

Program Summary



Stand strong for science

Stand for strong vision science

ARVO
2018

 **ARVO**
The Association for Research
in Vision and Ophthalmology
ARVO.org/AM

April 29 – May 3
Hawaii Convention Center
Honolulu, Hawaii

ARVO 2018

April 29 – May 3 | Honolulu, Hawaii

Important Policies

Use of recording/photography/audiotape/video equipment: Recording by any means (photographing, audiotaping, videotaping) of any presentations or sessions at any ARVO Meeting is prohibited, except by an ARVO-authorized agent for official purposes or by First Authors who want to photograph their own poster presentations. Violators risk confiscation of their equipment and/or dismissal from the Annual Meeting as deemed appropriate by ARVO.

Commercial Relationships Policy: Presenters must state and display all applicable commercial relationships. For more information on this important policy, refer to the Commercial Relationships Index at arvo.org/program-summary.

Clinical Trials Registration Policy: All clinical trials that will be reported in ARVO Annual Meeting abstracts must be registered on a publicly available database. The required acknowledgement of the First Author, acting as the authorized agent for all authors, certifies that any research presented in the abstract that reports on a clinical trial is registered, and the registration location and number are included on the abstract, in compliance with the ARVO Statement on Registering Clinical Trials, arvo.org/About/policies/statement-on-registering-clinical-trials/. For more information on this policy, refer to the Clinical Trials Registration Index at arvo.org/program-summary.

Program Summary

Program Summary: Online at arvo.org/program-summary. Abstracts are referred to in the *Program Summary* by program number (not page number) and session number.

Online Planner: Abstracts may be viewed and printed from the online planner at arvo.org/annual-meeting/program/online-planner/.

ARVO 2018 Mobile App: Offers complete search functionality for the Annual Meeting Program. Plan your schedule or sync with your schedule in the Online Planner. Download from the App Store, Google Play and elsewhere.

Photography Release

By attending the ARVO Annual Meeting, attendees agree to allow their names, likenesses and images either in audio, photographic or video format recorded onsite to be used by ARVO and the ARVO Foundation for Eye Research for educational and promotional purposes.

Disclaimer

The Association for Research in Vision and Ophthalmology (ARVO) Annual Meeting online program materials and print publications aim to promote vision research and scientific discourse for educational purposes. ARVO accepts no responsibility for any products, presentations, opinions, statements or positions expressed; and inclusion of such material within the Meeting, the publications or posted online does not constitute an endorsement by ARVO.



Continuing Medical Education

ARVO is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

ARVO designates this live activity for a maximum of 29.25 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Please refer to the *Pocket Guide* for the complete CME information.

Table of Contents

How to Use the <i>Program Summary</i>	3
Meeting Rooms — Convention Center Maps	4

Association Information

2017 – 2018 Board of Trustees	8
2017 – 2018 Foundation Board of Governors	8
Staff	8

2018 Annual Meeting Information

Annual Meeting Program Committee	9
In Remembrance	10
ARVO Social Events	12
NAEVR Central	12

Daily Program Schedules

(Scientific sessions in program number order)

Saturday	13
Sunday	19
Monday	87
Tuesday	177
Wednesday	259
Thursday	347

Indices

Moderator Index	401
Author Index	413

See arvo.org/program-summary for:

- ARVO Commercial Relationships Policy
- Commercial Relationships Index
- Statement on Registering Clinical Trials
- Clinical Trials Index

Children in the Convention Center

Children under 18 years old must be accompanied by a parent or guardian at all times. Parents/guardians who bring children into paper sessions must remove them immediately if they become disruptive. Children are not allowed to accompany parents/guardians in sessions/events where tickets are required or food is provided, except events for which children's tickets are available for purchase. Under no circumstances are children permitted in the exhibit hall during set-up or dismantle times.

© 2018 by the Association for Research in Vision and Ophthalmology, Inc. All rights reserved. Permission to republish any part of this book must be obtained in writing from the ARVO Director of Communications, prior to publication. Contact Katrina Norfleet at knorfleet@arvo.org.

How to Use the Program Summary

The *Program Summary* provides a summary of the ARVO 2018 Annual Meeting Scientific Program and information about other Meeting events and activities. Abstracts are not included. Abstracts are available online for viewing and printing. See below for details.

The scientific program is organized chronologically by day, session time and program number. All sessions scheduled within the same time slot are listed together (see thumb index at the side of each page).

A Program Daily Schedule is included for each day to provide a quick view of the scheduled paper and poster sessions, symposia, award lectures, business meetings, workshops and special interest groups (SIGs). These program schedules are located at the beginning of each scientific program day.

Page headers include the day, type of session and the program number range on each page.

There are four indices to assist you in locating sessions, moderators and presentations.

- **Author Index** — All authors are listed alphabetically by last name. Boldface type is used to indicate the program number and poster board number of the abstract for which the author is First (Presenting) Author. Bold and italic type indicates a symposium presentation. This index is located in the back of this book.
- **Moderator Index** — This is a listing of the session moderators alphabetically by last name. Included are the moderator's name, session day, date, time, location, title and Commercial Relationships Disclosure, if applicable. This index is located in the back of this book.
- **Clinical Trial Registration Index** (online only) — This is a listing by program number of the clinical trial registration information for each applicable presentation as indicated at the time of abstract submission. See ARVO Statement on Registering Clinical Trials in this Index. This index can be found online at arvo.org/am/program-summary.
- **Commercial Relationships Index** (online only) — This is a listing by program number of the commercial relationships and names of firms with which commercial relationships exist for each First Author and Co-author as indicated. First Authors or Co-authors who

indicated “none” for commercial relationship are not included in this index. See Commercial Relationships Policy in the Index. This index can be found online at www.arvo.org/program-summary.

Paper Sessions/Symposia/Minisymposia:

Room 313A
Wednesday, May 02, 2018 8:15 AM-10:00 AM

Retina

406 Retinopathy of Prematurity

3935 — 8:30 Differentiating retinal detachment and retinoschisis using handheld optical coherence tomography in stage 4 retinopathy of prematurity. Xi Chen, D. Tran-Viet, A. Dandridge, S. Freedman, L. Vajzovic, C. A. Toth. Ophthalmology, Duke University, Durham, NC*CR

Labels: Session location, Session day, date and time, Organizing section, Session number, Session title, Program number, Paper presentation time, Paper title.

Poster Sessions:

Exhibit Hall C0234-C0270
Sunday, April 29, 2018 8:15 AM-10:00 AM

Anatomy and Pathology/Oncology

114 Ocular structures in development, health, and disease

301 — C0234 A novel technique to characterize key fluid mechanic properties of the suprachoroidal injection procedure in an in vivo model. Shelley Hancock, N. Fisher, J. Yoo, R. V. Andino. Engineering, Clearside Biomedical, Inc., Alpharetta, GA *CR

*CR refers to the program number in the Commercial Relationships (CR) Index for Disclosures.

Poster board numbers indicate the Exhibit Hall location of the presentation. For example, C0234 will be located in Poster Area C and B1098 will be located in Poster Area B.

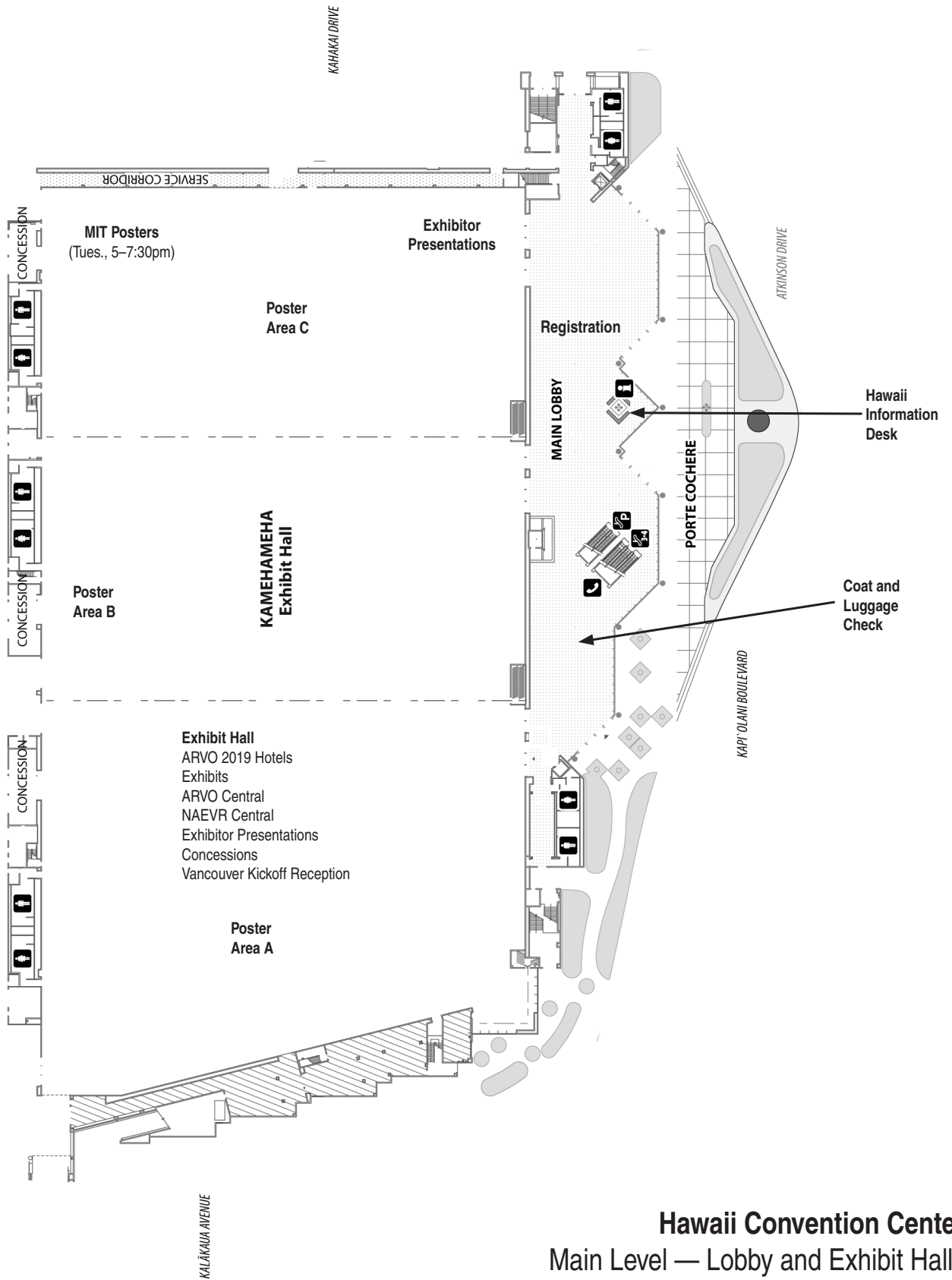
Labels: Session location, Poster board number range for session, Session day, date and time, Organizing section, Session number, Session title, Program number, Poster board number for presentation, Poster title.

Program information, printing abstracts and other features

For searchable information about the scientific program, authors, printable abstracts and to develop your own personal Meeting itinerary, visit arvo.org/annual-meeting/program/online-planner/.

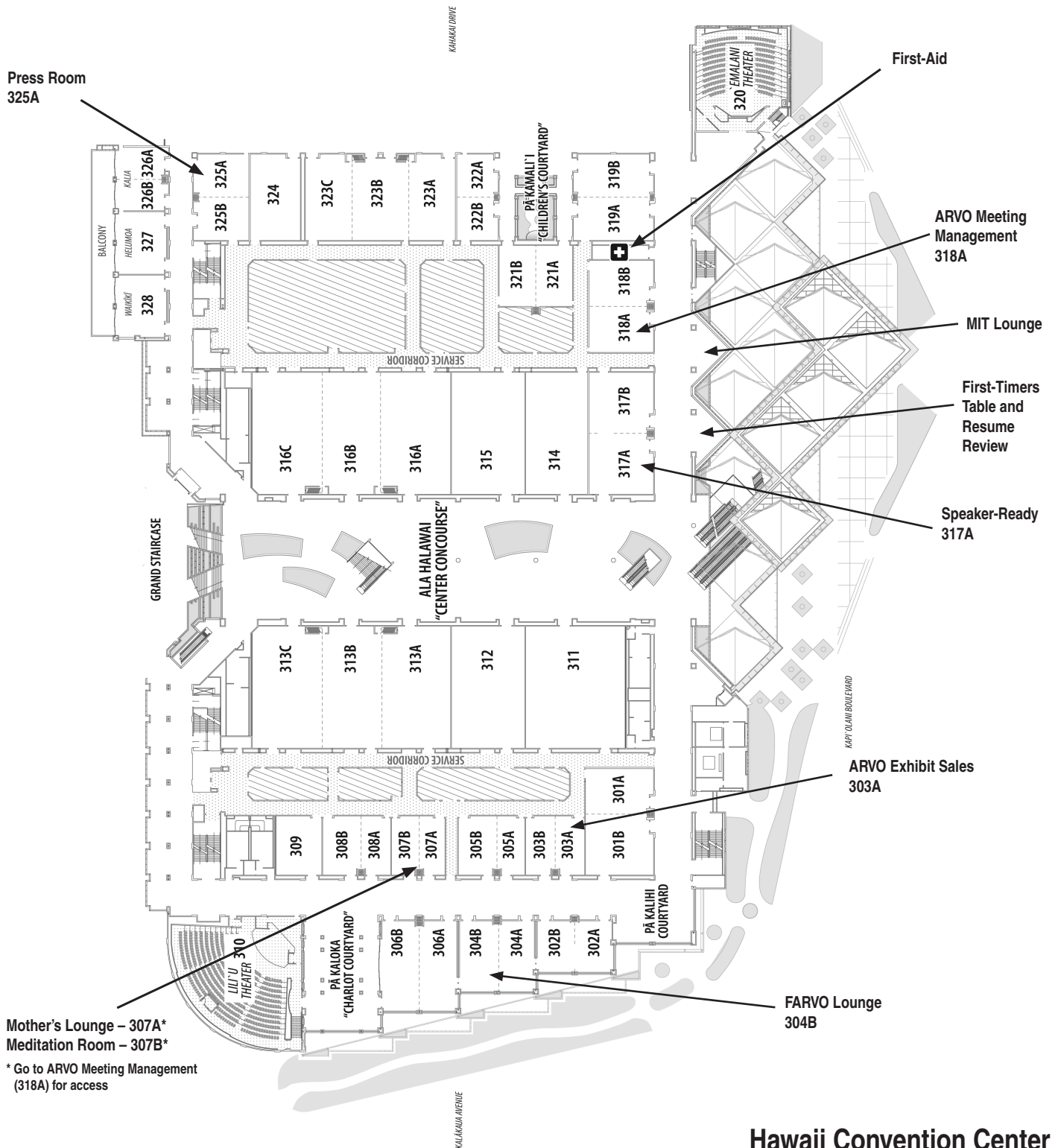
Abstracts also will be available at iovs.arvojournals.org, the version of record, in June 2018.

Meeting Rooms/Convention Center



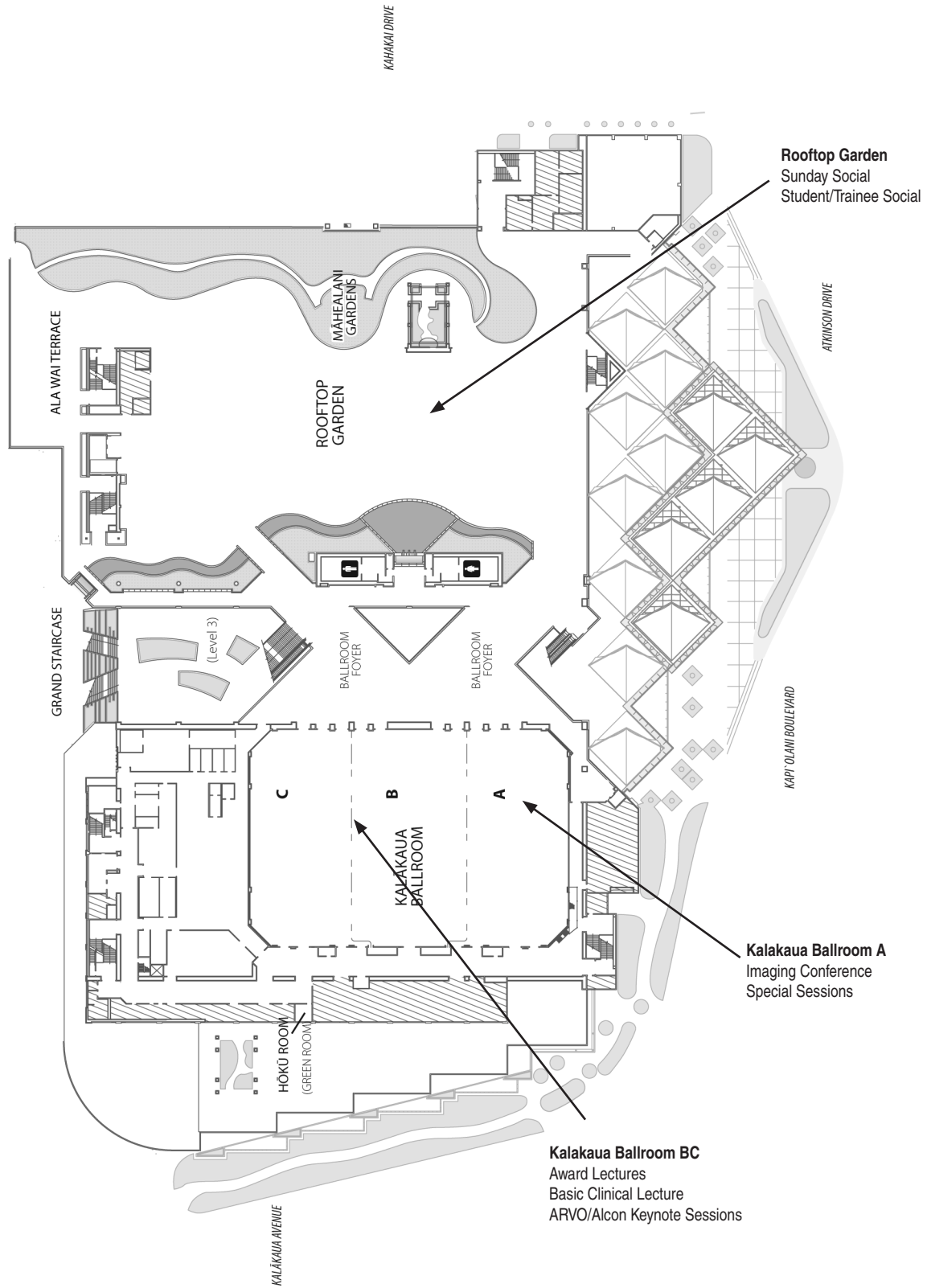
Hawaii Convention Center
Main Level — Lobby and Exhibit Halls

Meeting Rooms/Convention Center



Hawaii Convention Center Level 3 — Meeting rooms

Meeting Rooms/Convention Center



Rooftop Garden
 Sunday Social
 Student/Trainee Social

Kalakaua Ballroom A
 Imaging Conference
 Special Sessions

Kalakaua Ballroom BC
 Award Lectures
 Basic Clinical Lecture
 ARVO/Alcon Keynote Sessions

Hawaii Convention Center Level 4 — Ballrooms and Rooftop Garden

JOIN US!

INTERNATIONAL COUNCIL *of* OPHTHALMOLOGY

WOC  **2018**

WORLD OPHTHALMOLOGY CONGRESS®

BARCELONA, SPAIN
16-19 JUNE 2018

Host: Spanish Society of Ophthalmology
Co-Hosts: European Society of Ophthalmology and
Spanish Society of Implant-Refractive Ocular Surgery
Partners: Catalan Society of Ophthalmology
and Barraquer Institute



Register Now
www.icoph.org/woc2018

ARVO Office Information

Association for Research in Vision and Ophthalmology

1801 Rockville Pike, Suite 400 | Rockville, MD 20852-5622
Tel: +1.240.221.2900 | Fax: +1.240.221.0370 | arvo.org

ARVO Staff

Executive Office
Iris M. Rush, CAE
Executive Director

Loren Malaney
Director, Human Resources

Stephen Willie
Manager, Executive Operations

Stacy De La O, CAE
Manager, Committee Operations

Matthew Windsor, PhD
Senior Manager, Science
Communications

Communications, Marketing and Sales

Marisa Lavine, MS
Chief Marketing and
Communications Officer

Katrina Norfleet
Director of Communications

John Saville
Senior Graphic Designer

Julene Joy
Manager, Digital Communications

Fung Foo
Digital Design Specialist

Finance
Jason Spessard, MBA, CAE
Chief Financial Officer

Robert Cañas
Senior Manager, Finance

Femi Akinkuowo
Finance Coordinator

Information Technology and Member Services

Tim Maxey
Chief Information Officer

Kiah Culver
Assistant Director, Customer Service

Matthew Steele
Manager, Technology

Jeremy McCrary
Senior Program Coordinator
Customer Service

Mackenzi Wright
Customer Service Coordinator

Meeting Operations and Awards and Grants

Lancey Cowan, JD, CAE
Chief Meetings Officer

Kathy Cox
Assistant Director, Meetings

Ashley Engel, CMP
Assistant Director, Meetings

Isabel Regina Q. Borkoski, IOM
Senior Program Coordinator

Kerin Miller
Specialist, Awards & Grants

Mia Williams
Meeting Coordinator

Scientific Education

Gayle Claman, MS, CAE
Chief Learning Officer

Cathy Conley
Senior Instructional Designer

Jon Mallett, PhD
Director of Journals

Debbie Chin
Journals Manager

Kiyah Morrison
Senior Editorial Coordinator, *JOV*
and *TVST*

Marco Stoutamire
Editorial Coordinator, *IOVS*

NAEVR/AEVR Staff

James Jorkasky
Executive Director

David Epstein
Director, Government Relations and
Education

ARVO Board of Trustees

President

Claude F. Burgoyne, MD, FARVO
Glaucoma

Vice President

Sarah E. Coupland, MBBS, PhD, FARVO
Anatomy & Pathology/Oncology

President-elect

Steven J. Fliesler, PhD, FARVO
Retinal Cell Biology

Vice President-elect

Raymond A. Applegate, OD, PhD, FARVO
Visual Psychophysics/Physiological Optics

Andrew D. Dick, MBBS, MD, FMedSci, FARVO
Immunology/Microbiology

Immediate Past President

Emily Y. Chew, MD, FARVO
Clinical/Epidemiologic Research

Executive Vice President

Justine R. Smith, MBBS, PhD, FARVO
Immunology & Microbiology

Trustees

T. Michael Redmond, PhD, FARVO
Biochemistry/Molecular Biology

Maureen G. Maguire, PhD, FARVO
Clinical/Epidemiologic Research

Stephen C. Pflugfelder, MD, FARVO
Cornea

Irene Gottlob, MD, FARVO
Eye Movements/Strabismus/Amblyopia/
Neuro-Ophthalmology

Melinda K. Duncan, PhD, FARVO
Lens

W. Daniel Stamer, PhD, FARVO
Physiology/Pharmacology

Jennifer J. Kang-Mieler, PhD, FARVO
Retina

Maureen A. McCall, PhD, FARVO
Visual Neuroscience

Ex Officio Members:

Paul Sternberg, Jr., MD, FARVO
ARVO Foundation Board of Governors Chair

Emily Patterson, PhD
At-large Members-in-Training

Iris M. Rush, CAE
Executive Director

ARVO Foundation for Eye Research

1801 Rockville Pike, Suite 400 | Rockville, MD 20852-5622
Tel: +1.240.221.2950 | Fax: +1.240.221.0370 | arvofoundation.org

Board of Governors

Chair
Paul Sternberg, Jr., MD, FARVO

Immediate Past Chair

J. Mark Petrash, PhD, FARVO

Vice Chair

Cheryl Mae Craft, PhD, FARVO

Treasurer

David R. Williams, PhD, FARVO

Governors

Janet C. Blanks, PhD, FARVO
Jeffrey Boatright, PhD, FARVO

William J. Brunken, PhD, FARVO

Eric Carlson, PhD

Joan W. Miller, MD, FARVO

Mark Radford, MD, PhD

Stella Robertson, PhD

Joel S. Schuman, MD, FARVO

Erik van Kuijk, MD, PhD

Ex Officio to the Governors

Justine R. Smith, MBBS, PhD, FARVO
ARVO Executive Vice President

Gary W. Abrams, MD, FARVO
Governor Emeritus - Past Chair

Nicolas G. Bazan, MD, PhD, FARVO
Governor Emeritus - Past Chair

John E. Dowling, PhD, FARVO
Governor Emeritus - Past Chair

Foundation Staff

Iris M. Rush, CAE
ARVO and ARVO Foundation
Executive Director

Amanda Johnson
Foundation Manager

2018 Annual Meeting Program Committee

AMPC Chair

Justine R. Smith, FRANZCO,
PhD, FARVO
Flinders University
Adelaide, SA, Australia

Anatomy and Pathology/Oncology

Shahar Frenkel, MD, PhD (Chair)
Hadassah-Hebrew University
Medical Center
Jerusalem, Israel

Falk Schroedl (Chair)
Paracelsus University Salzburg
Salzburg, Austria

Regan Scott Ashby, PhD
University of Canberra
Canberra, CT, Australia

Alexandra Benavente-Perez,
MCOptom, MS, PhD
SUNY College of Optometry
New York, N.Y.

Colleen M. Cebulla, MD, PhD
Ohio State University
Columbus, Ohio

Timothy William Corson, PhD
Indiana University School of
Medicine
Indianapolis, Ind.

Biochemistry/Molecular Biology

Marina S. Gorbatyuk, PhD (Chair)
University of Alabama at
Birmingham
Birmingham, Ala.

Astra Dinculescu, PhD
University of Florida
Gainesville, Fla.

Luminia I. Paraoan, PhD
University of Liverpool
Liverpool, U.K.

Clinical/Epidemiologic Research

Lisa J. Keay, PhD (Chair)
George Institute for Global Health
Newton, NSW, Australia

Ecosse Lamoureux, MSc, PhD
Singapore Eye Research
Institute
Singapore

Bonnielin K. Swenor, MPH, PhD
Johns Hopkins Wilmer Eye
Institute
Baltimore, Md.

Cornea

Sophie Xiaohui Deng, MD, PhD
(Chair)
Jules Stein Eye Institute, UCLA
Los Angeles, Calif.

Nick Di Girolamo, PhD (Chair)
University of New South Wales
Sydney, NSW, Australia

Audrey M. Bernstein, PhD
Icahn School of Medicine at
Mount Sinai
New York, N.Y.

Cintia S. De Paiva, MD, PhD
Baylor College of Medicine
Waco, Texas

Noriko Koizumi, MD, PhD
Doshisha University
Kyoto City, Japan

Shivalingappa K. Swamynathan,
PhD
University of Pittsburgh
Pittsburgh, Pa.

Eye Movements/Strabismus/ Amblyopia/Neuro-Ophthalmology

Paul D. Gamlin, PhD (Chair)
University of Alabama at
Birmingham
Birmingham, Ala.

Zia Chaudhuri, FRCS, MS
Jules Stein Eye Institute, UCLA
Los Angeles, Calif.

Donny W. Suh, MD
University of Nebraska
Omaha, Neb.

Glaucoma

Adriana Di Polo, PhD (Chair)
University of Montreal
Montreal, QC, Canada

Nicholas Marsh-Armstrong, PhD
(Chair)
Johns Hopkins University
Baltimore, Md.

M. Francesca Cordeiro, MD, PhD
University College London
Institute of Ophthalmology and
Western Eye Hospital
London, UK

Murray Fingeret, OD
VA New York Health Care System
Hewlett, N.Y.

Tatjana C. Jakobs, MD
Massachusetts Eye and Ear
Infirmary
Boston, Mass.

Tony Realini, MD, MPH
West Virginia University Eye
Institute
Morgantown, W.Va.

Immunology/Microbiology

Paul G. McMenamin, DSc, PhD,
FARVO (Chair)
Monash University
Melbourne, VC, Australia

Richard W. J. Lee, MRCS,
MRCOphth, PhD
Bristol and Moorfields (NIHR BRC)
University College London
London, U.K.

Mary E. Marquart, PhD
University of Mississippi Medical
Center
Jackson, Miss.

Lens

Jeffrey M. Gross, PhD (Chair)
University of Pittsburgh School
of Medicine
Pittsburgh, Pa.

Salil Anil Lachke, PhD
University of Delaware
Newark, Del.

Kevin L. Schey, PhD
Vanderbilt University
Nashville, Tenn.

Physiology/Pharmacology

Antonio Longo, MD, PhD (Chair)
University of Catania
Catania, Italy

Claudio Bucolo, PhD
University of Catania
Catania, Italy

Haiyan Gong, MD, PhD
Boston University School of
Medicine
Boston, Mass.

Retina

Milam A. Brantley, Jr., MD, PhD
(Chair)
Vanderbilt University
Nashville, Tenn.

Itay Chowers, MD (Chair)
Hadassah-Hebrew University
Medical Center
Jerusalem, Israel

Netan Choudhry, MD, FRCS(C)
Herzig Eye Institute
Toronto, ONT, Canada

Amani A. Fawzi
Northwestern University
Chicago, Ill.

Mineo Kondo, MD, PhD, FARVO
Mie University Graduate School
of Medicine
Mie, Japan

Stephen R. Russell, MD
University of Iowa Hospitals &
Clinics
Iowa City, Iowa

Retinal Cell Biology

Enrica Strettoi, PhD (Chair)
CNR Neuroscience Institute
Pisa, Italy

James M. Fadool, PhD
Florida State University
Tallahassee, Fla.

Goldis Malek, PhD
Duke University
Durham, N.C.

Magali Saint-Geniez, PhD
Harvard Medical School
Boston, Mass.

Alan W. Stitt, PhD
Queens University
Belfast, U.K.

Visual Psychophysics/ Physiological Optics

Ann E. Elsner, PhD, FARVO
(Chair)
Indiana University
Bloomington, Ind.

Jennifer J. Hunter, PhD
University of Rochester
Rochester, N.Y.

Lisa A. Ostrin, OD, PhD
University of Houston College of
Optometry
Houston, Texas

Thomas W. Raasch, OD, PhD,
FARVO
Ohio State University,
College of Optometry
Columbus, Ohio

Visual Neuroscience

Ronald G. Gregg, PhD (Chair)
University of Louisville
Louisville, Ky.

Ulrike Grunert, PhD
University of Sydney
Sydney, NSW, Australia

Jan J. Kremers, PhD
University of Erlangen
Nuremberg, Germany

Genetics Cross-sectional Group

Eranga Nishanthie Vithana, PhD
(Chair)
Singapore Eye Research
Institute
Singapore

Zi-Bing Jin, MD, PhD
Wenzhou Medical University
Wenzhou, China

Yutao Liu, MD, PhD
Augusta University
Augusta, Ga.

Multidisciplinary Ophthalmic Imaging Cross-sectional Group

Hiroshi Ishikawa, MD (Chair)
New York University
New York, N.Y.

Stacey S. Choi, PhD
Ohio State University
Columbus, Ohio

Yali Jia, PhD
Oregon Health & Science
University
Portland, Ore.

Low Vision Cross-sectional Group

Russell L. Woods, PhD (Chair)
Scheepens Eye Research
Institute
Boston, Mass.

Nicole Ross, OD, MSc
New England College of
Optometry
Arlington, Mass.

Joanne M. Wood, BSc, PhD
Queensland University of
Technology
Brisbane, QLD, Australia

Ex Officio

Emily Y. Chew, MD, FARVO
National Eye Institute/NIH
Bethesda, Md.

Claude F. Burgoyne, MD, FARVO
Devers Eye Institute
Portland, Ore.

Steven J. Fliessler, PhD, FARVO
SUNY-Buffalo /
VA Medical Center – Buffalo
Buffalo, N.Y.

In remembrance

ARVO recognizes and honors members who we lost from March 2017 to March 15, 2018. We're proud of our members and their contributions to the vision and eye research community. If you know of a member we have lost that is not listed, please let us know at arvo@arvo.org.

Matthew D. Davis, MD **March 5, 2018**

A native of Wisconsin, Dr. Davis started his career at the University of Wisconsin – Madison in 1970, after completing his medical degree from the University of Pennsylvania and a residency at Massachusetts Eye and Ear Infirmary. He has been the Professor Emeritus at the Department of Ophthalmology and Visual Sciences there since 1996. During his career, Davis chaired the groundbreaking Diabetic Retinopathy Study (DRS), established the Early Treatment Diabetic Retinopathy Study classifications for the severity of retinopathy and the AREDS classification of macular degeneration and lens opacities. Davis has published over 270 papers and book chapters, and has received numerous medals and awards in ophthalmology and medicine, including the 1989 Weisenfeld Award from ARVO. He was an ARVO member from 1980 to 2012.

John Trevithick, PhD, FARVO **Feb. 20, 2018**

After completing his PhD in physiological-chemistry at the University of Wisconsin—Madison, Dr. Trevithick became a professor in the Biochemistry Department at Western University. After retiring in 2003, he joined the Kinesiology Department as a professor and embarked on a multi-year project funded by the Canadian Space Agency to develop dietary agents to decrease the risk of cataracts for astronauts on space voyages to Mars. Dr. Trevithick was an ARVO member from 1990 to 2018 and was a Silver Fellow. He published over 100 peer-reviewed scientific papers and presented numerous posters at international meetings for eye and vision research.

Ben A. Barres, MD, PhD **Dec. 27, 2017**

Dr. Barres was professor and the former chair of the Department of Neurobiology at Stanford. He had a significant impact on modern neuroscience, particularly glial biology and the role of microglia in glaucoma. Born Barbara Barres, he transitioned to male in 1997, and became the first openly transgender scientist in the National Academy of Sciences in 2013. He was the co-recipient of Society for Neuroscience's Ralph W. Gerard prize in 2016 and was a speaker at ARVO's Summer Eye Research Conference in 2007.

Gerhard Zinser, PhD **Nov. 19, 2017**

Dr. Zinser, co-founder and a managing director of Heidelberg Engineering, was a pioneer, an

inventor, and the driving force behind many of Heidelberg Engineering's ground-breaking technologies, such as the Retina Tomograph (HRT) and the Spectralis platform. Zinser contributed to many key advances in imaging technology, including confocal microscopy, scanning lasers and optics, OCT and software image analysis. He was an ARVO member from 1992 to 2018.

Tom Cornsweet, PhD **Nov. 12, 2017**

Dr. Cornsweet is best known for his discovery of the remarkable brightness phenomenon known generally as the Cornsweet Illusion. He described and analyzed this effect in *Visual Perception*. Cornsweet taught at Yale University, the University of California, Berkeley, and the University of California, Irvine. Cornsweet obtained 40 patents and continued to develop ophthalmic instruments at Brien Holden Vision Diagnostics, from 2013 to 2015. He was an ARVO member from 1980 to 2006.

Jer R. Kuszak, PhD, FARVO **Oct. 9, 2017**

Kuszak served as director of Electron Microscopy at Rush University Medical Center in Chicago, Ill., until his retirement in 2010. He was an active ARVO member from 1980 to 2012, serving as a committee member, then chair of the Annual Meeting Programming Committee. He authored more than 100 manuscripts and was the recipient of numerous scientific awards, including the prestigious Alcon Research Institute Award for Career Excellence in Eye Research.

Martin J. Steinbach, PhD, FARVO **June 24, 2017**

Dr. Steinbach was a Distinguished Research Professor Emeritus in the Department of Psychology, York University (Toronto, Canada), a Professor of Ophthalmology at the University of Toronto, and a founding member of the Centre for Vision Research (CVR), York University. He was an ARVO member from 1973 to 2017; he served as ARVO's vice president from 1985 to 1986, was a member of the International Advocacy Committee and the Foundation Donors Committee, and was a Silver Fellow. In 2009, he received the Carl Kupfer Award. His research with strabismus led to the discovery of the palisade endings in humans. Steinbach also did extensive research on people with vision loss from amblyopia, the loss of an eye, and age-related macular degeneration.

Roger F. Steinert, MD **June 6, 2017**

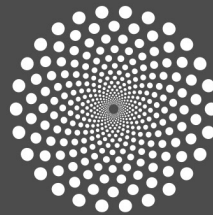
Dr. Steinert was an internationally renowned and respected corneal, cataract, and refractive surgeon who pioneered advances in laser surgery techniques and corneal transplantation. He was founding director of the Gavin Herbert Eye Institute, University of California, Irvine (UCI) and was also Chair of UCI's Department of Ophthalmology. He was an ARVO member from 1980 to 2015, and again in 2017. Steinert served as 2005 – 2006 president of the American Society of Cataract and Refractive Surgery. He received the 2009 Life Achievement Award from the American Academy of Ophthalmology, the 2015 Distinguished Achievement Award from the New England Ophthalmological Society, and the 2016 Distinguished Clinical Achievement Award from Harvard University.

Bert M. Glaser, MD **April 27, 2017**

After serving 13 years at Johns Hopkins Hospital as professor of ophthalmology and director of the Center for Vitreo-retinal Research at the Wilmer Eye Institute, Dr. Glaser formed a private practice which expanded and later became the National Retina Institute. Glaser's method of repairing macular holes was widely applied by other medical practitioners. He also worked in diabetic retinopathy, age-related macular degeneration and retinal detachments. He was an ARVO member from 1980 to 2017 and he received the 1989 ARVO Cogan Award. He also received awards from the Macula Society, the Retina Research Foundation and the American Academy of Ophthalmology. Glaser later founded a research and development firm, Ocular Proteomics, for the treatment of ocular diseases.

David Alan Luce, PhD **April 15, 2017**

Dr. Luce, a pioneering physicist and inventor, earned a PhD in physics from the Massachusetts Institute of Technology. Luce joined Moog Music in 1972 and invented the first commercial polyphonic synthesizer. After Moog closed, Luce embarked on a new career, helping to develop and refine ophthalmic diagnostic instruments at Reichert Technologies. After researching the properties of the cornea, he published a paper that earned him recognition as the "Father of Corneal Biomechanics." Luce and his colleagues at Reichert perfected a new diagnostic instrument based on his discovery, the ocular response analyzer, now used to detect glaucoma. He was an ARVO member from 2002 to 2016.



NEI

50 YEARS

of Advances in
Vision Research



Activities at ARVO

MONDAY

4/30

10:00^{AM}

NEI History Video Series

Exhibitor Presentation Area

TUESDAY

5/01

10:00^{AM}

NEI History Video Series

Exhibitor Presentation Area

11:00^{AM}

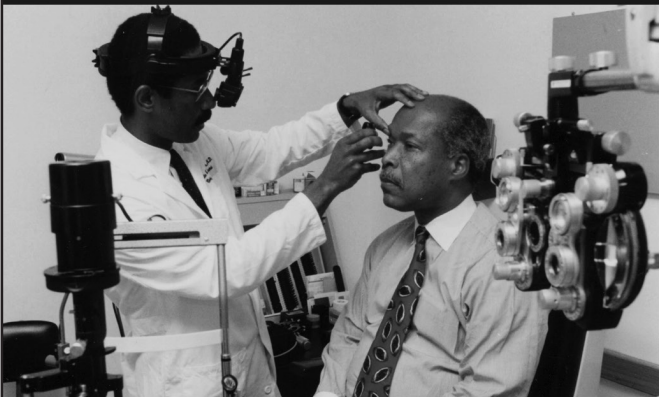
NEI 3-D Retina Organoid
Challenge 2020: Building
the Vision

Exhibitor Presentation Area

7:00^{PM}

ARVO Evening Session:
Bringing Regenerative
Medicine Therapies to the
Clinic

Ballroom A



Visit us at Booth 1427 to meet extramural staff
and try out our new virtual reality experience.

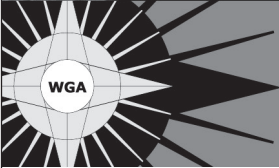


National Eye Institute

nei.nih.gov/NEIat50 | [#NEIat50](https://twitter.com/NEIat50)

**MARK YOUR
CALENDAR!**

June 1, 2018
Start abstract submission
and congress &
hotel registration



8th WORLD GLAUCOMA CONGRESS
MARCH 27 - 30, 2019
MELBOURNE, AUSTRALIA



www.worldglaucoma.org | The Global Glaucoma Network

ARVO Social Events: Everyone is Welcome!

Sunday Social

Sun., April 29, 6 – 7:30pm

Hawaii Convention Center Rooftop Garden

(admission ticket required*)

Join meeting attendees for great food, drinks, music, dancing, games and more under the Hawaiian sky. This event is family-friendly so purchase tickets for your entire family to join in the fun.

Student/Trainee Social

Mon., April 30, 7:30 – 9pm

Hawaii Convention Center Rooftop Garden

All trainees attending the Meeting are invited to join us in honoring the 2018 Travel Grant Recipients. Come and mingle with your colleagues, make new acquaintances, and meet members of the ARVO Board of Trustees.

ARVO Karaoke

Wed., May 2, 9pm – 12midnight

Sheraton Princess Kaiulani

120 Kaiulani Ave

(admission ticket required*)

Show your vocal talents or cheer on your favorite performer at the ARVO karaoke night! Admission includes one drink. Light snacks will also be available. You must be 21 years or older to attend this event.

ARVO Classical Concert

Wed., May 2, 8 – 10pm

Hilton Hawaiian Village

2005 Kalia Road

The popular ARVO Classical Concert is performed by multi-talented ARVO members. Relax and enjoy the music.



Vancouver Welcomes ARVO

2019 Kick-Off Reception

Thurs., May 3, 10:15 – 11am

Hawaii Convention Center Exhibit Hall

Join ARVO and Tourism Vancouver as we look forward to the ARVO 2019 Annual Meeting.

* Tickets may be purchased at meeting registration or at the Gift Shop in ARVO Central.



Saturday

April 28, 2018

Education Courses

Separate registration fee required

ARVO Annual Meeting Registration
Main Lobby
7am – 6pm

ARVO Imaging Conference
Kalakaua Ballroom A
8am – 5:30pm
(separate registration required)

ARVO Foundation and Dowling Society
Gala Awards Ceremony and Dinner
6:15 – 9:30pm
Hilton Hawaiian Village
2005 Kalia Rd
(tickets required)

ARVO
2018

April 29 – May 3 | Honolulu

Stand strong for science
Stand for strong vision science

Saturday, April 28 – Education courses (education courses require separate registration)

Time	Session	Title	Location
8am – 4:30pm	001	Big Data: Principles to practical application	313A
	002	Gene Editing Using CRISPR/Cas Technology: From Discovery to Therapy	316B
	003	Inherited retinal diseases: Divergent viewpoints of pathogenesis and treatment	316A
8am– 12:30pm	004	Introduction to AMD: Current research and therapeutics	316C

Room 313A

Saturday, April 28, 2018 8:00 AM-4:30 PM

001 Big Data: Principles to Practical Application

“Big Data” is a big buzzword in healthcare today. The use of Big Data for improving healthcare outcomes and controlling costs shows significant promise. This course will help participants define what Big Data is, describe the Big Data sets available in vision research, explain the analytic methods behind Big Data, and summarize the potential applications of Big Data. This activity’s overall purpose is to ensure change in learner competence by uncovering associations, patterns and trends with the data, in order to improve professional practice.

— 8:00 **Welcome and introduction.** *Anne L. Coleman. Jules Stein Eye Institute, University of California- Los Angeles, Santa Monica, CA*

— 8:15 **Tapping into Health Care Claims Databases to Learn About Ocular Diseases.** *Joshua D. Stein^{1,2}. ¹Kellogg Eye Center/Ophthal, University of Michigan, Ann Arbor, MI; ²Health Management & Policy, University of Michigan School of Public Health, Ann Arbor, MI*

— 8:35 **Case Study: IRIS Registry.** *Anne L. Coleman. Jules Stein Eye Institute, University of California- Los Angeles, Santa Monica, CA*

— 8:55 **Big Data Studies: EHRs.** *Michael F. Chiang. Ophthalmology and Medical Informatics, Oregon Health & Science University, Portland, OR *CR*

— 9:15 **Case Study: Machine Learning.** *Jayashree Kalpathy-Cramer. MGH/Harvard Medical School, Charlestown, MA*

— 9:35 **Break**

— 10:00 **Visualizing Big Data.** *Aaron Y. Lee. Ophthalmology, UW Medicine, Seattle, WA *CR*

— 10:20 **Big Data for Retinal Development, Evolution and Genetics.** *Anand Swaroop. National Eye Institute, Bethesda, MD*

— 10:40 **NIH Big Data Initiatives, Infrastructure.** *Belinda Seto. National Eye Institute, Bethesda, MD*

— 11:00 **Panel Discussion**

— 12:00 **Lunch Break**

— 1:00 **Practical Considerations for Performing Analyses Using Health Care Claims Data.** *Joshua D. Stein^{1,2}. ¹Kellogg Eye Center/Ophthal, University of Michigan, Ann Arbor, MI; ²Health Management & Policy, University of Michigan School of Public Health, Ann Arbor, MI*

— 1:25 **Practical Considerations of Working with Registries.** *Anne L. Coleman. Jules Stein Eye Institute, University of California-Los Angeles, Santa Monica, CA*

— 1:50 **Practical Considerations of Doing Big Data Studies with EHRs.** *Michael F. Chiang. Ophthalmology and Medical Informatics, Oregon Health & Science University, Portland, OR *CR*

— 2:15 **Practical Considerations of Doing Machine Learning.** *Jayashree Kalpathy-Cramer. MGH/Harvard Medical School, Charlestown, MA*

— 2:40 **Break**

— 2:55 **Practical Considerations of Visualizing Big Data.** *Aaron Y. Lee. Ophthalmology, UW Medicine, Seattle, WA *CR*

— 3:20 **Practical Considerations of Using Big Data in Genetics Research.** *Anand Swaroop. National Eye Institute, Bethesda, MD*

— 3:45 **Panel Discussion, Next Steps, and Closing Remarks**

Room 316B

Saturday, April 28, 2018 8:00 AM-4:30 PM

002 Gene Editing Using CRISPR/ Cas Technology: From Discovery to Therapy

In the current era of personalized medicine, a large number of genetic variants in patients with various diseases using next generation sequencing have been identified. Recent advances in genetic engineering, genotyping, high-resolution imaging and biomarker testing have made it easier to deliver the right treatments to the right patients at the right time. This course presents an overview of CRISPR technology from the leading experts who have pioneered it in other disciplines, followed by examples in eye and vision science and practical applications. This course is designed to enhance learner competence in the area of CRISPR technology in order to appropriately apply in the learner’s professional practice.

— 8:00 **What is Gene Editing? What Techniques are Available? What are the advantages and limitations of ZFN, TALEN, CRISPRn, CRISPRi, and CRISPRx?** *Stephen H. Tsang^{1,2}. ¹Columbia Coll Phys Surg, Columbia Univ-Harkness Eye Inst, New York, NY; ²NIH, Rockville, MD*

— 8:20 **Designing CRISPR experiments: Tips and potential pitfalls to look out for/avoid in gRNA design process.** *Stephen H. Tsang^{1,2}. ¹Columbia Coll Phys Surg, Columbia Univ-Harkness Eye Inst, New York, NY; ²NIH, Rockville, MD*

— 8:40 **GUIDE-Seq vs High-throughput genomic translocation sequencing vs Digenome-seq vs BLESS.** *Christine L. Xu. Columbia Medical Research Center, New York, NY*

— 9:10 **iSTOP: Induction of STOP codons by CRISPR-mediated base editing.** *Alberto Ciccia. Genetics and Development, Columbia University, New York, NY*

— 10:00 **Break**

— 10:15 **Challenges of CRISPR gene editing in genetic eye disease.** *Tara C. Moore^{2,1}. ¹Avellino Labs, San Francisco, CA; ²Biomedical Sciences Research Institute, University of Ulster, Coleraine, Northern Ireland, United Kingdom *CR*

— 10:45 **CjCas9-mediated genome editing for macular degenerations.** *Taeyoung Koo^{1,2}. ¹Center for Genome Engineering, Institute for Basic Science, Yuseong-gu, Korea (the Republic of); ²Basic Science, University of Science and Technology, Daejeon, Korea (the Republic of)*

— 11:15 **High Throughput CRISPR Screening for Ophthalmology.** *Alex W. Hewitt^{1,2}. ¹Department of Ophthalmology, Centre for Eye Research Australia, Sandy Bay, Tasmania, Australia; ²Menzies Institute for Medical Research, University of Tasmania, Hobart, Tasmania, Australia*

— 11:45 **Morning wrap-up**

— 12:00 **Lunch Break**

— 1:00 **Panel: Safety and efficacy of CRISPR in patients.** *Alex W. Hewitt^{1,2}. ¹Department of Ophthalmology, Centre for Eye Research Australia, Sandy Bay, Tasmania, Australia; ²Menzies Institute for Medical Research, University of Tasmania, Hobart, Tasmania, Australia*

— 1:20 **Panel: Safety and efficacy of CRISPR in patients.** *Vinit B. Mahajan. Ophthalmology, Stanford University, Palo Alto, CA*

— 1:40 **Panel Discussion - Safety and efficacy of CRISPR moving into patients.** *Peter Baciu. Ocular Disease, Editas Medicine, Cambridge, MA *CR*

— 2:00 **Designing optimal CRISPR gRNAs.** *Amy Guan. Benchling, San Francisco, CA*

— 2:45 **HDR ssODN and crRNA design for high efficiency and low OTEs.** *Mark Behlke. Integrated DNA Technologies, Inc., Coralville, IA *CR*

— 3:30 **CRISPR design, experimental analysis and cell engineering services.** *Kevin Holden. Synthego, Redwood City, CA *CR*

— 4:15 **Summary.** *Stephen H. Tsang. Columbia Coll Phys Surg, Columbia Univ-Harkness Eye Inst, New York, NY*

Room 316A

Saturday, April 28, 2018 8:00 AM-4:30 PM

**003 Inherited retinal diseases:
Divergent viewpoints of pathogenesis
and treatment**

Inherited retinal diseases are a group of eye disorders caused by an inherited gene mutation and can cause vision loss or blindness. The primary goal of this course is to discuss opposing viewpoints related to the various treatment strategies for inherited retinal diseases. Further, learners will be able to identify and debate different clinical and research topics in the area of inherited retinal diseases. Emphasized will be perspectives on the use of stem cells and gene-directed therapy. In addition, the primary mechanism of retinal degeneration in patients with Stargardt disease will be discussed. These discussions highlight current obstacles clinician-scientists are facing in their fight against retinal degeneration. The overall goal of this course is to enhance learner competence in the area of retinal degeneration to utilize in professional practice.

— 8:00 **Opening Remarks**

— 8:15 **Assessing the potential value of human pluripotent stem cell treatments for retinal degenerative diseases.** David M. Gamm^{2,1}. ¹Ophthalmology and Visual Sciences, Univ of Wisconsin-Madison, Madison, WI; ²McPherson Eye Research Institute, University of Wisconsin-Madison, Madison, WI *CR

— 8:30 **The uncertainties of stem cell treatment.** Kapil Bharti. National Eye Institute, Bethesda, MD

— 8:45 **Audience questions and discussion**

— 9:05 **The Potential Value of Gene Editing.** Eric A. Pierce. Ocular Genomics Institute, Massachusetts Eye and Ear, Belmont, MA *CR

— 9:20 **Optimizing safety and efficacy in gene editing therapies for Inherited retinal diseases.** John G. Flannery^{1,2}. ¹Helen Wills Neuroscience Institute, University of California, Berkeley, Berkeley, CA; ²School of Optometry, University of California, Berkeley, Berkeley, CA

— 9:35 **Audience questions and discussion**— 9:55 **Break**

— 10:10 **CAIs should be the initial approach for treating CME in inherited retinal diseases.** Mark E. Pennesi. Ophthalmology, Casey Eye Institute - OHSU, Portland, OR

— 10:25 **Steroids, NSAIDS, or the use of anti-VEGF, are likely equally effective as CAIs for the treatment of CME in inherited retinal diseases.** Alessandro Iannaccone. Duke Eye Center, Duke University Medical Center, Durham, NC

— 10:40 **Audience questions and discussion**

— 11:00 **Genetic screening should be routinely implemented in the clinical evaluation of patients with inherited retinal diseases.** Stephen P. Daiger. Human Genetics Center, School Pub Hlth, Univ Texas Hlth Sci Ctr Houston, Houston, TX

— 11:15 **Genetic screening should NOT be routinely implemented in the clinical evaluation of patients with inherited retinal diseases.** Byron L. Lam. Bascom Palmer Eye Institute, University of Miami Health System, Pinecrest, FL *CR

— 11:30 **Audience questions and discussion**— 11:50 **Lunch Break**

— 1:00 **Retinal autoimmunity can contribute to photoreceptor cell loss in retinitis pigmentosa and possibly other inherited retinal diseases.** Grazyna Adamus. Ophthal-Casey Eye Inst, Oregon Health Sciences University, Portland, OR

— 1:15 **Retinal autoimmunity is unlikely to contribute to photoreceptor cell loss in retinitis pigmentosa or other inherited retinal diseases.** Robert K. Koenekoop. McGill Ocular Genetics Laboratory, McGill University Health Centre, Montreal, Quebec, Canada

— 1:30 **Audience questions and discussion**

— 1:50 **Bisretinoids are the primary culprit in Stargardt disease.** Janet R. Sparrow. Department of Ophthalmology, Columbia University, New York, NY

— 2:05 **Bisretinoids restrict all-trans-retinal as a primary contributor to Stargardt disease.** Krzysztof Palczewski. Pharmacology School of Med, Case Western Reserve Univ, Cleveland, OH *CR

— 2:20 **Audience questions and discussion**— 2:40 **Break**

— 2:55 **Role of Abca4 in Photoreceptor Outer Segments.** Gabriel H. Travis. Stein Eye Institute, UCLA School of Medicine, Los Angeles, CA

— 3:10 **RPE is the primary site for the retinal degeneration in patients with Stargardt disease.** Roxana A. Radu. Ophthalmology, Stein Eye Institute /UCLA, Los Angeles, CA

— 3:25 **Audience questions and discussion**

— 3:45 **How Foundations can enhance clinical trial enrollment and advance Patients as Partners.** Stephen M. Rose. Science Dept, Foundation Fighting Blindness, Columbia, MD

— 4:00 **Doctors should ultimately be responsible for patient selection and participation in various treatment trials.** Samuel G. Jacobson. Center for Hereditary Retinal Degenerations, Scheie Eye Institute, Philadelphia, PA

— 4:15 **Summary and wrap-up**

Room 316C

Saturday, April 28, 2018 8:00 AM-12:30 PM

004 Introduction to AMD: Current research and therapeutics

Age-related macular degeneration (AMD) is one of the most common eye conditions leading to vision loss among people age 50 and older. In fact, the risk of acquiring advanced age-related macular degeneration increases from 2% for those ages 50-59, to nearly 30% for those over the age of 75. This course will examine key clinical and pathological findings in AMD. New insights into the genetics of AMD will be highlighted, including an in-depth discussion regarding the discovery of key biochemical pathways involved in the disease. Potential new therapies that could interrupt these pathways will also be explored. This course's overall aim is to enhance learner competence in the area of AMD to utilize in professional practice.

— 8:00 **Welcome and introduction.** *Debasish Sinha. Ophthalmology, Johns Hopkins Wilmer Eye Inst, Baltimore, MD*

— 8:10 **AMD – the clinical perspective. Its clinical presentation, pathology, current treatment options, and key clinicopathologic indicators for basic research.** *James T. Handa. Johns Hopkins Wilmer Eye Inst, Lutherville, MD *CR*

— 8:35 **Questions and discussion**

— 8:45 **AMD – clinical imaging. Identifying disease, progression and therapeutic endpoints.** *Cynthia A. Toth^{1,2}. ¹Ophthalmology, Duke Univ Eye Center, Durham, NC; ²Biomedical Engineering, Duke University, Durham, NC *CR, ✕*

— 9:10 **Questions and discussion**

— 9:20 **AMD – The translational value of preclinical animal models.** *Catherine Bowes Rickman. Ophthal & Cell Biology, Duke University Medical Center, Durham, NC*

— 9:45 **Questions and discussion**

— 9:55 **Break**

— 10:10 **AMD – from the immunologist perspective.** *Andrew D. Dick^{1,2}. ¹Ophthalmology, Univ of Bristol-Bristol Eye Hosp, Bristol, United Kingdom; ²UCL-Institute of Ophthalmology, London, United Kingdom *CR*

— 10:35 **Questions and discussion**

— 10:45 **AMD—Identifying New and Relevant Pathways at Different Disease Stages using Systems Biology.** *Jiang Qian. Ophthalmology, Johns Hopkins School of Medicine, Baltimore, MD*

— 11:10 **Questions and discussion**

— 11:20 **AMD - An Industry Perspective and Emerging Therapeutic Concepts.** *Ashwath Jayagopal. Ophthalmology Discovery and Biomarkers, F. Hoffmann-La Roche Ltd, Basel, Switzerland *CR*

— 11:45 **Questions and discussion**

— 11:55 **Panel Discussion**

— 12:20 **Summary and wrap-up**

Sunday

April 29, 2018

ARVO Annual Meeting
Registration
Main Lobby
7am – 6pm

Exhibit hours
8:15am – 5pm

Sunday Social
Hawaii Convention Center
Rooftop Garden
6 – 7:30pm
(tickets required)

ARVO
2018

April 29 – May 3 | Honolulu

Stand strong for science
Stand for strong vision science

Sunday, April 29 – Symposia, papers, workshops/SIGs and lectures

Time	Session	Title	Location
8:15 – 10:15am	101	Proteostasis networks: challenges and therapeutic opportunities for ocular diseases [BI, CO, GEN, GL, LE, PH, RC, RE] #1-5	310
	102	Ocular and Systemic Circadian Rhythms: Implications in Vision Research [VI, EY, BI, IM, PH, RC, VN] #6-11	311
	103	Retinal architecture and function: new insights [AP, BI, RC, RE, VI, VN] #12-16	Ballroom A
10:45 – 11:30am	115	Proctor Award and Lecture #338-339	Ballrooms BC
11:45am – 12:30pm	116	Friedenwald Award and Lecture #340	Ballrooms BC
1 – 2:30pm	117	Retinal microglia in degenerative diseases: Why function matters — SIG [AP, IM, RE, RC, GEN]	Room 301AB
	118	A Matter of Life or Death: Regulation of RGC Survival by Glia and Interneurons — SIG [AP, BI, GL, PH, RE, VN]	310
	119	Update on clinical gene therapy trials for inherited retinal diseases — SIG [CL, GEN, RE]	311
	120	Extracellular Vesicles and the Anterior Segment —SIG [CO]	312
	121	Towards Guidelines for Mouse Electroretinography (ERG) — SIG [BI, GEN, PH, RE, RC, VN]	313A
	122	Pizza with the experts*	313BC
	124	Biomarkers and Surrogate Endpoints in Ophthalmic Clinical Research — SIG [CL, CO, GL, IM, RE, MOI]	316A
	125	Experimental design for optimal animal research in the age of the ‘reproducibility crisis’	316B
	126	Grant writing: How to get your proposals funded	316C
	127	Delivery of therapeutics to ocular tissues — SIG [CO, GL, PH, RE, GEN]	Ballroom A
3:15 – 5pm	144	Pathogens harbouring in the eye [IM] #716-720	301AB
	145	Neuro-ophthalmology [EY] #721-727	306AB
	146	Novel imaging techniques and applications [VI] #728-734	310
	147	Diabetic Retinopathy Clinical [RE] #735-741	311
	148	Keratoconus: Corneal Biomechanics and Imaging [CO] #742-748	312
	149	Visual Cues and Signaling in Myopia [AP] #749-755	313A
	150	Primate retina and visual brain — Minisymposium [EY, RC, VI, VN] #756-760	314
	151	Retinal ischemia and mechanisms of vascular remodeling [RC] #761-767	315
	152	AMD [PH] #768-774	316A
	153	Genetic Epidemiology [CL] #775-781	316B
	154	Macular Diseases Excluding AMD [RE] #782-788	316C
	155	Biochemistry and Molecular Biology of AMD [BI] #789-795	320
3:15 – 4pm	156	GL-Epstein Award Session [GL] #796-797	Ballroom A
5:15 – 6pm	169	Weisenfeld Award and Lecture #1135	Ballrooms BC

Symposia, minisymposia and basic clinical lecture highlighted in **boldface**

* Registration required

Sunday, April 29 – Posters

Time	Session	Title	Program No.	Board No.	
8:15 –10am	104	Retinitis pigmentosa (clinical) [RE]	17 - 55	A0048 - A0086	
	105	AMD and Retinal Therapies Excluding Anti-VEGF [RE]	56 - 82	A0103 - A0129	
	106	Eyelids: evaluation, analysis and therapeutics [EY]	83 - 99	A0246 - A0262	
	107	Lacrimal and adnexal diseases [EY]	100 - 114	A0263 - A0277	
	108	Ocular surface health and disease [CO, AP]	115 - 162	B0029 - B0076	
	109	Pediatric ophthalmology [CL]	163 - 189	B0317 - B0343	
	110	Diabetic retinopathy [PH]	190 - 207	C0001 - C0018	
	111	AMD [PH]	208 - 246	C0019 - C0057	
	112	Presbyopia and IOL [VI]	247 - 268	C0106 - C0127	
	113	OCT - New Biomarkers and Technical Improvements [MOI]	269 - 300	C0170 - C0201	
	114	Ocular structures in development, health, and disease [AP]	301 - 337	C0234 - C0270	
	1 – 2:45pm	128	Biochemical and molecular mechanisms of age-related macular degeneration [BI]	341 - 373	A0001 - A0033
		129	Gene editing: methods and outcomes in ocular cells [BI]	374 - 386	A0034 - A0046
		130	Macular Edema [RE]	387 - 402	A0087 - A0102
131		Uveitis and Scleritis: Therapeutics [IM]	403 - 427	A0221 - A0245	
132		Cataract Surgery Procedures I [LE]	428 - 449	A0288 - A0309	
133		Surgery and Wound Healing I [GL]	450 - 493	A0310 - A0353	
134		Infection and Immunology [IM]	494 - 521	B0001 - B0028	
135		Corneal Stroma and Keratocytes [CO]	522 - 534	B0137 - B0149	
136		Stem Cell Therapy [RC]	535 - 559	B0150 - B0174	
137		New Insights on Retinogenesis from Organoids [RC]	560 - 575	B0175 - B0190	
138		Retinal Development [RC]	576 - 597	B0191 - B0212	
139		Outer Retina Function [VN]	598 - 607	B0270 - B0279	
140		Neuro-ophthalmology [EY]	608 - 627	B0280 - B0299	
141		Vision Rehabilitation Devices and Training [LV, CL, VN]	628 - 643	C0062 - C0073	
142	AO, OCT and imaging techniques and applications [PH, VI, VN]	644 - 675	C0202 - C0233		
143	Insights into myopia - animal models to human studies [AP]	676 - 715	C0271 - C0310		
3:15 – 5pm	157	AMD and Anti-VEGF I [RE]	798 - 841	A0130 - A0173	
	158	Vitreoretinal Surgery: Clinical Science [RE]	842 - 888	A0174 - A0220	
	159	Lens Development and Cell Biology [LE]	889 - 898	A0278 - A0287	
	160	Ocular Surface Disease Microbiome [CO]	899 - 908	B0077 - B0086	
	161	Dry Eye Clinical I [CO]	909 - 958	B0087 - B0136	
	162	Photoreceptor Degeneration [RC]	959 - 986	B0213 - B0240	
	163	Retinal degeneration: models and repair strategies [RC]	987 - 1015	B0241 - B0269	
	164	Strabismus: Basic and Clinical [EY]	1016 - 1032	B0300 - B0316	
	165	Diabetic eye disease screening and management [CL]	1033 - 1060	B0344 - B0371	
	166	Low Vision and Vision Rehabilitation Services [LV, CL]	1061 - 1072	C0074 - C0085	
	167	Normal and Aging Vision - Measurement [VI]	1073 - 1092	C0086 - C0105	
168	OCT - Clinical Application [MOI]	1093 - 1134	C0128 - C0169		

Poster board numbers correspond to poster location in Exhibit Hall; A = Poster Area A , B = Poster Area B and C = Poster Area C.

Room 310

Sunday, April 29, 2018 8:15 AM-10:15 AM

Biochemistry/Molecular Biology / Cornea / Genetics / Glaucoma / Lens / Physiology/Pharmacology / Retina / Retinal Cell Biology

101 Proteostasis networks: challenges and therapeutic opportunities for ocular diseases

Proteostasis, or protein homeostasis, is a key achievement of cells that impact critically on virtually every aspect of cell physiology, functions and lifespan. The cellular machinery that underpins Proteostasis integrates complex, multi-layered regulatory networks affecting global protein synthesis, protein trafficking and processing, folding, aggregation and degradation rates. Given the functional and structural heterogeneity and diversity of ocular cells/tissues, the mechanisms by which Proteostasis is coordinated within and between cells are central to understanding and managing the eye diseases. Recent findings concerning mechanisms of action of various risk factors and disease related variants of proteins with different primary functions increasingly point to failure of Proteostasis as a unifying pathway for ocular pathogenesis. This symposium will enable participants to discuss the pathways, translational opportunities and challenges for the management of eye diseases offered by targeting Proteostasis networks.

Moderators: Luminita I. Paraoan, Marina S. Gorbatyuk and Astra Dinculescu

— 8:15 Introduction

1 — 8:20 An Emergent Paradigm for Vision Research: Proteostasis, Variation and Precision Management of Human Disease. William E. Balch^{1,2}. ¹Molecular Medicine, The Scripps Research Institute, La Jolla, CA; ²The Skaggs Institute for Chemical Biology, La Jolla, CA

2 — 8:50 Immunoproteasome regulates multiple signaling pathway in ther Retinal Pigment Epithelium. Deborah A. Ferrington. *Ophthalmology & Visual Neuroscience, University of Minnesota, Shoreview, MN*

3 — 9:10 The role of protein biogenesis, trafficking and ER homeostasis in retinitis pigmentosa. Michael E. Cheetham. *UCL Institute of Ophthalmology, London, United Kingdom*

4 — 9:30 Photoreceptor autophagy: role in maintaining homeostasis. David N. Zacks. *Univ of Michigan-Kellogg Eye Ctr, Ann Arbor, MI *CR*

5 — 9:50 Molecular details of protein misfolding in myocilin-associated glaucoma. Raquel L. Lieberman. *School of Chemistry & Biochemistry, Georgia Institute of Technology, Atlanta, GA*

— 10:05 Panel Discussion

Room 311

Sunday, April 29, 2018 8:15 AM-10:15 AM

Biochemistry/Molecular Biology / Eye Movements/Strabismus/Amblyopia/Neuro-Ophthalmology / Immunology/Microbiology / Physiology/Pharmacology / Retinal Cell Biology / Visual Neuroscience / Visual Psychophysics/ Physiological Optics

102 Ocular and Systemic Circadian Rhythms: Implications in Vision Research

Circadian rhythms are ubiquitous throughout the body, and evidence shows that daily rhythms are subserved by light input to the intrinsically photosensitive retinal ganglion cells, as well as endogenous clocks. This symposium will allow participants to consider how circadian rhythms and diurnal patterns affect the eye and other systemic processes that are important in basic research and clinic.

Moderators: Lisa A. Ostrin and Paul D. Gamlin

— 8:15 Introduction & Welcome

6 — 8:20 Molecular Architecture of the Mammalian Circadian Clock. Joseph S. Takahashi¹. ¹University of Texas Southwestern, Dallas, TX; ²Howard Hughes Medical Institute, Dallas, TX*CR

7 — 8:39 Retinal and brain circuits underlying the effects of light on behavior. Samer Hattar. *National Institute of Mental Health, Bethesda, MD*

8 — 8:58 The Retina, Dopamine, and Circadian Rhythms. P. Michael Iuvone. *Ophthalmology, Emory University Sch of Med, Atlanta, GA*

9 — 9:17 How does melanopsin help us see? Robert J. Lucas. *University of Manchester, Manchester, United Kingdom *CR*

10 — 9:36 ipRGCs in retinal disease. Beatrix K. Feigl^{1,2}. ¹Inst of Hlth & Biomed Innovation, Queensland University of Technology, Brisbane, Queensland, Australia; ²Queensland Eye Institute, Brisbane, Queensland, Australia

11 — 9:55 Circadian rhythms in eye growth. Debora L. Nickla. *Biosciences, New England College of Optometry, Boston, MA*

Ballroom A

Sunday, April 29, 2018 8:15 AM-10:15 AM

Retinal Cell Biology / Anatomy and Pathology/ Oncology / Biochemistry/Molecular Biology / Retina / Retinal Cell Biology / Visual Neuroscience / Visual Psychophysics/ Physiological Optics

103 Retinal architecture and function: new insights

The symposium will bring together state-of-the art knowledge of the retinal connectome, highlighting new findings and placing them in the context of brain wiring diagram. Examples of normal and pathological retinal architecture will be given illustrating the multiple, newly identified roles of bipolar cells, and their exquisite stratification in the inner retina; the unique features of the human fovea; remodeling and corruption of retinal architecture in degenerative diseases; the unique contribution of glial cells to retinal physiology and pathological conditions. Destined to everyone with interests in the retina as part of the brain, either using basic or applied approaches.

Moderator: Ulrike Grunert

— 8:15 Introduction

12 — 8:25 Comparative connectomics of the mammalian retina. Kevin L. Briggman. *Computational Neuroethology, caesar, Bonn, Germany*

— 8:43 Discussion

13 — 8:47 The functional organisation of bipolar cell pathways. Thomas Euler^{1,2}. ¹CIN, University of Tuebingen, Tuebingen, Germany; ²Institute of Ophthalmic Research, University of Tuebingen, Tuebingen, Germany

— 9:05 Discussion

14 — 9:09 Discovering visual pathway origins in the center of the human foveola with connectomics. Dennis M. Dacey^{1,2}. ¹Biological Structure, University of Washington, Seattle, WA; ²Washington National Primate Research Center, University of Washington, Seattle, WA

— 9:27 Discussion

15 — 9:31 Circuit remodeling in retinal degeneration. Bryan W. Jones. *Ophthalmology, Moran Eye Center, Salt Lake City, UT*

— 9:49 Discussion

16 — 9:53 Retinal glia - physiology and disease. Thomas W. Gardner. *Ophthalmology, Kellogg Eye Ctr Univ of Michigan, Ann Arbor, MI *CR*

— 10:11 Discussion

Exhibit Hall A0048-A0086

Sunday, April 29, 2018 8:15 AM-10:00 AM

Retina

104 Retinitis pigmentosa (clinical)**Moderators: Stephen H. Tsang and David G. Birch****17 — A0048 Cell surgery in retinitis pigmentosa: restoration and visual prognosis.**

Paolo G. Limoli¹, E. Vingolo², M. Nebbioso³, S. Scalinci⁴, M. U. Morales⁵, C. S. Limoli¹.
¹Ophthalmology Department, Low Vision Research Center, Milan, Italy; ²Ophthalmology Department, Terracina Hospital, Terracina, Italy; ³Department of Sense Organs, La Sapienza University, Policlinico Umberto I, Roma, Italy; ⁴Ophthalmology Department, DIMEC University, Bologna, Italy; ⁵Ophthalmology Department, Nottingham University, Nottingham, United Kingdom

18 — A0049 Molecular Genetic Screening In A Series Of 852 Patients With Inherited Retinal Dystrophies From One German Reference Center.

Ulrich Kellner^{1,2}, H. Stoehr³, S. Kellner^{4,2}, S. Weintz^{1,2}, G. Farmand¹, B. Lindau¹, B. H. Weber³.
¹AugenZentrum Siegburg, MVZ ADTC Siegburg GmbH, Bonn, Germany; ²RetinaScience, Bonn, Germany; ³Institute for Human Genetics, University Regensburg, Regensburg, Germany

19 — A0050 Phenotypic expression of EYS mutations in patients with autosomal recessive retinitis pigmentosa in northern Sweden.

Marie Burstedt¹, F. Jonsson², I. Westin², I. Golovleva².
¹Department of Clinical Sciences, Ophthalmology, Umeå University, Umeå, Sweden; ²Department of Medical Bioscience/Medical and Clinical Genetics, Umeå University, Umeå, Sweden

20 — A0051 Long-term clinical course of Japanese patients with retinitis pigmentosa caused by mutations in pre-mRNA splicing gene.

Kentaro Kurata, K. Hosono, Y. Hotta. Hamamatsu University School of Medicine, Hamamatsu, Japan

21 — A0052 Association between Macular Blood Flow and Choroidal Structure and their Relationships to Visual Function in Retinitis Pigmentosa.

Yusuke Murakami¹, J. Funatsu¹, S. Nakatake¹, K. Fujiwara¹, T. Tachibana¹, T. Hisatomi¹, S. Yoshida¹, S. Sonoda², T. Sakamoto³, K. Sonoda¹, Y. Ikeda¹.
¹Department of Ophthalmology, Kyushu University, Fukuoka, Fukuoka, Japan; ²Ophthalmology, Kagoshima University, Kagoshima, Japan

22 — A0053 The Associations between Visual Acuity and Retinal Thickness in Retinitis Pigmentosa Using The Optical Coherence Tomography.

Amal Q. Aldarwesh¹, h. mofty¹, S. M. Fawzy², R. S. Al-Qahtani².
¹Optometry and Visual Science, King Saud University, Riyadh, Saudi Arabia; ²Department of Ophthalmology, King Abdul-Aziz University Hospital (KAU), Riyadh, Saudi Arabia; ³Ophthalmology, Ain Shams University, Cairo, Egypt

23 — A0054 CEP290 mutation spectrum in Germany and delineation of the associated phenotype.

Ditta Zobor¹, B. Feldhaus¹, N. Weisschuh¹, F. Nasser¹, E. Zrenner^{1,3}, S. KohF.
¹Institute for Ophthalmic Research, University of Tübingen, Germany, Tübingen, Germany; ²Molecular Genetics Laboratory, Institute for Ophthalmic Research, University of Tübingen, Germany, Tübingen, Germany; ³Werner Reichardt Center for Integrative Neuroscience, University of Tübingen, Germany, Tübingen, Germany

24 — A0055 Step-wise genetic diagnosis for retinitis pigmentosa and Usher syndrome by Next-Generation Sequence.

Shogo Numa, A. Oishi, M. Oishi, T. Hasegawa, K. Ishihara, A. Miyata, A. Tsujikawa. Ophthalmology and Visual Sciences, Kyoto University Graduate School of Medicine, Kyoto, Kyoto, Japan

25 — A0056 Relationship of visual field sensitivity in central 10-degrees to thickness of different retinal layers in eyes of patients with retinitis pigmentosa.

Akira Sayo, S. Ueno, T. Kominami, D. Inooka, H. Terasaki. Nagoya University, Nagoya, AICHI, Japan

26 — A0057 CRISPR-Cas9 RNP complex, delivered via lipid nanoparticle, is effective in disruption of RHO gene in vitro.

Amirmohsen Arbabi¹, C. Spee¹, D. R. Hinton¹, P. Qin², C. M. Craft¹, S. F. Hamm-Alvarez¹, H. Ameri¹.
¹USC Roski Eye Institute, Keck School of Medicine, University of Southern California, Los Angeles, CA; ²Chemistry, University of Southern California, Los Angeles, CA

27 — A0058 Quantification of macular microvascular changes in patients with retinitis pigmentosa using optical coherence tomography angiography.

Daiki Inooka, S. Ueno, T. Kominami, A. Sayo, S. Okado, Y. Ito, H. Terasaki. Department of Ophthalmology, Nagoya University Graduate School of Medicine, Nagoya, Japan

28 — A0059 Relationships among Spectral Domain Optical Coherence Tomography (SD-OCT) Parameters and Semi-automated Kinetic Perimetry (SKP) Parameters in Subjects with Autosomal Dominant Retinitis Pigmentosa (adRP).

Kirsten G. Locke¹, D. C. Hood², D. G. Birch^{1,2}.
¹Retina Foundation of the Southwest, Dallas, TX; ²Department of Ophthalmology, UT Southwestern Medical Center, Dallas, TX; ³Visual Science Laboratory, Department of Psychology and Ophthalmology, Columbia University, New York, NY *CR

29 — A0060 Use of optical coherence tomography angiography to estimate central visual function.

Kosuke Nakajima, S. Asano, T. Inoue, R. Obata, R. Asaoka, M. Aihara. Ophthalmology, University of Tokyo, Tokyo, Japan

30 — A0061 Test-retest Reliability of MP1 and MAIA Microperimetry in Retinitis Pigmentosa.

Mustafa Iftikhar, J. Wang, P. A. Campochiaro. Wilmer Eye Institute, Baltimore, MD

31 — A0062 Lack of Association Between Fundus Autofluorescence Loss and Retinal Vascular Diameter in Retinitis Pigmentosa.

Hossein Ameri, A. Arbabi, P. Karamian, M. Shahidi. USC Roski Eye Institute, Keck School of Medicine, University of Southern California, Los Angeles, CA

32 — A0063 Investigating plasticity in Retinitis Pigmentosa using retinotopic representation of the lesion projection zone.

Jeiran Choupan¹, E. Jung¹, V. R. Patel¹, C. Purington¹, N. Stiles¹, J. I. Morgan¹, A. S. Bock³, K. K. Gokoffski¹, J. Wang¹, M. Law¹, A. Moshfeghi¹, A. H. Kashani¹, H. Ameri¹, G. K. Aguirre², J. D. Weiland², Y. Shi¹.
¹University of Southern California, Pasadena, CA; ²Departments of Biomedical Engineering and Ophthalmology and Visual Sciences, University of Michigan, Ann Arbor, MI; ³University of Pennsylvania, Philadelphia, PA

33 — A0064 Assessment of Central Visual Function in Patients with Retinitis Pigmentosa.

Kohta Fujiwara^{1,2}, Y. Ikeda¹, Y. Murakami¹, T. Tachibana¹, J. Funatsu¹, Y. Koyanagi¹, S. Nakatake¹, N. Yoshida¹, S. Nakao¹, T. Hisatomi¹, S. Yoshida¹, T. Yoshitomi², T. Ishibashi¹, K. Sonoda¹.
¹Kyushu University, Fukuoka, Japan; ²Akita University, Akita, Japan

34 — A0065 Recombinant human Nerve Growth Factor (rhNGF) eye drops in patients with retinitis pigmentosa (RP) and cystoid macular edema (CME).

Paolo Rama¹, G. Ferrari¹, A. Colucci¹, L. Colombo², L. M. Rossetti³, G. Staurenghi⁴, A. Lambiasi⁵, M. Sacchetti⁵.
¹Ophthalmology and Ocular Surface Unit, San Raffaele Scientific Institute, Milano, Italy; ²Eye clinic, San Paolo Hospital, Milan, Italy; ³Eye clinic, University of Milan, Milan, Italy; ⁴Dept of Clinical Sci (Luigi Sacco), University of Milan, Milan, Italy; ⁵Sense Organs, Sapienza University, Rome, Italy ✗

35 — A0066 Rasch analysis and computer adaptive testing system simulations of the hereditary retinal diseases-specific quality of life item banks.

Jyoti Khadka, M. Prem Senthil, K. Pesudovs. Optometry and Vision Science, Flinders University, Adelaide, South Australia, Australia

36 — A0067 Targeted Next Generation Sequencing Reveals a Novel Frameshift MERTK Mutation in Retinitis Pigmentosa.

Mu Yang^{1,2}, S. Li^{1,2}, X. Zhu², Z. Yang^{2,1}.
¹Chengdu Institute of Biology, University of Chinese Academy of Sciences, Chengdu, Si Chuan, China; ²Sichuan Academy of Medical Sciences and Sichuan Provincial People's Hospital, Chengdu, China

37 — A0068 Associations Between Outer Retinal Structures and Focal Macular Electroretinograms in Patients with Retinitis Pigmentosa.

Taro Kominami^{2,1}, S. Ueno¹, H. Terasaki¹.
¹ophthalmology, Nagoya University graduate school of medicine, Nagoya-city, AICHI, Japan; ²Ophthalmology, Nagoya Memorial Hospital, Nagoya-city, Japan

- 38 — A0069 Prevalence of mutations in PDE6B gene in autosomal recessive retinitis pigmentosa in the aim of gene therapy.** Jean-Yves Deslandes¹, M. Giraud², B. Isidor³, P. Talarmin², I. Maury², S. Marconi¹, G. Le Meur³, M. Weber³, I. Meunier⁴, C. Hamel⁴, S. Bezieau². ¹Horama, Paris, France; ²Molecular Genetics Laboratory, University Hospital of Nantes, Nantes, France; ³Ophthalmology Clinic, University Hospital of Nantes, Nantes, France; ⁴National centre in inherited retinal dystrophies, University Hospital of Montpellier, Montpellier, France *CR
- 39 — A0070 Phenotypic variability in patients with RPI mutations.** Rachel M. Huckfeldt, C. Murphy, B. P. Hafley, D. G. Yavvas, L. H. Young, E. A. Pierce, E. Place. Massachusetts Eye and Ear Infirmary, Boston, MA
- 40 — A0071 Improvements in test-retest variability of static perimetry by censoring results with low sensitivity in retinitis pigmentosa.** Anushka Mistry¹, L. Nehmad¹, R. Khan¹, G. Dagnelie², J. S. Pollack³, A. K. Bittner¹. ¹College of Optometry, Nova Southeastern University, Davie, FL; ²Johns Hopkins Hospital, Baltimore, MD; ³Ophthalmology, Rush University Medical Center, Chicago, IL
- 41 — A0072 RPGR gene editing with CRISPR-Cas 9 system in Retinal degeneration 9 (Rd9) mice to correct a disease mutation and phenotype.** Amal Alsufyan^{1,2}, W. Yu⁴, J. Gumerson¹, L. Dong³, Z. Wu⁴, T. Li¹. ¹Retinal Cell Biology and Degeneration Section, The National Eye Institute, Bethesda, MD; ²Department of Chemistry and Biochemistry, George Mason University, Fairfax, VA; ³Genetic Engineering Core, The National Eye Institute, Bethesda, MD; ⁴Ocular Gene Therapy Core, The National Eye Institute, Bethesda, MD
- 42 — A0073 Novel RPI Mutations in Autosomal Recessive Retinitis Pigmentosa by targeted next generation sequencing.** Shujin Li^{1,2}, M. Yang^{1,2}, Z. Yang^{1,2}, X. Zhu^{1,2}. ¹Chengdu Institute of Biology, University of Chinese Academy of Sciences, Chengdu, Sichuan, China; ²Sichuan Provincial Key Laboratory for Human Disease Gene Study, Sichuan Provincial People's Hospital, University of Electronic Science and Technology of China, Chengdu, China
- 43 — A0074 Extensive phenotyping in CRB1-associated retinal dystrophies: defining clinical endpoints for gene therapy trials.** Mays Talib¹, M. van Schooneveld¹⁰, J. Wijnholds¹, M. van Genderen², N. Schalijs-Delofs¹, R. Florijn³, F. P. Cremers⁴, I. Born⁵, A. A. Thiadens⁶, C. C. Hoyng⁷, C. C. Klaver^{8,7}, A. A. Bergen^{3,9}, C. Boon^{1,10}. ¹Ophthalmology, Leiden University Medical Center, Leiden, Netherlands; ²Bartiméus, Diagnostic Centre for complex visual disorders, Zeist, Netherlands; ³Clinical Genetics, Academic Medical Center, Amsterdam, Netherlands; ⁴Human Genetics and Donders Institute for Brain, Cognition and Behaviour, Radboud University Medical Center, Nijmegen, Netherlands; ⁵Rotterdam Eye Hospital, Rotterdam, Netherlands; ⁶Ophthalmology, Erasmus Medical Center, Rotterdam, Netherlands; ⁷Ophthalmology, Radboud University Medical Center, Nijmegen, Netherlands; ⁸Ophthalmology and Epidemiology, Erasmus Medical Center, Rotterdam, Netherlands; ⁹The Netherlands Institute for Neuroscience (NIN-KNAW), Amsterdam, Netherlands; ¹⁰Ophthalmology, Academic Medical Center, Amsterdam, Netherlands *CR
- 44 — A0075 Pigmentary autosomal dominant familial retinopathy of penetrance and variable expressivity: Report of a deletion not reported in the human rhodopsin gene in a series of family cases.** Maria Moussalli. OFTALMOLOGIA, Hospital Italiano, Capital Federal, BUENOS AIRES, Argentina
- 45 — A0076 Progression of Retinitis Pigmentosa on Multimodal Imaging: The PREP-1 Study.** Syed Mahmood A. Shah, M. Iftikhar, B. Usmani, A. Sanyal, R. Kaur, M. Lemus, A. Nefalar, S. A. Kherani, S. Sodhi, S. Bagheri, E. M. Schonbach, N. Junaid, P. A. Campochiaro, H. P. Scholl. Wilmer Eye Institute, Baltimore, MD *CR
- 46 — A0077 Early Structural and Functional Abnormalities in Leber Congenital Amaurosis Caused by Mutations in RDH12.** Tomas S. Aleman, K. E. Uyhazi, L. Serrano, S. J. Bowman, D. J. Pearson, A. M. Maguire, J. Bennett. Department of Ophthalmology, Scheie Eye Institute, Philadelphia, PA
- 47 — A0078 A novel mutation in KIF3B in a family with dominant retinitis pigmentosa and polydactyly.** Stephen P. Daiger^{1,2}, L. S. Sullivan¹, S. J. Bowne¹, E. L. Cadenal¹, K. M. Bujakowska⁴, E. A. Pierce⁴, M. B. Gorin³, X. Latypova⁵, E. E. Davis⁵, N. Katsanis⁵, L. Martin⁵, L. Legeai-Mallet^{6,7}, B. Cogne⁸, S. Bezieau⁸, T. Besnard⁸, B. Isidor⁸. ¹Human Genetics Center, School Pub Hlth, Univ Texas Hlth Sci Ctr Houston, Houston, TX; ²Ruiz Dept. of Ophthalmology and Visual Science, The Univ. of Texas Health Science Center, Houston, TX; ³Jules Stein Eye Institute and Dept. of Ophthalmology, Univ. of California Los Angeles, Los Angeles, CA; ⁴Ocular Genomics Institute, Massachusetts Eye and Ear Infirmary, Boston, MA; ⁵Center for Human Disease Modeling, Duke Univ. Medical Center, Durham, NC; ⁶Université Paris Descartes, Sorbonne Paris Cité, Paris, France; ⁷Hôpital Necker-Enfants Malades, Paris, France; ⁸CHU de Nantes, Nantes, France
- 48 — A0079 A Natural History Study of Visual Function in Patients with Usher Syndrome Type 1C.** Meredith H. Hartman¹, K. N. Robillard², V. Sun³, I. Lopez³, M. Ibrahim³, K. Walsdorf³, M. Reinoso¹, R. K. Koenoekoop³, J. J. Lentz². ¹Ophthalmology, Louisiana State University Health Sciences Center, New Orleans, LA; ²Louisiana State University Health Sciences Center, Neuroscience Center of Excellence, New Orleans, LA; ³Pediatric Surgery, Montreal Children's Hospital, McGill University Health Center, Montreal, Quebec, Canada; ⁴School of Medicine, Louisiana State University Health Sciences Center, New Orleans, LA
- 49 — A0080 Morpho-functional links in Usher Syndrome: ultra-widefield fundus autofluorescence and optical coherence tomography findings and their correlation with visual acuity and electrophysiology findings.** Nina Mustafic¹, F. Ristoldo¹, A. Invernizzi^{1,2}, R. V. Jamieson³, J. R. Grigg¹. ¹Save Sight Institute, The University of Sydney, Sydney, New South Wales, Australia; ²Department of Biomedical and Clinical Science "L. Sacco", Luigi Sacco Hospital, University of Milan, Milan, Italy; ³Children's Medical Research Institute, The University of Sydney, Sydney, New South Wales, Australia *CR
- 50 — A0081 Longitudinal Reductions in Thickness of Foveal Inner Retinal Layers in Relation to Progressive Vision Loss in Retinitis Pigmentosa Patients.** Robert Zusman¹, A. Carass², Y. He², J. Prince², H. S. Ying², G. Dagnelie², A. Vinnett², A. K. Bittner¹. ¹Nova Southeastern University, Port Charlotte, FL; ²Johns Hopkins University, Baltimore, MD ✗
- 51 — A0082 Quantitative comparison of near-infrared versus short-wave autofluorescence imaging in monitoring progression of retinitis pigmentosa.** Ruben Jauregui^{2,1}, x. cui³, J. Duong¹, S. H. Tsang^{2,3}. ¹Weill Cornell Medicine, New York, NY; ²Ophthalmology, Edward S Harkness Eye Institute, Columbia University, New York, NY; ³Jonas Children's Vision Care, and Bernard & Shirlee Brown Glaucoma Laboratory, Columbia University, New York, NY; ⁴Biostatistics, Columbia University, New York, NY; ⁵Eye Institute & School of Optometry and Ophthalmology, Tianjin Medical University Eye Hospital, Tianjin, China
- 52 — A0083 One-year outcomes of dexamethasone implant versus oral acetazolamide for the treatment of cystoid macular edema in patients with retinitis pigmentosa.** Daniele Veritti^{1,2}, V. Sarao^{1,2}, K. De Nadai^{4,3}, F. Parmeggiani³, P. Lanzetta^{1,2}. ¹Department of Medicine - Ophthalmology, University of Udine, Udine, Italy; ²Istituto Europeo di Microchirurgia Oculare - IEMO, Udine, Italy; ³Department of Biomedical and Speciality Surgical Sciences, University of Ferrara, Ferrara, Italy; ⁴Center for Retinitis Pigmentosa of Veneto Region, Civil Hospital of Camposampiero, Azienda ULSS 6 Euganea, Padova, Italy *CR

53 — A0084 Investigating the usefulness of fundus autofluorescence in retinitis pigmentosa.

Saori Tsuneyoshi, K. Azuma, T. Inoue, R. Asaoka, M. Aihara, R. Obata. Department of Ophthalmology, University of Tokyo Hospital, Tokyo, Japan

54 — A0085 Full-Field Stimulus Thresholds (FSTs) in Subjects with Inherited Retinal Degenerations (IRDs) – a 10 Years Review.

Martin Klein¹, P. Mejia¹, D. Galles¹, D. G. Birch^{1,2}. ¹Retinal Degenerations, Retina Foundation of the Southwest, Dallas, TX; ²Ophthalmology, UT Southwestern Medical Center, Dallas, TX

55 — A0086 Phase I/II study to evaluate the safety and biological activity of HORA-PDE6B in patients with PDE6B retinitis pigmentosa (MIM#613801).

Le Meur Guilene¹, P. Lebranchu¹, j. Deltour¹, F. Billaud¹, N. Delaunay², F. Lallemand², S. Marconi², M. Weber¹. ¹Ophthalmology Clinic, University Hospital of Nantes, NANTES, France; ²Horama Sa, Paris, France *CR, ✕

Exhibit Hall A0103-A0129

Sunday, April 29, 2018 8:15 AM-10:00 AM

Retina**105 AMD and Retinal Therapies Excluding Anti-VEGF****56 — A0103 PDGFR β blockade inhibits choroidal neovascularization and fibrosis in a laser-induced CNV model in mice.**

Ye Liu, K. Noda, D. Wu, M. Murata, A. Kanda, S. Ishida. Laboratory of Ocular Cell Biology and Visual Science, Department of Ophthalmology, Faculty of Medicine and Graduate School of Medicine, Hokkaido University, Sapporo, Hokkaido, Japan *CR

57 — A0104 Subretinal Fibrosis Model in Laser-Induced Choroidal Neovascularization (CNV) Mice.

Lichun Zhong. Ocular Science Department, Toxikon Corporation, Bedford, MA

58 — A0105 Firsts steps in the development of a topical CeO₂NPs treatment to fight dry AMD progression using the DKOrd8 mouse model.

Anna Badia¹, A. Salas Torras¹, I. Salvo Ibanez², B. Ferreira de Souza¹, E. Casals², V. Puntès², M. A. Zapata¹, L. Fontrodona¹, J. Garcia-Arumi¹. ¹Ophthalmology, Vall d'Hebron Research Institute, Sabadell, Barcelona, Spain; ²Pharmacokinetic Nanoparticles, Vall d'Hebron Research Institute, Barcelona, Barcelona, Spain

59 — A0106 Effect of intravitreal triamcinolone acetate injections on persistent sub-retinal fluid in wet-AMD patients receiving conventional anti-VEGF therapy.

Danielle Wentzell^{1,2}, C. Jackman². ¹Memorial University of Newfoundland, St. John's, Newfoundland, Canada; ²Jackman Eye Institute, St. John's, Newfoundland, Canada

60 — A0107 Discovery and Planned Optimization of a Complement Factor C3-Inactivating Alterase, CB-2782.

Eric Furfine^{1,2}, M. Stanton¹, B. Kumar², N. Usman², D. Sloane², M. Popkov², E. Madison². ¹Mosaic Biosciences, Lincoln, MA; ²Catalyst Biosciences, South San Francisco, CA *CR

61 — A0108 Novel Retina Specific Laminin Isoforms Recapitulate Retinal Interphotoreceptor Matrix to Generate Human Embryonic Stem Cell-derived Photoreceptors.

Hwee Goon Tay¹, Z. Cai¹, Y. Sun¹, J. Guo^{1,2}, A. Moreno-Moral¹, W. Tan¹, K. Tryggvason^{1,2}. ¹Cardiovascular and Metabolic Disorders, DUKE NUS Medical School, Singapore, Singapore; ²Department of Medical Biochemistry and Biophysics, Karolinska Institute, Stockholm, Sweden

62 — A0109 Dynamics of inflammatory factors in aqueous humor under Ranibizumab or Aflibercept treatment for age-related macular degeneration.

Ryosuke Motohashi², H. Noma², K. Yasuda², O. Kotake², H. Goto¹, M. Shimura². ¹Tokyo Medical University, Tokyo, Japan; ²Tokyo Medical University, Hachioji Medical Center, Tokyo, Japan

63 — A0110 PEG-Fab Conjugates with tunable hydrodynamic radii for long-acting delivery.

Guannan He, M. Paluch, G. Han, W. Sandoval, P. Hass. Genentech Inc, South San Francisco, CA *CR

64 — A0111 P2X7R inhibition activates autophagy and impairs the inflammasome response in the RPE.

James T. Handa¹, H. Eilken², C. Eberhart¹, M. Karlstetter², H. Schirok², M. Yazdankhah¹, P. Shang¹, M. d. Cano¹, J. S. Mumm¹, A. Zink², C. Terjung², B. Kalthof², D. Sinha¹. ¹Johns Hopkins Wilmer Eye Inst, Lutherville, MD; ²Bayer Pharmaceuticals, Wuppertal, Germany *CR

65 — A0112 The ROCK inhibitor ripasudil suppresses angio-fibrotic switch in subretinal fibrovascular proliferation.

Iori Wada, S. Nakao, K. Ishikawa, M. Yamaguchi, Y. Kaizu, S. Yoshida, K. Sonoda. Kyushu university, Fukuoka, Fukuoka, Japan *CR

66 — A0113 Effect of two Laser Treatments on Bruchs Membrane Thickness in a Mouse Model of Age-related Macular Degeneration.

Elisabeth Richert¹, J. Tode¹, K. Vinh¹, A. K. Klettner², S. O. Koinzer¹, R. Lucius², R. Brinkmann³, J. Roeder¹. ¹Department of Ophthalmology, University of Kiel, Kiel, Germany; ²Anatomical Institute, University of Kiel, Kiel, Germany; ³Medical Laser Center Lübeck, Lübeck, Germany

67 — A0114 A novel bispecific inhibitor targeting VEGF and complement system suppressed angiogenesis in model of neovascular age-related macular degeneration.

Shiqi Yang, T. Li, X. Luo, X. Sun. Department of Ophthalmology, Shanghai General Hospital (Shanghai First People's Hospital), Shanghai Jiao Tong University School of Medicine, Shanghai, China

68 — A0115 A Surgical Technique for Subretinal Delivery of Human iPSC-RPE Patch.

Juan Amaral¹, S. T. Charles², V. Kristov³, A. Maminishkis³, K. Bharti¹. ¹Stem cell and translational research unit, National Eye Institute, Bethesda, MD; ²Charles Retina Institute, Memphis, TN; ³Section on Epithelial and Retinal Physiology and Disease, National Eye Institute, Bethesda, MD

69 — A0116 Systemic PDE 5/6 treatment of macular disease and dystrophy – long term vision and OCT results.

D Jackson Coleman, W. Lee, S. Chang, S. Daly, H. O. Lloyd, S. H. Tsang. Ophthalmology, Columbia University Medical Center, New York, NY ✕

70 — A0117 Systematic treatment with trimethoprim/sulfamethoxazole (Ditrim) significantly inhibits spontaneous choroidal neovascularization (sCNV) in the JR5558 mouse model.

YU SU^{1,2}, F. Rossato¹, A. Mackey¹, Y. Ng¹. ¹Schepens Eye Research Institute, Massachusetts Eye and Ear, Harvard Medical School Affiliate, Boston, MA; ²Ophthalmic Center, Renmin Hospital of Wuhan University, Wuhan, Hubei Province, China

71 — A0118 Gelatin-based Hydrogel as a Vehicle for Retinal Progenitor Cell Transplantation in Rat Retina.

Jeayoung Park^{1,2}, P. Baranov¹, H. Abdelgawad¹, A. Aydin¹, W. Niu³, M. Spector³, M. J. Young¹. ¹Schepens Eye Research Institute of Massachusetts Eye and Ear, Boston, MA; ²Yale School of Medicine, New Haven, CT; ³Department of Orthopedic Surgery, Brigham and Women's Hospital, Boston, MA

72 — A0119 APL-2, a Complement C3 Inhibitor, Slows the Growth of Geographic Atrophy Secondary to AMD: 18-month Results of a Phase 2 Trial (FILLY).

Charles C. Wyckoff^{1,2}, F. Grossi³. ¹Retina Consultants of Houston, Houston, TX; ²Blanton Eye Institute, Houston Methodist Hospital & Weill Cornell Medical College, Houston, TX; ³Apellis Pharmaceuticals, Inc., Crestwood, KY *CR, ✕

73 — A0120 Expression of an Anti-Inflammatory Peptide using a Minicircle-Plasmid delivery system in RPE Cell Culture.

Max Brinkmann¹, M. Kurz¹, M. Mandl¹, Z. Aherrahrou², A. Mohi¹, S. Grisanti¹, M. Ranjbar¹, M. Rudolf¹. ¹Department of Ophthalmology, University of Luebeck, Luebeck, Germany; ²Institute of Integrative and Experimental Genomics, University of Lübeck, Luebeck, Germany

74 — A0121 Use of Microperimetry and Visual Electrophysiology to Improve Success of Implantable Miniature Telescopic Lens in Patients with Central Macular Atrophy.

Paul Namkoong¹, Y. Yiannakou¹, L. H. Nguyen¹, K. Narain¹, R. Pham². ¹South Bay Retina Inc, Sunnyvale, CA; ²Surgery, O'Connor Hospital, San Jose, CA

- 75 — A0122 Efficacy of Micropulse Laser in Treatment of Idiopathic Polypoidal Choroidal Vasculopathy (PCV) Unresponsive to Aflibercept Injections.** Ahmed ALNAHRAWY^{1,2}, A. Goodluck¹, S. Younis¹. ¹Western Eye Hospital, Imperial College Healthcare NHS Trust, London, United Kingdom; ²Suez Canal University, Faculty of Medicine, Ismailia, Egypt
- 76 — A0123 First-in human study of SF0166 Topical Ophthalmic Solution in patients with neovascular age-related macular degeneration.** Omar Amirana¹, D. Edwards¹, B. Askew¹, D. S. Boyer², J. S. Heier³, P. K. Kaiser⁴. ¹SciFluor Life Sciences, Boston, MA; ²Retina Vitreous Associates, Beverly Hills, CA; ³Ophthalmic Consultants of Boston, Boston, MA; ⁴Cole Eye Institute, Cleveland, OH*CR, ✗
- 77 — A0124 Phase I/IIa Clinical Trial of Human Embryonic Stem Cell (hESC)-Derived Retinal Pigmented Epithelium (RPE, Opregen®) Transplantation in Advanced Dry Form Age-Related Macular Degeneration (AMD): Interim Results.** Eyal Banin¹, Y. Hemo¹, T. Jaouni¹, D. Marks-Ohana¹, M. Gurevich², O. Cuzzani³, D. S. Boyer⁴, B. Reubinoff⁵. ¹Ophthalmology, Hadassah-Hebrew Univ Med Ctr, Jerusalem, Israel; ²Cell Cure Neurosciences Ltd, Jerusalem, Israel; ³BioTime, Inc., Alameda, CA; ⁴Retina-Vitreous Associates Medical Group, Los Angeles, CA; ⁵Center for Embryonic Stem Cells and the Department of Gynecology and Obstetrics, Hadassah-Hebrew University Medical Center, Jerusalem, Israel *CR, ✗
- 78 — A0125 Measurement of the Dose of Triamcinolone Acetonide Produced by Office Based Centrifuge Concentration.** Nathan Farley¹, R. Komati¹, D. Albert¹, A. Zhang¹, K. Anderson¹, M. Ober². ¹Ophthalmology, Henry Ford Health System, Detroit, MI; ²Retina Consultants of Michigan, Southfield, MI; ³Rush Medical College, Chicago, IL *CR
- 79 — A0126 Incidence of ocular hypertension following intravitreal injection of 2mg triamcinolone.** Philip Storey^{1,2}, A. Obeid^{1,2}, M. Panchoy², J. Goodman², X. Gao^{1,2}, D. S. Borkar^{1,2}, D. Su^{1,2}, C. Regillo^{1,2}. ¹Retina Service, Wills Eye Hospital, Philadelphia, PA; ²Ophthalmology, Thomas Jefferson University, Philadelphia, PA
- 80 — A0127 In vivo Effects of CCFD9260S Following Intravitreal Administration to Cynomolgus Monkeys.** Helen S. Booter¹, N. Tassew¹, A. MacKenzie¹, H. Liu¹, D. O'Connor¹, F. Lorget¹, P. E. Miller², T. Streit³, T. M. Nork², J. N. Ver Hoeve², C. Stella¹, Y. Liu¹, D. Bumbaca¹, V. Bantsev¹. ¹Genentech, South San Francisco, CA; ²OSOD, Madison, WI; ³Covance, Madison, WI *CR
- 81 — A0128 Initial eight years of experience with the intravitreal dexamethasone implant: A retrospective chart review.** Josh O. Wallsh, C. Luths, E. Gallemore, R. Gallemore. Retina Macula Institute, Schenectady, NY
- 82 — A0129 The Effect of the Vitreous on the Localization and Outcomes of Intravitreal Injections of Sustained-Release Dexamethasone Implants.** Nicole Koullis^{1,2}, S. N. Moysidis^{3,2}, B. Burkemper², B. Do², A. A. Moshfeghi^{2,4}, H. Ameri², A. H. Kashani^{2,4}, N. A. Rao³, M. S. Humayun^{2,4}, D. C. Rodger^{2,4}. ¹William Beaumont Hospital, Oakland University William Beaumont School of Medicine, Royal Oak, MI; ²USC Roski Eye Institute, Department of Ophthalmology, Keck School of Medicine, University of Southern California, Los Angeles, CA; ³Associated Retinal Consultants, Oakland University William Beaumont School of Medicine, Royal Oak, MI; ⁴USC Institute for Biomedical Therapeutics, Los Angeles, CA
-
- Exhibit Hall A0246-A0262
Sunday, April 29, 2018 8:15 AM-10:00 AM
- Eye Movements/Strabismus/Amblyopia/Neuro-Ophthalmology**
- 106 Eyelids: evaluation, analysis and therapeutics**
-
- Moderator: Arvind Chandna**
- 83 — A0246 The permeability of eyelid skin to topically applied lidocaine.** Krisztina Emeriewen¹, G. Saleh^{1,2}, W. McAuley³, M. Cook¹. ¹Ophthalmology, Moorfields Eye Hospital, Bedford, United Kingdom; ²Institute of Ophthalmology, London, United Kingdom; ³Department of Pharmacy, Pharmacology and Postgraduate Medicine, University of Hertfordshire, Hatfield, United Kingdom
- 84 — A0247 An Alternative Surgical Approach for Marcus Gunn Jaw Wink Ptosis.** Karen E. Revere¹, A. Nti², W. Katowitz¹, J. A. Katowitz¹, G. Binenbaum¹. ¹Ophthalmology, Children's Hospital of Philadelphia, Philadelphia, PA; ²Ophthalmology, Scheie Eye Institute, Philadelphia, PA
- 85 — A0248 The Anterior Approach for Contact Lens Related Ptosis Correction.** Livia Teo^{1,3}, S. Lang^{2,3}, S. Jung^{2,3}, G. Teh^{2,3}. ¹Oculoplastics, Singapore National Eye Centre, Singapore, Singapore; ²Singapore National Eye Centre, Singapore, Singapore; ³Singapore Eye Research Institute, Singapore, Singapore
- 86 — A0249 A Mathematical Analysis of the Aesthetically Pleasing Eyelid.** Sagar Y. Patel¹, A. Chaulk², J. Stetter², V. Starks³, R. Mancini¹. ¹Ophthalmology, University of Texas Southwestern Medical Center, Dallas, TX; ²University of Texas Southwestern Medical Center, Dallas, TX; ³Ophthalmology, Massachusetts Eye and Ear Infirmary, Boston, MA
- 87 — A0250 Comparison of postoperative course of aponeurotic ptosis surgery in eyes with glaucoma filtration bleb and in eyes after intraocular surgery without bleb.** Risako Yamamoto¹, R. Shirakawa¹, T. Toyono¹, R. Sakata¹, R. Akiyama¹, Y. Aoyama¹, M. Noda^{1,2}, J. Yoshida¹, T. Miyai¹, T. Usui¹, M. Aihara¹. ¹The university of Tokyo hospital, Tokyo, Japan; ²Keio university hospital, Tokyo, Japan *CR
- 88 — A0251 Long Term Outcomes of Frontalis Suspension Surgery Using Autogenous Fascia Lata Slings in Children with Congenital Ptosis.** Michael R. Chua¹, D. M. Lo², J. A. Katowitz³, W. R. Katowitz³. ¹Ophthalmology, New York Eye and Ear Infirmary of Mount Sinai, New York, NY; ²Ophthalmology, New York University School of Medicine, New York, NY; ³Ophthalmology, The Children's Hospital of Philadelphia, Philadelphia, PA
- 89 — A0252 Goldmann Ptosis Visual Field Results in Eyes with Panretinal Photocoagulation.** Giancarlo A. Garcia^{1,2}, T. A. Vo¹, P. Ngai¹, M. A. Yonkers¹, J. P. Tao¹. ¹Gavin Herbert Eye Institute, University of California, Irvine, Irvine, CA; ²Byers Eye Institute, Stanford University, Palo Alto, CA
- 90 — A0253 Timing of Congenital Ptosis Repair in Relation to the Development of Strabismus.** Laura Kueny^{1,2}, H. de Beaufort². ¹Ophthalmology, Georgetown University/Washington Hospital Center, Washington, District of Columbia; ²Pediatric Ophthalmology, Children's National Medical Center, Washington, District of Columbia
- 91 — A0254 Evaluation of ocular surface condition and subjective happiness in blepharoplasty surgery.** Manami Kuze^{1,2}, M. Koizumi^{3,6}, Y. Tanaka⁶, K. Negishi¹, M. Ayaki^{4,5}. ¹Ophthalmology, Matsusaka Central General Hospital, Matsusaka, Mie, Japan; ²Ophthalmology, Mie University Graduate School of Medicine, Tsu, Mie, Japan; ³Plastic surgery, Koizumi Plastic surgery clinic, Nagoya, Aichi, Japan; ⁴Ophthalmology, Keio University School of Medicine, Shinjyuku, Tokyo, Japan; ⁵Ophthalmology, Ootake Eye Hospital Moon View Clinic, Yamato, Kanagawa, Japan; ⁶Ophthalmology, Matsusaka Municipal Hospital, Matsusaka, Mie, Japan
- 92 — A0255 Ocular Pyogenic Granulomas Treated with Topical Timolol.** Arpine Barsegian¹, N. Silverman^{1,2}, R. Shinder¹. ¹Department of Ophthalmology, SUNY Downstate Medical Center, Brooklyn, NY; ²University of Washington Eye Institute at Harborview, Seattle, WA
- 93 — A0256 NEW METHOD TO SIMULATE DERMATOCHALASIS SURGERY.** Eduardo Arenas Archila, A. MIETH. ASOCORNEA, BOGOTA, DC, Colombia

94 — A0257 Total or Subtotal Replacement of Tarsal Plate by Silicone Plate for Upper Eye Lid Reconstruction in Malignant Tumors. Brian Fowler¹, S. Manda^{2,1}, J. Jensen¹, K. DeAngelis¹, J. C. Fleming¹. ¹Ophthalmology, UTHSC, Hamilton Eye Institute, Memphis, TN; ²Ophthalmology, Medical College Calcutta, Calcutta, India

95 — A0258 The Botulinum Toxin use to reduce the free skin graft contraction after reconstruction of upper eyelid. Maria Zakharova. department of reconstructive and plastic surgery, The S. Fyodorov Eye Microsurgery Federal State Institution, Moscow, Russian Federation

96 — A0259 The use and viability of two autologous grafts as anterior and posterior lamellar spacers in eyelid reconstruction. Ameet Goyal, A. Goyal. Ophthalmology, New York Medical College, Rye, NY

97 — A0260 Quantitative Changes in Corneal Exposure during Vertical Gaze: A Clinical Model for Eyelid Contour Analysis. Yadan Quan¹, T. Zhang², M. Yu¹, R. Lu¹. ¹Zhongshan ophthalmic Center, Sun Yat-sen University, Guangzhou, China; ²Plastic Surgery Hospital, Peking Union Medical College (PUMC), CAMS, Beijing, China

98 — A0261 Self-Adhering Magnetic Device to Treat Corneal Exposure. Safwan Tayeb, R. Michael, P. Setabutr, C. Q. Yu, M. Rosenblatt. Ophthalmology and Visual Sciences, University of Illinois at Chicago, Chicago, IL

99 — A0262 Visual acuity trends of patients wearing PROSE for exposure keratopathy after oculoplastic surgery. Kalla A. Gervasio^{1,2}, E. Marlow², M. N. Lee², G. J. Lelli². ¹Medicine, Memorial Sloan Kettering Cancer Center, NY, NY; ²Ophthalmology, New York Presbyterian/Weill Cornell Medical College, NY, NY

Exhibit Hall A0263-A0277

Sunday, April 29, 2018 8:15 AM-10:00 AM

Eye Movements/Strabismus/Amblyopia/Neuro-Ophthalmology

107 Lacrimal and adnexal diseases

100 — A0263 Does Cosmetic Related Lacrimal Sac Pigmentation Play a Role in Chronic Dacryocystitis? Fatimah Alhammad¹, D. P. EDWARD^{2,3}, A. Maktabi², R. Khandekar², O. Alsheikh¹. ¹Oculoplasty, King Khalid Eye Specialist Hospital, Riyadh, Saudi Arabia; ²King Khalid Eye Specialist Hospital, Riyadh, Saudi Arabia; ³University of Illinois Eye and Ear Infirmary, Chicago, IL

101 — A0264 External Dacryocystorhinostomy: A Comparison of Ultrasonic Bone Aspiration to High Speed Drilling. Vikram Shankar, K. Kalyam, S. M. Couch. Ophthalmology, Washington University in St. Louis School of Medicine, St. Louis, MO

102 — A0265 Investigation of the mechanism of onset of dacryocystitis after rebamipide ophthalmic solution administration. Fumika Hotta¹, H. Eguchi¹, S. Kusaka¹, M. Hasegawa², c. miyazaki², M. Hirose², F. Taketani², T. Sasaki³, Y. Inoue⁴, Y. Shimomura². ¹Ophthalmology, Kindai University Sakai Hospital, Sakai, Japan; ²ophthalmology, Hyogo Prefectural Amagasaki General Medical Center, Amagasaki, Japan; ³Sasaki Eye Clinic, Fukui, Japan; ⁴Inoue Eye Clinic, Okayama, Japan; ⁵Ophthalmology, Kindai University, Osakasayama, Japan *CR

103 — A0266 Estimation of Eyelid Pressure Using a Blepharo-Tensiometer in Patients With Functional Nasolacrimal Duct Obstruction. Jinsoo Kim¹, S. Lee¹, Y. Choi², M. Lee¹. ¹Ophthalmology, Hallym University College of Medicine, Hallym University Sacred Heart Hospital, Anyang, Korea (the Republic of); ²Ophthalmology, Hallym University College of Medicine, Hallym University Kangdong Sacred Heart Hospital, Seoul, Korea (the Republic of)

104 — A0267 Probing and syringing outcomes for Congenital Nasolacrimal Duct Obstruction: A retrospective study. Olayinka A. Williams, H. Narendran, P. Gonzalez, M. Amanullah. Ophthalmology, Royal Hospital for children, Glasgow, Glasgow, United Kingdom

105 — A0268 Cost Comparison of Different Treatment Approaches to Dacryocystitis and Dacrocystocele. Erin Sieck, A. M. Lynch, J. L. Patnaik, J. K. Singh. CU Ophthalmology, University of Colorado, Aurora, CO

106 — A0269 Idiopathic Dacryoadenitis Treated with Intralesional Rituximab. Charles G. Miller, A. Barsegian, R. Shinder. Ophthalmology, SUNY Downstate, Brooklyn, NY

107 — A0270 Non-coding RNA Expression in Inflammatory Dacryoadenitis. Marwan Ali¹, A. Balasubramaniam¹, M. Maienschein-Cline², S. Wadhwa², D. Shah¹, K. Son¹, S. Kalmodia¹, V. K. Aakalu¹. ¹Ophthalmology and Visual sciences, University of Illinois at Chicago, Chicago, IL; ²Center for Bioinformatics and Genomics, University of Illinois at Chicago, Chicago, IL; ³University of Loyola, Chicago, IL

108 — A0271 A rabbit model of lacrimal-duct mucosal epithelium disorder with benzalkonium chloride. Michiko Tsukamoto^{1,2}, H. Tanaka^{1,3}, T. Nakayama¹, T. Nakamura⁴, A. Watanabe¹, C. Sotozono¹, S. Kinoshita⁴. ¹Ophthalmology, Kyoto Prefectural University of Medicine, Kyoto, Japan; ²Ophthalmology, Aiseikai Yamashina Hospital, Kyoto, Japan; ³Ophthalmology, Japanese Red Cross Kyoto Daini Hospital, Kyoto, Japan; ⁴Frontier Medical Science and Technology for Ophthalmology, Kyoto Prefectural University of Medicine, Kyoto, Japan *CR

109 — A0272 Rebamipide attenuates lacrimal duct epithelial cell damage in a rabbit model. Hiroshi Tanaka^{1,2}, T. Nakayama¹, M. Tsukamoto³, T. Nakamura⁴, A. Watanabe¹, C. Sotozono¹, S. Kinoshita⁴. ¹Ophthalmology, Kyoto Prefectural University of Medicine, Kyoto, KYOTO, Japan; ²Ophthalmology, Japanese Red Cross Kyoto Daini Hospital, Kyoto, Japan; ³Aiseikai Yamashina Hospital, Kyoto, Japan; ⁴Frontier Medical Science and Technology for Ophthalmology, Kyoto Prefectural University of Medicine, Kyoto, Japan *CR

110 — A0273 Evisceration versus enucleation following ocular trauma, a retrospective analysis at a level one trauma center. Donovan S. Reed, W. Brundridge, A. Mehta, B. Davies. Ophthalmology, San Antonio Military Medical Center, San Antonio, TX

111 — A0274 Incorporation of survey data from ophthalmologists and first responders in the development of a novel, point-of-injury treatment for ocular trauma. Michael A. Washington¹, K. Duncan¹, S. Waxman¹, N. A. Loewen¹, J. Y. Yu¹, M. V. Fedorchak^{1,2}. ¹Ophthalmology, University of Pittsburgh, Pittsburgh, PA; ²Bioengineering, University of Pittsburgh, Pittsburgh, PA *CR

112 — A0275 Evisceration and Sympathetic Ophthalmia: Histopathology and PCR analysis of the scleral bed. Laith Kadasi¹, N. V. Laver², K. Lombardo³, N. Lakis³, M. Migliori¹. ¹Ophthalmology, The Warren Alpert School of Medicine of Brown University, Providence, RI; ²Ophthalmology, Tufts University School of Medicine, Boston, MA; ³Pathology, The Warren Alpert School of Medicine of Brown University, Providence, RI

113 — A0276 Stratifying risk in operating room fires: local oxygen concentrations in open faced draping with nasal cannula and basic respiration mask. Aleksey Mishulin¹, B. Kennedy², C. Palileo¹, K. P. Winkler^{3,1}, G. Gladstone³. ¹Ophthalmology, Kresge Eye Institute, Troy, MI; ²Wayne State University School of Medicine, Detroit, MI; ³Consultants in Ophthalmic and Facial Plastic Surgery, Southfield, MI

114 — A0277 Successes in Education Through the Use of Social Media. Jason Jensen, K. DeAngelis, B. Fowler. Ophthalmology, UTHSC-Hamilton Eye Institute, Arlington, TN

Exhibit Hall B0029-B0076

Sunday, April 29, 2018 8:15 AM-10:00 AM

Cornea / Anatomy and Pathology/Oncology

108 Ocular surface health and disease**Moderators: Louis Tong and Laura Garcia-Posadas****115 — B0029 Reducing Adenoviral Patient Infected Days (RAPID): Prevalence of Polymerase Chain Reaction (PCR) Confirmed Adenovirus Among Patients Presenting With Acute Conjunctivitis.**

Mary Migneco¹, M. Margolis¹, C. Morettin², T. Than⁴, M. Whiteside⁸, E. Shorter³, J. S. Harthan², S. Johnson⁵, A. Hartwick⁶, K. Olsen⁷, T. van Zyl⁹, J. Huecker¹, C. Rosemann⁷, M. O. Gordon¹. ¹Ophthalmology, Washington University in St. Louis, St. Louis, MO; ²Illinois College of Optometry, Chicago, IL; ³Illinois Eye and Ear Infirmary, Chicago, IL; ⁴Carl Vinson VAMC, Dublin, GA; ⁵Northeastern State University, Tallegah, OK; ⁶Ohio State University, Columbus, OH; ⁷Brooke Army Medical Center, Fort Sam Houston, TX; ⁸University of California-Berkeley, Berkeley, CA; ⁹Massachusetts Eye and Ear, Boston, MA ✕

116 — B0030 The effects of rebamipide-based gene-expression analysis in human conjunctival epithelial cells.

Keiko Yamada¹, M. Ueta², H. Nishigaki², N. Yokoi³, C. Sotozono³, S. Kinoshita². ¹Ophthalmology, North Medical Center of Kyoto Prefectural University of Med, Kyoto, Japan; ²Frontier Medical Science and Technology for Ophthalmology, Kyoto Prefectural University of Med, Kyoto, Japan; ³Ophthalmology, Kyoto Prefectural University of Med, Kyoto, Japan

117 — B0031 Histopathologic Characterization of Pterygia in the Bronx – 15 Year Evaluation.

Rebecca Weiss¹, L. GODUNF¹, Y. Soliman³, A. Herzlich⁴, A. Parsikia⁵, M. Abadi^{6,7}, J. Mbekeani^{1,4}. ¹Ophthalmology, Montefiore Medical Center, Flushing, NY; ²Ophthalmology, Langone Medical Center, New York, NY; ³Albert Einstein College of Medicine, Bronx, NY; ⁴Ophthalmology, Jacobi Medical Center, Bronx, NY; ⁵Surgery, Jacobi Medical Center, Bronx, NY; ⁶Pathology, Jacobi Medical Center, Bronx, NY; ⁷Pathology, Montefiore Medical Center, Bronx, NY

118 — B0032 Plastic compressed collagen for ocular surface reconstruction: Evaluation of the biocompatibility in vivo.

Joana Witt, M. Borrelli, S. Mertsch, G. Geerling, K. Spaniol, S. Schrader. Department of Ophthalmology, University Hospital Duesseldorf, Duesseldorf, Germany

119 — B0033 Evaluation of adenovirus amplified detection kit using tears including conjunctival exudate.

YUSUKE SAEKI¹, T. Ueno¹, H. Migita², T. Kawamura¹, E. Uchio¹. ¹Fukuoka University, Fukuoka, Japan; ²Migita Eye Clinic, Fukuoka, Japan *CR

120 — B0034 The interaction between dry eye disease and allergic conjunctivitis in mice.

Tatsuma Kishimoto, K. Fukuda, W. Ishida, A. Fukushima. Kohasu, Oko-cho, Kochi Medical School, Nankoku, KOCHI, Japan

121 — B0035 Upregulation of RelB in the Post-Operative Conjunctiva and its Role in Regulating Inflammation.

Li-Fong Seet^{1,3}, L. Toh¹, S. Chu¹, T. Wong^{2,1}. ¹Ocular Therapeutics & Drug Delivery, Singapore Eye Research Institute, Singapore, Singapore; ²Singapore National Eye Centre, Singapore, Singapore; ³Duke-NUS Medical School, Singapore, Singapore

122 — B0036 Long-term prognosis of vernal keratoconjunctivitis.

Ayaka Mishima, Y. SAEKI, E. Uchio. Fukuoka University, Fukuoka, Japan

123 — B0037 Rapamycin attenuates Th2-driven experimental allergic conjunctivitis.

You sook Hwang, S. Chung, Y. Byun, S. Shin. Department of Ophthalmology and Visual Science, Seoul St. Mary's hospital, College of Medicine, The Catholic University of Korea, Seoul, Korea (the Republic of)

124 — B0038 Proteomic analyses in advanced primary pterygium.

Maria Fernanda Suarez¹, M. Enriquez-Algeciras², M. Piqueras², M. Gonzalez-Castellano³, M. Barros Centeno³, S. K. Bhattacharya², J. A. Urrets-Zavalia³, H. M. Serra¹. ¹Clinical Biochemistry, CIBICI Conicet- School of Chemical Sciences-UNC, Cordoba, Argentina; ²Bascom Palmer Eye Institute, University of Miami Miller School of Medicine, Miami, FL; ³Department of Ophthalmology, Universidad Catolica de Cordoba, Cordoba, Argentina

125 — B0039 Effect of UVB exposure on expression of MMP9 in human pterygium fibroblasts.

Naoko Shibata¹, S. Shibata¹, H. Ishida¹, E. Kiyokawa², H. Sasaki¹, E. Kubo¹. ¹Department of Ophthalmology, Kanazawa Medical University, Kahoku, ISHIKAWA, Japan; ²Department of Oncogenic Pathology, Kanazawa Medical University, Kahoku, Ishikawa, Japan

126 — B0040 The Association Between Pterygium and Elevated Serum Alkaline Phosphatase Level in the South Korean Population: A National Wide Cross-Sectional Study.

Soo Han Kim¹, H. Kim². ¹Department of Ophthalmology, Yonsei University Wonju College of Medicine, Wonju, Gangwon-do, Korea (the Republic of); ²Department of Occupational Therapy, Konyang University, Daejeon, Korea (the Republic of)

127 — B0041 Collagen matrix implant in primary pterygium excision.

Vishal Jhanji^{1,2}, K. Kam², A. Young². ¹University of Pittsburgh, Pittsburgh, PA; ²The Chinese University of Hong Kong, Kowloon, Hong Kong

128 — B0042 NLRP3 inflammasome activation and autophagy upregulation in pathogenesis of pterygium.

Yujuan Wang, J. Chen, Y. Zou. Zhongshan Ophthalmic Center, Guangzhou, Guangdong, China

129 — B0043 Decision Making Model for the Operation Method and Prognosis in Pterygium.

Min-Gyu Choi, J. Kim. Ophthalmology, Chung-Ang University, Seoul, Korea (the Republic of)

130 — B0044 Impact of pterygium in the ocular surface parameters and tear cytokine profile.

Bruna Duarte, A. Viana Wanzeler, D. Borges, A. Treiger Grunpenmacher, M. Alves. Unicamp, Campinas, Brazil

131 — B0045 Fast pterygium surgery without a plastia.

Alexandra Mieth, E. Arenas. Asocornea, Bogota, Colombia

132 — B0046 Electrospun silk fibroin/poly(L-lactic acid-co-ε-caprolactone) scaffolds for conjunctival tissue engineering.

Yao Fu, Q. Yao, Y. Hu, F. Yu, W. Zhang. Ophthalmology, Ninth People's Hospital, Shanghai Jiao Tong University School of Medicine, Shanghai, Shanghai, China

133 — B0047 Wnt/β-catenin signaling pathway promotes self-renewal and stemness of conjunctival stem cell.

Chang Rae Rho¹, E. Jang², K. Cho³, J. Lyu^{2,4}. ¹Ophthalmology, Daejeon St. Mary's Hospital, Daejeon, Korea (the Republic of); ²Department of Medical Science, Konyang University, Daejeon, Korea (the Republic of); ³Ophthalmology, Dankook University Hospital, Chounan, Korea (the Republic of); ⁴Myung-Gok Eye Research Institute, Konyang University, Daejeon, Korea (the Republic of)

134 — B0048 Therapeutic Effect of Intense Pulsed Light on Ocular Demodiosis.

Xiaozhao Zhang^{1,2}, L. Gong^{1,2}. ¹Department of Ophthalmology and Vision Science, The Eye & ENT Hospital of Fudan University, Shanghai, China; ²Key Laboratory of Myopia, Ministry of Health, Shanghai, China ✕

135 — B0049 Pathological changes of eyelid in blepharitis induced by Demodex infection.

Wei Li^{1,2}, Y. Mao¹, I. zhang¹, H. He¹, Z. Liu¹. ¹Eye Inst & Xiamen Eye Ctr, Xiamen Univ Sch of Medicine, Xiamen, China; ²Ophthalmology, Xiang'an Hospital Affiliated to Xiamen University, Xiamen, Fujian, China

136 — B0050 Detection and Assessment of Treatment Efficacy of Demodex Blepharitis by In Vivo Confocal Microscopy.

Nicholas Pondelis^{1,2}, M. M. Hom³, L. E. O'Dell⁴, A. Jamal², P. Hamrah^{1,2}. ¹Cornea Service, New England Eye Center, Boston, MA; ²Center for Translational Ocular Immunology, Department of Ophthalmology, Tufts Medical Center, Tufts University School of Medicine, Boston, MA; ³Private Practice, Azusa, CA; ⁴Dry Eye Center of PA, Manchester, PA *CR

137 — B0051 Reproducibility of Liquid Jet Aesthesiometer to Measure Corneal Sensitivity.

Klaus Ehrmann^{2,1}, C. Fedtke^{2,1}, D. Kho², N. Yeotikar², J. Shaw², M. Jong², J. Diec², D. Tilia^{2,1}. ¹School of Optometry and Vision Science, University of New South Wales, Sydney, New South Wales, Australia; ²Brien Holden Vision Institute, Sydney, New South Wales, Australia *CR, ✕

Sunday Posters
8:15 am – 10:00 am

- 138 — B0052 Corneal Pain Has a Negative Impact on the Quality of Life of Patients with Neuropathic Corneal Pain.** Maria J. Lopez, A. Jamali, G. Dieckmann, D. Koseoglu, N. Ramesh, B. Khaksari, P. Hamrah. *Ophthalmology, Tufts Medical Center, South Walpole, MA *CR*
- 139 — B0053 Using in vivo confocal microscopy to detect the effects of oral mucosal graft on lid margin pathologies in cicatricial ocular surface diseases.** Chin-Te Huang^{2,1}, Y. Wei², H. Chu^{2,3}, W. Chen^{2,4}. ¹Department of Ophthalmology, Buddhist Tzu Chi General Hospital, Institute of Medical Sciences, Tzu Chi University, Hualien, Taiwan; ²Department of Ophthalmology, National Taiwan University Hospital, Taipei, Taiwan; ³Graduate Institute of Clinical Medicine, National Taiwan University College of Medicine, Taipei, Taiwan; ⁴Center of Corneal Tissue Engineering and Stem Cell Biology, National Taiwan University Hospital, Taipei, Taiwan ✕
- 140 — B0054 Plasma Pharmacokinetics and Safety following Topical Administration of Brimonidine Tartrate Ophthalmic Solution 0.025% in Healthy Adults.** Lester O. Hosten¹, J. L. Vittitow². ¹Clinical and Medical Affairs, Bausch + Lomb, Bridgewater, NJ; ²Clinical Affairs, Bausch + Lomb, Bridgewater, NJ *CR, ✕
- 141 — B0055 Regulation of Ikzf1 inducible genes by TLR3 and IPS-1.** Mayumi Ueta, H. Nishigaki, K. Oosako, S. Kinoshita. *Department of Frontier Medical Science and Technology for Ophthalmology, Kyoto Prefectural University of Medicine, Kyoto, Japan*
- 142 — B0056 Molecular characterization of pterygium fibroblasts in an enhanced serial explant culture technique.** Denise Loya¹, A. Guerrero-Martinez², E. Camacho-Martinez¹, J. L. Domene Hickman², P. Lopez¹, J. C. Hernandez-Camarena¹, J. Zavala¹, J. E. Valdez¹. ¹Ophthalmology and Visual Sciences Institute, San Pedro Garza García, Nuevo Leon, Mexico; ²ITESM, Monterrey, Nuevo Leon, Mexico
- 143 — B0057 Next Generation Exomic Sequencing for Pterygium.** Bo-I Kuo, I. Wang. *Ophthalmology, National Taiwan University Hospital, Taipei, Taiwan*
- 144 — B0058 MiR-21 promotes pterygium cell proliferation through PTEN/AKT pathway** Abstract. Xia Li. *Ophthalmology, Fudan university associated EENT hospital, Shanghai, China*
- 145 — B0059 Associations between meibum quality, age and treatment response in patients with meibomian gland dysfunction.** Vannarut Satitpitakul, K. Ratanawongphaibul. *Ophthalmology, Chulalongkorn University and King Chulalongkorn Memorial Hospital, Pathumwan, Bangkok, Thailand ✕*
- 146 — B0060 Biophysical interactions of gamma-linolenic acid with tear lipids at an air-tear interface.** Poonam Mudgil. *School of Medicine, Western Sydney University, Penrith, New South Wales, Australia*
- 147 — B0061 Closed eye tear neutrophils produce IL-17a in homeostatic conditions.** Cameron K. Postnikoff, K. S. Held¹, V. Viswanath¹, K. K. Nichols². ¹Allergan, Plc, Irvine, CA; ²School of Optometry, University of Alabama at Birmingham, Birmingham, AL *CR, ✕
- 148 — B0062 Ocular Surface Temperature in Sjögren's Syndrome.** Maria L. Merino^{1,2}, J. Belmonte³, M. Acosta⁴, C. Belmonte⁴, J. Gallar⁴. ¹Ophthalmology, Hospital Marina Baixa, Alicante, Alicante, Spain; ²Oftalmar, Hospital Vithas Medimar, Alicante, Spain; ³Hospital General de Alicante, Alicante, Spain; ⁴Instituto Neurociencias, Alicante, Spain
- 149 — B0063 The effect of menstrual cycle, lifestyle factors and dry eye signs and symptoms on in-vivo corneal confocal microscopy measures.** Katie Edwards, L. Colorado, L. Dinh, S. Ha, D. Liu, A. Luu, S. Trang, T. Yu-Ting, K. L. Schmid. *School of Optometry and Vision Science, Queensland University of Technology, Kelvin Grove, Queensland, Australia*
- 150 — B0064 Medial Canthus Hyperpigmentation in Ocular Allergy.** Rodrigo C. Dompieri¹, L. C. Gontijo², N. Cruz¹, L. C. Gontijo², A. D. Gontijo², R. Y. Hida¹, N. K. Junior³. ¹Oftalmology, Santa Casa de São Paulo, São Paulo, Brazil; ²Instituto de Olhos Minas Gerais, Belo Horizonte, Brazil; ³Oftalmology, Universidade de São Paulo, São Paulo, Brazil
- 151 — B0065 Acrolein exposure to eye causes corneal inflammation, fibrosis, and angiogenesis.** Suneel Gupta^{1,2}, M. K. Fink^{1,2}, R. Tripathi^{1,2}, P. R. Sinha^{1,2}, S. S. Chaurasia^{1,2}, E. A. Giuliano³, N. Hesemann^{1,3}, L. McDaniel^{1,3}, E. M. Dailey^{1,3}, R. R. Mohan^{1,3}. ¹Harry S Truman Veteran Hospital, Columbia, MO; ²Ophthalmology, College of Veterinary Medicine, University of Missouri, Columbia, MO; ³Mason Eye Institute, University of Missouri, Columbia, MO
- 152 — B0066 Obstructive Sleep Apnea (OSA), Matrix Metalloproteinase 9 (MMP-9), and Systemic Alterations in Tissue Elastin.** Madeline Ripa, K. Mudaliar, J. Perlman, C. S. Bouchard. *Loyola University Medical Center, Maywood, IL*
- 153 — B0067 Changes in hyper-dry amniotic membrane after implantation in the rabbit conjunctiva.** Akio Miyakoshi¹, A. Hayashi¹, Y. Nishida², A. Tanaka². ¹Ophthalmology, University of Toyama, Toyama, Japan; ²AMNOS Company, Tokyo, Japan
- 154 — B0068 Characterization of corneal sensory nerve activity in young and adult guinea pigs.** Juana Gallar¹, K. Mizerska^{1,2}, C. Luna Garcia¹, S. Quirce¹, M. Acosta¹. ¹Instituto de Neurociencias, Universidad Miguel Hernandez-CSIC, San Juan de Alicante, ALICANTE, Spain; ²Weill Cornell Medicine, New York, NY
- 155 — B0069 Coding of small temperature changes by high-background cold thermosensitive trigeminal neurons innervating the ocular surface.** Ariadna Diaz-Tahoces, E. Velasco, C. Luna Garcia, F. A. Carrera, C. Belmonte, J. Gallar, M. Acosta. *Instituto de Neurociencias, Universidad Miguel Hernandez-CSIC, San Juan de Alicante, Spain*
- 156 — B0070 Prospective study on the ocular manifestations in Epidermolysis Bullosa and Autoimmune Blistering Diseases.** Brendon W. Lee^{1,3}, J. Tan¹, M. Radjenovic², L. Tar¹, D. F. Murrell^{1,2}, M. T. Coroneo^{1,3}. ¹Faculty of Medicine, University of New South Wales, Sydney, New South Wales, Australia; ²Department of Dermatology, St George Hospital, Sydney, New South Wales, Australia; ³Department of Ophthalmology, Prince of Wales Hospital, Sydney, New South Wales, Australia; ⁴Ophthalmic Surgeons, Sydney, New South Wales, Australia
- 157 — B0071 Discomfort self-perception, corneal sensitivity, blinking and tearing in young contact lens wearers.** M Carmen Acosta, J. Pastor-Zaplana, M. Morales-Villellas, M. Monteserin-Rodríguez, J. Gallar. *Instituto de Neurociencias, Universidad Miguel Hernandez-CSIC, San Juan, Alicante, Spain*
- 158 — B0072 New human organotypic corneal tissue model for ophthalmic drug delivery, dry eye, and wound healing studies.** Yulia Kaluzhny, M. Kinuthia, T. Truong, A. Lapointe, P. Hayden, M. Klausner. *MatTek Corporation, Ashland, MA *CR*
- 159 — B0073 The Clinical Features of Superior Limbic Keratoconjunctivitis: a retrospective study of 128 Chinese patients.** Minyi Zhu, C. Cheng, T. Lin, S. Zhou, K. Wu. *Zhongshan Ophthalmic Center, Guangzhou, China*
- 160 — B0074 The presentation of patients with psoriasis to ophthalmology accident and emergency.** Ellen Kay¹, R. J. Barry², G. Butt². ¹Foundation Year 1, Sandwell and West Birmingham Trust, Birmingham, United Kingdom; ²Birmingham and Midland Eye Centre, Birmingham, United Kingdom
- 161 — B0075 Improving Post-procedural Ocular Surface Discomfort in Patients Receiving Regular Intraocular Injections.** Elisabeth Sledz¹, J. D. Pitcher^{2,1}, K. Ramaiya², M. Chiu², F. Wyant², P. J. Sanchez², C. Roybal^{1,2}. ¹School of Medicine, University of New Mexico, Albuquerque, NM; ²Eye Associates of New Mexico, Albuquerque, NM *CR

162 — B0076 Ocular Histopathology of Acute and Chronic Pediatric Toxic Epidermal Necrolysis. Karel D. Capek^{1,2}, S. D. Trocmé^{2,3}, H. Pasha⁴, H. Khan¹⁰, K. H. Merkley^{8,9}, J. O. Lee^{14,11}, T. Huang¹³, D. N. Herndon^{7,6}, H. K. Hawkins^{4,5}.
¹Burn, Critical Care, and Reconstruction, Shriners Hospitals for Children, Galveston, TX; ²Cornea Consultant, Shriners Hospitals for Children, Galveston, TX; ³Cornea Consultant, MD Anderson Cancer Center, Houston, TX; ⁴Pathology, Shriners Hospitals for Children, Galveston, TX; ⁵Pathology, The University of Texas Medical Branch, Galveston, TX; ⁶Chief of Burns, The University of Texas Medical Branch, Galveston, TX; ⁷Chief of Staff, Shriners Hospitals for Children, Galveston, TX; ⁸Ophthalmology, The University of Texas Medical Branch, Galveston, TX; ⁹Cornea Consultant, Shriners Hospitals for Children, Galveston, TX; ¹⁰Ophthalmology, The University of Texas Medical Branch, Galveston, TX; ¹¹Burn Surgery, The University of Texas Medical Branch, Galveston, TX; ¹²Surgery, The University of Texas Medical Branch, Galveston, TX; ¹³Burn Reconstruction, Shriners Hospitals for Children, Galveston, TX; ¹⁴Burn and Critical Care, Shriners Hospitals for Children, Galveston, TX

Exhibit Hall B0317-B0343

Sunday, April 29, 2018 8:15 AM-10:00 AM

Clinical/Epidemiologic Research

109 Pediatric ophthalmology

Moderator: Lisa Nivison-Smith

163 — B0317 Results from 2016 National Survey of Children's Health (NSCH). Sandra S. Block¹, K. Baldonado². ¹School-Based Vision Clinic, Illinois College of Optometry, Chicago, IL; ²Prevent Blindness, Chicago, IL

164 — B0318 The British Childhood Visual Impairment and Blindness Study 2 (BCVIS2). Lucinda Teoh¹, A. Solebo^{1,2}, P. Cumberland¹, J. Sargent³, J. Rahi^{1,2}. ¹PPP, UCL GOS Institute of Child Health, London, United Kingdom; ²Ophthalmology, Great Ormond Street Hospital, London, United Kingdom; ³Neurodisability, Great Ormond Street Hospital, London, United Kingdom

165 — B0319 UK & Ireland observational study of outcomes following congenital / infantile cataract surgery: IoL under 2 five year follow up. Ameenat Solebo^{1,2}, P. Cumberland¹, J. Rahi^{2,1}. ¹Moorfields Biomedical Research Centre, University College London, London, United Kingdom; ²UCL GOS Institute of Child Health, London, United Kingdom

166 — B0320 Five year epidemiologic review of pediatric cataracts managed at Children's Hospital Los Angeles. Julia Johnston¹, D. Contractor¹, B. J. Reiser^{1,2}. ¹The Vision Center, Children's Hospital Los Angeles, Los Angeles, CA; ²USC Roski Eye Institute, Los Angeles, CA *CR

167 — B0321 The Swedish national paediatric cataract register (PECARE); incidence and onset of post-operative glaucoma. Gunilla Magnusson. Clinical Neuroscience and Rehabilitation/ Ophthalmology, The Sahlgrenska Academy at University of Gothenburg, Mölndal, Västra Götalandsregionen, Sweden

168 — B0322 Primary intraocular lens implantation in children under 12 months of age. Emi Sanders^{1,2}, W. F. Astle^{1,2}. ¹Alberta Health Services, Calgary, Alberta, Canada; ²University of Calgary, Calgary, Alberta, Canada

169 — B0323 Pediatric Traumatic Cataract Complicated by Retinal Detachment. Howe Qiu, N. Fischer, J. L. Patnaik, J. L. Jung, J. K. Singh, E. A. McCourt. Department of Ophthalmology, University of Colorado School of Medicine, Aurora, CO

170 — B0324 Incidence of Cytomegalovirus-Related Ocular Disease in Pediatric Patients. Carmel Mercado, E. B. Koo. Ophthalmology, Byers Eye Institute at Stanford, Palo Alto, CA

171 — B0325 Frequency of Uveitis in children with Juvenile Idiopathic Arthritis in the UK. Preliminary results from the Childhood Arthritis Prospective Study. Elspeth K. Green¹, J. Ashworth², K. Hyrich³, W. Thomson³, C. Edelsten⁴, A. Solebo^{4,5}. ¹Leighton Hospital, Crewe, United Kingdom; ²Manchester Royal Eye Department, Manchester, United Kingdom; ³Manchester University, Manchester, United Kingdom; ⁴Great Ormond Street Hospital / UCL GOS Institute of Child Health, London, United Kingdom; ⁵Moorfields Biomedical Research Centre, London, United Kingdom

172 — B0326 Analysis of pattern and clinical features of pediatric uveitis cases at a tertiary referral center in São Paulo, Brazil. Barbara Giampietro¹, F. s. Souto¹, J. T. Takiuti¹, L. A. Campos², C. Hirata¹, J. H. Yamamoto¹. ¹Ophthalmology, Hospital das Clinicas, University of Sao Paulo, Sao Paulo, Brazil; ²Rheumatology, Hospital das clinicas, University of Sao Paulo, Sao Paulo, Brazil

173 — B0327 Long-term observation of patients with childhood glaucoma. Is the current therapy sufficient? Susanne Marx-Gross, J. Kroth, N. Pfeiffer. University Eye Hospital, Mainz, Germany

174 — B0328 Clinical characteristics of children with Ahmed glaucoma valve implantation in a reference center in Mexico. Alejandro Guerrero-León, C. Navas Villar, J. S. Silva Ortiz, C. Hartleben Matkin. Instituto de Oftalmología Conde de Valenciana IAP, Ciudad de Mexico, Ciudad de Mexico, Mexico

175 — B0329 Corneal Configurations and High Order Aberrations in Primary Congenital Glaucoma. Yin Hu, L. Fang, X. Ding, X. Guo, X. Yang, X. Liu, M. He. 1. State Key Laboratory of Ophthalmology, Zhongshan Ophthalmic Center, Sun Yat-sen University, Guangzhou, China

176 — B0330 The effect of the history of delivery on the development of open-angle glaucoma. Jaeyoun lee¹, J. Kim¹, K. Park². ¹Kangbuk samsung hospital, Seoul, Korea (the Democratic People's Republic of); ²ophthalmology, Seoul National University hospital, Seoul, Korea (the Republic of)

177 — B0331 Ocular Findings in Osteogenesis Imperfecta: An Ophthalmologist Eye Survey. Felix Chau¹, V. Villegas³, T. S. Vajaranant¹, I. H. Maumenee^{1,2}. ¹Ophthalmology and Visual Science, University of Illinois at Chicago, Chicago, IL; ²Ophthalmology, Columbia University, New York, NY; ³Bascom Palmer Eye Institute, University of Miami, Miami, FL

178 — B0332 Classifying No Improvement in Visual Acuity in Children with Amblyopia Using Simulations. Rui Wu¹, R. E. Manny², M. Melia¹, E. Lazar¹, J. M. Holmes³, E. E. Birch⁴, S. A. Cotter⁵, R. Kraker¹, D. K. Wallace⁶. ¹Jaeb Center for Health Research, Tampa, FL; ²College of Optometry, University of Houston, Houston, TX; ³Mayo Clinic, Rochester, MN; ⁴Retina Foundation of the Southwest, University of Texas Southwestern, Dallas, TX; ⁵Southern California College of Optometry, Marshall B. Ketchum University, Fullerton, CA; ⁶Indiana University, Indianapolis, IN

179 — B0333 Partial Tendon Recession for the Correction of Small-Angle Vertical Strabismus: Preliminary Results of a Comparative Case Series. Henry Lin, A. Reynolds. Ophthalmology, Ross Eye Institute, University at Buffalo, Amherst, NY

180 — B0334 Association between exposure to digital devices and ocular symptoms in school aged children. Nabin Paudel^{1,2}, R. Gyawali², R. Pokharel², A. Thakur¹, B. Shrestha¹. ¹Pediatrics and Visual Psychophysics, Drishti Eye Care Center, Kathmandu, Nepal; ²Better Vision Foundation Nepal, Kathmandu, Nepal

181 — B0335 Cost analysis of a school-based vision program in Baltimore, MD. Alyssa M. Kretz², M. Mukherjee², N. B. Ghandi², R. Slavin¹, N. Madden¹, D. S. Friedman², M. X. Repka², L. Wen³, G. Auteri³, E. Behrle³, K. D. Frick⁴, M. E. Collins². ¹Johns Hopkins University School of Education, Baltimore, MD; ²Johns Hopkins University School of Medicine, Baltimore, MD; ³Baltimore City Health Department, Baltimore, MD; ⁴Johns Hopkins University Carey Business School, Baltimore, MD *CR

182 — B0336 Eyeglass retention in a school-based vision program. Moneesha Rani Mukherjee¹, A. M. Kretz¹, X. Guo¹, R. Slavin³, N. Madden³, D. S. Friedman¹, M. X. Repka¹, E. Behrle², L. Wen², G. Auteri², M. E. Collins¹. ¹Johns Hopkins University School of Medicine, Baltimore, MD; ²Baltimore City Health Department, Baltimore, MD; ³Johns Hopkins University School of Education, Baltimore, MD

183 — B0337 Visual acuity assessment in children obtained using a novel cell phone application compared to the clinical examination in a pediatric ophthalmology clinic. Lloyd Zhao¹, S. Stinnett², S. G. Prakashakorn². ¹School of Medicine, Duke University, Durham, NC; ²Duke University Department of Ophthalmology, Durham, NC ✗

184 — B0338 Sensitivity and Specificity of the Neonatal Red Reflex. Marco Vinicio V. Viquez², L. Wu¹. ¹Retina, Asociados de Macula Vitreo y Retina de Costa Rica, San Jose, San Jose, Costa Rica, Costa Rica; ²Ophthalmology, Caja Costarricense del Seguro Social, San Jose, San Jose, Costa Rica, Costa Rica *CR

185 — B0339 Prevalence of Eye Conditions in Children with a history of Postnatal Admission to Neonatal Intensive Care Units. Felicia Adinanto, A. French, K. A. Rose. Discipline of Orthoptics, University of Technology Sydney, Ultimo, New South Wales, Australia

186 — B0340 Retinopathy of Prematurity in Rwanda: setting up a screening system. Stefan K. De Smedt^{1,2}. ¹Ophthalmology, AZ St Maarten Hospital, Mechelen, Belgium; ²Ophthalmology, Institute of Tropical Medicine, Antwerp, Belgium

187 — B0341 Longitudinal Analysis of Refractive Errors in Premature Children during the First Three Years of Life. Lauren Hennein, A. de Alba Campomanes. Ophthalmology, University of California San Francisco, San Francisco, CA

188 — B0342 Findings of Universal Newborn eye screening examination in South Korea – The results of five years. So Young Kim. ophthalmology, Soonchunhyang Univ Cheonan Hospital, Cheonan, Choonchungnam-do, Korea (the Republic of)

189 — B0343 Characteristics of Birth-related retinal hemorrhages in Newborns. Jungwoo Lee, S. Kim. MD, Cheonan-si, Korea (the Republic of)

Exhibit Hall C0001-C0018

Sunday, April 29, 2018 8:15 AM-10:00 AM

Physiology/Pharmacology

110 Diabetic retinopathy

Moderator: Shahid Husain

190 — C0001 Montelukast modulates the NF- κ B inflammatory cascade in mouse retinal endothelial cells. Reena M. Bappupty, R. Talahalli, R. A. Gubitosi-Klug. Pediatric Endocrinology, Case Western Reserve University, Cleveland, OH

191 — C0002 The protective effect of Liraglutide on retinal Müller cell apoptosis induced by high glucose through activating p-ERK / Nrf2 / Trx pathway. Xiang Ren, L. m. Sun, J. I. Liu, L. Kong. Dalian Medical University, Dalian, China

192 — C0003 Ranibizumab or Afibercept Therapy with Dexamethosone Intravitreal Injection Efficacy in Diabetic Macular Edema. Joao J. Nassaralla¹, A. A. Nassaralla², M. H. Amaro³, J. J. Nassaralla³. ¹Retina and Vitreous, Instituto de Olhos de Goiania and UnB, Goiania, GOIAS, Brazil; ²Ophthalmology, Medical School São Leopoldo Mandic, Campinas, SP, Brazil; ³Ophthalmology, Medical School UFG, Goiânia, GO, Brazil; ⁴Retina and Vitreous, Instituto de Olhos e Laser de Belém, Belém, PA, Brazil ✗

193 — C0004 Retinal bioavailability of different curcumin oral formulations: a translational study. Claudio Bucolo¹, C. Platania¹, A. Fidilio¹, F. Lazzara¹, C. Piazza², F. Geraci¹, S. Salomone¹, F. Drago¹. ¹Biomedical and Biotechnological Sciences, University of Catania, Catania, Italy; ²Unifarm, Catania, Italy

194 — C0005 Elevated Expression of AOC3 in Human Eyes with NPDR. Andreas C. Borta¹, O. W. Gramlich^{2,3}, K. Miller^{2,3}, C. Godwin^{2,3}, R. Bakker⁴, M. H. Kuehn^{2,3}. ¹Department of Translational Medicine and Clinical Pharmacology, Boehringer Ingelheim Pharma GmbH & Co KG, Biberach an der Riss, Germany; ²Department of Ophthalmology and Visual Sciences, The University of Iowa, Iowa City, IA; ³Department of Veterans Affairs, Center for Preservation and Treatment of Visual Loss, Iowa City, IA; ⁴Department of CardioMetabolic Diseases Research, Boehringer Ingelheim Pharma GmbH & Co. KG, Biberach an der Riss, Germany *CR

195 — C0006 Effects of multiple intravitreal anti-VEGF injections in a rabbit model of persistent retinal neovascularization (PRNV). Yong Li^{1,2}, J. Busoy², B. Zaman¹, J. Wei^{1,2}, G. Tan², N. Cheung², V. A. Barathi², W. Hunziker¹, W. Hong¹, T. Wong^{2,3}, C. Cheung². ¹Institute of Molecular and Cell Biology, A*STAR, Singapore, Singapore; ²Singapore Eye Research Institute, Singapore National Eye Centre, Singapore, Singapore; ³Duke NUS Medical School, Singapore, Singapore

196 — C0007 Alpha-1 Antitrypsin Decreases Cx43 Expression Through PI3K/AKT Pathway in ARPE-19 Cells Exposed to High Glycemia. MARÍA CONSTANZA POTILINSKI¹, G. Ortiz¹, J. P. Salica^{1,2}, E. López^{1,2}, E. Chuluyán^{3,2}, J. E. Gallo^{1,2}. ¹IIMT-CONICET-Austral, Buenos Aires, Buenos Aires, Argentina; ²Oftalmología, Hospital Universitario Austral, Buenos Aires, Argentina; ³Farmacología, Universidad de Buenos Aires, Buenos Aires, Argentina

197 — C0008 Systemic factors associated with choroidal thickness in eyes with diabetic retinopathy. Jee Taek Kim, M. Choi. Ophthalmology, Chung Ang University Hospital, Seoul, Korea (the Democratic People's Republic of)

198 — C0009 ADX-103, a Novel Small Molecule Aldehyde Sequestering Agent, Decreases Retinal Edema and Inflammation in a Rat Model of Diabetic Macular Edema. Adna Halilovic, T. Brady, S. Macdonald. Aldeyra Therapeutics, Lexington, MA *CR

199 — C0010 A VE-PTP Antibody Activates Tie2 and Suppresses VEGF-Induced Retinal Vascular Leakage. Kevin G. Peters¹, J. Shen², Y. Liu², A. Nottebaum³, D. Vestweber³, M. Flynn¹, P. A. Campochiaro². ¹Aerpio Pharmaceuticals, Inc., Cincinnati, OH; ²Wilmer Eye Institute, Johns Hopkins School of Medicine, Baltimore, MD; ³Max Planck Institute for Molecular Biomedicine, Munster, Germany *CR

200 — C0011 AR-13503 Enhances the Efficacy of Afibercept in a Mouse Model of Proliferative Diabetic Retinopathy. Kevin Carbajal, M. Weksler, L. Moore, J. Ding, C. Kopczynski, C. Lin. Aerie Pharmaceuticals, Bedminster, NJ *CR

201 — C0012 Alpha-1 Antitrypsin Decreases NF κ B Signaling in Müller Cells in an *in Vitro* Diabetic Retinopathy Model. Juan E. Gallo^{1,2}, M. POTILINSKI¹, G. Ortiz², J. P. Salica^{1,2}, E. López^{1,2}, E. Chuluyán^{3,4}. ¹Ophthalmology, Hospital Universitario Austral, Pilar, BUENOS AIRES, Argentina; ²Instituto de Investigaciones en Medicina Traslacional (IIMT), Universidad Austral - CONICET, Pilar, Buenos Aires, Argentina; ³Medicina - Farmacología, Universidad de Buenos Aires, Buenos Aires, Argentina; ⁴Farmacología, CONICET, Buenos Aires, Argentina

202 — C0013 Expression, distribution and function of kinin B1 receptor in the rat diabetic retina. Soumaya Hachana¹, R. Couture¹, E. Vaucher². ¹Pharmacology, Université de Montréal, Montréal, Quebec, Canada; ²Ecole d'optométrie, Université de Montréal, Montréal, Quebec, Canada

203 — C0014 Use Of Afibercept (Zaltrap ZIV) in Diabetic Macular Edema. Efrain Romo-Garcia, A. Meza Anguiano, S. Paz Camacho, G. Gutierrez, W. Quiñonez. Ophthalmology, Centro de Investigación y Docencia en Ciencias de la Salud/ Universidad Autónoma de Sinaloa, Culiacan, Sinaloa, Mexico

204 — C0015 Recurrence of vitreous haemorrhage secondary to diabetic retinopathy in patients treated with intraoperative intravitreal Bevacizumab. ALEJANDRA N. Nieto Jordan, A. Zermeno, A. Ordonez Campos. Retina, Conde de Valenciana, Ciudad de México, Distrito federal, Mexico

205 — C0016 ROCK/PKC Inhibitor AR-13503 Inhibits Angiogenesis and Protects the Barrier Function of Retinal Pigment Epithelium. Jindong Ding, B. E. Foley, C. Kopczynski, C. Lin. Aerie Pharmaceuticals, Inc., Durham, NC *CR

206 — C0017 Study on the effect of lutein in an experimental model of diabetic retinopathy using the Ins2Akita mice. Wei Wang, A. C. Lo. Ophthalmology, The university of Hong Kong, Hong Kong, Hong Kong, China

207 — C0018 Vitreous cytokine levels in proliferative diabetic retinopathy and cataracts.

Jane Cho, G. Jun, T. Stein, J. Chung, K. McConnell, M. Fiorello, S. Ness, N. Siegel, M. Subramanian. *Ophthalmology, Boston University, Boston, MA*

Exhibit Hall C0019-C0057

Sunday, April 29, 2018 8:15 AM-10:00 AM

Physiology/Pharmacology

111 AMD

Moderators: Florian Sennlaub and Heping Xu

208 — C0019 Investigating Association of Intravitreal anti-VEGF Therapy and Renal Function.

Prarthana Dalal, J. Brown, E. Gray, S. Quaggin, M. Gill. *Northwestern University Feinberg School of Medicine, Chicago, IL*

209 — C0020 A novel biologics platform extends half-life and improves tissue penetration of intravitreally injected biological agents.

D. Victor Perloth, J. Naor, W. To, h. liang. *Kodiak Sciences Inc, Palo Alto, CA *CR*

210 — C0021 SAFETY AND TOLERANCE IN SIMULTANEOUS BILATERAL INTRAVITREAL INJECTIONS IN THE CONSULTING ROOM.

Federico M. Fernandez, P. Franco, P. G. Schlottmann. *Organización Médica de investigación, Buenos Aires, Buenos Aires, Argentina*

211 — C0022 KSI-301: An anti-VEGF antibody biopolymer conjugate with extended half-life for treatment of neovascular retinal diseases.

hong liang¹, X. Huang¹, W. Ngo¹, D. Dang¹, J. Lu¹, R. D. Jacobson¹, O. Harrabi², D. Perloth¹. ¹Kodiak Sciences Inc, Palo Alto, CA; ²Alexo Therapeutics, South San Francisco, CA *CR

212 — C0023 Superior stability of a class of novel antibody biopolymer conjugates for the treatment of retinal diseases.

Amy Duguay, W. To, J. Zhang, h. liang, D. Perloth, c. Su. *Kodiak Sciences, Palo Alto, CA *CR*

213 — C0024 Re-packaging bevacizumab in 2-mL glass vials for prolonged sterility, stability and bio-activity.

Jan S. Peterson¹, K. Rockwell², P. C. VanVeldhuisen¹, M. S. Ip³, I. U. Scott¹, B. A. Blodi³. ¹Emmes Corp, Rockville, MD; ²Investigational Drug Service, Perelman School of Medicine, Philadelphia, PA; ³Fundus Photograph Reading Center, University of Wisconsin-Madison, Madison, WI; ⁴Department of Ophthalmology, Penn State College of Medicine, Hershey, PA; ⁵Doheny Eye Institute, University of California-Los Angeles, Los Angeles, CA *CR, ✕

214 — C0025 Role of Intravitreal Anti VEGF agents in the management of Tubercular choroidal and optic disc granulomas.

Mohit Dogra, R. Singh. *Advanced Eye Centre, Postgraduate Institute of Medical Education and Research, Chandigarh, Chandigarh, India*

215 — C0026 Reporting of safety events across anti-VEGF indications and the Pharmacovigilance approach: Findings from the non-interventional OCEAN study.

Focke Ziemssen¹, J. Voegelers², G. Spital³, S. Liakopoulos⁴, S. Schmitz-Valckenberg⁵, T. Bertelmann⁶. ¹Center of Ophthalmology, University Tuebingen, Tuebingen, Germany; ²Novartis, Nuernberg, Germany; ³St. Franziskus Hospital Münster, Muenster, Germany; ⁴University Eye Hospital Cologne, Cologne, Germany; ⁵University Eye Hospital Bonn, Bonn, Germany; ⁶Georg-August University Goettingen, Goettingen, Germany *CR, ✕

216 — C0027 Retinal toxicity in rabbits administered intravitreal TSG-6-rabbit FAb fusion proteins.

Steven T. Laing¹, D. Tesar², S. Crowell³, J. Gray⁴, K. Loyet⁴, R. Andaya¹, A. McKenzie¹, F. Lorget¹, B. Kelley². ¹Safety Assessment, Genentech Inc., South San Francisco, CA; ²Drug Delivery, Genentech, South San Francisco, CA; ³PTPK, Genentech, South San Francisco, CA; ⁴BCP, Genentech, South San Francisco, CA *CR

217 — C0028 Effect of Ring Size on the Suitability of a New Class of Rho Kinase Compounds for Posterior Segment Disease.

Mitchell A. deLong^{1,2}, J. Sturdivant¹, C. Lichorowicz¹, C. Lin¹, C. Kopczynski¹. ¹Aerie Pharmaceuticals, Durham, NC; ²Chemistry, Duke University, Durham, NC *CR

218 — C0029**The CFTR corrector, VX-809 (Lumacaftor) and Hsp27 rescues ABCA4 trafficking mutants: a potential treatment for Stargardt disease.**

Liudmila Cebotaru¹, Q. Liu¹, I. Sabirzhanova¹, E. Bergbower¹, M. Yanda¹, W. Guggino². ¹Medicine, Johns Hopkins U, Baltimore, MD; ²Physiology, Johns Hopkins U., Baltimore, MD

219 — C0030 Development and characterization of a prototype antibody biopolymer conjugate targeting the complement system.

Rachel D. Jacobson¹, D. Dang¹, W. Ngo¹, J. Lu¹, A. Duguay¹, O. Harrabi², X. Huang¹, h. liang¹, D. Perloth¹. ¹Kodiak Sciences Inc., Palo Alto, CA; ²Alexo Therapeutics, South San Francisco, CA *CR

220 — C0031 A novel approach to inhibit pro-angiogenic VEGF splicing in retinal vascular diseases with topical administration of small molecules optimized for retinal pharmacokinetics.

Jennifer Batson¹, H. Toop^{1,3}, S. Liddell¹, J. Daubney¹, E. Stewart¹, K. McKechnie¹, J. Morris^{1,3}, D. Bates^{1,2}. ¹Exonate Ltd, Cambridge, United Kingdom; ²School of Medicine, University of Nottingham, Nottingham, United Kingdom; ³University of New South Wales, Sydney, New South Wales, Australia *CR

221 — C0032 Sunitinib-Loaded Injectable Polymer Depot Formulation for Potential Once per Year Treatment of Neovascular Age-related Macular Degeneration (wet AMD).

Yun Yu¹, W. Peterson¹, M. Yang¹, D. McKenzie¹, D. Cardona¹, D. Culp², B. C. Gilger³, J. Cleland¹. ¹Graybug Vision Inc., Redwood city, CA; ²Powered Research LLC, Research Triangle Park, NC; ³Clinical Sciences, North Carolina State University, Raleigh, NC *CR

222 — C0033 microRNA-181a exhibits inhibitory effect on ocular neovascularization.

Pierre Hardy¹, C. Cai¹, C. Yang¹, S. Croteau². ¹Pediatrics, Pharmacology & Physiology, University of Montreal, Montreal, Quebec, Canada; ²Medicine, University of Montreal, Montreal, Quebec, Canada

223 — C0034 Efficient choroidal neovascularization reduction by Sleeping Beauty Transposon-mediated PEDF gene delivery in rat iris and retinal pigment epithelial cells by using a clinical electroporator.

Patricia Fernandez^{1,2}, S. Recalde^{1,2}, M. Hernandez^{1,2}, L. Garcia-Garcia¹, J. Bezunartea¹, J. R. Rodriguez³, C. Marie⁴, D. Scherman⁴, Z. Izsak⁵, M. Kropp^{6,8}, S. Johnen⁶, G. Thumann^{7,8}, A. Garcia-Layana^{1,2}. ¹Experimental Ophthalmology Laboratory, Clinica Universidad de Navarra, Pamplona, Spain; ²IdiSNA, Pamplona, Spain; ³Cell Therapy Area, Division of Cancer, Center for Applied Medical Research (CIMA), Pamplona, Spain; ⁴Unité de Technologies Chimiques et Biologiques pour la Santé, INSERM U1022 – CNRS UMR8258, Paris, France; ⁵Max Delbrück Center for Molecular Medicine in the Helmholtz Society, Berlin, Germany; ⁶RWTH Aachen University, Aachen, Germany; ⁷Experimental Ophthalmology, University of Geneva, Geneva, Switzerland; ⁸Department of Ophthalmology, University Hospitals of Geneva, Geneva, Switzerland

224 — C0035 Efavirenz treatment reduces drusen-like lesions and choroidal neovascularization in the retina of 5XFAD mice, an Alzheimer's disease model.

Irina A. Pikuleva¹, A. Saadane¹, N. El-Darzi¹, N. Mast¹, G. Trichonas^{2,1}. ¹Ophthalmology and Visual Sciences, Case Western Reserve University, Cleveland, OH; ²Ophthalmology and Visual Sciences, University Hospitals, Cleveland, OH

225 — C0036 Activity of anti-Tissue Factor fusion protein ICON-1 in a swine model of choroidal neovascularization.

William Greene¹, G. Spiga³, B. C. Gilger², D. Culp³, T. Migone¹. ¹Iconic Therapeutics, Inc., South San Francisco, CA; ²North Carolina State University, Raleigh, NC; ³Powered Research, LLC, Research Triangle Park, NC *CR

226 — C0037 Stability and activity profiles of anti-complement factor D fragments translate across in vitro and in vivo studies to support long-acting delivery approaches.

Kelly M. Loyet, P. Hass, W. Sandoval, A. Morando, P. Liu, W. B. Shatz, L. Dickmann, M. Kenrick, J. Good, T. Davanace, A. Morimoto, R. Kelley, J. Scheer. *Genentech, Inc., South San Francisco, CA *CR, ✕*

- 227 — C0038 Human Factors Evaluation Injection Technique Used For Intravitreal Injections.** Gautam Shetty¹, A. Hedge².
¹Congruence Medical Solutions, Hanover, MD; ²Cornell University, Ithaca, NY *CR
- 228 — C0039 Simulation of Ocular Drug Distribution Following Zero Order Release of Intravitreally Dosed Bevacizumab Using 3D Computational Fluid Dynamic Model.** Jie Shen, M. Kazemi, M. Attar. Allergan, Irvine, CA *CR
- 229 — C0040 Ophthalmic Drug Delivery Using Injectible, Aqueous Driven, PEG/Vitamin E Copolymer Hydrogels.** Lina Liu, J. Zhang, H. Sheardown. Chemical Engineering, McMaster University, Hamilton, Ontario, Canada
- 230 — C0041 Development of a Highly Bioavailable Nanocore-based (OcuSurf™) Ophthalmic Formulation for Treatment of Blepharitis.** Kevin Ward, K. Barman, C. Li, S. P. Barman. Integral BioSystems, Bedford, MA *CR
- 231 — C0042 ICON-1 Pharmacokinetics after intravitreal and intravenous administration to rabbits.** Gabriela Burian¹, J. Gaudreault¹, B. C. Gilger², D. Culp³, T. Migone³. ¹GB Biomed Advisors GmbH, Oberwil, BL, Switzerland; ²JJG Pharma Consulting GmbH, Basel, BS, Switzerland; ³Iconic Therapeutics, Inc., South San Francisco, CA; ⁴Powered Research, LLC, Triangle Park, NC; ⁵NCSU, Raleigh, NC *CR
- 232 — C0043 Delivery and Toxicity of Ruthenium Pyridine-based Nanophotowitches in Retina.** Melanie Pribisko^{1,2}, U. Herget¹, L. Yue³, M. Lin³, R. H. Chow³, M. S. Humayun³, R. H. Grubbs¹, H. Gray¹. ¹Chemistry, California Institute of Technology, Pasadena, CA; ²Chemistry, California State University Channel Islands, Camarillo, CA; ³USC Keck School of Medicine, Los Angeles, CA
- 233 — C0044 In Vitro and In Vivo Characterization of Abicipar Pegol, an anti-VEGF DARPIn® Therapeutic.** Gerry A. Rodrigues¹, M. Mason², L. Christie², C. Hansen², J. A. Burke², K. Luhrs², T. C. Hohman³. ¹Research, Allergan plc, Irvine, CA; ²Allergan plc, Irvine, CA; ³Envision Consulting, LLC, Ocean City, NJ *CR
- 234 — C0045 Peptides that Modulate Angiogenesis.** Subrahmanian Tarakkad Krishnaji¹, H. Fu¹, A. Birsner¹, L. Bazinet¹, R. J. D'Amato^{1,2}. ¹Vascular Biology Program, Boston Children's Hospital, Boston, MA; ²Ophthalmology, Harvard Medical School, Boston, MA
- 235 — C0046 Hyaluronic acid conjugation significantly extends the vitreal half-life of antibody fragments.** Susan Crowell¹, A. Famili², C. Boswell¹, J. Chan³, J. Gray³, K. Loyet³, L. Comps-Agrar³, A. kamath¹, K. Rajagopal². ¹Preclinical and Translational PKPD, Genentech, South San Francisco, CA; ²Drug Delivery, Genentech, South San Francisco, CA; ³Biochemical and Cellular Pharmacology, Genentech, South San Francisco, CA *CR
- 236 — C0047 Combining ISTH0036, an antisense oligonucleotide targeting Transforming Growth Factor beta 2 (TGF-β2) mRNA, with aflibercept as novel treatment strategy for neovascular retinal diseases.** Michel Janicot¹, G. Kalesnykas², E. Leo³, P. Fettes³, S. Kaja², K. Wosikowski¹. ¹Preclinical Research and Development, Isarna Therapeutics, Munich, Germany; ²Experimentica Ltd, Kuopio, Finland; ³Clinical Research and Development, Isarna Therapeutics, Munich, Germany *CR
- 237 — C0048 Evaluation of the effects of VEGF/ANG-2 neutralization on vascular, neuronal and inflammatory pathologies in a spontaneous choroidal neovascularization (CNV) mouse model.** Richard H. Foxton, S. Uhles, S. Gruener, F. Revelant, N. Colé, M. Lazendic, M. Brecheisen, C. Ullmer. Roche Pharma Research and Early Development, Roche Innovation Center, Basel, Switzerland *CR
- 238 — C0049 Sustained Release of Small, Hydrophilic Peptides to the Ocular Surface via NanoM™.** Shikha P. Barman¹, Y. Li², L. Kaminski², K. Ward². ¹Executive, Integral BioSystems, Bedford, MA; ²Pharmaceutical Development, Integral BioSystems, Bedford, MA *CR
- 239 — C0050 Implementation of bioanalytical methods to quantify anti-VEGF-LAD (long acting delivery) Fabs in ocular matrices.** Laetitia Comps-Agrar¹, H. Hernández-Barry¹, J. Chan¹, K. Xu², L. Liu², S. Crowell³, B. Kelley⁴, D. Tesar⁴, K. Loyet¹. ¹Department of Biochemical and Cellular Pharmacology, Genentech, South San Francisco, CA; ²BAS-ADT, Genentech, South San Francisco, CA; ³PTPK, Genentech, South San Francisco, CA; ⁴Drug Delivery, Genentech, South San Francisco, CA
- 240 — C0051 Delivery of anti-VEGF molecules via subconjunctival drug depots for back-of-the-eye diseases.** Subbu Venkatraman^{1,2}, R. Joseph¹, H. Chua¹, G. M. Xiong³. ¹Materials Science & Engineering, Nanyang Technological University, Singapore, Singapore; ²Ocular Therapeutic Engineering Centre, Nanyang Technological University, Singapore, Singapore
- 241 — C0052 Chronic oral treatment with bio201 preserves retinal function in a dry AMD experimental model.** Valerie Fontaine¹, E. Monteiro¹, E. Brazhnikova¹, M. Fournie¹, C. Balducci², L. Guibout², J. A. Sahel¹, S. Veillet², P. Dilda², R. Lafont². ¹Institut de la Vision, Paris, France; ²Biophytis, Paris, France *CR
- 242 — C0053 Ocular and Systemic Pharmacokinetics of a PEGylated-anti-Factor D Fab Multimer in Cynomolgous Monkeys.** Daniela B. Yadav, W. B. Shatz, d. mandikian, C. Boswell, A. McKenzie, D. Sheinson, H. Liu, I. Figueroa, B. Kelley, D. Tesar, M. Dion, A. kamath, F. Lorget, S. Crowell. Genentech, Inc, South San Francisco, CA *CR
- 243 — C0054 Identification and characterization of a novel protein-PEG conjugate system for long-acting delivery to the back of the eye.** Whitney Shatz¹, N. Peer², P. Hass¹, D. Bumbaca⁵, K. Loyet³, C. Blanchette¹, R. Kelley⁴. ¹Protein Chemistry, Genentech, South San Francisco, CA; ²Purification Development, Genentech, South San Francisco, CA; ³Biochemical and Cellular Pharmacology, Genentech, South San Francisco, CA; ⁴Drug Delivery, Genentech, South San Francisco, CA; ⁵Preclinical and Translational Pharmacokinetics, Genentech, South San Francisco, CA *CR
- 244 — C0055 Pegylation of Abicipar Increases Vitreal Half-Life, Supporting a Potential for up to 3 Month Duration of Action in the Clinic.** Jennifer Seal¹, S. Ekwardhani², A. Schlegel¹, M. T. Stumpp³, H. Binz², M. Attar¹. ¹Allergan plc, Irvine, CA; ²Molecular Partners, Zurich, Switzerland *CR
- 245 — C0056 Effectiveness of Sustained Release TKI Hydrogel Combined with Bevacizumab in a VEGF Induced Retinal Leakage Model Through 12 Months.** Rami F. Elhayek, T. Jarrett, Z. Lattrell, E. Kahn, S. Takach, J. Metzinger, M. H. Goldstein, P. K. Jarrett, A. Sawhney. R&D, Ocular Therapeutics, Bedford, MA *CR
- 246 — C0057 PK/PD modeling to identify optimal binding affinity of an intravitreally administered anti-IL33 antibody to maintain target engagement in vitreous and retina for the treatment of AMD.** Isabel Figueroa, G. Nakamura, L. Comps-Agrar, J. Chan, E. Mai, R. Corpuz, J. Bevers, K. Loyet, M. Van Lookeren Campagne, A. Kamath. Genentech, Belmont, CA

Exhibit Hall C0106-C0127

Sunday, April 29, 2018 8:15 AM-10:00 AM

Visual Psychophysics/Physiological Optics

112 Presbyopia and IOL**Moderators: Sanjeev Kasthurirangan and Jason Shen**

247 — C0106 Clinical performance of multifocal scleral lens for presbyopia correction. Woo Park, S. Jin, W. Jeong, L. Jin, S. Kim, S. Noh, S. An. Ophthalmology, Dong-A University, College of medicine, Busan, Korea (the Republic of) *CR, ✕

- 248 — C0107 Clinical Outcomes Following Implantation of Extended Range of Vision 1-Piece Intraocular Lenses with Different Target Refraction and Diffractive Multifocal Intraocular Lenses with +2.75 Diopters Add Power.** Youngsub Eom¹, Y. Choi¹, S. Choi¹, J. Kim², H. Hwang³, J. Kim⁴, J. Song¹, H. Kim¹. ¹Ophthalmology, Korea University College of Medicine, Seoul, Korea (the Republic of); ²Ophthalmology, Chungbuk National University Hospital, Cheongju, Korea (the Republic of); ³Ophthalmology, Chuncheon Sacred Heart Hospital, Chuncheon, Korea (the Republic of); ⁴Joeeun Vision Clinic, Seoul, Korea (the Republic of) ✕
- 249 — C0108 Comparison between simulated and clinical visual performance in pseudophakic patients with trifocal intraocular lens.** Lin He, S. Jasti, R. Suryakumar, R. Sarangapani. R&D, Alcon Laboratories, Inc., Ft Worth, TX *CR
- 250 — C0109 Visual performance of FineVision trifocal intraocular lens in refractive lens exchange surgery.** Jaime Larrea Gonzalez¹, L. C. Escaf¹, m. I. corrales¹, V. Galvis^{1,2}, A. Tello^{1,2}. ¹Fundacion Oftalmologica de Santander - FOSCAL, Bucaramanga, Colombia; ²Centro Oftalmologico Virgilio Galvis, Bucaramanga, Colombia
- 251 — C0110 Scleral Implants Improved Near Visual Acuity: A Subsample Analysis of Patients Treated for Presbyopia.** Barbara Michalek, F. A. Bucci, B. Michalek. Bucci Laser Vision Institute, Wilkes Barre, PA ✕
- 252 — C0111 Comparison of multifocal visual simulations in patients before and after implantation of diffractive trifocal lenses.** Maria Vinas¹, M. Romero¹, S. Aissati¹, J. Mendez-Gonzalez², C. Benedi¹, E. Gamba², V. Akondi¹, n. Garzon³, F. Poyales³, C. Dorronsoro¹, S. Marcos¹. ¹Visual Optics & Biophotonics Lab, Instituto de Optica, CSIC, Madrid, Spain; ²EyesVision, Madrid, Madrid, Spain; ³IOA Innova Ocular, Madrid, Madrid, Spain *CR
- 253 — C0112 Factors influencing ametropia following toric intraocular lens implantation in eyes with high corneal astigmatism.** Chie Yukawa, M. Iida, K. Takada, R. Nejima, K. Minami, K. Miyata. Miyata Eye Hospital, Miyakonojo, Miyazaki, Japan
- 254 — C0113 Impact of residual astigmatism on optical and visual performance for toric intraocular lenses.** Carmen Canovas¹, P. Piers¹, M. Sun¹, A. Alarcon¹, H. A. Weeber¹, G. Waring². ¹Implant R&D, Johnson & Johnson Vision, Groningen, Netherlands; ²Waring Vision Institute, Mount Pleasant, SC *CR
- 255 — C0114 Experimental optical analysis of an original presbyopia-correcting variable focus lens.** Jessica Jarosz, Q. Lavigne, N. Molliex, G. Chenon, G. Noetinger, D. Tran, B. Berge. Laclarée, Lyon, France *CR
- 256 — C0115 Intraocular lens movement in different axial length.** Manqiang Peng, M. Khan, x. Huang, D. Lin. Central South university, Changsha, China
- 257 — C0116 Point spread function and wavefront evaluation of IOLs with different amount of spherical aberration.** Alice T. Epitropoulos¹, A. Pilon², V. Kolesnichenko³. ¹The Eye Center of Columbus, Columbus, OH; ²Surgical, Bausch & Lomb, Irvine, CA; ³Medical Affairs, Bausch & Lomb, Irvine, CA *CR
- 258 — C0117 Simulated Vision of Patients with Multifocal Intraocular Lens by a New Mobile Model Eye.** Yong Ho Koo, H. Hwang. Chuncheon Sacred Heart Hospital, Chuncheon, Korea (the Republic of)
- 259 — C0118 Long-term Performance of a one-piece acrylic hydrophilic intra-ocular lens.** George Pak Man Cheng. Hong Kong Laser Eye Center, Hong Kong, Hong Kong
- 260 — C0119 Assessment of Photic Phenomena for Five Monofocal IOL Models by Combining Model Eye and In Vitro Methods.** Kamal Das¹, L. Werner², S. Collins¹, X. Hong¹. ¹Implantable Lens Research, Alcon Laboratories, Inc, Fort Worth, TX; ²John A. Moran Eye Center, University of Utah, Salt Lake, UT *CR
- 261 — C0120 In vitro evaluation of a novel extended depth of field intra-ocular lens design.** Arthur Ho^{1,2}, J. Panos¹, K. Ehrmann^{1,2}, I. G. Cox³, P. Erickson¹. ¹Brien Holden Vision Institute, Sydney, New South Wales, Australia; ²School of Optometry and Vision Science, University of New South Wales, UNSW Sydney, New South Wales, Australia; ³IGC Consulting, Rochester, NY *CR
- 262 — C0121 Nanoscratch Evaluation of Various Hydrophobic Acrylic Intraocular Lens Materials in the Wet State.** Andrew Pilon¹, V. Kolesnichenko². ¹Surgical, Bausch & Lomb, Irvine, CA; ²Medical Affairs, Bausch & Lomb, Irvine, CA *CR
- 263 — C0122 Physical and chemical factors underlying glistening formation in hydrophobic acrylic intraocular lens materials.** Kyoko Miura, S. Sakai, S. Yokota, T. Tada, S. Katayama, S. Nagasaka, T. Sunada. IOL Development Sec., Development Div., Eye Care Div., NIDEK Co., Ltd., Gamagori, Aichi, Japan *CR
- 264 — C0123 Incidence of Negative Dysphotopsias with Plate-Shaped Collamer Intraocular Lenses.** Nicole N. Bajic, N. Simon, K. Riaz. Ophthalmology, University of Chicago, Chicago, IL
- 265 — C0124 In vitro assessment of longitudinal chromatic aberration in different optical designs of intraocular lenses.** Grzegorz Łabuz, S. Hyeck-Soo, T. M. Yildirim, G. Auffarth. David J Apple Center for Vision Research, Heidelberg, Germany
- 266 — C0125 Optical Pathway Imaging and Straylight Evaluation of Opacified Intraocular Lenses.** Hyeck Soo Son^{2,1}, T. M. Yildirim^{2,1}, G. Łabuz², G. Auffarth^{2,1}. ¹University Eye Hospital Heidelberg, Heidelberg, Germany; ²David J. Apple Center for Vision Research, Heidelberg, Germany
- 267 — C0126 Unfolding efficiency and time for optic recovery of a novel hydrophobic acrylic material as compared to currently available intraocular lens materials.** Gary Guenther¹, M. Ayyagari¹, A. Pilon², V. Kolesnichenko³. ¹Research & Development, Bausch & Lomb, Irvine, CA; ²Surgical, Bausch & Lomb, Irvine, CA; ³Medical Affairs, Bausch & Lomb, Irvine, CA *CR
- 268 — C0127 Full shape crystalline lens geometrical changes with age from 3-D OCT images in vivo and ex vivo.** Eduardo Martinez-Enriquez¹, A. Mohamed^{2,3}, M. Ruggieri⁴, M. Velasco-Ocana¹, S. Williams^{4,5}, B. Maceo Heilman^{4,5}, A. De Castro¹, P. Perez-Merino¹, N. Sravani², V. Sangwan², J. A. Pare^{3,4}, R. Augusteyn^{3,6}, A. Ho^{3,4}, F. Manns^{4,5}, S. Marcos¹. ¹Instituto de Optica "Daza de Valdés", Consejo Superior de Investigaciones Científicas (IO, CSIC), Madrid, Madrid, Spain; ²Ophthalmic Biophysics, L V Prasad Eye Institute, Hyderabad, Telangana, India; ³Brien Holden Vision Institute, Sydney, New South Wales, Australia; ⁴Ophthalmic Biophysics Center, Bascom Palmer Eye Institute, University of Miami Miller School of Medicine, Miami, FL; ⁵Department of Biomedical Engineering, University of Miami College of Engineering, Coral Gables, FL; ⁶School of Optometry and Vision Science, The University of New South Wales, Sydney, New South Wales, Australia *CR

Exhibit Hall C0170-C0201

Sunday, April 29, 2018 8:15 AM-10:00 AM

Multidisciplinary Ophthalmic Imaging Group

113 OCT - New Biomarkers and Technical Improvements

Moderators: Brian Soetikno and Xincheng Yao

269 — C0170 Evaluation of vitreoretinal cellular infiltration in uveitis on optical coherence tomography. Wataru Matsumiya¹, S. Kusuvara¹, A. Katsuyama¹, A. Uji², M. Nakamura¹. ¹Ophthalmology, Kobe University Graduate School of Medicine, Kobe, Hyogo, Japan; ²Ophthalmology, Kyoto University Graduate School of Medicine, Kyoto, Japan

270 — C0171 Evaluation of Vitreous Cells Using Swept-Source Optical Coherence Tomography. Rene Choi¹, Y. Li¹, J. J. Siak^{1,2}, C. Lu³, B. Lee³, J. Yang¹, G. Liu⁴, E. B. Suhler¹, P. Lin¹, J. G. Fujimoto³, J. T. Rosenbaum¹, D. Huang¹. ¹Ophthalmology, Casey Eye Institute - OHSU, Portland, OR; ²Ocular Inflammation and Immunology, Singapore National Eye Centre - Singapore Eye Research Institute, Singapore, Singapore; ³Electrical Engineering & Computer Science and Research Laboratory of Electronics, Massachusetts Institute of Technology, Cambridge, MA *CR

- 271 — C0172 Quantification of the tear film lipid layer using optical coherence tomography.** Valentin Aranha dos Santos^{1,4}, L. Schmetterer^{2,4}, H. Stegmann^{1,4}, G. Garhofer^{2,4}, D. Schmid^{2,4}, R. M. Werkmeister^{1,4}. ¹Center for medical physics, Medical University of Vienna, Vienna, Austria; ²Singapore Eye Research Institute, Singapore, Singapore; ³Department of clinical pharmacology, Medical University of Vienna, Vienna, Austria; ⁴Christian Doppler Laboratory for Ocular and Dermal Effects of Thiomers., Vienna, Austria ✕
- 272 — C0173 Topographical Profile of Peripapillary Choroidal Vasculature Index in Myopic Children.** Ajay Kumar¹, R. Agrawal², N. Khandelwal³, D. Bohan¹, J. Goh³, A. Goei³, J. Lam¹, C. Ngo¹. ¹Department of Ophthalmology, National University Health System, Singapore, SINGAPORE, Singapore; ²Department of Ophthalmology, Tan Tock Seng Hospital, Singapore, SINGAPORE, Singapore; ³Yong Loo Lin School of Medicine, National University of Singapore, Singapore, SINGAPORE, Singapore
- 273 — C0174 Anterior Chamber Blood Cell Differentiation Using Spectroscopic Optical Coherence Tomography.** Ruobing Qian¹, R. P. McNabb², A. N. Kuo^{2,1}, J. A. Izatt^{1,2}. ¹Biomedical Engineering, Duke University, Durham, NC; ²Ophthalmology, Duke University, Durham, NC *CR
- 274 — C0175 Widefield Choroidal Thickness Distribution in Normal Eyes.** Giovanni Gregori, F. Zheng, Y. Shi, E. Motulsky, P. J. Rosenfeld. Ophthalmology, Bascom Palmer Eye Institute, Miami, FL *CR
- 275 — C0176 Vitreous visualization: a comparison between ultrasound and OCT widefield.** Ugo Nava, F. Corvi, L. Pace, s. parrulli, M. Cereda, G. Staurengi, M. Cozzi, M. Belotti. Luigi Sacco Hospital University of Milan, Milan, Italy *CR
- 276 — C0177 Regional difference of choroidal structure by wide-field optical coherence tomography.** Naoko Kakiuchi, H. Terasaki, S. Sonoda, H. Shiihara, T. Sakamoto. Ophthalmology, Kagoshima University, Kagoshima, KAGOSHIMA, Japan
- 277 — C0178 Estimating retinal shape based on widefield optical coherence tomography and axial length measurements.** Jochen Straub, M. Steidle, C. Leahy, S. Bello, T. Callan, A. Covita. Carl Zeiss Meditec, Inc., Dublin, CA *CR
- 278 — C0179 In vivo cellular resolution imaging of human retina with full-field OCT.** Peng XIAO^{1,2}, V. Mazlin^{1,2}, K. Grieve³, J. A. Sahel³, M. Fink^{1,2}, C. Boccarda^{1,2}. ¹Institut Langevin, Paris, France; ²ESPCI Paris, PSL, Paris, France; ³Institut de la Vision, Paris, France
- 279 — C0180 Relation between IOP and air-puff-induced dynamics of ocular components in human eyes measured with full-eye-length SS-OCT.** Ireneusz Grulkowski¹, E. Maczynska¹, J. Rzeszewska², A. Jimenez-Villar¹, M. Wojtkowski^{3,1}, B. Kaluzny². ¹Faculty of Physics, Astronomy and Informatics, Nicolaus Copernicus University, Torun, Poland; ²Collegium Medicum, Nicolaus Copernicus University, Bydgoszcz, Poland; ³Institute of Physical Chemistry, Polish Academy of Sciences, Warsaw, Poland
- 280 — C0181 Use of intraoperative optical coherence tomography in vitreoretinal surgery for dense vitreous hemorrhage in Chinese population.** Jiwei Tao. Eye Hospital of Wenzhou Medical University, Hang Zhou, China
- 281 — C0182 Microstructural morphology in eyes with epiretinal membrane before, during and after membrane peeling in intraoperative optical coherence tomography (iOCT) and spectral domain OCT (SD-OCT) and visual acuity outcome.** Melanie Weschta², M. Pettenkofer¹, N. Feucht¹, C. P. Lohmann¹, M. Maier¹. ¹ophthalmology, Klinik rechts der Isar München (TUM), München, Germany; ²medicine, TU München, München, Germany
- 282 — C0183 Peripheral vitreoretinal findings using intraoperative optical coherence tomography in rhegmatogenous retinal detachment.** Koichi Nishitsuka, A. Sugano, H. Namba, Y. Kaneko, K. Nishi, H. Yamashita. Ophthalmology/Vis Sci, Yamagata University Sch of Med, Yamagata-shi, Yamagata, Japan *CR
- 283 — C0184 Impact of Intraoperative OCT-Assisted Epiretinal Membrane Peeling on ERM Recurrence Rate.** Steven Tran², P. Emami-naein¹, M. Safi¹, S. Osmanovic³, A. Moshiri¹, S. S. Park¹, L. S. Morse¹, G. Yiu¹. ¹Ophthalmology, University of California, Davis, Sacramento, CA; ²Chicago Medical School, Chicago, IL; ³Arlington Eye Physicians, Arlington Heights, IL *CR
- 284 — C0185 Axial Position-Based Colorization Improves Intraoperative Visualization of Live Volumetric (4D) Microscope-Integrated Optical Coherence Tomography (MIOCT).** Isaac Bleicher¹, M. Jackson-Atogi³, C. Viehland², H. Gabr², J. A. Izatt³, C. A. Toth². ¹Duke University School of Medicine, Durham, NC; ²Vitreoretinal Disease, Duke University Eye Center, Durham, NC; ³Biomedical Engineering, Duke University, Durham, NC *CR
- 285 — C0186 Use of 3D printing technology in fabricating intraoperative OCT compatible ophthalmic tools.** Hesham Gabr^{1,2}, H. Ngo³, S. Hsu¹, J. Izatt³, C. A. Toth^{1,3}. ¹Ophthalmology, Duke, Durham, NC; ²Ophthalmology, Ain-Shams University, Cairo, Egypt; ³Biomedical engineering, Duke, Durham, NC *CR, ✕
- 286 — C0187 Feasibility of Intraocular Forward-Imaging B-scan Optical Coherence Tomography Probe to Guide Subretinal Injections.** TOMAS A. Moreno¹, J. H. Shen¹, Y. Tao², K. M. Joos^{1,2}. ¹Vanderbilt Eye Institute, Vanderbilt University Medical Center, Nashville, TN; ²Biomedical Engineering, Vanderbilt University, Nashville, TN *CR
- 287 — C0188 Injection Assistance via Surgical Needle Guidance using Microscope-Integrated OCT (MI-OCT).** Jakob Weiss¹, N. Rieke¹, M. Nasser⁴, M. Maier⁴, C. P. Lohmann⁴, N. Navab^{1,2}, A. Eslami³. ¹Informatics, Chair I16, Technical University of Munich, Garching b. Munich, Germany; ²Johns Hopkins University, Baltimore, MD; ³Carl Zeiss Meditec AG, Munich, Germany; ⁴Ophthalmology, Klinikum Rechts der Isar, Munich, Germany *CR
- 288 — C0189 Effects of multifocal and monofocal intraocular lenses on swept-source microscope-integrated optical coherence tomography (SS-MIOCT) image quality in a model eye.** Wenlan Zhang¹, J. Tian¹, R. McNabb^{1,2}, H. Ngo^{1,2}, C. Viehland^{2,1}, A. N. Kuo^{1,2}, J. Izatt^{2,1}, C. A. Toth^{1,2}. ¹Ophthalmology, Duke Univ School of Medicine, Durham, NC; ²Biomedical Engineering, Duke University, Durham, NC *CR
- 289 — C0190 In vivo multimodality ophthalmic imaging using surgical microscope-integrated intraoperative spectrally-encoded coherence tomography and reflectometry (iSECTR).** Mohamed El-Haddad, J. Malone, K. C. Leeburg, B. D. Terrones, Y. Tao. Biomedical Engineering, Vanderbilt University, Nashville, TN *CR
- 290 — C0191 Subretinal fibrosis detection with polarization sensitive OCT.** Maximilian G. Gräfe^{1,2}, A. van de Kreeke², Y. de Jong - Hesse², F. D. Verbraak², J. De boer¹. ¹Vrije Universiteit Amsterdam, Amsterdam, Netherlands; ²VU medical center, Amsterdam, Netherlands *CR
- 291 — C0192 Polarization-sensitive swept-source OCT imaging of retinal pigment epithelium and subretinal fibrous tissues.** Masahiro Yamanari¹, M. Matsuzaki^{2,3}, S. Takagi^{2,3}, S. Sugiyama¹, N. Miyamoto^{2,3}, Y. Hirami^{2,3}, N. Koide⁴, F. Jaillon¹, D. Suzuki¹, K. Totani¹, K. Horikoshi¹, S. OSHIMA¹, M. Mandai^{4,2}, M. Takahashi^{4,2}, Y. Kurimoto^{2,3}. ¹Tomey Corporation, Nagoya, Japan; ²Department of Ophthalmology, Kobe City Eye Hospital, Kobe, Japan; ³Department of Ophthalmology, Kobe City Medical Center General Hospital, Kobe, Japan; ⁴Laboratory for Retinal Regeneration, Riken Center for Developmental Biology, Kobe, Japan *CR

- 292 — C0193 Functional imaging with ultra-high resolution polarization-sensitive optical coherence tomography.** Barry Cense^{1,2}, D. Serrano Garcia³, M. Reddikumar⁴, J. Cervantes⁴. ¹Lions Eye Institute, University of Western Australia, Perth, Western Australia, Australia; ²School of Electrical, Electronic and Computer Engineering, Perth, Western Australia, Australia; ³Universidad de Guadalajara, Guadalajara, Jalisco, Mexico; ⁴Center for Optical Research and Education, Utsunomiya University, Utsunomiya, Tochigi, Japan *CR
- 293 — C0194 In-vivo imaging of the healthy and pathological human limbus with 250 kHz, axicon lens-based, 1- μ m axial resolution SD-OCT.** Kostadinka K. Bizheva^{1,2}, Z. Hosseinaee¹, B. Tan¹, H. Le¹, B. Ballios³, H. Chew³, A. Slomovic³, L. Sorbara². ¹Physics and Astronomy, University of Waterloo, Waterloo, Ontario, Canada; ²School of Optometry and Vision Science, University of Waterloo, Waterloo, Ontario, Canada; ³Ophthalmology, University of Toronto, Toronto, Ontario, Canada
- 294 — C0195 Ex-vivo imaging of the posterior human corneal layers after Big Bubble DALK and DMEK procedures with sub-micrometer axial resolution OCT.** Luigina Sorbara⁴, M. Al Obthani¹, H. Chew², Z. Hosseinaee⁵, H. Le⁶, C. Maxwell⁶, D. Hileeto⁴, S. Holland⁴, C. Chan², H. Dua³, A. Slomovic³, K. K. Bizheva⁶. ¹Ophthalmology and Vision Sciences, University of British Columbia, Vancouver, British Columbia, Canada; ²Ophthalmology and Vision Sciences, University of Toronto, Toronto, Ontario, Canada; ³LA Donoso Laboratory for Eye Research, University of Nottingham, Nottingham, United Kingdom; ⁴School of Optometry and Vision Science, University of Waterloo, Waterloo, Ontario, Canada; ⁵Systems Design Engineering, University of Waterloo, Waterloo, Ontario, Canada; ⁶Physics and Astronomy, University of Waterloo, Waterloo, Ontario, Canada
- 295 — C0196 Investigating the functional response of cone photoreceptors during bleaching and dark adaptation with 1.7MHz optical coherence tomography.** Mehdi Azimipour, J. V. Migacz, B. Marsh-Armstrong, K. Murrell, R. J. Zawadzki, R. S. Jonnal, J. S. Werner. Department of Ophthalmology and Vision Science, University of California Davis, Sacramento, CA
- 296 — C0197 Capturing fine retinal structure using adaptive optics optical coherence tomography (AOOCT) with real-time retinal tracking.** Koji Nozato, K. Takeno, M. Fukuhara, K. Matsumoto, Y. Katashiba, H. Tanaka, H. Inoue, Y. Inao, Y. Sato, H. Ooban, K. Oyaizu, H. Shioda, H. Aoki, T. Yuasa, T. Makihiro. Medical Equipment Group, CANON INC., Kawasaki, Kanagawa, Japan *CR
- 297 — C0198 Compact retinal optical coherence tomography instrument at 1060nm for large field of view imaging including an optical zoom in option using adaptive optics.** Matthias Salas^{1,2}, M. Augustin¹, F. Felberer³, L. G. Ginner^{1,2}, A. Wartak¹, R. Leitgeb^{1,2}, X. Levecq³, A. Reumüller⁴, A. Pollreis⁴, U. Schmidt-Erfurth⁴, W. Drexler¹, M. Pircher¹. ¹Center for Medical Physics and Biomedical Engineering, Medical University of Vienna, Wien, Wien, Austria; ²Christian Doppler Laboratory for Innovative Optical Imaging and Its Translation to Medicine, Medical University of Vienna, Wien, Wien, Austria; ³Imagine Eyes, Orsay, France; ⁴Department of Ophthalmology and Optometry, Medical University of Vienna, Wien, Wien, Austria *CR
- 298 — C0199 Increasing the field of view in high resolution imaging of the retina with adaptive optics optical coherence tomography.** Michael Pircher, M. Laslandes, M. Salas, A. Wartak, C. K. Hitzenberger. Center for Med Pyhs & Biomed Eng, Medical University of Vienna, Vienna, Austria
- 299 — C0200 Achromatized visible light OCT for ultrahigh resolution retinal imaging.** Tingwei Zhang¹, S. P. Chong¹, A. M. Kho¹, M. Bernucci¹, A. Dubra², V. J. Srinivasan^{1,3}. ¹Biomedical Engineering, University of California Davis, Davis, CA; ²Byers Eye Institute, Stanford University, Palo Alto, CA; ³Department of Ophthalmology and Vision Science, University of California Davis School of Medicine, Sacramento, CA *CR
- 300 — C0201 Imaging motion in the retina in 3D using FF-SS-OCT.** Gereon Huttman^{1,2}, H. Spahr¹, C. Pfäffle^{1,3}, D. Hillmann¹. ¹Institute of Biomedical Optics, University of Lübeck, Lübeck, Germany; ²Airway Research Center North (ARC), German Center for Lung Research (DZL), Großhansdorf, Germany; ³Medical Laser Center Lübeck, Lübeck, Germany; ⁴Business unit Lübeck, Thorlabs GmbH, Lübeck, Germany *CR
-
- Exhibit Hall C0234-C0270
Sunday, April 29, 2018 8:15 AM-10:00 AM
Anatomy and Pathology/Oncology
- 114 Ocular structures in development, health, and disease**
-
- Moderators: Antonio Bergua and Chea-su Kee**
- 301 — C0234 A novel technique to characterize key fluid mechanic properties of the suprachoroidal injection procedure in an in vivo model.** Shelley Hancock, N. Fisher, J. Yoo, R. V. Andino. Engineering, Clearside Biomedical, Inc., Alpharetta, GA *CR
- 302 — C0235 Optical coherence tomography angiography of choriocapillaris: normative macular choriocapillaris vasculature and novel classification of early-stage systemic hypertensive changes: A cross-sectional study.** Kei Takayama^{1,2}, Y. Ito¹, H. Kaneko¹, K. Kataoka¹, T. Iwase¹, T. Tsunekawa¹, H. Shimizu¹, A. Suzumura¹, T. Akahori¹, H. Terasaki¹. ¹Nagoya University Graduate School of Medicine, Tokorozawa, Japan; ²Ophthalmology, National Defense Medical College, Tokorozawa, Saitama, Japan
- 303 — C0236 Evaluation of the subfoveal choroidal thickness in patients with oculocutaneous albinism.** MARCO S. ALMEIDA, L. Hirota, R. P. Manzano, R. Y. Sano. Ophthalmology, Irmandade Santa Casa de Misericórdia de Sao Paulo, Sao Paulo, Sao Paulo, Brazil
- 304 — C0237 RPE-specific Sox9 controls dorsal choroidal vascular development in the mouse retina.** So Goto^{2,1}, A. Onishi¹, Y. Ohigashi², H. Sakaguchi¹, K. Nishida¹, M. Takahashi². ¹Ophthalmology, Osaka Univ Graduate School, Suita, OSAKA, Japan; ²Laboratory for Retinal Regeneration, RIKEN Center for Developmental Biology, Kobe, Hyogo, Japan
- 305 — C0238 Relativity of choroidal thickness and blood flow in the subfoveal area with Idiopathic Macular Hole.** lin qirong¹, H. Liu². ¹Ophthalmology, Shanghai Jinan District Shibe Hospital, Shanghai, China; ²Ophthalmology, First People's Hospital of Shanghai, Shanghai, China
- 306 — C0239 Morphological Changes of the Retinal Choroid in Severe Alzheimer's Disease: A Histopathological Study.** Fred N. Ross-Cisneros¹, S. Asanad^{1,2}, E. Barron³, A. Golston⁴, E. A. Barron³, A. A. Sadun^{1,2}. ¹Neuro-Ophthalmology, Doheny Eye Institute, Los Angeles, CA; ²Ophthalmology, David Geffen School of Medicine at University of California Los Angeles, Los Angeles, CA; ³Imaging Core Facility, Doheny Eye Institute, Los Angeles, CA; ⁴Biostatistics, School of Public Health, University of California Los Angeles, Los Angeles, CA
- 307 — C0240 Histopathologic Validation of Choroidal Thickness as a Biomarker for Leber's Hereditary Optic Neuropathy (LHON).** Fei Lin^{1,2}, S. Asanad^{1,2}, F. Darvizeh³, F. N. Ross-Cisneros^{1,2}, M. Schunimann¹, P. Barboni³, A. A. Sadun^{1,2}. ¹Ophthalmology, Doheny Eye Institute-UCLA, Los Angeles, CA; ²Ophthalmology, David Geffen School of Medicine at University of California Los Angeles, Los Angeles, CA; ³Ophthalmology, San Raffaele Scientific Institute, Milan, Italy

- 308 — C0241 Morphological classification of RALDH2-positive cells in the human choroid.** Falk Schroedl^{1,2}, A. Kaser-Eichberger¹, A. Trost¹, C. Runge¹, D. Bruckner¹, B. Bogner¹, C. Strohmaier¹, H. A. Reitsamer^{1,3}, J. A. Summers⁴. ¹Dept Ophthalmology/Optomety, Research Program Experimental Ophthalmology, Paracelsus Medical University, Salzburg, Austria; ²Dept. of Anatomy, Paracelsus Medical University, Salzburg, Austria; ³Spinal Cord Injury and Tissue Regeneration Center Salzburg (SCI-TReCS), Salzburg, Austria; ⁴Department of Cell Biology, University of Oklahoma Health Science Center, Oklahoma, OK
- 309 — C0242 Comparison of TGF- β stimulated optic nerve head astrocytes in 2D versus 3D cultures.** Kathryn E. Bollinger, B. Mysona, j. zhao, C. Hernandez, G. Gonsalvez. Ophthalmology, Medical College of Georgia, Augusta, GA
- 310 — C0243 Optical Coherence Tomography Angiography in Optic Disc Swelling.** Masoud Fard¹, J. Jalil², Y. Suwan³, P. S. Subramanian⁴, R. Ritch³. ¹Ophthalmology, Farabi Eye Hospital, Tehran, Iran (the Islamic Republic of); ²Department of Biophysics and Bioengineering, Biotechnology, Tehran, Iran (the Islamic Republic of); ³new york eye and ear infirmiry, New York, NY; ⁴University of Colorado, Aurora, CO; ⁵ophthalmology, Bangkok, Thailand
- 311 — C0244 Understanding the role of glial cells (astrocytes and oligodendrocytes) in maintaining the homeostasis of the optic nerve.** Meysam Yazdankhah¹, R. Grebe², E. G. Bax³, I. A. Bhutto¹, S. L. Hose¹, A. N. FairchildBaranowski³, P. Calabresi³, J. Zigler², D. Sinha^{1,2}. ¹Ophthalmology, University of Pittsburgh, Pittsburgh, PA; ²Wilmer Eye Institute, The Johns Hopkins University, Baltimore, MD; ³Neurology, The Johns Hopkins University, Baltimore, MD
- 312 — C0245 Novel characterization of Prox-1 expression in the optic nerve.** Yujia Yang^{1,2}, L. Zhang^{1,2}, G. Li^{1,2}, L. Chen^{1,2}. ¹Vision Science Graduate Program, University of California, Berkeley, Berkeley, CA; ²Center for Eye Disease and Development, Program in Vision Science, and School of Optometry, University of California, Berkeley, Berkeley, CA
- 313 — C0246 Synaptic coupling of unmyelinated optic nerve axons – a novel insight into optic nerve structure and conductivity properties.** Adrian Smedowski^{1,2}, S. Akhtar³, L. Podracka⁷, X. Liu⁶, E. Toropainen⁷, M. Amadio⁵, M. Pietrucha-Dutczak¹, M. Varjosalo⁶, A. Urtti⁷, K. Kaarniranta^{4,8}, J. Lewin-Kowalik¹. ¹Department of Physiology, Medical University of Silesia, Katowice, Poland; ²Department of Ophthalmology, Medical University of Silesia, Katowice, Poland; ³Department of Optometry and Vision Science, King Saud University, Riyadh, Saudi Arabia; ⁴Department of Ophthalmology, Kuopio University Hospital, Kuopio, Finland; ⁵Department of Drug Sciences, Section of Pharmacology, University of Pavia, Pavia, Italy; ⁶Institute of Biotechnology, University of Helsinki, Helsinki, Finland; ⁷School of Pharmacy, University of Eastern Finland, Kuopio, Finland; ⁸Department of Ophthalmology, University of Eastern Finland, Kuopio, Finland
- 314 — C0247 Development of a Porcine Optic Nerve Injury Model.** Drew Holt¹, E. Por¹, J. Cleland¹, J. Harris¹, V. Gorantla², M. Sandoval¹, C. Thomas-Benson¹, L. Harris¹, A. Negaard¹, L. I. Benowitz³, J. L. Goldberg⁴, G. T. Bramblett¹. ¹Sensory Trauma, USAISR, JBSA Fort Sam Houston, TX; ²Wake Forest Institute for Regenerative Medicine, Winston-Salem, NC; ³Boston Children's Hospital and Harvard Medical School, Boston, MA; ⁴Byers Eye Institute at Stanford University, Palo Alto, CA
- 315 — C0248 Intra-optic nerve delivery of AAV-mediated gene therapy in mice.** Joseph Paul^{1,2}, T. Colgan^{1,2}, V. Chrysostomou^{1,2}, P. van Wijngaarden^{1,2}, J. G. Crowston^{1,2}. ¹Centre for Eye Research Australia, Melbourne, Victoria, Australia; ²Ophthalmology, The University of Melbourne, Melbourne, Victoria, Australia
- 316 — C0249 Visuo-retinal effects of chemotherapy in hematological malignancy.** David Anderson^{1,2}, S. Kedar^{1,3}, V. R. Bhatt^{1,2}, S. A. Holstein^{1,2}, M. Lunning^{1,2}, M. Rizzo^{1,2}. ¹Neurological Sciences, University of Nebraska Medical Center, Omaha, NE; ²Fred & Pamela Buffett Cancer Center, University of Nebraska Medical Center, Omaha, NE; ³Department of Ophthalmology, University of Nebraska Medical Center, Omaha, NE; ⁴Division of Oncology, Department of Internal Medicine, University of Nebraska Medical Center, Omaha, NE
- 317 — C0250 Lymphatic markers in the human optic nerve.** Andrea Trost¹, C. Runge¹, A. Kaser-Eichberger¹, D. Bruckner¹, F. Schrödl^{1,2}, B. Bogner¹, H. A. Reitsamer¹. ¹Dept Ophthalmology/Optomety, Paracelsus Medical University Salzburg, Salzburg, Austria; ²Dept Anatomy, Paracelsus Medical University Salzburg, Salzburg, Austria
- 318 — C0251 SEAM Organoids Model Iris Muscle Cell Development from the Optic Cup.** Bar Nachmani, T. A. Blenkinsop. Icahn School of Medicine at Mount Sinai, New York, NY
- 319 — C0252 Developmental change in the gene-expression of transient receptor potential melanostatin channel 3 (TRPM3) in murine lacrimal gland.** Anna Kanewska^{1,2}, M. Ito³, Y. Karasawa², M. Inada², F. Garreis¹, F. P. Paulsen¹, M. Takeuchi². ¹Anatomy II, Friedrich Alexander University Erlangen Nürnberg, Neumarkt, Germany; ²Developmental Anatomy and Regenerative Biology, Ophthalmology, National Defense Medical College, Saitama, Japan
- 320 — C0253 Tracking Mesenchyme Primordial Cells with Gli1 Labeled the Optic Nerve Head and Periocular Mesenchyme.** Kathy K. Svoboda^{3,2}, H. Zhao¹, M. Petrol². ¹Restorative Sciences, Texas A&M College of Dentistry, Dallas, TX; ²Ophthalmology, University of Texas Southwestern Medical Center, Dallas, TX; ³Biomedical Sciences, Texas A&M College of Dentistry, Dallas, TX
- 321 — C0254 Lactate receptor GPR81 modulates the integrated stress response in the developing outer retina.** Xiaojuan Yang^{1,2}, R. Rouget², T. Zhu², C. Quiniou², F. Duhamel², J. C. Rivera², P. Lachapelle³, S. Chemtob². ¹School of Optometry, University of Montreal, Montreal, Quebec, Canada; ²Department of Pediatrics, Ophthalmology and Pharmacology, CHU Sainte-Justine Research Center, Montreal, Quebec, Canada; ³Departments of Ophthalmology and Neurology-Neurosurgery, Research Institute of the McGill University Health Centre-Montreal Children's Hospital, Montreal, Quebec, Canada
- 322 — C0255 FGF and WNT Signaling Pathways Synergize During Ciliary Margin Development.** Revathi Balasubramanian¹, C. Tao¹, K. Polanco², X. Zhang². ¹Ophthalmology, Columbia University, New York, NY; ²Columbia University, New York, NY
- 323 — C0256 p190RhoGAP is Required for Proper Temporal Completion of Chroid Fissure Closure in the Zebrafish Eye.** Andrea James. Biology, University of Northern Colorado, Greeley, CO
- 324 — C0257 Identification of a Conserved Biophysical Mechanism for Productive Eye Repair.** Taylor Birkholz¹, C. Kha², W. Beane¹, K. Tseng². ¹Biological Sciences, Western Michigan University, Kalamazoo, MI; ²School of Life Sciences, University of Nevada, Las Vegas, Las Vegas, NV
- 325 — C0258 Generation of a Novel Peroxidase Knockout Mouse.** Xiaohu Yan^{1,2}, D. Li³, H. Cheng^{1,2}. ¹Shenzhen Key Laboratory of Ophthalmology, Shenzhen Eye Hospital, Jinan University, Shenzhen, China, Shenzhen, China; ²School of Optometry, Shenzhen University, Shenzhen, China, Shenzhen, China; ³Shanghai Key Laboratory of Regulatory Biology, Institute of Biomedical Sciences and School of Life Sciences, East China Normal University, Shanghai, China, Shanghai, China

- 326 — C0259 Nidogen: A Lynchpin Of Basement Membrane Disassembly Prior To Choroid Fissure Fusion.** *Nicholas Carrara, J. Famulski. Biology, University of Kentucky, Lexington, KY*
- 327 — C0260 Postnatal development of the nonhuman primate fovea is modulated by breast versus formula feeding.** *Martha Neuringer^{1,2}, T. J. McGill^{2,1}, E. E. Johnson¹, K. Paul¹, J. W. Erdman³, M. Kuchan⁴, L. Renner¹. ¹Oregon National Primate Research Center, Oregon Health & Science University, Beaverton, OR; ²Casey Eye Institute, Oregon Health & Science University, Portland, OR; ³Food Science and Human Nutrition, University of Illinois Champaign-Urbana, Urbana, IL; ⁴Abbott Nutrition, Columbus, OH *CR*
- 328 — C0261 Molecular genetic investigation of two distinct monogenic disorders with ocular involvement in a large consanguineous Roma family.** *Lubica Dudakova, P. Skalicka, P. Liskova. Charles University, Prague, Czechia*
- 329 — C0262 Triamcinolone acetamide loaded microemulsion for enhanced ocular bioavailability via topical route.** *Kritika Nayak, M. Misra. NIPER, Gandhinagar, Gandhinagar, GUJARAT, India*
- 330 — C0263 Tissue artefacts in post mortem human eyes.** *Svetlana Cherepanoff^{1,2}, L. Too², V. Pye², M. Killingsworth^{3,4}, A. Allende⁵, A. Invernizzi⁷, A. Hunyor⁸, J. Wong⁸, J. Arnold⁹, R. Merant⁸, M. Rodriguez^{1,5}, M. C. Madigan^{6,8}, G. Hall⁵. ¹St Vincent's Hospital, Darlinghurst, New South Wales, Australia; ²Brain and Mind Center, The University of Sydney, Sydney, New South Wales, Australia; ³School of Medicine, Western Sydney University, Sydney, New South Wales, Australia; ⁴South Western Sydney Clinical School, University of New South Wales, Sydney, New South Wales, Australia; ⁵Douglass Hanly Moir Pathology, Sydney, New South Wales, Australia; ⁶School of Optometry and Vision Science, University of New South Wales, Sydney, New South Wales, Australia; ⁷Department of Biomedical and Clinical Science "Luigi Sacco" Luigi Sacco Hospital, University of Milan, Milano, Italy; ⁸The University of Sydney, Sydney, New South Wales, Australia; ⁹Marsden Eye, Sydney, New South Wales, Australia*
- 331 — C0264 A cadaveric study of periocular and orbital surgical anatomy.** *Luke Dolezal, V. Rana, J. Sokol. Ophthalmology, University of Kansas Medical Center, Prairie Village, KS*
- 332 — C0265 Multi-electrode recording as a novel technique in electromyography of the orbicularis oculi muscle.** *Bonnie Sklar¹, K. A. Gervasio², K. Kaur¹, M. Sivak³, A. Wu⁴. ¹Medical Education, Icahn School of Medicine at Mount Sinai, New York, NY; ²Memorial Sloan Kettering Cancer Center, New York, NY; ³Neurology, Icahn School of Medicine at Mount Sinai, New York, NY; ⁴Ophthalmic Plastic and Reconstructive Surgery, Department of Ophthalmology, Stanford School of Medicine, Palo Alto, CA*
- 333 — C0266 Single particle tracking of nicotinic acetylcholine receptors (AChRs): implication for the pathogenesis of ocular myasthenia gravis (MG).** *Wei He, Y. Sun. Department of Ophthalmology, Stanford University, Palo Alto, CA*
- 334 — C0267 Feasibility of detecting RNA expression in human vitreous.** *Michelle Peng, K. Hemarat, Q. Liu, X. Kong, I. Sukpen, M. Kudish, J. Lo, D. Tapas, C. Chia, J. Kemmer, A. Naaseh, T. Doan, R. Lamy, J. M. Stewart. University of California, San Francisco, San Francisco, CA*
- 335 — C0268 The role of prostaglandins in floppy eyelid syndrome.** *Brittany Simmons¹, T. Zhao², C. Woeller^{4,1}, M. Gonzalez^{1,3}. ¹Ophthalmology, University of Rochester Medical Center, Rochester, NY; ²Associates in Ophthalmology, West Mifflin, PA; ³Dentistry, University of Rochester Medical Center, Rochester, NY; ⁴Environmental Medicine, University of Rochester Medical Center, Rochester, NY*
- 336 — C0269 Measurement and analysis of pH in human vitreous body.** *Hiroki Mieno¹, K. Kojima¹, K. Yoneda¹, K. Nagata¹, T. Inaba², Y. Marunaka³, C. Sotozono¹. ¹Ophthalmology, Kyoto Prefectural University of Medicine, Kyoto, Japan; ²Infection Control and Laboratory Medicine, Kyoto Prefectural University of Medicine, Kyoto, Japan; ³Molecular Cell Physiology, Kyoto Prefectural University of Medicine, Kyoto, Japan*
- 337 — C0270 Orbital lymphatic vessels in humans: a new paradigm.** *Renato Damasceno^{1,2}, J. Barbosa¹, L. Cortez¹, R. Belfort Jr². ¹Ophthalmology, Universidade Estadual de Ciências da Saúde de Alagoas, Maceió, Alagoas, Brazil; ²Ophthalmology, Universidade Federal de Sao Paulo, Sao Paulo, Sao Paulo, Brazil*

Ballrooms BC

Sunday, April 29, 2018 10:45 AM-11:30 AM

115 Proctor Award and Lecture

Clinical diagnoses remain the starting point for detection of monogenic outer retinal degenerations, but advances in non-invasive tools have added opportunities to understand further the pathophysiology. Add molecular diagnostics and science collaboration, these human photoreceptor and retinal pigment epithelium diseases are now entering an era of novel therapeutics.

— 10:45 **Introduction: Elise Heon, MD and Gustavo D. Aguirre, VMD, PhD**

338 — 10:50 From observations in the retina clinic to insights into pathophysiology. *Artur V. Cideciyan. Dept of Ophthalmology, Scheie Eye Institute, Univ of Pennsylvania, Philadelphia, PA*

339 — 11:10 From observations in the retina clinic to insights into pathophysiology. *Samuel G. Jacobson. Center for Hereditary Retinal Degenerations, Scheie Eye Institute, Philadelphia, PA*

Ballrooms BC

Sunday, April 29, 2018 11:45 AM-12:30 PM

116 Friedenwald Award and Lecture

In this lecture Reza Dana will provide an overview of ocular immune regulation, and relate fundamental qualities of immune cell phenotype and function to the art of M.C. Escher and the music of J.S. Bach.

— 11:45 **Introduction: Joan Miller**

340 — 11:50 What Escher and Bach teach us about Immunology. *Reza Dana. Ophthalmology, Mass. Eye & Ear Infirmary / Harvard Medical School, Boston, MA*

Room 301AB

Sunday, April 29, 2018 1:00 PM-2:30 PM

Immunology/Microbiology / Anatomy and Pathology/Oncology / Genetics / Retina / Retinal Cell Biology**117 Retinal microglia in degenerative diseases: Why function matters - SIG**

This SIG will present novel animal models, molecular analysis tools and functional measures to characterize the pro-active role of microglia in influencing the outcome of retinal degenerative diseases including AMD and rare photoreceptor dystrophies.

Moderator: Wai T. Wong

Microglia as endogenous sensors of neuronal stress. *Thomas Langmann.* Department of Ophthalmology, University of Cologne, Cologne, Germany

Microglia as RPE regulators. *Heping Xu.* Centre for Experimental Medicine, Queens University Belfast, Belfast, United Kingdom

Microglia as complement regulators. *Florian Sennlaub.* Institut de la Vision, Paris, France

A Neuroprotective Specialization for Bona Fide Microglia in Retinal Degeneration Models. *Daniel R. Saban.* Duke University School of Medicine, Durham, NC

Room 310

Sunday, April 29, 2018 1:00 PM-2:30 PM

Glaucoma / Anatomy and Pathology/Oncology / Biochemistry/Molecular Biology / Glaucoma / Physiology/Pharmacology / Retina / Visual Neuroscience**118 A Matter of Life or Death: Regulation of RGC Survival by Glia and Interneurons - SIG**

We will discuss recent evidence indicating that retinal astrocytes/Mueller cells, microglia, and interneurons govern the survival of retinal ganglion cells after traumatic or ischemic optic nerve injury and in glaucoma.

Moderator: Larry I. Benowitz (organizer). *Larry I. Benowitz.* Neurology, Harvard Medical School, Boston, MA

Mueller cells regulate RGC survival in an animal model of glaucoma. *Adriana Di Polo.* Neuroscience, University of Montreal, Montreal, Quebec, Canada

Cyclic AMP regulation in non-neuronal cells of the retina regulates RGC survival after optic nerve injury. *Jeffrey L. Goldberg.* Byers Eye Institute, Stanford University, Palo Alto, CA

Microglia govern RGC survival after optic nerve injury. *Wei Li.* Retinal Physiology, NEI/NIH, Bethesda, MD

Amacrine cells regulate RGC survival and axon regeneration after optic nerve injury via nitric oxide and mobile zinc. *Paul A. Rosenberg.* Neurology, Harvard Medical School, Boston, MA

Introduction to session. *Larry I. Benowitz.* Neurology, Harvard Medical School, Boston, MA

Room 311

Sunday, April 29, 2018 1:00 PM-2:30 PM

Retina / Clinical/Epidemiologic Research / Genetics
119 Update on clinical gene therapy trials for inherited retinal diseases - SIG

In this SIG, updates on current inherited retinal dystrophy gene therapy trials will be discussed by a panel of clinical investigators actively involved in these trials. Points of interest involving pros/cons of foveal detachment will be discussed.

Moderator: Christine N. Kay

Cone mediated gene therapy. *Christine N. Kay.* Retina, Vitreoretinal Associates, McIntosh, FL *CR

Overview of Lentivirus gene therapy trials. *Isabelle S. Audo.* Ophthalmology, Institut de la Vision, Paris, France *CR

Overview of AAV Intravitreal Gene Therapy Trials. *Mark E. Pennesi.* Ophthalmology, Casey Eye Institute, Portland, OR *CR

Part 1: Codon-optimization for delivering a fully functional RPGR protein in gene therapy for XLRP Part 2: Surgical techniques for foveal detachment in gene therapy delivery. *Robert E. MacLaren.* Ophthalmology, University of Oxford, London, United Kingdom *CR

Updates on Phase 3 trial for RPE65 associated retinal degeneration. *Stephen R. Russell.* Ophthalmology, University of Iowa, Iowa City, IA *CR

Room 312

Sunday, April 29, 2018 1:00 PM-2:30 PM

Cornea**120 Extracellular Vesicles and the Anterior Segment - SIG**

Extracellular Vesicles (EVs) are recognized as a source of cell communication. In the anterior segment, it is believed that can be used for therapy. SIG will focus on recent progress about EVs in the context of pathophysiology, diagnosis and treatment

Moderator: Dimitrios Karamichos

Exosomes in Keratoconus: A new target. *Dimitrios Karamichos.* Dean McGee Eye Institute, University of Oklahoma Health Sciences Center, Oklahoma City, OK

How to Control Specificity of Exosome Delivery. *Brian S. McKay.* University of Arizona, Tucson, AZ

Exosomes and Exfoliation Syndrome/Glaucoma. *Yutao Liu.* Augusta University, Augusta, GA

Role of Exosomes in Corneal Wound Healing and Angiogenesis. *Dimitri T. Azar.* University of Illinois, Chicago, IL

Corneal cell-cell communication via EVs. *James D. Zieske.* Schepens Eye Research/MEEL, Boston, MA

Sunday Workshops/SIGs
1:00 pm – 2:30 pm

Room 313A

Sunday, April 29, 2018 1:00 PM-2:30 PM

Visual Neuroscience / Biochemistry/Molecular Biology / Genetics / Physiology/Pharmacology / Retina / Retinal Cell Biology

121 Towards Guidelines for Mouse Electrorretinography (ERG) - SIG

ERG is essential in the functional evaluation of disease models and as preclinical biomarker in therapeutic trials. However, there are to date no guidelines for this technique. This SIG is intended as a kick-off meeting to start the process.

Moderators: Mathias W. Seeliger and Laura J. Frishman

Panelist. Mathias W. Seeliger. Div of Ocular Neurodegeneration, Ctr Ophthal Inst Ophthalmic Rsrch, Tuebingen, Germany

Panelist. Mabelle T. Pardue. GaTech/Biomedical Engineering, Atlanta VA Medical Center, Atlanta, GA

Panelist. Laura J. Frishman. College of Optometry, University of Houston, Houston, TX

Panelist. Neal S. Peachey. Ophthalmic Research (I-31), Cleveland Clinic Foundation, Cleveland, OH

Panelist. Suresh Viswanathan. College of Optometry, SUNY, New York, NY

Organizer. Mathias W. Seeliger. Div of Ocular Neurodegeneration, Ctr Ophthal Inst Ophthalmic Rsrch, Tuebingen, Germany

Room 313BC

Sunday, April 29, 2018 1:00 PM-2:30 PM

122 Pizza with the experts

Advance registration required. Trainees, students and junior faculty will benefit from this unique opportunity to network and gain valuable information from those who have been in your shoes! This very popular program offers informal discussions over a pizza lunch on a wide range of topics to provide personal guidance, insight and skills to help you advance your career! Topics will focus on professional development, career guidance, and best practices of interest to basic and clinical trainees and clinician-scientists. A number of the roundtable topics will be specifically tailored to the needs of clinician-scientists.

Room 316A

Sunday, April 29, 2018 1:00 PM-2:30 PM

Clinical/Epidemiologic Research / Cornea / Glaucoma / Immunology/Microbiology / Multidisciplinary Ophthalmic Imaging / Retina

124 Biomarkers and Surrogate Endpoints in Ophthalmic Clinical Research - SIG

This SIG, follow-up of the 2017 IOVS Special Issue, will critically discuss the use of biomarkers and surrogate endpoints in ophthalmic Clinical Trials, focusing on scientific advances, validation processes, regulatory issues, and related challenges.

Moderators: Edoardo Villani and Stela Vujosevic

Organizer. Edoardo Villani. DISCCO. Eye Clinic, University of Milan, San Giuseppe Hospital, Milan, Italy

Organizer. Stela Vujosevic. Azienda Ospedaliero-Universitaria Maggiore della Carità, Novara, Italy

Conceptual framework and common language. Edoardo Villani. DISCCO. Eye Clinic., University of Milan. San Giuseppe Hospital., Milan, Italy

The Growing Need for Validated Biomarkers and Endpoints for Dry Eye Clinical Research.

Penny A. Asbell. Icahn School of Medicine at Mount Sinai, New York, NY *CR

Biomarkers and Surrogate Endpoints: Lessons Learned From Glaucoma. Felipe Medeiros. Duke University, Durham, NC *CR

Biomarkers and Surrogate Endpoints in Uveitis: The Impact of Quantitative Imaging. Alastair K. Denniston. University Hospitals Birmingham NHSFT, Birmingham, United Kingdom

Biomarkers and Surrogate Endpoints in Diabetic Retinopathy. Stela Vujosevic. Azienda Ospedaliero-Universitaria Maggiore della Carità, Novara, Italy

Room 316B

Sunday, April 29, 2018 1:00 PM-2:30 PM

125 Experimental design for optimal animal research in the age of the ‘reproducibility crisis’

Animal models play a vital role in ocular research. Data obtained using animal models provide vital pre-clinical evidence for the decision of whether to continue to clinical trials or not. In vivo experiments also are fundamental for determining the molecular basis of physiology and pathophysiology, especially in complex tissues like the eye. The importance of appropriate design and execution of animal experiments cannot be overstated. The Proper experimental design is necessary for obtaining valid, interpretable results. To properly use animals, it is important that an appropriate animal model is chosen, proper outcome measures and time points are selected, the experiment is properly powered for all outcome measures, and the experiment is appropriately designed to minimize bias. It is also important that the experimental design takes into account animal welfare and the goal of the three Rs, reduce, replace and refinement of methods that alleviate or minimize potential pain, suffering or distress and enhance animal welfare for the animals used. The Animals in Research Committee Workshop for ARVO 2018 will focus the importance of developing the appropriate experimental design for animal research. Organized by the ARVO Animals in Research Committee.

Moderators: Jodhbir S. Mehta, Jack M. Sullivan and Neena B. Haider

— 1:00 **Experimental design and statistical analyses of animal models.** *Abbot F. Clark.* North Texas Eye Research Institute, U. North Texas Health Science Center, Fort Worth, TX *CR

— 1:15 **Gender, age and diet as biological variables in animal models.** *Catherine Bowes Rickman.* Ophthal & Cell Biology, Duke University Medical Center, Durham, NC

— 1:30 **Preclinical Trial Study Design-Achieving Rigor and Reproducibility!** *Mae O. Gordon.* Ophthal & Vis Sciences, Washington Univ Sch of Med, St Louis, MO

— 1:45 **Overview of ARVO regulations on the use of animals in research.** *Marie Ortega^{1,2}.* ¹Massachusetts Eye & Ear, Boston, MA; ²Schepens Eye Research Institute, Boston, MA

— 2:00 **Journal reviewers & editors perspective of the use of animals in research.** *Paul L. Kaufman.* Ophthalmology & Visual Sciences, Univ of Wisconsin Sch of Med & Public Hlth, Madison, WI

— 2:15 **Q & A and Discussion**

Room 316C

Sunday, April 29, 2018 1:00 PM-2:30 PM

126 Grant writing: How to get your proposals funded

This workshop focuses on providing ARVO trainees with advice on strategies to prepare a successful grant application. A panel of experts from government and non-governmental funding agencies and industry, including grant review panel members and foundation and industry sources will provide advice on application preparation, what separates fundable from unfundable applications, and strategies to engage industry support.

Moderators: Richard J. Blanch and Wenlin Zhang

— 1:00 **Introductions and Remarks**

— 1:05 **Structuring a successful NRSA and K99/R00 application.** *Neeraj Agarwal. Division of Extramural Research, National Eye Institute/NIH, Bethesda, MD*

— 1:20 **What separates funded from rejected applications at the NIH?** *Nicholas Delamere^{1,2}. ¹Physiology, University of Arizona, Tucson, AZ; ²Ophthalmology/Vis Sci, University of Arizona, Tucson, AZ*

— 1:35 **What Are Charitable Funders Looking For In Grant Applications?** *Diane Bovenkamp. BrightFocus Foundation, Clarksburg, MD*

— 1:50 **Alcon Research Institute Grants: Supporting research in vision science.** *Matthew E. Helton. Alcon Laboratories, Inc., Fort Worth, TX *CR*

— 2:05 **Q & A and Discussion**

Ballroom A

Sunday, April 29, 2018 1:00 PM-2:30 PM

Physiology/Pharmacology / Cornea / Genetics / Glaucoma / Retina

127 Delivery of therapeutics to ocular tissues - SIG

This SIG discusses novel and translational applications to deliver therapeutics to ocular tissues presenting various tools and ways of drug delivery. A broad range of application areas (ocular surface, cornea, glaucoma and retina) will be covered.

Moderators: Uday B. Kompella, Terete Borrás and Thomas A. Fuchsluger

Cell and gene therapy of the corneal endothelium. *Thomas A. Fuchsluger: Department of Ophthalmology, Friedrich-Alexander-University, Erlangen, Germany*

None. *Uday B. Kompella. Pharmaceutical Sciences & Ophthalmology, University of Colorado, Denver, CO *CR*

Nanoparticle-driven gene delivery into cornea. *Rajiv R. Mohan. Mason Eye Institute and VMTH, University of Missouri-Columbia, Columbia, MO*

Selecting the best scAAV serotype for the trabecular meshwork in human cells and postmortem perfused eyes. *Terete Borrás. Department of Ophthalmology, University of North Carolina, Chapel Hill, NC*

Targeting drug delivery within the eye via the suprachoroidal space. *Mark Prausnitz. Laboratory for Drug Delivery, Georgia Institute of Technology, Atlanta, GA *CR*

Ocular drug delivery: from bench to bedside. *Justin Hanes. Center for Nanomedicine, Johns Hopkins University, Baltimore, MD *CR*

Cell and gene therapy of the corneal endothelium. *Thomas A. Fuchsluger: Department of Ophthalmology, Friedrich-Alexander-University, Erlangen, Germany*

Exhibit Hall A0001-A0033

Sunday, April 29, 2018 1:00 PM-2:45 PM

Biochemistry/Molecular Biology

128 Biochemical and molecular mechanisms of age-related macular degeneration

Moderators: Alison J. Hardcastle, Mary C. McGahan and Monica B. Melo

341 — A0001 Altered mitochondrial homeostasis with AMD progression. Jorge R. Polanco¹, R. J. Kappahn¹, S. R. Montezuma¹, D. A. Ferrington^{1,2}. ¹Ophthalmology, University of Minnesota, Minneapolis, MN; ²Biochemistry, Molecular Biology, Biophysics, University of Minnesota, Minneapolis, MN

342 — A0002 Visual Cycle Proteins Increase Acutely After Stimulation with CSE. Marisol d. Cano, R. Pegany, J. Ocasio, A. Collins, S. Data, L. Wang, t. Liu, S. Dike, J. T. Handa. Wilmer Eye Institute/Ophthalmology, Johns Hopkins University, Westminster, MD

343 — A0003 Copper triggers mitochondrial biogenesis and helps in survival of RPE. Bharathidevi Subramaniam Rajesh, A. Manohar, S. KN. Department of Biochemistry and Cell Biology, Vision Research Foundation, Chennai, Tamilnadu, India

344 — A0004 The role of interleukin-33 in retinal tissue fibrosis after laser injury. KEISUKE ADACHI¹, T. Hirakata¹, Y. Asada¹, S. Iwamoto¹, S. Nakae², A. Matsuda^{1,3}. ¹Ophthalmology, Juntendo University Graduate school of Medicine, Tokyo, Japan; ²Frontier Research Initiative, Institute of Medical Science, University of Tokyo, Tokyo, Japan; ³Juntendo University Graduate School of Medicine, Laboratory of Ocular Atopic Diseases, Tokyo, Japan

345 — A0005 Effects of oxidative stress and AMD on mitochondrial homeostasis in cultured human primary RPE. Cody R. Fisher^{2,1}, M. Supik², S. R. Montezuma², D. A. Ferrington^{2,1}. ¹Biochemistry, Molecular Biology, Biophysics, University of Minnesota, St. Paul, MN; ²Ophthalmology and Visual Neurosciences, University of Minnesota, Minneapolis, MN

346 — A0006 The pathogenesis of polypoidal choroidal vasculopathy proceeds via a two-stage process. Yingbin Fu¹, S. Kumar¹, H. Nakashizuka², A. Jones⁵, A. Lambert², X. Zhao², M. Shen¹, M. Parker¹, M. Tso², J. Rainier². ¹Ophthalmology, Baylor College of Medicine, Houston, UT; ²Chemistry, University of Utah, Salt Lake City, UT; ³Visual Sciences, Nihon University School of Medicine, Tokyo, Japan; ⁴Ophthalmology, Johns Hopkins University School of Medicine, Baltimore, MD; ⁵Ophthalmology, University of Utah, Salt Lake City, UT *CR

347 — A0007 The reduction of XIAP is associated with NLRP3 inflammasome activation in RPE: implications for AMD pathogenesis. Jianguan Gao, H. R. Chen, S. Cao, J. Z. Cui, A. Wang, J. A. Matsubara. Ophthalmology and Visual Sciences, University of British Columbia, Vancouver, British Columbia, Canada

348 — A0008 Dietary Cholesterol Contributes to Vision Loss in a Complement-Dysregulated AMD Mouse Model. Michael Landowski¹, U. L. Kelly¹, D. Grigsby¹, M. Groelle¹, C. Bowes Rickman^{1,2}. ¹Ophthalmology, Duke University Medical Center, Durham, NC; ²Cell Biology, Duke University Medical Center, Durham, NC

349 — A0009 Cytokine profiling in patients with exudative age-related macular degeneration due to choroidal neovascularization and polypoidal choroidal vasculopathy. Xin Wei¹, P. K. Balne³, V. Au⁵, B. Lee⁶, N. Khandelwal², J. Connolly⁵, R. Narayanan⁴, S. Sethu⁷, R. Agrawal². ¹Khoo Teck Puat Hospital, National Healthcare Group, Singapore, Singapore; ²Tan Tock Seng Hospital, National Healthcare Group Eye Institute, Singapore, Singapore; ³Singapore Eye Research Institute, Singapore, Singapore; ⁴LV Prasad Eye Institute, Hyderabad, India; ⁵Institute of Molecular and Cell Biology, Singapore, Singapore; ⁶Singapore Immunology Network, Singapore, Singapore; ⁷Narayana Nethralaya, Bangalore, India

350 — A0010 Relationship between pachychoroid and aqueous humor concentrations of inflammatory cytokines in age-related macular degeneration. Masatoshi Onda¹, H. Takahashi^{1,2}, Y. Inoue¹, X. Tan³, Y. Arai¹, R. Takahashi¹, S. Inoda¹, S. Sakamoto¹, I. Sano¹, Y. Fujino², H. Kawashima¹, Y. Yanagi^{4,5}. ¹Jichi Medical University, Shimotsuke, Tochigi, Japan; ²JCHO Tokyo Shinjuku Medical Center, Shinjuku, Japan; ³Tokyo University, Hongou, Japan; ⁴Singapore Eye Research Institute, Singapore, Singapore; ⁵Singapore National Eye Centre, Singapore, Singapore x

351 — A0011 Preventive effects of (-)-epicatechin on retina and pigmented epithelium impaired by sodium iodate (NaIO₃). Bani Antonio-Aguirre¹, L. E. Niembro-Muñoz¹, X. P. Guillonneau⁴, I. Ramirez-Sanchez^{1,3}, A. C. Perez-Ortiz^{2,1}, A. Rendón⁴, E. Lira-Romero¹, L. Llacahuanga-Allecca¹, M. J. Peralta-Ildefonso¹, D. Jimenez-Collado¹, F. J. Estrada-Mena¹. ¹School of Medicine, Universidad Panamericana, Mexico City, Mexico; ²School of Public Health, Yale University, New Haven, CT; ³Department of Medicine, University California San Diego, San Diego, CA; ⁴UMR-S 968 INSERM UPMC, Institut de la Vision, Paris, France

352 — A0012 Metabolic profiling in serum of patients with non-advanced age-related macular degeneration reveals aberrations in glutamine pathway. Eiko de Jong¹, E. Kersten¹, S. Dammeier², Y. Lechanteur¹, E. Consortium¹, S. Fauser³, M. Ueffing², C. C. Hoyng¹, A. I. Den Hollander¹. ¹Ophthalmology, Donders Institute for Brain, Cognition and Behavior, Radboudumc, Nijmegen, Netherlands; ²Institute for Ophthalmic Research, Core Facility for Medical Bioanalytics, University of Tuebingen, Tuebingen, Germany; ³5F. Hoffmann - La Roche AG, Basel, Switzerland *CR

353 — A0013 Modulation of microRNA: Implications for macular degeneration. Kevin Schneider¹, M. Chwa¹, M. Saghizadeh², C. M. Kenney¹. ¹Ophthalmology, University of California Irvine, Irvine, CA; ²Surgery/Ophthalmology, Ceders-Sinai Medical Center, Los Angeles, CA

354 — A0014 Carboxyvinylpyrrole Protein Adducts: Potential AMD Biomarkers. Geeng-Fu Jang¹, J. Crabb¹, b. Willard², J. G. Hollyfield^{1,2}, R. Salomon³, J. W. Crabb^{1,2}. ¹Ophthalmic Research, Cole Eye Inst I31, Cleveland Clinic, Cleveland, OH; ²Depts of Ophthalmology and Molecular Medicine, Cleveland Clinic Lerner College of Medicine of Case Western Reserve University, Cleveland Clinic, Cleveland, OH; ³Department of Chemistry, Case Western Reserve University, Cleveland, OH

355 — A0015 Glucose-6-Phosphate Dehydrogenase (G6PD) deficiency and age-related macular degeneration in a Sardinian male population, Italy. Ermete Giancipoli¹, G. D'Amico Ricci¹, T. Porcu¹, C. Carru², F. Boscia¹, A. Pinna¹. ¹Department of Surgical, Microsurgical, and Medical Sciences, Section of Ophthalmology, University of Sassari, AOU Sassari, Bari, Italy; ²Molecular Biology, Department of Biomedical Sciences, University of Sassari, Sassari, Viale San Pietro 43, 07100 Sassari, Sassari, Italy. Italy *CR

356 — A0016 Analysis of the Aqueous Humor Proteome in Patients with Age-related Macular Degeneration. Itay Chowers, G. Beykin, L. Tiosano, S. Khateb, S. Hayoun, M. Grunin, S. Levi, B. Rinsky. Ophthalmology, Hadassah-Hebrew Univ Medical Ctr, Jerusalem, Israel *CR

357 — A0017 Synergistic cytotoxicity and genotoxicity of polycyclic aromatic hydrocarbons and blue light in retinal pigment epithelium cells. Corinne Zinfou^{1,2}, P. J. Rochette^{1,2}. ¹Faculty of Medicine, Laval University, Quebec, Quebec, Canada; ²Centre Universitaire d'Ophtalmologie, CHU de Quebec/Laval University research center, Quebec, Quebec, Canada

358 — A0018 A negative feedback loop between Angiogenin and Telomerase in AMD pathogenesis. Anuprita Ghosh¹, S. Sethu¹, G. Ram Sahu¹, s. gadd², N. K. Yadav², R. Agrawal², D. Sinha⁴, A. Ghosh¹. ¹GROW Research Laboratory, Narayana Nethralaya Foundation, Bangalore, India; ²Narayana Nethralaya, Bangalore, India; ³Tan Tock Seng Hospital, Singapore, Singapore; ⁴University of Pittsburgh, Pittsburgh, PA

- 359 — A0019 c-Jun mediated microRNA-302d-3p induces RPE dedifferentiation and CNV formation by targeting p21^{Waf1/Cip1}.** Xue Chen¹, C. Jiang¹, C. Zhao². ¹Ophthalmology, Nanjing Medical University, Nanjing, China; ²Department of Ophthalmology and Vision Science, Eye & ENT Hospital, Nanjing, Jiangsu, China
- 360 — A0020 Quantitative proteomic analysis of aqueous humor from patients with drusen and reticular pseudodrusen in age-related macular degeneration.** Hyewon Chung¹, K. Park^{2,3}, J. Chae¹, H. Jang¹, J. Baek⁴. ¹Ophthalmology, Konkuk University School of Medicine, Seoul, Korea (the Republic of); ²Ophthalmology, Seoul National University College of Medicine, Seoul, Korea (the Republic of); ³Ophthalmology, Seoul National University Bundang Hospital, Seongnam, Korea (the Republic of); ⁴Center of Biomedical Mass Spectrometry (CBMS), Diotech Korea Co., Ltd., Seoul, Korea (the Republic of)
- 361 — A0021 Cigarette smoke oxidant, hydroquinone, downregulates p62 and Nrf2 expressions in human RPE and induces cell death.** Samuel Abokyi^{1,2}, C. To¹, S. S. SHAN¹, H. H. Chan¹, D. Tse¹. ¹School of Optometry, The Hong Kong Polytechnic University, Kowloon, Hong Kong; ²Department of Optometry, University of Cape Coast, Cape Coast, Ghana
- 362 — A0022 EVA1A/TMEM166 regulates choroidal neovascularization by autophagy.** Luzhen Huang. Ophthalmology, People's Hospital of Peking University, Beijing, China
- 363 — A0023 Photo-conversion of A2E by high-energy visible light.** Marie-Christine Lambert^{1,2}, M. Ouellette^{1,2}, E. Boisselier^{1,2}, P. J. Rochette^{1,2}. ¹Axe Médecine régénératrice, Centre de recherche du CHU de Québec-Université Laval, Québec, Québec, Canada; ²Centre Universitaire d'Ophtalmologie, Hôpital du Saint-Sacrement, Québec, Québec, Canada
- 364 — A0024 Enhanced Detection of Sub-Retinal Pigment Epithelial Cell Layer Deposits in Human and Murine Tissue with New Zinc Detecting Probes.** Scott W. McPherson¹, H. Roehrich¹, S. Ghosh², K. Sada², M. Venkateswarulu², E. J. Van Kuijk¹. ¹Ophthalmology and Visual Neurosciences, University of Minnesota, Minneapolis, MN; ²Dept of Chem, Indian Institute of Technology Mandi, Mandi, Himachal Pradesh, India
- 365 — A0025 Repressed AMP- activated protein kinase, Sirtuin1 and peroxisome proliferator-activated receptor-gamma coactivator (PGC)-1alpha, overactive mammalian target of rapamycin, and dysregulated metabolites in RPE of AMD donor eyes.** Nady Golestaneh¹, N. Jiang², O. Postnikova³, A. Cheema⁴. ¹Ophthalmology/Neurology/Biochemistry, Georgetown University Medical Center, Washington, District of Columbia; ²Ophthalmology, Georgetown University Medical Center, Washington, District of Columbia; ³Laboratory of Retinal Cell & Molecular Biology, NIH/NEI, Bethesda, MD; ⁴Biochemistry and Molecular & Cellular Biology, Georgetown University Medical Center, Washington, District of Columbia
- 366 — A0026 A Mechanism study toward understanding the protective effects of glutaredoxin 2 (Grx2) on light-induced retinal damage.** Xiaobin Liu¹, C. Xavier¹, D. Wang¹, P. Ananti¹, Y. Liu², H. Wu^{1,2}. ¹Department of Pharmaceutical Sciences, University of North Texas Health Science Center, Fort Worth, TX; ²North Texas Eye Research Institute, University of North Texas Health Science Center, Fort Worth, TX
- 367 — A0027 Biochemical analysis of mutations in transmembrane domain one of ABCA4 responsible for Stargardt Macular Degeneration.** Fabian Garces, R. S. Molday. Biochemistry and Molecular Biology, University of British Columbia, Vancouver, British Columbia, Canada
- 368 — A0028 Differential Exon Usage In Retina With Laser-Induced Choroidal Neovascularization.** Jianhuan Chen¹, Z. Xu¹, X. Pan², D. Zhou², P. Hou³. ¹Wuxi School of Medicine, Jiangnan University, Wuxi, Jiangsu, China; ²Affiliated Hospital, Jiangnan University, Wuxi, Jiangsu, China; ³Jinhua Eye Hospital, Jinhua, China
- 369 — A0029 Protective effect of unbleachable retinal chromophore analogue against light-induced retinal degeneration in mice.** Beata Jastrzebska, S. Gao, G. Palczewska, M. Golczak, Z. Dong, K. Palczewski. Pharmacology, Case Western Reserve University, Cleveland, OH
- 370 — A0030 Epigenetic disease mechanisms associated with age-related macular degeneration.** Freekje Van Asten¹, X. Corso Diaz¹, V. Chaitankar¹, R. Ratnapriya¹, M. Starostik¹, E. Y. Chew², D. A. Ferrington³, A. Swaroop¹. ¹Neurobiology, Neurodegeneration and Repair Laboratory, National Institutes of Health/National Eye Institute, Bethesda, MD; ²Division of Epidemiology and Clinical Application, National Institutes of Health/National Eye Institute, Bethesda, MD; ³Department of Ophthalmology & Visual Neurosciences, University of Minnesota, Minneapolis, MN
- 371 — A0031 Aqueous humour metabolic profiles in typical age-related macular degeneration and polypoidal choroidal vasculopathy.** Yasuo Yanagi¹, Y. Gao⁴, L. Zhou⁴, H. Takahashi², Y. Fujino³, H. Kawashima², R. W. Beuerman⁴, T. Y. Wong⁴. ¹Singapore National Eye Centre, Singapore, Singapore; ²Department of Ophthalmology, Jichi Medical School, Tochigi, Japan; ³Japan Community Healthcare Organization, Tokyo Shinjuku Medical Center, Tokyo, Japan; ⁴Singapore Eye Research Institute, Singapore, Singapore
- 372 — A0032 Loss of NLRP1 Inflammasome Exacerbated Retinal Photoreceptor Damage and Choroidal Neovascularization in Mouse Models of Age-related Macular Degeneration through Reduction of IL-18.** Jiawei Ren¹, X. Zhang², Q. LIU², Q. Kang¹, J. Li¹. ¹First Affiliated Hospital of Xi'an Jiaotong University, Xi'an, Shaanxi, China; ²Affiliated Eye Hospital of Nanchang University, Nanchang, Jiangxi, China
- 373 — A0033 Ferroptosis in human retinal pigment epithelial cells induced by oxidative stress.** kiyohito Totsuka, T. Ueta, T. Uchida, S. Nakagawa, M. Honjo, M. Aihara. Tokyo University, Bunkyo, Japan

Exhibit Hall A0034-A0046

Sunday, April 29, 2018 1:00 PM-2:45 PM

Biochemistry/Molecular Biology

129 Gene editing: methods and outcomes in ocular cells

Moderators: Roxana A. Radu and Juana Gallar

374 — A0034 CRISPR/Cas9 Targeted Disruption of Herpes Simplex Virus type 1 in a Rabbit Latency Model Reduces Viral Reactivation and Associated Corneal Pathology. Christopher M. Owens¹, B. Diner¹, R. Fusco¹, E. King¹, A. Friedland², P. Singhal², K. Gogi², F. Harbinski², S. Shen³, M. Stefanidakis³, L. Barrera², D. Bumcrot⁴, D. Neumann⁵, C. Albright¹. ¹Virology, Editas Medicine, Cambridge, MA; ²Platform, Editas Medicine, Cambridge, MA; ³Pharmacology, Editas Medicine, Cambridge, MA; ⁴Pipeline, Editas Medicine, Cambridge, MA; ⁵Pharmacology & Experimental Therapeutics, LSUHSC-New Orleans, New Orleans, LA *CR

375 — A0035 Analysis of CEP78 knockout in zebrafish generated by CRISPR-Cas9. Yael Kinarty^{1,2}, S. Khateb¹, D. Sharon¹, A. Inbal¹. ¹Dept. of Ophthalmology, Hadassah-Hebrew university Medical Center, Jerusalem, Israel; ²Dept. of Medical Neurobiology, Medical Research Israel-Canada, The Hebrew University - Hadassah Medical School, Jerusalem, Israel

376 — A0036 Gene and mutation independent therapy via CRISPR-Cas9 mediated cellular reprogramming in rod photoreceptors. Jie Zhu^{1,2}, X. Fu², C. Ming³, Y. Duan², D. Hoang³, R. Zhang², J. Rutgard², D. Zhang², R. Hou², W. Xiong², K. Zhang^{2,1}. ¹Guangzhou Women and Children's Medical Center, Guangzhou, China; ²Shiley Eye Institute, University of California, San Diego, La Jolla, CA; ³Department of Biomedical Sciences, City University of Hong Kong, Hongkong, China; ⁴Guangzhou Elite Health Biological Pharmaceutical Technology Company Ltd., Guangzhou, China

377 — A0037 CRISPR/Cas9 mediated knockout of *rcbtb1* in *Xenopus tropicalis* to model *RCBTB1*-associated retinal disease. Giulia Ascarì¹, T. Naert¹, T. Van Nieuwenhuysen², S. Demuyne², C. Guerin³, F. Coppieters¹, K. Vlemminckx^{1,2}, E. De Baere¹. ¹Center for Medical Genetics Ghent, Ghent University, Ghent, Belgium; ²Department of Biomedical Molecular Biology, Ghent University, Ghent, Belgium; ³VIB Imaging Core, VIB-UGent Center for Inflammation Research, Ghent, Belgium

378 — A0038 RHODOPSIN transcriptional silencing & replacement for the treatment of autosomal dominant Retinitis Pigmentosa. Enrico Maria Surace^{1,2}, S. Botta¹, E. Marrocco¹, N. de Prisco¹, M. Sofia¹, M. Lupo¹, C. Gesualdo³, S. Rossi², F. Simonelli³. ¹TIGEM, Pozzuoli, Italy; ²Universita' degli Studi di Napoli "Federico II", Napoli, Italy; ³Universita' Luigi Vanvitelli, Napoli, Italy

379 — A0039 CRISPR/Cas9 mediated In vivo genome editing restores retinitis pigmentosa in a mouse model of RPGR. Liping Yang, S. Hu. Peking University Eye Center, Peking University Third Hospital, Beijing, China

380 — A0040 A Novel Hammerhead Ribozyme with High Catalytic Activity at Physiological Free Mg²⁺ Levels: A Potential Therapeutic for Autosomal Dominant Retinitis Pigmentosa. Jason Myers^{1,2}, Z. Fayazi^{1,2}, M. C. Butler^{1,2}, J. M. Sullivan^{1,2}. ¹Research Service, VA Western NY Healthcare System, Buffalo, NY; ²Ophthalmology, University at Buffalo-SUNY, Buffalo, NY *CR

381 — A0041 Should Genomic Expression Constructs be Employed when Developing Post-Transcriptional Silencing Agents for Gene Therapies? Alexandria J. Trujillo^{1,2}, J. M. Sullivan^{1,3}. ¹Research Service, VA Western NY Healthcare System, Buffalo, NY; ²Pharmacology and Toxicology, University at Buffalo-SUNY, Buffalo, NY; ³Ophthalmology, University at Buffalo-SUNY, Buffalo, NY

382 — A0042 Validation of *Staphylococcus aureus* Cas9 gRNAs targeting EGFP present in the rod cells of the Nrl-EGFP mouse line. Caroline Peddle¹, R. E. MacLaren^{1,2}, M. McClements¹. ¹University of Oxford, Oxford, England, United Kingdom; ²Oxford Eye Hospital, Oxford, United Kingdom

383 — A0043 ASNP CRISPR - A novel personalised medicine approach to treat autosomal disease. Kathleen Christie¹, L. DeDionisio², C. Shern², K. Blighe², M. Nesbit¹, T. C. Moore^{1,2}. ¹Ulster University, Coleraine, Northern Ireland, United Kingdom; ²Avellino Labs, Menlo Park, CA *CR

384 — A0044 CRISPR/Cas9-based editing delivered *in vitro* using an aptamer for the treatment of Retinitis Pigmentosa P23H. Vanessa Yanez, R. Kumar-Singh. Tufts University, Cambridge, MA

385 — A0045 Efficient *in vivo* editing of CEP290 IVS26 by EDIT-101 as a novel therapeutic for treatment of Leber Congenital Amaurosis 10. Michael Stefanidakis, M. Maeder, G. Bounoutas, C. Yudkoff, H. Chao, S. Haskett, D. Nguyen, S. J. Samuelsson, G. Giannoukos, D. Ciulla, E. Marco, C. Wilson, P. Baciou, P. Stetkiewicz, C. Albright, H. Jiang. Editas Medicine, Cambridge, MA

386 — A0046 Normal Retinal Phenotype in the Aged Global Cas9 Expressing Mouse Strain. Mark E. Kleinman, K. Jung, S. Dubey. Ophthalmology & Visual Sci, Univ of Kentucky, Lexington, KY

Exhibit Hall A0087-A0102

Sunday, April 29, 2018 1:00 PM-2:45 PM

Retina

130 Macular Edema

Moderator: Roberto Gallego-Pinazo

387 — A0087 Outcome After ≥6 Intravitreal Dexamethasone Implants For Macular Edema Due To Retinal Vein Occlusion. Muna Bhende, S. Jain, Y. Attiku, R. Raman. Shri Bhagwan Mahavir Vitreoretinal Service, Medical Research Foundation, Chennai, Tamil Nadu, India *CR

388 — A0088 Aquaporin 4 and glymphatic drainage in the human macula. Francine F. Behar-Cohen^{1,2}, A. Moulins³, L. Jonet¹, E. Gelize¹, A. Sellam¹, P. Crisanti¹. ¹INSERM Ophthalmology, Physiopathology of ocular diseases : Therapeutic innovations, Université Paris Descartes, Inserm, Assistance Publique Hôpitaux de Paris, Paris, France; ²Ophthalmopole, Cochin Hospital, Université Paris Descartes, Paris, France; ³FAA, Hôpital Jules Gonin, Université of Lausanne, Lausanne, Switzerland

389 — A0089 Anti-vascular endothelial growth factor agents reduce inflammation in central retinal vein occlusion with macular edema. Hidetaka Noma, K. Yasuda, M. Shimura. Department of Ophthalmology, Tokyo Medical University Hachioji Medical Center, Tokyo, Japan ✕

390 — A0090 Intravitreal Dexamethasone Implant Migration into the Anterior Chamber: A Multicenter Study from the Pan-American Collaborative Retina Study Group. Mariana B. Gonçalves¹, B. Q. Alves¹, R. Moura¹, O. M. Júnior¹, A. Maia¹, R. Belfort Jr¹, M. Ávila², M. Zas³, M. J. Saravia⁴, M. Lousas⁴, L. Wu⁵, J. Arevalo⁶, K. D. Pacheco⁷, M. E. Farah¹, F. Rodriguez⁸, M. Maia¹. ¹Ophthalmology, Federal University of São Paulo, São Paulo, São Paulo, Brazil; ²Federal University of Goiás, Goiânia, Brazil; ³Universidad of Buenos Aires, Buenos Aires, Argentina; ⁴Universidad Austral, Buenos Aires, Argentina; ⁵Instituto de Cirugia Ocular, San Jose, Costa Rica; ⁶The Wilmer Eye Institute-Johns Hopkins University, Baltimore, MD; ⁷Brazilian Center of Vision Eye Hospital, Brasília, Brazil; ⁸Fundacion Oftalmologica Nacional, Bogotá, Colombia

391 — A0091 Establishing a Colony of Non-human Primates with Cystoid Macular Edema. Laura Belen¹, K. Violette¹, C. Schillo¹, C. Gallotta¹, C. Grant³, L. Jos³, D. Hollander², A. Whitlock¹. ¹Pre-clinical, Ora Inc, Andover, MA; ²Ora, Inc, Andover, MA; ³Biome, Inc, Worcester, MA *CR

392 — A0092 Prospective study of the morphologic and functional parameter changes post treatment of macular edema associated with different retinal disorders. Latha Sharief^{1,2}, Y. Chen^{1,2}, S. Lightman^{1,2}, O. Tomkins-Netzer¹. ¹UCL Institute of Ophthalmology, London, United Kingdom; ²Moorfields Eye Hospital, London, United Kingdom

393 — A0093 12 Month follow-up of Intraocular Pressure after Ozurdex Implantation: a retrospective analysis. Michael Ellis, L. S. Morse, S. S. Park, G. Yiu, A. Moshiri. UC Davis, Sacramento, CA

394 — A0094 Preoperative Intraocular Dexamethasone Implant for Treatment of Macular Edema Prior to Cataract Surgery. Himanshu Banda, B. T. Smith. The Retina Institute, St. Louis, MO

395 — A0095 Electroretinography after long-term follow-up of selective retina therapy for macular edema.. Satoshi Honda¹, M. Yamamoto¹, T. Kohno¹, K. Hirayama¹, A. Kyo¹, D. Theissen-Kunde², Y. Miura^{2,3}, R. Brinkmann², K. Shiraki¹. ¹Osaka City University, Osaka, Japan; ²Medical Laser Center Luebeck, Luebeck, Germany; ³Institute of Biomedical Optics, University of Luebeck, Luebeck, Germany ✕

396 — A0096 The incidence of increased intraocular pressure and glaucoma incisional surgery following treatment with dexamethasone intravitreal implant in a private practice setting. Rim Makhlof¹, J. Levy², R. Taher², D. Shechtman², A. K. Bittner¹. ¹Optometry, Nova Southeastern University, Ft Lauderdale, FL; ²Retina Macula Specialists of Miami, North Miami Beach, FL *CR

397 — A0097 Results of Aflibercept in Hispanics with retinal vein occlusion macular edema. Francisco J Rodriguez, S. M. Rosenstiehl, D. A. Cortes, C. R. Carvajal. Fundacion Oftalmologica Nacional, Bogota, Colombia

398 — A0098 Best corrected visual acuity(BCVA) and central macular thickness (CMT) outcomes after fluocinolone acetonide intravitreal implant (FAc) injection in multitreated chronic diabetic macular edema (DME) patients. Efficacy in a real life setting in the United States. Manuel Paez, E. W. Deupree, M. J. Tolentino, D. M. Deupree. *Retina, The Macula Center, Miami, FL* *CR

399 — A0099 Effect of Tobacco Use on the Efficacy of Intravitreal Injection of Bevacizumab in Patients with Diabetic Macular Edema (DME). Oliver G. Fischer, D. S. Ketner. *Ophthalmology, Bronx-Lebanon Hospital Center of Icahn School of Medicine at Mount Sinai, New York, NY*

400 — A0100 Clinical factors associated with response to dexamethasone intravitreal implant in DME recalcitrant to bevacizumab. Pradeep Prasad^{1,2}, D. Lee², M. Javaheri³. ¹Retina, Stein Eye Institute, Los Angeles, CA; ²Ophthalmology, Harbor-UCLA, Los Angeles, CA; ³Ophthalmology, Martin Luther King Community Hospital, Los Angeles, CA *CR

401 — A0101 Ultrawide field scanning laser ophthalmoscopy imaging in macular edema. Radwan Ajlan, L. Barnard, A. Small. *Department of Ophthalmology, University of Kansas School of Medicine, Kansas, KS*

402 — A0102 The SD-OCT and OCT-A profile of DRIL extension in cases of diabetic macular edema refractory to anti-VEGF. Miguel Nicolas N. Cruz Pimentel¹, D. Mesa Rosselló¹, A. Juan¹, N. Abreu Arbaje¹, Y. Baéz¹, J. Domínguez¹, J. F. Batlle Pichardo¹, L. WiP. ¹Hospital Dr. Elias Santana, Santiago, Dominican Republic; ²Asociados de Mácula Vitreo y Retina de Costa Rica, San José, Costa Rica *CR

Exhibit Hall A0221-A0245

Sunday, April 29, 2018 1:00 PM-2:45 PM

Immunology/Microbiology

131 Uveitis and Scleritis: Therapeutics

Moderators: Quan Dong Nguyen and Kathryn Pepple

403 — A0221 A systematic review of the effectiveness of pharmacological agents for the treatment of uveitic macular oedema (UMO). Mohammad O. Tallouzi^{3,4}, R. J. Barry¹, D. J. Moore², M. J. Calver², P. I. Murray², J. M. Mathers³, A. K. Denniston⁵. ¹Institute of Immunology and Immunotherapy, College of Medical and Dental Sciences, University of Birmingham, Birmingham, United Kingdom; ²Academic Unit of Ophthalmology, Institute of Inflammation and Ageing, College of Medical and Dental Sciences, University of Birmingham, North Chicago, IL; ³Institute of Applied Health Research, College of Medical and Dental Sciences, University of Birmingham, Birmingham, United Kingdom; ⁴Academic Unit of Ophthalmology, Birmingham and Midland Eye Centre, Sandwell and West Birmingham Hospitals NHS Trust, Birmingham, United Kingdom; ⁵Department of Ophthalmology, Queen Elizabeth Hospital Birmingham, University Hospitals Birmingham NHS Foundation Trust, Birmingham, United Kingdom

404 — A0222 Efficacy of adalimumab for refractory noninfectious uveitis in Australia. Jonathan T. Lee^{1,2}, W. Yates^{3,4}, S. Rogers¹, D. Wakefield^{5,7}, P. J. McCluskey^{3,4}, L. L. Lim^{1,6}. ¹Centre for Eye Research Australia, East Melbourne, Victoria, Australia; ²Alfred Health, Melbourne, Victoria, Australia; ³Sydney Eye Hospital, Sydney, New South Wales, Australia; ⁴Save Sight Institute, Sydney, New South Wales, Australia; ⁵University of New South Wales, Kensington, New South Wales, Australia; ⁶Royal Victorian Eye and Ear Hospital, East Melbourne, Victoria, Australia; ⁷NSW Health Pathology, Sydney, New South Wales, Australia *CR

405 — A0223 Adalimumab for the treatment of uveitis in a Japanese population. Yosuke Harada, Y. Kiuchi. *Ophthalmology, Hiroshima University, Hiroshima, Japan*

406 — A0224 Infliximab for the successful treatment of uveitis failing adalimumab. Noy Ashkenazy, U. Saboo, A. Abraham, C. Ronconi, G. Kuizin, J. Cao. *Ophthalmology, University of Texas Southwestern Medical Center, Dallas, TX*

407 — A0225 Tumor necrosis factor inhibitors improve inflammatory control in eyes with refractory non-infectious uveitis. Ahmed Al-Janabi^{1,2}, A. El Nokrashy^{3,2}, L. Sharief^{1,2}, S. Lightman^{1,2}, O. Tomkins-Netzer^{1,2}. ¹University College London (UCL) Institute of Ophthalmology, LONDON, United Kingdom; ²Moorfields Eye Hospital, London, United Kingdom; ³Mansoura Ophthalmic Centre, Mansoura university, Mansoura, Egypt ✕

408 — A0226 Methotrexate and tumor necrosis factor- α inhibitors discontinuation in pediatric non-infectious uveitis. Sheila T. Angeles-Han¹, C. McCracken², S. Yeh³, K. Jenkins², C. Travers², K. A. Rouster-Stevens², S. R. Lambert⁴, C. Drews-Botsch⁴, S. Prahalad⁵. ¹Pediatrics, Cincinnati Children's Hospital Medical Center, Cincinnati, OH; ²Pediatrics, Emory University School of Medicine, Atlanta, GA; ³Ophthalmology, Emory University School of Medicine, Atlanta, GA; ⁴Emory University Rollins School of Public Health, Atlanta, GA; ⁵The Stanford University Medical Center, Palo Alto, CA *CR

409 — A0227 Title: Efficacy of abatacept treatment for severe, recalcitrant pediatric uveitis. Syeda Maryam Ahmed Naqvi, V. M. Utz, S. Bulas, L. Dan, S. Lopper, A. H. Kaufman. *Cincinnati Childrens Hospital Medical Center, Cincinnati, OH*

410 — A0228 Effects of Vitreomacular Adhesion on Treatment Outcomes in the Study of Safety and Bioactivity of TOciluzimab in Patients with Non-Infectious UVEITIS: The STOP-UVEITIS Study. Nam V. Nguyen^{1,2}, M. Hassan¹, M. S. Halim¹, R. Afridi¹, S. Bahuyot¹, Y. J. Sepah^{1,2}. ¹Ophthalmology, Stanford School of Medicine, Palo Alto, CA; ²Ophthalmology, Ocular Imaging Research and Reading Center, Menlo Park, CA *CR

411 — A0229 Interferon Alpha-2a: an effective therapeutic option in patients with refractory uveitic cystoid macular edema. Luca Cimino¹, L. De Simone^{1,2}, R. Aldigeri³, V. Mastrofilippo¹, S. Marchi^{1,4}, A. Sangiovanni¹, L. Fontana¹, C. Salvarani^{5,6}. ¹Ocular Immunology Unit, Azienda USL IRCCS, Reggio Emilia, Reggio Emilia, Italy; ²Ophthalmology, Campus Biomedico, Rome, Italy; ³Medicine and Surgery Department, University of Parma, Parma, Italy; ⁴Ophthalmology, Azienda USL IRCCS, Reggio Emilia, Reggio Emilia, Italy; ⁵Rheumatology, Azienda USL IRCCS, Reggio Emilia, Reggio Emilia, Italy; ⁶Rheumatology, University of Modena and Reggio Emilia, Modena, Italy

412 — A0230 A retrospective review of Tacrolimus usage in Ocular Inflammation in a large tertiary referral centre. Its role and efficacy. Bharat Kapoor, S. Phatak, T. Saad, G. Agorogiannis, R. W. Lee, A. Rees, C. Pavesio, M. Westcott. *Ophthalmology, Moorfields Eye Hospital, Leicester, United Kingdom*

413 — A0231 Post-Hoc Comparison of Best-Corrected Visual Acuity Improvement in Study and Untreated Fellow Eyes with Active Non-Infectious Uveitis of the Posterior Segment in the SAKURA Program. Brian C. Joondeph. *Colorado Retina Associates, PC, Denver, CO* *CR, ✕

414 — A0232 Vitreous Haze Improvement with Intravitreal Itrilimumab in Subjects with Active Non-Infectious Uveitis of the Posterior Segment: Post-hoc Comparison of Study Eyes vs. Untreated Fellow Eyes. Raj K. Maturi. *Midwest Eye Institute, Indianapolis, IN* *CR, ✕

- 415 — A0233 Pharmacokinetics of Sirolimus in Subjects Treated with Intravitreal Sirolimus in the SAVE-2 Study: Sirolimus As Therapeutic Approach to UVEitis – Protocol 2 with Two Doses of Intravitreal Sirolimus.** Yasir Jamal Sepah¹, D. V. Do¹, H. Takanaga², S. Mudumba², Q. Nguyen¹. ¹Byers Eye Institute, Palo Alto, California, Menlo Park, CA; ²Santen, Emeryville, CA *CR, ✕
- 416 — A0234 Treatment of noninfectious intermediate uveitis with dexamethasone (Ozurdex) intravitreal implant.** Christopher Welsh¹, S. Saleh², C. Gottlieb^{2,3}. ¹Faculty of Medicine, University of Ottawa, Markham, Ontario, Canada; ²The University of Ottawa Eye Institute & Faculty of Health Sciences, The University of Ottawa, Ottawa, Ontario, Canada; ³The Ottawa Hospital Research Institute, The Ottawa Hospital, Ottawa, Ontario, Canada
- 417 — A0235 Dissociations of the fluocinolone acetate implant: experience from long-term follow-up during the Multicenter Uveitis Steroid Treatment (MUST) Trial and Follow-up Study.** Elizabeth A. Sugar^{1,2}, J. A. Holbrook², A. E. Burke², G. J. Jaffe³, A. T. Vitale^{4,7}, J. L. Davis⁵, D. A. Jabs^{6,2}. ¹Biostatistics, Johns Hopkins University, Baltimore, MD; ²Epidemiology, Johns Hopkins University, Baltimore, MD; ³Duke Eye Center, Duke University, Durham, NC; ⁴Ophthalmology, Moran Eye Institute/University of Utah, Salt Lake City, UT; ⁵Bascom Palmer Eye Institute/Ophthalmology, University of Miami, Miami, FL; ⁶Ophthalmology, Mount Sinai School of Medicine, New York, NY; ⁷Medicine, Mount Sinai School of Medicine, New York, NY *CR, ✕
- 418 — A0236 Controlling Posterior Segment Uveitic Recurrences: Results from a Phase 3 Study of 0.18 mg Fluocinolone Acetate Intravitreal Insert (FAI) in Subjects with Chronic Non-Infectious Uveitis Affecting the Posterior Segment.** Quan Dong Nguyen¹, K. Patel², D. A. Paggiarino². ¹Byers Eye Institute, Stanford University, Palo Alto, CA; ²pSivida Corporation, Watertown, MA *CR, ✕
- 419 — A0237 Injectable 0.19 mg fluocinolone acetate (FAc) intravitreal implant for the treatment of non-infectious uveitic macular edema – a retrospective case study analysis.** Ramin Khoramnia, L. Weber, S. Marx, A. Scheuerle, G. Auffarth. University Eye Clinic Heidelberg, David J Apple International Laboratory, Heidelberg, Germany *CR
- 420 — A0238 Are Anti-angiogenics (Bevacizumab) Intravitreal Injections as Effective as Intravitreal Triamcinolone Acetonide Injections for the Management of Persistent Non-infectious Uveitic Cystoid Macular Edema?** J Fernando Arevalo¹, A. F. Lasave², B. A. Schlaen³, D. Zeballos⁴, M. Diaz-Llopis⁵, C. A. Couto⁶, W. El-Haig⁷. ¹Retina Division, The Wilmer Eye Institute-Johns Hopkins University, Baltimore, MD; ²Retina and Vitreous Service, Clinica Privada de Ojos, Mar del Plata, Argentina; ³Hospital Universitario Austral, Servicio de Oftalmología, Derqui-Pilar, Buenos Aires, Argentina; ⁴Clinica de Ojos, Cuenca, Ecuador; ⁵Consortio Hospital, General Universitario de Valencia, Valencia, Spain; ⁶Uveitis Clinics, Department of Ophthalmology, Universidad de Buenos Aires, Buenos Aires, Argentina; ⁷Ophthalmology Department, Faculty of Medicine, Zagazig University, Zagazig, Egypt
- 421 — A0239 Association between nonsteroidal anti-inflammatory drugs and uveitis recurrence in ankylosing spondylitis patients.** Kaidi Wang¹, L. Gensler², A. Hirst¹, J. D. Reveille³, M. M. Ward⁴, M. H. Weisman⁵, M. A. Brown⁶, M. Lee⁷, M. Rahbar⁷, T. Porco¹, N. Acharya¹. ¹UCSF/Proctor Foundation, San Francisco, CA; ²Rheumatology, UCSF, San Francisco, CA; ³Rheumatology, The University of Texas Health Science Center at Houston, Houston, TX; ⁴Clinical Trials and Outcomes Branch, National Institute of Arthritis and Musculoskeletal and Skin Diseases, Bethesda, MD; ⁵Rheumatology, Cedars Sinai Medical Center, Los Angeles, CA; ⁶Queensland University of Technology, Queensland, Queensland, Australia; ⁷Clinical and Translational Sciences, The University of Texas Health Science Center at Houston, Houston, TX *CR
- 422 — A0240 Subclinical signs persistence in Vogt-Koyanagi-Harada disease (VKHD) patients treated with early high-dose corticosteroids and immunosuppressive therapy (IMT).** Marcelo M. Lavezzo, V. M. Sakata, E. E. Rodriguez, S. F. Abdallah, C. Kanenobu, C. Morita, M. Oyamada, C. Hirata, J. H. Yamamoto. Ophthalmology, University of Sao Paulo Medical School, Sao Paulo, Sao Paulo, Brazil ✕
- 423 — A0241 Immunosuppressants and/or Anti-Vascular Endothelial Growth Factor inhibitors in Punctate Inner Choroidopathy? Follow-up Results with Optical Coherence Tomography Angiography.** Dominika Pohlmann, U. Pleyer, A. M. Jousen, S. Winterhalter. Ophthalmology, Universitätsmedizin Berlin Charité, Berlin, Germany
- 424 — A0242 Treatment of Relentless Placoid Choroidopathy with Intravenous Cyclophosphamide: A case series.** Alejandro Zermeno, R. Moreno. General Ophthalmology, Instituto de Oftalmología a Conde de Valenciana, Mexico City, DF, Mexico
- 425 — A0243 A retrospective study for scleritis therapy with immunosuppressant and biological agents.** Noriko Oishi, S. Yui, N. Shiratori, J. Hori. Ophthalmology, Nippon Medical School, Bunkyo-ku, Japan
- 426 — A0244 Long-term Maintenance Therapy of Rituximab in Treatment of Noninfectious Scleritis.** Swetha Dhanireddy¹, R. Swan¹, C. S. Foster^{2,3}. ¹Ophthalmology, SUNY Upstate Medical Center, Syracuse, NY; ²Massachusetts Eye Research & Surgery Institution, Waltham, MA; ³Ocular Immunology & Uveitis Foundation, Waltham, MA
- 427 — A0245 Repository Corticotropin Injection (RCI) in Ocular Inflammation: A Case Series and Literature Review.** Alexander B. Crane¹, Y. Sharon², D. S. Chu^{1,2}. ¹Rutgers New Jersey Medical School, Newark, NJ; ²Metropolitan Eye Research & Surgery Institute, Palisades Park, NJ *CR

Exhibit Hall A0288-A0309

Sunday, April 29, 2018 1:00 PM-2:45 PM

Lens

132 Cataract Surgery Procedures I

Moderator: Jeffrey M. Gross

- 428 — A0288 Sutureless Intracocular Lens Fixation Using a Microtube-assisted Technique.** Kentaro Yuda^{1,2}, T. Shimizu^{1,2}, T. Hayashi^{1,2}, K. Yuda^{1,3}. ¹Ophthalmology, Yokohama City University School of Medicine, Yokohama, Japan; ²Ophthalmology, Yokohama Minamikyosai Hospital, Yokohama, Japan; ³Ophthalmology, Kikuna Yuda Eye Clinic, Yokohama, Japan ✕
- 429 — A0289 The effect of OASIS iris expander in phacoemulsification surgery of cataract with small pupil.** Jing Shang Zhang, J. Wang, X. Wan. Beijing Institute of Ophthalmology, Beijing Tongren Hospital, Beijing, China
- 430 — A0290 Reliability of IOL Master 700 biometry readings in eyes with dense cataracts.** John Wong¹, P. Huang², H. Fam¹. ¹Ophthalmology, National Healthcare Group Eye Institute, Tan Tock Seng Hospital, Singapore, Singapore; ²Ophthalmology and Visual Sciences, Khoo Teck Puat hospital, Singapore, Singapore
- 431 — A0291 Evaluation and Comparison of Macular and Choroidal Thickness after Intracameral Moxifloxacin for Prevention of Postcataract Endophthalmitis.** Bruna G. Ferreira¹, I. C. Silva¹, M. I. Vieira¹, M. Alves¹, M. V. Mélega¹, A. Treiger Grunpacher¹, M. A. Nascimento¹, R. P. Lira², C. E. Arieta¹. ¹Ophthalmology, UNICAMP, Campinas, Sao Paulo, Brazil; ²Universidade Federal do Pernambuco, Recife, Brazil ✕
- 432 — A0292 Is Trypan blue capsular staining really safe in cataract surgery?** Young Min Park¹, J. M. Park¹, S. Park², J. S. Lee². ¹Ophthalmology, Gyeongsang National University Changwon Hospital, Changwonsi, Gyeongsangnam-do, Korea (the Republic of); ²Pusan National University Hospital, Pusan, Korea (the Republic of)

- 433 — A0293 Does the Use of a Preloaded Intraocular Lens Delivery System Improve Post-operative Refractive Outcomes for Cataract Surgery?** Mary Henry, N. Patel. East Kent Hospitals NHS foundation Trust, Purley, United Kingdom
- 434 — A0294 Practice Patterns of Canadian Ophthalmological Society members in Cataract Surgery – Survey 2017.** Dara Onasanya¹, L. Ong-Tone². ¹College of Medicine, University of Saskatchewan, Regina, Saskatchewan, Canada; ²Section of Ophthalmology, Department of Surgery, Regina Qu'Appelle Health Region, Regina, Saskatchewan, Canada
- 435 — A0295 Efficacy of optic capture without anterior vitrectomy in pediatric cataract surgery.** Akiko Iwata¹, S. Kusaka¹, K. Tachibana¹, K. Abe¹, D. Tsujioka¹, Y. Shimomura². ¹Ophthalmology, Kindai University Sakai Hospital, Sakai, Osaka, Japan; ²Ophthalmology, Kindai University, Osaka-Sayama, Osaka, Japan
- 436 — A0296 Diagnostic signs and biometric characteristics for preexisting posterior capsule defects in congenital cataracts during the first year of life.** Yun-e Zhao, Z. Li, p. chang, X. Ding, Y. Zhao. Cataract, Eye Hospital of Wenzhou Medical University, Wenzhou, Zhejiang, China ✕
- 437 — A0297 Electron microscopy studies for opacified Intraocular lenses after glaucoma tube implants.** Ahmed Abdelmaksoud¹, R. Lacey², S. Romani³, K. Dawson³, R. Williams², S. Bentley⁵, M. Batterbury⁴, A. Bhargava⁵. ¹Ophthalmology, Sheffield teaching hospitals, Preston, United Kingdom; ²Department of Eye and Vision Science, Institute of ageing and Chronic Disease, The University of Liverpool, Liverpool, United Kingdom; ³Nanoinvestigation Centre at Liverpool, Centre for Materials & Structures, The University of Liverpool, Liverpool, Liverpool, United Kingdom; ⁴St Paul's Eye Unit, Royal Liverpool and Broadgreen University Hospitals NHS Trust, Liverpool, United Kingdom; ⁵Ophthalmology, Aintree University Hospitals NHS Foundation Trust, Liverpool, United Kingdom
- 438 — A0298 Femtosecond laser-assisted cataract surgery in octo and nonagenarians.** Priya Nidamanuri¹, M. Popiela², B. Thajudeen², V. Kumar². ¹Northeast Ohio Medical University, Canton, OH; ²Princess of Wales Hospital, Bridgend, United Kingdom
- 439 — A0299 Motion capture of capsulorhexis forceps.** András Bálint, B. Varsányi, Z. Biró. Department of Ophthalmology, University of Pécs, Hungary, Pécs, Hungary
- 440 — A0300 Accuracy of partial coherence interferometry in patients with large inter-eye axial length difference.** Christine A. Petersen, P. Taravati, P. P. Chen. Ophthalmology, University of Washington, Seattle, WA
- 441 — A0301 Phacoemulsification: subluxation versus divide and conquer in Beginner Surgeon.** lakehal-ayat youcef^{1,3}, C. Goetz², G. Hayek¹, M. LUC¹, J. Vermion¹, N. Ouamara², J. Perone¹. ¹Ophthalmology, Metz-Thionville regional Hospital Center, Metz, France; ²Clinical research Support Unit, Metz-Thionville Regional Hospital Center, Metz, France; ³Faculty of medicine, University of Lorraine, Metz, France
- 442 — A0302 Long-term Outcomes for Pediatric Patients Undergoing Trans-Scleral Fixation of the Capsular Bag with Intraocular Lens for Ectopia Lentis.** Leah Owen¹, J. Byrd^{1,4}, M. Young¹, W. Liu³, D. Tate², Y. Zhang³, A. S. Crandall¹. ¹Ophthalmology, University of Utah Moran Eye Center, Salt Lake City, UT; ²A.T. Still University School of Osteopathic Medicine in Arizona, Mesa, AZ; ³Division of Epidemiology, University of Utah, Salt Lake City, UT; ⁴Ophthalmology, Children's National, District of Columbia, District of Columbia
- 443 — A0303 Opacification of Scleral Sutured Hydrophilic Acrylic Intraocular Lenses in Patients with Subsequent DSAEK or Pars Plana Vitrectomy.** Tatyana Beketova^{1,2}, G. Kim^{1,2}. ¹Ruiz Department of Ophthalmology and Visual Science, McGovern Medical School at The University of Texas Health Science Center at Houston, Houston, TX; ²Robert Cizik Eye Clinic, Houston, TX
- 444 — A0304 Accuracy of new postoperative ACD prediction formula using anterior segment OCT.** Hiroshi Sasaki, H. Ishida, A. Ii, M. Kita, Y. Seki, N. Shibata, H. Miyashita, E. Shibuya, N. Mita, E. Kubo. Department of Ophthalmology, Kanazawa Medical University, Kahoku-gun, Ishikawa, Japan
- 445 — A0305 Comparison of Corneal Endothelial Cell Changes after Phacoemulsification using Different Viscosurgical Devices.** Hongyan Zhang¹, M. Li², X. Song¹, H. Song¹. ¹Beijing Tongren Eye Center, Beijing, China; ²Indiana University, Indianapolis, IN
- 446 — A0306 Prediction of residual astigmatism using intraoperative wavefront aberrometry vs the Barrett toric IOL calculator.** Joaquim N. Murta, M. Raimundo, A. Rosa, M. Quadrado. Ophthalmology, Faculty Medicine/ Centro Hospitalar Universitario Coimbra, Coimbra, Portugal *CR
- 447 — A0307 Surgical Simulator Training Techniques to Teach Residents Capsular Rhexis with the Non-Dominant Hand.** Stephen Dryden, J. Jensen, E. Kanner. Ophthalmology, UTHSC-Hamilton Eye Institute, Memphis, TN
- 448 — A0308 Comparison of intraocular pressure (IOP) lowering effect of Femtosecond Laser Assisted Cataract Surgery (FLACS) as compared to conventional phacoemulsification.** Erin Ong¹, S. Ong¹, L. Chang¹, S. Karim¹, A. Betancourt², B. Spagnolo², A. Hammer², O. Saeedi¹. ¹Ophthalmology, University of Maryland, Baltimore, MD; ²Baltimore Washington Eye Center, Glen Burnie, MD*CR
- 449 — A0309 The Effect of Phacoemulsification on Intraocular Pressure in Glaucoma Patients in Resident Cases.** Zoey Stoumbos^{1,2}, D. Wilson¹. ¹Ophthalmology, Georgetown University, Washington, District of Columbia; ²Ophthalmology, Washington Hospital Center, Washington, District of Columbia

Exhibit Hall A0310-A0353

Sunday, April 29, 2018 1:00 PM-2:45 PM

Glaucoma

133 Surgery and Wound Healing I

Moderators: Stefano A. Gandolfi and Tony Realini

450 — A0310 Glaucoma surgery & ocular surface. Rodrigo M. Torres. Ocular Surface & Immunology, Centro de Ojos Dr Lodolo, Colonia Avellaneda, Entre Rios, Argentina

451 — A0311 Effects of trabeculectomy on optical characteristics. YU MIZUNO, Y. Kiuchi. Ophthalmology, Hiroshima University, Hiroshima, Japan

452 — A0312 Evaluation of cataract progression after trabeculectomy using lens densitometry by Pentacam Scheimpflug imaging and lens thickness by A-scan ultrasound. Johanna Orphal, K. R. Pillunat, R. Herber, L. E. Pillunat. Department of Ophthalmology, University of Dresden, Germany, Dresden, Germany

453 — A0313 Combined Cataract and Glaucoma Surgery using a Dual Blade and Direct Viscodilation of the Collector Channels. Linda Burk¹, J. Gilmore². ¹Ophthalmology, University of Texas Southwestern, Dallas, TX; ²Texas Tech University Health Science Center, Lubbock, TX

454 — A0314 Reducing long-term complications after combined cataract, lens implant and trabeculectomy surgeries. Edward J. Rockwood. Cole Eye Institute, Cole Eye Institute, Cleveland, OH

455 — A0315 IOP Effect of Cataract Surgery on Eyes with Prior Functional Trabeculectomy Versus Tube Implant. Nicole Rosenberg, A. Meyer, P. Nguyen, M. Sherwood. University of Florida, Gainesville, FL

456 — A0316 Quality improvement: where is gonioscopy? Beatrice Des Marchais^{1,2}, E. De Larochellière^{1,2}, R. Kyrillos^{1,2}, M. Keyeutat Tondji^{1,3}. ¹Département d'ophtalmologie et d'ORL-CCF, Faculté de médecine, Université Laval, Quebec, Quebec, Canada; ²Centre universitaire d'ophtalmologie, Hôpital du Saint-Sacrement, CHU de Québec-Université Laval, Quebec, Quebec, Canada; ³CUO-Recherche-Clinique, Centre de recherche du CHU de Québec-Université Laval, Hôpital du Saint-Sacrement, CHU de Québec-Université Laval, Quebec, Quebec, Canada

457 — A0317 Effect of combined phacoemulsification and goniotomy on intraocular pressure in open-angle glaucoma. Chang-Sik Kim, W. Kim, W. Lee, K. Kim. *Ophthalmology, Chungnam National University College of Medicine, Daejeon, Korea (the Republic of)*

458 — A0318 Gonioscopy-assisted Transluminal Trabeculotomy (GATT) outcomes in eyes with treatment resistant open angle glaucoma. Carlos Matos Neto, M. A. de Faria, G. D. de Araujo, R. Barbosa de Araujo, B. M. de Faria. *Federal Univeristy of Rio Grande do Norte, Natal, Brazil*

459 — A0319 Intraocular pressure reduction after combined ab interno trabeculotomy and endocyclophotocoagulation in patients with open angle glaucoma. Louisa Lu, J. Liu. *Ophthalmology and Visual Science, Yale University School of Medicine, New Haven, CT*

460 — A0320 Relationship between intraocular pressure reduction and visual field aggravation after trabeculectomy in eyes with open angle glaucoma. Shunsuke Takahashi, A. Sawada, T. Yamamoto. *Gifu University Graduate School of Medicine, Gifu, Japan*

461 — A0321 Changes in choroidal area after intraocular pressure reduction following trabeculectomy. Kazuyuki Hirooka¹, H. Kojima¹, E. Nitta¹, K. Ukegawa¹, S. Sonoda², T. Sakamoto². ¹*Ophthalmology, Kagawa Univ Faculty of Medicine, Kita-gun, Kagawa, Japan;* ²*Kagoshima University, Kagoshima, Japan* *CR

462 — A0322 Comparison of changes in mGCIPL thickness between medically and surgically treated eyes with advanced glaucoma. Masahiro Onda, A. Sawada, H. Inuzuka, T. Yamamoto. *Gifu Graduate School of Medicine, Gifu, Japan*

463 — A0323 Correlating post-operative outcomes following trabeculectomy and non-penetrating surgical procedures: a five-year longitudinal study. Navpreet Dhillon¹, L. Jiang², S. Eaves², L. Chen², A. Ng², P. Ranjit². ¹*Ophthalmology, Moorfields Eye Hospital, London, United Kingdom;* ²*Ophthalmology, University Hospital North Staffordshire, Stoke-on-Trent, United Kingdom*

464 — A0324 Ocular Axial Length as an Indicator of Success in the Control of Primary Congenital Glaucoma (PCG) in Children Undergoing Early Trabeculotomy. Ana Catarina Melo, A. C. Veloso, S. Cronemberger, N. S. Calixto, E. Milhomens. *Visual Sciences Laboratory/Ophthalmology, Federal University of Minas Gerais, Belo Horizonte, Minas Gerais, Brazil*

465 — A0325 High-stakes ocular surgery through the eyes of the surgeon: Experiences of operating on ‘only-eye’ patients. Lee Jones¹, V. Cross^{2,3}, D. P. Crabb¹, P. Shah^{2,4}. ¹*Division of Optometry and Visual Sciences, School of Health Sciences, City, University of London, London, United Kingdom;* ²*Institute for Translational Medicine, University Hospital Birmingham / Birmingham Institute for Glaucoma Research, Birmingham, United Kingdom;* ³*Centre for Health & Social Care Improvement, University of Wolverhampton, Wolverhampton, United Kingdom;* ⁴*Institute of Ophthalmology, University College London, London, United Kingdom* *CR

466 — A0326 Ten year, single surgeon, series of ‘Moorfields safer surgery technique’ trabeculectomy, and combined phacotrabeculectomy with IOL: a ‘Medisoft’ EPR audit from Gloucestershire, UK. Andrew I. McNaught^{1,2}, D. Crabb³. ¹*Ophthalmology, Gloucestershire Hopsitals NHS Foundation Trust, Cheltenham, Gloucestershire, United Kingdom;* ²*School of Health Professions, Plymouth University, Plymouth, Devon, United Kingdom;* ³*Optometry and Visual Science, School of Health Sciences, City, University of London, London, London, United Kingdom* *CR

467 — A0327 Outcomes of trabectome and phaco-trabectome by glaucoma severity: experience in a reference center in Mexico. Carlos Francisco Navas Villar, J. S. Silva Ortiz, C. Hartleben Matkin. *Instituto de Oftalmolog?a Conde de Valenciana, Mexico City, Mexico*

468 — A0328 Trabeculectomy bleb morphology – type of antimetabolite and other predictive factors for the development of adverse thin cystic blebs. Toby Al-Mugheiry¹, D. C. Broadway^{2,3}. ¹*General Surgery, The Queen Elizabeth Hospital, King’s Lynn, United Kingdom;* ²*Ophthalmology, Norfolk and Norwich University Hospital, Norwich, United Kingdom;* ³*Clinical School, University of East Anglia, Norwich, United Kingdom*

469 — A0329 Structural Assessment of Filtering Blebs in Eyes Requiring Digital Compression. A Comparative Study using a Clinical and Tomographic Approach. Yesenia Yolanda Dorantes Diez¹, J. A. Paczka^{2,3}, M. Cuadros¹, M. Romo Sainz¹, M. A. Dorantes-Diez⁴. ¹*Universidad de Guadalajara, Zapopan, Jalisco, Mexico;* ²*Unidad de Diagnóstico Temprano del Glaucoma, Guadalajara, Mexico;* ³*Asistencia e Investigación en Glaucoma, Guadalajara, Mexico;* ⁴*Universidad Popular Autónoma del Estado de Puebla, Puebla, Mexico*

470 — A0330 Small-incision revision of trabeculectomy with mitomycin: outcomes and complications. Philip P. Chen, K. Moeller. *Ophthalmology, University of Washington, Seattle, WA*

471 — A0331 Subconjunctival Injection Versus Direct Scleral Application of Mitomycin-C in Trabeculectomy. Jiun Do¹, B. Xu², A. Camp¹, P. Ngai¹, R. N. Weinreb¹. ¹*Ophthalmology, University of California San Diego, La Jolla, CA;* ²*USC Roski Eye Institute, Los Angeles, CA* ✕

472 — A0332 Sponge-Applied vs Subconjunctival Injection of Mitomycin-C during Phaco-Trabeculectomy in Asian Eyes. Xiner Guo, B. Ang, P. Lim, B. Lim, V. Yong, H. Wong, L. Yip. *National Healthcare Group Eye Institute, Department of ophthalmology, Tan Tock Seng Hospital, Singapore, Singapore, Singapore*

473 — A0333 Nonpenetrating Deep Sclerectomy with Mitomycin C: 5 Year Follow-up with analysis of IOP control and Visual Field Survival. Grant Slagle¹, W. E. Sponse¹. ¹*Midwestern University, Westmont, IL;* ²*Vision Sciences, WESMDPA/UIW/UTSA, San Antonio, TX*

474 — A0334 A Novel Decoricin and SAHA Combination Therapy to Treat Bleb Fibrosis in Vivo in Rabbits. Jella A. An^{1,2}, S. Gupta^{2,3}, M. K. Fink^{2,3}, N. Hesemann^{1,2}, R. Tripathi^{2,3}, P. R. Sinha^{2,3}, L. McDaniel^{1,2}, R. R. Mohan^{2,3}. ¹*Mason Eye Institute, University of Missouri, School of Medicine, Columbia, MO;* ²*Ophthalmology, Harry S. Truman Memorial Veteran Hospital, Columbia, MO;* ³*Veterinary Medicine and Surgery, University of Missouri, Columbia, MO*

475 — A0335 LPAIR Inhibitor Ki16425 Attenuates Human Tenon’s Fibroblasts Myofibroblasts Via Suppression of Smads Signaling. Xianchai Lin, Y. Zheng. *Zhongshan Ophthalmic Center, Sun Yat-sen University, Guangzhou, China*

476 — A0336 Antifibrotic effect of conbercept (KH902) on human tenon’s fibroblasts. Shaodan Zhang^{2,1}, L. Du¹, D. Wu¹, W. CHU³, H. Wang¹, C. Liu¹. ¹*Department of Ophthalmology, The 4th People’s Hospital of Shenyang, Shenyang, China;* ²*The Eye Hospital, School of Ophthalmology & Optometry, Wenzhou Medical University, Wenzhou, China;* ³*Departments of Ophthalmology & Visual Sciences, The Chinese University of Hong Kong, Hong Kong, Hong Kong, Hong Kong*

477 — A0337 Valproic Acid Reduces Inflammation following Experimental Glaucoma Surgery. Tina Wong^{1,2}, L. Toh¹, S. Chu¹, L. Seet^{1,2}. ¹*Singapore Eye Research Institute, Singapore, Singapore;* ²*Duke NUS Graduate Medical School, Singapore, Singapore*

478 — A0338 Inhibitory effects of Y-27632, Rho-associated protein kinase inhibitor, on scarring formation following glaucoma filtration surgery. Diah G. Ibrahim, J. Ko, W. Iwata, H. Okumichi, Y. Kiuchi. *Ophthalmology and Visual Sciences, Hiroshima University, Hiroshima City, Japan*

- 479 — A0339 Assessing the effects of indomethacin and dexamethasone on wound healing using a 3D bioartificial tissue of human Tenon's capsule fibroblasts.** Jim Denstedt¹, J. Armstrong¹, C. M. Hutnik^{1,2}, C. Treford¹. ¹Schulich School of Medicine and Dentistry, London, Ontario, Canada; ²Ophthalmology, St. Joseph's Health Care, London, Ontario, Canada
- 480 — A0340 Novel characterization and intravital imaging of dynamic conjunctival lymphangiogenesis after filtration surgery.** Miao Zhang^{1,2}, G. Li^{1,2}, M. Shi^{1,2}, L. Chen^{1,2}. ¹Vision Science Graduate Program, University of California, Berkeley, Berkeley, CA; ²Center for Eye Disease and Development, Program in Vision Science, and School of Optometry, University of California, Berkeley, Berkeley, CA
- 481 — A0341 Outcomes of microcatheter-assisted trabeculotomy in the treatment of primary congenital glaucoma after failed glaucoma surgeries.** huaizhou wang¹, M. Hu^{2,1}, Y. Shi¹, N. Wang¹. ¹Beijing Tongren Eye Center, Beijing Tongren Hospital, Capital Medical University, Beijing, China; ²Ophthalmology, Beijing Children's Hospital, Beijing, China ✕
- 482 — A0342 Number of postoperative follow-up visits after phacoemulsification in glaucoma and nonglaucoma patients.** Priscilla Nobrega, K. Bojikian, P. P. Chen. *Ophthalmology*, University of Washington, Seattle, WA
- 483 — A0343 Histologic Analysis of Trabecular Meshwork Obtained from Kahook Dual Blade Goniotomy.** Swarup S. Swaminathan¹, P. Monsalve¹, M. Enriquez-Algeciras¹, X. Zhou¹, S. K. Bhattacharya¹, S. R. Dubovy^{1,2}, A. K. Junk^{1,3}. ¹Bascom Palmer Eye Institute, Miami, FL; ²Florida Lions Ocular Pathology Laboratory, Miami, FL; ³Miami Veterans Affairs Medical Center, Miami, FL
- 484 — A0344 Influence of incision arc amount of trabecular meshwork on the short-term outcome of gonioscopy-assisted transluminal trabeculotomy/suture-trabeculotomy *ab interno*.** Kazuhiko Mori¹, Y. Yamamoto¹, Y. Ikeda¹, M. Ueno¹, K. Imai², C. Sotozono¹. ¹Department of Ophthalmology, Kyoto Prefectural Univ of Med, Kamigyo-Ku, Kyoto, Japan; ²Department of Medical Innovation and Translational Medical Science, Kyoto Prefectural University of Medicine, Kyoto, Japan *CR
- 485 — A0345 Sutureless scleral tunnel trabeculotomy, case series report.** Clarisa E. Del Hierro, L. Laneri Pusineri, C. Prado-Larrea, R. Castañeda, J. Jimenez Roman. *Asociación Para Evitar la Ceguera en México*, Mexico City, Mexico
- 486 — A0346 Variability of tensile strength during microsurgical knot construction: A comparative study of polyglactin 910 and lactomer suture.** Abayomi Fabunmi, D. Rhee. *Ophthalmology*, University Hospitals, Cleveland, OH
- 487 — A0347 Post-operative complications after non-valved glaucoma device implantation due to rapid Polysorb™ suture absorption time.** Dante Sorrentino, I. Conner, J. Polat. *Ophthalmology*, University of Pittsburgh, Pittsburgh, PA
- 488 — A0348 Biodegradable Material for Glaucoma Drainage Devices – A Pilot study in Rabbits.** Simar Rajan Singh¹, S. Pandav¹, R. Nada², S. Kaushik¹. ¹Ophthalmology, Advanced Eye Centre, Post Graduate Institute of Medical Education and Research, Chandigarh, India, Chandigarh, India; ²Histopathology, Post Graduate Institute of Medical Education and Research, Chandigarh, India
- 489 — A0349 Early Experience with Gonioscopy-Assisted Transluminal Trabeculotomy (GATT) using Poly-Propylene Suture in Patients with Open Angle Glaucoma.** Maria I. Corrales¹, M. Cuadros^{2,3}, V. Galvis^{3,1}, J. A. Paczka⁴. ¹Floridablanca, Fundación Oftalmologica de Santander - FOSCAL, Floridablanca, Colombia; ²Universidad de Guadalajara, Guadalajara, Mexico; ³Centro Oftalmológico Virgilio Galvis R, Floridablanca, Colombia; ⁴Research, Global Glaucoma Institute, Guadalajara, Mexico
- 490 — A0350 The Effect of Smoking on Trabeculectomy Outcomes.** Jonathan Young, R. Passo, B. Edmunds, J. C. Morrison, H. Takusagawa, S. Tehrani. *Ophthalmology*, Casey Eye Institute - OHSU, Portland, OR
- 491 — A0351 Effect of Tobacco Smoking on Outcomes of Trabeculectomy.** Nadia Rios-Acosta, L. Gould, J. Rahman, G. Gdih, S. Bali. *Glaucoma*, University of Manitoba, Winnipeg, Manitoba, Canada
- 492 — A0352 A Rabbit Model for Glaucoma Filtration Surgery.** Saumya Nagar, A. Almazan, L. Rajagopalan, S. S. Lee, W. Orilla, J. A. Burke, M. R. Robinson. *Allergan plc*, La Jolla, CA *CR
- 493 — A0353 The alteration of gene expression profiles after filtration surgery in mouse.** Akira Matsuda, Y. Asada, S. Iwamoto. *Department of Ophthalmology, Juntendo Univ School of Med, Tokyo, Tokyo, Japan*

Exhibit Hall B0001-B0028

Sunday, April 29, 2018 1:00 PM-2:45 PM

Immunology/Microbiology

134 Infection and Immunology

Moderators: Elizabeth A. Berger and Eric G. Romanowski

- 494 — B0001 Role of TSLP in mediation of Toll-like receptor2/4 and antimicrobial peptides in innate immunity of corneal *A. fumigatus* infection.** Chenyang Dai, X. Wu. *Clinical medicine*, Shandong University, Jinan, Shandong, China

495 — B0002 TSLP-activated dendritic cells induce T helper type 2 inflammation in *Aspergillus fumigatus* keratitis. Lin Sun, X. Wu. *Department of Ophthalmology, Qilu Hospital of Shandong University, Jinan, Shandong, China*

496 — B0003 Role of IL-32/PR3 in Innate Immunity of Fungal Keratitis. Jing Lin, R. XU, G. Zhao, C. Li. *Ophthalmology*, the Affiliated Hospital of Qingdao University, Qingdao, China

497 — B0004 The STAT3 promotes the chemokines and inflammatory cytokines expression in fungal keratitis. Liya Wang, S. He, S. Liu, H. Zhang, Y. Xie. *Henan Eye Hospital & Henan Eye Institute*, Zhengzhou, China

498 — B0005 In Vitro Susceptibility of Intravitreal Fungal Endophthalmitis Isolates to Novel Antifungal Agents. Kenneth C. Fan, J. F. Russell, D. Miller, H. W. Flynn. *Bascom Palmer Eye Institute*, Miami, FL

499 — B0006 Gene Expression Changes in Human Retinal Pigment Epithelial (hRPE) Cells Following Infection with *Toxoplasma gondii*. Elise Rochet¹, S. Lie¹, Y. Ma¹, L. M. Ashander¹, A. M. Shadforth², T. A. Blenkinsop³, B. Appukuttan¹, B. Wilmot⁴, J. R. Smith¹. ¹Flinders University College of Medicine & Public Health, Adelaide, South Australia, Australia; ²Queensland Eye Institute & Queensland Institute of Technology, Brisbane, Queensland, Australia; ³Icahn School of Medicine at Mount Sinai, New York, NY; ⁴Oregon Health & Science University, Portland, OR

500 — B0007 Efficacy of Nanosponges in Protecting Retinal Function During Bacterial Endophthalmitis. Michelle C. Callegan^{1,2}, P. S. Coburn^{1,3}, F. C. Miller^{4,5}, A. L. LaGrow¹, C. Land¹, Y. Chen^{6,7}, W. Gao^{6,7}, L. Zhang^{6,7}. ¹Department of Ophthalmology, University of Oklahoma Health Sciences Center, Oklahoma City, OK; ²Department of Microbiology and Immunology, University of Oklahoma Health Sciences Center, Oklahoma City, OK; ³Dean A. McGee Eye Institute, Oklahoma City, OK; ⁴Department of Cell Biology, University of Oklahoma Health Sciences Center, Oklahoma City, OK; ⁵Department of Family and Preventive Medicine, University of Oklahoma Health Sciences Center, Oklahoma City, OK; ⁶Department of NanoEngineering, University of California San Diego, San Diego, CA; ⁷Moore's Cancer Centre, University of California San Diego, San Diego, CA

501 — B0008 In vivo imaging of *Pseudomonas aeruginosa* gene expression on mouse contact lenses. Melinda R. Grosse¹, M. Metruccio¹, L. Tabor¹, D. J. Evans^{1,2}, S. M. Fleiszig¹. ¹School of Optometry, University of California, Berkeley, Berkeley, CA; ²Biological & Pharmaceutical Sciences, Touro University, Vallejo, CA

- 502 — B0009 The role of corneal lymphangiogenesis in a murine bacterial keratitis model.** Akitomo Narimatsu^{1,2}, T. Hattori¹, N. Koike², K. Tajima³, H. Nakagawa¹, M. Ogawa¹, S. Kumakura¹, T. Matsumoto², H. Goto¹. ¹Ophthalmology, Tokyo medical university, Shinjuku, Tokyo, Japan; ²Microbiology, Tokyo Medical University, Shinjuku, Tokyo, Japan; ³Surgery, School of Medicine, Keio University, Shinjuku, Tokyo, Japan
- 503 — B0010 L-2-amino-4-methoxy-trans-3-butenoic acid Production by the Keratitis Associated *Pseudomonas aeruginosa*.** Salina E. Salamah², M. Kovach², R. Bouhenni¹. ¹Ophthalmology, Akron Children's Hospital, Akron, OH; ²Biology, Baldwin Wallace University, Berea, OH
- 504 — B0011 IQ-domain GTPase-activating protein1 (IQGAP-1) Modulation of Tight Junction Proteins and Protection against *P. aeruginosa* Invasion.** Elizabeth P. Shen¹, F. Hu². ¹Ophthalmology, Taipei Tzu Chi Hospital, Taipei, Taiwan; ²Ophthalmology, National Taiwan University, Taipei, -- select one --, Taiwan
- 505 — B0012 Contact lens wear can trigger clandestine parainflammation in mice.** Suzanne M. Fleiszig¹, M. Metruccio¹, A. Sullivan¹, A. Kroken¹, H. Horneman¹, S. Wan¹, D. J. Evans^{1,2}. ¹School of Optometry, Univ of California - Berkeley, Berkeley, CA; ²College of Pharmacy, Touro University, Vallejo, CA
- 506 — B0013 Microscopic characterization of mouse model mixed keratitis.** Diana Gabriela Ponce-Angulo^{1,3}, L. Bautista-Hernández¹, R. Calvillo-Medina¹, G. Aparicio-Ozores¹, R. Ribas-Jaimes³, V. M. Bautista¹. ¹Microbiology and Ocular Proteomics, Instituto de Oftalmología Conde de Valenciana, Mexico City, Mexico; ²Bacteriología Médica, Escuela Nacional de Ciencias Biológicas-IPN, Mexico City, Mexico; ³Producción y Control de Biológicos, Escuela Nacional de Ciencias Biológicas-IPN, Mexico City, Mexico
- 507 — B0014 Experimental immune-mediated conjunctivitis (EIC): downregulation by Coversin, a dual C5 and LTB4 inhibitor.** Virginia Calder¹, M. Eskandarpour¹, X. Zhang¹, Y. Chen^{1,3}, M. Nunn^{2,4}, W. Weston-Davies⁴. ¹UCL Institute of Ophthalmology, University College London, London, United Kingdom; ²UCL, London, United Kingdom; ³Department of Ophthalmology, Chang Geng Memorial Hospital, Taoyuan, Taiwan; ⁴Akari Therapeutics Plc, London, United Kingdom *CR
- 508 — B0015 Combined blockade of VEGFR-3 and Itga-9 promotes lamellar corneal transplant survival.** Meng Shi^{1,2}, Z. Zhang^{1,2}, G. Li^{1,2}, Y. Yokosaki³, D. G. Hwang⁴, L. Chen^{1,2}. ¹Vision Science Graduate Program, Berkeley, CA; ²Center for Eye Disease and Development, Program in Vision Science, and School of Optometry, Berkeley, CA; ³Cell-Matrix Frontier Laboratory, Biomedical Research Unit, Hiroshima, Japan; ⁴Department of Ophthalmology, San Francisco, CA
- 509 — B0016 Expression of TLT-2 on T cells and macrophages in corneal allografts.** Hiroko Taniguchi¹, M. Hashiguchi³, H. Akiba², H. Yagita², M. Azuma³, J. Hori¹. ¹Ophthalmology, Nippon Medical School, Bunkyo-ku, TOKYO, Japan; ²Immunology, Juntendo University School of Medicine, Tokyo, Japan; ³Molecular Immunology, Tokyo Medical and Dental University, Tokyo, Japan
- 510 — B0017 Expression of T cell/ transmembrane, immunoglobulin, and mucin (TIM)-4 in normal cornea and corneal grafts.** Ayaka Takeda¹, H. Taniguchi¹, T. Kunishige¹, H. Akiba², H. Yagita², J. Hori¹. ¹Nippon Medical School, Tokyo-to, Japan; ²Immunology, Juntendo University School of Medicine, Tokyo, Japan
- 511 — B0018 Immunophenotypic profiles of inflammatory cells in chalazion..** Rei Nemoto, Y. Usui, S. Ueda, H. Goto. Tokyo Medical University, Tokyo, Japan
- 512 — B0019 CRISPR/Cas9-Mediated Genome Editing of Herpesviruses Limits Productive and Latent Infections.** Saskia Imhof. Ophthalmology, UMC Utrecht, Utrecht, Netherlands
- 513 — B0020 Heparanase upregulation in human corneal tissues infected with herpes simplex virus type 1.** Ann-Marie Lobo, D. Shukla. Ophthalmology, Illinois Eye and Ear Infirmary, University of Illinois, Chicago, IL
- 514 — B0021 The absence of DHHC3 affects primary and latent HSV-1 infection.** Shaohui Wang¹, K. Mott¹, M. Cilluffo², C. Kilpatrick³, S. Murakami³, A. V. Ljubimov¹, K. G. Kousoulas⁴, S. Awasthi⁵, B. Luscher³, H. Ghiasi¹. ¹Cedars Sinai Medical Center, West Hollywood, CA; ²UCLA, Los Angeles, CA; ³Pennsylvania State University, University Park, PA; ⁴Louisiana State University, Baton Rouge, LA; ⁵University of Pennsylvania, Philadelphia, PA
- 515 — B0022 Effect of recombinant HSV-1 expressing IL-4 or IFN- γ on macrophage responses *in vitro* and *in vivo*.** Dong Hyun Lee, H. Ghiasi. Cedars Sinai Medical Center, Los Angeles, CA
- 516 — B0023 A Surprising Failure of Herpes Simplex Virus Type 1 (HSV-1) to Spread to the Brain or Contralateral Retina Following Unilateral Inoculation of Mice with Retrovirus-induced Immunosuppression (MAIDS).** Madeline Welch¹, J. Carter¹, L. Duncan¹, J. Oh¹, R. D. Dix^{1,2}. ¹Georgia State University, Atlanta, GA; ²Ophthalmology, Emory University, Atlanta, GA
- 517 — B0024 The NLRP3 Inflammasome is Involved in the Pathogenesis of Experimental Murine Cytomegalovirus (MCMV) Retinitis in Mice with Retrovirus-induced Immunosuppression (MAIDS).** Jessica Carter¹, J. Oh¹, L. Duncan¹, M. Welch¹, M. Housman¹, R. D. Dix^{1,2}. ¹Biology, Georgia State University, Atlanta, GA; ²Ophthalmology, Emory University, Atlanta, GA
- 518 — B0025 Hypoxia associated glycolytic reprogramming in the pathogenesis of herpes stromal keratitis (HSK).** Susmit Suvas, P. Rao. Ophthalmology and Anatomy/Cell Biology, Wayne State University School of Medicine, Detroit, MI
- 519 — B0026 Human HSV-Specific Memory CD8⁺ TEM Cells with Unique JAK/STAT, Chemokine and Anti-Inflammatory Gene Signatures Are Associated with Asymptomatic Ocular Herpes Infection.** Lbachir BenMohamed, H. Vahed, R. Srivastava, A. B. Nesburn. Gavin Herbert Eye Institute, Univ of California-Irvine, Irvine, CA
- 520 — B0027 Blockade of Lymphocyte activation gene-3 (LAG-3) Pathway Improved the Size and Protective Function of Herpes Simplex Virus-Specific CD8⁺ T cells against Ocular Herpes Infection and Disease.** Anthony B. Nesburn, R. Srivastava, R. Soumyabrata, L. BenMohamed. Gavin Herbert Eye Institute, University of California, Irvine, Los Angeles, CA
- 521 — B0028 Network modeling of proteins identifies critical sites for vaccine design.** Elizabeth Rossin¹, J. Chodosh¹, B. Walker², G. Gaiha². ¹Ophthalmology, Massachusetts Eye and Ear; Boston, MA; ²Massachusetts General Hospital, Boston, MA

Exhibit Hall B0137-B0149

Sunday, April 29, 2018 1:00 PM-2:45 PM

Cornea

135 Corneal Stroma and Keratocytes**Moderator: Tomoko Sato**

522 — B0137 Molecular mechanisms of corneal collagen crosslinking. Guzel Bikbova^{2,1}, A. Khalimov², G. Kazakbaeva², M. Bikbov². ¹Ophthalmology & Visual Science, Chiba Univ Grad School of Medicine, Chuo-ku, CHIBA, Japan; ²Ufa Eye Research Institute, Ufa, Russian Federation

523 — B0138 Phenotypic study of PAX6 haploinsufficient aniridic corneal stromal cells in a tissue equivalent. Carla Sanchez Martinez¹, V. Tovell¹, S. J. Tuft², J. T. Daniels¹. ¹Institute of Ophthalmology, UCL, London, United Kingdom; ²Moorfields Eye Hospital NHS Foundation Trust, London, United Kingdom

524 — B0139 Corneal biomechanics following intrastromal injection of hyaluronidase. Soohyun Kim², I. Jalilian², V. K. Raghunathan¹, S. M. Thomasy^{2,3}, C. J. Murphy^{2,3}. ¹Ocular Surface Institute, University of Houston, Houston, TX; ²Veterinary Surgical and Radiological Science, University of California Davis, Davis, CA; ³Ophthalmology & Vision Science, University of California Davis, Davis, CA

- 525 — B0140 Plasminogen promotes phagocytic activity of cultured human corneal fibroblasts.** Tomoko Sato¹, K. Sugioka¹, J. Murakami¹, H. Mishima¹, T. Nishida², Y. Shimomura¹. ¹Kindai University Faculty of Medicine, Osaka-sayama, Japan; ²Ophthalmology, Yamaguchi University, Ube, Japan
- 526 — B0141 Improvement of Keratoprosthesis Biointegration by Covalent Functionalization of PMMA.** Roholah Sharifl^{1,2}, M. Islam^{1,2}, S. Mahmoudzadeh^{1,2}, J. Chodos^{3,2}, C. H. Dohlman^{3,2}, M. Gonzalez-Andrades^{1,2}. ¹Ophthalmology, Schepens Eye Research Institute, Cambridge, MA; ²Ophthalmology, Harvard Medical School, Boston, MA; ³Ophthalmology, Massachusetts Eye and Ear Infirmary, Boston, MA
- 527 — B0142 3D engineered corneal stroma-derived cells on a laser-assisted bioprinted matrix.** Richard Nagymihaly^{1,4}, A. Sorkio², L. Koch², M. C. Moe^{1,4}, B. Chichkov^{3,5}, H. Skottman², G. Petrovski^{1,4}. ¹Department of Ophthalmology, Center for Eye Research, Oslo University Hospital, Oslo, Norway; ²Faculty of Medicine and Life Sciences, BioMediTech Institute, University of Tampere, Tampere, Finland; ³Nanotechnology Department, Biofabrication group, Laser Zentrum Hannover e.V., Hannover, Germany; ⁴Norwegian Center for Stem Cell Research, Oslo University Hospital, Oslo, Norway; ⁵Institute for Quantum Optics, Leibniz Universität Hannover, Hannover, Germany
- 528 — B0143 Collagenolytic Properties of *Staphylococcus Aureus* culture broth and Staphylokinase on Human Corneal Fibroblasts Cultured in Collagen Gel.** Koji Sugioka¹, A. Kodama-Takahashi¹, T. Sato¹, J. Murakami¹, H. Mishima¹, T. Nishida², Y. Shimomura¹. ¹Ophthalmology, Kindai University, Osakasayama, Japan; ²Ophthalmology, Yamaguchi University, Ube, Japan
- 529 — B0144 Corneal Changes in Patients Treated with Rose Bengal Photodynamic Antimicrobial Therapy for Severe Infectious Keratitis.** Jaime D. Martinez^{1,3}, S. R. Dubovy^{2,1}, G. Amescua^{1,3}, P. Monsalve^{2,1}, X. Zhou^{2,1}, A. Arboleda³, H. A. Durkee³, M. C. Aguilar³, N. Relhan^{1,3}, N. Nikpoor¹, H. W. Flynn¹, D. Miller^{4,1}, J. A. Parel^{3,1}. ¹Bascom Palmer Eye Institute, Miami, FL; ²Florida Lions Ocular Pathology Laboratory, Department of Ophthalmology, Bascom Palmer Eye Institute, University of Miami Miller School of Medicine, Miami, FL; ³Ophthalmic Biophysics Center, Bascom Palmer Eye Institute, University of Miami Miller School of Medicine, Miami, FL; ⁴Ocular Microbiology Laboratory, Bascom Palmer Eye Institute, Miami, FL
- 530 — B0145 Stimulation of cell proliferation and collagen synthesis of human corneal stromal cells in vitro for regeneration of ocular surface.** Meike Hasenzahl, S. Reichl. Pharmazeutische Technologie, TU Braunschweig, Braunschweig, Germany
- 531 — B0146 Generation of primary pluripotent spheroid culture from human corneas using human platelet lysates.** Jingjing You^{1,2}, H. E. Frazer¹, L. Wen¹, S. Cooper^{1,3}, C. Hodge^{4,5}, G. Sutton^{1,4}. ¹University of Sydney, Save Sight Institute, Sydney, New South Wales, Australia; ²School of Optometry and Vision Science, UNSW Sydney, Kensington, New South Wales, Australia; ³NSW Health Pathology, NSW Satewide Biobank, Sydney, New South Wales, Australia; ⁴Lions NSW Eye Bank, Sydney, New South Wales, Australia; ⁵Vision Eye Institute, Sydney, New South Wales, Australia *CR
- 532 — B0147 A novel tissue engineered corneal stromal equivalent.** Xin Che¹, C. Jia¹, H. Wu¹, S. Ou¹, X. He¹, W. Li^{1,2}. ¹Xiamen University, Xiamen, China; ²Xiamen University affiliated Xiamen Eye Center, Xiamen, China
- 533 — B0148 The structural transformation of the stromal extracellular matrix in cross-linked and non-cross-linked corneas during drying.** Sally Hayes¹, J. S. Bell¹, E. Feneck¹, S. R. Morgan¹, O. Shebanova², K. M. Meek¹. ¹School of Optometry and Vision Sciences, Cardiff University, Cardiff, United Kingdom; ²Diamond Light Source, Oxford, United Kingdom
- 534 — B0149 Identification of the function of keratocan positive keratocytes.** Ting Su¹, X. Chen¹, X. Liao¹, Z. Wan¹, Y. Li¹, W. W. Kao², W. Li^{1,3}, Y. Chen¹, Z. Liu^{1,3}. ¹Eye Institute of Xiamen University, Fujian Provincial Key Laboratory of Ophthalmology and Visual Science, Medical College of Xiamen University, Xiamen, Fujian, China; ²Ophthalmology, University of Cincinnati, Cincinnati, OH; ³Affiliated Xiamen Eye Center of Xiamen University, Xiamen, China
-
- Exhibit Hall B0150-B0174
Sunday, April 29, 2018 1:00 PM-2:45 PM
- Retinal Cell Biology**
136 Stem Cell Therapy
-
- Moderators: Rajashekhar Gangaraju and Ruchira Singh**
- 535 — B0150 Orbital fat derived mesenchymal stem cells rescue RPE from necrosis and differentiate towards RPE.** Aya Barzelay, S. Wheisthal, o. ohana, a. elikhis, s. Katz, v. Rozidzki, r. ben cnaan, i. leibovitch, A. Loewenstein, A. Barak. Ophthalmology, Tel Aviv Medical Center, Tel Aviv, Israel
- 536 — B0151 Enhancement of Constructing Ultra-thin Corneal Stromal Membranes-Based Bioengineered Retinal Pigment Epithelial Sheet in iPS - Conditioned Medium.** Jianing Gu^{1,2}, Y. Wang^{2,1}, X. Yan^{2,1}, X. Yang¹, H. Huang¹, H. Xu¹, J. Chen^{1,2}, S. Tang^{1,2}. ¹Aier eye institute, Changsha, Hunan Province, China; ²Aier School of Ophthalmology, Central South University, Changsha, Hunan, China
- 537 — B0152 Direct-to-consumer marketing by U.S. Stem-Cell Clinics for Ocular Conditions.** Rajinder S. Nirwan¹, T. A. Albini², J. Sridhar², H. W. Flynn³, A. E. Kuriyan¹. ¹Flaum Eye Institute, Univ. of Rochester Med Center, Rochester, NY; ²Bascom Palmer Eye Institute, Miami, FL *CR
- 538 — B0153 Evaluation of cell production and shipment procedure in non-human primates for hESC-RPE sheet transplantation.** Tanja Ilmarinen¹, H. Hongisto¹, Z. Liu², E. Wong³, R. W. Beuerman^{4,5}, G. Tan³, B. V. Stanzel^{6,3}, H. Skottman^{1,4}. ¹Faculty of Medicine and Life Sciences, BioMediTech Institute, University of Tampere, Tampere, Finland; ²National University of Singapore, Singapore, Singapore; ³Singapore National Eye Centre, Singapore, Singapore; ⁴Singapore Eye Research Institute, Singapore, Singapore; ⁵Duke-NUS, Singapore, Singapore; ⁶Knappschaft Eye Clinic and Fraunhofer Institute for biomedical engineering, Sulzbach, Germany *CR
- 539 — B0154 HLA-E-Expressing “Universal” Pluripotent Stem Cells as a Source of Retinal Pigment Epithelium to Treat Age-Related Macular Degeneration.** mei jiang¹, M. Stevanovic^{4,1}, V. Lopes¹, B. Thomas², D. Russell³, M. S. Humayun², D. O. Clegg¹. ¹Department of Molecular, Cellular, and Developmental Biology, University of California Santa Barbara, Santa Barbara, CA; ²Roski Eye Institute, University of Southern California, Los Angeles, CA; ³Department of Medicine, University of Washington, Seattle, WA; ⁴Howard Hughes Medical Institute, Chevy Chase, MD
- 540 — B0155 Mesenchymal stem cells reduce neuroretinal degeneration in vitro.** Ivan Fernandez-Bueno^{1,2}, S. Labrador¹, M. Garcia-Gutierrez¹, G. K. Srivastava^{1,3}, J. Pastor^{1,2}. ¹Instituto Universitario de Oftalmobiología Aplicada (IOBA), University of Valladolid, Valladolid, Spain; ²Red Temática de Investigación Cooperativa en Salud (RETICS), Oftared, Instituto de Salud Carlos III, Valladolid, Spain; ³Centro en Red de Medicina Regenerativa y Terapia Celular de Castilla y León, Valladolid, Spain
- 541 — B0156 Genetical modification to reduce bipolar cells in hESC derived retinas aiming for enhanced host-graft contact after transplantation.** Suguru Yamasaki^{1,2}, T. Hashiguchi¹, T. Watanabe¹, K. Matsushita^{1,2}, A. Kuwahara², A. Kishino², T. Kimura², M. Takahashi¹, M. Mandai¹. ¹CDB, Riken, Kobe, HYOGO, Japan; ²Sumitomo Dainippon Pharma Co.,Ltd., Kobe, Japan *CR
- 542 — B0157 Defining the optimal stage for transplantation of pluripotent stem cell derived photoreceptor precursors.** DARIN ZERTI¹, J. Collin¹, D. Steel¹, C. B. Mellough^{1,2}, E. Sernagor³, L. Armstrong¹, M. Lako¹. ¹Institute of Genetic Medicine, Newcastle University, NEWCASTLE UPON TYNE, United Kingdom; ²Centre for Ophthalmology and Visual Science, Lions Eye Institute Ltd, Perth, Western Australia, Australia; ³Institute of Neuroscience, Newcastle University, Newcastle upon Tyne, United Kingdom

543 — B0158 Comprehensive in vivo assessment of human pluripotent stem cell-derived photoreceptor survival and differentiation potential in the immune-compromised S334ter rat. Joe Phillips^{1,2}, A. Ludwig^{1,2}, P. Barney¹, K. Barlow¹, L. Jager¹, E. E. Capowski¹, D. M. Gamm^{1,2}, ¹Waisman Center, University of Wisconsin, Madison, WI; ²McPherson Eye Research Institute, University of Wisconsin, Madison, WI *CR

544 — B0159 3D retina organoids produced from CRX-GFP human embryonic stem cells (hESCs) processed into retinal sheets and transplanted into immunodeficient retinal degenerate (RD) rats. Magdalene J. Seiler¹, B. T. McLelland¹, J. Collin², C. B. Mellough³, M. Lako², R. B. Aramant¹, G. Nistor⁴, H. S. Keirstead¹. ¹PMR; Stem Cell Research Ctr, Univ of California, Irvine, Irvine, CA; ²Institute of Genetic Medicine, Newcastle University, Newcastle upon Tyne, United Kingdom; ³Lions Eye Institute, Nedlands, Western Australia, Australia; ⁴AIVITA Biomedical, Irvine, CA *CR

545 — B0160 Subretinal transplantation of human induced pluripotent stem cell-derived retinal pigment epithelium (hiPS-RPE) into pigs.. Dirk Sandner¹, M. Stein^{2,1}, D. Wittig², S. Almedawar², H. Sachs³, M. Scharffenberg⁴, R. Jung⁵, L. Pillunat⁶, E. Tanaka^{2,6}, M. Kar², M. Ader². ¹Department of Ophthalmology, Univ. Hospital Carl Gustav Carus, TU Dresden, Dresden, Germany; ²DFG-Center for Regenerative Therapies Dresden (CRTD) TU Dresden, Dresden, Germany; ³Städtisches Klinikum Dresden Friedrichstadt, University Teaching Hospital, Dresden, Germany; ⁴Department of Anaesthesiology and Intensive Care Therapy, Univ. Hospital Carl Gustav Carus, TU Dresden, Dresden, Germany; ⁵Experimentelle Zentrum, Univ. Hospital Carl Gustav Carus, TU Dresden, Dresden, Germany; ⁶Research Institute of Molecular Pathology, Vienna Biocenter, Vienna, Austria

546 — B0161 Efficacy of clinical-grade iPSC-RPE cells and patch in rodent and swine models of retinal degeneration. Aaron Rising¹, V. Khristov¹, Y. Li¹, M. M. Campos¹, H. Qian¹, J. Stoddard², A. Maminishkis¹, J. Amaral¹, T. J. McGill¹, S. S. Miller¹, K. Bharti¹. ¹National Eye Institute, National Institutes of Health, Bethesda, MD; ²Ophthalmology, Casey Eye Institute-OHSU, Beaverton, OR

547 — B0162 TNF α involves the proliferation of Müller cells in the light-damaged adult rats. Yuan Fang. Eye & ENT Hospital of Fudan University, Shanghai, China

548 — B0163 Chemokine-mediated migration of stem cells in the degenerating retina. Martina Pesaresi¹, S. A. Bonilla Pons¹, M. Cosma^{1,2}. ¹Centre for Genomic Regulation (CRG), Barcelona, Spain; ²Institució Catalana de Recerca i Estudis Avançats (ICREA), Barcelona, Spain

549 — B0164 Stem cell therapy for treatment of ischemic optic neuropathy. Louise A. Mesentier-Louro¹, N. Yang², A. Shariati¹, P. D. Domizi³, R. Dodd⁴, G. Wernig³, M. Wernig², Y. J. Liao¹. ¹Ophthalmology, Stanford University, Palo Alto, CA; ²Institute for Stem Cell Biology and Regenerative Medicine, Stanford University, Palo Alto, CA; ³Pathology, Stanford University, Palo Alto, CA; ⁴Neurosurgery, Stanford University, Palo Alto, CA

550 — B0165 Mesenchymal stromal cells promote vascular regeneration and modulate inflammation in a mouse model of ischemic retinopathy. Baraa Noueihed^{1,2}, J. Rivera^{3,2}, S. Chemtob^{3,2}. ¹Pharmacology and Therapeutics, McGill University, Montreal, Quebec, Canada; ²Ophthalmology, Maisonneuve-Rosemont Hospital Research Centre, Montreal, Quebec, Canada; ³Pediatrics, Ophthalmology, & Pharmacology, CHU Sainte-Justine Research Centre, Montreal, Quebec, Canada

551 — B0166 Validating the efficacy of GMP-NPCs following subretinal injection into an animal model of retinal degeneration. Bin Lu¹, S. Girman¹, C. Zhang¹, J. Saylor¹, A. Pieplow¹, S. Ghiani¹, B. Bakondi¹, A. Block¹, L. Nocito-Labad¹, A. Ljubimov^{1,2}, C. Svendsen^{1,2}, S. Wang^{1,2}. ¹Board of Governors Regenerative Medicine Institute, Biomedical Sciences, Cedars Sinai Medical Center, Los Angeles, CA; ²David Geffen School of Medicine, University of California Los Angeles, Los Angeles, CA

552 — B0167 Modulation of the inner limiting membrane to enhance cellular engraftment into the ganglion cell layer. Zenith Acosta Torres^{1,2}, G. Dvorianchikova¹, D. V. Ivanov^{1,3}, D. Pelaez^{1,2}. ¹Bascom Palmer Eye Institute, Department of Ophthalmology, University of Miami Miller School of Medicine, Miami, FL; ²Biomedical Engineering, University of Miami, Coral Gables, FL; ³Microbiology and Immunology, University of Miami Miller School of Medicine, Miami, FL

553 — B0168 Objective quantification of photoreceptor ribbon synapses in iPSC cell-derived retina after transplantation to retinal degeneration model mice. Ryutarō Akiba^{1,2}, T. Matsuyama Hoyos¹, M. Mandai¹, S. Yamamoto², M. Takahashi¹. ¹Laboratory for Retinal Regeneration, Riken Center for Developmental Biology, Kobe, Hyogo, Japan; ²Ophthalmology and Visual Science, Chiba University, Chiba, Chiba, Japan

554 — B0169 The secretome of adipose stem cells primed for TSG-6 expression protects retinal endothelial barrier function and suppresses microglial activation. Mickey Pentecost², K. Jha¹, L. Klaić², A. Beland², R. Rajesh Lenin¹, N. Soh², J. Wohlschlege³, R. Gangaraju^{1,2}. ¹Department of Ophthalmology, The University of Tennessee Health Science Center, Memphis, TN; ²Cell Care Therapeutics, Inc., Monrovia, CA; ³Department of Biological Chemistry, University of California, Los Angeles, Los Angeles, CA *CR

555 — B0170 AMD Cell Therapy Efficacy Assessment Using Artificial Intelligence-Based Multi-Spectral Imaging. Nathan Hotaling¹, N. J. Schaub², Q. Wan¹, R. Sharma¹, S. Padi³, P. Manescu³, J. Chalfoun³, M. Simon³, M. Ouladi³, C. G. Simon², P. Bajcsy³, K. Bharti¹. ¹OGVFB, National Eye Institute, Washington, District of Columbia; ²Biosystems and Biomaterials, National Institute of Standards and Technology, Gaithersburg, MD; ³Information Technology Laboratory, National Institute of Standards and Technology, Gaithersburg, MD

556 — B0171 Towards macular regeneration: generation, MACS purification and transplantation of cone photoreceptors derived from mouse induced pluripotent stem cells (mIPSC). Hany Abdelgawad^{1,2}, J. Park^{1,3}, K. Afrasyab^{1,4}, P. Y. Baranov¹, M. J. Young¹. ¹Department Of Ophthalmology, Harvard Medical School, Boston, MA; ²Department Of Ophthalmology, Fayoum University, Fayoum, Egypt; ³Yale School of Medicine, New Haven, CT; ⁴Linköping University, Linköping, Sweden

557 — B0172 Stem cell therapy enhancement with gold nanoparticles functionalized with nerve growth factor in an animal model of laser damaged retina. Simona Nicoara^{1,2}, C. Berce¹, A. Tabaran³, C. Bouari⁴, S. Astilean⁵, M. Potara⁵, O. Barboș⁶, O. Soritau⁶. ¹Ophthalmology, “Iuliu Hatieganu” University of Medicine and Pharmacy, Cluj-Napoca, Romania; ²Ophthalmology, SCJU, Cluj-Napoca, Cluj, Romania; ³University of Agricultural Science and Veterinary Medicine, Cluj-Napoca, Cluj, Romania; ⁴University of Agricultural Science and Veterinary Medicine, Cluj-Napoca, Cluj, Romania; ⁵Babes-Bolyai University, Cluj-Napoca, Cluj, Romania; ⁶“Ion Chiricuta” Institute of Oncology, Cluj-Napoca, Cluj, Romania

558 — B0173 A Complete Retina Patch to Treat Irreversible Retinal Injuries. Biju Thomas^{1,5}, B. T. McLelland², D. Zhu³, G. Nistor⁴, R. B. Aramant¹, D. R. Hinton³, M. S. Humayun^{1,5}, H. S. Keirstead⁴, M. J. Seiler². ¹Ophthalmology, USC Eye Institute, Los Angeles, CA; ²Physical Medicine & Rehabilitation, UC Irvine School of Medicine, Irvine, CA; ³Pathology, USC, Los Angeles, CA; ⁴Aivita Biomedical, Irvine, CA; ⁵Institute for Biomedical Therapeutics, USC, Los Angeles, CA *CR

559 — B0174 Adult Mammalian Retinal Regeneration. Cindy Linn¹, M. Stanchfield¹, D. Otteson², M. Webster¹. ¹Biological Sciences, Western Michigan University, Kalamazoo, MI; ²University of Houston College of Optometry, Houston, TX

Exhibit Hall B0175-B0190

Sunday, April 29, 2018 1:00 PM-2:45 PM

Retinal Cell Biology**137 New Insights on Retinogenesis from Organoids****Moderators: Jane Sowden and Karl Wahlin****560 — B0175 Differentiation methods impact the survival and lamination of human pluripotent stem cell-derived retinal organoids.**

Carla B. Mellough^{1,2}, J. Collin², R. Queen², J. S. Steyn², M. Yu², K. White², G. Hilgen⁴, D. Elliot², M. Santibanez-koref², M. Jackson², E. Sernagor⁴, M. Lako². ¹Lions Eye Institute Ltd., Perth, Western Australia, Australia; ²Institute of Genetic Medicine, Newcastle University, Newcastle upon Tyne, Tyne and Wear, United Kingdom; ³EM Research Services, Newcastle University, Newcastle upon Tyne, United Kingdom; ⁴Institute of Neuroscience, Newcastle University, Newcastle upon Tyne, United Kingdom

561 — B0176 Laminin γ 3 expression and its functional role during human retinal morphogenesis.

Birthe Dorgau¹, A. Sharpe¹, M. Felemban¹, D. Hallam¹, D. Steel¹, S. Lindsay¹, C. B. Mellough^{1,2}, M. Lako¹. ¹Institute of Genetic Medicine, Newcastle University, Newcastle upon Tyne, Tyne and Wear, United Kingdom; ²Centre for Ophthalmology and Visual Science, Lions Eye Institute, The University of Western Australia, Perth, Western Australia, Australia

562 — B0177 DHA promotes differentiation of photoreceptor cells in 3D neural retinas.

Eisuke Arai¹, B. Sahu², L. Perusek², V. Parmar², A. Murakami¹, A. Maeda². ¹Department of Ophthalmology, Juntendo University School of Medicine, Bunkyo-ku, Tokyo, Japan; ²Department of Ophthalmology and Visual Sciences, Case Western Reserve University, Cleveland, OH *CR

563 — B0178 Enhancing Cone Differentiation of miPSCs via FGF8-induced Retinoic Acid Signaling Inhibition.

Koyar Afrasyab¹, H. Abdelgawad¹, J. Park^{1,2}, M. J. Young¹. ¹Schepens Eye Research Institute of Massachusetts Eye and Ear, Boston, MA; ²Yale School of Medicine, New Haven, CT

564 — B0179 Enhancing Retinal Ganglion Cell Production from Human Pluripotent Stem Cell-Derived 3D Retinal Cultures.

Xiangmei Zhang¹, K. Nguyen¹, S. A. Barnes^{2,3}, X. Yang¹. ¹Ophthalmology, Jules Stein Eye Institute-UCLA, Los Angeles, CA; ²Physio/Biophys/Ophthal/Vis Sci, UCLA, Los Angeles, CA; ³Physio/Biophys/Ophthal/Vis Sci, Dalhousie University-DAL-11762, Halifax, Nova Scotia, Canada

565 — B0180 Using statistical models to identify key variables critical for generation of retinal organoids from iPSC.

Valeria Chichagova^{1,2}, D. Hallam², M. Nicholds¹, R. Thomas³, M. Lako², L. Armstrong^{1,2}. ¹Newcells Biotech, Newcastle upon Tyne, United Kingdom; ²Institute of Genetic Medicine, Newcastle University, Newcastle upon Tyne, United Kingdom; ³Centre for Biological Engineering, Loughborough University, Loughborough, United Kingdom

566 — B0181 Optimization of xeno-free 3D culture method for retinal differentiation from pluripotent cells.

Tatiana Perepelkina^{1,2}, P. Y. Baranov^{1,2}. ¹Schepens Eye Research Institute, Medford, MA; ²Harvard Medical School, Cambridge, MA

567 — B0182 Development of a 3-dimensional microphysiological Retina-on-a-chip system.

Jasmin Haderspeck¹, K. Achberger¹, C. Probst², J. Rogal², J. Chuchuy², W. Haq³, P. Loskill², S. Liebau¹. ¹Institute of Neuroanatomy and Developmental Biology, Eberhard Karls University Tuebingen, Germany, Tuebingen, Germany; ²Department of Cell and Tissue Engineering, Fraunhofer Institute for Interfacial Engineering and Biotechnology IGB, Stuttgart, Germany; ³Centre for Ophthalmology, Institute for Ophthalmic Research, University of Tuebingen, Tuebingen, Germany *CR

568 — B0183 Investigation of Retinal Ganglion Cell Diversity and Subtype Specification from Human Pluripotent Stem Cells.

Jason S. Meyer^{2,3}, S. Ohlemacher¹, C. Fligor¹, M. J. Phillips^{6,5}, P. Jiang⁷, D. M. Gamm^{6,4}, K. Langer¹. ¹Biology, Indiana Univ- Purdue Univ Indianapolis, Indianapolis, IN; ²Stark Neurosciences Research Institute, Indiana University, Indianapolis, IN; ³Biology, Indiana University, Indianapolis, IN; ⁴Ophthalmology and Visual Sciences, University of Wisconsin, Madison, WI; ⁵McPherson Eye Research Institute, University of Wisconsin, Madison, WI; ⁶Waisman Center, University of Wisconsin, Madison, WI; ⁷Morggridge Institute for Research, Madison, WI *CR

569 — B0184 The CRX allelic deletion in ES cells rendering delayed maturation of photoreceptors in three-dimensional Retinal organoids differentiation.

Deng Pan, X. Xia, H. Liu, S. Pan, M. Gao, Z. Jin. Wenzhou Medical University, Division of Ophthalmic Genetics, Lab for Stem Cell & Retinal Regeneration, Wenzhou, China

570 — B0185 Using hESC-derived retinal organoids to investigate the transcriptional profile of emerging photoreceptors.

Joseph Collin, R. Queen, C. B. Mellough, M. Lako. Newcastle University, Newcastle upon Tyne, United Kingdom

571 — B0186 COMPASS acts as a temporal rheostat to control retinal neuroectoderm versus mesoderm fate choice.

Rajesh C. Rao¹, Q. Li¹, F. Mao², Y. Dou². ¹Ophthalmology and Visual Sciences, University of Michigan Medical School, Ann Arbor, MI; ²Pathology, University of Michigan, Ann Arbor, MI

572 — B0187 Differentiation of human iPSC-derived optic vesicles into numerous types of retinal cells.

Kana Orihara¹, C. Yabuta¹, M. Azuma¹, N. Azuma². ¹SENJU PHARMACEUTICAL CO., LTD, Kobe, Hyogo, Japan; ²National Center for Child Health and Development, Tokyo, Japan *CR

573 — B0188 CRISPR/Cas9 Edited hiPSCs to Model Neural Retina Differentiation.

Phuong Lam¹, C. Gutierrez¹, K. Del Rio-Tsonis^{1,2}, M. L. Robinson^{1,2}. ¹Biology, Miami University, Oxford, OH; ²Center for Visual Sciences, Miami University, Oxford, OH

574 — B0189 Transcriptomic analysis of retinal organoids from human pluripotent stem cells.

Melissa K. Jones, A. R. Ogata, F. Su, B. Chen, J. Seid, K. Wahlin. Shiley Eye Institute, Department of Ophthalmology, University of California San Diego, La Jolla, CA

575 — B0190 Three-dimensional retinal organoids from induced pluripotent stem cells derived from rd16 mouse model of CEP290-LCA.

Holly Chen¹, K. D. Kaya¹, C. Jiang¹, A. Mondal¹, M. Brooks¹, J. Kim¹, M. Swaroop², W. Zheng², A. Swaroop¹. ¹National Eye Institute, National Institutes of Health, Bethesda, MD; ²National Center for Advancing Translational Sciences, National Institutes of Health, Rockville, MD

Exhibit Hall B0191-B0212

Sunday, April 29, 2018 1:00 PM-2:45 PM

Retinal Cell Biology**138 Retinal Development****Moderator: Stefanie G. Wohl****576 — B0191 The role of brain-derived neurotrophic factor on retinal dysfunction in diabetic retinopathy and its association with eicosapentaenoic acid.**

Rina Namba, H. Kaneko, K. Kataoka, T. Tsunekawa, T. Matsuura, A. Suzumura, H. Shimizu, H. Terasaki. Nagoya University Graduate School of Medicine, Aichi, Aichi, Japan

577 — B0192 The lizard third eye.

Katie Irwin¹, A. M. Rasys^{1,2}, T. Roldan³, D. B. Menke⁴, J. D. Lauderdale^{1,5}. ¹Cellular Biology, University of Georgia, Athens, GA; ²College of Veterinary Medicine, University of Georgia, Athens, GA; ³Biology, University of Puerto Rico, Cayey, Puerto Rico; ⁴Genetics, University of Georgia, Athens, GA; ⁵Neuroscience Division of Biomedical and Health Sciences Institute, University of Georgia, Athens, GA

578 — B0193 Vwc2l affects eye development and interacts with olfm1 in zebrafish.

Naoki Nakaya, M. B. Sengupta, S. I. Tomarev. SRGCB/LRCMB, National Eye Institute, Bethesda, MD

579 — B0194 **Pard3c is important for cell survival and proliferation, but not for apicobasal polarity during zebrafish retinal development.** Oliver Vocking, W. Fang, X. Wei. *Ophthalmology, University of Pittsburgh, Pittsburgh, PA*

580 — B0195 **Microglial development in the eye and brain.** Ryo Mukai¹, Y. Okunuki², C. Kim², D. Park², D. Husain², K. M. Connor². ¹*Ophthalmology, Gunma University Graduate School of Medicine, Maebashi, N/A, Japan*; ²*Ophthalmology, Harvard Medical School, Massachusetts Eye & Ear Infirmary, Boston, MA*

581 — B0196 **Conditional deletion of VEGFR-1 in smooth muscle cells causes decreased retinal vessel growth and reduced alveolarisation in mice.** Xiangke Yin, y. du, Z. Ye, Q. Chen, L. Huang, L. Lixian, X. Li, R. Ju. *Zhongshan Ophthalmic Center Sun Yat-Sen University, Guangzhou, China*

582 — B0197 **Six3 and Six6 are required for protecting multipotent retinal progenitors against ciliary margin fate through suppressing Wnt/β-catenin signaling.** Wei Liu, R. Diacou, A. Cvekl. *Albert Einstein College of Med, Pelham, NY*

583 — B0198 **Expression of an opsin protein in developing starburst amacrine cells.** Sumathi Sekaran¹, P. Moseley¹, S. Regan¹, C. K. Campla², S. Broadgate¹, A. Swaroop², S. Halford¹. ¹*University of Oxford, Oxford, United Kingdom*; ²*National Eye Institute, Bethesda, MD*

584 — B0199 **Transgenic trpβ2 expression does not induce full red cone morphology despite inducing red cone physiology.** Leah Middleton^{2,1}, R. F. Nelson². ¹*University of Pennsylvania, Philadelphia, PA*; ²*National Institute of Neurological Disorders and Stroke, National Institutes of Health, Rockville, MD*

585 — B0200 **Enhancement of mitotic activity in the chick retina following optic nerve section and growth factor treatment.** Vivian Choh¹, S. A. Chong¹, A. Kumar¹, N. Hutchings¹, C. F. Wildsoet². ¹*School of Optometry and Vision Science, University of Waterloo, Waterloo, Ontario, Canada*; ²*School of Optometry, University of California Berkeley, Berkeley, CA*

586 — B0201 **Laminin β2 Chain Regulates Retinal Progenitor Cell Mitotic Spindle Orientation Via Dystroglycan.** William J. Brunken, D. Serjanov, G. Bachay, D. D. Hunter. *Ophthalmology, Upstate Medical University, Syracuse, NY*

587 — B0202 **Mouse retinal development at single-cell resolution.** Brian S. Clark¹, G. Stein-O'Brien^{1,2}, F. Rajati³, G. H. Cannon², F. Shiau¹, E. Aranda-Michel¹, E. J. Fertig⁴, L. A. Goff^{1,2}, S. Blackshaw^{1,5}. ¹*Solomon H. Snyder Department of Neuroscience, Johns Hopkins University School of Medicine, Baltimore, MD*; ²*McKusick-Nathans Institute of Genetic Medicine, Johns Hopkins University School of Medicine, Baltimore, MD*; ³*Department of Ophthalmology, Johns Hopkins University School of Medicine, Baltimore, MD*; ⁴*Department of Oncology Biostats, Johns Hopkins University School of Medicine, Baltimore, MD*; ⁵*Center for Humans Systems Biology, Department of Neurology, Department of Ophthalmology, and Institute for Cell Engineering, Johns Hopkins University School of Medicine, Baltimore, MD*

588 — B0203 **Candidate gene analysis at two QTL modulating AII amacrine cell number in mouse retina.** Bridget Kulesh^{1,2}, P. W. Keeley², B. E. Reese^{2,3}. ¹*Molecular, Cellular, and Developmental Biology, University of California, Santa Barbara, Santa Barbara, CA*; ²*Neuroscience Research Institute, University of California, Santa Barbara, Santa Barbara, CA*; ³*Psychological and Brain Sciences, University of California, Santa Barbara, Santa Barbara, CA*

589 — B0204 **Anolis sagrei lizard—a novel model system for studying fovea development.** Ashley M. Rasy^{1,2}, K. Irwin¹, S. Luo³, D. B. Menke³, J. D. Lauderdale^{1,4}. ¹*Cellular Biology, University of Georgia, Athens, GA*; ²*College of Veterinary Medicine, University of Georgia, Athens, GA*; ³*Genetics, University of Georgia, Athens, GA*; ⁴*Neuroscience Division of Biomedical and Health Sciences Institute, University of Georgia, Athens, GA*

590 — B0205 **Gbx2 regulates the development of a non-GABAergic non-Glycinergic amacrine cell in the mammalian retina.** Patrick C. Kerstein¹, J. Leffler², B. Sivy³, W. R. Taylor², K. Wright¹. ¹*Vollum Institute, Oregon Health and Science University, Portland, OR*; ²*School of Optometry, University of California-Berkeley, Berkeley, CA*; ³*Casey Eye Institute, Oregon Health and Science University, Portland, CA*

591 — B0206 **Pivotal roles of Fezf2 in differentiation of cone OFF bipolar cells and functional maturation of cone ON bipolar cells in developing mouse retina.** Sumiko Watanabe¹, A. Mizota², H. Suzuki¹. ¹*Molecular & Developmental Biol, Univ of Tokyo, Inst Med Science, Tokyo, TOKYO, Japan*; ²*Department of Ophthalmology, Teikyo University School of Medicine, Tokyo, Japan*

592 — B0207 **Molecular and Functional Analyses of Human Pluripotent Stem Cell Derived Retinal Ganglion Cells in Long Term Culture.** Sarah Ohlemacher¹, R. Vij¹, A. Sridhar¹, V. Sluch², M. Edler², D. J. Zack², A. Baucum^{1,3}, T. Cummins^{1,3}, J. S. Meyer^{1,3}. ¹*IUPUI/Biology, IUPUI, Indianapolis, IN*; ²*Department of Ophthalmology, Wilmer Eye Institute, Baltimore, MD*; ³*Stark Neurosciences Research Institute, Indianapolis, IN* *CR

593 — B0208 **Eye Development in the Brown Anole Lizard *Anolis sagrei*.** James D. Lauderdale^{1,3}, A. M. Rasy^{2,4}, S. H. Pau⁴, K. Irwin², S. Luo⁴, D. B. Menke⁴. ¹*Cellular Biology, University of Georgia, Athens, GA*; ²*Cellular Biology, University of Georgia, Athens, GA*; ³*BHSI Neuroscience, University of Georgia, Athens, GA*; ⁴*Genetics, University of Georgia, Athens, GA*

594 — B0209 **Expression of developmental commitment factors in the regenerating adult zebrafish retina.** Manuela Lahne, M. Brecker, S. Semanek, D. R. Hyde. *Biological Sciences, University of Notre Dame, Notre Dame, IN*

595 — B0210 **QTLs on Chromosomes 3 and 13 interact to modulate horizontal cell number in the mouse retina.** Patrick W. Keeley¹, B. E. Reese^{1,2}. ¹*Neuroscience Research Institute, University of California, Santa Barbara, Santa Barbara, CA*; ²*Psychological and Brain Sciences, University of California, Santa Barbara, Santa Barbara, CA*

596 — B0211 **Growth coordination of mouse eye compartments by NF2-Hippo-Yap/Taz signaling cascade.** Jin Woo Kim, K. Moon. *Department of Biological Sciences, Korea Advanced Institute of Science and Technology (KAIST), Daejeon, Korea (the Republic of)*

597 — B0212 **Roles of NAD for the survival of retinal progenitors through the regulation of pro-apoptotic gene expression via Sirt-mediated histone acetylation.** Akira Murakami¹, H. Kuribayashi², Y. Baba², E. Arai^{1,2}, S. Watanabe². ¹*Ophthalmology, Juntendo Univ Grad School of Medicine, Bunkyo-Ku, TOKYO, Japan*; ²*Division of Molecular and Developmental Biology, Institute of Medical Science, University of Tokyo, Tokyo, Japan*

Exhibit Hall B0270-B0279

Sunday, April 29, 2018 1:00 PM-2:45 PM

Visual Neuroscience

139 Outer Retina Function

Moderator: Stuart C. Mangel

598 — B0270 **in vitro photoprotective effect of optical filters on retinal pigment epithelium cells exposed to moderate daylight-mimicking conditions.** Melanie Marie¹, C. Barrau², C. Ehrismann², P. Gondouin¹, J. A. Sahel¹, T. Villette², S. A. Picaud¹. ¹*Institut de la Vision, Paris, France*; ²*Light and vision sciences, Essilor International R&D, Charenton-le-Pont, France* *CR

599 — B0271 **Assessing rod function in cone dystrophy patients with ABCA4 mutations using rod fractional sensitivity estimates based on ERG a-wave rise time.** Kristen E. Bowles¹, B. Jeffrey², L. J. Frishman¹. ¹*College of Optometry, University of Houston, Houston, TX*; ²*National Eye Institute, National Institute of Health, Bethesda, MD*

600 — B0272 A computational method for determining opsin peak absorbance wavelengths from zebrafish PIII ERG responses. Ralph F. Nelson^{1,2}, A. Balraj^{1,2}, T. Suresh¹, M. Torvund^{1,3}, S. S. Patterson^{1,4}. ¹Basic Neurosciences Program, NINDS NIH, Bethesda, MD; ²Anatomy and Regenerative Biology, George Washington University, Washington DC, District of Columbia; ³Neuroscience, University of Arizona, Tucson, AZ; ⁴Ophthalmology, University of Washington, Seattle, WA

601 — B0273 Effect of Forskolin on Recovery of the Cone Photoresponse in Grk Knockout Zebrafish Larvae. Jared D. Chrispell, S. Osawa, E. R. Weiss. *Cell Biology and Physiology*, University of North Carolina at Chapel Hill, Carrboro, NC

602 — B0274 Deletion of an Nrl-regulated alternative promoter results in retina-specific silencing of *Frpm1*, a gene involved in mediating rod adaptation. Christie K. Campla^{1,2}, S. Halford¹, S. Sekaran², L. Dong¹, A. Swaroop¹. ¹National Eye Institute, Bethesda, MD; ²University of Oxford, Oxford, United Kingdom

603 — B0275 Chemogenetic manipulation of feedback inhibition from horizontal cells to photoreceptors in transgenic zebrafish expressing alien neurotransmitter receptors. Billie Beckwith-Cohen, L. Holzhausen, R. H. Kramer. *Molecular and Cell Biology*, University of California, Berkeley, Berkeley, CA

604 — B0276 Pointillism in the retina: a new method to semi-automatically assess rods and cones density in immunostained retinas. Anna Verschuere, v. fradot, S. A. Picaud, J. Sahel. *Vision Institute, Paris, France*

605 — B0277 Identification of protein components of the rod outer segment plasma membrane by label-free protein correlation profiling. Nikolai P. Skiba¹, L. Molday², R. S. Molday³, V. Y. Arshavsky¹. ¹Ophthalmology, Duke University, Durham, NC; ²Biochemistry and Molecular Biology, University of British Columbia, Vancouver, British Columbia, Canada; ³Biochemistry and Molecular Biology, University of British Columbia, Vancouver, British Columbia, Canada

606 — B0278 Light-induced length shrinkage of photoreceptor outer segment. Yiming Lu¹, J. Benedetti¹, X. Yao^{1,2}. ¹Department of Bioengineering, University of Illinois at Chicago, Chicago, IL; ²Department of Ophthalmology and visual sciences, University of Illinois at Chicago, Chicago, IL

607 — B0279 Horizontal Cell Specific Dopamine Receptor Knock Out Causes ON vs OFF-pathway Specific Dysfunction in Spatial Tuning and Light Adaptation in the Retina. David Sprinzen, D. McMahon. *Neuroscience*, Vanderbilt, Nashville, TN

Exhibit Hall B0280-B0299

Sunday, April 29, 2018 1:00 PM-2:45 PM

Eye Movements/Strabismus/Amblyopia/Neuro-Ophthalmology

140 Neuro-ophthalmology

Moderator: Randy H. Kardon

608 — B0280 Relationship between Ocular Versions and Superior Oblique Muscle Hypoplasia in Unilateral Superior Oblique Palsy. Jeong-Min Hwang, J. Lee, H. Yang. *Ophthalmology*, Seoul National University College of Medicine, Seongnam, Korea (the Republic of)

609 — B0281 Dynamics of ocular myasthenia gravis, generalized myasthenia gravis and remission: a retrospective cohort study in southern Thailand. Juthamat Witthayaveerasak, N. Aiu-aree. *Ophthalmology*, Prince of Songkla University, Hatyai, Songkhla, Thailand

610 — B0282 Retinal Sensitivity Reduced in Patients with Multiple Sclerosis and Neuromyelitis Optica Spectrum Disorder with no History of Optic Neuritis. Hiroataka Yokouchi, T. Baba, S. Yamamoto. *Ophthalmology*, Chiba Univ Graduate School of Med, Chiba, CHIBA, Japan

611 — B0283 Diagnostic Value of Fatigue-Induced Ice Test in the Evaluation of Ptosis in Myasthenia Gravis. Hyun Ju Kee¹, H. Yang², J. Hwang², K. Park². ¹Ophthalmology, Seoul Nation University Hospital, Seoul, Korea (the Republic of); ²Seoul National University College of Medicine, Seongnam, Korea (the Republic of)

612 — B0284 Hand-held Optical Coherence Tomography – A New Biomarker of Brain Swelling in Cerebral Malaria. Zhanhan Tu¹, V. Sheth¹, J. Gormley², C. Manda³, F. A. Proudlock¹, K. Seydel¹, T. Taylor⁴, S. P. Harding², I. Gottlob¹. ¹Neuroscience, Psychology and Behaviour, University of Leicester, Leicester, United Kingdom; ²Eye and Vision Science, Institute of Ageing and Chronic Disease, University of Liverpool, Liverpool, United Kingdom; ³University of Malawi, Blantyre, Malawi; ⁴Michigan state University, Ann Arbor, MI

613 — B0285 Retinal neuronal loss detected by swept-source optical coherence tomography in patients with mild cognitive impairment. Leonardo P. Cunha^{2,1}, A. M. Almeida², L. F. Costa-Cunha³, E. A. Figueiredo³, R. C. Preti¹, L. C. Zacharias¹, M. L. Monteiro¹. ¹Ophthalmology, University of Sao Paulo, São Paulo, São Paulo, Brazil; ²Ophthalmology, Federal University of Juiz de Fora, Juiz de Fora, Minas Gerais, Brazil; ³Hospital de Olhos Juiz de Fora, Juiz de Fora, Brazil

614 — B0286 Validation of an equation model to predict intracranial pressure in clinical studies. Niro Kasahara¹, M. Matuoka¹, K. Santos¹, N. Cruz¹, A. R. Martins², S. Nigro². ¹Ophthalmology, Santa Casa de Sao Paulo Sch of Med Sci, S'ao Paulo, S'ao Paulo, Brazil; ²Clinical Pathology Laboratory, Irmandade da Santa Casa de Misericordia de Sao Paulo, Sao Paulo, São Paulo, Brazil

615 — B0287 Anterograde microstructural changes along the visual pathways in optic neuritis. Yuyi You¹, C. Wang¹, S. Liu¹, S. L. Graham², A. Klistorner¹. ¹Sydney University, Carlingford, New South Wales, Australia; ²Macquarie University, North Ryde, New South Wales, Australia

616 — B0288 Diagnostic Yield of Laboratory Testing and Imaging Studies in Patients with Optic Atrophy in an Inner City Population. Rebecca Moran^{1,2}, N. Blace^{2,1}, N. Haddad^{2,1}, T. Eleff¹. ¹Optometry/Ophthalmology, St Barnabas Hospital, Bronx, NY; ²Ophthalmology/Optometry, Bronx Lebanon Hospital, Bronx, NY

617 — B0289 Retinal Nerve Fiber Layer Thickness in Migraine and its Correlation to Duration and Severity of Disease. Dianne A. Barrett^{1,2}, N. Hashemi^{2,1}, O. O. Adesina^{2,1}. ¹Robert Cizik Eye Clinic, Houston, TX; ²Ruiz Department of Ophthalmology and Visual Science, McGovern Medical School at The University of Texas Health Science Center at Houston, Houston, TX

618 — B0290 Retinal hypoperfusion in patients with Alzheimer's disease. Yi Liu^{1,2}, H. Jiang^{1,3}, Y. Deng^{1,4}, Z. Duan^{1,4}, T. Rundek³, X. Sun³, B. Baume⁵, J. Landman³, J. Wang¹. ¹Department of Ophthalmology, Bascom Palmer Eye Institute, University of Miami Miller School of Medicine, Miami, FL; ²Department of Ophthalmology, Third Affiliated Hospital of Nanjing University of Chinese Medicine, Nanjing, Jiangsu, China; ³Department of Neurology, University of Miami Miller School of Medicine, Miami, FL; ⁴Zhongshan Ophthalmic Center, Sun Yat-sen University, Guangzhou, Guangdong, Christmas Island *CR

619 — B0291 The Impact of Optic Nerve Disorders on Sleep Wake. Sarah R. Stevenson¹, C. Andrews¹, I. Alexander², M. Votruba³, P. Yu-Wai-Man^{4,5}, S. Downes^{1,6}, R. Foster^{7,8}. ¹Eye Research Group Oxford, Oxford Eye Hospital, Oxford, United Kingdom; ²Nuffield Department of Clinical Neurosciences, University of Oxford, Oxford, United Kingdom; ³School of Optometry and Vision Sciences, Cardiff, United Kingdom; ⁴Cambridge Centre for Brain Repair, Department of Clinical Neurosciences, University of Cambridge, Cambridge, United Kingdom; ⁵NIHR Biomedical Research Centre and Institute of Ophthalmology, Moorfields Eye Hospital and University College London, London, United Arab Emirates; ⁶University of Oxford, Oxford, United Kingdom; ⁷Nuffield Laboratory of Ophthalmology, University of Oxford, Oxford, United Kingdom; ⁸Sleep and Circadian Neuroscience Institute, University of Oxford, Oxford, United Kingdom ✂

620 — B0292 Early Visual Biomarkers in a Mouse Model of Multiple Sclerosis. *Oliver W. Gramlich^{2,1}, K. Zarai^{2,1}, A. J. Brown^{2,1}, R. H. Kardon^{2,1}.* ¹Dept. of Ophthalmology & Visual Sciences, The University of Iowa, Iowa City, IA; ²Center for the Prevention and Treatment of Visual Loss, Iowa City VA Health Care, Iowa City, IA

621 — B0293 Pupillary response dynamics of mydriasis measured with multifocal pupillography. *Bhim B. Rai¹, F. Sabeti^{1,2}, C. F. Carle¹, O. Sarac³, E. Rohan¹, T. Maddess¹.* ¹Neuroscience, John Curtin School of Medical Research, Australian National University, Building 131, Garran Road, Acton, ACT, Australia 2601., Canberra, Australian Capital Territory, Australia; ²Optometry, University of Canberra, Canberra, Australian Capital Territory, Australia; ³Ophthalmology, Yildirim Beyazit University, Ankara, Turkey *CR

622 — B0294 The population-based epidemiology of ocular diseases in multiple sclerosis. *Sarah C. Xu¹, E. Flanagan², F. Wang¹, J. Leavitt¹, J. J. Chen^{1,2}.* ¹Ophthalmology and Visual Science, Mayo Clinic Hospital, Rochester, MN; ²Neurology, Mayo Clinic Hospital, Rochester, MN

623 — B0295 Axonal protection by a small molecule SIRT1 activator, SRT2104, with alteration of autophagy in optic nerve degeneration. *Yasushi Kitaoka^{1,2}, K. Sase¹, C. Tsukahara^{1,2}, H. Takagi¹.* ¹Ophthalmology, St Marianna Univ School of Med, Kawasaki, Kanagawa, Japan; ²Molecular Neuroscience, St. Marianna University Graduate School of Medicine, Kawasaki, Japan

624 — B0296 Akebia Saponin D prevents axonal loss against TNF-induced optic nerve damage with autophagy modulation. *Kana Sase¹, Y. Kitaoka^{1,2}, C. Tsukahara^{1,2}, H. Takagi¹.* ¹Ophthalmology, St. Marianna University School of Medicine, Kawasaki, Kanagawa, Japan; ²Molecular Neuroscience, St. Marianna University Graduate School of Medicine, Kawasaki, Japan

625 — B0297 Validation of microsaccades as a biomarker for disability in multiple sclerosis. *Christy K. Sheehy¹, B. Shi², E. Bensinger^{3,4}, A. Romeo¹, L. Rani¹, m. devereux¹, J. Gelfand¹, S. B. Stevenson³, A. Green^{1,6}.* ¹Neurology, UCSF, San Francisco, CA; ²School of Medicine, UCSF, San Francisco, CA; ³Vision Science Graduate Group, University of California, Berkeley, Berkeley, CA; ⁴Optometry, University of California, Berkeley, Berkeley, CA; ⁵Optometry, University of Houston, Houston, TX; ⁶Ophthalmology, UCSF, San Francisco, CA *CR

626 — B0298 Axonal protection by tacrolimus with inhibition of NFATc1 in TNF-induced optic nerve degeneration. *Chihiro Tsukahara^{1,2}, Y. Kitaoka^{1,2}, K. Sase¹, H. Takagi¹.* ¹Ophthalmology, St. Marianna University School of Medicine, Kawasaki, Japan; ²Molecular Neuroscience, St. Marianna University Graduate School of Medicine, Kawasaki, Japan

627 — B0299 Monozygotic Twin Correlations of Retinal and Cerebral Vascular Parameters. *Aleid van de Kreeke², T. Nguyen², E. Konijnenberg¹, A. Den Braber¹, M. ten Kate¹, P. Visser¹, F. D. Verbraak².* ¹Alzheimercenter, VU University Medical Center, Amsterdam, Netherlands; ²Ophthalmology, VU University Medical Center, Amsterdam, Netherlands

Exhibit Hall C0058-C0073

Sunday, April 29, 2018 1:00 PM-2:45 PM

Low Vision Group / Clinical/Epidemiologic Research / Visual Neuroscience

141 Vision Rehabilitation Devices and Training

Moderator: Patricia Grant

628 — C0058 Optimization of visual performance in patients with age-related macular degeneration using biofeedback training. *Mirella T. Barboni^{1,2}, Z. Récsán^{2,3}, Z. Szepessy^{2,3}, M. Ecsedy², K. Szekeres⁴, M. Maczkó⁴, A. Urbán⁴, B. V. Nagy^{4,1}, D. F. Ventura¹, J. Nemeth².* ¹Experimental Psychology, University of Sao Paulo, Sao Paulo, Brazil; ²Ophthalmology, Semmelweis University, Budapest, Hungary; ³Bionics Innovation Center, Budapest, Hungary; ⁴Mechatronics, Optics and Mechanical Engineering Informatics, Budapest University of Technology and Economics, Budapest, Hungary

629 — C0059 Comparative Effectiveness of a Self-Guided Eye Movement Reading Training Program: Clinic vs. Home. *Meesa Maeng¹, W. H. Seiple^{2,3}, C. Jackson⁴, K. Randolph^{1,5}, J. P. Szyk^{1,2}.* ¹Forsythe Center for Comprehensive Vision Care, The Chicago Lighthouse, Chicago, IL; ²Jesse Brown VA Medical Center, Chicago, IL; ³Ophthalmology & Visual Sciences, University of Illinois at Chicago, Chicago, IL; ⁴Connecticut College, New London, CT; ⁵Cornell University, Ithaca, NY ✕

630 — C0060 Training to improve speed of letter recognition benefits reading speed in people with central vision loss. *Susana T. Chung.* School of Optometry, University of California, Berkeley, CA

631 — C0061 Critical spacing of contour interaction for children with Cerebral Visual Impairment (CVI). *Jasmine Junge, D. A. Orel-Bixler.* Vision Science/Optometry, UC Berkeley, Walnut Creek, CA

632 — Impact of text navigation skills on reading speed (RS). *Gianfrancesco M. Villani¹, S. Kuester², R. A. Schuchard³, S. Trauzettel-klosinski².* ¹Low Vision Rehabilitation, Studio Oculista Villani, Castel d'Azzano, Verona, Italy; ²Vision Rehabilitation Research Unit, University of Tuebingen, Tuebingen, Germany; ³FDA/CDRH/ODE/DOED, Silver Spring, MD

633 — C0063 Eyedaptic Augmented Reality Visual Aid Leads to Improved Reading Speed and Accuracy in Individuals with AMD. *Mitul C. Mehta^{2,1}, B. T. Kim^{1,2}, R. Kammer³, D. Watola².* ¹Department of Ophthalmology, University of California, Irvine, Irvine, CA; ²Eyedaptic, Laguna Beach, CA *CR

634 — C0064 Comparison of Head Borne Electronic Low Vision Devices in Patients with Visual Impairment. *Erica J. Troyer^{2,1}, M. Dixon^{2,3}.* ¹The Chicago Lighthouse, Chicago, IL; ²Illinois Eye Institute/Illinois College of Optometry, Chicago, IL; ³Spectrios Institute for Low Vision, Wheaton, IL

635 — C0065 Gaze-contingent screen magnification control. *Roberto Manduchi¹, S. T. Chung².* ¹UC Santa Cruz, Santa Cruz, CA; ²UC Berkeley, Berkeley, CA

636 — C0066 Clinical use of a novel retinal imaging laser eyewear. *Takahiro Minami¹, Y. Taketani^{1,2}, M. Nakamura³, Y. Yasuda³, S. Kato¹.* ¹The Department of Ophthalmology, The University of Tokyo, Tokyo, Japan; ²Schepens Eye Research Institute, Boston, MA; ³QD Laser, Inc., Kanagawa, Japan *CR, ✕

637 — C0067 Measuring the usefulness of strabismic field expansion in hemianopia. *Philip M. Bronstad.* Ophthalmology, Harvard Medical School, Boston, MA

638 — C0068 High power multi-periscopic device for field expansion. *Eli Peli^{1,2}, J. Jung^{1,2}, N. Kurukuti^{1,2}, F. Vargas Martin³.* ¹Ophthalmology, Schepens Eye Res Inst, MEEI, Boston, MA; ²Ophthalmology, Harvard Medical School, Boston, MA; ³Universidad de Murcia, Murcia, Spain *CR

639 — C0069 No useful field expansion for hemianopia or acquire monocular vision with full-field prisms. *Jae-Hyun Jung^{2,1}, E. Peli^{2,1}.* ¹Ophthalmology, Harvard Medical School, Boston, MA; ²Ophthalmology, Schepens Eye Research Institute, Massachusetts Eye and Ear, Boston, MA *CR

640 — C0070 Head Mounted Display Technology for Low Vision due to Peripheral Field Loss. *Yooree Chung^{3,1}, A. Chen¹, S. E. Hassan⁴, M. S. Santiago⁷, L. Ojeda², D. C. Musch^{1,5}, D. Wicker¹, S. Day¹, A. Howson¹, J. D. Weiland^{3,1}, S. E. Moroi^{1,6}, J. R. Ehrlich^{1,6}.* ¹Ophthalmology and Visual Sciences, University of Michigan, Ann Arbor, MI; ²Mechanical Engineering, University of Michigan, Ann Arbor, MI; ³Biomedical Engineering, University of Michigan, Ann Arbor, MI; ⁴School of Optometry, Indiana University, Bloomington, IN; ⁵Epidemiology, University of Michigan, Ann Arbor, MI; ⁶Institute for Healthcare Policy and Innovation, University of Michigan, Ann Arbor, MI; ⁷Robotics, University of Michigan, Ann Arbor, MI ✕

641 — C0071 Feasibility of using Bluetooth Beacon Sensors to Monitor Usage of Hand-held Low Vision Devices at Home. *Ava K. Bittner, R. Khan.* Optometry, Nova Southeastern University, College of Optometry, Ft. Lauderdale, FL

642 — C0072 Preliminary evaluation of Bluetooth beacons on hand-held magnifiers as sensors to detect usage via increased temperature when held by low vision patients in clinic. Rakin Khan, K. Green, A. K. Bittner. *Nova Southeastern University, Davie, FL*

643 — C0073 Smartphone and tablet usage among individuals with vision impairment: Are mainstream devices replacing traditional visual aids? Natalie Martiniello^{1,2}, M. Bittner³, W. Eisenbarth³, C. Lehane⁴, A. Johnson⁵, W. Wittich^{1,2}. ¹School of Optometry, Université de Montréal, Montreal, Quebec, Canada; ²CRIR/Centre de réadaptation MAB-Mackay du CIUSSS du Centre-Ouest-de-l'Île-de-Montréal, Montreal, Quebec, Canada; ³Munich University of Applied Sciences, Munich, Germany; ⁴Department of Psychology, University of Copenhagen (Denmark), Copenhagen, Denmark; ⁵Department of Psychology, Concordia University, Montreal, Quebec, Canada

Exhibit Hall C0202-C0233

Sunday, April 29, 2018 1:00 PM-2:45 PM

Visual Psychophysics/Physiological Optics / Physiology/Pharmacology / Visual Neuroscience
142 AO, OCT and imaging techniques and applications

Moderators: Furu Zhang and Nicole M. Putnam

644 — C0202 Near Infrared Adaptive Optics Flood illumination ophthalmoscope Angiography. Elena Gofas Salas^{1,2}, P. Mecē^{2,3}, C. Petit⁴, K. Grieve⁴, L. Mugnier², J. A. Sahel^{1,5}, M. Paques⁴, S. Meimon². ¹Institut de la Vision (UPMC), Paris, France; ²DOTA/HIRA, ONERA, Paris, France; ³Quantel Medical, Paris, France; ⁴Clinical Investigation Center 1423, Quinze-Vingts Hospital, INSERM, Paris, France; ⁵School of Medicine, University of Pittsburgh, Pittsburgh, PA *CR

645 — C0203 Long-term stability and repeatability of the late phase adaptive optics enhanced indocyanine green signal demonstrates potential clinical utility for evaluation of the retinal pigment epithelium. Johnny Tam¹, H. Jung¹, T. Liu¹, M. Droettboom², L. Huryn¹, J. Liu¹. ¹National Eye Institute, National Institutes of Health, Bethesda, MD; ²Medical Science & Computing, Rockville, MD

646 — C0204 Analysis of periarteral capillary free zone in optical coherence tomography angiography of normal retina and its association with severe nonproliferative diabetic retinopathy. JIN MA, h. li, X. Ding, L. Lu. *Retina, Zhongshan Ophthalmic Center, Guanzhou, Guangdong, China*

647 — C0205 Measuring local flicker evoked changes in retinal capillary blood flow using a dual-beam Adaptive Optics Scanning Laser Ophthalmoscope. Raymond L. Warner¹, A. De Castro², T. Luo¹, K. Sapoznik¹, L. Sawides², S. A. Burns¹. ¹Optometry, Indiana University, Bloomington, Bloomington, IN; ²Universidad de Murcia, Murcia, Spain

648 — C0206 Survey of transient hyporeflective clusters of cones in healthy eyes. Ethan bensing¹, Y. Wang², S. Ravikumari¹, B. P. Schmidt¹, A. Roorda¹. ¹School of Optometry and Vision Science Graduate Group, University of California, Berkeley, Berkeley, CA; ²School of Optometry, University of California, Berkeley, Berkeley, CA *CR

649 — C0207 Foveal and parafoveal between-individual variation in in-vivo cone-to-RPE cell ratio. Rigmor C. Baraas, H. Pedersen, S. J. Gilson. *National Centre for Optics, Vision and Eye Care, University College of Southeast Norway, Kongsberg, Norway*

650 — C0208 Otophysiological function of individual cones. Robert F. Cooper^{1,2}, W. S. Tuten^{1,2}, D. H. Brainard¹, J. I. Morgan^{3,4}. ¹Psychology, University of Pennsylvania, Philadelphia, PA; ²Ophthalmology, University of Pennsylvania, Philadelphia, PA; ³Ophthalmology, Scheie Eye Institute, University of Pennsylvania, Philadelphia, PA; ⁴Ophthalmology, Center for Advanced Retinal and Ophthalmic Therapeutics, University of Pennsylvania, Philadelphia, PA *CR

651 — C0209 In Vivo Measurements of Cone Photoreceptor Parameters in Eyes with Different Vision from Images Obtained by an Adaptive Optics Retinal Camera. Yuanbo Liang¹, H. Cheng¹, S. Lin¹, K. J. Ciuffreda³, B. Vasudevan², K. Zhou¹. ¹Eye Hospital, Wenzhou Medical University, Wenzhou, Zhejiang, China; ²College of Optometry, Midwestern University, Glendale, United States Minor Outlying Islands; ³Department of Biological and Vision Sciences, State University of New York College of Optometry, New York, United States Minor Outlying Islands

652 — C0210 Comparing metrics for quantifying the human rod photoreceptor mosaic. Emily J. Patterson¹, C. S. Langlo², R. F. Cooper^{3,4}, J. Carroll^{1,2}. ¹Ophthalmology & Visual Sciences, Medical College of Wisconsin, Milwaukee, WI; ²Cell Biology, Neurology and Anatomy, Medical College of Wisconsin, Milwaukee, WI; ³Department of Psychology, University of Pennsylvania, Philadelphia, PA; ⁴Department of Ophthalmology, University of Pennsylvania, Philadelphia, PA *CR

653 — C0211 Plucking strings and playing chords: percepts elicited from single and multiple cone stimulation. Brian P. Schmidt, A. E. Boehm, A. Roorda. *School of Optometry and Vision Science Graduate Group, University of California, Berkeley, CA *CR*

654 — C0212 Visual benefit of correcting High Order Aberrations in blue or green light: an optical effect? Susana Marcos¹, C. Benedi¹, M. Vinas¹, C. Dorronsoro¹, S. A. Burns², E. Pelz³. ¹Instituto de Optica, CSIC, Madrid, Spain; ²Indiana University, Bloomington, IN; ³Schepens Eye Res Inst-MEEI, Boston, MA

655 — C0213 Longitudinal Chromatic Aberration(LCA) compensation for adaptive optics vision testing and imaging. Xiaoyun Jiang, J. Kuchenbecker, Z. Yao, R. Sabesan. *Ophthalmology, University of Washington, School of Medicine, Seattle, WA*

656 — C0214 The role of fixational eye movements in maintaining a stable fixation locus. Kavitha Ratnam^{1,2}, N. R. Bowers¹, A. Roorda¹. ¹School of Optometry and Vision Science Graduate Group, University of California, Berkeley, Berkeley, CA; ²Oculus Research, Redmond, WA *CR

657 — C0215 Terminal Leber hereditary optic neuropathy with G11778A mutation on optical coherence tomography angiography. Minglian Zhang, M. Wang. *Hebei Provincial Eye Hospital, Xingtai City, Hebei Province, China*

658 — C0216 Toward Automated Alignment of Longitudinally-Acquired Adaptive Optics Retinal Images: Constellation Features. Min Chen¹, R. F. Cooper^{2,3}, G. K. Han^{3,4}, J. Gee¹, D. H. Brainard², J. I. Morgan^{3,4}. ¹Radiology, University of Pennsylvania, Philadelphia, PA; ²Psychology, University of Pennsylvania, Philadelphia, PA; ³Scheie Eye Institute, Ophthalmology, University of Pennsylvania, Philadelphia, PA; ⁴Center for Advanced Retinal and Ocular Therapeutics, University of Pennsylvania, Philadelphia, PA *CR

659 — C0217 Dynamic Pupil Tracking for Adaptive Optics Visual Simulator with Liquid Crystal Spatial Light Modulator. Fan Yi, B. A. Davis, H. McNeill, M. J. Collins. *School of Optometry and Vision Science, Queensland University of Technology, Brisbane, Queensland, Australia*

660 — C0218 Improvements to manual registration of AOSLO image sequences. Dirk-Uwe G. Bartsch, M. Amador, A. Meshi, K. C. Dams, T. Lin, W. R. Freeman. *Ophthalmology-Shiley Eye Ctr, Univ of California-San Diego, La Jolla, CA*

661 — C0219 Dual Scan AOSLO Imaging for measuring eye velocity and correcting eye motion distortion of images. Stephen A. Burns, T. Luo. *School of Optometry, Indiana University, Bloomington, IN *CR*

662 — C0220 Exploring directional retinal light scattering using a digital micromirror device. Salihah Qaysi, B. Vohnsen. *University College Dublin, Dublin, Ireland*

663 — C0221 High speed, spectral domain, line field OCT. VIMAL PRABHU PANDIYAN, A. Bertelli, R. Sabesan. *Ophthalmology, University of Washington School of Medicine, Seattle, WA*

664 — C0222 Evaluation of a combined ultra-wide field SLO with SD OCT. Nathan J. Gresores¹, M. Singer¹, A. Cairns⁴, M. J. Sinaï¹, S. R. Sadda^{2,3}. ¹Research, Medical Center Ophthalmology Associates, San Antonio, TX; ²Doheny Image Reading Center, Doheny Eye Institute, Los Angeles, CA; ³Department of Ophthalmology, University of California at Los Angeles, Los Angeles, CA; ⁴Clinical Development, Optos Inc, Marlborough, CA *CR

665 — C0223 The interference pattern of the anterior surface of the human eye: an Optical Coherence Tomography Study. CLAUDIO IOVINO^{1,2}, M. Fossarello¹, M. Braghiroli¹, P. E. Napoli^{1,2}. ¹Eye Clinic, University of Cagliari, Cagliari, Italy; ²These authors contributed equally to this work, Cagliari, Italy

666 — C0224 RPE disruption with long duration visible light exposure is governed by a photochemical damage mechanism. Jie Zhang¹, D. R. Williams^{1,2}, J. J. Hunter^{1,3}. ¹Center for visual science, University of Rochester, Rochester, NY; ²The Institute of Optics and Flaum Eye Institute, University of Rochester, Rochester, NY; ³The Institute of Optics, Flam Eye Institute and Department of Biomedical Engineering, University of Rochester, Rochester, NY *CR

667 — C0225 Retinal structure variation in congenital aniridia: within family phenotype-genotype discordance. Hilde Rogeberg Pedersen¹, M. Neitz², S. J. Gilson¹, E. C. Landsend³, Ø. A. Utheim³, T. P. Utheim^{3,1}, R. C. Baraas¹. ¹National Center for Optics, Vision and Eye Care, Faculty of Health and Social Sciences, University College of Southeast Norway, Kongsberg, Norway; ²Department of Ophthalmology, University of Washington, Seattle, WA; ³Department of Ophthalmology, Oslo University Hospital, Oslo, Norway

668 — C0226 Repeatability of Flood-Illuminated Adaptive Optics Imaging in Subjects with Retinitis Pigmentosa. Michael Gale, G. Harman, J. Chen, M. E. Pennesi. Casey Eye Institute, Oregon Health & Science University, Portland, OR

669 — C0227 Characterization of retinal structure in ATF6-associated achromatopsia. Rebecca Mastey¹, M. Georgiou^{2,3}, C. S. Langlo^{1,4}, A. Kalitzeos^{2,3}, A. Vincent⁵, A. T. Moore⁶, S. H. Tsang⁷, J. H. Lin^{8,9}, M. Young¹⁰, M. Hartnett¹⁰, E. Heon⁵, S. Kohl¹¹, M. Michaelides^{2,3}, J. Carroll^{1,4}. ¹Ophthalmology & Visual Sciences, Medical College of Wisconsin, Milwaukee, WI; ²Genetics, University College London Institute of Ophthalmology, London, United Kingdom; ³Moorfields Eye Hospital, London, United Kingdom; ⁴Cell Biology, Neurobiology, & Anatomy, Medical College of Wisconsin, Milwaukee, WI; ⁵Ophthalmology and Vision Sciences, The Hospital for Sick Children, Toronto, Ontario, Canada; ⁶Ophthalmology, University of California San Francisco Medical School, San Francisco, CA; ⁷Ophthalmology, Columbia University, New York, NY; ⁸Ophthalmology, University of California San Diego, La Jolla, CA; ⁹Pathology, University of California San Diego, La Jolla, CA; ¹⁰Moran Eye Center, University of Utah, Salt Lake City, UT; ¹¹Centre for Ophthalmology at The Institute for Ophthalmic Research, University of Tübingen, Tübingen, Germany *CR

670 — C0228 Quantification of retinal traction caused by epiretinal membrane (ERM) using en face optical coherence tomography and its influence on visual function. Yuki Kanzaki¹, Y. Morizane¹, M. Hirano¹, S. Kimura¹, M. Hosokawa¹, Y. Shiode¹, S. Doi¹, S. Toshima¹, K. Takahashi¹, A. Fujiwara¹, M. Hosogi¹, F. Shiraga¹, I. Takasu². ¹Okayama University, Okayama, Okayama prefecture, Japan; ²Takasu eye clinic, Okayama City, Japan

671 — C0229 Assessment of lamellar macular hole and macular pseudohole with a combination of en face and radial B-scan optical coherence tomography imaging. Hirano Masayuki¹, Y. Morizane¹, S. Kimura¹, M. Hosokawa¹, Y. Shiode¹, S. Doi¹, S. Toshima¹, K. Takahashi¹, M. Hosogi¹, A. Fujiwara¹, I. Takasu², F. Shiraga¹. ¹Okayama University Hospital, Okayama, Japan; ²Takasu Eye Clinic, Okayama, Japan

672 — C0230 Physiologic origin of intrinsic optical signals in human retina. Clara Pfäffle^{1,3}, D. Hillmann², H. Spahr^{1,3}, L. Kutzner³, B. Kabuth³, S. Burhan³, F. Hilge³, G. Hüttmann^{3,4}. ¹Medizinisches Laserzentrum Lübeck (MLL), Lübeck, Germany; ²Thorlabs GmbH, Lübeck, Germany; ³University of Lübeck, Lübeck, Germany; ⁴Member of the German Center for Lung Research (DZL), Gießen, Germany *CR

673 — C0231 Evaluation of optical coherence tomography volumetric data prior to analysis. Homayoun Bagherinia, A. Fard, M. K. Durbin. Carl Zeiss Meditec, Inc., Dublin, CA *CR

674 — C0232 Normative values of retinal vessel oximetry in healthy children against adults. Maria Waizel, C. Türksever, M. G. Todorova. Ophthalmology, University Hospital Basel, Basel, Switzerland ✗

675 — C0233 Trend in Utilizing Wide-Field Fundus Photography in Ophthalmology. Laura C. Huang, D. V. Do. Department of Ophthalmology, Byers Eye Institute, Stanford University, Palo Alto, CA

Exhibit Hall C0271-C0310

Sunday, April 29, 2018 1:00 PM-2:45 PM

Anatomy and Pathology/Oncology

143 Insights into myopia - animal models to human studies

Moderators: Ian Morgan and Falk Schroedl

676 — C0271 Correlation between bright light and lens-induced myopia. Cindy Karouta¹, K. Thomson¹, R. S. Ashby^{1,2}. ¹University of Canberra, Bruce, Canberra, Australian Capital Territory, Australia; ²Australian National University, Canberra, Australian Capital Territory, Australia

677 — C0272 Violet light exposure suppresses refractive change and axial elongation in a murine model of lens-induced myopia. Toshihide Kurihara^{1,2}, X. Jiang^{1,2}, K. Mori^{1,2}, S. Ikeda^{1,2}, H. Torii^{1,2}, K. Tsubota¹. ¹Ophthalmology, Keio University School of Medicine, Tokyo, Japan; ²Laboratory of Photobiology, Keio University School of Medicine, Tokyo, Japan *CR

678 — C0273 Influence of chromatic light on lens-induced myopia in mice. Ryan Strickland³, E. Landis³, M. T. Pardue^{1,2}. ¹Biomedical Engineering, Georgia Institute of Technology, Atlanta, GA; ²Center for Visual and Neurocognitive Rehabilitation, Atlanta VA, Atlanta, GA; ³Emory University, Atlanta, GA

679 — C0274 Short-wavelength cone contrast reverses the sign of defocus for emmetropization in chick. Frances J. Rucker, C. P. Taylor. Biomedical Science, New England Coll of Optometry, Boston, MA

680 — C0275 The effect of dynamic simulated sunlight on myopia model of guinea pigs. Feng Zhao¹, Z. Chen², J. Zeng¹. ¹Zhongshan Ophthalmic Center, Guangzhou, China; ²Guangdong wlight visual health research institute, Guangzhou, China

681 — C0276 The Relation of Light Spectral Composition and Dopamine D1 and D2 Receptors in Lens Induced Myopia in Guinea Pigs. Wangyuan Liu, J. Dai. Ophthalmology, Fudan University Eye and ENT Hospital, Shanghai, China

682 — C0277 Effects of 0.5Hz and 20Hz Flash 530nm Monochromatic Illumination on Refraction Development in Guinea Pigs. Tian Tian, H. Liu, R. Liu. Key Laboratory of Myopia, Ministry of Health, Department of Ophthalmology, Eye, Ear, Nose, and Throat Hospital, Fudan University, Shanghai, China

683 — C0278 Indoor Illuminants, S-Cone Stimulation, and Eye Growth in Chicks. Hannah H. Yoon, C. P. Taylor, F. J. Rucker. Biomedical Science and Disease, New England College of Optometry, Boston, MA

684 — C0279 Effects of different light exposure paradigms before myopia is induced. Marita P. Feldkaemper, S. Bernhard-Kurz, F. Schaeffel. Institute for Ophthalmic Research, Section of Neurobiology of the eye, Tuebingen, Germany

685 — C0280 Combined effects of bright light and intravitreal atropine on retinal dopamine release in chickens. Ute Mathis, M. P. Feldkaemper, M. Wang, F. Schaeffel. Section of Neurobiology of the Eye, Ophthalmic Research Institute, Tuebingen, Germany

686 — C0281 Effects of spectral composition of light on dopamine release and myopia development in chicks. Min Wang^{1,2}, F. Schaeffel¹, M. P. Feldkaemper¹. ¹Section of Neurobiology of the Eye, Ophthalmic Research Institute, University of Tuebingen, Tuebingen, Germany; ²Department of Ophthalmology, The Second Xiangya Hospital, Central South University, Changsha, China

- 687 — C0282 The effect of blue light on the guinea pigs with lens induced myopia.** *manrong yu^{1,2}, J. Dai^{1,2}, ¹Eye and ENT Hospital of Fudan University, Shanghai, China; ²Key Laboratory of Myopia, Ministry of Health, Shanghai, China*
- 688 — C0283 Effects of Quasi-Monochromatic Long-wavelength Ambient Lighting on Form-Deprivation Myopia in Infant Rhesus Monkeys.** *Li-Fang Hung^{1,2}, B. Arumugam^{1,2}, Z. She^{1,2}, E. L. Smith^{1,2}. ¹College of Optometry, University of Houston, Houston, TX; ²Brien Holden Vision Institute, Sydney, New South Wales, Australia*
- 689 — C0284 Effects of Caffeine, an Adenosine Receptor Antagonist, on Lens Compensation in Rhesus Monkeys.** *Zhihui She^{1,2}, B. Arumugam^{1,2}, L. Hung^{1,2}, M. Jong², L. A. Ostrin¹, E. L. Smith^{1,2}. ¹College of Optometry, University of Houston, Houston, TX; ²Brien Holden Vision Institute, Sydney, New South Wales, Australia*
- 690 — C0285 Intravitreal injection, but not topical instillation, of atropine inhibits myopic shift in the chick lens-induced myopia model.** *Takaaki Inaba¹, T. Oda¹, T. Shibata¹, H. Kamio¹, K. Ueda¹, M. Kato¹, J. Zhang^{1,2}. ¹Santen Pharmaceutical Co., Ltd., Nara, Japan; ²Santen Inc., Emeryville, CA *CR*
- 691 — C0286 Topical Atropine Prevents Contact Lens-Induced Myopia in Guinea Pigs.** *Sarah Kochik, C. F. Wildsoet. Vision Science, University of California, Berkeley, Berkeley, CA*
- 692 — C0287 Low dose Atropine for Myopia Progression (LAMP) Study: A Double-blinded Randomized Placebo-Controlled Trial on atropine 0.05%, 0.025%, and 0.01%.** *Jason YAM, Y. Jiang, S. Tang, A. Law. The Chinese University of Hong Kong, Hong Kong, Hong Kong *X*
- 693 — C0288 Atropine applied at different times of day has different effects on choroid thickness.** *Pauline Kang^{1,2}, S. Clendaniel², A. Li¹, C. Van¹, X. Zhu², D. Troilo², A. Benavente-Perez². ¹School of Optometry & Vision Science, University of New South Wales, Sydney, New South Wales, Australia; ²SUNY College of Optometry, New York, NY *CR, *X*
- 694 — C0289 M to L cone ratios determine eye size in chicks.** *Sandra Gisbert Martinez, F. Schaeffel. Neurobiology of the eye, Institute for Ophthalmic Research, Tuebingen, Germany*
- 695 — C0290 Quantification and distribution of co-localized astrocytes and capillaries in the inner retina of juvenile marmosets, normative data for myopia studies.** *Carol Lin, N. SLAVI, A. Nour, M. Srinivas, A. Pope, V. Lin, R. Nieu, A. Benavente-Perez. Biological Sciences, SUNY College of Optometry, New York, NY *CR*
- 696 — C0291 Retinal ON-pathway responses in marmosets experiencing positive lens defocus.** *Rita Nieu, A. Benavente-Perez, A. Nour, A. Pope, C. Lin, V. Lin, S. Viswanathan. SUNY College of Optometry, New York, NY *CR*
- 697 — C0292 Measuring changes in fundal reflectance in myopic chickens with isotropic photorefractometry.** *Barbara Swiatczak, M. P. Feldkaemper, F. Schaeffel. Section of Neurobiology of the Eye, Ophthalmic Research Institute, University of Tuebingen, Germany, Tuebingen, Germany*
- 698 — C0293 Gene expression profiling in the retina of Collaborative Cross mice reveals pathways underlying refractive eye development and susceptibility to myopia.** *Tatiana V. Tkatchenko¹, A. V. Tkatchenko^{1,2}. ¹Ophthalmology, Columbia University, New York, NY; ²Pathology and Cell Biology, Columbia University, New York, NY *CR*
- 699 — C0294 Relative protein quantification in lens-induced chick retina by iTRAQ-based proteomics approach.** *Hui Zheng^{1,2}, K. Cheung², K. Li², X. Tang^{3,1}, C. To², D. Tse², T. Lam². ¹The School of Medicine, Nankai University, Tianjin, China; ²School of Optometry, The Hong Kong Polytechnic University, Hong Kong, Hong Kong; ³Tianjin Eye Hospital, Tianjin, China*
- 700 — C0295 Risk variances of refractive error and axial length explained by polygenic risk scores of spherical equivalents.** *Clair Enthoven¹, A. Iglesias^{1,2}, M. S. Tedja¹, W. Tideman¹, J. Polling^{1,3}, V. J. Verhoeven^{1,2}, C. C. Klaver^{1,4}. ¹Ophthalmology/Epidemiology, Erasmus MC, Rotterdam, Netherlands; ²Clinical Genetics, Erasmus MC, Rotterdam, Zuid-Holland, Netherlands; ³Orthoptics & Optometry, University of Applied Sciences, Utrecht, Utrecht, Netherlands; ⁴Ophthalmology, Radboud University Medical Center, Nijmegen, Gelderland, Netherlands*
- 701 — C0296 Whole-Genome Sequencing Identifies UTR Variants in LRPAP1 in a Large Iranian Family with High Myopia.** *Terri L. Young¹, K. Whisenhunt¹, S. Tompson¹, R. Maroofian², M. Najafi³, A. Rad³. ¹Ophthalmology, University of Wisconsin, Madison, WI; ²Genetics and Molecular Cell Sciences Research Centre, St. George Hospital, University of London, London, United Kingdom; ³Department of Human Genetics, Radboud University Medical Center, Nijmegen, Netherlands*
- 702 — C0297 Family-Based Association Tests of Myopia reveal a potentially hidden association signal upstream of two GABA receptor genes.** *Candace Middlebrooks¹, C. L. Simpson², A. Musolf¹, L. Portas³, F. Murgia³, E. B. Ciner⁴, D. Stambolian⁵, J. E. Bailey-Wilson¹. ¹National Human Genome Research Inst, National Institutes of Health, Baltimore, MD; ²Department of Genetics, Genomics and Informatics, Univ of Tennessee Health Science Center, Memphis, TN; ³CNR, Institute of Population Genetics, Li Punti, Sassari, Italy; ⁴Salus University, Elkins, Park, PA; ⁵Ophthalmology-Stellar Chance Lab, University of Pennsylvania, Philadelphia, PA*
- 703 — C0298 Association of collagen 2 alpha 1 (COL2A1) gene with ocular axial length and stature in Chinese children: The Guangzhou Twin Eye Study.** *Jian Zhang¹, X. Han¹, X. Ding¹, C. Liao¹, M. He^{1,2}. ¹Key Laboratory of Ophthalmology, Zhongshan Ophthalmic Center, Guangzhou, China; ²Center for Eye Research Australia, University of Melbourne, Melbourne, Victoria, Australia*
- 704 — C0299 Dopaminergic and serotonergic signaling in black fur BL6 and albino, rag2-/-, immunodeficient BL6 mice subjected to lens-induced (LIM) and form-deprivation myopia (FDM).** *Qianwen Gong^{1,2}, L. Liu¹, M. Janowski². ¹Ophthalmology and Optometry, West China Hospital, Baltimore, MD; ²Radiology, Cell Engineering, Johns Hopkins University School of Medicine, Baltimore, MD*
- 705 — C0300 Cone photoreceptors and optical signals to defocus following emmetropization to lenses in chicks.** *Mengyuan Ke¹, E. L. Irving², M. Ksilak¹, M. C. Campbell^{1,2}. ¹Physics and Astronomy, University of Waterloo, Waterloo, Ontario, Canada; ²School of Optometry, University of Waterloo, Waterloo, Ontario, Canada*
- 706 — C0301 Optical defocus changes signaling of ganglion cells in the mouse retina.** *Feng Pan^{1,2}, S. Banerjee¹, K. LUK¹, C. TANG¹, S. YU¹. ¹Optometry, The Hong Kong Polytechnic University, Hunghom, Hong Kong; ²Centre for Myopia Research, The Hong Kong Polytechnic University, HungHom, Hong Kong*
- 707 — C0302 Differential BMP Gene Expression Persists in Chick RPE Following Termination of Retinal Defocus and Image Degradation Treatments.** *Christine F. Wildsoet, D. Sun, G. M. Chuang, Y. Zhang. Ctr for Ocular Disease & Dvlpmt, Univ of California, Berkeley, Berkeley, CA*
- 708 — C0303 Scleral Crosslinking Using Genipin Has a Dose-Dependent Effect on Form-Deprivation Myopia in Tree Shrews.** *Rafael Grytz¹, M. El Hamdaoui¹, A. M. Levy², C. A. Girkin¹, B. C. Samuels¹. ¹Department of Ophthalmology, University of Alabama at Birmingham, Birmingham, AL; ²Department of Biomedical Engineering, University of Alabama at Birmingham, Birmingham, AL*
- 709 — C0304 Substantial Preconditioning Effect Observed In the Inflation Tests of Juvenile Tree Shrew Sclera.** *Gianfranco Bianco¹, A. M. Levy¹, R. Grytz¹, M. A. Fazio^{1,2}. ¹Dept. of Ophthalmology, UAB, Birmingham, AL; ²Department of Biomechanical Engineering, University of Alabama at Birmingham, Birmingham, AL*
- 710 — C0305 The Role of the RhoA/ROCK Signaling Pathway in Mechanical Strain-induced Scleral Myofibroblast Differentiation.** *Ying Yuan¹, M. Li¹, C. To², T. Lam², P. Wang¹, Y. Yu¹, Q. Chen¹, X. Hu¹, B. Ke¹. ¹Shanghai General Hospital, Shanghai Jiao Tong University School of Medicine, Shanghai, China; ²Hong Kong Polytechnic University, Hong Kong, Hong Kong*

711 — C0306 Identification of Specific Binding Sites for Apolipoprotein A-1/Retinoic acid Complexes on Scleral Cell Membranes. Jody A. Summers. Dept of Cell Biology, Univ of Oklahoma Hlth Sci Ctr, Oklahoma City, OK

712 — C0307 An ultrasound-based biomarker of myopia in the guinea pig sclera. Jonathan Mamou¹, S. A. McFadden², Q. V. Hoang^{3,4}. ¹Lizzi Ctr for Biomedical Engineering, Riverside Research, New York, NY; ²Vision Sciences Group, HMRI and Faculty of Science, School of Psychology, University of Newcastle, Newcastle, New South Wales, Australia; ³Department of Ophthalmology, Columbia University Medical Center, New York, NY; ⁴Singapore Eye Research Institute, Singapore National Eye Centre, Duke-NUS Medical School, Singapore, Singapore

713 — C0308 scleral crosslinking using glycerinaldehyde for the prevention of myopia progression in the rabbit: biochemical and ultrastructural changes. Xiao Lin, H. Zhou. Vision Science and Ophthalmology, Fudan University, Shanghai, Shanghai, China

714 — C0309 Efficacy of Rose Bengal as a Light Activated Cross-Linker in Guinea Pig Sclera. Sally A. McFadden, N. Cox, Y. Abdulla. School of Psychology, The University of Newcastle, Callaghan, New South Wales, Australia

715 — C0310 Stiffening of rabbit sclera by bacteriochlorophyll derivative WST11 and near infrared illumination (NIR)through the cornea. Alexandra Goz^{1,3}, J. Brekelmans², A. Marcovich^{1,3}, A. Brandis⁴, X. Sui⁴, D. Wagner⁴, S. Cohen⁴, A. Scherz¹. ¹Department of Plant Sciences, weizmann institute of Science, Rehovot, Rehovot, Israel; ²University Eye Clinic Maastricht, AZ Maastricht, Netherlands; ³Ophthalmology, Kaplan Medical Center, Rehovot, Israel; ⁴Weizmann Institute of Science, Rehovot, Israel *CR

Room 301AB

Sunday, April 29, 2018 3:15 PM-5:00 PM

Immunology/Microbiology

144 Pathogens harbouring in the eye**Moderators: Jamie E. Craig and Mary E. Marquart**

716 — 3:15 Experimental malarial retinopathy reveals vascular alterations, parasite neuroretina infiltration, and neuronal cell death. *Francois Paquet-Durand¹, S. Beck¹, S. Das¹, T. Schubert¹, N. Tanimoto¹, M. Garcia-Garrido¹, R. Muehlfriedel¹, S. Bolz¹, B. Mordmueller², M. W. Seeliger¹.* ¹Experimental Ophthalmology, Institute for Ophthalmic Research, Tuebingen, Germany; ²Tropical Medicine, University of Tuebingen, Tuebingen, Germany

717 — 3:30 The Use of Predatory Prokaryotes to Control an Ocular Pathogen in the Vitreous. *Eric G. Romanowski¹, K. Brothers¹, D. E. Kadour², R. M. Shanks¹.* ¹The Charles T. Campbell Ophthalmic Microbiology Laboratory, UPMC Eye Center, Ophthalmology and Visual Sciences Research Center, University of Pittsburgh School of Medicine, Pittsburgh, PA; ²Department of Oral Biology, Rutgers School of Dental Medicine, Newark, NJ

718 — 3:45 Murine cytomegalovirus (MCMV) disseminates to and remains latent in the choroid following systemic infection of neonatal BALB/c mice. *Ming Zhang, J. Xu, X. Liu, B. Marshall, Z. Dong.* Department of Cellular Biology and Anatomy, Augusta University, Augusta, GA

719 — 4:00 Ebola Virus Persistence in Ocular Tissues and Fluids (EVICT) Study: Ebolavirus RT-PCR Results and Cataract Surgery Outcomes. *Jessica Shantha¹, J. Mattia², A. Goba³, I. Crozier⁴, K. Barnes³, B. Hayek¹, C. Kraft¹, J. Hartnett⁵, N. Acharya⁶, M. Teshome², P. Farmer⁷, L. Gess², r. Garry⁵, M. J. Vandy², S. Yeh¹.* ¹Emory University, Atlanta, GA; ²Kissy Eye Hospital, Freetown, Sierra Leone; ³Kenema Government Hospital, Kenema, Sierra Leone; ⁴National Institutes of Health, Bethesda, MD; ⁵Tulane University, New Orleans, LA; ⁶UCSF/Proctor Foundation, San Francisco, CA; ⁷Harvard, Boston, MA *CR

720 — 4:15 An aberrant immune response to an ocular commensal results in disease in a mouse model of Muckle-Wells Syndrome. *Kumarkrishna Raychaudhuri¹, A. St. Leger¹, F. Almaghrabi¹, I. J. Fuss², W. Strober², R. R. Caspi¹.* ¹National Eye Institute, NIH, Chevy Chase, MD; ²NIAID, NIH, Bethesda, MD

Room 306AB

Sunday, April 29, 2018 3:15 PM-5:00 PM

Eye Movements/Strabismus/Amblyopia/Neuro-Ophthalmology

145 Neuro-ophthalmology**Moderators: Donny W. Suh and Randy H. Kardon**

721 — 3:15 Retinal microcirculation, microvasculature and microstructure in patients with multiple sclerosis: 1 year follow-up. *Hong Jiang^{1,2}, C. Shi^{1,3}, Z. Duan^{1,4}, S. Delgado², G. Gregori¹, J. Hernandez², J. Wang¹.* ¹Bascom Palmer Eye Institute, University of Miami, Miami, FL; ²Neurology, University of Miami, Miami, FL; ³School of Ophthalmology and Optometry, Wenzhou Medical College, Wenzhou, Zhejiang, China; ⁴Zhongshan Ophthalmic Centre, Sun Yat-sen University, Guangzhou, Guangdong, China *CR

722 — 3:30 Anterior and posterior ocular structures change during long-duration spaceflight and one year after landing. *Brandon Macias¹, N. B. Pate², C. R. Gibson³, B. C. Samuels⁴, S. Lee¹, R. Ploutz-Snyder⁵, A. Sargsyan¹, D. Alexander⁶, R. Riascos⁷, L. Kramer⁷, S. Laurie¹, T. Mader⁸, T. Brunstetter⁹, C. Otto¹⁰, M. B. Stenger⁶.* ¹KBRwyle, NASA-JSC, Houston, TX; ²University of Houston College of Optometry, Houston, TX; ³Coastal Eye Associates, Webster, TX; ⁴University of Alabama at Birmingham, Birmingham, TX; ⁵University of Michigan, Ann Arbor, TX; ⁶NASA-JSC, Houston, TX; ⁷UTHealth, Houston, TX; ⁸Col (R) US Army, Cooper Landing, AK; ⁹NASA-JSC, CAPT US Navy, Houston, TX; ¹⁰Memorial Sloan Kettering Cancer Center, New York, NY

723 — 3:45 A new approach for diagnosing internuclear ophthalmoplegia with infrared oculography. *Jenny Nij Bijvank^{1,2}, L. Balk², S. Tan¹, B. Uitdehaag², A. Petzold^{1,3}, R. van Rijn¹.* ¹Ophthalmology, VUmc, Utrecht, Utrecht, Netherlands; ²Neurology, VU University Medical Center, Amsterdam, Netherlands; ³Neuro-ophthalmology, Moorfields Eye Hospital, London, Netherlands *CR

724 — 4:00 Optical Coherence Tomography Angiography in amyloid proven Alzheimer's disease; a non-invasive biomarker? *Jurre den Haan¹, A. van de Kreeke², J. de Boer³, F. Bouwman¹, F. D. Verbraak².* ¹Alzheimer Center, VU University Medical Center, Amsterdam, Netherlands; ²Ophthalmology, VU University Medical Center, Amsterdam, Netherlands; ³Biolaserlab, VU University, Amsterdam, Netherlands

725 — 4:15 Retinal venule diameters decreased following 6 months of treatment for high intracranial pressure in Idiopathic Intracranial Hypertension Treatment Trial participants. *Heather E. Moss^{1,2}, R. A. Hollar³, W. S. Fischer³, S. E. Feldon³.* ¹Ophthalmology, Stanford University, Palo Alto, CA; ²Neurology & Neurosciences, Stanford University, Stanford, CA, CA; ³Ophthalmology, University of Rochester, Rochester, NY ✕

726 — 4:30 Effect of stimulus intensity, visual field location and duration on the rod-, cone- and melanopsin- mediated pupillary light reflex. *Ifat Sher-Rosenthal¹, S. Haj Yahia¹, A. Hamburg^{1,2}, Y. Tucker^{1,3}, D. Ben Ner¹, S. Yassin¹, R. Chibel^{1,2}, E. Derazne², Y. Rotenstreich^{1,2}.* ¹Goldschleger Eye Institute, Sheba Medical Center, Tel Hashomer, Israel; ²Sackler Faculty of Medicine, Tel Aviv University, Tel Aviv, Israel; ³St George's, University of London, Nicosia, Cyprus *CR, ✕

727 — 4:45 Sustained and transient pupil responses in the mesopic range. *John L. Barbur.* Applied Vision Res Center, City University London, London, England, United Kingdom

Room 310

Sunday, April 29, 2018 3:15 PM-5:00 PM

Visual Psychophysics/Physiological Optics

146 Novel imaging techniques and applications**Moderators: Kazuhiro Kurokawa and Jesse B. Schallek**

728 — 3:15 Imaging retinal function with phase-sensitive adaptive optics optical coherence tomography. *Kazuhiro Kurokawa¹, J. A. Crowell¹, F. Zhang¹, Z. Liu², D. T. Miller¹.* ¹School of Optometry, Indiana University, Bloomington, IN; ²Division of Biomedical Physics, FDA, Silver Spring, MD

729 — 3:30 Histologic correlation of cone photoreceptor maturation with ultrahigh resolution OCT in wild type swine. *Niloofar Piri, P. A. Scott, H. J. Kaplan, B. Sahu, M. A. McCall.* Ophthalmology and Visual Sciences, University of Louisville, Louisville, KY

730 — 3:45 Influence of light on the diurnal rhythm of photoreceptor disc shedding in humans. *Furu Zhang¹, K. Kurokawa¹, A. Lassoued¹, J. A. Crowell¹, Z. Liu², D. T. Miller¹.* ¹School of Optometry, Indiana University, Bloomington, IN; ²Division of Biomedical Physics, FDA, Silver Spring, MD

731 — 4:00 The Relationship between Cone Density and Axial Length: CAL Study. Yiyi Wang², N. Bensaïd⁴, P. Tiruveedhula², J. Ma³, A. Roorda¹, S. Ravikumar¹. ¹School of Optometry and Vision Science Graduate Group, University of California, Berkeley, Berkeley, CA; ²School of Optometry, University of California, Berkeley, Berkeley, CA; ³Mechanical Engineering & Mechanics, Ningbo University, Ningbo, Zhejiang, China; ⁴Carl Zeiss Meditec AG, Berlin, Germany *CR

732 — 4:15 Adaptive optics ophthalmoscopy in the awake, behaving mouse. Jesse B. Schallek^{2,1}, A. Joseph^{3,1}, Q. Yang¹, K. Padmanabhan^{4,1}, C. Pfeifer^{2,1}. ¹Ctr for Visual Science, University of Rochester, Rochester, NY; ²Flaum Eye Institute, University of Rochester, Rochester, NY; ³Institute of Optics, University of Rochester, Rochester, NY; ⁴Neuroscience, University of Rochester, Rochester, NY *CR

733 — 4:30 High speed high resolution anamorphic adaptive optics near-confocal ophthalmoscopy. Xiaolin Wang, J. Lu, B. Gu, Y. Zhang. Ophthalmology, University of Alabama at Birmingham, Birmingham, AL *CR

734 — 4:45 Study on the precision and reliability of a newly designed eye tracker. Rui Guo¹, Z. Li¹, Q. Zhao², G. Li¹. ¹Visual and Biomedical Optics Lab, The Ohio State University, Columbus, OH; ²College of medicine, Columbus, OH

Room 311

Sunday, April 29, 2018 3:15 PM-5:00 PM

Retina

147 Diabetic Retinopathy Clinical

Moderators: Jennifer K. Sun and Charles C. Wykoff

735 — 3:15 Clinically Relevant Outcomes from the DRCR.net Anti-VEGF Treatment Algorithm for Proliferative Diabetic Retinopathy. Jennifer K. Sun^{1,2}. ¹Beetham Eye Institute, Joslin Diabetes Center, Boston, MA; ²Ophthalmology, Harvard Medical School, Boston, MA *CR, ✕

736 — 3:30 Outcomes in proliferative diabetic retinopathy patients who are lost to follow-up after panretinal photocoagulation vs. intravitreal anti-vascular endothelial growth factor injection. Jason Hsu^{1,2}, A. Obeid¹, D. Su¹, J. Uhr¹, S. N. Patel¹. ¹Retina Service, Wills Eye Hospital, Philadelphia, PA; ²Mid Atlantic Retina, Philadelphia, PA *CR

737 — 3:45 Automated Hemorrhage and Microaneurysm Counts on Ultrawide Field Images Predict Increased Risk of Diabetic Retinopathy Progression Over 4 Years. Paolo S. Silva^{1,2}, M. Elmasry¹, A. Pisig¹, Y. Aldairy¹, j. van hemert³, A. Fleming³, J. K. Sun^{1,2}, L. P. Aiello^{1,2}. ¹Beetham Eye Institute, Joslin Diabetes Center, Boston, MA; ²Ophthalmology, Harvard Medical School, Boston, MA; ³Optos plc, Dunfermline, United Kingdom *CR

738 — 4:00 The development and validation of a deep learning algorithm for referable diabetic retinopathy. Stuart Keel², Z. Li¹, Y. He³, W. Meng³, R. Chang⁴, M. He^{1,2}. ¹Zhongshan Ophthalmic Center, Guangzhou, China; ²Centre for Eye Research Australia, Melbourne, Victoria, Australia; ³Healgoo Interactive Medical Technology Co.Ltd, Guangzhou, China; ⁴Byers Eye Institute at Stanford University, Palo Alto, CA

739 — 4:15 Quantitative assessment of changes in retinal vascular density and morphology among patients with diabetic retinopathy using spectral domain optical coherence tomography angiography (SD-OCTA). Kaitlin Kogachi¹, T. Lin^{1,2}, N. V. Palejwala³, S. Itty³, J. D. Wolfe⁴, K. A. Drenser⁴, A. Capone⁴, P. U. Dugel^{3,1}, X. Jiang¹, A. Shahidzadeh¹, Z. Chu⁵, R. K. Wang⁶, A. H. Kashani^{1,2}. ¹Department of Ophthalmology, USC Roski Eye Institute, University of Southern California, Los Angeles, CA; ²USC Institute for Biomedical Therapeutics, University of Southern California, Los Angeles, CA; ³Retinal Consultants of Arizona, Phoenix, AZ; ⁴Associated Retinal Consultants, Oakland University William Beaumont School of Medicine, Royal Oak, MI; ⁵Department of Bioengineering, University of Washington, Seattle, WA *CR

740 — 4:30 Incorporating Predominantly Peripheral Diabetic Retinopathy (DR) Lesion Identification in a Teleophthalmology Program Predicts DR Progression over 4 Years in Eyes with Early DR. Mohamed A. Elmasry¹, P. S. Silva^{1,2}, j. Cavallerano^{1,2}, A. U. Pisig¹, Y. Aldairy¹, J. K. Sun^{1,2}, L. P. Aiello^{1,2}. ¹Beetham Eye Institute, Joslin Diabetes Center, Boston, MA; ²Ophthalmology, Harvard Medical School, Boston, MA

741 — 4:45 Correlation between corneal and retinal neurodegenerative changes and their association to parafoveal microvascular perfusion in patients with type II diabetes. Julia Hafner¹, S. Karst¹, S. Sacu^{1,3}, C. Scholda¹, E. Pablik², U. Schmidt-Erfurth¹. ¹Ophthalmology and Optometry, Medical University Vienna, Vienna, Austria; ²CeMSIIS, Institute for Medical Statistics, Vienna, Austria; ³Vienna Clinical Trial Center, Vienna, Austria ✕

Room 312

Sunday, April 29, 2018 3:15 PM-5:00 PM

Cornea

148 Keratoconus: Corneal Biomechanics and Imaging

Moderators: Vishal Jhanji and Jodhbir S. Mehta

742 — 3:15 Novel Biomarker for diagnosis, prognosis, and targeted therapy of Keratoconus. Rabab Sharif¹, S. Bak-Nielsen², H. Sejersen², J. Hjortdal², D. Karamichos¹. ¹University of Oklahoma Health Sciences Center, Oklahoma City, OK; ²Aarhus University Hospital, Aarhus, Denmark

743 — 3:30 Homozygous Mutation in the ELMO3 Gene with Keratoconus. Mariam L. Khaled¹, K. Abu-Amero², A. Al-Muammar², Y. Bykhovskaya³, X. Gao⁴, M. A. Hauser⁵, R. Allingham⁶, Y. Rabinowitz³, Y. Liu^{1,7}. ¹Department of Cell Biology and Anatomy, Augusta University, Augusta, GA; ²Department of Ophthalmology, College of Medicine, King Saud University, Riyadh, Saudi Arabia; ³Department of Surgery, Regenerative Medicine Institute, Los Angeles, CA; ⁴Department of Ophthalmology and Visual Sciences, University of Illinois at Chicago, Chicago, IL; ⁵Department of Medicine, Duke University Medical Center, Durham, NC; ⁶Department of Ophthalmology, Duke University Medical Center, Durham, NC; ⁷James & Jean Culver Vision Discovery Institute, Augusta University, Augusta, GA

744 — 3:45 Increased expression of Retinoic acid-related Orphan Receptor gamma transcription factor and its products in keratoconus patients. Ruchita Selot¹, J. Naidu¹, N. Kumar¹, R. Shetty², R. R. Mohan³, A. Ghosh¹, S. Sethu¹. ¹GROW Research Laboratory, Narayana Nethralaya Foundation, Bangalore, Karnataka, India; ²Narayana Nethralaya Eye Hospital, Bangalore, Karnataka, India; ³University of Missouri-Columbia, Columbia, MO

745 — 4:00 Phase-Decorrelation OCT for Noncontact Measurement of Biomechanical Effects of Corneal Crosslinking. Brecken Blackburn¹, S. Gu¹, M. R. Ford², V. S. De Stefano², M. Jenkins^{3,1}, W. J. Dupps^{2,1}, A. Rollins¹. ¹Biomedical Engineering, Case Western Reserve University, Cleveland Heights, OH; ²Cleveland Clinic, Cleveland, OH; ³Pediatrics, Case Western Reserve University, Cleveland, OH *CR

746 — 4:15 Brillouin ocular analyzer detects biomechanical changes in corneal tissues in the early stages of keratoconus and after corneal crosslinking. Peng Shao¹, A. M. Eltony¹, T. Seiler¹, B. Tavakol¹, R. Pineda IF^{2,3}, T. Seiler⁴, S. Yun¹. ¹Wellmen Center for Photomedicine, Massachusetts General Hospital and Harvard Medical School, Malden, MA; ²Massachusetts Eye and Ear Infirmary, Boston, MA; ³Harvard Medical School, Boston, MA; ⁴Institute for Refractive and Ophthalmic Surgery, Zurich, Switzerland *CR, ✕

747 — 4:30 Native-Like, Cell-Laden, Orthogonal-Multilayer and Transplantable Tissue- Engineered Corneal Stroma Induced by a Mechanical Collagen Microenvironment. Jiansu Chen^{1,4}, Z. Cui², J. Zhang², Q. Zeng³, S. Liu³, Y. Guo⁵, M. Xie², J. Gu⁴, S. Tang^{6,4}. ¹Institute of Ophthalmology, Medical College, Jinan University, Guangzhou, China; ²Key Laboratory of Optoelectronic Information and Sensing Technologies of Guangdong Higher Educational Institutes, Guangzhou, China; ³The Department of Ophthalmology, the First Clinical Medical College, Jinan University, Guangzhou, China; ⁴Aier Eye Institute, Changsha, China; ⁵Key Laboratory for Regenerative Medicine, Ministry of Education, Jinan University, Guangzhou, China; ⁶Aier School of Ophthalmology, Central South University, Changsha, China

748 — 4:45 Sodium hydroxymethylglycinate via eyedrop for corneal cross-linking in Dutch-belted rabbits: a comparison of 40mM (0.5%) vs 80mM (1%) concentrations. Mariya Zyablitskaya, D. Amponin, A. Takaoka, C. Jayyosi, K. Myers, C. Chen, L. Suh, T. Nagasaki, S. Trokel, D. C. Paik. Columbia University, New York, NY

Room 313A

Sunday, April 29, 2018 3:15 PM-5:00 PM

Anatomy and Pathology/Oncology

149 Visual Cues and Signaling in Myopia

Moderators: Regan S. Ashby and Machel T. Pardue

749 — 3:15 Dynamic chromatic noise stimulation promotes myopia. Christopher P. Taylor, F. J. Rucker. Biomedical Science and Disease, New England College of Optometry, Boston, MA

750 — 3:30 Lens defocus alters dopamine synthesis under different ambient lighting conditions. Erica Landis², H. L. Park¹, L. He¹, C. Sidhu¹, M. A. Chrenek¹, R. Strickland³, P. Iuvone^{1,4}, M. T. Pardue^{5,6}. ¹Ophthalmology, Emory University, Atlanta, GA; ²Neuroscience, Emory University, Atlanta, GA; ³Emory University, Atlanta, GA; ⁴Pharmacology, Emory University, Atlanta, GA; ⁵Biomedical Engineering, Georgia Institute of Technology, Atlanta, GA; ⁶Atlanta Veterans Affairs Medical Center, Atlanta, GA

751 — 3:45 Retinal gene expression profiling following exposure to hyperopic or myopic defocus supports retina's capacity to recognize sign of defocus. Andrei V. Tkatchenko^{1,2}, D. Troilo³, A. Benavente-Perez³, T. V. Tkatchenko¹. ¹Ophthalmology, Columbia University, New York, NY; ²Pathology and Cell Biology, Columbia University, New York, NY; ³SUNY College of Optometry, New York, NY*CR

752 — 4:00 Retinal Simultaneous Competing Defocus of Opposite Sign Induces Up-Regulation of BMP Gene Expression in Chick RPE. Yan Zhang, S. Y. Azmoun, J. R. Chhoa, C. F. Wildsoet. School of Optometry, University of California, Berkeley, Berkeley, CA

753 — 4:15 Apomorphine attenuates form deprivation myopia by a dopamine D1 receptor-dependent mechanism in mice. Xiangtian Zhou, F. Huang, L. zhang, Q. Wang, J. Qu. School of Ophthalmology and Optometry, Wenzhou Medical University, Wenzhou, Zhejiang, China

754 — 4:30 Muscarinic-cholinergic and GABA antagonists appear to modulate eye growth independent of the dopaminergic system. Kate Thomson¹, C. Karouta¹, R. S. Ashby^{1,2}. ¹Centre for Research into Therapeutic Solutions, Health Research Institute, University of Canberra, Canberra, Australian Capital Territory, Australia; ²Research School of Biology, Australian National University, Canberra, Australian Capital Territory, Australia

755 — 4:45 Ocular growth and metabolomics are dependent upon the spectral content of white light. Raymond Najjar^{1,2}, J. Chao De La Barca^{3,4}, V. A. Barathi^{1,2}, C. Ho Ee Hua¹, J. Lock¹, W. Foulds¹, P. Reynier^{3,4}, D. Milea^{1,5}. ¹Singapore Eye Research Institute (SERI), Singapore, Singapore; ²The Ophthalmology & Visual Sciences ACP (EYE-ACP), Duke-NUS Medical School, Singapore, Singapore, Singapore; ³Département de Biochimie et Génétique, Centre Hospitalier Universitaire d'Angers, Angers, France; ⁴Institut MITOVASC, CNRS 6015, INSERM U1083, Université d'Angers, Angers, France; ⁵Singapore National Eye Center (SNEC), Singapore, Singapore

Room 314

Sunday, April 29, 2018 3:15 PM-5:00 PM

Visual Neuroscience

150 Primate retina and visual brain - Minisymposium

This minisymposium will bring together leading experts in the primate visual system and cover morphological, physiological and gene therapy topics. A thorough understanding of the morphology and function of the visual system of human and non-human primates is essential for gene therapy of retinal diseases. To date, the large majority of studies are being carried out in rodent models, but there are significant differences between the eyes of mice and men. For a translation of the application to humans, work in non-human primates is therefore vital.

Moderators: Dennis M. Dacey, Ulrike Grunert and Jan J. Kremers

— 3:15 Introduction - Dennis M. Dacey

756 — 3:20 Functional properties of human retina measured with Adaptive Optics. Austin Rooda. School of Optometry, University of California, Berkeley, Berkeley, CA *CR

757 — 3:37 Optogenetics for vision restoration-translation from mice to non-human primates. Deniz Dalkara^{1,2}. ¹Institut de la Vision, Paris, France; ²INSERM, PARIS, France *CR

758 — 3:54 Signaling pathways in the primate retina. William R. Taylor. University of California, Berkeley, Berkeley, CA

759 — 4:11 Receptive field diversity in primate lateral geniculate nucleus. Paul R. Martin^{1,2}. ¹Save Sight Institute, University of Sydney, Sydney, New South Wales, Australia; ²Centre of Excellence for Integrative Brain Function, Australian Research Council, Sydney, New South Wales, Australia

760 — 4:28 Organization and function of feedback connections in early visual processing. Alessandra Angelucci. University of Utah, Salt Lake City, UT

Room 315

Sunday, April 29, 2018 3:15 PM-5:00 PM

Retinal Cell Biology

151 Retinal ischemia and mechanisms of vascular remodeling

Moderators: Marcus Fruttiger and S. Priya Narayanan

761 — 3:15 miR-30a-5p inhibition promotes tissue repair through modulation of endothelial and microglial function and cross talk following ischemic injury. Salome Murinello, Y. Usui, S. Sakimoto, M. Kitano, E. Aguilar, M. Friedlander. Molecular Medicine, TSRI, La Jolla, CA

762 — 3:30 Modulation of endothelial cell function and pathologic ocular angiogenesis by microRNA-145. Chi-Hsiu Liu, Z. Wang, Y. Sun, R. Duran, A. Poblete, S. S. Cho, J. Chen. Ophthalmology, Boston Children's Hospital, Boston, MA

763 — 3:45 Preconditioning Across Generations: Intermittent Hypoxia in F0 Mice Promotes Neuroprotection from Retinal Ischemia in F1 Offspring. Jeff Gidday^{1,2}, K. C. Belmonte^{1,2}, N. A. Lanson^{1,2}, J. C. Harman^{1,2}. ¹Ophthalmology, Louisiana State University School of Medicine, New Orleans, LA; ²Physiology, Louisiana State University School of Medicine, New Orleans, LA

764 — 4:00 Photoreceptor glucose metabolic modulation by adiponectin prevents hyperglycemic ROP. Zhongjie Fu¹, C. Lofqvist², R. Liegl¹, Z. Wang¹, Y. Sun¹, Y. Gong¹, C. Liu¹, B. Cakir¹, R. Duran¹, A. Poblete¹, S. S. Cho¹, J. D. Akula¹, M. Kinter³, S. Talukdar⁴, A. Hellstrom⁵, L. E. Smith¹. ¹Department of Ophthalmology, Children's Hosp Boston/Harvard Med Sch, Brookline, MA; ²Section for Ophthalmology, Department of Clinical Neuroscience and rehabilitation, Institute of Neuroscience and Physiology, Sahlgrenska Academy,, University of Gothenburg, Göteborg, Sweden; ³Aging and Metabolism Research Program, Oklahoma Medical Research Foundation, Oklahoma city, OK; ⁴Merck Research Laboratories, Merck, Boston, MA

765 — 4:15 Progenitor cell combination normalizes pericyte ensheathment in the oxygen-induced retinopathy (OIR) model. Sergio Li Calzi², L. C. Shaw¹, W. C. Shelley³, J. Quigley⁴, L. Moldovan¹, M. Ivan⁴, M. E. Boulton², M. C. Yoder³, M. Grant². ¹Ophthalmology, IUPUI, Indianapolis, IN; ²Ophthalmology, University of Alabama at Birmingham, Birmingham, AL; ³Pediatrics, IUPUI, Indianapolis, IN; ⁴Hematology/Oncology, IUPUI, Indianapolis, IN

766 — 4:30 Endothelial Semaphorin 6A promotes retinal revascularization and decreases pathologic angiogenesis in oxygen-induced retinopathy. Yanhong Wei^{1,2}, J. Gong², Z. Xu², E. J. Duh². ¹School of Public Health, Sun Yat-sen University, Guangzhou, China; ²Ophthalmology, Johns Hopkins University School of Medicine, Baltimore, MD

767 — 4:45 Myeloid precursors develop into endothelial progenitor cells modulated by SOCS3. Ye Sun¹, P. Zhou², C. Liu¹, Y. Gong¹, B. Cakir¹, S. S. Cho¹, A. Poblete¹, R. Duran¹, J. Chen¹, L. E. Smith¹. ¹Ophthalmology, Boston Children's Hosp/Harvard Med Sch, Boston, MA; ²Cardiology, Boston Children's Hospital, Boston, MA

Room 316A

Sunday, April 29, 2018 3:15 PM-5:00 PM

Physiology/Pharmacology

152 AMD

Moderators: lucian Del Priore and Teresio Avitabile

768 — 3:15 Synthetic compound MAF20170220-4 Protects Human Retinal Pigment Epithelial Cells from Oxidative Stress-induced Cell Death. Lucian Del Priore¹, H. Cai¹, J. Gong¹, L. Abriola², M. A. Fields¹. ¹Department of Ophthalmology and Visual Science, Yale School of Medicine, New Haven, CT; ²Yale Center for Molecular Discovery, Yale University, West Haven, CT

769 — 3:30 The pro-cell death RIP1 kinase mediates angiogenesis by facilitating M2-like macrophages. Takashi Ueta^{1,3}, K. Ishihara¹, S. Notomi^{1,2}, J. Lee¹, D. Maidana¹, N. Efstathiou¹, Y. Murakami², E. Hasegawa^{1,2}, J. W. Miller¹, D. Vavvas¹. ¹Massachusetts Eye and Ear, Boston, MA; ²Kyushu University, Fukuoka, Japan; ³University of Tokyo, Tokyo, Japan *CR

770 — 3:45 Systemic dendrimer-triamcinolone therapy for age-related macular degeneration. Kannan Rangaramanujam, S. Kambhampati, I. A. Bhutto, T. P. Wu, S. McLeod, G. A. Lutty. Center for Nanomedicine/Ophthalmology, Wilmer Eye Institute, Highland, MD *CR

771 — 4:00 Effects of Anti-VEGF and ALG-1001 on Human Retinal Cells in vitro. Cristina M. Kenney^{1,4}, M. Chwa¹, J. Cáceres-del-Carpio¹, D. Malik¹, S. Atilano¹, K. Schneider¹, G. Limb⁵, D. S. Boyer², A. B. Nesburn^{1,3}, B. D. Kuppermann¹. ¹Ophthalmology, Gavin Herbert Eye Inst, UC Irvine, Irvine, CA; ²Retina-vitreous Associates Medical Group, Los Angeles, CA; ³Cedars-Sinai Medical Center, Los Angeles, CA; ⁴Pathology and Laboratory Medicine, University of California Irvine, Irvine, CA; ⁵University College of London, Institute of Ophthalmology, London, United Kingdom *CR

772 — 4:15 Aflibercept does not inhibit normal retinal vascular development in the mouse model of oxygen-induced retinopathy. Jade G. Gieseke Guevara¹, A. Gonzalez¹, C. C. Smith², S. Agarwal-Sinha¹, S. Amin¹. ¹Ophthalmology, University of Florida, Gainesville, FL; ²Ophthalmology Research, University of Florida, Gainesville, FL

773 — 4:30 Alpha-1 antitrypsin ameliorates retinal degeneration by modulating microglia polarization in rd1 mice model. Tian Zhou. Zhongshan Ophthalmic Center, Sun Yat-sen University, Guangzhou, China

774 — 4:45 Characteristics of retinopathy associated with the use of binimetinib (MEK inhibitor) in the treatment of metastatic cancers. Chi Yun Doreen Ho, A. Song, L. L. Lim, E. Dang, D. Pomerleau, R. C. Symons. Ophthalmology, Royal Melbourne Hospital, Pascoe Vale South, Victoria, Australia

Room 316B

Sunday, April 29, 2018 3:15 PM-5:00 PM

Clinical/Epidemiologic Research

153 Genetic Epidemiology

Moderators: Christopher J. Hammond and Xuejuan Jiang

775 — 3:15 Analyses of the UK Biobank data highlights hundreds of genetic loci and pathways associated with refractive error and myopia. Christopher J. Hammond¹, P. G. Hysi¹, A. Khawaja², P. J. Foster^{4,3}, P. Cumberland², P. T. Khaw^{4,3}, J. Rahi². ¹Ophthalmology, King's College London, London, England, United Kingdom; ²Institute of Child Health, University College London, London, United Kingdom; ³Moorfields Eye Hospital, London, United Kingdom; ⁴University College London, London, United Kingdom

776 — 3:30 Genome-wide association studies for corneal and refractive astigmatism in UK Biobank demonstrate a shared role for myopia susceptibility loci. Rupal L. Shah, J. A. Guggenheim. School of Optometry & Vision Sciences, Cardiff University, Cardiff, United Kingdom

777 — 3:45 Circulating O-methylascorbate is associated with population IOP variation: a metabolomics and GWAS study. Pirro G. Hysi^{2,1}, T. Spector¹, C. J. Hammond². ¹Twin Research & Genetic Epidemiology, King's College London, London, England, United Kingdom; ²Department of Ophthalmology, King's College London, London, England, United Kingdom

778 — 4:00 Association of Glaucoma-Susceptible Genes to Retinal Nerve Fiber Layer Thickness in Two Racial/Ethnic Populations in the US. Xuejuan Jiang^{1,2}, D. Noursome², R. McKean-Cowdin^{2,1}, B. Burkemper¹, M. Torres¹, R. Varma^{1,2}. ¹Ophthalmology, USC Roski Eye Institute, Los Angeles, CA; ²Preventive Medicine, University of Southern California, Los Angeles, CA

779 — 4:15 Polygenic risk score is associated with intraocular pressure and improves glaucoma prediction in the UK Biobank cohort. X. Raymond Gao, F. Fan. Ophthalmology and Visual Sciences, University of Illinois, Chicago, IL

780 — 4:30 Statistical approaches to the analysis of whole-genome sequencing in autosomal-dominant macular dystrophy. Roberto Y. Cordero¹, R. W. Williams¹, M. B. Petersen^{5,6}, H. Kokotas³, M. Grigoriadou³, G. Kitsos⁴, N. A. Mandal², C. L. Simpson^{1,2}. ¹Genetics, Genomics and Informatics, University of Tennessee Health Science Center, Memphis, TN; ²Ophthalmology, University of Tennessee Health Science Center, Memphis, TN; ³Genetics, Institute of Child Health, Athens, Greece; ⁴Ophthalmology, Medical School, University of Ioannina, Ioannina, Greece; ⁵Clinical Genetics, Aalborg University Hospital, Aalborg, Denmark; ⁶Clinical Medicine, Aalborg University, Aalborg, Denmark

781 — 4:45 GWAS identifies 52 genomic regions associated with iris colour in a study conducted using almost 200,000 participants of European descent. Mark J. Simcoe^{1,2}, M. Kayser³, T. Spector², C. J. Hammond^{1,2}, P. G. Hysi^{1,2}. ¹Ophthalmology, King's College London, London, England, United Kingdom; ²Department of Twin Research and Genetic Epidemiology, King's College London, London, England, United Kingdom; ³Department of Forensic Molecular Biology, Erasmus University Medical Center, Rotterdam, Netherlands

Room 316C

Sunday, April 29, 2018 3:15 PM-5:00 PM

Retina

154 Macular Diseases Excluding AMD

Moderators: Milam A. Brantley and Eyal Banin

782 — 3:15 Short-Term Oral Mifepristone for the Treatment of Central Serous Chorioretinopathy (STOMP CSC) – A Randomized, Placebo-Controlled Study. Roger A. Goldberg¹, J. S. Heier². ¹Bay Area Retina Associates, Walnut Creek, CA; ²Ophthalmic Consultants of Boston, Boston, MA *CR, ✗

783 — 3:30 Baseline characteristics associated with good visual acuity outcomes in myopic choroidal neovascularization: results from the RADIANCE trial. Carolyn Pan¹, D. V. Do¹, L. Hill¹, T. Ecoiffier², I. Stoilov². ¹Byers Eye Institute, Stanford University School of Medicine, Palo Alto, CA; ²Genentech, Inc., South San Francisco, CA *CR, ✗

784 — 3:45 Long-term outcomes in ranibizumab-treated East Asian patients with myopic choroidal neovascularization in the 36-month post-RADIANCE study period. Mark Wieland¹, B. Day², T. Ecoiffier², S. Gune², Z. Haskova². ¹Northern California Retina Vitreous Associates, Mountain View, CA; ²Genentech, Inc., South San Francisco, CA *CR, ✗

785 — 4:00 Retinal thickness changes and fovea migration in eyes with idiopathic macular hole after vitrectomy with hemi-temporal internal limiting membrane peeling. Jiro Kogo, A. Shiono, H. Sasaki, t. jujo, H. Takagi. Ophthalmology, St. Marianna University School of Medicine, Kawasaki, Kanagawa, Japan

786 — 4:15 A Novel Contrast Sensitivity Test as a Measure of Functional Vision in Macular Telangiectasia and Central Retinal Vein Occlusion. Rebecca F. Silverman¹, I. Lains^{1,2}, A. K. Bittner⁴, L. A. Lesmes³, J. B. Miller¹. ¹Retina Service, Massachusetts Eye and Ear, Boston, MA; ²Department of Ophthalmology, University of Coimbra, Coimbra, Portugal; ³Adaptive Sensory Technology, Inc., San Diego, CA; ⁴Nova Southeastern University, College of Optometry, Fort Lauderdale, FL *CR, ✗

787 — 4:30 Regions of Disease Sparing Spatially Correlate with Choroidal Thinning in ABCA4 Disease. Winston Lee¹, M. Paavo¹, J. Zernant¹, S. H. Tsang^{1,2}, J. R. Sparrow^{1,2}, R. Allikmets^{1,2}. ¹Ophthalmology, Columbia University, New York, NY; ²Pathology & Cell Biology, Columbia University, New York, NY

788 — 4:45 Static and dynamic assessment of fixation stability in Stargardt disease. Etienne M. Schonbach^{1,7}, A. V. Cideciyan⁴, M. A. Ibrahim¹, R. W. Strauss^{1,2}, D. G. Birch⁵, J. S. Sunness⁶, S. R. Sadda³, H. P. Scholl^{1,8}. ¹Wilmer Eye Institute, Johns Hopkins University School of Medicine, Baltimore, MD; ²Ophthalmology, University of Basel, Basel, Switzerland; ³Doheny Eye Institute, UCLA David Geffen School of Medicine, Los Angeles, CA; ⁴Scheie Eye Institute, University of Pennsylvania, Philadelphia, PA; ⁵Retina Foundation of the Southwest, University of Texas, Dallas, TX; ⁶Hoover Low Vision Rehabilitation Services, Greater Baltimore Medical Center, Baltimore, MD; ⁷Medicine, University of Maryland Midtown Campus, Baltimore, MD; ⁸Department of Ophthalmology, University of Basel, Basel, Switzerland *CR, ✗

Room 320

Sunday, April 29, 2018 3:15 PM-5:00 PM

Biochemistry/Molecular Biology

155 Biochemistry and Molecular Biology of AMD

Moderators: Catherine Bowes Rickman and Baerbel Rohrer

789 — 3:15 Whole-exome sequencing in age-related macular degeneration identifies rare protein-altering variants in COL8A1, a component of Bruch's membrane. Anneke I. Den Hollander¹, J. Corominas¹, J. Colijn^{2,4}, M. Geerlings¹, S. Fauser^{3,5}, E. de Jong¹, C. van Duijn⁴, C. C. Hoyng¹, C. C. Klaver^{2,1}. ¹Ophthalmology, Radboud Univ Nijmegen Med Ctr, Nijmegen, Netherlands; ²Department of Ophthalmology, Erasmus Medical Center, Rotterdam, Netherlands; ³Department of Ophthalmology, University Hospital of Cologne, Cologne, Germany; ⁴Department of Epidemiology, Erasmus Medical Center, Rotterdam, Netherlands; ⁵Roche Pharma Research and Early Development, F. Hoffmann-La Roche Ltd, Basel, Switzerland *CR

790 — 3:30 Functional Analysis of the Complement Inhibitor Factor I in Sera of Patients with Advanced Age-Related Macular Degeneration. Peter Baciu^{1,2}, J. Yang¹, D. Kavanagh⁶, J. Atkinson⁵, J. Seddon^{3,4}. ¹Biology, Allergan, Inc, Irvine, CA; ²Ocular Disease, Editas Medicine, Cambridge, MA; ³Department of Ophthalmology, Tufts University School of Medicine, Boston, MA; ⁴Ophthalmic Epidemiology and Genetics Service, Tufts Medical Center, Boston, MA; ⁵Department of Medicine, Division of Rheumatology, Washington University School of Medicine, St. Louis, MO; ⁶National Renal Complement Therapeutics Centre, Newcastle upon Tyne Hospital, Newcastle upon Tyne, United Kingdom *CR

791 — 3:45 C3a triggers formation of sub-RPE deposits via the ubiquitin proteasome pathway. Rosario Fernandez-Godino, E. A. Pierce. Ophthalmology, Mass Eye and Ear Infirmary, Boston, MA

792 — 4:00 Complement activation products, single nucleotide polymorphisms and age-related macular degeneration (AMD). Baerbel Rohrer^{1,2}, a. Frazer-Abel³, A. Leonard¹, R. Ratnapriya⁴, T. Ward¹, A. Pietraszkiewicz⁴, E. O'Quinn¹, K. Adams¹, A. Swaroop³, B. Wolf¹. ¹Ophthalmology, Med Univ of South Carolina, Charleston, SC; ²Division of Research, Ralph H. Johnson VA Medical Center, Charleston, SC; ³Exsera BioLabs, University of Colorado, Denver, CO; ⁴National Eye Institute, Bethesda, MD; ⁵Public Health Sciences, Medical University of South Carolina, Charleston, SC ✗

793 — 4:15 Impact of lactate transport deficit in age-related macular degeneration. Laurence Klipfel¹, M. Var¹, M. Cordonnier¹, S. Mohand-Saïd², O. Goureau³, T. D. Leveillard¹. ¹Genetics, Institut de la Vision, UMR-S 968, Paris, France; ²CIC, Hôpital Quinze-Vingt, Paris, France; ³Development, Institut de la Vision, UMR-S 968, Paris, France

794 — 4:30 Loss of calcium and integrin binding protein 2 cause AMD-like phenotype in mice. Zubair M. Ahmed^{1,3}, P. A. Scott², A. P. Giese¹, S. Riazuddin¹, S. Sethna^{1,3}. ¹Otorhinolaryngology-HNS, University of Maryland, Baltimore, MD; ²Ophthalmology, University of Louisville, Louisville, KY; ³Ophthalmology and Visual Sciences, University of Maryland Baltimore, Baltimore, MD

795 — 4:45 Damaged nuclear DNA accumulates in retinal pigment epithelium cells of age-related macular degeneration patients. Haijiang Lin^{1,2}, B. Tian², a. Al-moujahed², J. W. Miller², D. G. Vavvas². ¹Ophthalmology, University of Massachusetts, Newton Highlands, MA; ²Ophthalmology, Massachusetts Eye & Ear, Boston, MA *CR

Ballroom A

Sunday, April 29, 2018 3:15 PM-4:00 PM

Glaucoma***156 GL-Epstein Award Session***

The Dr. David L. Epstein Award is given annually to a well-established, senior investigator with a documented history of conducting eye and vision research in glaucoma and mentoring clinician-scientists to independent academic and research careers. The \$100,000 award supports a collaborative project for the mentor and mentee related to glaucoma. The award was created by Dr. Epstein's family with the intention of furthering his long-standing determination and interest in solving the complex issues of glaucoma through well-conceived and executed scientific research focused on finding the causes and new treatments for the disease.

— 3:15 **Introduction and presentation of award: Joel Schuman, MD**

796 — 3:20 Retinal Ganglion Cell Recovery.
Jonathan G. Crowston. Ophthalmology, Centre for Eye Research Australia, East Melbourne, Victoria, Australia

797 — 3:40 Energy supply to optic nerve axons. *Peter van Wijngaarden. The University of Melbourne, Melbourne, Victoria, Australia*

Sunday Award
Session
3:15 pm – 4:00 pm

Exhibit Hall A0130-A0173

Sunday, April 29, 2018 3:15 PM-5:00 PM

Retina

157 AMD and Anti-VEGF I**Moderators: Rithwick Rajagopal and Robert L. Avery****798 — A0130 The MATE study: Treating neovascular age-related Macular degeneration with Aflibercept: a pilot, 24 month randomised controlled trial comparing standard care with individualised Treat and Extend regimen.**

Archana Airody^{1,8}, T. Dorey¹, A. Mankowska¹, K. Balaskas², R. Mukherjee³, T. Empeslidis⁴, L. Downey⁵, S. Dhar-munshi⁶, A. Morland⁷, H. Baseler⁸, R. Gale¹. ¹Academic Unit of Ophthalmology, York Teaching hospital NHS Foundation Trust, York, United Kingdom; ²Ophthalmology, Manchester Royal Infirmary, Manchester, Manchester, United Kingdom; ³Ophthalmology, St James' University Hospital, Leeds, United Kingdom; ⁴Ophthalmology, University Hospitals of Leicester NHS trust, Leicester, United Kingdom; ⁵Ophthalmology, Hull Royal Infirmary, Hull, United Kingdom; ⁶Ophthalmology, Kings Mill Hospital, Sutton-in-Ashfield, United Kingdom; ⁷Department of Psychology, University of York, York, United Kingdom; ⁸University of York, Hull York Medical School, York, United Kingdom *CR, ✗

799 — A0131 One-year real-world outcome in patients receiving individualized treatment with aflibercept for neovascular age-related macular degeneration. Mya T. Ohn. *Ophthalmology, Southend University Hospital, Leigh-on-Sea, United Kingdom***800 — A0132 Assessment of Mental Burden of Patients with Neovascular Age-Related Macular Degeneration Treated by Treat-and-Extend Regimen with Intravitreal Ranibizumab.** Aki Kato¹, T. Yasukawa¹, I. Sugita², M. Yoshida¹, M. Nozaki¹, Y. Hirano¹, J. Kondo², T. Abe², K. Sugita², T. Okita², H. Morita¹, K. Sugitani¹, H. Usui¹, N. Niwa¹, F. Kato¹, Y. Ogura¹. ¹Ophthalmology and Visual Science, Nagoya City University Graduate School of Medical Sciences, Nagoya, Aichi, Japan; ²Sugita Eye Hospital, Nagoya, Japan *CR, ✗**801 — A0133 Treatment of neovascular Age related macular degeneration (AMD) using a Modified 'Treat and Extend regimen'.** Rehab Ismail¹, D. Varma². ¹NHS England, Longbenton, United Kingdom; ²Ophthalmology, Sunderland Eye Infirmary, Sunderland, United Kingdom**802 — A0134 AMD associated Peripapillary Choroidal Neovascularization in the era of anti-VEGF therapy.** Tiezhu Lin^{1,2}, K. C. Dans¹, A. Meshi¹, M. Amador^{1,3}, W. R. Freeman¹. ¹Ophthalmology, UCSD, San Diego, CA; ²Ophthalmology, He Eye Hospital, Shenyang, Liaoning, China; ³Escuela Superior de O, Instituto Barraquer de America, Bojota, Colombia**803 — A0135 Prospective Randomized Controlled Trial of Combination Ranibizumab and Indomethacin for Neovascular Age-Related Macular Degeneration.** Andrea Russo, E. Gambicorti, F. Morescalchi, F. Semeraro. *Univ degli Studi di Brescia - Italy, Brescia, Italy ✗***804 — A0136 Psychometric properties of the National Eye Institute Visual Function Questionnaire (NEI-VFQ 25) tested in observational longitudinal study of patients with neovascular Age-related Macular Degeneration (Norwegian cohort).** Elma Jelin^{1,2}, T. Wisløff³, M. C. Moe^{1,2}, T. Heiberg^{3,4}. ¹Ophthalmology, Oslo University Hospital, Oslo, Norway; ²Institute of Clinical Medicine, University of Oslo, Oslo, Norway; ³Regional Research Support, Oslo University Hospital, Oslo, Norway; ⁴Østfold University College, Oslo, Norway; ⁵Norwegian Institute of Public Health, Oslo, Norway; ⁶Institute of Health and Society, University of Oslo, Oslo, Norway *CR, ✗**805 — A0137 Comparison of Physician and Nurse-Administered Intravitreal Injections of anti-vascular endothelial growth factor, a Randomized Noninferiority Trial.** Stine Bolme^{1,4}, T. S. Morken^{1,4}, T. Follstad², V. Halsteinli^{2,3}, D. Austeng^{1,4}. ¹Department of Neuromedicine and Movement Science, Norwegian University of Science and Technology, Trondheim, Sør-Trøndelag, Norway; ²Department of Public Health and Nursing, Faculty of Medicine and Health Sciences, Norwegian University of Science and Technology, Trondheim, Norway; ³Regional Center for Health Care Improvement, St. Olavs Hospital, Trondheim University Hospital, Trondheim, Norway; ⁴Department of Ophthalmology, St. Olavs Hospital, Trondheim University Hospital, Trondheim, Norway ✗**806 — A0138 Factors to consider before switching anti-VEGF treatments in neovascular age-related macular degeneration (nAMD): Effect of online education on physician knowledge and confidence.** Siggi D. Trier¹, A. Loewenstein², D. Middleton¹, P. Schoonheim¹. ¹Medical Education, Medscape LLC, New York, NY; ²Ophthalmology, Tel Aviv Medical Center, Tel Aviv, Israel *CR**807 — A0139 Three-year outcomes of a treat and extend regimen of aflibercept for neovascular age-related macular degeneration.** Mio Hosokawa, Y. Morizane, S. Kimura, Y. Shiode, M. Hirano, S. Doi, S. Toshima, K. Takahashi, A. Fujiwara, Y. Kanzaki, M. Hosogi, F. Shiraga. *Ophthalmology, Okayama University Graduate School of Medicine, Dentistry and Pharmaceutical Sciences, Okayama, Japan***808 — A0140 Eight-year outcome in the first cohort of ranibizumab-treated patients at Northampton General Hospital, United Kingdom.** Lin Lu^{3,1}, L. Osman^{2,1}, P. Tonne³, G. Reddy³, M. Logendran². ¹South East Midlands Deanery, UK, Leicester; England, United Kingdom; ²Ophthalmology, Leicester Royal Infirmary, Leicester; Leicestershire, United Kingdom; ³Ophthalmology, Northampton General Hospital, Northampton, Northamptonshire, United Kingdom**809 — A0141 Anti-VEGF Therapy Patterns of Neovascular Age-related Macular Degeneration in Shanghai, China.** Mengxi Shen¹, T. Zhou², C. Fu¹, X. Gu¹, M. Xiao¹, F. Wang¹, X. Sun¹. ¹Shanghai General Hospital, Shanghai, China; ²Fudan University, Shanghai, China**810 — A0142 Retrospective Evaluation of Neovascular Age-related Macular Degeneration Managed With Treat-And-Extend Regimen: 5-year Results of the RENO Study.** Micaela Koci¹, G. M. Gahn¹, P. D. Freeman², L. Hill³, S. A. Taylor⁴, A. Aziz⁵, A. Khanani². ¹University of Nevada, Reno School of Medicine, Reno, NV; ²Sierra Eye Associates, Reno, NV; ³Independent Statistical Consultant, Denver, CO; ⁴University of Massachusetts, Boston, MA; ⁵University of Nevada, Reno, Reno, NV *CR**811 — A0143 One-year Outcomes of Fixed Treatment of Intravitreal Aflibercept for Exudative Age-related Macular Degeneration and the Factor of Visual Prognosis.** Rie Osaka, C. Shiragami, A. Ono, S. Manabe, Y. Takasago, M. Kobayashi, A. Yamashita, K. Hirooka. *Kagawa University Faculty of Medicine, Kita-gun, Japan***812 — A0144 Risk factors for breakthrough vitreous hemorrhage after intravitreal anti-VEGF injection in age-related macular degeneration.** Yong-Il Shin, J. Sung, J. Kim. *Department of Ophthalmology, Chungnam National University College of Medicine, Daejeon, Korea (the Republic of)***813 — A0145 Systemic risk factors that may impinge on the therapeutic outcomes in neovascular age related macular degeneration treated with anti VEGF agents on a treat and extend regimen.** Yi Fan Tang², K. Mendis^{2,1}. ¹Canberra Retina Clinic, Deakin, Australian Capital Territory, Australia; ²The Canberra Hospital, Garran, Australian Capital Territory, Australia**814 — A0146 Evolution over 4 years of enrollment of baseline characteristics of treatment-naïve nAMD patients in the LUMINOUS study.** Eric H. Souied¹, W. Macfadden², S. Parikh². ¹Hôpital Intercommunal, Hopital Henri Mondor, Paris, France; ²Novartis Pharma AG, Basel, Switzerland *CR, ✗

- 815 — A0147 Ranibizumab and Aflibercept: Baseline and 12-month visual outcomes of patients at a large tertiary ophthalmic hospital.** Siegfried K. Wagner¹, K. Fasler¹, F. Afshar¹, R. Chopra¹, K. U. Kortuem^{1,2}, N. Pontikos¹, T. Ramakrishnan¹, E. Preston¹, P. Patel¹, A. Tufail¹, K. Balaskas¹, P. A. Keane¹. ¹NIHR Biomedical Research Centre at Moorfields Eye Hospital NHS Foundation Trust and UCL Institute of Ophthalmology, London, United Kingdom; ²University Eye Hospital, Munich, Germany *CR
- 816 — A0148 Development of neovascular age-related macular degeneration in fellow eyes of patients undergoing intravitreal anti-VEGF therapy at a large tertiary ophthalmic hospital.** Reena Chopra¹, S. K. Wagner¹, K. Fasler¹, K. U. Kortuem^{1,2}, N. Pontikos¹, F. Afshar¹, T. Ramakrishnan¹, G. C. Preston¹, K. Balaskas¹, P. Patel¹, A. Tufail¹, P. A. Keane¹. ¹NIHR Biomedical Research Centre for Ophthalmology, Moorfields Eye Hospital NHS Foundation Trust and UCL Institute of Ophthalmology, London, United Kingdom; ²University Eye Hospital, Munich, Germany *CR
- 817 — A0149 Real-life long-term outcomes for patients receiving intra-vitreous Aflibercept for neovascular age related macular degeneration (nAMD): four-year follow-up.** Ankur Mehta, D. Varma, M. Habib, J. Smith, M. Sandhina, S. David, A. Kotagiri. Ophthalmology, Sunderland Eye Infirmary, Tynemouth, North Shields, United Kingdom *CR
- 818 — A0150 Intravitreal aflibercept treatment in a population of different subtypes of exudative maculopathy.** Guenther Weigert, S. Rezar, K. Eibenberger, W. Buehl, U. Schmidt-Erfurth, S. Sacu. Department of Ophthalmology, Medical University of Vienna, Vienna, Austria *CR, ✗
- 819 — A0151 Influence of posterior vitreous detachment on extendability of treat-and-extend anti-VEGF therapy in neovascular age-related macular degeneration.** Sophie Klimscha, L. Coulibaly, A. Sadeghipour, B. Gerendas, S. M. Waldstein, U. Schmidt-Erfurth. Department of Ophthalmology and Optometry, Medical University of Vienna, Vienna, Austria *CR
- 820 — A0152 Long-term outcomes of switching to aflibercept for treatment resistant neovascular age-related macular degeneration.** Kimberly Spooner^{1,2}, T. Hong¹, R. Nair^{1,2}, N. Chow¹, G. Broadhead^{1,2}, W. Wijeyakumar^{1,2}, A. Chang^{1,2}. ¹Sydney Institute of Vision Science, Sydney, New South Wales, Australia; ²Save Sight Institute, Department of Ophthalmology, University of Sydney, Sydney, New South Wales, Australia *CR, ✗
- 821 — A0153 Investigating visual and anatomical outcomes of patients treated with ranibizumab and aflibercept for wet macular degeneration in the United Kingdom over a 3 year period.** Michael Grinton, M. McKenna, S. Pushpoth, P. Severn. James Cook University Hospital, Middlesbrough, United Kingdom *CR
- 822 — A0154 Risk for low visual acuity after 1 and 2 years of treatment with anti-VEGF. Comparison of different agents: Ranibizumab, Aflibercept, and Bevacizumab.** Inger Westborg¹, A. Rosso². ¹Department of Clinical sciences/Ophthalmology, Umeå University, Boden, Sweden; ²Radiology Diagnostics, Institution of Translational Medicine, Lund University, Lund, Sweden *CR
- 823 — A0155 Long-term analysis of intravitreal anti-VEGF drugs.** Tetsuhiro Yasuma, K. Kataoka, Y. Ito, H. Terasaki. Department of Ophthalmology, Nagoya University, Nagoya, Japan *CR
- 824 — A0156 Quarterly Anti-VEGF Dosing for the Treatment of Neovascular Age-Related Macular Degeneration: A Cross Trial Comparison.** David A. Eichenbaum¹, B. Day², L. Tuomi². ¹Retina Vitreous Associates of Florida, St. Petersburg, FL; ²Genentech, Inc., South San Francisco, CA *CR, ✗
- 825 — A0157 Long-term visual and anatomical outcomes in treatment naïve neovascular age-related macular degeneration (nAMD) patients treated with anti-VEGF agents.** Saleema A. Kherani, R. Channa, R. Shaikat, O. Adeyemo, M. Iftikhar, A. Scott, A. Sodhi, J. T. Handa, I. Zimmer-Galler, A. Wenick, S. D. Solomon, M. Sachdeva, C. B. Meyerle, P. A. Campochiaro. Ophthalmology, Johns Hopkins University, Baltimore, MD
- 826 — A0158 One and two-year visual acuity outcomes after treatment for neovascular age-related macular degeneration at a large tertiary ophthalmic hospital.** Katrin Fasler¹, F. Afshar¹, R. Chopra¹, K. U. Kortuem¹, N. Pontikos¹, S. K. Wagner^{1,2}, L. Raja¹, H. Al Janabi¹, T. Ramakrishnan¹, G. C. Preston¹, K. Balaskas^{1,3}, A. Tufail¹, P. Patel¹, P. Keane^{1,4}. ¹Moorfields Eye Hospital NHS Foundation Trust, London, United Kingdom; ²Institute of Ophthalmology, University College, London, United Kingdom; ³University of Manchester, Manchester, United Kingdom; ⁴UCL Institute of Ophthalmology, London, United Kingdom *CR
- 827 — A0159 Evaluation of intravitreal aflibercept for treatment-naïve eyes with retinal angiomatous proliferation (RAP) using a fixed regimen during the first year of treatment.** Jan Ernest¹, K. Manethova¹, P. Kolar². ¹Ophthalmology, Military University Hospital Prague, Prague, Czechia; ²Ophthalmology, University hospital Brno Bohunice, Brno, Czechia ✗
- 828 — A0160 Outcome of Avastin treatment for wet age-related macular degeneration in patients with visual acuity score 85 or better at first presentation.** Ben J. Burton^{1,2}, T. Parveen³. ¹Ophthalmology, University Of East Anglia, Norwich, England, United Kingdom; ²Ophthalmology, James Paget University Hospital, Great Yarmouth, Norfolk, United Kingdom; ³Norwich Medical School, Norwich, Norfolk, United Kingdom *CR
- 829 — A0161 A Probabilistic Forecast of 12 Month Visual Outcomes of nAMD.** Vuong Nguyen¹, K. Teo¹, J. Simpson², V. Daien³, D. Barthelmes^{1,4}, M. C. Gillies¹, R. Walton⁵. ¹Save Sight Institute, Sydney, New South Wales, Australia; ²University of Sydney, Sydney, New South Wales, Australia; ³Gui De Chauliac Hospital, Montpellier, France; ⁴University of Zurich, Zurich, Switzerland; ⁵Cancer Institute NSW, Sydney, New South Wales, Australia *CR
- 830 — A0162 Comparison of initially on-scheduled versus delayed versus missed ranibizumab treatment in neovascular age-related macular degeneration.** Yi-Sheng Chang. Department of Ophthalmology, National Cheng Kung University, Taiwan, Tainan City, Taiwan
- 831 — A0163 Efficacy and safety of ranibizumab with or without verteporfin photodynamic therapy for polypoidal choroidal vasculopathy: 24-month results from the EVEREST II study.** Adrian H C. Koh¹, S. Parikh². ¹Medical Retina, Eye & Retina Surgeons, Camden Medical Centre, Singapore, Singapore; ²Novartis Pharma AG, Basel, Switzerland *CR, ✗
- 832 — A0164 Examination of the effect of topical aqueous suppressants on the efficacy of anti-VEGF infections for age-related macular degeneration.** Jonathan Minkowski¹, M. MacCumber^{1,2}. ¹Ophthalmology, Rush University Medical Center, Chicago, IL; ²Illinois Retina Associates, S.C., Chicago, IL *CR
- 833 — A0165 Clinical Characteristic of and Anti-VEGF Resistance in Polypoidal Choroidal Vasculopathy in Caucasian Patients.** Gregg T. Kokame^{1,2}, K. Kokame¹, K. Liu³, K. Kaneko¹. ¹Research, Hawaii Macula and Retina Institute, Aiea, HI; ²Ophthalmology, University of Hawaii School of Medicine, Honolulu, HI; ³University of Hawaii School of Medicine, Honolulu, HI *CR
- 834 — A0166 Outcomes in Eyes with Retinal Angiomatous Proliferation treated with different anti-VEGF regimens.** Elizabeth M. Walsh, S. Perera, R. Borbara, G. De Salvo. Ophthalmology, University Hospital Southampton, Southampton, Hampshire, United Kingdom
- 835 — A0167 Visual Outcome of Bilateral Same-Session Intravitreal Anti-VEGF Injections.** Saghar Bagheri¹, I. Koulouri¹, E. Konstantinou¹, F. Erenler², D. G. Vavvas¹. ¹Massachusetts Eye and Ear, Harvard Medical School, Boston, MA; ²Carney Hospital, Tufts School of Medicine, Boston, MA
- 836 — A0168 Association Between Timing of Peak Vision Gain and Long-Term Outcomes of Ranibizumab for nAMD: A Post Hoc Analysis of HARBOR.** Louis Chang¹, R. N. Khurana¹, B. Day², A. Ghanekar², I. Stoilov². ¹Northern California Retina Vitreous Associates, Mountain View, CA; ²Genentech, Inc, South San Francisco, CA *CR, ✗

837 — A0169 Ranibizumab treatment for nAMD in clinical practice: outcomes from the LUMINOUS™ study. Sanjay Sharma¹, S. Parikh², W. Macfadden². ¹Department of Ophthalmology and Epidemiology, Queen's University, Kingston, Ontario, Canada; ²Novartis Pharma AG, Basel, Switzerland *CR, ✎

838 — A0170

Visual outcomes after 50 or more intravitreal anti-VEGF injections for neovascular age-related macular degeneration at a large tertiary ophthalmic hospital. Karsten U. Kortuem^{2,1}, T. Ramakrishnan², K. Fasler², R. Chopra², N. Pontikos², S. Wagner², L. Raja², H. Al Janabi², F. Afshar², E. Preston², P. Patel², A. Tufail², K. Balaskas², P. Keane². ¹Ophthalmology, Ludwig-Maximilians-Univ, Muenchen, Germany; ²Moorfields Eye Hospital, London, United Kingdom *CR

839 — A0171 Real world data of Anti-VEGF treatment (Aflibercept) in treatment naive Neovascular Age Related Macular Degeneration (nAMD) over 3 years. Manju Chandran¹, S. Praveen², L. North¹, H. Naveed¹, L. Bhat¹, S. Mathew¹, N. Nair¹, G. Menon¹. ¹Ophthalmology, Frimley Health NHS Foundation Trust, Tongham, Surrey, United Kingdom; ²Medical student, St George's University Hospitals NHS Foundation Trust, London, Tooting, United Kingdom *CR

840 — A0172 Comparison of Ranibizumab and Aflibercept in Patients with Neovascular Age-Related Macular Degeneration treated following a 'Treat and Extend' protocol: efficacy variables from the pre-specified 12-month interim analysis of the RIVAL study. Mark C. Gillies¹, A. Hunyor¹, J. Arnold², F. Pecheur³, K. Underhill⁴, R. H. Guymer⁵, I. McAllister⁵. ¹Ophthalmology, University of Sydney, Sydney, New South Wales, Australia; ²Marsden Eye Specialists, Parramatta, New South Wales, Australia; ³Novartis Pharmaceuticals, Australia, Sydney, New South Wales, Australia; ⁴CERA, Sydney, New South Wales, Australia; ⁵Lions Eye Institute, Perth, Western Australia, Australia *CR, ✎

841 — A0173 Comparison of Outcomes in Patients with Neovascular Age-Related Macular Degeneration Managed with Anti-VEGF on Conventional Treat-and-Extend vs. Trial-Stop Regimens. Christina Y. Weng¹, W. Lin². ¹Retina, Baylor College of Medicine-Cullen Eye Institute, Houston, TX; ²Baylor College of Medicine, Houston, TX

Exhibit Hall A0174-A0220

Sunday, April 29, 2018 3:15 PM-5:00 PM

Retina

158 Vitreoretinal Surgery: Clinical Science

Moderators: William F. Mieler and Eduardo V. Navajas

842 — A0174 Assessment of Fluorescein Angiographic Pattern and Its prognostic value in Idiopathic Epiretinal Membrane. Ik Soo Byon^{1,2}, H. Kwon², S. Park², J. E. Lee². ¹Ophthalmology, Pusan National University Yangsan Hospital, Yangsan, Korea (the Republic of); ²Pusan National University School of Medicine, Yangsan, Korea (the Republic of)

843 — A0175 Effect of lubricants on corneal thickness during pars plana vitrectomy. Diane Siegel, A. Hendrick. Emory University School of Medicine, Atlanta, GA

844 — A0176 Visual and Anatomic Outcomes of Pediatric Endoscopic Vitrectomy in 210 Consecutive Cases. Unikora Yang¹, A. Nagiel^{2,3}, S. Wong^{2,4}, E. A. Say^{2,3}, T. C. Lee^{2,3}. ¹Pediatrics, Children's Hospital Los Angeles, Los Angeles, CA; ²Ophthalmology, The Vision Center, Children's Hospital Los Angeles, Los Angeles, CA; ³Ophthalmology, USC Roski Eye Institute, Los Angeles, CA; ⁴Ophthalmology, Moorfields Eye Hospital, Great Ormond Street Hospital for Children, Royal Free Hospital, London, United Kingdom; ⁵Ophthalmology, Storm Eye Institute, Medical University of South Carolina, Charleston, SC

845 — A0177 Comparison of outcomes between 20, 23 and 25 gauge vitrectomy for dropped lens fragments during cataract surgery. Seung Lee. ophthalmology, Dongguk University, Gyeonju, Gyeongsangbukdo, Korea (the Republic of)

846 — A0178 Comparison of Visual and Anatomic Outcomes of Eyes Undergoing Type I Boston Keratoprosthesis with Combination Pars Plana Vitrectomy to Eyes without Combination Vitrectomy. Jennifer I. Lim, L. Machen, A. Arteaga, F. Karas, R. A. Hyde, D. Cao, M. Niec, T. S. Vajaranant, M. S. Cortina. Ophthal-Eye & Ear Infirm, University of Illinois, Chicago, IL *CR

847 — A0179 Long-term results of vitrectomy with subretinal tissue plasminogen activator injection for submacular hemorrhage due to polypoidal choroidal vasculopathy. Shuhei Kimura, Y. Morizane, M. Hosokawa, Y. Shiode, M. Hirano, S. Doi, S. Tushima, K. Takahashi, Y. Kanzaki, M. Hosogi, A. Fujiwara, F. Shiraga. Ophthalmology, Okayama University, Okayama City, Japan

848 — A0180 Foveal architectural alterations following internal limiting membrane peeling for high myopic retinoschisis identified with intraoperative optical coherence tomography. Yuji Ito, M. Inoue, A. Hirakata. Kyorin Eye Center, Mitaka City, Tokyo, Japan *CR

849 — A0181 Inflammatory destruction of the RPE of an autologous RPE and choroid graft? Jan C. van Meurs^{1,2}, S. H. van Romunde¹, E. T. van Zeeburg¹, G. Pertile³. ¹Vitreoretinal Surgery, Rotterdam Eye Hospital, Rotterdam, Zuid-Holland, Netherlands; ²Ophthalmology, Erasmus University Rotterdam, Rotterdam, Zuid-Holland, Netherlands; ³Vitreoretinal Surgery, Ospedale Sacro Cuore Don Calabria, Negrar (Vr), Italy

850 — A0182 Outcomes of 25 or 27 Ga PPV and Akreos AO60 secondary lens implantation performed by trainees with supervision. Michael J. Ang¹, P. Patel¹, J. J. Chen^{1,2}, A. D. Fu^{1,2}. ¹Department of Ophthalmology, California Pacific Medical Center, San Francisco, CA; ²West Coast Retina, San Francisco, CA

851 — A0183 Dynamic Changes in Temperature and Condensation on Intraocular Lenses During Air-Fluid Exchange. Darren Knight, S. Tsao, S. Carter, M. C. Mehta, B. D. Kuppermann. Ophthalmology, University of California, Irvine, Irvine, CA

852 — A0184 The impact of early vitrectomy for dense vitreous hemorrhage without a history of diabetic retinopathy. Mayuka Hayashida¹, A. Miki¹, H. Imai¹, A. Azumi², M. Nakamura¹. ¹Kobe University Hospital, Nishinomiyu, Hyogo, Japan; ²Kobe Kaisei Hospital, Kobe, Japan

853 — A0185 Pharmacokinetics of Room Air Tamponade after Vitrectomy. Sung Who Park, J. E. Lee, Y. Jeong, J. Lee. Ophthalmology, Pusan national university hospital, Pusan, Korea (the Republic of)

854 — A0186 Long-term outcome of idiopathic macular hole vitrectomy without postoperative face-down positioning. Fumihiko Yagi, T. Takumi, G. Tomita. Department of Ophthalmology, Toho University Ohashi Medical Center, Meguro-ku, Tokyo, Japan *CR

855 — A0187 Correlation between choroidal thickness and intraocular pressure after 23-gauge and 25-gauge vitrectomy for idiopathic epiretinal membrane. Asuka Takeyama^{1,2}, Y. Imamura¹, M. Shibata¹, Y. Komiya¹, G. Tomita², M. Ishida¹. ¹Teikyo University Hospital Mizonokuchi, Tokyo, Japan; ²Toho University Ohashi Medical Center, Tokyo, Japan *CR

856 — A0188 Clinical and Anatomic Outcomes of Phacovitrectomy Surgery in Proliferative Diabetic Retinopathy. Talisa E. de Carlo, S. Gulati, I. Zhu, E. Tu, W. F. Mieler. Ophthalmology, University of Illinois at Chicago, Chicago, IL

857 — A0189 Augmented Posterior Hyaloid Adhesion Associated with Retinal Detachment after Macular Hole Repair. Danielle M. Lo¹, M. R. Chua², K. J. Wald¹. ¹Ophthalmology, NYU School of Medicine, New York, NY; ²Ophthalmology, New York Eye and Ear Infirmary, New York, NY

858 — A0190 A randomized controlled clinical trial comparing 20 gauge and 23 gauge vitrectomy for patients with macular hole or macular pucker. Paula Scholz¹, P. Muther¹, P. Schiller², M. Felsch², S. Fauser^{1,3}. ¹Department of Ophthalmology, University Hospital Cologne, Cologne, Germany; ²Institute of Medical Statistics, Computer Science and Epidemiology, University Hospital Cologne, Cologne, Germany; ³F. Hoffmann-La Roche, Basel, Switzerland ✕

859 — A0191 Clinical outcomes and safety profile of scleral fixated AKREOS AO60 lens. Nour Nofal¹, A. Dirani², K. Hammamji². ¹Ophthalmology, McGill University, Montreal, Quebec, Canada; ²Ophthalmology, Université de Montréal, Montreal, Quebec, Canada

860 — A0192 Narcotic Prescribing Patterns and Pain Management by Vitreoretinal Surgeons. Kinley Beck¹, P. Yanev², T. Jergensen², J. Iltis², R. Membreno², K. Wannamaker¹, p. rosales¹, j. sohn¹, R. Diaz-Rohena¹, M. Singer³. ¹Ophthalmology, UT Health San Antonio, San Antonio, TX; ²Medical Student, Long School of Medicine, UT Health San Antonio, San Antonio, TX; ³Medical Center Ophthalmology Associates, San Antonio, TX *CR

861 — A0193 Vitrectomy without Prone Positioning for Rhegmatogenous Retinal Detachments in Eyes with Inferior Retinal Breaks. Susumu Sakimoto¹, N. Shiraki¹, H. Sakaguchi¹, K. Nishida¹, K. Nishida¹, M. Kamei². ¹Ophthalmology, Osaka University Graduate School of Medicine, Suita, Japan; ²Ophthalmology, Aichi Medical University, Nagakute, Japan

862 — A0194 Predictive factors for better short-term outcome in idiopathic epiretinal membrane after pars plana vitrectomy. Sakiko Minami, Y. Shigeno, H. Shinoda, N. Nagai, T. Kurihara, M. Kamoshita, K. Watanabe, H. Sonobe, Y. Hidaka, K. Tsubota, Y. Ozawa. Ophthalmology, Keio University School of Medicine, Shinjuku-ku, Tokyo, Japan *CR

863 — A0195 Clinical and pathological observation of retinal changes after vitrectomy with internal limiting membrane peeling. Toshio Hisatomi, T. Tachibana, S. notomi, K. Fujiwara, Y. Murakami, Y. Ikeda, S. Yoshida, T. Ishibashi, K. Sonoda. Ophthalmology, Kyushu University, Fukuoka, Fukuoka, Japan

864 — A0196 The Double-edged Sword of Epiretinal Membrane Surgery: Improving Versus Inducing Diplopia. Raymond Iezzi, S. R. Hatt, D. A. Leske, J. M. Holmes. Ophthalmology, Mayo Clinic, Rochester, MN

865 — A0197 The Inner Limiting Membrane Peel without special staining for Macular Pucker Removal. Andrew Hou¹, K. Leikert¹, P. Hanona², B. Kizyl¹, N. Farley¹, H. Gao¹. ¹Ophthalmology, Henry Ford Hospital, Detroit, MI; ²School of Medicine, Michigan State University, East Lansing, MI

866 — A0198 Topical Aqueous Suppression and Spontaneous Closure of Idiopathic Full-Thickness Macular Holes. Daniel Su, A. Obeid, J. Hsu. Mid Atlantic Retina, Wills Eye Hospital, Philadelphia, PA

867 — A0199 The Treatment of Large Macular Hole using Multi-Layered Inverted ILM Flap Technique. Jung Min Park¹, D. Song¹, M. Yeom¹, S. Lee². ¹Maryknoll hospital, PUSAN, Korea (the Republic of); ²ophthalmology, Haeundae Paik Hospital, Pusan, Haeundae gu, Korea (the Republic of)

868 — A0200 Comparative outcomes of same-day versus day one postoperative examinations following vitreoretinal surgery. Sherveen S. Salek, H. L. Park, A. Hendrick. Emory Eye Center, Atlanta, GA

869 — A0201 Macular Buckling Versus Vitrectomy for Myopic Macular Schisis and associated macular Detachment. Lin Lu, B. Liu, Y. Li, W. Ma, X. Yu. Retina, Zhongshan Ophthalmic Center, Sun Yat-sen University, Guangzhou, China ✕

870 — A0202 Hemi-temporal internal limiting membrane peeling as a safety and useful procedure for macular hole surgery. Hiroki Sasaki, T. Jujo, A. Shiono, J. Kogo, H. Takagi. ophthalmology, St.Marianna University School of Medicine, Kawasaki, Kanagawa, Japan ✕

871 — A0203 Comparison of intraocular pressure fluctuation during pars plana vitrectomy performed with various vitrectomy systems. YOICHIRO SHINKAI¹, K. Yoneda², C. Sotozono². ¹a graduate student, Kyoto City, Kyoto, Japan; ²Kyoto Prefectural University of Medicine, Kyoto, Japan

872 — A0204 Quantitative Evaluation of Digital-Image Enhancement during Heads-Up Surgery. Kunihiro Akiyama^{1,2}, K. Watanabe^{1,2}, M. Fukui^{1,2}, H. Higuchi³, Y. Fukuma⁴, T. Noda^{1,2}. ¹Ophthalmology, National Hospital Organization, Tokyo Medical Center, Tokyo, Japan; ²Division of Vision Research, National Institute of Sensory Organs, National Hospital Organization, Tokyo Medical Center, Tokyo, Japan; ³Sony Corporation, Tokyo, Japan; ⁴Topcon Corporation, Tokyo, Japan *CR

873 — A0205 Preferred practice patterns among young retina specialists. Angeline L. Wang¹, J. Tsui¹, H. K. Pandya², M. C. Mehta¹. ¹Department of Ophthalmology, University of California Irvine, Irvine, CA; ²Retina Specialists, Dallas, TX

874 — A0206 Incidence of pars plana vitrectomy for complications related to proliferative diabetic retinopathy in patients previously treated with panretinal photocoagulation. Ian D. Kirchner¹, J. P. McLaughlin¹, B. Dinh³, P. H. Scharper². ¹Krieger Eye Institute, Sinai Hospital of Baltimore, Baltimore, MD; ²Retina Specialists of Alabama, Montgomery, AL; ³Internal Medicine, Inova Health System, Falls Church, VA

875 — A0207 Scleral fixation of posterior chamber intraocular lenses using Gore-Tex suture: clinical outcomes from a single-institution case series. Andrew M. Williams, B. Botsford, I. Conner, A. W. Eller, J. Martel. Department of Ophthalmology, University of Pittsburgh Medical Center, Pittsburgh, PA

876 — A0208 Clinical and Anatomic Outcomes of Combined Phacovitrectomy Surgery. Shilpa Gulati, T. E. de Carlo, I. Zhu, E. Tu, W. F. Mieler. Illinois Eye and Ear Infirmary, Chicago, IL

877 — A0209 Dynamic Anatomic Changes During Epiretinal Membrane Peeling Surgery Measured Using Intraoperative OCT. Lekha Mukkamala¹, P. Emami-naeini¹, S. Wong¹, D. Cunejare², S. Farsiu², L. S. Morse¹, A. Moshiri¹, S. S. Park¹, G. Yiu¹. ¹Ophthalmology, UC Davis Eye Center, Sacramento, CA; ²Duke University, Durham, NC *CR

878 — A0210 Perioperative anesthetic complications of vitrectomy surgery in patients older than 80 years: A comparison between general anesthesia and local anesthesia with sedation. SUNGHEE HAN¹, B. Kim², J. PARK², S. Bae². ¹Anesthesiology, Seoul National University Bundang Hospital, Seoul National University College of Medicine, Seongnam-si, Gyeonggi-do, Korea (the Republic of); ²Anesthesiology, Seoul National University Bundang Hospital, Seongman-si, Korea (the Republic of)

879 — A0211 Optical coherence tomography angiography of dissociated optic nerve fiber layer appearance after internal limiting membrane peeling for full thickness macular hole. Nathan Schuck¹, M. Heisler², S. Han², M. Sarunic², E. V. Navajas¹. ¹University of British Columbia, Vancouver, British Columbia, Canada; ²Simon Fraser University, Burnaby, British Columbia, Canada

880 — A0212 Posterior-involving open-globe injury prognostic factors and outcomes. Levi Kanu, Y. Jiang, W. F. Mieler. Ophthalmology, University of Illinois at Chicago, Chicago, IL

881 — A0213 Confocal scanning laser microscopy in patients with postoperative endophthalmitis. Tito Fiore, M. Lupidi, G. Torroni, A. Cerquaglia, B. Iaccheri, C. Cagini. Ophthalmology, S Marla Della Misericordia Hospital, Perugia, Italy

882 — A0214 Inverted flap for large macular holes: a functional evaluation. *salvatore parrulli, I. D'Agostino, U. Nava, M. Cereda, G. Staurenghi. university of milan - Luigi Sacco hospital, Milan, Italy *CR*

883 — A0215 Post-vitrectomy ocular hemorrhage among United States adults on oral antithrombotics. *Ronald A. Cantrell¹, J. R. Willis¹, S. S. Park², Y. Chia¹, M. Abouhossein¹, G. Barteselli¹. ¹Genentech, South San Francisco, CA; ²University of California Davis Eye Center, Sacramento, CA *CR*

884 — A0216 Outcomes of 27-gauge pars plana vitrectomy for diabetic vitreoretinal disease. *Megan Nichols, R. M. Sieburth, Y. Shildkrot. University of Virginia, Charlottesville, VA*

885 — A0217 Clinical outcome comparison of vitrectomy for myopic traction maculopathy according to the international photographic classification for myopic maculopathy. *Kyungsik Lee¹, E. Kang², H. Koh¹. ¹Ophthalmology, Yonsei University College of Medicine, Seoul, Korea (the Democratic People's Republic of); ²Bupyeong ST. Mary's eye clinic, Seoul, Korea (the Republic of)*

886 — A0218 Outcomes of Vitrectomy in Von Hippel-Lindau Disease. *Matthew A. Powers, R. A. Shields, C. A. Ludwig, D. M. Moshfeghi. Ophthalmology, Stanford University, Palo Alto, CA*

887 — A0219 Use of silicon oil to reduce bleeding after vitrectomy in patients with vitreous hemorrhage due to diabetic retinopathy. *Wilehaldo Quiñónez, E. Romo García, S. Paz Camacho, G. Gutierrez Ruiz, A. Meza Anguiano, A. Ramón Concepción. Oftalmología, Centro de Investigación y Docencia en Ciencias de la Salud- Universidad Autónoma de Sinaloa - Hospital Civil de Culiacán, Culiacán, Mexico*

888 — A0220 Development, Implementation, and Evaluation of a Pre-Residency Vitreoretinal Curriculum for Ophthalmology Residents Using the American Academy of Ophthalmology's Ophthalmology News and Education Network. *Robison V. Chan, L. Machen, K. Jonas, A. Aref. Ophthalmology, Illinois Eye and Ear Infirmary, Chicago, IL *CR*

Exhibit Hall A0278-A0287

Sunday, April 29, 2018 3:15 PM-5:00 PM

Lens

159 Lens Development and Cell Biology

Moderator: Melinda K. Duncan

889 — A0278 Immunolocalization of aquaporin 1 and aquaporin 8 in lens. *Rijo Hayashi¹, S. Hayashi², K. Fukuda³, S. Machida¹. ¹Ophthalmology, Saitama Medical Center, Dokkyo Medical University, Koshigaya, Saitama, Japan; ²Lively Eye Clinic, Soka, Saitama, Japan; ³Saitama Medical Center Joint Research Center, Dokkyo Medical University, Koshigaya, Saitama, Japan*

890 — A0279 Tropomyosin is required for normal lens development and differentiation. *Eri Kubo¹, T. Shibata¹, E. Kiyokawa², M. Ikawa³, D. P. Singh⁴, H. Sasaki¹. ¹Dept of Ophthalmology, Kanazawa Medical University, Kahoku-gun, Ishikawa, Japan; ²Department of Oncogenic Pathology, Kanazawa Medical University, Ishikawa, Japan; ³Research Institute for Microbial Diseases, Osaka University, Osaka, Japan; ⁴Department of Ophthalmology and Visual Sciences, University of Nebraska Medical Center, Omaha, NE *CR*

891 — A0280 Wnt5a through noncanonical Wnt/JNK signaling promotes the differentiation of human embryonic stem cells to lentoid bodies. *Chenlu Han, J. Li, C. Wang, L. Luo. Zhongshan Ophthalmic Center, Sun Yat-Sen University, Guangzhou, China*

892 — A0281 Investigation of differentiation and cell junctions in 3D Spherical Micro-Chambered Lens Epithelial Cells *In vitro*. *Chun-Yen Liu, E. Wang, N. Tjahjono, C. Xia, X. Gong. Vision & Optometry Science, University of California, Berkeley, Berkeley, CA*

893 — A0282 Spread: A regulator of lens epithelial cell proliferation and fiber differentiation. *Fatima Wazin^{1,2}, F. J. Lovicu^{1,2}. ¹Clinical ophthalmology and eye health, University of Sydney, Sydney, New South Wales, Australia; ²Save Sight Institute, Sydney, New South Wales, Australia*

894 — A0283 Transcriptome landscape of early lens development. *Salil A. Lachke^{1,2}, A. Kakrana², A. D. Siddam¹, I. Saadi², D. Anand¹. ¹Department of Biological Sciences, University of Delaware, Newark, DE; ²Center for Bioinformatics and Computational Biology, University of Delaware, Newark, DE; ³Department of Anatomy and Cell Biology, University of Kansas Medical Center, Kansas City, KS*

895 — A0284 Investigation of proteins interacting with the cataract-linked RNA-binding protein Celf1 in mouse lens development. *Sandeep Aryal¹, A. D. Siddam¹, S. A. Lachke^{1,2}. ¹Biology, University of Delaware, Newark, DE; ²Center for Bioinformatics and Computational Biology, University of Delaware, Newark, DE*

896 — A0285 Automated Gestational Age Estimation through Smartphone Lens Imaging Using Convolutional Neural Networks and Support Vector Machines. *Arjun Desai¹, C. Peng¹, L. Fang¹, D. Mukherjee¹, S. Farsiui¹, J. Griffin². ¹Biomedical Engineering, Duke University, Durham, NC; ²RTI International, Research Triangle Park, NC*

897 — A0286 Long-term Ocular Developmental Changes in Children following Cataract Surgery. *Shagun Dhaliwal, D. McCartney, K. Mitchell, R. Cooley, D. Han, S. Luke, L. Kong. Department of Ophthalmology & Visual Sciences, Texas Tech University Health Sciences Center, Lubbock, TX*

898 — A0287 Expression of Transforming Growth Factor-beta and Matrix Metalloproteinases in Aqueous Humor of Congenital Ectopia Lentis Patients. *Bing Xiao, D. Zheng, Cataract, Zhongshan Ophthalmic Center, Sun Yat-sen University, Guangzhou, China*

Exhibit Hall B0077-B0086

Sunday, April 29, 2018 3:15 PM-5:00 PM

Cornea

160 Ocular Surface Disease Microbiome

Moderator: Cintia S. De Paiva

899 — B0077 Ocular surface microbiomes of children and adults. *Coby Ray¹, K. Mitchell¹, E. Morales², D. Kirk¹, L. Motheral³, E. Conser³, T. Camp³, T. W. Reid¹, P. Tran¹, K. Luth¹, D. McCartney¹, B. Tudor², E. Nieto², M. Maldonado⁴, O. Sundin². ¹Department of Ophthalmology and Visual Sciences, Texas Tech University Health Sciences Center, Lubbock, TX; ²Biomedical Sciences, Texas Tech University Health Sciences Center at El Paso, El Paso, TX; ³Pediatrics, Texas Tech University Health Sciences Center, Lubbock, TX; ⁴Surgery, Texas Tech University Health Sciences Center at El Paso, El Paso, TX*

900 — B0078 Metagenomic analysis of Dry Eye Syndrome microbiome. *Selene Molina¹, E. O. Graue-Hernandez², R. Arredondo¹, P. Orduña¹, L. Alcaraz³, E. Graue-Wiechers⁴, S. Ponce¹, Y. López¹. ¹Facultad de Medicina, Universidad Nacional Autónoma de México, Mexico City, Mexico; ²Instituto de Oftalmología Conde de Valenciana, Mexico City, Mexico; ³Instituto de Ecología, Universidad Nacional Autónoma de México, Mexico City, Mexico; ⁴Universidad Nacional Autónoma de México, Mexico City, Mexico*

901 — B0079 Staphylococcus aureus lysates inhibit HSV-I infection in conjunctival epithelial cells. *Kaili Wu¹, T. Lin¹, X. Liu¹, Y. Zhang^{1,2}, M. Zhu¹. ¹Zhongshan Ophthalmic Center, Sun Yat-sen University, Guangzhou, China; ²Hubei University of Science and Technology, Xianning, China*

902 — B0080 Impact of contact lens wear and dry eye on the amicrobiomic status of the murine cornea. *Stephanie Wan¹, M. Metruccio², A. Kroken², M. Grosser², D. J. Evans^{2,3}, S. M. Fleiszig². ¹Vision Science Program, UC Berkeley, Berkeley, CA; ²Optometry, UC Berkeley, Berkeley, CA; ³College of Pharmacy, Touro University, Vallejo, CA*

903 — B0081 Ocular Demodicosis is Associated with Changes of Ocular Surface Microbiota. *Xiaohui Luo, Y. Liu, L. Wei, L. Liang. Zhongshan Ophthalmic Center, Sun Yat-sen University, Guangzhou, China*

904 — B0082 Determining the Ideal Swab Material for Analyzing the Ocular Surface Microbiome. Kara M. Cavuoto, A. Galor, D. Miller, S. Banerjee. Univ of Miami Sch of Medicine, Miami, FL

905 — B0083 In-Vitro Demodicidal Activity of Commercial Lid Hygiene Products. Alan G. Kabat. Southern College of Optometry, Memphis, TN *CR

906 — B0084 Acute sunburn of human eye – microstructural observations by in vivo confocal microscopy. Christina N. Grupcheva, D. Grupchev, M. N. Radeva. Ophthalmology and visual science, Medical Univerity, Varna, Bulgaria

907 — B0085 Microbial Contamination in Corneas Stored in Organ Culture Media: A 30 Month Report from the Lions New South Wales Eye Bank. Meidong Zhu^{1,2}, M. Wells^{3,4}, M. Kennedy², R. Devasahayam¹, P. Georges¹, M. Ghabcha¹, J. Treloggen¹, G. Sutton³, C. Petsoglou^{1,2}. ¹Lions New South Wales Eye Bank, New South Wales Organ and Tissue Donation Service, Sydney, New South Wales, Australia; ²Save Sight Institute, The University of Sydney, Sydney, New South Wales, Australia; ³Sydney Medical School, The University of Sydney, Sydney, New South Wales, Australia; ⁴Sydney Eye Hospital, Sydney, New South Wales, Australia

908 — B0086 What is hiding in your eyes? The microbiome of ocular surface niches. Jerome Ozkan¹, M. Willcox¹, B. Wermeuer², T. Thomas¹, M. T. Coroneo¹. ¹University of New South Wales, Kensington, New South Wales, Australia; ²University of Geottingen, Geottingen, Germany

Exhibit Hall B0087-B0136

Sunday, April 29, 2018 3:15 PM-5:00 PM

Cornea

161 Dry Eye Clinical I

Moderators: Richard Y. Hida and Murat Dogru

909 — B0087 Noninvasive assessment of tear film break-up time and location in normal subjects and patients with dry eye syndrome. Ran Zhuo^{2,1}, J. Jiang¹, L. Hou¹, X. Mao¹, F. Lu¹, B. Zhang². ¹The Affiliated Eye Hospital, Wenzhou Medical University, Wenzhou, Zhejiang, China; ²Nova Southeastern University, Davie, FL

910 — B0088 Isolation and Analysis of Normal Human Tear Extracellular Vesicle RNA. Henry Fortinberry, W. Ngo, C. Postnikoff, J. J. Nichols, A. Pucker. Optometry and Vision Science, University of Alabama at Birmingham, Birmingham, AL *CR

911 — B0089 Equivalence of lipid layer patterns obtained from two different interferometers and graded with two scales. Maria Vidal-Rohr^{1,2}, L. N. Davies¹, J. S. Wolffsohn¹. ¹Aston University, Birmingham, United Kingdom; ²Universidad de Valencia, Valencia, Spain

912 — B0090 Changes in Signs and Symptoms of Dry Eye Disease after using 0.1% or 0.05% Emulsions of Cyclosporine A Eye Drops. Jonatan Olafsson^{1,2}, Ø. A. Utheim^{3,4}, X. Chen^{5,6}, S. Olafsson^{7,8}, S. Raeder², D. A. Dart⁹, B. Tashbayev^{2,10}, T. P. Utheim^{3,11}. ¹Institute of Clinical Medicine, Faculty of Medicine, University of Oslo, Oslo, Norway; ²The Norwegian Dry Eye Clinic, Oslo, Norway; ³Department of Ophthalmology, Oslo University Hospital, Oslo, Norway; ⁴Department of Medical Biochemistry, Oslo University Hospital, Oslo, Norway; ⁵Faculty of Health Science, National Centre for Optics, Vision and Eye Care, University of Southeast Norway, Kongsberg, Norway; ⁶Department of Ophthalmology, Drammen Hospital, Drammen, Norway; ⁷Telemark Hospital, Skien, Norway; ⁸Loma Linda University Medical Center, Loma Linda, CA; ⁹Schepens Eye Reserach Institute/Massachusetts Eye and Ear/Department of Ophthalmology, Harvard Medical School, Boston, MA; ¹⁰Institute of Clinical Dentistry, Faculty of Dentistry, University of Oslo, Oslo, Norway; ¹¹Department of Ophthalmology, Stavanger University Hospital, Stavanger, Norway

913 — B0091 Smartphone use and effects on tear film, blinking and binocular vision. Blanka Golebiowski, J. Long, K. Harrison, A. Lee, L. Asper. School of Optometry and Vision Science, UNSW Sydney, UNSW Sydney, New South Wales, Australia

914 — B0092 Evaluation of the Durability of Dry Eye Symptom Relief Following Daily Use of TrueTear™. Jeff Penzner¹, D. Hollander², G. Torkildsen³, S. Baba¹, M. Holdbrook¹, M. Senchyna¹. ¹Allergan plc, Irvine, CA; ²Ora Inc., Andover, MA; ³Andover Eye Associates, Andover, MA *CR, ✗

915 — B0093 Effectiveness of Trehalose 3% as a treatment for Dry Eye Syndrome in patients with Sjögren's Syndrome. Alejandro Navas, A. Benitez-García, C. Pinkus Herrera, J. Serna-Ojeda, A. J. Ramirez-Miranda, E. O. Graue-Hernandez. Cornea and Refractive Surgery, Institute of Ophthalmology "Conde de Valenciana", Mexico City, CDMX, Mexico *CR

916 — B0094 Meibomian gland dysfunction and dry-eye syndrome in type 2 diabetic patients. Ji Yoon Kwak, T. Kim, S. Lee, K. Han, R. Jun. Ewha Womans University Mokdong Hospital, Seoul, Korea (the Republic of)

917 — B0095 Temporal change in clinical dry eye metrics of chronic ocular graft-versus-host disease (OGVHD) after allogeneic hematopoietic stem cell transplantation (allo-HSCT). Cynthia Tung. University of Texas MD Anderson Cancer Center, Houston, TX

918 — B0096 Effect of TrueTear™ on Dry Eye Symptoms During Exposure to a Controlled Adverse Environment. Michelle Senchyna¹, G. W. Ousler², G. Jerkins³, G. Pattar⁴, D. Evans⁵, M. Holdbrook¹, S. Baba¹. ¹Allergan plc, Irvine, CA; ²Ora Inc., Andover, MA; ³Nashville Vision Associates, Nashville, TN; ⁴Eye Care Institute, Louisville, KY; ⁵Total Eye Care, Memphis, TN *CR, ✗

919 — B0097 Conjunctival epithelial cell HLA-DR expression and association with signs and symptoms of Dry Eye Disease (DED) in the 'Dry Eye Assessment and Management' (DREAM®) Study. Neeta S. Roy¹, Y. Wei¹, E. Kuklinski¹, B. Barry², G. Ying³, Y. Yu³, M. G. Maguire³, M. Brightwell-Arnold³, P. A. Asbell¹. ¹Ophthalmology, Icahn School of Medicine at Mount Sinai, New York, NY; ²The Warren Alpert Medical School of Brown University, Providence, RI; ³University of Pennsylvania, Philadelphia, PA *CR, ✗

920 — B0098 Contrast Between Meibomian Gland and Background as an Objective Measure of Gland Function. Thao N. Yeh, M. C. Lin. School of Optometry, University of California, Berkeley, Albany, CA

921 — B0099 Prevalence of Meibomian Gland Dysfunction in Sjogren's Syndrome Patients. Sruthi Srinivasan¹, B. Caffery², J. S. Harthan³, M. Acs², M. Barnett⁴, L. Johnson-Tong⁵, D. Papinski¹, B. Pemberton⁶. ¹Centre for Ocular Research and Education, University of Waterloo, School of Optometry and Vision Science, Waterloo, Ontario, Canada; ²Toronto Eye Care, Toronto, Ontario, Canada; ³Illinois College of Optometry, Chicago, IL; ⁴Ophthalmology and Vision Science, UC Davis Health, Sacramento, CA; ⁵Private Practice, Sacramento, CA; ⁶Husz & Pemberton Eye Center, Tucson, CA

922 — B0100 Efficacy of punctal cauterly in chronic ocular GVHD. Matthew Viggiano¹, L. Mi², J. Shen³. ¹Research, Mayo Clinic, Scottsdale, AZ; ²Research Biostatistics, Mayo Clinic, Scottsdale, AZ; ³Ophthalmology, Mayo Clinic, Scottsdale, AZ

923 — B0101 Lid laxity and Concurrent Signs of Ocular Surface Disease. Tracy Doll¹, J. S. Harthan², S. Schwartz³, C. Halleran⁴, M. M. Hom⁵. ¹Pacific University College of Optometry, Forest Grove, OR; ²Illinois College of Optometry, Chicago, IL; ³Private Practice, Sterling Heights, MI; ⁴Private Practice, Clarendville, Newfoundland, Canada; ⁵Private Practice, Azusa, CA *CR

924 — B0102 The Association between Signs and Symptoms in Patients with Dry Eye Disease. Maxwell Pistilli¹, M. G. Maguire¹, J. V. Greiner², P. A. Asbell³. ¹Ophthalmology, University of Pennsylvania, Philadelphia, PA; ²Schepens Eye Res Inst, Mass Eye Ear Inf, Harvard Medical School, Cambridge, MA; ³Icahn School of Medicine, Mount Sinai, New York, NY *CR, ✗

- 925 — B0103 Tivanisiran, a new treatment for Dry Eye Disease, that improved signs and symptoms in clinical trials.** Ana Isabel Jimenez², V. Ruz², V. Gonzalez², C. Paneda¹, T. Martinez¹, B. Vargas², A. Bleau². ¹R & D, Sylentis, Tres Cantos, Madrid, Spain; ²Sylentis, Madrid, Spain *CR, ✕
- 926 — B0104 The upregulated expression of TLR4 signaling pathway in tear proteins of patients taking SSRIs: a possible association between SSRIs and dry eye.** Yue Yin, L. Gong. Eye & ENT Hospital of Fudan University, Shanghai, China
- 927 — B0105 The correlation between the severity of dry eye and videokeratographic indices in Korea.** Byung Yi Ko¹, J. Lee², M. Kim², Y. Lee². ¹External Eye in Ophthalmology, Konyang University Hospital, Daejeon, Korea (the Democratic People's Republic of); ²Konyang University Hospital, Daejeon, Korea (the Republic of)
- 928 — B0106 Prevalence of Meibomian Gland Dysfunction in a Norwegian Working-Age Population Seeking Specialist Eye Care for Dry Eye Symptoms.** Reza A Badian³, T. P. Utheim^{3,5}, S. Raeder¹, Ø. A. Utheim², X. Chen³, B. Tashbayev⁴, B. Aakre³, A. Ystenas³, V. Sundling³. ¹Norwegian Dry Eye Clinic, Oslo, Norway; ²Department of Ophthalmology, Oslo University Hospital, Oslo, Norway; ³National Centre for Optics, Vision and Eye Care Department of Optometry, Radiography and Lighting Design, University College of Southeast-Norway, Norway, Norway; ⁴Institute of Clinical Dentistry, Faculty of Dentistry, University of Oslo, Oslo, Norway; ⁵Unit of Regenerative Medicine, Department of Medical Biochemistry, Oslo University Hospital, Oslo, Norway
- 929 — B0107 Increased Meibomian gland dropout and MMP-9 expression in an untreated millennial population who did not self-report for MGD treatment.** Srihari Narayanan, N. Kasraie, C. G. Connor, W. Miller. Rosenberg School of Optometry, University of the Incarnate Word, San Antonio, TX
- 930 — B0108 Is significant reduction of ocular surface inflammation while applying CSA 0,1% eyedrops in patients with ocular Graft versus Host Disease (GVHD) accompanied by improvement of the Ocular Surface Disease Index (OSDI)?** Stephanie Weissleder¹, A. Steinhorst¹, F. Ayuk Ayuketang², S. Linke¹, N. Stuebiger¹. ¹Department of Ophthalmology, University of Hamburg, Hamburg, Germany; ²Bone Marrow Transplantation, University of Hamburg, Hamburg, Germany
- 931 — B0109 Correlations between dry eye, ocular surface findings, autonomic and sensitive neuropathy in diabetic patients with Charcot Joint Disease.** Alex Treiger Grubenmacher¹, G. Ayub¹, Y. Ballesteros Atala², J. Castro², M. G. Vitorino¹, D. Huarachi¹, D. Borges¹, B. G. Ferreira¹, B. Duarte¹, M. Candida Ribeiro Parisi², M. Alves¹. ¹Ophthalmology, University of Campinas, Campinas, SP, Brazil; ²Endocrinology, University of Campinas, Campinas, SP, Brazil
- 932 — B0110 A Novel System, TearCare®, for the Treatment of the Signs and Symptoms of Dry Eye Disease.** David Badawi. Central Eye Care, Arlington Heights, CA *CR, ✕
- 933 — B0111 Interpretation of the lipid layer thickness in dry eye disease with LipiView II interferometer.** Yun Jin Lee^{1,2}, D. Yoon^{1,2}, J. Hyon^{1,2}, H. Jeon^{1,2}. ¹Ophthalmology, Seoul National University College of Medicine, Seoul, Korea (the Republic of); ²Ophthalmology, Seoul National University Bundang Hospital, Seongnam, Korea (the Republic of)
- 934 — B0112 A longitudinal study of the relationship between signs and symptoms in keratoconjunctivitis sicca.** Jeffrey Hogg^{1,2}, D. Ismail³, J. Garrigue³, M. Deniaud⁴, M. Amrane³, F. C. Figueiredo^{1,2}. ¹Newcastle Eye Centre, Newcastle upon Tyne, United Kingdom; ²The University of Newcastle upon Tyne, Newcastle upon Tyne, United Kingdom; ³Santen SAS, Vervy, France; ⁴MDSTAT Consulting, Lyon, France
- 935 — B0113 The potential effect of LipiFlow on meibomian gland structure: a preliminary analysis utilizing Dynamic Meibomian Imaging.** Arjan Hura¹, A. Epitropoulos^{2,5}, C. Czyn^{3,4}, C. A. Blackie⁶, T. Davis (McClelland)^{2,5}. ¹Riverside Methodist Hospital, Columbus, OH; ²Ophthalmic Surgeons & Consultants of Ohio Inc, Columbus, OH; ³Ophthalmology, Section Oculofacial Plastic and Reconstructive Surgery, Ohio University/ OhioHealth Doctors Hospital, Columbus, OH; ⁴Ophthalmology, Oral and Maxillofacial Surgery, Grant Medical Center, Columbus, OH; ⁵The Eye Center of Columbus, Columbus, OH; ⁶Vision, Johnson & Johnson, Morrisville, NC *CR
- 936 — B0114 The repeatability of tear film measurements in subjects with dry eye.** Fiona Stapleton, K. Wong, M. Willcox, J. Tan. School of Optometry and Vision Science, University of New South Wales, Kensington Sydney, New South Wales, Australia *CR, ✕
- 937 — B0115 Prevalence of Novel Candidate Sjogren's Syndrome Antibodies in the Dry Eye Assessment and Management (DREAM®) Study.** Vantine Y. Bunyal¹, G. Ying¹, M. G. Maguire¹, E. Kuklinski³, E. Peskin¹, M. C. Lin², P. A. Asbell³. ¹Ophthalmology, Scheie Eye Institute, Penn Valley, PA; ²Optometry, University of California, Berkeley, Berkeley, CA; ³Ophthalmology, Icahn School of Medicine at Mount Sinai, New York, NY *CR, ✕
- 938 — B0116 Clinical Performance of a Multiplexed Nanoliter Lab-on-a-Chip Immunoassay Platform.** Benjamin D. Sullivan^{1,2}, B. Bielory³, M. Bohm⁴, B. Cochener⁵, D. Devries⁶, E. Donnenfeld⁷, W. Hauser⁸, T. Kohnen⁴, M. McDonald⁷, J. Reddy⁹, J. D. Sheppard^{10,11}, W. Whitley¹¹, E. Yeu¹¹. ¹TearLab Corp, San Diego, CA; ²Lubris BioPharma, Boston, MA; ³Ophthalmic Consultants of Boston, Boston, MA; ⁴Universitäts Klinikum Frankfurt Goethe-Universität, Frankfurt, Germany; ⁵Inserm LaTIM Research Unit UMR, University Brest Hospital, Brest, France; ⁶Eye Care Associates of Nevada, Sparks, NV; ⁷Ophthalmic Consultants of Long Island, Garden City, NY; ⁸Southern College of Optometry, Memphis, TN; ⁹LV Prasad Eye Institute, Hyderabad, India; ¹⁰Eastern Virginia Medical School, Norfolk, VA; ¹¹Virginia Eye Consultants, Norfolk, VA *CR
- 939 — B0117 Analytical Performance of Quantitative MMP-9 Tear Fluid Analysis on a Nanoliter Lab-on-a-Chip Immunoassay Platform.** Michael Berg, D. Cohen, M. Lee, A. Fenlason, R. Smidt, S. Zmina, B. Sullivan. TearLab Corporation, San Diego, CA *CR
- 940 — B0118 Temperature Variability of Beaded Heat Mask for Meibomian Gland Dysfunction.** Amy Nau, G. Stetson. Korb Research, Sharon, MA
- 941 — B0119 Influence of perfluorohexyloctane containing eye drops on tear film thickness in patients with mild to moderate dry eye disease.** Gerhard Garhofer¹, D. Schmid¹, R. M. Werkmeister², N. Adzhemian^{1,3}, K. Serge⁴, S. Kroesser⁴, L. Schmetterer^{1,5}. ¹Department of Clinical Pharmacology, Medical University of Vienna, Vienna, Austria; ²Center for Medical Physics and Biomedical Engineering, Medical University of Vienna, Austria, Vienna, Austria; ³Moscow Helmholtz Research Institute of Eye Diseases, Moscow, Russian Federation; ⁴Novaliq GmbH, Heidelberg, Germany; ⁵Singapore Eye Research Institute, Singapore National Eye Centre, Singapore, Singapore *CR, ✕
- 942 — B0120 Epidemiology of persistent dry eye-like symptoms after cataract surgery.** Allister Gibbons¹, E. Iglesias², R. Sajjani¹, R. Levitt¹, K. sarantopoulos¹, A. Galor¹. ¹UNIVERSITY OF MIAMI, MIAMI, FL; ²Miami Veterans Affairs Medical Center, Miami, FL
- 943 — B0121 Relationship between subjective symptoms of dry eye disease and lifestyle habits: Large-scale clinical research using iPhone application.** Takenori Inomata¹, M. Nakamura², Y. Yoshimura¹, M. Iwagami¹, Y. Hirastuka¹, S. Hori¹, K. Fujimoto¹, Y. Okumura¹, T. Shiang¹, A. Murakami¹. ¹Ophthalmology, Juntendo University Faculty of Medicine, Tokyo, Japan; ²Center for iPS Cell Research and Application, Kyoto University, Kyoto, Japan *CR, ✕

944 — B0122 Noninvasive assessment of tear film and corneal wavefront change of 3% Diquafosol ophthalmic solution for patients with dry eye after cataract surgery. Bongjoon Choi. Lee Eye Hospital, Busan, Korea (the Democratic People's Republic of)

945 — B0123 Effect of warming eyelids on tear film stability and quality of life in visual display terminal (VDT) users: a randomized controlled trial. Chi-Chin Sun^{1,2}, C. Hsiao³, C. Lee⁴, Y. Hwang³, T. Kyouko³, I. Michihito⁵. ¹Ophthalmology, Chang Gung Memorial Hospital, Keelung, Taiwan; ²Department of Chinese Medicine, Chang Gung University, Taoyuan City, Taiwan, Taoyuan, Taiwan; ³Ophthalmology, Chang Gung Memorial Hospital, LinKou, Taiwan; ⁴Ophthalmology, Chang Hua Shiou Chuan Hospital, Chang Hua, Taiwan; ⁵Personal Health Care Lab, Kao Corporation, Tokyo, Japan *CR, ✗

946 — B0124 Periocular nerve blocks for the treatment of ocular pain. leslie small¹, A. Chang^{6,2}, R. Levitt³, A. Galor^{4,5}, K. sarantopoulos³. ¹Optometry, Bascom Palmer Eye Institute, Miami, FL; ²Physical Medicine and Rehabilitation, Jackson Memorial Hospital, Miami, FL; ³Department of Anesthesiology, Perioperative Medicine and Pain Management, University of Miami Miller School of Medicine, Miami, FL; ⁴Ophthalmology, Bascom Palmer Eye Institute University of Miami, Miami, FL; ⁵Ophthalmology, Miami Veterans Administration Medical Center, Miami, FL; ⁶Department of Physical Medicine and Rehabilitation, University of Miami Miller School of Medicine, Miami, FL

947 — B0125 A Phase 2 randomized, double-masked, placebo-controlled study of novel narrow spectrum kinase inhibitor TOP1630 for the treatment of dry eye syndrome. Mike Taylor, A. Duggal, C. Walshe, M. Fyfe, A. Rowley, S. Webber. TopiVert Pharma, London, United Kingdom *CR, ✗

948 — B0126 Tear film break-up time and lipid layer assessment for Dry Eye Disease employing smartphone technology at a tertiary eye care center. Fatima Rubio¹, J. F. Perez-Vazquez², R. Garcia-Vazquez², S. Rodriguez-Castro², R. Gonzalez-Salinas², R. Gultias-Cañizo², H. Quiroz-Mercado², M. Garza-Leon³, E. Hernandez-Quintela³, V. Sanchez-Huerta³. ¹Anterior Segment Surgery, Asociación Para Evitar la Ceguera en México, Mexico City, Mexico; ²Research Department, Asociación Para Evitar la Ceguera en México, Mexico City, Mexico; ³Cornea, Asociación Para Evitar la Ceguera en México, Mexico City, Mexico *CR

949 — B0127 Clinical, cytological and biochemical results of the adjuvant treatment of freeze-dried Aloe Vera gel and drops in patients with evaporative dry eye disease. Josefina A. Mejias S., L. Izquierdo, M. G. Hadid, C. Maldonado, J. A. Chauca, M. Henriquez. Research Department, Oftalmosalud, Lima, Peru

950 — B0128 Prevalence of Dry Eye Feeling and Its Associations in Russia. The Ural Eye and Medical Study. Jost B. Jonas¹, M. Bikbov², G. Kazakbaeva², R. Fayzrakhmanov², Y. Uzyanbaeva², R. Zainullin². ¹Ophthalmology, Medical Faculty Mannheim-Heidelberg, Mannheim, Germany; ²Ufa Eye Research Institute, Ufa, Russian Federation

951 — B0129 Does smartphone exposure time and smartphone SAR value affect ocular surface and refractive error of the dominant eye? Sertac Argun Kivanc¹, B. Akova-Budak¹, M. Ulusoy², A. Seyhan Karatepe³, O. O. Olcaysu⁴. ¹Ophthalmology, Uludag University, Bursa, Turkey; ²Ophthalmology, Baskent University, Konya, Turkey; ³Ophthalmology, Okan University, Istanbul, Turkey; ⁴Istinye State Hospital, Istanbul, Turkey

952 — B0130 Evaluation of Multiple Imputation Methods for Missing Diary Data for Statistical Analysis in Dry Eye Studies. Lot Slade, K. Bateman, D. W. Usner. Biostatistics, Statistics and Data Corporation, Tempe, AZ

953 — B0131 A comparison of four warm compress devices. Graham Stetson^{1,2}, C. Kenrick^{2,3}. ¹New England College of Optometry, Boston, MA; ²Korb & Associates, Boston, MA; ³MicroSurgical Eye Consultants, Peabody, MA

954 — B0132 Association Between Symptoms and Signs of Dry Eye after Allogeneic Hematopoietic Stem Cell Transplantation. Da Yeong Kim², D. kim¹, H. Kim¹, K. Na². ¹Department of Electrical Engineering, Inha University, Incheon, Korea (the Republic of); ²Department of Ophthalmology, Yeouido St. Mary's Hospital, Seoul, Korea (the Republic of)

955 — B0133 Altered Lymphotoxin alpha (LTA) level in tear fluid, measured with a POCT test, in dry eye patients. Jing-Feng Huang^{2,1}, X. Lin³, Z. Liu³. ¹La Jolla BioConsulting, San Diego, CA; ²Seinda Biomedical, Guangzhou, China; ³Xiamen University, Medical School, Xiamen, China *CR

956 — B0134 Does diabetes make a difference in dry eye? Scott Schwartz³, C. Halleran¹, T. Doll², J. S. Harthan¹, M. T. Williams⁷, L. E. O'Dell⁶, N. Bernabe⁵, M. M. Hom⁵. ¹Illinois College of Optometry, Chicago, IL; ²College of Optometry, Pacific University Oregon, Beaverton, OR; ³Private Practice, Sterling Heights, MI; ⁴Private Practice, Clarendville, Newfoundland, Canada; ⁵Private Practice, Azusa, CA; ⁶Private Practice, Manchester, PA; ⁷EyeCare, New York Hotel Trades Council Health Centers, New York, NY *CR

957 — B0135 The Effect of 2% Rebamipide Eye drops on the Ocular Surface in Dry Eye Patients. Murat Dogru^{1,2}, M. Shinzawa¹, S. Den¹, H. Iseda¹, M. Suzuki¹, Y. Shibasaki³, J. Shimazaki¹. ¹Ophthalmology, Tokyo Dental College Ichikawa General Hospital, Chiba, Japan; ²Ophthalmology, Keio University School of Medicine, Tokyo, Japan; ³Medical Affairs, Otsuka Pharma, Tokyo, Japan *CR, ✗

958 — B0136 A hypothesis-free study of medication use and symptomatic dry eye in 79,866 participants. Laura Wolpert, S. Bazeer, C. J. Hammond, J. Vehof. Twin Research and Genetic Epidemiology, Kings College London, London, United Kingdom

Exhibit Hall B0213-B0240

Sunday, April 29, 2018 3:15 PM-5:00 PM

Retinal Cell Biology

162 Photoreceptor Degeneration

Moderators: Martina Biagioni and Brian D. Perkins

959 — B0213 Dark rearing does not prevent prodromal rod oxidative stress *in vivo* in male *Pde6b*^{fl/wt} mice. Bruce A. Berkowitz¹, R. Podolsky², A. M. Berr³, K. Dermany³, F. Shafiq-Khorassani², R. Roberts³. ¹Anatomy/Cell Biol & Ophthal, Wayne State Univ Sch of Med, Detroit, MI; ²Department of Family Medicine and Public Health Sciences, Wayne State University, Detroit, MI; ³Anatomy & Cell Biology, Wayne State University, Detroit, MI

960 — B0214 The Joubert Syndrome cilia proteins *ar113b*, *ah1l* and *cc2d2a* differentially modify the severity of retinal dysfunction due to loss of *cep290* in zebrafish. Ping Song¹, E. M. Lessieur⁴, E. Piccillo², C. C. Nivar³, J. Fogerty¹, B. D. Perkins¹. ¹Ophthalmic Research, Cole Eye Inst, Cleveland Clinic Fndn, Cleveland, OH; ²John Carroll University, University Heights, OH; ³Case Western Reserve University, Cleveland, OH; ⁴Department of Molecular Medicine, Cleveland Clinic Lerner College of Medicine of Case Western Reserve University, Cleveland, OH

961 — B0215 Evaluation of the safety of laser-delivered photobiomodulation and its neuroprotection efficacy in a mouse model of Retinitis Pigmentosa. Jack Z. Ao, G. Chidlow, J. P. Wood, R. J. Casson. Ophthalmology and Visual Sciences, University of Adelaide, Adelaide, South Australia, Australia

962 — B0216 Onset of neuronal oscillation requires the loss of both rod and cone photoreceptors in deafferented retinas. Ching-Kang J. Chen^{1,2}, T. Kiyama³, Y. Chen¹, C. Mao³. ¹Ophthalmology, Baylor College of Medicine, Houston, TX; ²Biochemistry and Molecular Biology, Baylor College of Medicine, Houston, TX; ³Ophthalmology and Visual Science, The University of Texas Health Science Center at Houston, Houston, TX

963 — B0217 ARL2 regulates trafficking and expression of isoprenylated proteins and is crucial for development of photoreceptor outer segments. Houbin Zhang, Z. Yang, T. Lin, Y. Wu, T. Zou, J. yang, Y. Zhang. Sichuan Provincial People's Hospital, Chengdu, Sichuan Province, China

- 964 — B0218 Pay attention to the toxicity of minocycline on photoreceptor cells.** *Yusheng Wang, W. Xu. Ophthalmology, Fourth Military Medical University, Xi'an, Shaanxi, China*
- 965 — B0219 HIF1A is the responsible factor for cone degeneration and subretinal neovascularization in a mouse model of chronic hypoxia.** *Maya Barben, C. Schori, C. Grimm, M. Samardzija. Lab for Retinal Cell Biology, University of Zurich, Schlieren, Switzerland*
- 966 — B0220 Low-density RGR-bound membranes from suspension of outer segments.** *Zhaoxia Zhang^{1,2}, H. Fong^{1,3}. ¹Department of Ophthalmology, Keck School of Medicine, USC, Monterey Park, CA; ²Shanxi Eye Hospital, Taiyuan, China; ³USC Roski Eye Institute, Los Angeles, CA*
- 967 — B0221 Mitochondrial Dysfunction in Photoreceptors after Retinal Detachment.** *Xueting Luo, X. She, X. Lu, X. Sun. Ophthalmology, Shanghai General Hospital, Shanghai, China*
- 968 — B0222 Cellular Response Following Bright Light Exposure in the Retina of Juvenile Rats.** *SHASHA LV, A. Polosa, P. Lachapelle. Departments of Ophthalmology, Neurology and Neurosurgery, Research Institute of the McGill University Health Centre/Montreal Children's Hospital, McGill University, Montreal, Quebec, Canada*
- 969 — B0223 Removal of the clock gene *Bmal1* from 661W cells affects cell viability and response to oxidative stress.** *Kenkichi Baba¹, T. Suen¹, A. Sanchez-Bretano¹, J. DeBruyne¹, P. Iuvone², G. Tosini¹. ¹Morehouse School of Medicine, Atlanta, GA; ²Emory University Sch of Med, Atlanta, GA*
- 970 — B0224 Validation and comparison of Achromatopsia mouse lines expressing a fluorescent marker in cone photoreceptors.** *Livia S. Carvalho^{1,2}, V. Voigr³, I. Schuster³, P. Fuller-Carter¹, J. Quesada¹, S. Vasiliou¹, D. M. Hunt¹. ¹Retinal Genomics and Therapy, Lions Eye Institute, Perth, Western Australia, Australia; ²Centre for Ophthalmology and Visual Sciences, University of Western Australia, Perth, Western Australia, Australia; ³Immunology, Lions Eye Institute, Perth, Western Australia, Australia*
- 971 — B0225 Lutein and zeaxanthin isomers ameliorate photoreceptor degeneration in *Pde6^{rd10}* mice.** *Minzhong Yi^{1,2}, C. Beight^{1,3}. ¹Ophthalmic Research, Cleveland Clinic Foundation, Cleveland, OH; ²Cleveland Clinic Lerner College of Medicine of Case Western Reserve University, Cleveland, OH; ³Louis Stokes Cleveland Veterans Affairs Medical Center, Cleveland, OH*
- 972 — B0226 Inner retinal remodelling in *Tvrm4* rhodopsin mutant mice.** *Antonia Stefanov^{2,1}, E. Novelli², E. Strettoi². ¹Regional Doctorate School of Neuroscience, University of Florence, Florence, Italy; ²Institute of Neuroscience, National Research Council, CNR, Pisa, Pisa, Italy*
- 973 — B0227 Characterisation of Retinal Degeneration in *Idh3a* Mutant Mice.** *Amy Findlay¹, K. Novakova¹, L. Mckie¹, R. Carter², P. Potter³, I. Jackson¹. ¹University of Edinburgh, MRC Human Genetics Unit, Edinburgh, United Kingdom; ²QMRI, University of Edinburgh, Edinburgh, United Kingdom; ³MRC Harwell, Oxford, United Kingdom*
- 974 — B0228 RNAseq Analysis to Understand the Cellular Mechanisms Involved in Thyroid Hormone Signaling Suppression-induced Cone Protection.** *Hongwei Ma¹, F. Yang¹, W. M. Freeman², X. Ding¹. ¹The Department of Cell Biology, Univ of Oklahoma Health Sci Ctr, Oklahoma City, OK; ²Department of Physiology, Univ of Oklahoma Health Sci Ctr, Oklahoma City, OK*
- 975 — B0229 The protective effect and immune suppressive mechanism of Fingomolid (FTY720) in light-induced retinal damage rats.** *Hui Chen, Q. Zhang. Ophthalmology Department, Sichuan Academy of Medical Sciences & Sichuan Provincial People's Hospital, School of Medicine, University of Electronic Science and Technology of China, Cheng Du, Sichuan province, China*
- 976 — B0230 BDNF effects on retina derived 661W cells indicate distinct photoreceptor intracellular signalling pathways.** *Chitra Joseph, V. Gupta, S. L. Graham. Clinical Medicine, Macquarie University, Macquarie Park, New South Wales, Australia*
- 977 — B0231 Photoreceptor Cholesterol Metabolism Regulates Age-Related Retinal Neurodegeneration.** *Norimitsu Ban, A. Sene, T. Lee, Z. Dong, A. Santeford, J. Lin, R. Apte. Ophthalmology and Visual Sciences, Washington University in St. Louis, St. Louis, MO *CR*
- 978 — B0232 Effect of heat shock on mutant rhodopsin expression in a *Xenopus laevis* model of retinitis pigmentosa.** *Beatrice Tam, D. Lee, O. L. Moritz. Ophthalmology and Visual Sciences, University of British Columbia, Vancouver, British Columbia, Canada*
- 979 — B0233 Deoxygedunin promotes TrkB receptor activation and downstream signalling cascades in photoreceptor cell line.** *Abubakar Siddiq Mangani, C. Joseph, V. Gupta, S. L. Graham. Clinical Medicine, Macquarie University, Sydney, New South Wales, Australia*
- 980 — B0234 Large-scale Whole-organism Phenotypic Screen Identifies Rod Cell Neuroprotectants Effective in Zebrafish and Mouse Models of Retinitis Pigmentosa.** *Liyun Zhang¹, C. Chen¹, J. Qian¹, H. Ji¹, D. J. Zack¹, J. Hanes¹, D. Ackerley², B. Rohrer³, J. S. Mumm⁴. ¹School of Public Health, Johns Hopkins University, Baltimore, MD; ²School of Biological Science, Victoria University, Wellington, New Zealand; ³Medical University of South Carolina, Charleston, SC; ⁴Wilmer Eye Institute, Johns Hopkins University, Baltimore, MD *CR*
- 981 — B0235 CRISPR-Cas9-induced mutations in the mouse *Rpgr* (retinitis pigmentosa GTPase regulator) gene provide new insights into the role of the distinct RPGR isoforms in photoreceptor cilia.** *Wei Zhang¹, L. Li¹, M. Anand¹, M. Brodsky², H. Khanna¹. ¹Ophthalmology & Visual Sciences, UMASS Medical school, Worcester, MA; ²Molecular, Cell, and Cancer Biology, UMASS Medical School, Worcester, MA*
- 982 — B0236 Comparison of computerized system and human observers for vision assessment based on optomotor response in Rhodopsin knockout mice.** *Kin-Sang Cho¹, J. Xiao^{1,2}, C. Shi¹, K. Chang¹, T. P. Utheim³, G. Luo¹, D. F. Chen¹. ¹Schepens Eye Research Institute, Massachusetts Eye and Ear, Department of Ophthalmology, Harvard Medical School, Boston, MA; ²Faculty of Medicine, University of Oslo, Oslo, Norway; ³Department of Oral Biology, Faculty of Dentistry, Oslo, Norway*
- 983 — B0237 The co-receptor CD36 as a target in regulation of subretinal inflammation.** *Samy Omri^{1,2}, K. Melal³, H. Tahiri³, D. Mulumba³, W. Lubell³, h. ong^{3,1}, S. Chemtob³. ¹Mperia Therapeutics, Montreal, Quebec, Canada; ²Ophthalmology, Université de Montréal, Montreal, Quebec, Canada; ³Université de Montréal, Montreal, Quebec, Canada *CR*
- 984 — B0238 Establishment of a novel cone transfection technique for cone-rod dystrophy mouse models.** *Wataru Otsu, J. Chuang, C. Sung. Ophthalmology, Weill Cornell Medicine, New York, NY*
- 985 — B0239 Modeling *CRB1*-associated LCA Using Patient-Specific Retinal Progenitor Cells.** *Lindsey Weed, K. Gill, J. Bennett, J. Mills. University of Pennsylvania, Philadelphia, PA*
- 986 — B0240 Lack of n3 VLC-PUFAs and Elovanooids correlates with impaired photoreceptor disk morphogenesis in AdipoR1 KO.** *William C. Gordon, N. G. Bazan. Ophthalmology & Neuroscience Center, LSU Health Sciences Center, New Orleans, LA*

Exhibit Hall B0241-B0269

Sunday, April 29, 2018 3:15 PM-5:00 PM

Retinal Cell Biology**163 Retinal degeneration: models and repair strategies****Moderators: Hongwei Ma and Teresa Puthussery**

987 — B0241 Development of a Zebrafish Model of Retinitis Pigmentosa. Randy Igbimoba¹, J. Atkinson², Y. Lin¹, G. Orozco⁴, D. Nguyen², J. O'Brien¹. ¹Ophthalmology & Visual Science, University of Texas McGovern Medical School at Houston, Missouri City, TX; ²College of Veterinary Medicine & Biomedical Sciences, Texas A&M University, College Station, TX; ³Ophthalmology, West Virginia University, Morgantown, WV; ⁴San Juan Bautista School of Medicine, Caguas, Puerto Rico

988 — B0242 Overexpression of the mitochondrial Ca²⁺ uniporter in cones alters Ca²⁺ and mitochondrial homeostasis. Rachel Hutto, C. M. Bisbach, J. Hurley, S. E. Brockerhoff. Biochemistry, University of Washington, Seattle, WA

989 — B0243 Assessment of adjunctive gene therapy to dormant cones in end-stage retinitis pigmentosa. Mark Hassall^{1,2}, M. McClements¹, A. R. Barnard¹, S. A. Aslam^{1,2}, R. E. MacLaren^{1,2}. ¹Nuffield Laboratory of Ophthalmology, University of Oxford, Oxford, England, United Kingdom; ²Oxford Eye Hospital, Oxford, Oxfordshire, United Kingdom *CR

990 — B0244 Retinal degeneration and subretinal Iba1⁺ accumulation in complement factor H-deficient mice are associated with increased gene expression of phagocytic markers. Natasha Buchanan, E. Queiroz, J. Demirs, J. Yang, B. Leehy, N. Rangaswamy, I. Arellano, M. Crowley, C. E. Bigelow, K. Anderson, S. Liao. Ophthalmology, Novartis Inst for Biomed Resrch, Cambridge, MA*CR

991 — B0245 Comparative transcriptomic and epigenomic analysis identifies regulators of neurogenic competence in retinal Müller glia. Seth Blackshaw¹, T. Hoang¹, J. Wang², M. Lahne³, L. Todd⁴, C. Santiago⁵, N. Squires⁴, P. Boyd³, J. D. Ash⁵, A. J. Fischer⁴, J. Qian³, D. R. Hyde³. ¹Neuroscience, Johns Hopkins Univ Sch of Med, Baltimore, MD; ²Ophthalmology, Johns Hopkins University School of Medicine, Baltimore, MD; ³Biology, Notre Dame University, South Bend, IN; ⁴Neuroscience, Ohio State University Medical Center, Columbus, OH; ⁵Ophthalmology, University of Florida, Gainesville, FL

992 — B0246 Transcriptomics analysis of Müller glia in response to different damage paradigms in the adult zebrafish retina. David R. Hyde¹, P. Boyd¹, M. Lahne¹, T. Hoang², J. Wang³, C. Santiago⁴, S. Blackshaw², J. Qian³, J. D. Ash⁴, A. Fischer⁵. ¹Dept of Biological Sciences, University of Notre Dame, South Bend, IN; ²Neuroscience, Johns Hopkins University, Baltimore, MD; ³Ophthalmology, Johns Hopkins University, Baltimore, MD; ⁴Ophthalmology, University of Florida, Gainesville, FL; ⁵Neuroscience, Ohio State University College of Medicine, Columbus, OH

993 — B0247 Alpha-1-microglobulin attenuates oxidative stress and enhances photoreceptor survival in an in vitro model of rhegmatogenous retinal detachment. Linnea T. Taylor¹, H. Abdshill¹, J. Bergwik², B. Åkerström², F. K. Ghosh¹. ¹Ophthalmology, Lund University, Lund, Sweden; ²Lund University, Lund, Sweden *CR

994 — B0248 Deletion of ER complex protein Emc3 led to photoreceptor degeneration. Xianjun Zhu^{1,2}, L. Zhang². ¹Center for Human Molecular Genetics, Sichuan Provincial Hospital, Chengdu, China; ²University of Electronic Science and Technology of China, Chengdu, Sichuan, China

995 — B0249 Reduced expression and delayed translocation of α -transducin in photoreceptors of a mouse model of Usher syndrome. Bhagwat V. Alapure, J. J. Lentz. Neuroscience Center of Excellence, Louisiana State University Health Sciences Centre, New Orleans, LA

996 — B0250 Beneficial effects of thioredoxin administration in experimental retinal degeneration. Maria Miranda, R. Gimeno-Hernández, A. Fernández-Carbonell, T. Olivar, V. Hernández-Rabaza, R. Lopez-Pedrajas, I. Almansa. Physiology, Univ CEU-Cardenal Herrera, Valencia, Spain

997 — B0251 Stanniocalcin-2 preserves retinal function in a rat model of retinitis pigmentosa. Min Zhao¹, W. Xie¹, S. Tsai¹, M. Su², T. W. Hein^{1,3}, L. Kuo^{1,3}, R. H. Rosa^{1,3}. ¹Medical Physiology, Texas A&M University, Temple, TX; ²Texas A&M University Health Science Center, College of Medicine, Temple, TX; ³Dept of Ophthalmology, Baylor Scott & White Health, Temple, TX

998 — B0252 New insights into the mechanisms of retinal degeneration due to Phosphodiesterase 6 (PDE6) deficiency. Regine L. Muehlfriede¹, V. Sothilingam¹, M. Garcia Garrido², N. Tanimoto¹, S. Beck¹, S. Michalakos², M. Biel², F. Paquet-Durand¹, M. W. Seeliger¹. ¹Center for Ophthalmology, Institute for Ophthalmic Research, Tuebingen, Germany; ²Center for Drug Research, Ludwig-Maximilians-Universität München, Munich, Germany

999 — B0253 Protection of cone photoreceptors by CDFN (cerebral dopamine neurotrophic factor). Yiwen Li, J. Lu, Y. Chen, R. Wen. Bascom Palmer Eye Institute, University of Miami, Miami, FL

1000 — B0254 Disrupted electroretinogram responses in RPE or photoreceptor Adiponectin receptor 1 (AdipoR1) conditional KOs. Blake Matherne¹, M. I. Kautzmann², W. C. Gordon³, N. G. Bazan³. ¹Ophthalmology, LSU Health Sciences, New Orleans, LA; ²Neuroscience Center, LSU Health Sciences, New Orleans, LA; ³Neuroscience Center and Ophthalmology, LSU Health Sciences, New Orleans, LA

1001 — B0255 Dark-rearing reduces degeneration and alters the characteristics of cGMP dysregulation in rd10 mice. Hope Titus, K. K. Weller, J. Li, R. G. Weleber, M. E. Pennesi, P. Yang. Oregon Health and Sciences University, Portland, OR *CR

1002 — B0256 Wedelolactone protects DNA-induced photoreceptor death. Kevin Harkin, S. Pavlou, A. W. Stitt, H. Xu, M. Chen. Queens University Belfast, Belfast, United Kingdom

1003 — B0257 Selectively knocking down hexokinase 2 in rods leads to retinal degeneration. Rui Zhang¹, W. Shen¹, S. Lee¹, M. Yam¹, L. Zhu¹, A. Mathai¹, C. J. Chen², M. C. Gillies¹. ¹Clinical Ophthalmology and Eye Health, The University of Sydney, Sydney, New South Wales, Australia; ²Department of Ophthalmology, Baylor College of Medicine, Houston, TX

1004 — B0258 A frameshift mutation in RDH12 causes autosomal dominant retinitis pigmentosa in families of Tunisian Jewish origin. Boris Rosin^{1,2}, P. Namburi¹, M. I. Khan³, F. P. Cremers², E. Banin^{1,2}, D. Sharon¹. ¹Ophthalmology, Hadassah Medical Center, Jerusalem, Israel; ²The Center for Retinal and Macular Degenerations (CRMD), Hadassah Medical Center, Jerusalem, Israel; ³Human Genetics, Donders Institute for Brain, Cognition and Behaviour, Radboud University Medical Center, Nijmegen, Netherlands

1005 — B0259 Long-term Rescue of Photoreceptors in a Rodent Model of Retinitis Pigmentosa Associated with MERTK Gene Mutation. Daniel V. Palanker^{1,2}, S. Kang^{3,1}, R. Dalal¹, Y. Quan¹, H. Lorach². ¹Ophthalmology, Stanford University, Stanford, CA; ²Hansen Experimental Physics Laboratory, Stanford University, Stanford, CA; ³Ophthalmology and Visual Science, The Catholic University of Korea, Seoul, Korea (the Republic of)

1006 — B0260 Low LED light exposure as a model of retinal degeneration in Albino rats. Maria M. Benedetto, M. Guido, M. A. Contin. Center for Biological Chemistry Research in Cordoba (CIQUIBIC-CONICET), Department of Biological Chemistry "Dr. Ranwell Caputto", School of Chemical Sciences, National University of Cordoba, Cordoba, Cordoba, Argentina

1007 — B0261 Retinal bipolar cell gene changes in the rd1 model of inherited retinal degeneration. Michael J. Gilhooley^{1,2}, D. G. Hickey^{1,3}, S. Hughes^{1,4}, M. W. Hankins^{1,4}. ¹Nuffield Laboratory of Ophthalmology, University of Oxford, Oxford, England, United Kingdom; ²Moorfields Eye Hospital, London, England, United Kingdom; ³Royal Victorian Eye and Ear Hospital, Melbourne, Victoria, Australia; ⁴Sleep and Circadian Neuroscience Institute, University of Oxford, Oxford, England, United Kingdom

1008 — B0262 Stanniocalcin-1 rescues photoreceptor degeneration in a porcine model of retinitis pigmentosa. Wankun Xie¹, M. Zhao¹, S. Tsai¹, M. Su², G. W. Roddy^{3,4}, P. Bradley⁴, M. M. LaVail⁵, T. W. Hein^{1,4}, L. Kuo^{1,4}, R. H. Rosa^{1,4}. ¹Medical Physiology, Texas A&M University Health Science Center, Temple, TX; ²College of Medicine, Texas A&M University Health Science Center, Temple, TX; ³Ophthalmology, Mayo Clinic, Rochester, MN; ⁴Ophthalmology, Baylor Scott & White Health, Temple, TX; ⁵Ophthalmology, University of California, San Francisco, CA

1009 — B0263 Single cell RNA-Seq to elucidate the mechanism of delayed cell death in retinal dystrophy. Rachayata Dharmat^{1,2}, S. Kim², Y. Li², A. Eblimit², R. Chen^{1,2}. ¹Molecular and Human genetics, Baylor College Of Medicine, Houston, TX; ²Human Genome Sequencing Center, Baylor College of Medicine, Houston, TX

1010 — B0264 Short periods of dark adaptation in a light-induced damage model of AMD produces retinal degeneration in pigmented zebrafish. Amanda Khan, S. L. Stella. Neural and Behavioral Sciences, Penn State College of Medicine, Hershey, PA

1011 — B0265 There and Back Again: Transient Microglial Responses to Localized Neuronal Damage In Vivo. Eric B. Miller¹, P. Zhang^{2,4}, M. Goswami², R. J. Zawadzki^{2,3}, E. N. Pugh^{4,2}, M. E. Burns^{1,3}. ¹Neuroscience, UC Davis, Davis, CA; ²EyePod Small Animal Ocular Imaging Lab, UC Davis, Davis, CA; ³Ophthalmology & Vision Science, UC Davis, Davis, CA; ⁴Cell Biology and Human Anatomy, UC Davis, Davis, CA

1012 — B0266 Unraveling Sphingolipid Signaling in the Retina, one gene at a time- the role of Sphingosine kinase 2. Nawajes A. Mandal¹, H. Qi², J. Wilkerson², m. stiles², s. khanam¹, L. Wilmott¹, S. Dutta¹, J. Cole¹. ¹Ophthalmology, Univ of Tennessee, Health Science Center, Memphis, TN; ²University of Oklahoma Health Sciences Center, Oklahoma City, OK

1013 — B0267 Variability in therapeutic outcome due to age of P23H rhodopsin mice at time of dosing can be reduced by enhanced retinal drug delivery. Anna-Sophia Kiang, P. Kenna, M. M. Humphries, A. Nguyen, J. Keane, J. G. Farrar, M. Campbell, P. Humphries. Institute of Genetics, School of Genetics and Microbiology, Trinity College Dublin, Dublin, Ireland

1014 — B0268 Early steps of photoreceptor degeneration in a *Xenopus laevis* model of retinitis pigmentosa. Ulisse Boccheri¹, M. Mazzolini¹, B. Tam², C. Chiu², V. Torre¹, O. L. Moritz². ¹Neurobiology, International School for Advanced Studies, Trieste, Italy/Friuli Venezia Giulia, Italy; ²Department of Ophthalmology & Visual Sciences, University of British Columbia, Vancouver, British Columbia, Canada

1015 — B0269 Quercetin prevented retinal degeneration induced by Sodium iodate. Byul-Nim Ahn¹, Y. Shin¹, S. Kim¹, J. Yang^{1,2}. ¹T2B Infrastructure Center for Ocular Disease, Inje University Busan Paik Hospital, Busan, Korea (the Republic of); ²Department of Ophthalmology, Inje University College of Medicine, Busan, Korea (the Republic of)

Exhibit Hall B0300-B0316

Sunday, April 29, 2018 3:15 PM-5:00 PM

Eye Movements/Strabismus/Amblyopia/Neuro-Ophthalmology

164 Strabismus: Basic and Clinical

Moderator: Ian Erkelens

1016 — B0300 Evidence of oculomotor dominance during smooth pursuit in depth. Arvind Chandna^{1,2}, S. J. Heinen¹, J. Badler¹, W. N. Scott^{3,1}. ¹Smith-Kettlewell Eye Research Institute, San Francisco, CA; ²Pediatric Ophthalmology, Alder Hey Children's Hospital NHS Trust, Liverpool, Merseyside, United Kingdom; ³Psychology, Wright State University, Dayton, OH

1017 — B0301 Cyclofusion ranges in a healthy adult population. Sara M. Flodin^{1,2}, T. Pansell³, A. Rydberg³, M. A. Gronlund^{1,2}. ¹Department of Clinical Neuroscience, Institute of Neuroscience and Physiology, The Sahlgrenska Academy at University of Gothenburg, Gothenburg, Sweden; ²Department of Ophthalmology, Sahlgrenska University Hospital, Mölndal, Sweden; ³Department of Clinical Neuroscience, Karolinska Institutet, Division of eye and vision, Stockholm, Sweden

1018 — B0302 Motor adaptation of reflexive fusional vergence is impaired in Convergence Insufficiency. William R. Bobier, I. Erkelens. University of Waterloo, Waterloo, Ontario, Canada

1019 — B0303 Change of Perceived Size of Object by Convergence or Divergence without Accommodation Measured by Three-Dimensional Scenography. Ichiro Hamasaki¹, k. shibata¹, T. Shimizu¹, S. Hasebe², H. Ohtsuki³, F. Shiraga¹. ¹ophthalmology, Okayama Univ. Hospital, Okayama city, Okayama, Japan; ²Kawasaki Hospital, Okayama, Japan; ³Saiseikai General Hospital, Okayama, Japan *CR

1020 — B0304 Decreased binocular summation ratio in intermittent exotropia. Jeongmin Kwon, J. Jung. Ophthalmology, Pusan National University Yangsan Hospital, Yangsan-si, Gyeongsangnam-do, Korea (the Republic of)

1021 — B0305 Properties of cells associated with strabismus angle in the rostral superior colliculus of strabismic monkey. Suraj Upadhyaya, V. Das. College of Optometry, University of Houston, Houston, TX

1022 — B0306 Clinical comparison of tenacious proximal fusion and high AC/A ratio types of intermittent exotropia. Soo Jung Lee¹, H. Kim¹, J. Park¹, J. Park². ¹Haeundae Paik Hospital, Busan, Korea (the Republic of); ²Maryknoll hospital, Busan, Korea (the Republic of)

1023 — B0307 The analysis of ocular deviations between dominant and non-dominant eye using video-oculography (VOG) in intermittent exotropia. Sung-Hyuk Moon^{1,2}, J. Ban^{1,2}, I. Yun³, J. Yang^{2,1}. ¹Ophthalmology, Inje University Busan Paik Hospital, Busan, Korea (the Republic of); ²T2B Infrastructure Center for Ocular Disease, Inje University College of Medicine, Busan, Korea (the Republic of); ³Nunevit Eye Center, Busan, Korea (the Republic of) ✗

1024 — B0308 An objective rapid system based on eye tracking for eye deviation measurement in children and adults. Oren Yehezkel¹, A. Spierer², R. Yam¹, D. Oz¹, M. Belkin³, T. Węgnanski – Jaffe². ¹NovaSight, Airport city, Israel; ²Goldschleger Eye Institute, Sheba Medical Center, Tel-Hashomer, Israel; ³Goldschleger Eye Research Institute, Sheba Medical Center, Tel Hashomer, Israel *CR, ✗

1025 — B0309 Change in the eye position under general anesthesia: Is it related to the etiology in intermittent exotropia? Eun Hye Jung^{1,2}, S. Khwarg^{1,2}, Y. Yu^{1,2}, S. Kim^{1,2}. ¹Ophthalmology, Seoul National University Hospital, SEOUL, Korea (the Republic of); ²Seoul National University College of Medicine, Seoul, Korea (the Republic of)

1026 — B0310 A Reevaluation of Prism Position in the Measurement of Strabismus. Declan Kirk¹, C. Ray², K. Freedman². ¹Medical School, Texas Tech University Health Sciences Center, Lubbock, TX; ²Department of Ophthalmology and Visual Sciences, Texas Tech University Health Sciences Center, Lubbock, TX

1027 — B0311 Amblyopia as a risk factor for recurrence in patients with infantile esotropia treated surgically: 10-year follow-up. Ruben Espino Icazbalceta, M. Urdapilleta, A. Zermeno, J. Vargas, C. Murillo. Instituto de Oftalmologia Conde de Valenciana, Mexico City, Mexico

1028 — B0312 Extraocular Muscles Insertion Analysis Using Ultrasound Biomicroscopy and Anterior Segment Optical Coherence Tomography and Intraoperative Correlation in Adult Patients with Strabismus After Trauma. Astrid E. Gonzalez Ramos, N. Cintron, M. Blasini Torres, R. Vazquez Botet. Ophthalmology, University of Puerto Rico School of Medicine, San Juan, Puerto Rico

1029 — B0313 Anterior segment coherence tomography to assess the insertion of extraocular muscles in patients previously submitted to strabismus surgery. Taciana Toda¹, C. Y. Hashimoto¹, E. T. Sato², R. Boaventura Barcello¹. ¹Ophthalmology, Santa Casa de Misericórdia de São Paulo, São Paulo, Brazil; ²Universidade Federal de São Paulo, São Paulo, Brazil

1030 — B0314 Analysis of GPR143 Gene Mutations in Five Chinese Families with the Ocular Albinism Type I. Ningdong Li, j. jiang. Ophthalmology, Beijing Children Hospital, Beijing, China

1031 — B0315 Objective Evaluation of Characteristics of Visual Fatigue in Patients with Intermittent Exotropia. Masakazu Hirota¹, T. Morimoto¹, H. Kanda¹, T. Endo², T. Miyoshi³, S. Miyagawa⁴, Y. Hirohara⁴, T. Yamaguchi⁴, M. Saika⁴, T. Fujikado¹. ¹Applied Visual Science, Osaka University Graduate School of Medicine, Suita-shi, OSAKA, Japan; ²Osaka Women's and Children's Hospital, Izumi, Japan; ³Integrative Physiology, Osaka University Graduate School of Medicine, Suita, Japan; ⁴Topcon, Itabashi, Japan*CR, ✗

1032 — B0316 The Effect of Strabismus Surgery on Self-Esteem. Kimberly Estes¹, R. Parrish¹, J. Sinacore², P. Mumby³, J. F. McDonnell¹. ¹Ophthalmology, Loyola University Medical Center, Maywood, IL; ²Public Health Science, Loyola University Medical Center, Maywood, IL; ³Psychiatry and Behavioral Neurosciences, Loyola University Medical Center, Maywood, IL

Exhibit Hall B0344-B0371

Sunday, April 29, 2018 3:15 PM-5:00 PM

Clinical/Epidemiologic Research

165 Diabetic eye disease screening and management

Moderator: Ecosse L. Lamoureux

1033 — B0344 Is Myopia Associated with the Incidence and Progression of Diabetic Retinopathy? Ryan Man, A. T. Gan, P. Gupta, E. Fenwick, C. Sabanayagam, N. Tan, T. Y. Wong, C. Cheng, E. L. Lamoureux. SERI, Singapore Eye Research Institute, Singapore, Singapore

1034 — B0345 Diabetes mellitus in MacTel Can Diabetes Mellitus be a negative prognosticator in MacTel? Daniela Florea¹, T. Mansour¹, T. Clemons², K. Balaskas¹, C. Egan¹, T. Peto³. ¹Research and Development, Moorfields Eye Hospital, London, United Kingdom; ²EMMES Corporation, Rockville, WA; ³Ophthalmology, Queen's University Belfast Faculty of Medicine, Belfast, United Kingdom

1035 — B0346 Risk Factors and Clinical Characteristics for Retinal Neurodegeneration in Type 2 Diabetes. Jae Min Kim¹, K. Kim¹, S. Noh¹, E. Kim¹, S. Rhee², S. Chon², J. Woo², S. Yu¹. ¹Kyunghee Univ medical center, Seoul, Korea (the Republic of); ²Department of Endocrinology and Metabolism, Kyunghee Univ medical center, Seoul, Korea (the Republic of)

1036 — B0347 Risk Factors for Central Serous Retinopathy. Maggie Zhou¹, S. Bakri², S. Pershing^{3,4}. ¹Stanford University School of Medicine, Stanford, CA; ²Department of Ophthalmology, Mayo Clinic, Rochester, MN; ³Byers Eye Institute at Stanford, Palo Alto, CA; ⁴Veterans Affairs (VA) Palo Alto Health Care System, Palo Alto, CA

1037 — B0348 Risk factors associated with complex vitreoretinal surgery for patients with diabetes. Kristen Nwanyanwu¹, J. Warren². ¹Ophthalmology and Visual Science, Yale University, New Haven, CT; ²Biostatistics, Yale University, New Haven, CT

1038 — B0349 Prevalence of Diabetic Retinopathy in Chinese Adults With Type 2 Diabetes in the Rural Area of Shanghai. Lihua Gong¹, J. Lin², Q. Shen³, X. Zhang¹. ¹Ophthalmology, Qingpu Branch of Zhongshan Hospital, Shanghai, China; ²Laboratory department, Qingpu Branch of Zhongshan Hospital, Shanghai, China; ³Qingpu Center of Disease Control and Prevention, Shanghai, China

1039 — B0350 The prevalence of diabetes mellitus and diabetic retinopathy in the Rio Grande Valley: A demographics report. Donald C. C. Meadows¹, H. Khalaf¹, M. P. Johnson², V. H. Gonzalez¹. ¹Valley Retina Institute, McAllen, TX; ²UTRGV, Brownsville, TX

1040 — B0351 Association of retinal vessel diameters and diabetic retinopathy in pregnancy. Barbara E. Klein, K. E. Lee, S. M. Meuer, A. Mosher, A. Ewen, R. Klein. Ophthalmology & Visual Sciences, Univ of Wisconsin-Madison, Madison, WI

1041 — B0352 Is Diabetic Retinopathy Severity an Independent Risk Factor for Stroke in the Framingham Heart Study Cohort? Catherine Q. Zhu¹, S. Seshadri¹, J. J. Himali¹, A. Beiser^{1,3}, H. S. Ying^{2,3}. ¹Boston University School of Medicine, Boston, MA; ²Massachusetts Eye Research & Surgery Institution (MERSI), Boston, MA; ³*AB and HSY are joint-senior authors, Boston, MA

1042 — B0353 Red flags of diabetic retinopathy (DR) in patients with Type 1 Diabetes mellitus (T1DM) using HbA1c level and antihypertensive medication. Lydia Marahrens¹, F. Andreas², D. Roeckl¹, F. Ziemssen¹. ¹Center of Ophthalmology, University Tuebingen, Tuebingen, Germany; ²German Centre for Diabetes Research (DZD), Institute for Diabetes Research and Metabolic Diseases of the Helmholtz Centre Munich at the University of Tuebingen, Tuebingen, Germany *CR

1043 — B0354 Diabetic Retinopathy Status as a Marker for More Severe Reduction in Circulating Endothelial Progenitor Cells and Systemic Atherosclerosis in Diabetics. Kendrick C. Shih¹, I. Wong¹, J. S. Lai¹, K. Yiu². ¹Department of Ophthalmology, University of Hong Kong, Hong Kong, Hong Kong; ²Department of Medicine, University of Hong Kong, Hong Kong Island, Hong Kong

1044 — B0355 Comparing Teleretinal Screening-Identified Diabetic Retinopathy with Diabetic Nephropathy and Other Markers of Systemic Disease. Sean M. Rodriguez¹, E. B. Hamill^{2,3}, N. Moon¹, A. Kanakamedala¹, C. Y. Weng^{2,3}. ¹School of Medicine, Baylor College of Medicine, Houston, TX; ²Department of Ophthalmology, Baylor College of Medicine-Cullen Eye Institute, Houston, TX; ³Department of Ophthalmology, Ben Taub General Hospital-Harris Health System, Houston, TX

1045 — B0356 Barriers to and facilitators of diabetic retinopathy screening in a high-risk population. Elizabeth Fairless, K. Nwanyanwu. Yale School of Medicine, New Haven, CT

1046 — B0357 Ecological factors influencing patient adherence with diabetic eye screening in rural communities: a qualitative study. Nicholas Zupan¹, O. Shiyabola², R. Swearingen¹, J. Carlson¹, N. Jacobson³, M. Smith⁴, J. Mahoney⁵, R. Klein¹, T. Bjelland⁶, Y. Liu¹. ¹Department of Ophthalmology and Vision Sciences, University of Wisconsin School of Medicine and Public Health, Madison, WI; ²Department of Social and Administrative Sciences, University of Wisconsin School of Pharmacy, Madison, WI; ³Institute for Clinical and Translational Research, University of Wisconsin School of Medicine and Public Health, Madison, WI; ⁴Departments of Population Health Sciences, Family Medicine and Community Health, University of Wisconsin School of Medicine and Public Health, Madison, WI; ⁵Department of Medicine, University of Wisconsin School of Medicine and Public Health, Madison, WI; ⁶Mile Bluff Medical Center, Mauston, WI

1047 — B0358 A Personalized protocol for Diabetic Retinopathy Screening. Shiri Shulman¹, N. Parush Shear Yashuv², R. Katz³, A. Karasik⁴, T. El-Hay², Y. Goldschmidt², V. Shalev³. ¹ophthalmology institute, assuta medical centers, Tel-Aviv, Israel; ²IBM reaserch, Heifa, Israel; ³Maccabi health services, Tel-Aviv, Israel; ⁴Endocrinology Department, Sheba Medical Center, Tel-Aviv, Israel

1048 — B0359 Geographical Nationwide Mapping of Diabetic Retinopathy Using Teleretinal Screening. Robert Wong^{1,2}, G. Karsaliya¹, S. Day Ghafoori^{1,2}, J. A. Martinez^{1,2}, P. A. Nixon^{1,2}, C. A. Harper^{1,2}, M. Levitan^{1,2}, R. C. Young^{1,2}. ¹Ophthalmology, Austin Retina Associates, Austin, TX; ²Surgery and Perioperative Services, Dell Seton Medical School, University of Texas at Austin, Austin, TX *CR

1049 — B0360 Evaluation of a diabetic retinopathy telemedicine screening program in a metropolitan primary care setting. Miel Sundararajan, R. Gentile, S. Saleem, M. Gupta. *Ophthalmology, New York Eye & Ear Infirmary of Mount Sinai, New York, NY*

1050 — B0361 Assessing diabetic eye screening rates in a rural, multi-payer health system. Julia Carlson¹, S. Georgeson¹, R. Swearingen¹, N. Zupan¹, M. Smith², J. Mahoney³, R. Klein¹, T. Bjelland⁴, Y. Liu¹. ¹Department of Ophthalmology and Visual Sciences, University of Wisconsin School of Medicine and Public Health, Madison, WI; ²Departments of Population Health Sciences and Family Medicine and Community Health, University of Wisconsin School of Medicine and Public Health, Madison, WI; ³Department of Medicine, University of Wisconsin School of Medicine and Public Health, Madison, WI; ⁴Mile Bluff Medical Center, Mauston, WI

1051 — B0362 Impact of Appointment Compliance on Visual Outcomes in Patients with Diabetic Retinopathy. Daniel R. Agarwal¹, B. Udeh³, B. Lapin², J. Campbell³, A. V. Rachitskaya¹. ¹Department of Ophthalmology, Cleveland Clinic-Cole Eye Institute, Cleveland, OH; ²Quantitative Health Sciences, Cleveland Clinic-Neurological Institute, Cleveland, OH; ³Department of Clinical Transformation, Cleveland Clinic, Cleveland, OH

1052 — B0363 Evaluation of Compliance Rates in Patients with Diabetic Retinopathy. Suruchi Bhardwaj¹, R. Anderson¹, B. Chiu¹, D. Eppenstein², K. J. Wald¹, J. J. Tseng², Y. Modi¹. ¹Ophthalmology, NYU School of Medicine, New York, NY; ²Retina Associates of New York, New York, NY

1053 — B0364 Potential factors of receiving dilated fundus examination among patients with diabetes in China. Meng Jie. Zhongshan ophthalmic center, Sun Yat-sen university, Guangzhou, China, Guangzhou, China

1054 — B0365 Systematic Review of Photographic Screening Methods in Diabetic Retinopathy. William Yan¹, M. McGuinness², R. Chakrabarti³, K. Fotis², M. He^{1,4}, R. P. Finger⁵. ¹Ophthalmic Epidemiology, Centre for Eye Research Australia, Melbourne, Victoria, Australia; ²Population Health Unit, Centre for Eye Research Australia, Melbourne, Victoria, Australia; ³Ophthalmology, Royal Victorian Eye and Ear Hospital, Melbourne, Victoria, Australia; ⁴Ophthalmology, Zhongshan Ophthalmic Centre, Melbourne, Victoria, Australia; ⁵Ophthalmology, University of Bonn, Bonn, Germany

1055 — B0366 Validating Optos® ultra wide-field imaging against conventional Topcon® imaging. Stine Byberg¹, D. Visitisen¹, M. H. Charles², M. Valerius¹, E. Juul¹, M. E. Jørgensen¹, H. Lund-Andersen^{1,3}. ¹Steno Diabetes Center Copenhagen, Gentofte, Denmark; ²Aarhus University, Aarhus, Denmark; ³Dept. of Ophthalmology, Rigshospitalet, Glostrup, Denmark ✕

1056 — B0367 Diabetic Capillary Nonperfusion in the Macula and Extramacular areas on Optical Coherence Tomography Angiography. shota yasukura, T. Murakami, K. Suzuma, T. Yoshitake, M. Fujimoto, H. Nakanishi, M. Oishi, A. Tsujikawa. *Ophthalmology, Kyoto University, Kyoto, Kyoto, Japan*

1057 — B0368 Survey of TREATMENT for Diabetic Macular Edema (STREAT-DME) Study: Results by year from real world data in Japan. Takuya Utsumi¹, M. Shimura¹, S. Kitano², T. Sakamoto³. ¹Department of Ophthalmology, Tokyo Medical University Hachioji Medical Center, Tokyo, Hachioji, Japan; ²Department of Ophthalmology, Tokyo Women's Medical University, Tokyo, Japan; ³Department of Ophthalmology, Kagoshima University, Kagoshima, Japan *CR

1058 — B0369 Diabetic retinopathy in rural population, experience in a mexican institution of ophthalmology. Veronica A. Romero Morales¹, M. A. Vazquez¹, R. Garcia Franco¹, E. Hernandez¹, X. Mira¹, D. dorantes², T. Gonzalez², J. López², V. Millán², M. Miranda Santiago², D. Rodriguez², L. Romano², D. Torres², P. Ramirez¹, G. Hernandez Alba^{2,1}, V. C. Lansingh¹. ¹Ophthalmology, Instituto Mexicano de Oftalmología I.A.P., Queretaro, Mexico; ²Anahuac University, Queretaro, Mexico

1059 — B0370 Retinal Panfotocoagulation: Outcome of diabetic patients in an Ophthalmological Hospital inserted in the Brazilian public health system: Goiânia, Goiás: Brazil. Eduardo R. Dalia¹, K. Neto², R. Faro², L. Pedrosa², T. Martins², L. Pinheiro Teixeira¹, T. Rassi¹. ¹Retina, Fundação Banco de Olhos de Goiás, Goiânia, Brazil; ²Fundação Banco de Olhos de Goiás, Goiânia, Brazil

1060 — B0371 Follow-up patterns among patients with treatment-naïve proliferative diabetic retinopathy offered panretinal photocoagulation. Sophie Cai, M. Sachdeva, N. M. Bressler. *Ophthalmology, Wilmer Eye Institute, Johns Hopkins Hospital, Baltimore, MD*

Exhibit Hall C0074-C0085

Sunday, April 29, 2018 3:15 PM-5:00 PM

Low Vision Group / Clinical/Epidemiologic Research

166 Low Vision and Vision Rehabilitation Services

Moderator: Jill Keffe

1061 — C0074 Visual Acuity Improvement by Refraction of Low Vision Patients in an Academic Medical Center. Xinxing Guo, B. K. Swenor, J. Goldstein. *Wilmer Eye Institute, Baltimore, MD*

1062 — C0075 Baseline traits of patients presenting for low vision services in a community health center. Alexis G. Malkin¹, R. W. Massof². ¹New England College of Optometry, Boston, MA; ²Johns Hopkins University, Wilmer Eye Institute, Baltimore, MD

1063 — C0076 Regional Differences in Eye Health: Findings from Mwanza, Tanzania. Sahil Aggarwal, D. Ju, M. C. Mehta. *Gavin Herbert Eye Institute, University of California, Irvine, Irvine, CA*

1064 — C0077 Investigation of Visual Disability in Previous Zhabei District, Shanghai, 2010 - 2017. JILI CHEN¹, C. Zheng². ¹Ophthalmology, Shanghai Jinan District Shibei Hospital, Shanghai, China; ²Ophthalmology, Children's Hospital of Shanghai, Shanghai, China

1065 — C0078 Clinico-epidemiologic features of oculocutaneous albinism in Mexico City. Carlos Muller Morales, J. C. Zenteno, A. M. Beauregard. *Instituto de Oftalmologia Conde de Valenciana, Mexico City, DF, Mexico*

1066 — C0079 Quality of life of patients attending a low-vision rehabilitation service in Brazil. Matheus B. Silva¹, G. C. Cavalieri¹, L. S. Cota², E. Z. Frare², E. Hoyama^{1,2}, T. Matsuo¹, N. Hasegawa¹. ¹Hofalon, Londrina, Paraná, Brazil; ²PUCPR, Londrina, Paraná, Brazil

1067 — C0080 Contextual Factors that affect Participation of Adults with Deafblindness in Indian Society: A Qualitative Study. Atul Jaiswal¹, H. Aldersey¹, W. Wittich^{2,3}, M. Mirza⁴, M. Finlayson¹. ¹School of Rehabilitation Therapy, Queen's University, Kingston, Ontario, Canada; ²School of Optometry, University of Montreal, Montreal, Quebec, Canada; ³School of Physical and Occupational Therapy, McGill University, Montreal, Quebec, Canada; ⁴Department of Occupational Therapy, University of Illinois at Chicago, Chicago, IL

1068 — C0081 Prevalence and severity of dual sensory loss (vision & hearing) in the Canadian Longitudinal Study on Aging. Walter Wittich^{1,2}, A. Hämäläinen^{1,2}, M. K. Pichora-Fuller³, N. Phillips⁴, L. Kolisang⁶, D. Guthrie⁵, P. Mick⁶. ¹School of Optometry, University of Montreal, Montreal, Quebec, Canada; ²Centre de recherche interdisciplinaire en réadaptation (CRIR) du Montreal métropolitain, Montreal, Quebec, Canada; ³University of Toronto at Mississauga, Mississauga, Ontario, Canada; ⁴Psychology, Concordia University, Montreal, Quebec, Canada; ⁵Department of Kinesiology and Physical Education, Wilfrid Laurier University, Waterloo, Ontario, Canada; ⁶Department of Surgery, University of British Columbia at Kelowna, Kelowna, British Columbia, Canada

1069 — C0082 Prevalence of Visual Impairment in the Municipality of Braga -Portugal using capture-recapture methods. Pedro Lima Ramos^{1,2}, R. Santana⁵, I. Sousa³, A. A. Rocha-Sousa⁴, A. F. Macedo^{1,2}. ¹Department of Medicine and Optometry, Linnaeus University, Kalmar, Sweden; ²Centre of Physics and Optometry, University of Minho, Braga, Portugal; ³Centro de Matemática, Universidade do Minho, Braga, Portugal; ⁴Organs of Senses, Faculty of Medicine, University of Porto, Porto, Portugal; ⁵Health Policy and Management, University Nova de Lisboa, Lisboa, Portugal

1070 — C0083 Exploring barriers to physical activity faced by people with vision loss. Antonio F. Macedo^{1,2}, D. Santos², L. Hernández Moreno², M. Leitao², K. Latham³, J. Linhares². ¹Medicine and Optometry, Linnaeus University, Kalmar, Sweden; ²Centre of Physics and Optometry (Vision Rehabilitation Lab.), Universidade do Minho, Braga, Portugal; ³Department of Vision & Hearing Sciences, Anglia Ruskin University, Cambridge, United Kingdom

1071 — C0084 Relationship between low vision rehabilitation outcomes and goals included in the plan of care. Kyoko Fujiwara¹, T. M. Smith², R. W. Massof¹. ¹Ophthalmology, Johns Hopkins University Wilmer Eye Institute, Baltimore, MD; ²School of Occupational Therapy, Texas Woman's University, Houston, TX *CR

1072 — C0085 Feasibility of developing a single disease severity scale for Retinitis Pigmentosa. Rob Chun, G. Dagnelie, R. W. Massof. ¹Ophthalmology, Johns Hopkins Wilmer Eye Institute, Baltimore, MD

Exhibit Hall C0086-C0105

Sunday, April 29, 2018 3:15 PM-5:00 PM

Visual Psychophysics/Physiological Optics

167 Normal and Aging Vision - Measurement

Moderators: Lori A. Lott and Erin Rueff

1073 — C0086 A novel Bayesian approach to testing and analyzing visual acuity. Luis A. Lesmes. *Adaptive Sensory Technology, San Diego, CA* *CR

1074 — C0087 Psychophysical validation of a novel Bayesian method for measuring visual acuity. Yukai Zhao¹, L. A. Lesmes³, M. Dorr⁴, P. J. Bex², Z. Lu¹. ¹Psychology, the Ohio State University, Columbus, OH; ²Psychology, Northeastern University, Boston, MA; ³Adaptive Sensory Technology, Inc, San Diego, CA; ⁴Technical University of Munich, Munich, Germany *CR

1075 — C0088 A Bayesian method using through focus visual acuity to predict rates of spectacle wear for pseudophakic patients. Robert Rosen, L. Tsai, A. Alarcon, K. Hileman, P. Piers. *Abbott Medical Optics, Groningen, Netherlands* *CR

1076 — C0089 Feedback improves measured visual acuity in adults. Andrew V. Collins¹, M. Noori¹, R. J. Jacobs¹, N. S. Anstice^{1,2}. ¹Optometry and Vision Science, University of Auckland, Auckland, New Zealand; ²Discipline of Optometry, University of Canberra, Canberra, Australian Capital Territory, Australia

1077 — C0090 Luminance and visual acuity: 20/20 may not always mean 20/20! David Evans¹, K. L. McCray², M. M. Hammond², P. G. Davey². ¹VectorVision, Greenville, OH; ²Western University of Health Sciences, Pomona, CA *CR

1078 — C0091 Evaluation of contrast sensitivity function under mesopic conditions using CSV-1000E to establish normative database. Jeanette Cross, E. Ng, M. Diep, C. Healy, P. G. Davey. *College of Optometry, Western University of Health Sciences, Pomona, CA* *CR

1079 — C0092 Number of flankers influences crowding and contour interaction differently. Lenka Musilova¹, F. Pluháček¹, H. E. Bedell², J. Siderov³. ¹Department of Optics, Palacky University Olomouc, Olomouc, Czechia; ²College of Optometry, University of Houston, Houston, TX; ³Department of Vision & Hearing Sciences, Anglia Ruskin University, Cambridge, United Kingdom

1080 — C0093 Visual crowding in congenital nystagmus, sensory deficit or image motion? Vijay Taylor^{2,1}, A. H. Dahlmann-Noor¹, M. Theodorou¹, J. A. Greenwood¹. ¹Moorfields Eye Hospital, London, England, United Kingdom; ²Experimental Psychology, University College London, London, United Kingdom

1081 — C0094 Diplopia and Visual Acuity: Magnitude, Orientation and Contrast. Andrew Carkeet, A. Chang, T. Chang, P. Chen, M. Gu, V. Lin, J. Ng. *Optometry and Vision Science, QUT, Kelvin Grove, Queensland, Australia*

1082 — C0095 Repeatability of Low-Contrast Visual Acuity Across Horizontal Gaze in Patients with Infantile Nystagmus Syndrome. Andrea N. Fry, A. M. Gehring, M. K. Lalonde, R. W. Hertle, T. L. Roberts. *Ophthalmology, Children's Medical Center of Akron, Akron, OH*

1083 — C0096 The Odd One Out – Differential Visual Acuity. Susan J. Leat, C. Yabobchuk-Stanger, E. L. Irving. *School of Optometry and Vision Science, University of Waterloo, Waterloo, Ontario, Canada*

1084 — C0097 Monocular and binocular limits for spatial vision: Effects of 'normal' aging on photopic and mesopic visual acuity and contrast sensitivity. Arjan Keuken^{2,1}, A. Subramanian², J. L. Barbur². ¹University of Applied Sciences, Utrecht, Utrecht, Netherlands; ²Applied Vision Research Centre, School of Health Sciences, City, University of London, London, United Kingdom

1085 — C0098 Global shape integration optotypes for the clinical assessment of visual acuity and subjective refraction. Alexander Leube, A. Ohlendorf, S. Wahl. *Ophthalmic Research Institute, University Tuebingen, Tuebingen, Germany* *CR

1086 — C0099 Implementation of a novel visual acuity chart in an urgent care setting. James F. Wu¹, S. Eyley¹, A. Visotcky², A. Szabo², G. Griepentrog¹, C. Warren¹, D. P. Han¹. ¹Department of Ophthalmology & Visual Sciences, Medical College of Wisconsin, Milwaukee, WI; ²Division of Biostatistics, Medical College of Wisconsin, Milwaukee, WI

1087 — C0100 Acute Consumption of Dark Chocolate Improves Detection of Low Contrast Targets. Jeff C. Rabin, K. Patrizi, N. Karunathilake. *Optometry, UIW Rosenberg School of Optometry, San Antonio, TX* ✕

1088 — C0101 Letter Based Contrast Sensitivity Assessment for Clinical Trials. Sanjeev Kasthurirangan, C. Garufis. *Surgical, Johnson & Johnson Vision, Milpitas, CA* *CR

1089 — C0102 Evaluation of Evans Letter Contrast Test and Pelli-Robson chart in assessing threshold contrast sensitivity. Arsineh A. Amirkhanian, Y. Cetina, M. M. Hammond, B. McAllister, P. G. Davey. *Optometry, Western University of Health Sciences, Pomona, CA* *CR

1090 — C0103 Gender differences in objective and subjective visual function. Lena Havstam Johansson, I. Skoog, M. Zetterberg. *Department of Clinical Neuroscience/Ophthalmology, Institute of Neuroscience and Physiology Sahlgrenska Academy at University of Gothenburg, Molndal, Sweden*

1091 — C0104 Refractive Error and Fixation Stability. Nancy J. Coletta^{1,2}, L. Walker², F. A. Vera-Diaz². ¹School of Optometry, MCPHS University, Worcester, MA; ²New England College of Optometry, Boston, MA

1092 — C0105 Analysis of Optokinetic Response Data for Setting Baseline Visual Acuity in Wild-type and Mutant Adult Zebrafish. Yeelong Yang¹, D. Cameron². ¹Graduate College of Biomedical Sciences, Western University of Health Sciences, Pomona, CA; ²College of Optometry, Western University of Health Sciences, Pomona, CA

Exhibit Hall C0128-C0169

Sunday, April 29, 2018 3:15 PM-5:00 PM

Multidisciplinary Ophthalmic Imaging Group

168 OCT - Clinical Application

Moderators: Guoqiang Li and Yoshiaki Yasuno

1093 — C0128 Clinical advantage of Swept-Source Optical Coherence Tomography for the patients with retinal hemorrhage due to retinal microaneurysms: a case series. Hideyuki Shimizu, H. Kaneko, T. Tsunekawa, T. Matsuura, A. Suzumura, H. Terasaki. *Ophthalmology, Nagoya University Graduate School of Medicine, Nagoya, Japan* *CR

- 1094 — C0129 Coronary artery disease severity and its correlation with retinal blood vessel caliber demonstrated by spectral domain optical coherence tomography.** Omer Trivizki¹, S. Armarnik², Y. Arbel³, A. Rosenblatt¹, R. Vladimir¹, D. Goldenberg¹. ¹Ophthalmology, Tel Aviv Medical Center, Tel Aviv, Sackler School of Medicine, Tel Aviv University, Tel Aviv, Israel; ²Ophthalmology, Meir Medical Center, Sackler School of Medicine, Tel Aviv University, Tel Aviv, Israel, Sackler School of Medicine, Tel Aviv University, Tel Aviv, Israel, Kfar Saba, Israel; ³Cardiology, Tel Aviv Medical Center, Tel Aviv, Sackler School of Medicine, Tel Aviv University, Tel Aviv, Israel
- 1095 — C0130 Swept-source optical coherence tomography with multiple B-scan averaging in the management of anterior scleral inflammation.** Maite Sainz De La Maza¹, M. Hereu¹, M. Hernandez¹, M. Mesquida², V. Llorenç¹, A. Adan Civera¹, J. Zarranz-Ventura¹. ¹Clinic Institute of Ophthalmology, Hospital Clinic of Barcelona, BARCELONA, Spain; ²IDIBAPS, Barcelona, Spain
- 1096 — C0131 Suprachoroidal Space Alterations after Delivery of Triamcinolone Acetonide: Post-Hoc Analysis of the Phase 1/2 HULK Study of Patients with Diabetic Macular Edema.** Shaun I. Lampen¹, R. N. Khurana², D. M. Brown^{1,2}, C. C. Wykoff^{1,2}. ¹Retina Consultants of Houston, Houston, TX; ²Blanton Eye Institute, Houston Methodist Hospital & Weill Cornell Medical College, Houston, TX; ³Northern California Retina Vitreous Association, Mountain View, CA *CR, ✕
- 1097 — C0132 Retinal Thickness Changes Following Vitrectomy for Epiretinal Membrane.** Bhavesh Katbamna, V. Medic, J. E. Kim. Medical College of Wisconsin, Milwaukee, WI
- 1098 — C0133 En face versus 25-line raster optical coherence tomography scan patterns for detection of macular fluid in retinal vein occlusions and central serous retinopathy.** Nathan E. Cutler¹, M. Adam², A. Shahlaee³. ¹Retina, Cole Eye Institute, Cleveland, OH; ²Colorado Retina Associates, Denver, CO; ³Ophthalmology, UCSF, San Francisco, CA
- 1099 — C0134 Optical Coherence Tomography Features as Pre-operative predictors of Post-operative Visual Improvement in Patients Undergoing Epiretinal Membrane and Internal Limiting Membrane Peeling.** John C. Zeyer^{1,2}, P. R. Parker¹, M. MacCumber^{1,2}. ¹Ophthalmology, Rush University, Chicago, IL; ²Illinois Retina Associates, SC, Chicago, IL
- 1100 — C0135 Anatomical changes of the anterior segment following circumferential silicone sponge scleral buckling surgery measured with AS-OCT.** Ana Boris Moreno Andrade, R. Matsui, S. Lopez Rubio, J. Rodriguez Loaiza, F. Graue Wiechers, A. Moreno Andrade. Instituto De Oftalmologia Fundacion Conde De Valenciana, Ciudad De Mexico, Ciudad De Mexico, Mexico
- 1101 — C0136 Zones of circumpapillary retinal nerve fiber layer thickness (cpRNFLT) (in-)vulnerability to aging and life style.** Tobias Elze^{1,2}, M. Wang^{2,1}, N. Baniyadi^{2,1}, H. Wang^{2,3}, D. Li^{2,1}, K. Wirkner², T. Kirsten², C. Enzenbach^{2,5}, M. Nuechter², J. Thiery^{2,4}, M. Loeffler^{2,5}, C. Engel^{2,5}, F. G. Rauscher^{2,3}. ¹Schepens Eye Research Institute, Harvard Medical School, Boston, MA; ²Leipzig Research Centre for Civilization Diseases (LIFE), Leipzig University, Leipzig, Germany; ³Institute for Psychology and Behavior, Jilin University of Finance and Economics, Changchun, China; ⁴Institute of Laboratory Medicine, Clinical Chemistry and Molecular Diagnostics, Leipzig University, Leipzig, Germany; ⁵Institute for Medical Informatics, Statistics, and Epidemiology (IMISE), Leipzig University, Leipzig, Germany
- 1102 — C0137 Age-related focal thinning of the ganglion cell-inner plexiform layer.** Jianhua Wang¹, Y. Deng^{1,3}, C. Shi^{1,4}, T. Rundek², B. BaumeF, H. Jiang^{1,2}. ¹Ophthalmology, Bascom Palmer Eye Inst Lib, Miami, FL; ²Neurology, University of Miami, Miami, FL; ³Zhongshan Ophthalmic Centre, Sun Yat-sen University, Guangzhou, China; ⁴School of Ophthalmology and Optometry, Wenzhou Medical University, Wenzhou, Zhejiang, China
- 1103 — C0138 Measurement of ganglion cell complex and nerve fiber layer by Optical Coherence Tomography in a healthy young Mexican population.** Jose Alberto Hernandez Vargas^{1,2}, J. Villalobos Ojeda¹, D. Malacara Hernandez¹, I. Kelly¹. ¹Visual optics, optics investigation centre, Leon, Mexico; ²Glaucoma, Asociación para Evitar la Ceguera, Mexico City, Mexico
- 1104 — C0139 Ganglion Cell-Inner Plexiform Layer Thickness in Healthy Korean Children: Normative Data and Biometric Correlations.** Yoon Pyo Lee, D. Choi. Ophthalmology, Kangnam Sacred Heart Hospital, Seoul, Korea (the Republic of)
- 1105 — C0140 Age and location-specific norms of interocular retinal nerve fiber layer thickness asymmetry.** Neda Baniyadi^{1,2}, F. G. Rauscher^{2,3}, M. Wang^{2,1}, D. Li^{2,1}, H. Wang^{2,4}, K. Wirkner², M. Nuechter², J. Thiery^{2,5}, M. Loeffler^{2,3}, C. Engel^{2,3}, T. Elze^{2,1}. ¹Schepens Eye Research Institute, Harvard Medical School, Boston, MA; ²Leipzig Research Centre for Civilization Diseases (LIFE), Leipzig University, Leipzig, Germany; ³Institute for Medical Informatics, Statistics, and Epidemiology (IMISE), Leipzig University, Leipzig, Germany; ⁴Institute for Psychology and Behavior, Jilin University of Finance and Economics, Changchun, China; ⁵Institute of Laboratory Medicine, Clinical Chemistry and Molecular Diagnostics, Leipzig University, Leipzig, Germany
- 1106 — C0141 Assessing ganglion cell layer topography in human albinism using optical coherence tomography.** Erica N. Woertz¹, B. Omoba², S. J. Chiu³, S. Farsi³, J. Carroll^{1,4}. ¹Cell Biology, Neurobiology & Anatomy, Medical College of Wisconsin, Milwaukee, WI; ²Medical College of Wisconsin, Milwaukee, WI; ³Department of Ophthalmology, Duke University, Durham, NC; ⁴Ophthalmology & Visual Sciences, Medical College of Wisconsin, Milwaukee, WI *CR
- 1107 — C0142 Comparison of color funduscopy and Spectralis multicolor on detection of abnormal findings in retinal nerve fiber layer.** Hiroto Terasaki, S. Sonoda, H. Shiihara, N. Kakiuchi, T. Sakamoto. Kagoshima University, Kagoshima-shi, Japan *CR
- 1108 — C0143 Assessment of macular and retinal nerve fiber layer thicknesses in patients with keratoconus using optical coherence tomography (OCT) and an adjunctive contact lens.** Elena Zhu², L. E. Downie², A. M. McKendrick³, E. W. Chong^{4,1}, R. C. Symons^{4,3}. ¹Centre for Eye Research Australia, Royal Victoria Eye and Ear Hospital, Department of Surgery (Ophthalmology), University of Melbourne, Parkville, Victoria, Australia; ²Melbourne Medical School, University of Melbourne, Parkville, Victoria, Australia; ³Department of Optometry and Vision Sciences, University of Melbourne, Parkville, Victoria, Australia; ⁴Department of Ophthalmology, Royal Melbourne Hospital, Parkville, Victoria, Australia *CR
- 1109 — C0144 Alignment of Center of Foveal Pit and Vertex of Foveal Bulge determined by Ultrahigh Resolution Spectral-Domain Optical Coherence Tomography in Normal Eyes.** Yoshitsugu Matsui, E. Uchiyama, R. Miyata, H. Matsubara, M. Kondo. Ophthalmology, Mie University, Tsu city, Mie, Japan *CR
- 1110 — C0145 Analysis of foveal thickness in patients with oculocutaneous albinism using OCT with eyetracker.** Liara Hirota, M. S. Almeida, R. P. Manzano, R. Y. Sano. Irmandade da Santa Casa de Misericórdia de Sao Paulo, Sao Paulo, Brazil
- 1111 — C0146 Quantitative Analysis of Adult Onset Foveal Vitelliform Lesions with Multimodal Imaging.** Matthew Gillam, V. P. Papastefanou. Department of Ophthalmology, Barts Health NHS Trust, London, London, United Kingdom
- 1112 — C0147 Foveal shape variation among gender and ethnicity.** Josie B. McKellar, I. Ctori, B. Huntjens. Optometry and Visual Science, City, University of London, London, United Kingdom
- 1113 — C0148 Relationship between preserved ellipsoid zone area and choroidal vascularity index in retinitis pigmentosa.** Kirstie Baker¹, M. G. Nittala¹, X. Huang¹, S. Velaga¹, K. Vupparaboina², J. Chhablani², S. R. Sadda^{1,3}. ¹Doheny Eye Institute, Los Angeles, CA; ²L.V.Prasad Eye Institute, Telangana, India; ³Ophthalmology, University of California - Los Angeles, Los Angeles, CA

1114 — C0149 Ethnic variations in preferred retinal locus of fixation using Optical Coherence Tomography. Byki Huntjens, J. B. McKellar, I. Ctort, M. Powner. *Optometry and Visual Science, City, University of London, London, United Kingdom*

1115 — C0150 Subfoveal choroidal thickness in healthy eyes measured by spectral-domain and swept-source optical coherence tomography. Nataliya Semenova, E. Gurova, E. Sokolova, V. Akopyan. *Department of Ophthalmology, Lomonosov Moscow State University, School of Medicine, Moscow, Russian Federation*

1116 — C0151 Choroidal thickness among Hispanics by Enhanced Depth Imaging Optical Coherence Tomography (EDI-OCT). Claudia Zepeda-Palacio^{1,2}, A. C. Perez-Ortiz^{3,2}, M. T. Valdez Gonzalez¹, S. Voorduin Ramos¹. ¹Fundación hospital Nuestra señora de la Luz, México, Mexico; ²Escuela de Medicina, Universidad Panamericana, Insurgentes Mixcoac, Benito Juarez, Ciudad de Mexico, Mexico; ³School of Public Health, Yale University, New Haven, CT

1117 — C0152 Changes in stromal and luminal areas of choroid in pachychoroid spectrum diseases. Minsub Lee^{1,2}, J. Chae¹, H. Jang¹, H. Lee^{1,2}, H. Kim^{1,2}, H. Chung^{1,2}. ¹Ophthalmology, Konkuk University School of Medicine, Seoul, Korea (the Republic of); ²Ophthalmology, Konkuk University Medical Center, Seoul, Korea (the Republic of)

1118 — C0153 Displacement between anterior chamber width obtained by anterior segment optical coherence tomography and white-to-white distance. Sune Chansangpetch^{1,2}, A. Nguyen², S. C. Lin². ¹Faculty of Medicine, Chulalongkorn University and King Chulalongkorn Memorial Hospital, Thai Red Cross Society, Bangkok, Thailand; ²Ophthalmology, University of California, San Francisco, San Francisco, CA

1119 — C0154 Anterior segment optical coherence tomography identifies myopathy in thyroid eye disease. susan E. azar. *Ophthalmology, Tulane University, New Orleans LA, LA*

1120 — C0155 Using spectral domain optical coherence tomography to assess the epithelium of palisades of Vogt in normal and diseased limbus. Tzu-Yun Kao^{1,2}, W. Chen², H. Lin², T. Tew². ¹Ophthalmology, National Taiwan University, Yun-Lin Branch, Yun-Lin, Taiwan; ²Ophthalmology, National Taiwan University, Taipei, Taiwan ✉

1121 — C0156 Optical Coherence Tomography-based Observation of Age-related Changes in Human Schlemm's Canal. Yujin Zhao. *Eye & ENT Hospital of Fudan University, Shanghai, China*

1122 — C0157 Afferent system discordance. Lessons from mismatch of visual field and OCT. Steven A. Newman. *Ophthalmology, University of Virginia, Charlottesville, VA*

1123 — C0158 Retinal morphology in pre-clinical Alzheimer's Disease. Shaun Frost¹, Y. Kanagasingam¹, M. Koronyo-Hamou², Y. Koronyo², D. Biggs³, S. Verdooner³, R. Martins⁴. ¹CSIRO, Perth, Western Australia, Australia; ²Department of Biomedical Sciences, Cedars-Sinai Medical Center, Los Angeles, CA; ³Neurovision Imaging LLC, Sacramento, CA; ⁴Australian Alzheimer Research Foundation, Perth, Western Australia, Australia

1124 — C0159 Interaction between retinal microcirculation and microstructure in patients with Alzheimer's disease. Ying Lin^{1,2}, H. Jiang^{1,3}, Y. Liu^{1,4}, Y. Deng^{1,2}, Z. Duan^{1,2}, T. Rundek³, X. Sun³, B. Baumel³, J. Wang¹. ¹Department of Ophthalmology, Bascom Palmer Eye Institute, MIAMI, FL; ²Zhongshan Ophthalmic Center, Sun Yat-sen University, Guangzhou, China; ³Department of Neurology, University of Miami Miller School of Medicine, Miami, FL; ⁴Department of Ophthalmology, Third Affiliated Hospital of Nanjing University of Chinese Medicine, Nanjing, Jiangsu, China *CR

1125 — C0160 OCT analysis of Bruch's opening-minimum rim width and cup depth in eyes with compressive chiasmal lesions. Correlation with peripapillary retinal nerve fiber layer and standard automated perimetry. Rafael Barbosa de Araujo, L. C. Zacharias, M. K. Oyamada, R. C. Preti, M. L. Monteiro. *Ophthalmology, Faculdade de Med da Univ de Sao Paulo, S?o Paulo, S?o Paulo, Brazil*

1126 — C0161 Evaluating Drusen and Spectral Domain Optical Coherence Tomography (SDOCT) Retinal Thickness Parameters in Neurodegenerative Disease. Richard Cheng³, M. Couse³, E. Leontieva^{3,11}, C. Hudson^{3,10}, E. Mandelcorn^{1,2}, E. Margolin^{1,2}, W. Lou⁴, M. A. Binns^{4,5}, A. Santiago^{4,5}, S. Black^{2,6}, A. Lang^{2,7}, S. Kumar^{6,8}, M. Masellis^{6,2}, D. Grimes⁹, W. Hatch^{11,10}. ¹Department of Ophthalmology and Vision Science, Toronto Western Hospital, University Health Network, Toronto, Ontario, Canada; ²Department of Medicine, University of Toronto, Toronto, Ontario, Canada; ³School of Optometry and Vision Science, University of Waterloo, Waterloo, Ontario, Canada; ⁴Division of Biostatistics, Dalla Lana School of Public Health, University of Toronto, Toronto, Ontario, Canada; ⁵Rotman Research Institute, Baycrest Health Sciences, Toronto, Ontario, Canada; ⁶Department of Medicine, Sunnybrook Health Sciences Centre, Toronto, Ontario, Canada; ⁷Krembil Neuroscience Centre, University Health Network, Toronto, Ontario, Canada; ⁸Campbell Family Mental Health Research Institute, Centre for Addiction and Mental Health, Toronto, Ontario, Canada; ⁹Department of Neuroscience, Ottawa Hospital Research Institute, Ottawa, Ontario, Canada; ¹⁰Department of Ophthalmology and Vision Science, University of Toronto, Toronto, Ontario, Canada; ¹¹Kensington Eye Institute, Toronto, Ontario, Canada

1127 — C0162 Macular structural changes in Leber's hereditary optic neuropathy with G11778A mutation evaluated by optical coherence tomography. Xinting Liu, M. Shen, Y. Yuan, F. Lu. *School of Ophthalmology and Optometry, Wenzhou Medical University, Wenzhou, Zhejiang, China*

1128 — C0163 Association between retinal nerve fiber layer thickness and human cognitive performance. Hui Wang^{1,2}, T. Elze^{2,3}, T. Luck^{2,4}, J. Kynast^{2,5}, F. Rodriguez^{2,4}, A. Witte^{2,5}, C. Engel^{2,6}, J. Girbardt^{2,6}, M. Wang^{2,3}, N. Baniasad^{2,3}, D. Li^{2,3}, M. Loeffler^{2,6}, M. L. Schroeter^{5,7}, S. G. Riedel-Heller^{2,4}, A. Villringer^{5,7}, F. G. Rauscher^{2,6}. ¹Institute for Psychology and Behavior, Jilin University of Finance and Economics, ChangChun, JiLin, China; ²Leipzig Research Centre for Civilization Diseases (LIFE), Leipzig University, Leipzig, Germany; ³Schepens Eye Research Institute, Harvard Medical School, Boston, MA; ⁴Institute of Social Medicine, Occupational Health and Public Health (ISAP), Leipzig University, Leipzig, Germany; ⁵Department of Neurology, Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany; ⁶Institute for Medical Informatics, Statistics, and Epidemiology (IMISE), Leipzig University, Leipzig, Germany; ⁷Clinic for Cognitive Neurology, Leipzig University, Leipzig, Germany

1129 — C0164 Dermatopathologic and Optical Coherence Tomography "Cracked Mud Sign" in Pseudoxanthoma Elasticum. Ashley E. Brown¹, C. C. Wykoff², S. Hsu², D. M. Brown². ¹McGovern Medical School, University of Texas Health Science Center at Houston, Houston, TX; ²Retina Consultants of Houston, Houston, TX; ³Dermatology, Temple University School of Medicine, Philadelphia, PA

1130 — C0165 Ocular manifestation of Posterior Cortical Atrophy. Lajos Csincsik¹, T. Shakespeare², S. Crutch², T. Peto³, I. Lengyel¹. ¹School of Medicine, Dentistry and Biomedical Sciences, Queen's University Belfast, Belfast, United Kingdom; ²Dementia Research Centre, UCL Institute of Neurology, London, United Kingdom; ³Queen's University Belfast, Belfast, United Kingdom *CR

1131 — C0166 Spectral domain optical coherence tomography abnormalities preceding visual field changes in hydroxychloroquine retinopathy. Sean Garrity, D. Sarraf. *UCLA, South Park, PA*

1132 — C0167 Longitudinal Retinal Thickness Changes in Sickle Cell Retinopathy by Optical Coherence Tomography. Cindy Cai¹, M. O. Linz¹, I. C. Han^{1,2}, A. Scott¹. ¹Wilmer Eye Institute, Baltimore, MD; ²University of Iowa, Department of Ophthalmology and Visual Sciences, Iowa City, IA

1133 — C0168 Submacular Choroid Thickness Increases during Long-Duration Spaceflight.

Steven Laurie^{1,2}, B. Macias^{1,2}, C. Ferguson³, J. Dunn^{1,4}, D. Ebert^{1,2}, J. H. Liu⁵, S. Lee^{1,2}, S. Dulchavsky⁶, A. Hargens⁵, M. B. Stenger¹. ¹NASA Johnson Space Center, Houston, TX; ²KBRwyle, Houston, TX; ³Mechanical Engineering, University of Kentucky, Lexington, KY; ⁴GeoControl Systems, Inc, Houston, TX; ⁵University of California San Diego, La Jolla, CA; ⁶Henry Ford Hospital, Detroit, MI

1134 — C0169 Simulated-Weightlessness Alters Retinal Foveal Structure and Microvasculature that Is Reversed by a Venotonic Thigh Cuff Countermeasure. Alex Huang¹, S.

Balasubramanian¹, M. B. Stenger², S. Lee³, S. Laurie³, J. H. Liu⁴, A. Feiveson², S. R. Sadda¹, A. Hargens², C. Cole⁵, J. Foulk⁵, D. Ebert³, A. Sargsyan³, B. Macias³. ¹UCLA Ophthalmology, Doheny Eye Institute, Los Angeles, CA; ²NASA-JSC, Houston, TX; ³KBRwyle, Houston, TX; ⁴Ophthalmology, University of California, San Diego, CA; ⁵Clemson University, Pendleton, SC
*CR

Ballrooms BC

Sunday, April 29, 2018 5:15 PM-6:00 PM

169 Weisenfeld Award and Lecture

In this lecture, Mary Elizabeth Hartnett will speak about retinopathy of prematurity (ROP), a leading cause of childhood blindness worldwide. ROP and factors imparting risk have changed over time and vary throughout the world. She will discuss the roles of oxygen and VEGF signaling in both pathologic and physiologic angiogenesis focusing on work her lab has done to understand VEGF signaling and how this has translated to current trials using anti-VEGF agents. She will also describe the need for optimal models to assess pathophysiology as well as protective mechanisms to prevent ROP.

— 5:15 **Introduction: Patricia D'Amore, MD, PhD, FARVO**

1135 — 5:20 Discovering mechanisms in the changing and diverse pathology of ROP. M

Elizabeth Hartnett. Retina Service, Moran Eye Center; Univ of Utah, Salt Lake City, UT

Sunday Award
Lecture
5:15 pm – 6:00 pm

Monday

April 30, 2018

ARVO Annual Meeting
Registration
Main Lobby
7am – 6pm

NAEVR Briefing:
NAEVR Defense-Related Vision
Research Opportunities
7 – 8am
Room 313BC

Exhibit hours
8:15am – 5:15pm

ARVO/Alcon Keynote Session
CRISPR-Cas gene editing:
biology, technology and ethics
5:30 – 6:45pm
Kalakaua Ballroom BC

Student/Trainee Social
Rooftop Garden
7:30 – 9pm
(Everyone welcome)

ARVO
2018

April 29 – May 3 | Honolulu

Stand strong for science
Stand for strong vision science

Monday, April 30 – Minisymposia, papers, section business meetings

Time	Session	Title	Location
8:15 –10am	201	Clinical Uveitis: Etiology, Complications and QoL [IM] #1136-1141	301AB
	202	EOM and associated tissues: Disease and Development [EY] #1142-1148	306AB
	203	Advances in imaging of retinal disease [VI] #1149-1155	310
	204	Vitreoretinal Interface and Retinal Detachment [RE] #1156-1162	311
	205	Ocular surface biology, disease, surgery [CO] #1163-1169	312
	206	New Perspectives in Human Myopia Research [AP] #1117-1176	313A
	207	Discoveries in Glaucoma and Associated Endophenotypes [GEN, GL] #1177-1183	314
	208	RPE physiology [RC] #1184-1189	315
	209	Gene therapy [PH] #1190-1196	316A
	210	Implementation science in ophthalmology — Minisymposium [CL, LV, RE] #1197-1201	316B
	211	Signaling and Cell Biology [LE] #1202-1207	316C
	212	Biochemistry and Molecular Biology of Diabetic Retinopathy [BI] #1208-1213	320
	213	Biomechanics [GL] #1214-1220	Ballroom A
	214	Deep Learning Highlights [MOI] #1221-1227	Ballrooms BC
10:15 –11am	201a	IM Section Business Meeting [IM]	301AB
	202a	EY Section Business Meeting [EY]	306AB
	203a	VI Section Business Meeting [VI]	310
	204a	RE Section Business Meeting [RE]	311
	205a	CO Section Business Meeting [CO]	312
	206a	AP Section Business Meeting [AP]	313A
	207a	VN Section Business Meeting [VN]	314
	208a	RC Section Business Meeting [RC]	315
	209a	PH Section Business Meeting [PH]	316A
	210a	CL Section Business Meeting [CL]	316B
	211a	LE Section Business Meeting [LE]	316C
	212a	BI Section Business Meeting [BI]	320
212a	GL Section Business Meeting [GL]	Ballroom A	
11:15 – 1pm	224	New Insights into Bacterial Keratitis [IM] #1544-1550	301AB
	225	Strabismus [EY] #1551-1557	306AB
	226	20/20 Visual acuity is not enough – again — Minisymposium [VI] #1558-1562	310
	227	Inherited Retinal Diseases [RE] #1563-1569	311
	228	Cornea surgery, non-refractive [CO] #1570-1576	312
	229	Anatomical changes during ocular development and disease [AP] #1577-1583	313A
	230	Circadian clocks in retinal health and diseases — Minisymposium [RC, RE, VN] #1584-1588	315
	231	Retina I [PH] #1589-1595	316A
	232	Healthcare Delivery [CL] #1596-1601	316B
	233	Posterior capsular opacification (PCO) [LE] #1602-1607	316C
	234	Targeting mitochondrial dysfunction in retinal and optic nerve disease — Minisymposium [BI, RC, RE] #1608-1612	320
	235	What's new in glaucoma imaging? — Minisymposium [GL, MOI] #1613-1617	Ballroom A
236	AMD and Anti-VEGF [RE] #1618-1624	Ballrooms BC	

Symposia and minisymposia highlighted in **boldface**

Monday, April 30 – Minisymposia, papers, workshops/SIGs, lectures (continued)

Time	Session	Title	Location
1:30 – 3pm	249	Telemedicine and Artificial Intelligence using Deep Learning Systems to Screen and Monitor Diabetic Retinopathy, Glaucoma and Age-related Macular Degeneration using Different Imaging Modalities — SIG [GL, IM, RE]	301AB
	250	Phagocytic mechanisms in ocular tissues: from physiological to pathological processes — SIG [BI, CO, IM, PH, RC, RE, VN, GEN]	306AB
	251	Omega-3 Fatty Acid Supplementation for Dry Eye Disease: Data on Efficacy and Safety from the Dry Eye Assessment and Management (DREAM©) Study — SIG [CO, CL]	310
	252	Managing Patients with Diabetic Macular Edema, Diabetic Retinopathy, Neovascular and Non-Neovascular AMD, and Retinal Vein Occlusion: How to Best Utilize the Latest Data from Clinical Trials — SIG [CL, CO, IM, PH, VI, VN, RE, GEN, MOI]	311
	253	MOI Group — Visible Light OCT [MOI]	313A
	254	China-ARVO Networking Forum	313BC
	255	EVER/ARVO Workshop: Multi-omics, mechanisms and stratification – paradigms for understanding and targeting immune responses in disease	314
	256	Keys to writing manuscripts and determining where to publish	316A
	257	NIH-CSR workshop on the peer review of grant applications	316B
	258	Civic and community engagement for stronger science: Effective communication strategies	316C
	259	Eye and Brain - the interrelationship and pathology — SIG [BI, EY, GL, IM, RE, VN, MOI]	320
	260	Membrane dynamics in RPE health and disease — SIG [BI, IM, PH, RC, RE]	Ballroom A
	261	The Lasker/IRRF Initiative for Innovation in Vision Science: Glaucoma and Diabetic Retinopathy — SIG [BI, GL, RC]	Ballrooms BC
3:30 – 5:15pm	262	Functional Vision and Visual Function [LV] #1942-1947	306AB
	263	Accommodation and Binocular Vision [VI] #1948-1954	310
	264	Diabetic Macular Edema Clinical [RE] #1955-1961	311
	265	Dry Eye Clinical [CO] #1962-1968	312
	266	Highlights of Imaging Technologies [MOI] #1969-1975	313A
	267	Photosensitive cells [VN] #1976-1982	314
	268	Stem Cells: from retinal organoids to transplantation [RC] #1983-1989	315
	269	From optics to electronics: New technologies for improving vision in health and disease — Minisymposium [PH] #1990-1994	316A
	270	IOP Measurement, Clinical Trials and Drug Studies [GL] #1995-2001	316C
	271	Corneal regeneration in health and disease — Minisymposium [CO, EY, RC, VI] #2002-2007	320
	272	Neurodegeneration [GL] #2008-2014	Ballroom A
5:30 – 6:45pm	292	ARVO/Alcon Keynote Session: CRISPR-Cas gene editing: biology, technology and ethics	Ballrooms BC
7 – 8:30pm	293	Special Session: Military Relevant Priorities and Strategies for Injury Diagnostics and Treatments #2556-2559	Ballroom A

Symposia and minisymposia highlighted in **boldface**

Monday, April 30 – Posters

Time	Session	Title	Program No.	Board No.	
8:15 – 10am	215	Clinical Trials and Drug Studies [GL]	1228 - 1258	A0069 - A0099	
	216	Visual function- beyond clinical VA and CSF [VI, VN, LV]	1259 - 1293	A0294 - A0328	
	217	Corneal Surgery non-refractive [CO]	1294 - 1349	B0001 - B0056	
	218	Corneal Endothelium I [CO]	1350 - 1382	B0110 - B0142	
	219	Corneal Biomechanics [CO]	1383 - 1417	B0160 - B0194	
	220	Genetics of AMD and Macular dystrophies [GEN]	1418 - 1438	B0337 - B0357	
	221	AMD and Anti-VEGF II [RE]	1439 - 1475	C0001 - C0037	
	222	Retinal glia: cell biology [RC]	1476 - 1500	C0218 - C0242	
	223	Clinical Imaging Retina [RE, RC]	1501 - 1543	C0342 - C0384	
	11:15am – 1pm	237	Retinoblastoma: From Bench to Bedside [AP, BI]	1625 - 1647	A0001 - A0023
238		Aqueous humor dynamics, IOP [PH]	1648 - 1665	A0024 - A0041	
239		Image Processing and Interpretation [MOI]	1666 - 1703	A0187 - A0224	
240		Machine Learning on Imaging [MOI, VI]	1704 - 1741	A0225 - A0262	
241		Contact Lens [CO, AP]	1742 - 1794	B0057 - B0109	
242		Corneal Neuropathy [CO]	1795 - 1811	B0143 - B0159	
243		Genetic and Retinal disease epidemiology [CL]	1812 - 1846	B0273 - B0307	
244		Ganglion Cells and Beyond [VN, VI]	1847 - 1862	C0151 - C0166	
245		Inner Retinal circuits [VN]	1863 - 1874	C0167 - C0178	
246		Visual Disease Models and Restoration [VN]	1875 - 1884	C0179 - C0188	
247		Diabetic Retinopathy: Clinical [RE]	1885 - 1913	C0285 - C0313	
248		Diabetic Retinopathy: Imaging [RE]	1914 - 1941	C0314 - C0341	
3:30 – 5:15pm		273	Biomechanics [GL]	2015 - 2041	A0042 - A0068
		274	Surgery and Wound Healing II [GL]	2042 - 2078	A0100 - A0136
		275	Imaging: Posterior Segment I [GL]	2079 - 2128	A0137 - A0186
	276	Optics, imaging, biometry and function in normal and myopic eye growth [AP]	2129 - 2159	A0263 - A0293	
	277	Eye Movements [EY]	2160 - 2173	A0329 - A0342	
	278	Neuro-ophthalmology [EY]	2174 - 2187	A0343 - A0356	
	279	Neuro-ophthalmology Intracranial HTN and papilledema [EY]	2188 - 2197	A0357 - A0366	
	280	Cataract Surgery - IOLs [LE]	2198 - 2218	A0367 - A0387	
	281	Cataract Surgery Procedures II [LE]	2219 - 2240	A0388 - A0409	
	282	Corneal Development, Cell and Molecular Biology [CO]	2241 - 2293	B0195 - B0247	
	283	Trauma [CL, AP]	2294 - 2318	B0248 - B0272	
	284	Genetics of Retinal dystrophies and Functional Genomics [GEN]	2319 - 2347	B0308 - B0336	
	285	Proteostasis and systems biology approaches for ocular cellular profiling [BI]	2348 - 2371	B0358 - B0381	
286	Neovascular AMD [RE]	2372 - 2405	C0038 - C0071		
287	Dry AMD [RE, RC]	2406 - 2431	C0072 - C0097		
288	Early and Atrophic AMD [RC]	2432 - 2459	C0098 - C0125		
289	Disease modeling and potential therapies [RC]	2460 - 2484	C0126 - C0150		
290	Neuroprotection [RC]	2485 - 2513	C0189 - C0217		
291	Inflammatory Disease Processes in Humans and Experimental Models [IM]	2514 - 2555	C0243 - C0284		

Poster board numbers correspond to poster location in Exhibit Hall; A = Poster Area A , B = Poster Area B and C = Poster Area C.

Room 301AB

Monday, April 30, 2018 8:15 AM-10:00 AM

Immunology/Microbiology

201 Clinical Uveitis: Etiology, Complications and QoL**Moderators: Alastair K. Denniston and Douglas A. Jabs**

1136 — 8:15 Health related quality of life in uveitis patients. Mohith Shamdas^{1,2}, K. Bassilious^{1,2}, P. I. Murray^{1,2}. ¹Academic Unit of Ophthalmology, University of Birmingham, Birmingham, United Kingdom; ²Birmingham and Midland Eye Centre, Sandwell and West Birmingham Hospitals NHS Trust, Birmingham, United Kingdom

1137 — 8:30 Health disparities impact prevalence and complications of noninfectious uveitis: results from the National Inpatient Sample. Krati Chauhan¹, S. Scaife⁴, J. T. Rosenbaum^{2,3}. ¹Rheumatology, Southern Illinois University- School of Medicine, Springfield, IL; ²Ophthalmology, Oregon Health and Science University-School of Medicine, Portland, OR; ³Ophthalmology, Legacy Devers Eye Institute, Portland, OR; ⁴Center for Clinical Research, Springfield, IL

1138 — 8:45 Rapid Visual Field Progression in Uveitic Glaucoma: Evidence From ‘Big Data’ Collected in Glaucoma Clinics in the United Kingdom. Xiaoxuan Liu^{1,2}, S. R. Kelly³, R. J. Barry⁴, S. R. Bryan³, P. A. Keane⁵, A. K. Denniston^{1,2}, D. Crabb³. ¹Academic Unit of Ophthalmology, Institute of Inflammation and Ageing, College of Medical and Dental Sciences, University of Birmingham, Birmingham, United Kingdom; ²Ophthalmology Department, University Hospitals Birmingham NHS Foundation Trust, Birmingham, United Kingdom; ³Division of Optometry and Visual Sciences, City, University of London, London, United Kingdom; ⁴Birmingham Midlands Eye Centre, Sandwell and West Birmingham Hospitals, Birmingham, United Kingdom; ⁵Moorfields Eye Hospital NHS Foundation Trust, London, United Kingdom *CR

1139 — 9:00 Vitamin D levels and exposures in active and inactive uveitis patients. Anthony J. Hall^{1,2}, Z. Chiu^{1,2}, R. Troutbeck³, M. Lin^{1,3}, L. Cecelia^{1,3}, L. L. Lim^{3,4}. ¹Ophthalmology, Alfred Hospital, Melbourne, Prahran, Victoria, Australia; ²Surgery, Monash University, Melbourne, Victoria, Australia; ³Ophthalmology, RVEEH, Melbourne, Victoria, Australia; ⁴Centre for Eye Research, Melbourne, Victoria, Australia

1140 — 9:15 Serologic Testing for Syphilis in Patients with Uveitis. Meghan Berkenstock¹, L. Allan-Blitz², E. L. Crowell¹, F. Yu², D. Cordova², J. E. Thorne¹, G. N. Holland². ¹Wilmer Eye Institute, Baltimore, MD; ²UCLA Stein Eye Institute, Los Angeles, CA

1141 — 9:30 Anti-tuberculosis treatment reduces the risk of disease recurrence among eye with latent tuberculosis-related uveitis. Oren Tomkins-Netzer^{1,2}, B. Leong³, X. Zhang¹, S. Lightman^{1,2}, P. J. McCluskey^{3,4}. ¹Ophthalmology, UCL, London, United Kingdom; ²Moorfields Eye Hospital, London, United Kingdom; ³Save Sight Institute, Sydney Medical School, Sydney, New South Wales, Australia; ⁴Sydney Eye Hospital, Sydney, New South Wales, Australia

Room 301AB

Monday, April 30, 2018 10:15 AM-11:00 AM

201a IM Section Business Meeting

1. Trustees Report of Status of Association
2. ARVO Strategic Plan
3. Annual Meeting Program Committee Chairs Report
4. Annual Meeting Program Committee Election Results
5. IM Section Trustee nomination(s) update
6. Cora Verhagen Award
7. Dr. Raniyah Ramadan Foundation Award
8. Other Business

Room 306AB

Monday, April 30, 2018 8:15 AM-10:00 AM

Eye Movements/Strabismus/Amblyopia/Neuro-Ophthalmology

202 EOM and associated tissues: Disease and Development**Moderators: Linda K. McLoon and Birgit Lorenz**

1142 — 8:15 Three-dimensional ex vivo modeling of Graves’ orbitopathy reveals a novel pathogenic role for the HIF2A-LOX pathway. Fumihito Hikage, S. Atkins, A. Kahana, T. Smith, T. Chun. University of Michigan, Ann Arbor, MI

1143 — 8:30 Tissue remodeling in Thyroid Eye Disease(TED): The role of Thy1 (CD90) and TSHR in TED adipogenesis. Richard P. Phipps, C. Woeller, S. E. Feldon. Ophthalmology, University of Rochester, Rochester, NY

1144 — 8:45 Retinoid-regulated expression of pro-inflammatory cytokines in orbital tissues: a potential common denominator in orbital inflammatory syndromes. Curtis J. Heisel¹, P. E. Kish², N. Rajesh³, A. Kahana². ¹University of Michigan Medical School, Ann Arbor, MI; ²Ophthalmology and Visual Sciences, University of Michigan, Ann Arbor, MI; ³LSA, University of Michigan, Ann Arbor, MI

1145 — 9:00 Elevated Bone morphogenic protein 4 (BMP4) Expression implicated in Site-specific Adipogenesis in Thyroid Associated Orbitopathy (TAO). Kam-lung, Kelvin Chong^{1,2}, J. Wong¹, W. Chu¹, C. Pang¹. ¹Ophthalmology and Visual Science, The Chinese University of Hong Kong, Hong Kong, Hong Kong; ²Ophthalmology and Visual Science, Prince of Wales Hospital, Hong Kong, Hong Kong

1146 — 9:15 Sarcomere remodelling and gene expression profile changes following strabismus surgery. Fatima Pedrosa Domellof^{1,2}, M. Rodriguez Garcia¹, A. Vicente¹, K. Sandgren Hochhard¹. ¹Dept of Clinical Sciences/Ophthalmology, UMEA University, Umea, Sweden; ²Department of Integrative Medical Biology/Anatomy, Umeå University, Umeå, Sweden

1147 — 9:30 Adult Abducens Nerve and Lateral Rectus Muscle Regenerate in a Coordinated Fashion Following Injury, Revealing Important Biological Interactions. Alon Kahana, R. M. Kelly, C. Sha, P. E. Kish. Ophthalmology and Visual Sciences, University of Michigan, Ann Arbor, MI

1148 — 9:45 Effect of Treatment with Ciliary Neurotrophic Factor on Contractile Properties in Rabbit Extraocular Muscle. Linda K. McLoon, K. R. Fitzpatrick, S. A. McConnell. Ophthalmology and Visual Neurosciences, University of Minnesota, Minneapolis, MN

Room 306AB

Monday, April 30, 2018 10:15 AM-11:00 AM

202a EY Section Business Meeting

1. Trustees Report of Status of Association
2. ARVO Strategic Plan
3. Annual Meeting Program Committee Chairs Report
4. Annual Meeting Program Committee Election Results
5. Other Business

Room 310

Monday, April 30, 2018 8:15 AM-10:00 AM

Visual Psychophysics/Physiological Optics

203 Advances in imaging of retinal disease**Moderators: Jessica I. Morgan and Jennifer J. Hunter**

1149 — 8:15 Evaluation of the foveal avascular zone with Optical Coherence Tomography Angiography of the retina in diabetic patients without retinopathy.. Aline Astorga Carballo, U. de Dios Cuadras, D. Zapata, E. Ariza, F. Graue Wiechers. Retina, Conde de Valenciana, Mexico City, CDMX, Mexico

1150 — 8:30 Evaluation of Retinal Vasculature in Patients with Branch Retinal Vein Occlusion Through Optical Coherence Tomography Angiography. Bárbara d. Moura^{2,1}, T. E. Arantes¹, V. T. Bravo Filho¹, I. B. Paiva¹, R. P. Lira². ¹Altino Ventura Foundation, Recife, Pernambuco, Brazil; ²Clinical Hospital/UFPE, Recife, PE, Brazil

1151 — 8:45 Cellular-scale assessment of visual function in Choroideremia. Jessica I. Morgan^{1,2}, W. S. Tuten^{1,3}, R. F. Cooper^{1,3}, G. K. Han^{1,2}, G. Young^{1,2}, J. Bennett^{1,2}, A. M. Maguire^{1,2}, T. S. Aleman^{1,2}, D. H. Brainard³. ¹Scheie Eye Institute, Ophthalmology, University of Pennsylvania, Philadelphia, PA; ²Center for Advanced Retinal and Ocular Therapeutics, University of Pennsylvania, Philadelphia, PA; ³Psychology, University of Pennsylvania, Philadelphia, PA *CR

1152 — 9:00 Fine scale analysis of fixation utility in adaptive optics images of diabetic patients with localized areas of dark cones. Ann E. Elsner, B. P. Haggerty, S. A. Burns. Optometry, Indiana University, Bloomington, IN

1153 — 9:15 Unique adaptive optics OCT reflection in cone inner segments of subjects with retinitis pigmentosa. Ayoub Lassoued, K. Kurokawa, F. Zhang, J. A. Crowell, D. T. Miller. Optometry, Indiana University-Bloomington, Bloomington, IN

1154 — 9:30 High resolution imaging of retinal detachment in the cone-dominant ground squirrel. Alexander E. Salmon¹, B. S. Sajdak¹, T. B. Connor², A. Dubra³, J. Carroll^{1,2}. ¹Cell Biology, Neurobiology, & Anatomy, Medical College of Wisconsin, Milwaukee, WI; ²Ophthalmology & Visual Sciences, Medical College of Wisconsin, Milwaukee, WI; ³Ophthalmology, Stanford University, Stanford, CA

1155 — 9:45 Two-photon autofluorescence kinetics of macaque photoreceptors are slowed during systemic hypoxia. Sarah Walters¹, C. Schwarz², A. Walker², L. DiVincenti¹, J. J. Hunter^{3,2}. ¹The Institute of Optics, University of Rochester, Rochester, NY; ²Center for Visual Science, University of Rochester, Rochester, NY; ³Flaum Eye Institute, University of Rochester, Rochester, NY; ⁴Division of Comparative Medicine, University of Rochester, Rochester, NY *CR

Room 310

Monday, April 30, 2018 10:15 AM-11:00 AM

203a VI Section Business Meeting

1. Trustees Report of Status of Association
2. ARVO Strategic Plan
3. Annual Meeting Program Committee Chairs Report
4. Annual Meeting Program Committee Election Results
5. VI Section Trustee nomination(s) update
6. Other Business

Room 311

Monday, April 30, 2018 8:15 AM-10:00 AM

Retina**204 Vitreoretinal Interface and Retinal Detachment**

Moderators: Stephen R. Russell and Anthony B. Daniels

1156 — 8:15 MIF promoter polymorphism variations in retinal detachment with proliferative vitreoretinopathy. Colleen M. Cebulla¹, H. Van Law^{1,5}, B. Kim¹, R. Kusibati¹, T. Heisler-Taylor¹, D. Williams¹, J. Matthias¹, F. Davidorf¹, M. Ohr¹, M. Wells¹, D. Klisovic^{1,4}, J. Allen¹, W. Terrell⁶, D. M. Miller², R. Pilarski³, M. H. Abdel-Rahman^{1,3}. ¹Ophthalmology and Visual Science, The Ohio State University, Columbus, OH; ²Cincinnati Eye Institute, Cincinnati, OH; ³Division Human Genetics, Ohio State University, Columbus, OH; ⁴Midwest Retina, Dublin, OH; ⁵The Ohio State University College of Optometry, Columbus, OH; ⁶Mary Lanning Healthcare, Hastings, NE

1157 — 8:30 Intravitreal HC-HA/PTX3: A potential novel therapy for proliferative vitreoretinopathy. Ajay E. Kuriyan^{1,2}, H. He³, E. Arrieta², N. Relhan², J. Peterson², C. Su², M. Mahabole³, S. R. Dubovy², H. W. Flynn², J. A. Paref², S. C. Tseng³. ¹Flaum Eye Institute, Univ. of Rochester Med Center, Pittsford, NY; ²Ophthalmology, Bascom Palmer Eye Institute, Miami, FL; ³TissueTech, Inc., Miami, FL *CR

1158 — 8:45 Changes in Vitreoretinal Adhesion with Age and Region in Human and Sheep Eyes. Christopher J. Creveling, B. Coats. Mechanical Engineering, University of Utah, Salt Lake City, UT

1159 — 9:00 Progressive Reductions in Acuity Occur even within the First Three Days After a Macula-Off Retinal Detachment. Margaret Greven¹, T. Leng², L. Leung², D. M. Moshfeghi², S. Sanislo², R. Silva², I. Schachar². ¹Ophthalmology, Wake Forest University School of Medicine, Winston Salem, NC; ²Stanford University School of Medicine, Palo Alto, CA

1160 — 9:15 Experience and Outcomes of Pneumatic Retinopexy Performed by Vitreoretinal Fellows in the United States. Glenn Yiu¹, P. Emami-naeini¹, J. Deaner², F. Alfi², P. Gogte³, R. Kaplan⁴, K. Chen⁶, E. nudleman⁶, D. S. Grewal⁵, M. Gupta⁴, J. D. Wolfe³, M. Klufas². ¹Ophthalmology, UC Davis, Sacramento, CA; ²Ophthalmology, Wills Eye Hospital, Philadelphia, PA; ³Associated Retinal Consultants, Royal Oak, MI; ⁴Ophthalmology, New York Eye & Ear Infirmary, New York, NY; ⁵Duke Eye Center, Durham, NC; ⁶Ophthalmology, UCSD, San Diego, CA

1161 — 9:30 Head-positioning tracking device for monitoring patient's adherence to position indications after pneumatic retinopexy. Raul Velez-Montoya¹, A. Gonzalez-H. Leon¹, K. J. Herrera-Juarez², N. Crim¹, E. Hernandez-Quintela². ¹Retina, Asociación para Evitar la Ceguera en Mexico Hospital "Dr. Luis Sanchez Bulnes" IAP, Mexico, CDMX, Mexico; ²Cornea, Asociación para Evitar la Ceguera en Mexico Hospital "Dr. Luis Sanchez Bulnes" IAP, Mexico City, CDMX, Mexico

1162 — 9:45 Impact of viewing system choice during primary retinal detachment repair. Marianeli Rodriguez¹, E. Ryan², C. Ryan², S. Kakulavarapu², P. Mardis⁴, J. A. Stefater¹, N. Forbes², O. Gupta⁵, A. Capone⁶, D. Joseph⁷, D. Eliott¹, Y. Yonekawa¹. ¹Massachusetts Eye and Ear Infirmary, Boston, MA; ²Vitreoretinal Surgery, University of Minnesota, Minneapolis, MN; ³College of Osteopathic Medicine, Nova Southeastern University, Fort Lauderdale, FL; ⁴University of Tennessee, Knoxville, TN; ⁵Wills Eye Hospital, Mid Atlantic Retina, Columbus, OH; ⁶Oakland University William Beaumont School of Medicine, Associated Retinal Consultants, Royal Oak, MI; ⁷The Retina Institute, St Louis, MO *CR

Room 311

Monday, April 30, 2018 10:15 AM-11:00 AM

204a RE Section Business Meeting

1. Trustees Report of Status of Association
2. ARVO Strategic Plan
3. Annual Meeting Program Committee Chairs Report
4. Annual Meeting Program Committee Election Results
5. Other Business

Room 312

Monday, April 30, 2018 8:15 AM-10:00 AM

Cornea**205 Ocular surface biology, disease, surgery**

Moderators: Stephanie L. Watson and Pablo Argueso

1163 — 8:15 Unilateral Chemical Injury Results in Contralateral Unaffected Eyes Oculis Surface Alteration. Dan Wu¹, Q. Le², J. Xu¹. ¹Ophthalmology and Visual Science, Shanghai Eye, Ear, Nose, and Throat Hospital, Shanghai, China; ²UCLA, Los Angeles, CA

1164 — 8:30 Meibomian Gland Dropout in Hematological Patients Prior to Hematopoietic Stem Cell Transplantation. *Giuseppe Giannaccare¹, M. Pellegrini¹, S. Sebastiani¹, L. Primavera¹, A. Interdonato¹, F. Moscardelli¹, L. Sessa², F. Bonifazi², M. Arpinati², P. Versura¹, E. C. Campos¹.* ¹Ophthalmology Unit, DIMES Dept, Alma Mater Studiorum University of Bologna, Bologna, Italy; ²Department of Hematology, University of Bologna, Bologna, Italy

1165 — 8:45 Clinical Severity Grading Tool for Cicatrising Conjunctivitis: A Validation Study. *Hon Shing Ong^{1,2}, D. Minassian⁴, S. Rauz³, J. S. Mehta¹, J. K. Dart².* ¹Corneal and External Diseases / Tissue Engineering and Stem Cell, Singapore National Eye Centre / Singapore Eye Research Institute, Singapore, Singapore; ²Corneal and External Diseases, Moorfields Eye Hospital / UCL Institute of Ophthalmology, London, United Kingdom; ³Ophthalmology, University of Birmingham, Birmingham, United Kingdom; ⁴Epidemiology, EpiVision Ophthalmic Epidemiology Consultants, London, United Kingdom

1166 — 9:00 Resolvin E1 uses multiple receptors and signaling pathways to increase intracellular Ca²⁺ and mucin secretion in conjunctival goblet cells. *Darlene A. Dartt^{1,2}, M. Lippestad^{1,3}, R. Hodges¹, T. P. Utheim^{1,4}, C. Serhan⁵.* ¹Schepens Eye Research Institute/ MEEI, Boston, MA; ²Ophthalmology, Harvard Medical School, Boston, MA; ³Faculty of Medicine, University of Oslo, Oslo, Norway; ⁴Medical Biochemistry, Oslo University Hospital, Oslo, Norway; ⁵Anesthesia, Harvard Medical School, Boston, MA

1167 — 9:15 The role of VEGF Expression in Superior Limbic Keratoconjunctivitis. *Sabrina Bergeron¹, P. Zoroquiain¹, J. M. Lasiste¹, J. Coblentz¹, D. Sanft¹, D. Cheema², M. N. Burnier¹.* ¹The MUHC - McGill Ocular Pathology Laboratory, Montreal, Quebec, Canada; ²Ophthalmology, McGill University, Montreal, Quebec, Canada

1168 — 9:30 Conjunctival Immunomics of Primary and Secondary Sjogrens syndrome. *Aihua Hou^{1,3}, C. Chua², L. Pan², A. Salvatore², L. Tong^{1,4}.* ¹Singapore Eye Research Institute, Singapore Eye Research Institute, Singapore, Singapore; ²SingHealth Translational Immunology and Inflammation Center, Singapore, Singapore; ³DUKE-NUS, Singapore, Singapore; ⁴Singapore National Eye Center, Singapore, Singapore

1169 — 9:45 The Role of Autophagy in the Pathogenesis of Exposure Keratitis. *Cheng Li, G. Wang, W. Li, Z. Liu.* Xiamen University, Xiamen, Fujian, China

Room 312

Monday, April 30, 2018 10:15 AM-11:00 AM

205a CO Section Business Meeting

1. Trustees Report of Status of Association
2. ARVO Strategic Plan
3. Annual Meeting Program Committee Chairs Report
4. Annual Meeting Program Committee Election Results
5. Other Business

Room 313A

Monday, April 30, 2018 8:15 AM-10:00 AM

Anatomy and Pathology/Oncology

206 New Perspectives in Human Myopia Research

Moderators: Alexandra Benavente-Perez and Pauline Kang

1170 — 8:15 Comparison of corneal biomechanical properties measured by Ultra-High-Speed Scheimpflug camera between myopic and emmetropic eyes. *Aratchaporn Tubtimthong¹, S. Chansangpetch^{1,2}, N. Ratprasatporn¹, P. Rojanapongpun¹, S. C. Lin².* ¹Department of Ophthalmology, Faculty of Medicine, Chulalongkorn University and King Chulalongkorn Memorial Hospital, Thai Red Cross Society, Bangkok, Thailand; ²Department of Ophthalmology, University of California, San Francisco Medical School, San Francisco, CA

1171 — 8:30 Reading white text on black background may cause less myopia than conventional black text on white. *Frank Schaeffel, M. Wang, A. Carrillo Aleman.* Section Neurobiology of Eye, Ophthalmic Research Institute, Tuebingen, Germany

1172 — 8:45 Five-year growth in axial length during adolescence in relation to choroidal thickness and axial length at 11-years of age in the Copenhagen Child Cohort 2000 study: A prospective population-based cohort study. *Mathias H. Hansen^{1,2}, X. Q. Li¹, L. Kessel^{1,2}, M. Larsen^{1,2}, I. C. Munch^{3,2}.* ¹Department of Ophthalmology, Rigshospitalet, Glostrup, Denmark; ²University of Copenhagen, Copenhagen, Denmark; ³Department of Ophthalmology, Zealand University Hospital, Roskilde, Denmark

1173 — 9:00 Inheritance of peripheral refraction. *Dibyendu Pusti¹, A. Benito¹, J. Sánchez-Romera², J. Ordoñana², P. Artal¹.* ¹Laboratorio de Optica, Universidad de Murcia, Murcia, Spain; ²Murcia Twin Registry, Universidad de Murcia, Murcia, Spain

1174 — 9:15 High myopia: hypoxia as a factor of misbalance between oxidative stress and growth factors. *Amparo Navea¹, S. Merida¹, V. Villar¹, J. Morales², A. Lanzagorta², F. Bosch¹.* ¹Ciencias de la Salud, Universidad Cardenal Herrera CEU, Valencia, Spain; ²Fisabio Oftalmología, Valencia, Spain

1175 — 9:30 Ocular and Systemic Diurnal Rhythms with Light Exposure in Emmetropic and Myopic Adults. *Hannah Burfield, K. M. Beach, N. B. Patel, L. A. Ostrin.* College of Optometry, University of Houston, Houston, TX

1176 — 9:45 Time of the day influences the response to optical defocus in human eyes. *Ranjay Chakraborty, M. Do, S. Hobbs, V. Lam, D. Moderiano, S. Sarin.* Optometry and Vision Science, Flinders University, Adelaide, South Australia, Australia

Room 313A

Monday, April 30, 2018 10:15 AM-11:00 AM

206a AP Section Business Meeting

1. Trustees Report of Status of Association
2. ARVO Strategic Plan
3. Annual Meeting Program Committee Chairs Report
4. Annual Meeting Program Committee Election Results
5. 2018 Trustee Election Results 6. Other Business

Room 314

Monday, April 30, 2018 8:15 AM-10:00 AM

Genetics Group / Glaucoma

207 Discoveries in Glaucoma and Associated Endophenotypes**Moderators: Louis R. Pasquale and Michael A. Hauser**

1177 — 8:15 119 loci influencing intraocular pressure provide new insight into primary open angle glaucoma susceptibility and age of onset. Jamie E. Craig¹, A. W. Hewitt², D. Mackey³, S. L. Graham⁴, P. R. Healey⁵, A. J. White⁵, J. Landers¹, R. Casson⁶, E. Souzeau¹, K. P. Burdon², P. Gharahkhani⁷, S. MacGregor⁷. ¹Department of Ophthalmology, Flinders University, Adelaide, South Australia, Australia; ²Menzies Institute for Medical Research, University of Tasmania, Hobart, Tasmania, Australia; ³Centre for Ophthalmology and Visual Science, University of Western Australia, Perth, Western Australia, Australia; ⁴Department of Ophthalmology, Macquarie University, Sydney, New South Wales, Australia; ⁵Department of Ophthalmology, University of Sydney, Sydney, New South Wales, Australia; ⁶Department of Ophthalmology, University of Adelaide, Adelaide, South Australia, Australia; ⁷QIMR Berghofer Medical Research Institute, Brisbane, Queensland, Australia

1178 — 8:30 Genome-wide association study of intraocular pressure identifies 83 novel loci. Anthony P. Khawaja¹, J. Cooke Bailey², M. J. Simcoe³, R. P. Igo², L. R. Pasquale⁴, P. J. Foster¹, J. L. Wiggs⁴, C. J. Hammond³, P. G. Hysi³. ¹NIHR Biomedical Research Centre, Moorfields Eye Hospital NHS Foundation Trust and UCL Institute of Ophthalmology, London, United Kingdom; ²Department of Population and Quantitative Health Sciences, Institute for Computational Biology, Case Western Reserve University School of Medicine, Cleveland, OH; ³Department of Ophthalmology, King's College London, St. Thomas' Hospital, London, United Kingdom; ⁴Department of Ophthalmology, Harvard Medical School, Massachusetts Eye and Ear Infirmary, Boston, MA

1179 — 8:45 A multi-ethnic genome-wide association study of primary-open angle glaucoma identifies novel risk loci. Helene Choquet¹, K. K. Thai¹, J. Yin¹, T. J. Hoffmann^{2,3}, M. N. Kvale², Y. Banda², C. Schaefer⁴, N. Risch^{1,2}, R. Melles⁵, S. K. Nair⁵, E. Jorgenson¹. ¹Division of Research, Kaiser Permanente Northern California, Oakland, CA; ²Institute for Human Genetics, University of California, San Francisco, San Francisco, CA; ³Department of Epidemiology and Biostatistics, University of California, San Francisco, San Francisco, CA; ⁴Department of Ophthalmology, Kaiser Permanente Northern California, Redwood City, CA; ⁵Departments of Ophthalmology and Anatomy, School of Medicine, University of California San Francisco, San Francisco, CA

1180 — 9:00 Identifying genes that underlie Primary Open-Angle Glaucoma using genetically determined gene expression. Jibril Hirbo¹, J. Cooke Bailey⁵, P. Evans⁴, E. R. Gamazon¹, R. Tao⁴, K. M. Joos², M. A. Brantley², J. L. Wiggs³, N. J. Cox¹. ¹Genetic Medicine, Vanderbilt University School of Medicine, Nashville, TN; ²Vanderbilt Eye Institute, Vanderbilt University School of Medicine, Nashville, TN; ³Ophthalmology, Harvard Medical School, Boston, MA; ⁴Biostatistics, Vanderbilt University School of Medicine, Nashville, TN; ⁵Population and Quantitative Health Sciences, Case Western Reserve University School of Medicine, Cleveland, OH

1181 — 9:15 Genomic Locus Modulating Corneal Thickness In The Mouse Identifies POU6F2, A Potential Risk Of Developing Glaucoma. Eldon E. Geisert¹, R. King¹, F. Struebing¹, Y. Li¹, J. Wang^{1,3}, J. Cook Bailey², J. L. Wiggs⁴. ¹Ophthalmology, Emory University, Atlanta, GA; ²Population and Quantitative Health Sciences, Case Western Reserve, Cleveland, OH; ³Ophthalmology, Tianjin Medical University, Tianjin, China; ⁴Ophthalmology, Harvard Medical School, Boston, MA

1182 — 9:30 Gene-Based Analysis Leveraging Whole Genome Sequencing (WGS) Data on Individuals with Multiple Longitudinal Glaucoma Related Phenotypes Shows Evidence for Genetic Factors in Open Angle Glaucoma Progression. Argus J. Athanas-Crannell¹, M. Christopher², Y. Choi³, A. Chan³, L. M. Zangwill⁴, J. I. Rotter⁹, J. M. Liebmann⁵, C. A. Girkin⁶, R. M. Feldman⁷, H. Dubiner⁸, Y. I. Chen⁹, K. Taylor⁹, X. Guo⁹, R. Ayyagari², R. N. Weinreb², N. Schork^{2,4}. ¹Biomedical Informatics, University California San Diego, San Diego, CA; ²Hamilton Glaucoma Center, Shiley Eye Institute, Department of Ophthalmology, University of California San Diego, La Jolla, CA; ³Human Biology, The J. Craig Venter Institute, La Jolla, CA; ⁴Departments of Psychiatry and Family Medicine and Public Health, University of California San Diego, La Jolla, CA; ⁵Bernard and Shirlee Brown Glaucoma Research Laboratory, Harkness Eye Institute, New York, NY; ⁶Department of Ophthalmology, University of Alabama at Birmingham, Birmingham, AL; ⁷Ruiz Department of Ophthalmology, University of Texas Health Science Center, Houston, TX; ⁸Eye Care Center Management Inc, Marrow, GA; ⁹Los Angeles Biomedical Research Institute and Department of Pediatrics, Institute for Translational Genomics and Population Sciences, Torrance, CA *CR

1183 — 9:45 Association of APBB2 Links Mechanisms of Neurodegeneration in Glaucoma and Alzheimer's Disease. Michael A. Hauser. Ophthalmology & Medicine, Duke Univ Medical Center, Durham, NC

Room 314

Monday, April 30, 2018 10:15 AM-11:00 AM

207a VN Section Business Meeting

1. Trustees Report of Status of Association
2. ARVO Strategic Plan
3. Annual Meeting Program Committee Chairs Report
4. Annual Meeting Program Committee Election Results
5. Other Business

Room 315

Monday, April 30, 2018 8:15 AM-10:00 AM

Retinal Cell Biology

208 RPE physiology**Moderators: John D. Ash and Claire H. Mitchell**

1184 — 8:15 PPARalpha is required for RPE metabolism and function. Rui Cheng, K. Zhou, J. Ma. Physiology, University of Oklahoma Health Sciences Center, Oklahoma City, OK

1185 — 8:30 Loss of PGC-1 α function in RPE induces EMT and promotes retinal degeneration.

Mariana Aparecida Rosales^{1,2}, M. Saint-Geniez^{1,2},
¹Ophthalmology, Harvard Medical School, Boston, MA; ²Schepens Eye Research Institute of Mass Eye and Ear, Boston, MA

1186 — 8:45 Evidence that the AMPK activator, Metformin, induced protection of the retina and RPE through metabolic reprogramming.

Lei Xu¹, J. Du², J. D. Ash¹.
¹Ophthalmology, Univ of Florida, Gainesville, FL;
²West Virginia University, Morgantown, WV

1187 — 9:00 Pink1 and Nrf2 mediated mitochondrial retrograde signaling in RPE heterogeneity.

Sayantana Datta, M. d. Cano, t. Liu, J. T. Handa. Ophthalmology, Johns Hopkins School of Medicine, Baltimore, MD *CR

1188 — 9:15 Mechanisms Underlying Late-Onset Retinal Degeneration in Human iPSC-RPE Reveal Biological Insights into AMD Pathogenesis.

Fnu Ruchi¹, K. J. Miyagishima¹, D. Bose¹, M. Farnoodian¹, A. George¹, R. Sharp², M. Nimmagadda¹, k. Clore-Gronenborn¹, Z. Qureshy¹, C. Zhang¹, Y. Sergeev¹, C. A. Cukras¹, P. Sieving¹, K. Boesze-Battaglia², S. S. Miller¹, K. Bharti¹. ¹NEI, NIH, Bethesda, MD; ²Univ of Penn, Philadelphia, PA

1189 — 9:30 Voltage-gated sodium channels in retinal pigment epithelium – a real deal or an artifact?

Julia K. Johansson^{1,3}, T. Ihalainen^{2,4}, H. Skottman^{2,4}, S. Nyman^{1,3}. ¹Faculty of Biomedical Sciences and Engineering, Tampere University of Technology, Tampere, Finland; ²Faculty of Medicine and Life Sciences, University of Tampere, Tampere, Finland; ³BioMediTech, Tampere University of Technology, Tampere, Finland; ⁴BioMediTech, University of Tampere, Tampere, Finland

Room 315

Monday, April 30, 2018 10:15 AM-11:00 AM

208a RC Section Business Meeting

1. Trustees Report of Status of Association
2. ARVO Strategic Plan
3. Annual Meeting Program Committee Chairs Report
4. Annual Meeting Program Committee Election Results
5. RC Section Trustee nomination(s) update
6. Other Business

Room 316A

Monday, April 30, 2018 8:15 AM-10:00 AM

Physiology/Pharmacology**209 Gene therapy**

Moderators: Robert E. MacLaren and Christine F. Wildsoet

1190 — 8:15 Covalently-Incorporated Roscovitine Drug Delivery from Contact Lenses.

Frances Lasowski¹, M. Mikail², T. Rambarran¹, H. Sheardown¹. ¹Chemical Engineering, McMaster University, Stoney Creek, Ontario, Canada; ²University of Toronto, Toronto, Ontario, Canada

1191 — 8:30 Efficacy of EYS606 in

Experimental Models of Uveitis. Ronald BUGGAGE¹, K. Bigot¹, E. Touchard¹, R. Benard¹, T. Borden¹, F. F. Behar-Cohen^{2,3}. ¹Eyevevsys, Paris, France; ²Université Paris Descartes Sorbonne Paris Cité, Paris, France; ³Centre de Recherche des Cordeliers, INSERM UMRS 1138, Paris, France *CR

1192 — 8:45 Cytotoxicity and ocular safety of silicic acid, the degradation product of porous silicon.

Lingyun Cheng, W. R. Freeman, K. Huffman, Y. Sun. Jacobs Retina Center/Shiley Eye Institute, La Jolla, CA *CR

1193 — 9:00 Development of a platform protein delivery system for retinal cells in vivo following intravitreal injection.

Deepa Talreja, S. Cashman, B. Dasari, R. Kumar-Singh. Developmental, Molecular and Chemical biology, Tufts University School of Medicine, Medford, MA

1194 — 9:15 Evolution of recombinant adeno-associated viral vectors with favourable retinal penetration properties.

Sonja Kleinlogel¹, E. Hulliger¹, M. van Wyk¹, A. David¹, M. Odenthal², H. Büning³. ¹Institute of Physiology, University of Bern, Bern, Switzerland; ²Institute of Pathology, University Hospital Cologne, Cologne, Germany; ³Institute of Experimental Hematology, Medizinische Hochschule Hannover (MHH), Hannover, Germany *CR

1195 — 9:30 Retinal Gene Therapy for Choroideremia in a Multicenter Dose Escalation Phase I/II Clinical Trial.

Robert E. MacLaren¹, K. Xue¹, A. R. Barnard¹, M. I. Patricio¹, T. L. Edwards¹, S. Downes¹, A. Lotery², G. Black³, A. Webster⁴, J. K. Jolly¹, M. C. Seabra⁴. ¹Nuffield Lab of Ophthalmology, University of Oxford, Oxford, England, United Kingdom; ²Ophthalmology, University of Southampton, Southampton, United Kingdom; ³Genetics, University of Manchester, Manchester, United Kingdom; ⁴UCL Institute of Ophthalmology, London, United Kingdom *CR, ✕

1196 — 9:45 Rescue of Kir7.1 function by gene augmentation in LCA16 patient derived iPSC-RPE cells.

Pawan K. Shahi¹, D. Sinha², S. Stulo³, D. M. Pillers^{1,4}, D. M. Gamm^{2,5}, B. R. Pattnaik^{1,5}. ¹Pediatrics, McPherson Eye Research Institute, UW-Madison, Madison, WI; ²McPherson Eye Research Institute, Waisman Center, UW-Madison, Madison, WI; ³Pediatrics, UW-Madison, Madison, WI; ⁴Medical Genetics, UW-Madison, Madison, WI; ⁵Ophthalmology and Visual Sciences, UW-Madison, Madison, WI

Room 316A

Monday, April 30, 2018 10:15 AM-11:00 AM

209a PH Section Business Meeting

1. Trustees Report of Status of Association
2. ARVO Strategic Plan
3. Annual Meeting Program Committee Chairs Report
4. Annual Meeting Program Committee Election Results
5. Other Business

Room 316B

Monday, April 30, 2018 8:15 AM-10:00 AM

Clinical/Epidemiologic Research / Low Vision / Retina**210 Implementation science in ophthalmology - Minisymposium**

Implementation science is the ‘study of methods to promote the adoption and integration of evidence-based practices, interventions and policies into routine health care and public health settings.’ While there are many proven strategies to prevent and treat eye diseases and rehabilitation models for those people with permanent vision loss, the large numbers of people around the world affected by vision impairment and blindness make provision of care a major challenge. In this mini-symposium, we will provide an overview of implementation science and how it can be applied in ophthalmology. A series of case series will then be presented demonstrating research in diagnosis, prevention, and rehabilitation.

Moderators: Lisa J. Keay and Bonnielin K. Swenor

— 8:15 Presentation of the Oberdorfer Award in Low Vision**— 8:20 Welcome & Overview****1197 — 8:25 Implementation science - an introduction and application to ophthalmology.**

Anne Sales^{1,2}. ¹Learning Health Sciences, University of Michigan Medical School, Ann Arbor, MI; ²Center for Clinical Management Research, VA Ann Arbor Healthcare System, Ann Arbor, MI

1198 — 9:00 Camera based screening in diabetic retinopathy at primary care clinics. Rajeev Ramchandran^{1,2}. ¹Ophthalmology, Flaum Eye Institute, Rochester, NY; ²Public Health Sciences, University of Rochester, Rochester, NY *CR

1199 — 9:15 Provision of primary eyecare in India: The LV Prasad Eye Institute pyramidal model of eyecare service delivery. Dorairajan Balasubramanian. L V Prasad Eye Institute (LVPEI), Hyderabad, Hyderabad, India

1200 — 9:30 Preventing depression in low vision patients: Implementation and scale-up of an early psychological intervention for depressive symptoms. Edith E. Holloway^{2,1}. ¹Ophthalmology, Department of Surgery, University of Melbourne, Parkville, Victoria, Australia; ²Centre For Eye Research Australia, East Melbourne, Victoria, Australia ↗

1201 — 9:45 Using an electronic health record advisory to improve utilization of low vision rehabilitation services. Judith Goldstein^{1,2}. ¹Ophthalmology, Johns Hopkins School of Medicine, Baltimore, MD; ²Physical Medicine and Rehabilitation, Johns Hopkins School of Medicine, Baltimore, MD

Room 316B

Monday, April 30, 2018 10:15 AM-11:00 AM

210a CL Section Business Meeting

1. Trustees Report of Status of Association
2. ARVO Strategic Plan
3. Annual Meeting Program Committee Chairs Report
4. Annual Meeting Program Committee Election Results
5. Increasing CL membership participation 6. Other Business

Room 316C

Monday, April 30, 2018 8:15 AM-10:00 AM

Lens

211 Signaling and Cell Biology

Moderators: Dharendra P. Singh and Judith A. West-Mays

1202 — 8:15 EGF potentiates TGFβ-induced epithelial-mesenchymal transition (EMT) in lens epithelial cells by enhancing EGFR signaling. Daisy Shu^{1,2}, F. J. Lovicu^{1,2}. ¹Clinical Ophthalmology and Eye Health, University of Sydney, Sydney, New South Wales, Australia; ²Save Sight Institute, Sydney, New South Wales, Australia

1203 — 8:30 RTK-antagonists negatively regulate lens epithelial cell proliferation induced by FGF. Guannan Zhao¹, C. Bailey², Y. Feng², J. Rasko², F. J. Lovicu^{1,3}. ¹The University of Sydney, Sydney, New South Wales, Australia; ²Gene & Stem Cell Therapy Program, Centenary Institute, Sydney, New South Wales, Australia; ³Save Sight Institute, Sydney, New South Wales, Australia

1204 — 8:45 Characteristics analyses of CRYBB2 and CRYGD-mutated congenital cataract patients' iPSCs-derived lentoid bodies in vitro. Danni Lyu, Q. FU, K. Yao. Eye Center of Second Affiliated Hospital of Zhejiang University School of Medicine, Hangzhou, Zhejiang, China

1205 — 9:00 Deficiency of S100A4, a Ca²⁺-binding protein, induces expression of neuronal S100A5 and the retinal specific transcriptome in mouse lens. Rupalatha Maddala¹, K. Buddin¹, V. Y. Arshavsky^{1,2}, A. R. Bresnick³, V. Ponugoti^{1,2}. ¹Ophthalmology, Duke University Medical Center, Durham, NC; ²Pharmacology and Cancer Biology, Duke University School of Medicine, Durham, NC; ³Biochemistry, Albert Einstein College of Medicine, Bronx, NY

1206 — 9:15 The role of aldose reductase in lens regeneration. Leonid M. Zukin, M. G. Pedler, B. Shieh, S. Seiwald, J. Petrash. Ophthalmology, University of Colorado School of Medicine, Greenwood Village, CO

1207 — 9:30 Chronic oxidation promotes epithelial-mesenchymal transition in lens epithelial cells via a Wnt/b-catenin dependent and TGFB independent pathway. Xingjun Fan¹, Z. Wei¹, H. Yan^{2,3}. ¹Pathology, Case Western Reserve Univ, Cleveland, OH; ²The Chongqing Key Laboratory of Ophthalmology and Chongqing Eye Institute, The First Affiliated Hospital of Chongqing Medical University, Chongqing, Chongqing, China; ³Ophthalmology, The Fourth Military Medical University, Xian, Shaanxi, China

Room 316C

Monday, April 30, 2018 10:15 AM-11:00 AM

211a LE Section Business Meeting

1. Trustees Report of Status of Association
2. ARVO Strategic Plan
3. Annual Meeting Program Committee Chairs Report
4. Annual Meeting Program Committee Election Results
5. Other Business

Room 320

Monday, April 30, 2018 8:15 AM-10:00 AM

Biochemistry/Molecular Biology

212 Biochemistry and Molecular Biology of Diabetic Retinopathy

Moderators: Sarah X. Zhang, Maria Grant and Julia V. Busik

1208 — 8:15 Regional Changes of the Retinal Transcriptome in Humans: Diabetes or Retinopathy signature? Patrice E. Fort¹, Y. Shan¹, J. E. Roger². ¹Ophthalmology and Visual Sciences, University of Michigan, Ann Arbor, MI; ²CERTO, Orsay, France

1209 — 8:30 Retinal ischemia reperfusion injury model: a contrast in pathogenic responses between C57BL/6J versus BALB/cJ mice. Haoshen Shi¹, J. J. Steinle^{1,2}, E. A. Berger^{1,2}. ¹Anatomy and Cell Biology, Wayne State University, Detroit, MI; ²Ophthalmology, Kresge Eye Institute, Detroit, MI

1210 — 8:45 The role of inducible nitric oxide synthase in diabetic retinopathy. Rahmeh Othman^{1,2}, E. Vaucher², R. Couture¹. ¹Pharmacology and physiology, Université de Montréal, Montreal, Quebec, Canada; ²Optometry school, Université de Montréal, Montreal, Quebec, Canada

1211 — 9:00 Increased diabetic retinal neuronal degeneration in IL-33^{-/-} mice is related to reduced Müller cell-derived neurotrophic factors. Josy Augustine, S. Pavlou, A. W. Stitt, H. Xu, M. Chen. Centre for Experimental Medicine, Queen's University, Belfast, UK, Belfast, Northern Ireland, United Kingdom

1212 — 9:15 Metabolic, excitation and functional mapping of diabetic retinopathy. Felix R. Yaquez-Chona, T. T. Phuong, O. Yarishkin, B. W. Jones, D. Krizaj. Ophthalmology, Univ of Utah, Salt Lake City, UT

1213 — 9:30 Discovery of Urinary Proteomic Changes Associated with Proliferative Diabetic Retinopathy using Mass Spectrometry Analyses. Ashok Sharma^{1,2}, W. Zhi¹, S. Kodeboyina¹, S. Bai¹, J. She¹, S. Sharma^{1,3}. ¹Center for Biotechnology and Genomic Medicine, Augusta University, Augusta, GA; ²Department of Population Health Sciences, Augusta University, Augusta, GA; ³Department of Ophthalmology, Augusta University, Augusta, GA

Room 320

Monday, April 30, 2018 10:15 AM-11:00 AM

212a BI Section Business Meeting

1. Trustees Report of Status of Association
2. ARVO Strategic Plan
3. Annual Meeting Program Committee Chairs Report
4. Annual Meeting Program Committee Election Results
5. Other Business

Ballroom A

Monday, April 30, 2018 8:15 AM-10:00 AM

Glaucoma

213 Biomechanics

Moderators: Colleen M. McDowell and Ian A. Sigal

1214 — 8:15 Novel Ex-Vivo Translaminar Autonomous System to study effects of Intraocular and Intracranial pressure differential on Human Retinal Ganglion Cells.

Tasneem P. Sharma^{1,2}, A. F. Clark^{1,2}, C. M. McDowell^{1,2}. ¹Pharmacology and Neuroscience, University of North Texas Health Science Center, Fort Worth, TX; ²North Texas Eye Research Institute, University of North Texas Health Science Center, Fort Worth, TX *CR

1215 — 8:30 Variation in the Three-Dimensional Histomorphometry of the Normal Human Optic Nerve Head with Elevated IOP, Age, and Race.

Christopher A. Girkin¹, J. C. Downs¹, H. Yang², B. Smith¹, J. Reynaud², C. F. Burgoyne², M. A. Fazio¹. ¹Ophthalmology, Univ of Alabama at Birmingham, Birmingham, AL; ²Ophthalmology, Devers Eye Institute, Portland, OR

1216 — 8:45 Don't judge a beam by its width; thin lamina cribrosa beams have different collagen microstructure than thick beams.

Ian A. Sigal^{1,2}, B. Brazile¹, N. Jan^{1,2}, A. Gogola¹, J. R. Constantin^{2,1}, A. Voorhees¹. ¹Ophthalmology, University of Pittsburgh, Pittsburgh, PA; ²Bioengineering, University of Pittsburgh, Pittsburgh, PA

1217 — 9:00 Impact of Estrogen Deficiency on Outflow Facility and Ocular Biomechanics in Rats. Andrew Feola^{1,2}, J. Sherwood³, D. R. Overby³, M. T. Pardue^{1,2}, C. R. Ethier². ¹Atlanta VA Medical Center, Atlanta, GA; ²Biomedical Engineering, Georgia Institute of Technology, Atlanta, GA; ³Biomedical Engineering, Imperial College London, London, United Kingdom

1218 — 9:15 Comparison of Ocular Biomechanical Properties in Normal and Glaucomatous Eyes Using Ultrasound Surface Wave Elastography. Arthur J. Sit¹, A. Kazemi¹, B. Zhou², X. Zhang^{2,3}. ¹Ophthalmology, Mayo Clinic, Rochester, MN; ²Radiology, Mayo Clinic, Rochester, MN; ³Physiology and Biomedical Engineering, Mayo Clinic, Rochester, MN *CR

1219 — 9:30 Structural Characterization of Human Lamina Cribrosa and Its Correlation to IOP-induced Strain. Yik Tung Tracy Ling¹, R. shi¹, D. Midgett¹, C. Nguyen², E. Cone-Kimball¹, M. Pease², H. A. Quigley², T. D. Nguyen¹. ¹Mechanical Engineering, Johns Hopkins University, Baltimore, MD; ²Wilmer Ophthalmological Institute, School of Medicine, Johns Hopkins University, Baltimore, MD

1220 — 9:45 Simultaneous in-situ visualization and quantification of lamina cribrosa collagen beams and capillaries at normal and elevated IOPs. Bryn Brazile, B. Yang, A. Voorhees, I. A. Sigal. University of Pittsburgh, Pittsburgh, PA

Ballroom A

Monday, April 30, 2018 10:15 AM-11:00 AM

213a GL Section Business Meeting

1. Trustees Report of Status of Association
2. ARVO Strategic Plan
3. Annual Meeting Program Committee Chairs Report
4. Annual Meeting Program Committee Election Results
5. 2018 Trustee Elections Results
6. Other Business

Ballrooms BC

Monday, April 30, 2018 8:15 AM-10:00 AM

Multidisciplinary Ophthalmic Imaging Group

214 Deep Learning Highlights

Moderators: Sina Farsiu, Bhavna J. Antony and Dale Webster

1221 — 8:15 Deep Neural Network Based Quantification of Retinal Optical Coherence Tomography Images. Morgan Heisler¹, M. Ju¹, D. Lu¹, A. Athwal¹, G. Docherty², R. Martens², Z. Mammo², P. Prentas³, S. Lee¹, F. Chan⁴, M. Bhalla⁴, Y. Jian¹, S. Loncaric³, M. Beg¹, E. V. Navajas², M. Sarunic¹. ¹School of Engineering Science, Simon Fraser University, Burnaby, British Columbia, Canada; ²Department of Ophthalmology and Visual Sciences, University of British Columbia, Vancouver, British Columbia, Canada; ³Faculty of Electrical Engineering and Computing, University of Zagreb, Zagreb, Croatia; ⁴Faculty of Medicine, University of British Columbia, Vancouver, British Columbia, Canada

1222 — 8:30 Fully automated quantification of retinal cones and anterior chamber cells using deep learning. Yue Wu¹, S. Xiao¹, A. Rokem², C. S. Lee¹, L. Wilson¹, K. Peppel^{1,3}, R. Sabesan¹, A. Y. Lee^{1,3}. ¹Ophthalmology, University of Washington, Seattle, WA; ²Science Institute, University of Washington, Seattle, WA; ³Ophthalmology, Puget Sound Veteran Affairs, Seattle, WA

1223 — 8:45 Web based, fully automated, deep learning segmentation of oxygen induced retinopathy. Sa Xiao¹, F. Bucher^{2,3}, Y. Wu¹, A. Rokem⁴, C. S. Lee¹, K. V. Marra^{2,5}, R. Fallon⁶, S. Diaz-Aguilar², E. Aguilar², M. Friedlander^{2,6}, A. Y. Lee^{1,4}. ¹Ophthalmology, University of Washington School of Medicine, Kirkland, WA; ²Department of Molecular Medicine, The Scripps Research Institute, La Jolla, CA; ³Eye Center, Faculty of Medicine, University of Freiburg, Freiburg im Breisgau, Germany; ⁴Science Institute, University of Washington, Seattle, WA; ⁵Department of Bioengineering, University of California, San Diego, San Diego, CA; ⁶Lowy Medical Research Institute, La Jolla, CA *CR

1224 — 9:00 Quantitative OCT angiography for computer-aided classification of diabetic retinopathy. Minhaj Nur Alam¹, Y. Zhang², J. I. Lim³, R. V. Chan³, M. Yang², X. Yao^{1,3}. ¹Bioengineering, University of Illinois at Chicago, Chicago, IL; ²Mathematics, Statistics and Computer Sciences, University of Illinois at Chicago, Chicago, IL; ³Ophthalmology and visual science, University of Illinois at Chicago, Chicago, IL

1225 — 9:15 Deep learning-based automatic segmentation of ellipsoid zone defects in optical coherence tomography images of macular telangiectasia type 2. Jessica Loo¹, L. Fang¹, D. Cunefare¹, G. J. Jaffe², S. Farsiu^{1,2}. ¹Biomedical Engineering, Duke University, Durham, NC; ²Ophthalmology, Duke University, Durham, NC *CR

1226 — 9:30 Deep-learning Framework for Summarization of OCT Volumes. Bhavna J. Antony, S. Maetschke, R. Garnavi. IBM Research, Melbourne, Victoria, Australia *CR

1227 — 9:45 Assisted reads for diabetic retinopathy using a deep learning algorithm and integrated gradient explanation. Rory Sayres¹, A. Taly¹, E. Rahimi^{1,2}, K. Blumer¹, D. Coz¹, N. Hammel¹, J. Krause¹, A. Narayanaswamy¹, Z. Rastegar¹, D. Wu¹, S. Xu¹, L. Peng¹, D. Webster¹. ¹Google, Mountain View, CA; ²Palo Alto Medical Foundation, San Carlos, CA; ³Verily, Mountain View, CA *CR

Exhibit Hall A0069-A0099

Monday, April 30, 2018 8:15 AM-10:00 AM

Glaucoma

215 Clinical Trials and Drug Studies

Moderators: David C. Musch and Ingeborg Stalmans

1228 — A0069 Efficacy and tolerability of a preservative-free triple fixed combination in glaucoma patients: a prospective crossover study.

Oscar Olvera Montañó, L. M. Baiza-Duran, P. Muñoz-Villegas. *Clinical Research, Laboratorios Sophia, S.A. de C.V., Zapopan, Jalisco, Mexico* *CR, ✕

1229 — A0070 Six-month efficacy and safety outcomes of a novel selective EP2 agonist omidenepag isopropyl: the RENGE study (Phase 3).

Makoto Aihara¹, F. Lu², H. Kawata³, A. Iwata³, N. Odani-Kawabata³, N. K. Shams^{2,3}. ¹Ophthalmology, University of Tokyo, Bunkyo-ku, TOKYO, Japan; ²Santen Inc., Emeryville, CA; ³Santen Pharmaceutical Co., Ltd., Osaka, Japan *CR, ✕

1230 — A0071 Intraocular pressure reduction effects of Ripasudil after Trabectome® surgery.

Yuta Saito, C. Yui, K. Yasuda, E. Miura, N. Yasuda, H. Takahashi. *Ophthalmology, Showa University, Tokyo, TOKYO, Japan*

1231 — A0072 Patient-reported Outcomes of Bimatoprost Ocular Ring in an Open-label Extension Study in Patients with Open-angle Glaucoma or Ocular Hypertension.

Michelle Y. Chen¹, K. N. Salf², M. Tepedino³, E. McLaurin⁴, K. Olander⁵, D. Wirta⁶, W. Flynn⁷, G. Walker¹, J. Ling¹, J. Yang¹, M. Goodkin¹. ¹Allergan, Irvine, CA; ²Sall Research Medical Center, Artesia, CA; ³Cornerstone Eye Care, High Point, NC; ⁴Total Eye Care, P.A., Memphis, TN; ⁵University Eye Specialists, Maryville, TN; ⁶David Wirta, MD & Associates, Newport Beach, CA; ⁷University of Texas Health Science Center, San Antonio, TX *CR, ✕

1232 — A0073 The interaction on intraocular pressure, pupil diameter and hyperemia between brimonidine and ripasudil.

Jinhee Lee¹, T. Ono¹, A. Yagi¹, T. Komizo¹, K. Miyata¹, M. Honjo², M. Aihara². ¹Miyata eye hospital, Miyazaki, Japan; ²The university of Tokyo, Tokyo, Japan ✕

1233 — A0074 IOP lowering effect of omidenepag isopropyl in latanoprost non-/low-responder subjects with primary open-angle glaucoma or ocular hypertension: the FUJI study.

Auli M. Ropo², M. Aihara¹, F. Lu³, H. Kawata⁴, A. Iwata⁴, N. Odani-Kawabata⁴, N. K. Shams^{3,4}. ¹Ophthalmology, University of Tokyo, Tokyo, Japan; ²Santen Oy, Helsinki, Finland; ³Santen Inc., Emeryville, CA; ⁴Santen Pharmaceutical Co., Ltd., Osaka, Japan *CR, ✕

1234 — A0075 Switching from preserved prostaglandin therapy to preservative free tafluprost increases tear film thickness in patients with glaucoma. Anton B. Hommer^{2,1}, D. Schmidl^{1,2}, M. Kromus², A. M. Bata¹, K. Fondi¹, R. M. Werkmeister³, C. Baar¹, L. Schmetterer^{1,4}, G. Garhofer¹. ¹Department of Clinical Pharmacology, Medical University Vienna, Vienna, Austria;

²Ordination Dr. Hommer, Vienna, Austria; ³Center for Medical Physics and Biomedical Engineering, Medical University Vienna, Vienna, Austria; ⁴Singapore Eye Research Institute, Singapore National Eye Centre, Singapore, Singapore *CR, ✕

1235 — A0076 A Phase 3 trial comparing omidenepag isopropyl 0.002% with latanoprost 0.005% in primary open-angle glaucoma and ocular hypertension: the AYAME study.

Fenghe Lu¹, M. Aihara², H. Kawata³, A. Iwata³, N. Odani-Kawabata³, N. K. Shams^{1,3}. ¹Santen Inc., Emeryville, CA; ²Ophthalmology, University of Tokyo, Tokyo, Japan; ³Santen Pharmaceutical Co., Ltd., Osaka, Japan *CR, ✕

1236 — A0077 Efficacy and tolerability of a new thermostable formulation of latanoprost in nanoparticles.

Lourdes Rodriguez¹, J. F. Casiraghi², D. Grigera³, A. Peyret⁴, S. Passerini¹. ¹Laboratorios Poen, Buenos Aires, Buenos Aires, Argentina; ²Hospital de Clinicas Jose de San Martin, Buenos Aires, Argentina; ³Hospital Santa Lucia, Buenos Aires, Argentina; ⁴Hospital Durand, Buenos Aires, Argentina *CR, ✕

1237 — A0078 Effect of Topical Phenylephrine 2.5% on Episcleral Venous Pressure in Normal Human Eyes.

Arash Kazemi, A. J. Sit, S. A. Mansukhani. *Ophthalmology, Mayo Clinic Rochester, Rochester, MN*

1238 — A0079 In vitro study with delta-9-tetrahydrocannabinol (THC) solution to decrease intraocular pressure and neuroprotection.

Marisa Arcos^{1,2}, V. Matovelle³, h. Ilerena², N. Sanchez⁴, J. Tintin³, H. Toapanta³. ¹ophthalmology, Universidad del Salvador, Buenos aires, Argentina; ²Research Department, Universidad Catolica de Cuenca, Cuenca, Azuay, Ecuador; ³Universidad Catolica de Cuenca, Cuenca, Ecuador; ⁴Consultor Independiente, Cuenca, Ecuador

1239 — A0080 Knowledge and Beliefs about Medical Properties of Cannabis by Glaucoma Patients.

Jose A. Paczka^{1,2}, M. Romo Sainz¹, Y. Y. Dorantes-Diez¹, M. O. Cuadros-Segovia^{1,5}, S. Garcia Aurora³, L. A. Giorgi-Sandoval^{2,4}. ¹University of Guadalajara, Zapopan, Jalisco, Mexico; ²Research & Development, Unidad de Diagnostico Temprano de Glaucoma, Guadalajara, Jalisco, Mexico; ³Oftalmologia, Hospital Regional Valentin Gomez Farias ISSSTE, Guadalajara, Jalisco, Mexico; ⁴Research, Asistencia e Investigacion en Glaucoma, A.C., Guadalajara, Jalisco, Mexico; ⁵Glaucoma, Centro Oftalmológico Galvis - FOSCAL, Bucaramanga, Santander, Colombia

1240 — A0081 The Effects of Systemic Antihypertensives on Change in Intraocular Pressure After Initiating Topical Prostaglandin Therapy for Open Angle Glaucoma.

Joshua M. Iltis¹, M. Siddiqui¹, P. Yanev¹, C. Huynh¹, R. Membreno¹, J. Sladic¹, T. Jergensen¹, K. Wannamaker¹, D. Kermany², D. Nolan², M. Singer². ¹University of Texas Health Science Center San Antonio, San Antonio, TX; ²Medical Center of Ophthalmology Associates, San Antonio, TX *CR

1241 — A0082 Recombinant human nerve growth factor (rhNGF) eye drops for glaucoma: Interim results.

Lilia Popova, M. Nuñez, B. T. Nguyen, S. L. Groth, A. Dennis, Z. Li, T. Khavari, S. Y. Wang, R. Chang, A. C. Fisher, J. L. Goldberg. *Ophthalmology, Stanford University, Palo Alto, CA* ✕

1242 — A0083 Long-term Safety and Ocular Hypotensive Efficacy of Netarsudil Ophthalmic Solution: The ROCKET-2 Study.

Janet B. Serle¹, M. Kahook², R. A. Lewis³, T. G. Heah³, N. Ramirez-Davis³, C. Kocpczynski⁴, D. W. Usner⁵, G. Novack^{6,7}. ¹Ophthalmology, Mount Sinai School of Medicine, New York, NY; ²Ophthalmology, University of Colorado School of Medicine, Denver, CO; ³Clinical Research, Aerie Pharmaceuticals, Bedminster, NJ; ⁴Research, Aerie Pharmaceuticals, Durham, NC; ⁵SDC, Tempe, AZ; ⁶PharmaLogic Development, Inc., San Rafael, CA; ⁷Pharmacology & Ophthalmology, University of California, Davis, CA *CR, ✕

1243 — A0084 Efficacy and tolerability of a preservative-free 0.005% latanoprost in glaucoma patients: a prospective crossover study.

Leopoldo M. Baiza-Duran, O. Olvera Montañó. *Clinical Research, Laboratorios Sophia, S.A. de C.V., Zapopan, Jalisco, Mexico* *CR, ✕

1244 — A0085 Pre-Commercialization of Agmatine Antiglaucoma Eye Drops.

Samin Hong^{1,2}, Y. Chung³, H. Kim³, Y. Cho³, C. Kim^{1,4}, G. Seong^{1,4}. ¹Ophthalmology, Yonsei University College of Medicine, Seoul, Korea (the Republic of); ²Optic Nerve Regeneration & Stem Cell Research Institute, Hong Samin Yonsei Eye Clinic, Seoul, Korea (the Republic of); ³Eyegene, Inc., Seoul, Korea (the Republic of); ⁴Yonsei Institute of Vision Research, Seoul, Korea (the Republic of) *CR

1245 — A0086 Efficacy and Pharmacokinetics of a Sustained Release Travoprost Intracameral Hydrogel Implant in Beagle Dogs.

Charles D. Blizzard, A. Desai, S. D'Abbraccio, J. Mangano, J. Langh, N. Buff, J. Metzinger, M. H. Goldstein, A. Gelormini, A. Driscoll. *Ocular Therapeutics, Inc, Nashua, NH* *CR

1246 — A0087 Intravitreal Brimonidine Drug Delivery System (Brimo DDS Generation 1) Enhances Spatial Sweep Visual Evoked Potential (sVEP) in a Non-human Primate Model of Chronic Glaucoma.

James A. Burke¹, K. Zhang¹, W. Orilla¹, C. Ghosn¹, L. A. Wheeler². ¹Biological Research, Allergan plc, Irvine, CA; ²Biological Sciences, Zeteo Drug Discovery LLC, Irvine, CA *CR

1247 — A0088 Sustained-Release Travoprost Micro-Rods Lower IOP in Beagle Dogs. Kenneth J. Mandell, A. White. LayerBio, Inc., Arlington, MA *CR

1248 — A0089 Applying Propensity Score in Assessing Association of Glaucoma Medication with Structural Progression. Mengfei Wu^{1,2}, M. Liu^{1,2}, K. Lucy¹, H. Ishikawa¹, J. S. Schuman¹, G. Wollstein¹. ¹NYU Langone Medical Center, New York, NY; ²Departments of Population Health and Environmental Medicine, NYU School of Medicine, New York, NY *CR

1249 — A0090 Long-term In Vivo Efficacy of an Engineered Polymer Thin-Film Co-delivery Device for Treatment of Glaucoma. Nina Rosa Konichi da Silva¹, Y. Cao², K. E. Samy², J. Kim³, M. Peng¹, A. Phone¹, T. A. Desai^{3,2}, R. Bhisitkul¹. ¹Ophthalmology, University Of California San Francisco, San Francisco, CA; ²Bioengineering, UC Berkeley-UCSF, San Francisco, CA; ³Bioengineering and Therapeutic Sciences, University of California, San Francisco, CA *CR

1250 — A0091 Safety Analysis of a Sustained Release Travoprost Intracameral Hydrogel Implant in Beagle Dogs. Arthur Driscoll, C. D. Blizzard, A. Desai, S. D'Abbraccio, J. Langh, J. Mangano, N. Buff, J. Metzinger, M. H. Goldstein, A. Gelormini. R&D, Ocular Therapeutix, Bedford, MA *CR

1251 — A0092 UPARANT is an effective antiangiogenic in a novel mouse model of rubeosis iridis associated with neovascular glaucoma. Helder Andre¹, F. Locri^{1,2}, M. Aronsson¹, M. Cammalleri², M. Dal Monte², P. Bagnoli², M. De Rosa³, V. Pavone⁴, A. P. Kvant¹. ¹St Erik Eye Hospital, Karolinska Institutet, Stockholm, Sweden; ²Dept. Biology, University of Pisa, Pisa, Italy; ³Dept. Experimental Medicine, Second University of Napoli, Naples, Italy; ⁴Dept. Chemical Sciences, University of Napoli Federico II, Naples, Italy *CR

1252 — A0093 Subcutaneous Administration of AKB-9778, a Tie2 Activator, Reduces IOP in Patients with Diabetic Retinopathy. Mitchell G. Brigell¹, V. H. Gonzalez², D. J. Bell³, A. Khanani⁵, B. Withers¹, L. Gambino¹, P. A. Campochiaro⁴, K. G. Peters¹, S. Pakola¹. ¹Aerpio Pharmaceuticals, Cincinnati, OH; ²Valley Retina Institute, Mcallen, TX; ³Medical Center Ophthalmology Associates, San Antonio, TX; ⁴Wilmer Eye Institute, Johns Hopkins University Medical Center, Baltimore, MD; ⁵Sierra Eye Associates, Reno, NV *CR, ✗

1253 — A0094 Intraocular pressure lowering effects of T2347 in normotensive nonhuman primates following once-daily topical administration. Robin J. Goody¹, V. Woodley¹, S. Henry¹, M. S. Lawrence¹, C. Olmiere². ¹RxGen, Inc, Madison, CT; ²Laboratoires Théa, Clermont-Ferrand, CEDEX 2, France *CR

1254 — A0095 Effect of Palmitoylethanolamide (PEA) on inner retinal function in stable glaucoma patients. A prospective, randomized, single blind, crossover, clinical trial by pattern electroretinogram. Chiara Lumini^{1,2}, L. Scudeller³, F. Bettio¹, E. Picasso², G. Pasinetti⁴, G. C. Rossi¹. ¹University Eye Clinic, IRCCS Fondazione Policlinico San Matteo, Pavia, Italy; ²University Of Pavia, Pavia, Italy; ³Scientific direction, IRCCS Fondazione Policlinico San Matteo, Pavia, Italy; ⁴Eye Unit, Istituto Beato Palazzolo, Bergamo, Italy ✗

1255 — A0096 Recommendation for Patient-Centered After-Visit Summary for Patients with Glaucoma. Kyle Hirabayashi^{1,2}, M. Pomerantz^{2,3}, S. L. Thomas², J. B. Serle². ¹George Washington University School of Medicine and Health Sciences, Washington, District of Columbia; ²Ophthalmology, Icahn School of Medicine at Mount Sinai, New York, NY; ³SUNY Upstate Medical University - College of Medicine, Syracuse, NY *CR

1256 — A0097 Efficacy of the After-Visit Summary in Medication Recall Among Glaucoma Patients. Stephanie L. Thomas¹, M. Pomerantz^{1,2}, K. Hirabayashi^{1,3}, J. B. Serle¹. ¹Ophthalmology, Icahn School of Medicine at Mount Sinai, New York, NY; ²SUNY Upstate Medical University, Syracuse, NY; ³George Washington University School of Medicine and Health Sciences, Washington, District of Columbia *CR

1257 — A0098 A Patient-Based Approach to Determining Barriers to Medication Recall and Adherence in Glaucoma Patients. Emily Moriarty¹, M. Pomerantz^{2,1}, K. Hirabayashi^{2,1}, S. L. Thomas¹, J. B. Serle¹. ¹Ophthalmology, Icahn School of Medicine at Mount Sinai, New York, NY; ²George Washington University, Washington DC, District of Columbia; ³SUNY Upstate, Syracuse, NY *CR

1258 — A0099 Adherence to medical treatment in childhood glaucoma. Deepak P. Edward^{1,2}, A. Al Dawood¹, S. Al Salman¹, F. Al hussan¹, A. Al Houssien¹, S. Al Shahwan¹, R. Khandekar¹. ¹King Khaled Eye Specialist Hospital, Riyadh, Saudi Arabia; ²University of Illinois Eye and Ear Infirmary, Chicago, IL

Exhibit Hall A0294-A0328

Monday, April 30, 2018 8:15 AM-10:00 AM
Visual Psychophysics/Physiological Optics / Low Vision / Visual Neuroscience

216 Visual function- beyond clinical VA and CSF

Moderators: Allen M. Cheong and Catherine Donaldson

1259 — A0294 Rod- and Cone- Mediated Dark-Adaptation Kinetics in Pre-Clinical Age-Related Macular Degeneration (AMD). Emma Stackpole¹, Y. Conley³, M. Perlin², M. B. Gorin¹, S. Nusinowitz¹. ¹Retina Disorders and Ophthalmic Genetics, UCLA Jules Stein Eye Institute, Los Angeles, CA; ²Cybergenetics, Pittsburgh, PA; ³Human Genetics, University of Pittsburgh, Pittsburgh, PA

1260 — A0295 Contrast sensitivity is elevated for stimuli outside cone-driven complete spatial summation in age-related macular degeneration. Agnes Yiu Jeung Choi^{1,2}, L. Nivison-Smith^{1,2}, S. Khuu², J. Phu^{1,2}, N. Yoshioka^{1,2}, B. Zangerl^{1,2}, N. Assaad^{1,3}, M. Kalloniatis^{1,2}. ¹Centre for Eye Health, The University of New South Wales, Kensington, New South Wales, Australia; ²School of Optometry and Vision Science, The University of New South Wales, Kensington, New South Wales, Australia; ³Department of Ophthalmology, Prince of Wales Hospital, Randwick, New South Wales, Australia *CR

1261 — A0296 Does retinal neuronal processing slow with age? Photopic flicker electroretinograms from over 700 unrelated individuals. Omar A. Mahroo^{2,1}, D. Kozareva^{3,1}, T. Soorma¹, A. M. Tanner¹, A. Yusuf¹, H. Al-Ani¹, C. J. Hammond^{1,3}. ¹Ophthalmology, King's College London, London, England, United Kingdom; ²UCL Institute of Ophthalmology, London, United Kingdom; ³Twin Research and Genetic Epidemiology, King's College London, London, United Kingdom

1262 — A0297 Longitudinal Assessment Of Reading Test Performance In Patients With Type 2 Macular Telangiectasia (MacTel). Simona Degli Esposti^{1,2}, S. Sirrell², T. F. Heeren^{1,3}, C. Egan¹, G. S. Rubin². ¹Moorfields Eye Hospital NHS Foundation Trust, London, United Kingdom; ²UCL Institute of Ophthalmology, London, United Kingdom; ³University Eye Hospital Bonn, Bonn, Germany

1263 — A0298 Vision Function in Early to Intermediate AMD: Progression to Advanced AMD. Lori A. Lott¹, M. E. Schneek¹, G. Haegerstrom-Portnoy^{1,2}, S. Hewlett¹, B. Gauer³, J. A. Brabyn¹. ¹Smith-Kettlewell, San Francisco, CA; ²UC Berkeley, School of Optometry, Berkeley, CA; ³Bonnie M. Gauer, OD, MS, LLC, Roseburg, OR

1264 — A0299 Eye gaze tracking and its relationship with visual acuity, central visual field and age-related macular degeneration features. Augustinus Laude^{1,2}, D. W. Wong³, A. Yow³, M. Mookiah¹, T. H. Lim¹. ¹National Healthcare Group Eye Institute, Tan Tock Seng Hospital, Singapore, Singapore; ²Lee Kong Chian School of Medicine, Nanyang Technological University, Singapore, Singapore; ³Institute for Infocomm Research, Singapore, Singapore

1265 — A0300 Standard automated perimetry with eye tracking. Travis Smith, G. Harman. Casey Eye Institute, Oregon Health & Science University, Portland, OR

1266 — A0301 A novel Bayesian adaptive method for mapping the visual field. Pengjing Xu¹, L. A. Lesmes², D. Yu³, Z. Lu¹. ¹Psychology, The Ohio State University, Columbus, OH; ²Adaptive Sensory Technology, San Diego, CA; ³College of Optometry, The Ohio State University, Columbus, OH *CR

1267 — A0302 Pharmacological pupil dilation causes significant sensitivity changes that are pupil change-dependent but not eccentricity-dependent. Henrietta Wang^{1,2}, J. Phu^{1,2}, K. Qiu², M. Chau², S. Khuu², M. Kalloniatis^{1,2}. ¹Centre for Eye Health, University of New South Wales, Sydney, New South Wales, Australia; ²Optometry and Vision Science, University of New South Wales, Sydney, Northern Territory, Australia

1268 — A0303 Optimisation of adaptation time required for conduct of Maia microperimetry visual field testing. Ruofan Connie Han^{1,2}, J. Gray¹, J. Han³, R. E. MacLaren^{1,2}, J. K. Jolly^{1,2}. ¹Nuffield Department of Clinical Neurosciences, Oxford Eye Hospital, Oxford, United Kingdom; ²Oxford Eye Hospital, Oxford, United Kingdom; ³Oxford Medical School, Oxford, United Kingdom

1269 — A0304 Software for digitization and three-dimensional volumetric measurement of Kinetic Perimetry. Laura R. Erker², E. Chegarnov², M. A. Parker², M. Adeli², E. Parker², T. Smith², C. Barnes¹, M. Broemeling¹, D. J. Wilson², R. G. Weleber². ¹Novelion Therapeutics, Inc, Vancouver, British Columbia, Canada; ²Ophthalmology, OHSU Casey Eye Institute Reading Center, Portland, OR *CR

1270 — A0305 Statokinetic dissociation in anterior visual pathway disease is eliminated by equating the psychophysical procedures. Jack Phu^{1,2}, H. Wang^{1,2}, M. Kalloniatis^{1,2}, S. Khuu². ¹Centre for Eye Health, University of New South Wales, Sydney, New South Wales, Australia; ²Optometry and Vision Science, University of New South Wales, Sydney, New South Wales, Australia

1271 — A0306 Integrated multi-parameter representation of changes in visual field data time series for threshold amsler grid tests. Chris Adams¹, J. Cerwin¹, W. Fink^{2,1}. ¹Ceeable Technologies Inc., Somerville, MA; ²Visual and Autonomous Exploration Systems Research Laboratory, University of Arizona, Tucson, AZ *CR

1272 — A0307 The limits of the far peripheral visual field. Catherine Bain¹, I. Marin-Franch^{2,1}, A. I. McNaught^{3,1}, P. Artes¹. ¹Eye and Vision research group Plymouth University, Plymouth, United Kingdom; ²Ophthalmology, University of Alabama at Birmingham, Birmingham, AL; ³Ophthalmology, Gloucestershire Hospital NHS Foundation Trust, Cheltenham, United Kingdom

1273 — A0308 Impact of dark adaptation time on the Scotopic microperimeter S-MAIA.. Klainti Timos K. Naska¹, R. Hogg¹, M. U. Morales², W. M. Amoaku². ¹Centre of Public Health, Queens University Belfast, Belfast, Belfast, United Kingdom; ²Ophthalmology, Division of Clinical Neuroscience, University of Nottingham, Nottingham, Nottingham, United Kingdom *CR

1274 — A0309 Reduced fixation stability during a peripheral orientation discrimination task in participants with normal vision. Rajkumar Nallour Raveendran¹, A. k. Krishnan¹, B. Thompson². ¹Envision Research Institute, Wichita, KS; ²School of Optometry and Vision Science, University of Waterloo, Waterloo, Ontario, Canada

1275 — A0310 Validation of the quick CSF method with digit stimuli. Haiyan Zheng¹, F. Hou¹, L. A. Lesmes³, Z. Lu². ¹Wenzhou Medical University, Wenzhou, Zhejiang, China; ²The Ohio State University, Columbus, OH; ³Adaptive Sensory Technology, San Diego, CA *CR

1276 — A0311 SwipeCSF – Fast and accurate measurement of the contrast sensitivity function. Arne Ohlendorf¹, C. Kraft², A. Leube³, S. Wahl¹. ¹Technology and Innovation, Carl Zeiss Vision International GmbH, Aalen, Germany; ²Course of Optometry, University of Applied Sciences, Jena, Germany; ³Institute for Ophthalmic Research, Tübingen, Germany *CR

1277 — A0312 Human Motion Processing in Reverse Phi. Mohana Kuppaswamy Parthasarathy¹, V. Lakshminarayanan^{1,2}. ¹Optometry and Vision Science, University of Waterloo, Waterloo, Ontario, Canada; ²Electrical and Computer Engineering, Ryerson University, Toronto, Ontario, Canada

1278 — A0313 Shape defined by motion discrimination task allows to delineate peripheral from central visual processing. Kalina Burnat¹, M. Wieteska², A. Kozak¹. ¹Nencki Institute of Experimental Biology, PAS, Warsaw, Poland; ²Institute of Radioelectronics and Multimedia Technology, Warsaw University of Technology, Warsaw, Poland

1279 — A0314 Theoretical assessment of negative dysphotopsia in physiological eye models. Mihai State¹, S. Palkovits², A. Alarcon¹, N. Hirschschall², O. Findl², M. Van der Moeren¹, P. Piers¹. ¹R&D, Johnson & Johnson Vision, Groningen, Netherlands; ²Vienna Institute for Research in Ocular Surgery (VIROS), Hanusch Hospital, Vienna, Austria *CR

1280 — A0315 Effect of monochromatic aberrations on suprathreshold and threshold discrimination tasks. Fuensanta A. Vera-Diaz¹, C. Otero Molins^{3,1}, P. J. Bex². ¹Optometry, New England College of Optometry, Boston, MA; ²Northeastern University, Boston, MA; ³Davalor Research Center – Universitat Politècnica de Catalunya, Barcelona, Spain

1281 — A0316 Adapting to Blurry Text: Impact on Acuity and Reading. Yueh-Hsun Wu, G. E. Legge. Department of Psychology, University of Minnesota, Twin Cities, Minneapolis, MN

1282 — A0317 Spatial attention increases paracentral visual acuity under defocused conditions. Elie de Lestrangle¹, T. Leung¹, R. Li², C. Kee¹. ¹School of Optometry, The Hong Kong Polytechnic University, Hong Kong, Hong Kong; ²School of Optometry, University of California, Berkeley, CA

1283 — A0318 Comparison Of The Vmax Voice Activ™ Subjective Refractor (Vasr) And Traditional Refraction In A Healthy Population. Christopher Lievens, C. Newman, A. Kabat, J. Weber. Southern College of Optometry, Memphis, TN *CR

1284 — A0319 Repeatability Of The Vmax Voice Activ™ Subjective Refractor (Vasr) And Traditional Refractive Methods In A Healthy Population. Christina Newman, C. Lievens, A. Kabat, J. Weber. Southern College of Optometry, Memphis, TN *CR

1285 — A0320 Visual Capability Estimation via Task-based Motor Action Pattern Measurement. Yanyu Lu, L. Ding, S. Fu. Shanghai Jiao Tong University, Shanghai, China

1286 — A0321 Directions discrimination in adolescents with autism spectrum disorders (ASD). Asmaa Bakroon¹, P. Roy^{1,2}, V. Lakshminarayanan^{1,3}. ¹School of Optometry & Vision Science, University of Waterloo, Waterloo, Ontario, Canada; ²Department of Systems Design Engineering, University of Waterloo, Waterloo, Ontario, Canada; ³Departments of Physics, Electrical and Computer Engineering, University of Michigan, Ann Arbor, MI

1287 — A0322 A simpler test for eye hand coordination using an iPad? Barbara M. Junghans, V. W. Cheung, S. C. Tang, S. Khuu. Univ of New South Wales, Duffys Forest, New South Wales, Australia

1288 — A0323 Above and beyond driving visual abilities: Toward a single index developed in a driving simulator. Romain Chaumillon¹, J. Michaels¹, D. Bernardin^{1,2}, J. Faubert¹. ¹School of Optometry, University of Montreal, Montréal, Quebec, Canada; ²Essilor Canada Ltd., Montreal, Quebec, Canada

1289 — A0324 Effect of refractive blur on judgment of pedestrian walking direction at night-time. Alex A. Black, C. Chiu, G. Kim, J. Le, H. Lee, T. Nguyen, J. M. Wood. School of Optometry & Vision Science, Queensland University of Technology, Kelvin Grove, Queensland, Australia

1290 — A0325 Measuring real-time anxiety during simulated mobility scenarios in people with non-neovascular age-related macular degeneration (AMD). Deanna J. Taylor, P. Jones, N. D. Smith, A. M. Binns, D. P. Crabb. Division of Optometry and Visual Sciences, City, University of London, London, United Kingdom *CR

1291 — A0326 Investigation of visual function tests for night driving difficulties. Janessa Kimlin, A. A. Black, J. M. Wood. School of Optometry and Vision Science, Queensland University of Technology, Brisbane, Queensland, Australia

1292 — A0327 Lower heart-rate variability (but not heart-rate) is associated with increased self-reported stigma toward low vision assistive devices. Corina M. Lacombe¹, A. Johnson¹, W. Wittich². ¹Psychology, Concordia University, Laval, Quebec, Canada; ²University of Montreal, Montreal, Quebec, Canada

1293 — A0328 Priming with flash-lag illusion is percept-dependent. Marjan Persuh. Department of Social Sciences, Human Services and Criminal Justice, Borough of Manhattan Community College, The City University of New York, Astoria, NY

Exhibit Hall B0001-B0056

Monday, April 30, 2018 8:15 AM-10:00 AM

Cornea

217 Corneal Surgery non-refractive

Moderators: Jodhbir S. Mehta and Natalie A. Afshari

1294 — B0001 Demystifying DMEK: A comparison of donor preparation. Rachel Epstein¹, P. Majmudar^{1,2}, R. Epstein^{1,2}, J. Rubenstein^{1,3}. ¹Rush University Medical Center, Chicago, IL; ²Chicago Cornea Consultants, Chicago, IL; ³University Ophthalmology Associates, Chicago, IL

1295 — B0002 Split Donor Cornea Transplantation by Combined DMEK and DALK Surgeries in Costa Rica. Diana Rodriguez¹, R. Ulate Piedra¹, E. Hernandez Bogantes^{1,2}. ¹Clinica Oftalmologica, San Jose, Costa Rica; ²Centro Ocular, Heredia, Costa Rica

1296 — B0003 Keratometry and re-bubbling in DMEK (Descemet's membrane endothelial keratoplasty) corneal transplants. Da Costa Marie³, C. Dubroux¹, P. Rolland¹, G. Hayek^{1,2}, C. Goetz³, N. Ouamara³, L. Lhuillier¹, M. Zaidi¹, J. Perone¹. ¹Ophthalmology department, Regional Hospital Center of Metz-Thionville, Mercy Hospital, Metz, France; ²Ophthalmology, University of Pécs, Medical School, Pécs, Hungary; ³Research support unit, Regional Hospital Center of Metz-Thionville, Mercy Hospital, Metz, France

1297 — B0004 Probability of second eye Re-bubble in patients that have undergone bilateral DMEK surgery and had a re-bubble in the first eye. Dorian A. Zeidmeyer, A. J. Bauer, L. R. Newman, M. D. Straiko, M. A. Terry. Ophthalmology Cornea, Devers Eye Institute, Miami, FL

1298 — B0005 Postoperative visual acuity for DSAEK and UT-DSAEK: Is thinner better? Rolland Pauline¹, M. Da Costa¹, C. Dubroux¹, G. Hayek^{1,2}, C. Goetz³, M. Luc¹, J. Perone¹. ¹Department of Ophthalmology, Metz-Thionville Regional Hospital Center, Mercy Hospital, ARS Laquenexy, France; ²Ophthalmology, University of Pécs, Medical School, Pécs, Hungary

1299 — B0006 Comparison of DMEK and DSAEK in high and low risk posterior lamellar keratoplasty. Jesper Hjortdal¹, U. Pleyer², C. C. Murphy⁴, D. Tole³, B. Vabres³. ¹Ophthalmology, Aarhus University Hospital, Aarhus, Denmark; ²Ophthalmology, Charité- Universitätsmedizin, Berlin, Germany; ³Bristol Eye Hospital, Bristol, United Kingdom; ⁴Ophthalmology, Royal College of Surgeons of Ireland, Dublin, Ireland; ⁵Ophthalmology, CHU Nantes, Nantes, France

1300 — B0007 Safety of Long-term Storage and Shipping of p³DMEK. Jason Hooton¹, S. I. Lentz², N. Hicks³, K. Jones³, K. McCoy³, S. I. Mian¹. ¹Kellogg Eye Center, University of Michigan, Ann Arbor, MI; ²Department of Internal Medicine, Division of Metabolism, Endocrinology & Diabetes, University of Michigan, Ann Arbor, MI; ³Eversight, Ann Arbor, MI

1301 — B0008 Factors that impact on the quality of donor corneas: 9 year-retrospective analysis. Jasmine M. Wong, F. A. Nogueira, R. Y. Hida, D. Chen Wu, P. A. Poletto, A. L. Netto. Faculdade de Ciências Médicas da Santa Casa de São Paulo, São Paulo, São Paulo, Brazil

1302 — B0009 Graft Detachment After Descemet Stripping Automated Endothelial keratoplasty. Nicola Cardascia, G. La Tegola, V. Pastore, V. Bini, G. Alessio. Oftalmologia, Policlinico Bari Univ di Bari A Moro, Rutigliano, Italy

1303 — B0010 Quantifying risk factors for Descemet Stripping Automated Endothelial Keratoplasty dislocation. Darrell R. Lewis, R. M. Stewart, E. Chan. Cornea and External Diseases, Royal Victorian Eye and Ear Hospital, Melbourne, Victoria, Australia

1304 — B0011 Pentagram Suturing Anterior Chamber Plasty and Descemet's Stripping Automated Endothelial Keratoplasty (DSAEK) for Bullous Keratopathy with Extensive Anterior Synchia of Iris. Xiang Fan^{1,2}, Y. Hao^{3,2}, J. Hong^{1,2}, W. Wang^{1,2}. ¹Department of Ophthalmology, Peking University Third Hospital, Beijing, China; ²Beijing Key Laboratory of Restoration of Damaged Ocular Nerve, Beijing, China; ³HNA Doctor Group, Beijing, China

1305 — B0012 Analyses of injector size for micro incision DMEK. Javier Cabrerizo, M. Alberti, M. D. De La Cour. Ophthalmology, Rigshospitalet/ Glostrup, Copenhagen, Denmark

1306 — B0013 Five-year Clinical Results Comparing Descemet Stripping Automated Endothelial Keratoplasty and non Descemet Stripping Automated Endothelial Keratoplasty. Takashi Omoto^{1,2}, T. Toyono¹, R. Shirakawa¹, J. Yoshida¹, T. Miyai¹, S. Yamagami³, T. Usui¹. ¹University of Tokyo Hospital, Tokyo, Japan; ²JR Tokyo General Hospital, Tokyo, Japan; ³Nihon University Hospital, Tokyo, Japan *CR

1307 — B0014 Feasibility and clinical outcome of secondary Descemet Membrane Endothelial Keratoplasty (DMEK) after failed primary DMEK. Ingo Schmack, B. Agha, M. Shajari, M. Lawatsch, T. Kohnen. Ophthalmology, University of Frankfurt, Frankfurt, Germany

1308 — B0015 Analysis of mid-term corneal endothelial remodeling post Descemet's membrane endothelial keratoplasty by wide-field contact and non-contact specular microscopy. Tsutomu Inatomi, H. Tanaka, K. Numa, C. Sotozono, S. Kinoshita. Ophthalmology, Kyoto Prefectural Univ of Med, Kamigyo-Ku, KYOTO, Japan

1309 — B0016 Exploring endothelial cell loss caused by orientation stamps on pre-loaded Descemet membrane endothelial keratoplasty (DMEK) grafts. Lara R. Newman¹, K. D. Tran², K. Odell², P. K. Dye², J. Galloway², C. S. Sales³, M. D. Straiko¹, M. A. Terry^{1,2}. ¹Cornea, Devers Eye Institute, Portland, OR; ²Lions VisionGift, Portland, OR; ³Ophthalmology, Weill Cornell Medicine, New York, NY

1310 — B0017 De novo iris abnormality after Descemet membrane endothelial keratoplasty and its impact on postoperative clinical outcomes. Hideaki Yokogawa, A. Kobayashi, N. Mori, T. Nishino, T. Masaki, K. Sugiyama. Ophthalmology, Kanazawa University School of Medicine, Kanazawa-shi, Ishikawa-ken, Japan

1311 — B0018 Influence of Fuchs endothelial corneal dystrophy on contrast sensitivity in cataract patients. Theofilos Tourtas, V. Augustin, J. Weller, F. E. Kruse. Department of Ophthalmology, University of Erlangen-Nuremberg, Erlangen, Germany

1312 — B0019 Epithelial healing following Descemet's Stripping Automated Endothelial Keratoplasty: Role of Therapeutic Contact Lens. Ritika Mukhija, T. Agarwal, J. S. Titiyal, N. Sharma, R. Sinha, P. K. Maharana. *Ophthalmology, All India Institute of Medical Sciences, New Delhi, New Delhi, India* ✉

1313 — B0020 Retention rate and visual outcomes in pediatric patients implanted with the Boston type-1 keratoprosthesis based on pre-operative diagnosis. Brandon DeCaluwe, R. Wozniak, J. Aquavella. *University of Rochester Flaum Eye Institute, Rochester, NY*

1314 — B0021 Improving the Practicality and Safety of Artificial Corneas: Pre-assembly and Gamma Sterilization of the Boston Keratoprosthesis. Miguel Gonzalez Andrades¹, M. Islam¹, R. Shariff¹, T. Divoux^{2,3}, M. Haist^{4,5}, E. I. Paschalis¹, A. Cruzat¹, L. Gelfand¹, F. Ulm¹, J. Chodosh¹, F. Delori¹, C. H. Dohlman¹. ¹Ophthalmology, Mass Eye and Ear - Harvard Medical School, Boston, MA; ²MultiScale Material Science for Energy and Environment, UMI, Boston, MA; ³Centre de Recherche Paul Pascal, Pessac, France; ⁴Civil and Environmental Engineering Department, Massachusetts Institute of Technology, Boston, MA; ⁵Institute of Concrete Structures and Building Materials, Karlsruhe Institute of Technology, Karlsruhe, Germany

1315 — B0022 Boston type I Keratoprosthesis as the Primary Penetrating Corneal Procedure. Todd Driver¹, C. Aravena¹, H. Duong¹, J. Christenbury¹, F. Yu¹, S. Basak¹, A. Aldave¹. ¹UCLA Stein Eye Institute, Los Angeles, CA; ²Disha Eye Hospitals, Kolkata, India

1316 — B0023 Characteristics of Recurrent Retroprosthetic Membranes Following Boston Keratoprosthesis Type 1 Implantation. Taylor Starnes, A. Arteaga, S. Hassanaly, J. de la Cruz, M. S. Cortina. *Ophthalmology and Visual Sciences, University of Illinois at Chicago, Chicago, IL*

1317 — B0024 In quest of a novel artificial cornea using biomimetic nanopography: initial studies in the New Zealand white rabbit. Kate Xie¹, E. Liang², J. Cai², P. Q. Vu¹, S. Carter¹, A. Yee², M. Farid¹. ¹Ophthalmology, Gavin Herbert Eye Institute, University of California, Irvine, Irvine, CA; ²Chemical Engineering & Materials Science, University of California, Irvine, Irvine, CA

1318 — B0025 OCT-Guided Cooperative Robotic Deep Anterior Lamellar Keratoplasty. Mark Draelos¹, B. Keller¹, G. Tang², K. Hauser^{3,2}, A. N. Kuo¹, J. A. Izatt^{1,4}. ¹Biomedical Engineering, Duke University, Durham, NC; ²Mechanical Engineering and Materials Science, Duke University, Durham, NC; ³Electrical and Computer Engineering, Duke University, Durham, NC; ⁴Ophthalmology, Duke University Medical Center, Durham, NC ✉CR

1319 — B0026 Correlation between iris posterior synechia severity and anterior chamber volume following Descemet's Membrane Endothelial Keratoplasty. Toshiki Shimizu^{2,1}, T. Hayashi^{2,1}, K. Yuda^{2,1}, H. Takahashi³, K. Yamazaki⁴, i. oyakawa⁵, N. Mizuki¹, N. Kato⁶. ¹Ophthalmology, Yokohama City University School of Medicine, Yokohama, Kanagawa, Japan; ²Ophthalmology, Yokohama Minami Kyosai hospital, Kanagawa, Japan; ³Ophthalmology, Jichi Medical University, Tochigi, Japan; ⁴Omiya Nanasato Eye Institute, Saitama, Japan; ⁵Ophthalmology, University of the Ryukyus, Okinawa, Japan; ⁶Ophthalmology, Saitama Medical University, Saitama, Japan

1320 — B0027 Patient-Reported Visual Disability in Fuchs Endothelial Corneal Dystrophy Using the new Visual Function and Corneal Health Status (V-FUCHS) Instrument. Katrin Wacker^{1,2}, K. H. Baratz¹, S. V. Patel¹. ¹Department of Ophthalmology, Mayo Clinic, Rochester, MN; ²Department of Ophthalmology, University of Freiburg, Freiburg, Germany

1321 — B0028 Coralline Hydroxyapatite Keratoprosthesis: Technique Description and Long-Term Visual Outcomes. Rodrigo E. Barrera Rodriguez^{1,2}, J. I. Barraquer Granados^{1,2}, C. R. Leon Roldan^{3,2}. ¹Clinica Barraquer, Bogota, Colombia; ²Escuela Superior de Oftalmología, Bogota, Colombia; ³Centro Oftalmológico Leon, Ciudad de Guatemala, Guatemala

1322 — B0029 Long-term outcomes of amniotic membrane transplantation in acute Stevens-Johnson syndrome/ toxic epidermal necrolysis. Swapna Shanbhag, J. Chodosh, H. Saeed. *Ophthalmology, Massachusetts Eye and Ear Infirmary - Harvard Medical School, Boston, MA*

1323 — B0030 Tuck-in Lamellar keratoplasty with an lenticule obtained by small incision lenticule extraction: a novel method for treatment of Post- LASIK Ectasia. yang Jiang. *Chinese Academy of Medical Science, Beijing, China*

1324 — B0031 Efficacy of Tectonic Graft using preserved human scleral tissue after Proper Antifungal Treatment in Fungal Necrotizing Sclerokeratitis. Hyung-Joon Kim, H. Kang, S. KIM. *Department of Ophthalmology, Daegu Catholic Univ Hospital, Daegu, Korea (the Democratic People's Republic of)*

1325 — B0032 Keratoplasty Outcomes in Patients with Uveitis. Nathan Lambert¹, J. Rose-Nussbaumer², W. Chamberlain¹. ¹Casey Eye Institute, Oregon Health & Science University, Portland, OR; ²University of California San Francisco, San Francisco, CA

1326 — B0033 Can we optimize the refractive target in triple Descemet membrane endothelial keratoplasty in the fellow eye after surgery in the first eye? Victor Augustin, J. Weller, F. E. Kruse, T. Tourtas. *Department of Ophthalmology, University of Erlangen-Nuremberg, Erlangen, Germany*

1327 — B0034 Changing Trends of Original Diseases and Surgical Procedures in Corneal Transplantation. Aya Takahashi, Y. Takahashi, C. Sasaki, S. Nishisako, J. Shimazaki. *Ophthalmology, Tokyo Dental College Ichikawa, Ichikawa, Japan*

1328 — B0035 Outcomes of Therapeutic Penetrating Keratoplasty for Microbial Keratitis. Valerie P. Saw^{1,2}, E. Gkaragkani¹, C. Da Costa Paula¹, F. Aiello¹, z. Gkatzoufas¹. ¹Cornea/ External Disease, Moorfields Eye Hospital, London, England, United Kingdom; ²Institute of Ophthalmology, University College London, London, Other (Non U.S.), United Kingdom

1329 — B0036 Surgical trends in pediatric corneal transplantation in the United States. Angela Zhu, C. R. Prescott. *Ophthalmology, Johns Hopkins Wilmer Eye Institute, Baltimore, MD*

1330 — B0037 Intrastromal Keratoplasty: new prospects for the treatment of keratoconus. Emilio Pedrotti, C. Chiarego, E. BONACCI, T. Merz, P. Talli, J. Bonetto, G. Marchini. *Ophthalmology, University of Verona, Verona, Italy*

1331 — B0038 Quality of Donated Corneas Preserved from Enucleated and Non-Enucleated Eyes: 9 Year Follow-Up. Fabio A. Nogueira, J. M. Wong, R. Y. Hida, D. Chen Wu, P. A. Poletto. *Santa Casa de São Paulo, Sao Paulo, Sao Paulo, Brazil*

1332 — B0039 In vitro characteristics and in vivo outcome of α 1,3-galactosyltransferase gene-knockout miniature pig cornea in full-thickness corneal xenotransplantation using nonhuman primate. Chang Ho Yoon^{1,2}, S. Choi^{1,2}, H. Lee², H. Kim², H. Kang³, J. Kim⁴, H. Choi^{1,2}, C. Park^{4,5}, K. Choi⁶, H. Kim⁶, C. Ahn⁷, M. Kim^{1,2}. ¹Ophthalmology, Seoul National University Hospital, Seoul, Korea (the Democratic People's Republic of); ²Laboratory of Ocular Regenerative Medicine and Immunology, Seoul Artificial Eye Center; Seoul National University Hospital Biomedical Research Institute, Seoul, Korea (the Republic of); ³Department of Laboratory Medicine, Hallym University College of Medicine, Seoul, Korea (the Republic of); ⁴Translational Xenotransplantation Research Center, Seoul National University College of Medicine, Seoul, Korea (the Republic of); ⁵Department of Microbiology and Immunology, Cancer Research Institute, Seoul National University College of Medicine, Seoul, Korea (the Republic of); ⁶Optipharm, Inc., Seoul, Korea (the Republic of); ⁷Department of Internal medicine, Seoul National University College of Medicine, Seoul, Korea (the Republic of)

1333 — B0040 Corneal higher order aberrations and visual acuity after deep anterior lamellar keratoplasty in treating keratoconus. Natsume Suzuki^{2,1}, T. Yamaguchi^{2,1}, Y. Satake², K. Tsubota¹, J. Shimazaki². ¹Ophthalmology, Keio University School of Medicine, Shinjuku-ku, Tokyo, Japan; ²Ophthalmology, Tokyo Dental College, Ichikawa General Hospital, Ichikawa, Chiba, Japan

1334 — B0041 Retrospective case series of clinical outcomes associated with globe trauma in corneal graft patients. Michael Shaw¹, J. Sandhu¹, F. Figueiredo^{1,2}. ¹Ophthalmology, Royal Victoria Infirmary, Newcastle upon Tyne, United Kingdom; ²Newcastle University, Newcastle upon Tyne, United Kingdom

1335 — B0042 Femtosecond Laser-Enabled Keratoplasty with zig-zag pattern: Comparison of Suture Pattern. Caleb Shumway, S. Aggarwal, M. Farid, S. Garg, S. Kedhar, M. Wade. University of California, Irvine, Irvine, CA *CR

1336 — B0043 FSL-assisted trephinations profiles: “decagonal”, “zig-zag” and “butt-joint”. Erika Bonacci, E. Pedrotti, C. Chierago, J. Bonetto, P. Talli, T. Merz, G. Marchini. Eye Clinic University, Verona, Italy

1337 — B0044 Corneal collagen cross-linking in progressive keratoconus, pellucid marginal degeneration, and LASIK-induced ectasia : an observational single – centre study. Wendy Hatch^{1,3}, S. Ong Tone², S. El Defrawy^{1,3}, M. Bujak^{2,3}, C. Chan^{1,3}, H. Chew^{1,3}, A. Cohen⁴, Y. Jin¹, C. Kranemann^{2,3}, T. Rabinovitch^{2,3}, D. Rootman^{1,3}, A. Slomovic^{1,3}, R. Stein¹, N. Singa^{2,3}. ¹Ophthalmology, University of Toronto, Toronto, Ontario, Canada; ²Ophthalmology, University of Toronto, Toronto, Ontario, Canada; ³Kensington Eye Institute, Toronto, Ontario, Canada; ⁴Applied Health Research Centre, Toronto, Ontario, Canada *CR, ✕

1338 — B0045 Effect of age and pre-operative corneal topography on epithelial thickness changes after corneal crosslinking and intrastromal corneal ring segment implantation. Lacey Haines¹, O. Kralj², S. Marschall², A. Gawish⁴, P. Fieguth⁴, N. Singa², H. Chew⁵, D. Rootman⁵, A. Slomovic⁵, W. Hatch⁵, K. K. Bizheva^{2,4}, L. Sorbara¹. ¹School of Optometry and Vision Science, University of Waterloo, Waterloo, Ontario, Canada; ²Physics and Astronomy, University of Waterloo, Waterloo, Ontario, Canada; ³Oculus, Wetzlar, Germany; ⁴Systems Design Engineering, University of Waterloo, Waterloo, Ontario, Canada; ⁵Ophthalmology and Vision Sciences, University of Toronto, Toronto, Ontario, Canada *CR, ✕

1339 — B0046 Analysis of Visual and Refractive Outcomes of Scleral-Fixated Intraocular Lens Implants. Aditya Kanesathasan, M. Nguyen, B. D. Ayres. Wills Eye Hospital, Philadelphia, PA

1340 — B0047 Evaluation of Corneal Surface after Penetrating Keratoplasty (PK) and Deep Anterior Lamellar Keratoplasty (DALK). Fernando Morales-Wong, K. Mohamed-Noriega, A. Olvera-Barrios, C. González-Arocha, D. Charles-Cantú, G. Villarreal M^ondez, M. Fernandez, J. Mohamed-Hamsho. Universidad Autonoma de Nuevo Leon, Faculty Of Medicine, University Hospital, Ophthalmology Department, Monterrey, Mexico

1341 — B0048 European registry for quality improvement in corneal transplantation surgery. Lucia Brocato¹, J. Armitage², M. Cleasson³, G. Jones⁴, C. Konijn⁵, M. Heemskerck⁵, J. Hjortdal⁶, M. Jones⁷, U. Stenevi³, R. M. Nuijts⁸, M. Lundström⁹, M. M. Dickman⁸. ¹ESCRS, Dublin, Ireland; ²Bristol University, Bristol, United Kingdom; ³Sahlgren's University Hospital, Molndal, Sweden; ⁴Veneto Eye Bank Foundation, Venice, Italy; ⁵Dutch Transplantation Society, Leiden, Netherlands; ⁶Aarhus University Medical Hospital, Aarhus, Denmark; ⁷NHS Blood and Transplant, Watford, United Kingdom; ⁸University Eye Clinic, Maastricht University Medical Center, Maastricht University, Maastricht, -- select one --, Netherlands; ⁹Lund University, Lund, Sweden

1342 — B0049 Real-time Corneal Segmentation and 3D Needle Tracking in Intraoperative OCT. Brenton Keller¹, M. Draelos¹, G. Tang², S. Farsi^{1,3}, A. N. Kuo³, K. Hauser⁴, J. A. Izatt^{1,3}. ¹Biomedical Engineering, Duke University, Durham, NC; ²Mechanical Engineering, Duke University, Durham, NC; ³Ophthalmology, Duke University, Durham, NC; ⁴Electrical and Computer Engineering, Duke University, Durham, NC *CR

1343 — B0050 Primary Pterygium Survey: Internet based expert opinion. Enrique O. Graue-Hernandez^{2,1}, A. Navas¹, A. J. Ramirez-Miranda¹, A. Jimenez-Corona², J. Serna-Ojeda¹, M. J. Mannis³. ¹Cornea & External Disease, Instituto de Oftalmología, Mexico city, Mexico, Mexico; ²Ophthalmic Epidemiology, Instituto de Oftalmología Fundación Conde de Valenciana, Mexico City, Mexico, Mexico; ³Ophthalmology, UC Davis, Sacramento, CA

1344 — B0051 Recurrence rate of Mini-SLET vs. Limbal-Conjunctival Autograft in Primary Pterygium Excision. Valeria Oliva, A. Nava Castañeda, E. O. Graue-Hernandez. Cornea, Instituto de Oftalmología Conde de Valenciana, Mexico, Mexico ✕

1345 — B0052 Dual-layered Collagen Vitrigel Implant as Cornea-mimetic Substitute. Xiaokun Wang, S. Majumdar, U. Soiberman, J. H. Elisseeff. School of Medicine, Johns Hopkins University, Baltimore, MD

1346 — B0053 iOCT (Intra-operative Optical Coherence Tomography) Guided Stromal Fluid Drainage for Corneal Hydrops. Farin R. Shaikh, P. K. Maharana, J. S. Titiyal. Ophthalmology, Dr Rajendra Prasad Centre for Ophthalmic Sciences, AIIMS, New Delhi, New delhi, New delhi, India

1347 — B0054 Development of microscope-integrated optical coherence tomography (MIOCT) generated topography maps for corneal astigmatic axis detection. James Tian¹, B. Keller², H. Ngo¹, N. M. Fuerst¹, S. Hsu¹, R. P. McNabb¹, C. A. Toth^{1,2}, J. A. Izatt^{1,2}, A. N. Kuo^{1,2}. ¹Ophthalmology, Duke University Eye Center, Durham, NC; ²Biomedical Engineering, Duke University, Durham, NC*CR

1348 — B0055 Subtenon Triamcinolone Injection Can Prevent Post-Penetrating Keratoplasty Rejection. Seung Mo Kim, J. Kwag, H. Tchah, J. Kim. Ophthalmology, University of Ulsan College of Medicine, Asan Medical Center, Seoul, Korea (the Republic of)

1349 — B0056 Conjunctival Fundus Cultures In Donor Corneas (Bacteriological Load Detection). Leticia Vazquez-Maya, D. Gomez-Garcia, J. F. Perez-Vazquez, K. P. Garcia-Carmona, L. Carrete-Gonzalez. Cornea Department, Hospital General de Mexico, Mexico City, Mexico

Exhibit Hall B0110-B0142

Monday, April 30, 2018 8:15 AM-10:00 AM

Cornea

218 Corneal Endothelium I

Moderators: Takashi Miyai and Takefumi Yamaguchi

1350 — B0110 Corneal phenotype of a Slc4a11 knockout murine model for congenital hereditary endothelial dystrophy. Antoine Sylvestre-Bouchard^{2,1}, S. Vlad^{3,1}, H. De Alwis⁵, K. Sayasith¹, M. Piché¹, J. R. Casey⁴, I. Brunette^{1,2}. ¹Ophthalmology, Maisonneuve-Rosemont Hospital, Montreal, Quebec, Canada; ²Medicine, Université de Montréal, Montreal, Quebec, Canada; ³Medicine and Health Sciences, Université de Sherbrooke, Sherbrooke, Quebec, Canada; ⁴Biochemistry, University of Alberta, Edmonton, Alberta, Canada; ⁵Chemistry and Biomolecular Sciences, University of Ottawa, Ottawa, Ontario, Canada

1351 — B0111 Corneal endothelial dystrophies belong to the same series of disorders connected by transcriptional factors ZEB1 and TCF4/E2-2. Wenlin Zhang, A. J. Aldave. Jules Stein Eye Institute, University of California Los Angeles, Los Angeles, CA

1352 — B0112 Altered endothelial cell microRNA DNA methylation patterns in Fuchs endothelial corneal dystrophy. Matilda F. Chan^{1,2}, E. Khuc¹, M. Wolf¹, D. J. Weisenberger³, D. G. Hwang^{1,2}, P. Pan¹. ¹Ophthalmology, Univ of California-San Francisco, San Francisco, CA; ²Proctor Foundation, Univ of California-San Francisco, San Francisco, CA; ³Biochemistry and Molecular Medicine, University of Southern California, Los Angeles, CA

1353 — B0113 Association of rs613872 and trinucleotide repeat expansion in the TCF4 gene in Fuchs endothelial corneal dystrophy in Germany. Yuya Komori¹, N. Okumura¹, R. Hayashi¹, M. Nakano², K. Tashiro², K. Yoshii³, R. Aleff⁴, M. Butz⁵, E. W. Highsmith⁵, E. Wieben⁴, M. P. Fautsch⁶, K. H. Baratz⁶, T. Tourtas⁷, U. Schlotzer-Schrehardt⁷, F. E. Kruse⁷, N. Koizumi¹. ¹Biomedical Engineering, Doshisha University, Kyotanabe, Kyoto, Japan; ²Genomic Medical Sciences, Kyoto Prefectural University of Medicine, Kyoto, Japan; ³Mathematics and Statistics in Medical Sciences, Kyoto Prefectural University of Medicine, Kyoto, Japan; ⁴Biochemistry and Molecular Biology, Mayo Clinic, Rochester, MN; ⁵Laboratory Medicine and Pathology, Mayo Clinic, Rochester, MN; ⁶Ophthalmology, Mayo Clinic, Rochester, MN; ⁷Ophthalmology, University of Erlangen-Nürnberg, Erlangen-Nuremberg, Germany

1354 — B0114 Establishment of a drug screening system for Fuchs endothelial corneal dystrophy. Takeshi Oshima¹, N. Okumura¹, T. Onishi¹, E. Ueda¹, K. Watanabe¹, T. Tourtas², U. Schlotzer-Schrehardt², F. E. Kruse², N. Koizumi¹. ¹Biomedical Engineering, Doshisha University, Kyotanabe, Kyoto, Japan; ²Ophthalmology, University of Erlangen-Nürnberg, Erlangen, Germany *CR

1355 — B0115 Ocular levels of angiotensin converting enzyme (ACE) in Fuchs' Endothelial Dystrophy. Robert Hoerster¹, M. Matthaei², C. Cursiefen², E. Tahmaz¹, U. Streicher², N. Refaian², L. M. Heindl². ¹Augenambulanz, Erkelenz, Erkelenz, Germany; ²Center of Ophthalmology, University of Cologne, Cologne, Germany; ³Institute for Clinical Chemistry, University of Cologne, Cologne, Germany

1356 — B0116 N-Acetylcysteine Alleviates Progression of Fuchs Endothelial Corneal Dystrophy in a UVA Irradiation-Induced Mouse Model. Cailing Liu¹, T. Miyajima¹, S. Vasanth¹, T. Miyai¹, B. Farinelli², U. V. Jurkunas¹. ¹Schepens Eye Research Institute, Massachusetts Eye and Ear Infirmary, Boston, MA; ²Wellman Center for Photomedicine, Massachusetts General Hospital, Boston, MA

1357 — B0117 Reduced Fission and Mitophagy in Diabetic Corneal Endothelial Cells Impair Mitochondrial Health. Jessica M. Skeie^{1,2}, B. Aldrich^{1,2}, A. E. Wilcox³, G. A. Schmidt², C. R. Reed², M. A. Greiner^{1,2}. ¹Ophthalmology and Visual Sciences, University of Iowa, Coralville, IA; ²Iowa Lions Eye Bank, Coralville, IA

1358 — B0118 Secreted protease imbalance in Fuchs Corneal Endothelial Dystrophy. Mathieu Theriault^{1,2}, N. Parent^{1,2}, S. Gendron^{1,2}, I. Brunette^{4,3}, P. J. Rochette^{1,2}, S. Proulx^{1,2}. ¹Ophthalmologie, Université Laval, Québec, Québec, Canada; ²CUO-Recherche, CHU de Québec, Québec, Québec, Canada; ³Ophthalmology, University of Montreal, Montreal, Québec, Canada; ⁴Research Center, Maisonneuve-Rosemont Hospital, Montreal, Québec, Canada

1359 — B0119 Role of Estrogen-DNA Adducts in Fuchs Endothelial Corneal Dystrophy. Taiga Miyajima^{1,4}, S. Vasanth¹, Y. Chen¹, M. Price³, F. Price³, M. Zahid², E. Rogan², U. V. Jurkunas¹. ¹Department of Ophthalmology, Schepens Eye Research Institute, Harvard Medical School, Boston, MA; ²Department of Environmental, Agricultural and Occupational Health, University of Nebraska Medical Center, Omaha, NE; ³Price Vision Group, Indianapolis, IN; ⁴Department of Ophthalmology, Dokkyo Medical University, Mibu, Tochigi, Japan

1360 — B0120 Smoking and Annual US Regional Rate of Fuchs Endothelial Dystrophy Related Endothelial Keratoplasty. Rebecca Lian¹, R. P. Igo², R. Sella¹, Y. Li³, S. K. Iyengar², N. A. Afshari¹. ¹University of California San Diego, San Diego, CA; ²Case Western, Cleveland, OH; ³Duke University, Durham, NC

1361 — B0121 Corneal Endothelial Severity Scoring System for Fuchs's Endothelial Dystrophy: Sectorial Corneal Endothelial Deterioration Imaging. Ricardo Holzchuh^{2,1}, R. Y. Hida^{1,2}, S. M. Chammas², F. U. Carvalho², I. C. Teixeira², F. C. Abib³. ¹Ophthalmology, Universidade de Sao Paulo (USP), Sao Paulo, Brazil; ²Santa Casa de Sao Paulo, Sao Paulo, Brazil; ³Anatomy, Universidade federal do Parana, Curitiba, Brazil

1362 — B0122 New Corneal Endothelial Severity Scoring System for Fuchs's Endothelial Dystrophy: Horizontal cornea x Vertical cornea. Sabrina M. Chammas¹, R. Y. Hida¹, R. Holzchuh¹, F. U. Carvalho¹, I. C. Teixeira¹, F. C. Abib^{2,1}. ¹ISCMSp, São Paulo, Brazil; ²Federal University of Parana, Parana, Brazil

1363 — B0123 Active TGF-β promotes intercellular junction formation for post-confluent corneal endothelial cells. Kim Santerre, S. Proulx. Université Laval, Québec, Québec, Canada

1364 — B0124 Transcription factor SP1 mediates fibrosis as a downstream target of ZEB1 induced by FGF2 in human corneal endothelium. Eric Jung, J. Lee, J. M. Heur. Ophthalmology, University of Southern California, Los Angeles, CA

1365 — B0125 Injury-induced FGF2 enhances expression of fibrosis- and proliferation-related gene in *in vivo* mouse corneal endothelium. JeongGoo Lee, E. Jung, J. M. Heur. Ophthalmology, University of Southern California, Montrose, CA

1366 — B0126 Fibroblast growth factor 2 (FGF-2) and epidermal growth factor (EGF) activate transient receptor potential vanilloid channel 1 (TRPV1) and 4 (TRPV4) in human corneal endothelial cells. Nina Ljubojevic¹, M. Pushina², J. Loeffler², C. Dimitropoulos¹, C. Kupper¹, P. S. Reinach³, S. Mergler⁴, M. Valtink². ¹Klinik für Augenheilkunde, Charité – Universitätsmedizin Berlin, corporate member of Freie Universität Berlin, Humboldt-Universität zu Berlin, and Berlin Institute of Health, Berlin, Germany; ²Institute of Anatomy, University of Medicine Carl Gustav Carus, TU Dresden, Dresden, Germany; ³School of Ophthalmology and Optometry, Wenzhou Medical University, Wenzhou, China

1367 — B0127 Ribonuclease 5 Facilitates Mitosis-driven Corneal Endothelial Wound Healing Via Activation of PI3-kinase/Akt Pathway. Jae Chan Kim, K. Kim, S. Lee, M. Choi. Ophthalmology, Chung-Ang Univ. Hospital, Seoul, Korea (the Democratic People's Republic of)

1368 — B0128 MicroRNA-184 overexpression suppresses TGFβ/Smad signal in human corneal endothelial cells. Tetsuya Toyono¹, S. Asano¹, T. Miyai¹, K. Kitamoto¹, S. Nakagawa¹, M. Kuroda², A. Jun³, T. Usui¹. ¹Ophthalmology, University of Tokyo, Department of Ophthalmology, Bunkyo-ku, Tokyo, Japan; ²Molecular Pathology, Tokyo Medical University, Tokyo, Japan; ³Wilmer Eye Institute, Johns Hopkins University, Baltimore, MD

1369 — B0129 Expression of TSP1 in Human Corneal Cells. Xiaqing Q. Guo, A. E. Hucheeon, J. D. Zieske. Ophthalmology, Harvard Medical School, Schepens Eye Research Institute/MEE, Boston, MA *CR

1370 — B0130 Effect of SOX2 Overexpression on Regeneration of Corneal Endothelial Cells. Young Joo Shin¹, H. Kim², J. Hwang¹, T. Chung³, Y. Chang¹. ¹Ophthalmology, Hallym University College of Medicine, Seoul, Korea (the Democratic People's Republic of); ²Department of Ophthalmology and Visual Science, Yeouido St. Mary's Hospital, College of Medicine, The Catholic University of Korea, Seoul, Korea (the Republic of); ³Samsung Medical Center, Sungkyunkwan University School of Medicine, Seoul, Korea (the Republic of)

1371 — B0131 The Ca²⁺/Nucleotide Nanocomplex formulation enhances the pump function of corneal endothelial cells by increasing the activity of Na⁺/K⁺ Dependent ATPase. Su Ah Kim¹, R. Afza¹, H. Hwang², B. Lim², J. Jeung², K. Kang². ¹Department of Ophthalmology, SahnYook Medical Center, Seoul, Korea (the Republic of); ²Department of Ophthalmology, Incheon St. Mary's Hospital, Incheon, Korea (the Republic of)

1372 — B0132 Directed differentiation of periocular mesenchyme from human embryonic stem cells. Gary S. Peh¹, M. Lovatt¹, G. Yam¹, R. Dunn², J. S. Mehta¹. ¹Ocular Tissue Eng & Stem Cell Group, Singapore Eye Research Institute, Singapore, Singapore; ²Institute of Medical Biology, Agency for Science, Technology and Research, Singapore, Singapore

1373 — B0133 Factors Affecting Primary Human Corneal Endothelial Cell Adhesion. Ricardo F. Frausto, V. S. Swamy, D. D. Chung, A. J. Aldave. Doris Stein, Cornea Division, Jules Stein Eye Institute, UCLA, Los Angeles, CA

1374 — B0134 Characterisation of corneal transition zone explant cultures. Jie Zhang, A. M. Ahmad, C. N. McGhee, D. V. Patel. Ophthalmology, University of Auckland, Auckland, New Zealand

1375 — B0135 Optimization of Storage Conditions for Transportation of Cultured Corneal Endothelial Cells. Stephen Wahlig^{1,2}, S. Lin², K. Binte Adnan², X. Seah², M. Lovatt², G. S. Peh², J. S. Mehta^{2,3}. ¹Duke University School of Medicine, West Des Moines, IA; ²Tissue Engineering and Stem Cell Group, Singapore Eye Research Institute, Singapore, Singapore; ³Corneal Service, Singapore National Eye Centre, Singapore, Singapore

1376 — B0136 Evaluation of cultured corneal endothelial cells morphology with an easy and free tool. Maria Dolores Montalvo², J. Zavala¹. ¹Escuela de Medicina y Ciencias de la Salud, Tecnológico de Monterrey, Monterrey, Nuevo Leon, Mexico; ²Posgrado Escuela de Ciencias e Ingeniería, Tecnológico de Monterrey, Monterrey, Nuevo Leon, Mexico

1377 — B0137 Primary human corneal endothelial cell transplantation in an ex vivo model. Lauren Cornell, J. McDaniel, B. Lund, D. O. Zamora. Ocular Trauma, US Army Institute of Surgical Research, Fort Sam Houston, TX

1378 — B0138 Ultrathin Poly-DL-Lactic Membranes for Corneal Endothelial Transplantation. Bert Van den Bogerd¹, J. Van Hoorick^{2,3}, J. Van Erps³, H. Thienpont^{2,3}, S. Ni Dhubhghaill⁴, c. koppen⁴, P. Dubruel², S. Van Vlierberghe^{2,3}, N. Zakaria^{1,4}. ¹Laboratory of Ophthalmology, Translational Neurosciences, University of Antwerp, Wilrijk, Belgium; ²Polymer Chemistry & Biomaterials Group, Department of Organic and Macromolecular Chemistry, Ghent University, Ghent, Belgium; ³Brussels Photonics, Department of Applied Physics and Photonics, Free University of Brussels, Brussels, Belgium; ⁴Department of Ophthalmology, Antwerp University Hospital, Edegem, Belgium *CR

1379 — B0139 ECM Protein Coating on Tilapia Fish Scales Improves HCEC Adhesion and Proliferation Through ILK/p63 Signaling. David H. Ma, Y. Hsueh, H. Chen, J. Lai, K. Ma. Ophthalmology, Chang Gung Memorial Hospital, Taipei, Taiwan

1380 — B0140 Evaluation of the suitability of biocompatible carriers as artificial transplants using cultured porcine corneal endothelial cells. Daniele Spinozzi^{1,2}, L. Baydoun^{1,2}, A. Miron¹, M. Bruinsma¹, I. Dapena^{1,2}, M. Rafat^{3,4}, S. Oellerich¹, G. Melles^{1,2}. ¹NIIOS - Netherlands Institute for Innovative Ocular Surgery, Rotterdam, Netherlands; ²Melles Cornea Clinic, Rotterdam, Netherlands; ³LinkoCare Life Science AB, Linköping, Sweden; ⁴Linköping University, Department of Biomedical Engineering, Linköping, Sweden *CR

1381 — B0141 Experimental study of skin-derived corneal endothelial cell-like cells for long-term monkey corneal endothelial transplantation. Xinyi Wu. Ophthal QiLu Hosp/Ophthal, Shandong University, Jinan, SHANDONG, China

1382 — B0142 Pre-clinical Model of Bullous Keratopathy in Rabbit for Corneal Transplantation of Engineered Corneal Endothelial Grafts. Carlos-Alberto Rodriguez-Barrientos^{1,2}, M. Arango-Rodriguez², N. Carreño^{2,4}, N. Vazquez², M. Chacon¹, V. Solarte^{2,5}, S. Becerra², C. Sossa^{2,5}, A. Tello^{4,5}, V. Galvis^{4,5}, A. Meana^{1,3}, J. Merayo-Lloves¹. ¹Instituto Universitario Fernández- Vega, Universidad de Oviedo, Fundación de Investigación Oftalmológica, Oviedo, Asturias, Spain; ²Banco Multitejidos y Centro de Terapias Avanzadas, Fundación Oftalmológica de Santander, Clínica FOSCAL Internacional, Bucaramanga, Colombia; ³Centro Comunitario de Sangre y Tejido de Asturias, Oviedo, Asturias, Spain; ⁴Centro Oftalmológico Virgilio Galvis, Bucaramanga, Colombia; ⁵Universidad Autónoma de Bucaramanga (UNAB), Bucaramanga, Colombia

Exhibit Hall B0160-B0194

Monday, April 30, 2018 8:15 AM-10:00 AM

Cornea

219 Corneal Biomechanics

Moderator: Yutao Liu

1383 — B0160 Investigation of corneal biomechanics using Ocular Response Analyzer® and Corvis® ST in diabetes mellitus. Lisa Ramm, R. Herber, E. Spoerl, N. Terai, L. E. Pillunat. Ophthalmology, University Carl Gustav Carus TU Dresden, Dresden, Germany

1384 — B0161 Measurement of biomechanical corrected intraocular pressure using different tonometry devices – a comparative study. Naim Terai, R. Herber, L. Ramm, E. Spoerl, F. Raiskup, L. E. Pillunat. Ophthalmology, University of Dresden, Dresden, Germany

1385 — B0162 Oxygen diffusion limits the biomechanical effectiveness of iontophoresis-assisted transepithelial corneal cross-linking. Emilio A. Torres Netto^{1,2}, S. Kling¹, N. L. Hafezi³, J. B. Randleman⁴, F. Hafezi^{5,4}. ¹University of Zurich, Zurich, Switzerland; ²Federal University Of Sao Paulo, Paulista School of Medicine, Sao Paulo, Brazil; ³ELZA Institute, Zurich, Switzerland; ⁴University of Southern California, Los Angeles, CA; ⁵University of Geneva, Geneva, Switzerland

1386 — B0163 Differences in Corneal Biomechanical Behavior between Normal and Keratoconic Corneas using In-vivo Optical Coherence Elastography. Vinicius S. De Stefano^{1,2}, M. R. Ford¹, I. Seven¹, B. Hughes³, W. J. Dupps^{1,2}. ¹Cole Eye Institute, Cleveland Clinic, Cleveland, OH; ²Federal University of Sao Paulo, Sao Paulo, SP, Brazil; ³OptoQuest, Inc., Cleveland, OH; ⁴Dept. of Biomedical Engineering, Lerner Research Institute, Cleveland Clinic, Cleveland, OH *CR

1387 — B0164 New experimental applanation tonometer for myopic patients after laser refractive surgery. Maria Iglesias¹, A. Laiseca¹, R. P. Casaroli-Marano², B. Kudsieh¹, J. Nadal¹, R. I. Barraquer¹. ¹Barraquer Ophthalmology Center, Barcelona, Spain; ²Universitat de Barcelona, Barcelona, Spain *CR

1388 — B0165 Epithelial Remodeling After Corneal Cross-Linking Using Higher Fluence and Accelerated Treatment Time. Claudia E. Perez Straziota^{1,2}, I. Haberman³, A. Fidalgo Broncano, MD, FEBO⁴, S. Woo Kim⁵, P. Z. Lang², F. Hafezi^{6,7}, J. B. Randleman². ¹Cornea Eye Institute, Beverly Hills, CA; ²Roski Eye Institute, University of Southern California, Los Angeles, CA; ³Ophthalmology, NYU Langone Health, New York, NY; ⁴Oftalmologia, Clinica El Brillante, Cordoba, Spain; ⁵Ophthalmology, Ulsan University of College of Medicine, Ulsan, Korea (the Republic of); ⁶Medicine, University of Geneva, Geneva, Switzerland; ⁷ELZA Institute, Dietikon/Zurich, Switzerland *CR, ✕

1389 — B0166 2D-Extensimetry in human corneas after LASIK vs. SmlLE: a fellow eye study. Bogdan Spiru¹, S. Kling², F. Hafezi^{2,3}, W. Sekundo¹. ¹Ophthalmology, University Hospital of Marburg, Marburg, Hessen, Germany; ²Laboratory of Ocular Cell Biology, Center for Applied Biotechnology and Molecular Medicine, University of Zurich, Zurich, Switzerland; ³ELZA Institute, Dietikon/Zurich, Switzerland *CR

1390 — B0167 Biometric and dynamic predictors of ORA measures of corneal biomechanics. Daniela Oehring¹, C. Purslow^{2,1}, P. Buckhurst¹, H. Buckhurst¹. ¹Faculty of Health and Human Sciences, Plymouth University, Plymouth, Devon, United Kingdom; ²School of Optometry & Vision Sciences, Cardiff University, Cardiff, Wales, United Kingdom

1391 — B0168 Corneal Deformation Before and After Corneal Crosslinking (CXL) in Response to Ocular Pulse. Keyton Clayson^{1,2}, E. Pavlatos¹, X. Pan³, Y. Ma¹, J. Liu^{1,4}. ¹Department of Biomedical Engineering, The Ohio State University, Columbus, OH; ²Interdisciplinary Biophysics Graduate Program, The Ohio State University, Columbus, OH; ³Department of Biomedical Informatics, The Ohio State University, Columbus, OH; ⁴Department of Ophthalmology & Visual Science, The Ohio State University, Columbus, OH

1392 — B0169 The Study on Changes of Rabbit Corneal Biomechanical Properties after Femtosecond Assisted LASIK. Muhammad Ahmad Khan^{2,1}, D. Lin¹. ¹Cataract & Glaucoma, Changsha Aier Hospital, Changsha, Hunan, China; ²Refractive Surgery, Changsha Aier Hospital, Changsha, Hunan, China

1393 — B0170 Mechanical stability of partial thickness tectonic corneal grafts. Joel Palko¹, Y. Ma², M. W. Dixon¹, K. Clayson², A. Hong¹, A. Lubniewski¹, J. Liu². ¹Ophthalmology, Washington University in St Louis, Saint Louis, MO; ²Biomedical Engineering, Ohio State University, Columbus, OH

1394 — B0171 Corneal epithelial cell culture medium as a new agent for corneal wound healing. ISHIDA GAKU^{1,2}, T. Nakamura², M. Nagata¹, M. Nakakoji¹, H. Kobayashi¹, S. Yokoo¹, S. Kinoshita², C. Sotozono¹. ¹Kyoto Prefectural University of Medicine, Kyoto, Japan; ²Department of Frontier Medical Science and Technology for Ophthalmology Kyoto Prefectural University of Medicine, Kyoto, Japan

1395 — B0172 Establishing the link between waveform derived corneal stiffness and ex vivo derived corneal elastic modulus: A prospective study with air-puff applanation of porcine eyes. Robert Herber¹, M. Francis², E. Spoerl¹, L. E. Pillunat¹, F. Raiskup¹, A. Sinha Roy². ¹Department of Ophthalmology, Univ. Hospital Carl Gustav Carus at TU Dresden, Dresden, Germany; ²Narayana Nethralaya Foundation, Bangalore, India

1396 — B0173 Influence of physiological parameters on human corneal displacements in response to ocular pulse. Jun Liu^{1,2}, E. Pavlatos¹, K. Clayson^{1,3}, X. Pan⁴. ¹Department of Biomedical Engineering, Ohio State University, Columbus, OH; ²Department of Ophthalmology and Visual Science, Ohio State University, Columbus, OH; ³Biophysics Interdisciplinary Program, Ohio State University, Columbus, OH; ⁴Department of Biomedical Informatics, Ohio State University, Columbus, OH

1397 — B0174 Characterizing how stromal initial hydration affects the mechanical properties of collagen crosslinked porcine and human corneas. Hamed Hatami-Marbini. Mechanical Engineering, University of Illinois at Chicago, Chicago, IL

1398 — B0175 Effects of corneal collagen crosslinking on stromal wound healing using a rabbit phototherapeutic keratectomy model. Bret A. Moore^{1,2}, S. Kim², I. Jalilian², m. motta², M. Mukai², M. Mizutani², C. J. Murphy^{2,3}, S. M. Thomasy^{2,3}. ¹Veterinary Medical Teaching Hospital, University of California, Davis, Davis, CA; ²Department of Surgical and Radiological Sciences, University of California, Davis, Davis, CA; ³Department of Ophthalmology and Vision Science, University of California, Davis, Davis, CA

1399 — B0176 Comparison of the effect of eye rubbing in keratoconus and normal eyes using Scheimpflug analysis and Ocular Response Analyzer. Michelle Cerrate, L. Izquierdo, M. G. Hadid, L. Cañola, C. Maldonado, J. A. Chauca, M. Henriquez. Research department, Instituto de ojos oftalmosalud, Lima, Lima, Peru

1400 — B0177 Longitudinal Brillouin measurements of the human cornea before and after LASIK. Amira M. Eltony^{2,1}, P. Shao^{2,1}, T. Seiler⁴, A. Scally³, R. Pineda II^{5,1}, T. Seiler³, S. Yun^{2,1}. ¹Harvard Medical School, Boston, MA; ²Wellman Center for Photomedicine, Massachusetts General Hospital, Boston, MA; ³Institute for Refractive and Ophthalmic Surgery, Zurich, Switzerland; ⁴Universitätsklinik für Augenheilkunde, Inselspital Bern, Bern, Switzerland; ⁵Massachusetts Eye and Ear Infirmary, Boston, MA

1401 — B0178 Development of a time-domain finite-element model of acoustic wave propagation in the cornea. Behrouz Tavakol², J. Birkenfeld², A. Ramier¹, S. Yun¹. ¹Wellman Center for Photomedicine, Harvard Medical School, Mass General Hospital, Medford, MA; ²Harvard Medical School, Mass. General Hospital, Cambridge, MA; ³MIT, Cambridge, MA

1402 — B0179 3D inflation response of the corneoscleral junction in porcine and human eyes. Yanhui Ma¹, K. Clayson^{1,2}, E. Pavlatos¹, X. Pan³, J. Liu^{1,4}. ¹Department of Biomedical Engineering, Ohio State University, Columbus, OH; ²Interdisciplinary Biophysics Graduate Program, Ohio State University, Columbus, OH; ³Department of Biomedical Informatics, Ohio State University, Columbus, OH; ⁴Department of Ophthalmology and Visual Science, Ohio State University, Columbus, OH

1403 — B0180 Wavelength Dependence of Infrared Femtosecond Laser Ablation in the Cornea. Adam Boretzky¹, J. Clary¹, G. Noojin¹, A. Shingledecker¹, B. Rockwell¹. ¹Engility Corporation, San Antonio, TX; ²11th Human Performance Wing, Air Force Research Laboratory, Fort Sam Houston, TX

1404 — B0181 Characterising biomechanical properties of healthy human corneas with the Ocular Response Analyser and CorvisST. Hetal D. Buckhurst¹, C. Purslow^{1,2}, P. J. Buckhurst¹, D. Oehring¹. ¹School of Health Professions, Plymouth University, Plymouth, Devon, United Kingdom; ²School of Optometry and Vision Science, Cardiff University, Cardiff, United Kingdom, United Kingdom

1405 — B0182 Comparison of changes in corneal biomechanical properties after uneventful phacoemulsification in diabetic and non-diabetic patients. Angela M. Carneiro^{1,2}, J. N. Beato^{1,2}, J. Esteves², D. Reis¹, M. Falcao^{1,2}, V. Rosas², F. Falcao-Reis^{1,2}. ¹Faculty Medicine Porto, Hospital Sao Joao, Porto, Portugal; ²Ophthalmology, Hospital Sao Joao, Porto, Portugal

1406 — B0183 Construction of a limbal epithelial stem cell carrier composed with decellularized corneal lenticule embedded compressed collagen. Jeongho Kim¹, M. Huh¹, K. Lee¹, S. Jung¹, B. Park¹, S. Yi¹, D. Kim¹, H. Hong², D. Kim², H. Kim¹. ¹Kyungpook National University, Daegu, Dong-gu, Korea (the Republic of); ²Department of Mechanical Engineering, Pohang University of Science and Technology (POSTECH), Pohang, Korea (the Republic of)

1407 — B0184 Assessment of ocular mechanical resonances using phase-sensitive OCT and frequency-domain air puff stimulation. Judith Birkenfeld^{1,2}, A. Ramier¹, B. Tavakol¹, S. Marcos², S. Yun¹. ¹The Wellman Center for Photomedicine at MGH, Harvard Medical School, Boston, MA; ²Instituto de Óptica “Daza de Valdés”, CSIC, Madrid, Spain

1408 — B0185 Corneal Biomechanical Changes Following Collagen Cross-Linking With Rose Bengal-Green Light and Riboflavin-UVA. Nilufer Yesilirmak^{1,2}, A. Tefon³, Y. Aribas³, K. Bilgihan³. ¹Ankara Training and Research Hospital, Ankara, Turkey; ²Cornea, Bascom Palmer Eye Institute, Miami, FL; ³Gazi University Hospital, Ankara, Turkey

1409 — B0186 Finding An Optimal Corneal Xenograft: Comparative Analysis Of Corneal Matrix Proteins Across Species. Yelin Yang^{1,2}, R. Sharifi², A. Yashar², M. Gonzalez-Andrades². ¹Ophthalmology, University of Toronto, Toronto, Ontario, Canada; ²Ophthalmology, Massachusetts Eye and Ear and Schepens Eye Research Institute, Boston, MA

1410 — B0187 Preliminary study on biomechanical contribution of the sclera to dynamic corneal response in air-puff induced deformation. B. Audrey Nguyen², C. J. Roberts^{1,2}, M. A. Reilly^{2,1}. ¹Ophthalmology & Visual Science, Ohio State University, Columbus, OH; ²Biomedical Engineering, Ohio State University, Columbus, OH *CR

1411 — B0188 A Novel GelMA-based Bioadhesive for Repair of Corneal Stromal Defects. Zhongmou Sun¹, A. Kheirkhah¹, R. Al Karmi¹, W. Foulsham¹, E. Shirzaei Sani², N. Annabi², R. Dana¹. ¹Schepens Eye Research Institute, Harvard Medical School, Boston, MA; ²Chemistry Engineering, Northeastern University, Boston, MA *CR

1412 — B0189 Implications of Remodeling and Reorganization in Developing Corneas. Sheng-Lin Lee¹, H. Cheng², C. Dong¹. ¹Department of Physics, National Taiwan University, Taipei, Taiwan, Taiwan; ²Genetics & Developmental Biology, National Chung Hsing University, Taichung, Taiwan

1413 — B0190 Topographic Corneal Changes Induced by Oral Riboflavin in the Treatment of Corneal Ectasia. Karen Schaeffer¹, J. Jarstad², A. Schaeffer³, L. McDaniel⁴. ¹Tulane School of Medicine, New Orleans, LA; ²Ophthalmology, University of Missouri School of Medicine, Columbia, MO; ³Ophthalmology, University of Tennessee, Memphis, TN

1414 — B0191 Fabrication of model eye to mimic human eye for assessing tonometer pressure. Han Saem Cho¹, S. Lee², H. Lee¹, H. Moon³, S. Jeoung¹. ¹Korea Research Institute of Standards and Science, Daejeon, Korea (the Republic of); ²Bundang Jeseang General Hospital, Daejeon, Korea (the Republic of); ³Gachon university, Seongnam, Korea (the Republic of)

1415 — B0192 A subfibrillar deformation mechanism in corneal collagen that affords flexibility. James S. Bell¹, S. Hayes¹, C. Whitford², J. Sanchez-Weatherby³, O. Shebanova³, C. Vergari⁴, P. Winlove⁴, N. Terrill⁵, T. Sorensen⁴, A. Elsheikh², K. M. Meek¹. ¹Cardiff University, Cardiff, United Kingdom; ²University of Liverpool, Liverpool, United Kingdom; ³Diamond Light Source, Didcot, United Kingdom; ⁴University of Exeter, Exeter, United Kingdom

1416 — B0193 Three-dimensional, biomechanical characterization of customized corneal collagen crosslinking using Brillouin microscopy. Joshua Webb¹, G. Scarcelli¹, J. B. Randleman². ¹Fischell Department of Bioengineering, University of Maryland, College Park, MD; ²University of Southern California, Los Angeles, CA

1417 — B0194 Accuracy of integrated corneal biomechanical and tomographic data for detecting subclinical keratoectasia. Prema Padmanabhan¹, P. kataria¹, v. Padmanaban¹, S. P. Srinivas², R. Ambrosio³. ¹Department of Cornea and Refractive Surgery, Medical Research Foundation, Chennai, TamilNadu, India; ²Optometry, Indiana University, Bloomington, IN; ³Instituto de Olhos Renato Ambrosio, Rio de Janeiro, Brazil *CR

Exhibit Hall B0337-B0357

Monday, April 30, 2018 8:15 AM-10:00 AM

Genetics Group

220 Genetics of AMD and Macular dystrophies

Moderator: Robert P. Igo

1418 — B0337 Genome-wide Association Study of Choroidal Thickness in the Amish. Yeunjo E. Song¹, O. García Rodríguez², K. Miskimen¹, M. G. Nittala³, S. R. Sadda³, W. Scott², D. Stambolian⁴, J. Haines^{1,5}. ¹Population & Quantitative Health Sciences, Case Western Reserve University, Cleveland, OH; ²Hussman Institute for Human Genomics, University of Miami, Miami, FL; ³Doheny Imaging Reading Center, Doheny Eye Institute, Los Angeles, CA; ⁴Ophthalmology and Genetics, University of Pennsylvania, Philadelphia, PA; ⁵Institute for Computational Biology, Case Western Reserve University, Cleveland, OH

1419 — B0338 A Prospective Study on Hereditary Proclivity of Age-Related Macular Degeneration. Rami Gabriel, M. C. Mehta, C. M. Kenney. UC Irvine School of Medicine, Newport Beach, CA

1420 — B0339 Investigation of a rare risk variant in complement factor H for age-related macular degeneration in the Amish. Andrea R. Waksmunski^{1,2}, K. Miskimen³, Y. E. Song³, R. Laux³, D. Fuzzell⁴, S. Fuzzell⁴, L. D. Adams⁴, L. Caywood⁴, M. Prough⁴, W. K. Scott⁴, D. Stambolian⁵, M. A. Pericak-Vance⁴, J. L. Haines^{2,3}. ¹Genetics and Genome Sciences, Case Western Reserve University, Cleveland, OH; ²Institute for Computational Biology, Case Western Reserve University, Cleveland, OH; ³Population and Quantitative Health Sciences, Case Western Reserve University, Cleveland, OH; ⁴Hussman Institute for Human Genomics, University of Miami, Miami, FL; ⁵Ophthalmology and Genetics, University of Pennsylvania, Philadelphia, PA

1421 — B0340 Slc38A1 blockade inhibits angiogenesis and laser-induced choroidal neovascularization. Mehrdad Khajavi¹, H. Fu¹, S. Krishnaji¹, L. Bazinet¹, A. Birchner¹, A. Schiffer¹, R. Zhou¹, R. J. D'Amato^{1,2}. ¹Vascular Biology Program, Boston Children's Hospital, Boston, MA; ²Ophthalmology, Harvard Medical School, Boston, MA

1422 — B0341 Safety of the Subretinal Delivery of RGX-314 AAV8-anti-VEGF Fab Gene Therapy in NHP: Retinal Structure Over One Year. Michael J. Ammar¹, E. J. Zhou², J. I. Morgan¹, K. E. Uyhazi¹, A. Lyubarsky¹, E. Wielechowski³, G. Ying⁴, E. Bote³, L. Makaron³, S. Yoo⁵, J. Wilson³, J. Bennett¹, A. M. Maguire¹, A. Tretiakova⁶, T. S. Aleman¹. ¹Center for Advanced Retinal and Ocular Therapeutics, Scheie Eye Institute, University of Pennsylvania, Philadelphia, PA; ²Perelman School of Medicine, University of Pennsylvania, Philadelphia, PA; ³Gene Therapy Program, Department of Medicine, University of Pennsylvania, Philadelphia, PA; ⁴Center for Preventative Ophthalmology and Biostatistics, University of Pennsylvania, Philadelphia, PA; ⁵REGENXBIO, Rockville, MD; ⁶Pfizer, Inc, RDRU, Cambridge, MA *CR

1423 — B0342 Association of a Variant in VWA3A with Response to Anti-VEGF Treatment in Neovascular Age-Related Macular Degeneration. Michelle Grunin¹, G. Beykin¹, E. Rahmani², R. Schweiger², G. Baref², S. Levi¹, S. Hayoun¹, B. Rinsky¹, M. Ganiel¹, S. Carmi², E. Halperin^{4,5}, I. Chowers¹. ¹Department of Ophthalmology, Hadassah-Hebrew University Medical Center, Jerusalem, Israel; ²Molecular Microbiology and Biotechnology, Tel Aviv University, Tel Aviv, Israel; ³Braun School of Public Health and Community Medicine, Hebrew University of Jerusalem, Jerusalem, Israel; ⁴Department of Computer Science, University of California, Los Angeles, Los Angeles, CA; ⁵Department of Anesthesiology, University of California, Los Angeles, Los Angeles, CA

1424 — B0343 The association of age-related maculopathy susceptibility 2 gene polymorphisms with the 12 months outcomes of combination therapy with intravitreal aflibercept and verteporfin photodynamic therapy for polypoidal choroidal vasculopathy. Shunichiro Nakai, S. Honda, W. Matsumiya, A. Miki, M. Nakamura. Kobe University Graduate School of Medicine, Kobe, Japan

1425 — B0344 Common Variants in KLHL2 and C4orf50 Are Associated with Poorer Anti-VEGF Treatment Response in Age-Related Macular Degeneration. Omar García Rodríguez¹, S. Pan¹, P. Patrice¹, L. D. Adams¹, J. Welch¹, R. Laux², J. Fortun³, M. A. Brantley⁴, J. Kovach³, S. G. Schwartz², A. Agarwal⁵, J. Haines², M. A. Pericak-Vance¹, W. Scott¹. ¹Hussman Institute, University of Miami, Miami, FL; ²Population & Quantitative Health Science, Case Western Reserve University, Cleveland, OH; ³Bascom Palmer Eye Institute, University of Miami, Miami, FL; ⁴Ophthalmology & Visual Sciences, Vanderbilt University Medical Center, Nashville, TN; ⁵West Coast Retina, West Coast Retina, San Francisco, CA *CR

1426 — B0345 Genome-wide association study for response to ranibizumab therapy in 919 individuals with age-related macular degeneration. Masato Akiyama^{1,2}, A. Takahashi^{1,3}, Y. Momozawa⁷, S. Arakawa^{2,4}, F. Miya^{5,6}, Y. Oshima^{2,8}, M. Yasuda², S. Yoshida², Y. Yanagi^{9,10}, K. Tanaka¹⁴, Y. Ogura¹¹, K. Takahashi¹³, K. Fujisawa⁴, K. Kadonosono¹², T. Ishibashi², K. Sonoda². ¹Laboratory for Statistical Analysis, RIKEN, Center for Integrative Medical Sciences, Yokohama, Kanagawa, Japan; ²Department of Ophthalmology, Kyushu University, Fukuoka, Fukuoka, Japan; ³Laboratory for Omics Informatics, Omics Research Center, National Cerebral and Cardiovascular Center, Osaka, Japan; ⁴Japan Community Health care Organization, Kyushu Hospital, Kitakyushu, Japan; ⁵Laboratory for Medical Science Mathematics, RIKEN Center for Integrative Medical Science, Yokohama, Japan; ⁶Department of Medical Science Mathematics, Medical Research Institute, Tokyo Medical and Dental University, Tokyo, Japan; ⁷Laboratory for Genotyping Development, RIKEN Center for Integrative Medical Science, Yokohama, Japan; ⁸Department of Ophthalmology, Fukuoka University Chikushi Hospital, Fukuoka, Japan; ⁹Department of Ophthalmology, University of Tokyo School of Medicine, Tokyo, Japan; ¹⁰Medical Retina Department, Singapore National Eye Center, Singapore, Japan; ¹¹Department of Ophthalmology and Visual Science, Nagoya City University Graduate School of Medical Sciences, Nagoya, Japan; ¹²Department of Ophthalmology & Micro-technology, Yokohama City University Graduate School of Medicine, Yokohama, Japan; ¹³Department of Ophthalmology, Kansai Medical University, Osaka, Japan; ¹⁴Division of Ophthalmology, Department of Visual Sciences, Nihon University School of Medicine, Tokyo, Japan

1427 — B0346 Different gender risk distribution of CRP and A69S frequencies in wet-AMD Spanish patients. Maria Hernandez^{1,3}, S. Recalde^{1,3}, J. Zarranz-Ventura², B. Molins², M. Moreno^{1,3}, J. Bezunartea^{1,3}, A. Adán², P. Fernandez^{1,3}, A. García-Layana^{1,3}. ¹Laboratory of Experimental Ophthalmology, Clinica Universidad de Navarra, Pamplona, Spain; ²Ophthalmology, Hospital Clinic, Barcelona, Cataluña, Spain; ³Navarra Institute for Health Research, IdiSNA, Pamplona, Navarra, Spain

1428 — B0347 Optimizing case-control classification for age-related macular degeneration in the VA electronic health record using a multi-algorithm data cube approach. Sudha K. Iyengar^{1,2}, C. W. Halladay³, T. Hadi⁴, M. D. Anger^{5,6}, X. Nguyen⁷, R. P. Igo^{8,2}, P. B. Greenberg^{9,10}, D. Crawford^{8,2}, J. M. Sullivan^{5,6}, S. Damrauer^{11,12}, W. Wu^{13,14}, N. Peachey^{2,16}, E. Konicki^{2,15}. ¹Population and Quantitative Health Sciences, Genetics and Genome Sciences, Ophthalmology and Visual Sciences, Case Western Reserve University, Cleveland, OH; ²Louis Stokes Cleveland VA Medical Center, Cleveland, OH; ³Center for Innovation in Long-term Services and Supports, Providence VA Medical Center, Providence, RI; ⁴Ophthalmology and Visual Sciences, University Hospitals Eye Institute, Case Western Reserve University, Cleveland, OH; ⁵Research Service, VA Western NY Healthcare System, Buffalo, NY; ⁶Ophthalmology, SUNY-University at Buffalo, Buffalo, NY; ⁷VA Boston Healthcare System, Boston, MA; ⁸Population and Quantitative Health Sciences, Case Western Reserve University, Cleveland, OH; ⁹Section of Ophthalmology, Providence VA Medical Center, Providence, RI; ¹⁰Division of Ophthalmology, Alpert Medical School, Brown University, Providence, RI; ¹¹Division of Vascular and Endovascular Surgery, University of Pennsylvania, Philadelphia, PA; ¹²Surgery, Corporal Michael Crescenz VA Medical Center, Philadelphia, PA; ¹³Section of Cardiology, Medical Service, Providence VA Medical Center, Providence, RI; ¹⁴Division of Cardiology, Alpert Medical School, Brown University, Providence, RI; ¹⁵Psychiatry, Case Western Reserve University, Cleveland, OH; ¹⁶Cole Eye Institute and Dept. of Ophthalmology, Lerner College of Medicine, Cleveland Clinic, Cleveland, OH

1429 — B0348 A family with a spectrum of Miyake's disease possibly caused by a novel RP1L1 mutation (S1207F). Shuhei Kameya¹, K. Gocho¹, S. Kikuchi¹, K. Akeo¹, D. Kubota¹, Y. Tane², K. Shinoda³, A. Mizota², K. Fujinami⁴, T. Iwata⁴, K. Yoshitake⁴, K. Tsunoda⁴, T. Igarashi⁵, H. Takahashi⁵. ¹Ophthalmology, Chiba Hokusoh Hosp Nippon Med Sch, Inba, CHIBA, Japan; ²Ophthalmology, Teikyo University, Itabashi-ku, Japan; ³Ophthalmology, Saitama Medical University, Moroyama, Japan; ⁴National Institute of Sensory Organ, Meguro-ku, Japan; ⁵Ophthalmology, Nippon Medical School, Bunkyo-ku, Japan *CR

1430 — B0349 Multimodal imaging of East Asian Patients with Occult Macular Dystrophy (Miyake's disease): EAOMD Report No. 3. Kwangsic Joo¹, L. Yang², K. Tsunoda³, M. Kondo⁴, Y. Fujinami⁵, G. Arno³, T. Kurihara⁵, K. Tsubota⁵, T. Iwata⁶, X. Zou², H. Li², Y. Miyake⁶, K. Park¹, K. Fujinami⁵, R. Su⁷, S. Woo¹. ¹Ophthalmology, Seoul National University Bundang Hospital, Seongnam, Korea (the Republic of); ²Ophthalmology, Peking Union Medical College Hospital, Peking Union Medical College and Chinese Academy of Medical Sciences, Beijing, China; ³Laboratory of Visual Physiology, Division of Vision Research, National Institute of Sensory Organs, National Hospital Organization, Tokyo Medical Center, Tokyo, Japan; ⁴Mie University Graduate School of Medicine, Mie, Japan; ⁵Ophthalmology, Keio University School of Medicine, Tokyo, Japan; ⁶Division of Molecular and Cellular Biology, National Institute of Sensory Organs, National Hospital Organization Tokyo Medical Center, Tokyo, Japan

1431 — B0350 Clinical and Genetic Characteristics of East Asian Patients with Occult Macular Dystrophy (Miyake's disease); EAOMD Report No.1. Kaoru Fujinami^{1,2}, L. Yang^{1,3}, K. Joo¹, K. Tsunoda¹, Y. Kawamura⁴, Y. Fujinami^{1,5}, G. Arno^{1,2}, T. Kurihara³, K. Tsubota³, X. Zou⁶, H. Li⁶, K. Park⁷, T. Iwata⁴, Y. Miyake^{8,1}, S. Woo⁷, R. Sui⁶. ¹Laboratory of Visual Physiology, Division of Vision Research, National Institute of Sensory Organs, National Hospital Organization, Tokyo Medical Center, Meguro-ku, Tokyo, Japan; ²Genetics, UCL Institute of Ophthalmology, London, United Kingdom; ³Department of Ophthalmology, Keio University School of Medicine, Meguro-ku, Tokyo, Japan; ⁴Division of Molecular and Cellular Biology, National Institute of Sensory Organs, National Hospital Organization Tokyo Medical Center, Meguro-ku, Japan; ⁵Department of Public Health Research, Yokokawa clinic, Suita, Osaka, Japan; ⁶Department of Ophthalmology, Peking Union Medical College Hospital, Peking Union Medical College and Chinese Academy of Medical Sciences, Beijing, China; ⁷Department of Ophthalmology, Seoul National University Bundang Hospital, Seoul National University College of Medicine, Seongnam, Korea (the Democratic People's Republic of); ⁸Aichi Medical University, Nagakute, Japan *CR

1432 — B0351 Genotype Phenotype Association in East Asian Patients with Occult Macular Dystrophy (Miyake's disease); EAOMD Report No.4. Yu Fujinami^{1,2}, L. Yang^{1,3}, K. Joo⁴, K. Tsunoda¹⁰, M. Kondo⁵, G. Arno^{1,6}, X. LIU⁷, K. Tsubota⁸, T. Iwata⁸, X. Zou⁸, H. Li⁹, K. Park¹, Y. Miyake¹¹, S. Woo⁴, R. Sui⁹, K. Fujinami^{1,6}.
¹Laboratory of Visual Physiology, Division of Vision Research, National Institute of Sensory Organs, National Hospital Organization, Tokyo Medical Center, Meguro-ku, Tokyo, Japan; ²Department of Public Health Research, Yokokawa clinic, Suita, Osaka, Japan; ³Department of Ophthalmology, Keio University School of Medicine, Shinjyuku-ku, Tokyo, Japan; ⁴Department of Ophthalmology, Seoul National University Bundang Hospital, Seoul National University College of Medicine, Seongnam, Korea (the Republic of); ⁵Ophthalmology, Mie University Graduate School of Medicine, Tsu, Mie, Japan; ⁶UCL Institute of Ophthalmology, London, United Kingdom; ⁷Third Military Medical University, Southwest Hospital, Chongqing, China; ⁸Division of Molecular and Cellular Biology, National Institute of Sensory Organs, Tokyo, Japan; ⁹Peking Union Medical College Hospital, Peking Union Medical College and Chinese Academy of Medical Sciences, Beijing, China; ¹⁰Division of Vision Research, National Institute of Sensory Organs, National Hospital Organization, Tokyo Medical Center, Meguro-ku, Tokyo, Japan; ¹¹Aichi Medical University, Nagakute, Aichi, Japan *CR

1433 — B0352 The journey from clinical to genetic diagnosis in Stargardt disease. Dana Schlegel, K. E. Branham, J. R. Heckenlively, A. T. Fahim, T. Jayaundera. *Retinal Dystrophy, Kellogg Eye Center, Ann Arbor, MI*

1434 — B0353 Mutations in JAG1 Gene May Lead to Familial Exudative Vitreoretinopathy. Lin Zhang, S. Zhang, X. Zhu, Z. Yang. *Key Laboratory for Human Disease Gene Study, Sichuan Academy of Medical Sciences and Sichuan Provincial People's Hospital, School of Medicine, University of Electronic Science and Technology of China, Chengdu, Sichuan, China*

1435 — B0354 Association of Irregular Pigment Epithelial Detachment in Central Serous Chorioretinopathy with Genetic Variants Implicated in Age-related Macular Degeneration. Soo Chang Cho, N. Ryoo, K. Park. *Ophthalmology, Seoul National University Bundang Hospital, Seongnam, Gyeonggi-do, Korea (the Democratic People's Republic of)*

1436 — B0355 Aberrant expression of Long Intergenic Non-coding RNAs in the whole blood of patients with Proliferative Diabetic Retinopathy. Jacey Ma¹, Z. Cui², B. Li³, Y. Shi⁴, H. Xu³, J. Chen¹, S. Tang¹. ¹Aier School of Ophthalmology, Central South University, Guangzhou, China; ²Key Laboratory for Regenerative Medicine, Ministry of Education, Jinan University, Guangzhou, China; ³Centre for Experimental Medicine, Queen's University Belfast, Belfast, United Kingdom; ⁴Nanjing First Hospital, Nanjing Medical University, Nanjing, China; ⁵Tongji Medical College, Huazhong University of Science and Technology, Wuhan, China

1437 — B0356 Genetic characterisation of North Carolina Macular Dystrophy in a predominantly Non-Caucasian population. Andrea L. Vincent^{1,2}, L. Hou¹, F. Shaya³, M. J. Leys⁴, K. W. Small⁵. ¹Ophthalmology, New Zealand National Eye Centre, University of Auckland, Auckland, New Zealand; ²Eye Department, Greenlane Clinical Centre, Auckland District Health Board, Auckland, New Zealand; ³Macula and Retina Institute/ Molecular Insight Research Foundation, Los Angeles, CA; ⁴Eye Institute, University of West Virginia, Morgantown, WV

1438 — B0357 Isolated population helps tease out a third locus underlying a multigenic form of canine RPGRIP1 cone-rod dystrophy. Keiko Miyadera¹, L. Murgiano¹, C. Spector¹, F. P. Marinho¹, V. Dufour¹, R. G. Das¹, M. Brooks², A. Swaroop², G. D. Aguirre¹. ¹Clinical Sciences & Advanced Medicine, Univ of Pennsylvania, School of Vet Medicine, Philadelphia, PA; ²National Eye Institute, National Institutes of Health, Bethesda, MD

Exhibit Hall C0001-C0037

Monday, April 30, 2018 8:15 AM-10:00 AM

Retina

221 AMD and Anti-VEGF II

Moderators: Karl G. Csaky and Eric H. Souied

1439 — C0001 Topical treatment for AMD: Non-invasive delivery and efficacy of ranibizumab and bevacizumab in rabbit and porcine eyes. Felicity De Cogan¹, A. Lynch¹, M. Berwick³, A. Peacock², S. Elsherbiny⁴, H. Xu⁵, M. Chen⁵. ¹Microbiology and Infection, University of Birmingham, Birmingham, United Kingdom; ²University of Birmingham, Birmingham, United Kingdom; ³University Hospital Coventry, Coventry, United Kingdom; ⁴Warwick Hospital, Warwick, United Kingdom; ⁵Queens University Belfast, Belfast, United Kingdom *CR

1440 — C0002 A compact off-axis full-field time-domain OCT device for home-care applications. Peter Koch¹, H. Sudkamp¹, M. Muenst¹, M. vomEndt¹, D. Theissen-Kunde¹, R. Birngruber¹, C. Burchard², J. Roeder², G. Hüttmann¹. ¹Medizinisches Laserzentrum Lübeck GmbH, Luebeck, Germany; ²Universitätsklinikum Schleswig-Holstein, Kiel, Germany *CR

1441 — C0003 Compounding and storage of aflibercept in prefilled syringes does not affect protein structure or VEGF binding activity. Magne Sivertsen¹, Ø. K. Jørstad¹, A. Grevys², S. Foss², J. Andersen², M. C. Moe¹. ¹Department of Ophthalmology, Oslo University Hospital, University of Oslo, Oslo, Oslo, Norway; ²Centre for Immune Regulation and Department of Immunology, Oslo University Hospital, University of Oslo, Oslo, Oslo, Norway *CR

1442 — C0004 Sustained anti-VEGF activity of aflibercept (Eylea™) after storage in polycarbonate syringes used for intravitreal injection: a pathway to safety and efficiency in high volume clinics providing intravitreal therapy. Dennis P. Han, C. Skumatz, J. C. Besharse, I. S. Kassem. *Ophthalmology, Medical College of Wisconsin, Milwaukee, WI *CR*

1443 — C0005 Noninfectious Inflammation after Intravitreal Aflibercept (EYLEA®) Injection for Patient with Exudative Age-related Macular Degeneration. Younghoon Lee, B. Ko. *ophthalmology, Konyang university hospital, Daejeon, Korea (the Republic of)*

1444 — C0006 Macular capillary plexuses during anti-vascular endothelial growth factor therapy for neovascular age-related macular degeneration. Taiichi Hikichi¹, M. Agarie². ¹Hikichi Eye Clinic, Sapporo, Hokkaido, Japan; ²Carl Zeiss Meditec Co., Ltd., Tokyo, Japan *CR

1445 — C0007 Retinal oxygen saturation, vessel diameter and flicker response in eyes with different subtypes of neovascular age-related macular degeneration during aflibercept treatment. Alexandra-Stephanie Weinhandl^{1,3}, K. Eibenberger^{1,3}, S. Rezar^{1,3}, D. Schmid², W. Buehl¹, G. Garhofer², U. Schmidt-Erfurth¹, S. Sacu^{1,3}. ¹Department of Ophthalmology, Medical University of Vienna, Vienna, Vienna, Austria; ²Department of Clinical Pharmacology, Medical University of Vienna, Vienna, Austria; ³Vienna Clinical Trial Center, Medical University of Vienna, Vienna, Austria *CR, ✗

1446 — C0008 Association between number of injections during long-term anti VEGF therapy and retinal electrophysiological parameters. Angharad E. Hobby^{1,2}, B. Huntjens¹, O. A. Mahroo^{2,3}, D. P. Crabb¹, A. M. Binns¹. ¹Division of Optometry and Visual Sciences, School of Health Sciences, City, University of London, London, United Kingdom; ²Department of Ophthalmology, St Thomas' Hospital, London, United Kingdom; ³Moorfields Eye Hospital and the UCL Institute of Ophthalmology, London, United Kingdom *CR

1447 — C0009 Afibercept in combination with nesvacumab (anti-Ang2) induces vascular remodeling in a rabbit model of pathological neovascularization.. Bibiana Iglesias, T. MacPherson, J. Cao, C. Romano. *Ophthalmology, Regeneron, Tarrytown, NY* *CR

1448 — C0010 Subanalysis of data from rAAV.sFLT-1 phase 1 and 2a randomized gene therapy trials for wet age-related macular degeneration. Elizabeth Rakoczy^{1,2}, A. Magnò², C. Lai¹, M. Degli-Esposti¹, I. Constable¹. ¹Centre of Ophthalmology and Visual Science, The University of Western Australia, Nedlands, Western Australia, Australia; ²Molecular Ophthalmology, Lions Eye Institute, Nedlands, Western Australia, Australia *CR, ✗

1449 — C0011 Efficacy and Safety of AAV2.Flt23k Intrareceptor Compared to AAV2.sFlt01. Xiaohui Zhang, H. Uehara, L. Carroll, B. Archer, B. K. Ambati. *University of Utah, moran eye center, Salt lake city, UT*

1450 — C0012 Intravitreal anti-vascular endothelial growth factor treatment for pachychoroid neovascularopathy. Han Joo Cho, S. Cho, S. Jung, C. Kim, D. Lee, J. Kim. *Department of Ophthalmology, Kim's Eye Hospital, Konyang University College of Medicine, Seoul, Korea (the Republic of)*

1451 — C0013 The Effect of alcohol after intravitreal anti-VEGF treatment in AMD - in a cellular level. Soyeon Jung, H. Chin. *Ophthalmology and Inha Vision Science Laboratory, Inha University School of Medicine, Incheon, Korea (the Republic of)*

1452 — C0014 Evaluation of Afibercept and Ziv-Afibercept Binding Affinity to Vascular Endothelial Growth Factor, Stability, and Sterility after Compounding. Julia L. Farah¹, R. Y. Sano¹, I. L. Maugéri², D. Teixeira², M. E. Ishimura², G. Martins², L. Mimiça³, C. Silva³, C. Meyer², J. R. Dias², G. C. Andrade², M. E. Farah². ¹Ophthalmology, Santa Casa de Sao Paulo, Sao Paulo, Sao Paulo, Brazil; ²Paulista School of Medicine, Federal University of Sao Paulo, Sao Paulo, Brazil; ³Santa Casa de Sao Paulo, Sao Paulo, Brazil

1453 — C0015 Surgical and Nonsurgical Management and Outcomes of Submacular Hemorrhage Secondary to Neovascular Age-Related Macular Degeneration. Zubair Ansari, H. W. Flynn. *Ophthalmology, University of Miami Bascom Palmer Eye Institute, Miami, FL*

1454 — C0016 Effect of Cilioretinal Artery Hemodynamics on Macular Atrophy in Age-Related Macular Degeneration. Adel Ebraheem¹, P. Le¹, S. Pitetta², N. S. Abdelfattah¹, S. R. Satta², C. C. Wykoff^{3,4}. ¹Ophthalmology, University of California- Los Angeles/Doheny Eye Institute, Forest Grove, OR; ²Doheny Eye Institute, Los Angeles, CA; ³Retina Consultants of Houston, Houston, Texas, Houston, TN; ⁴Blanton Eye Institute, Houston Methodist Hospital & Weill Cornell Medical College, Houston, TX *CR, ✗

1455 — C0017 Predictability of the 12-week dosing status at Week 48 for patients receiving brolicizumab in HAWK and HARRIER. Pravin U. Dugel¹, G. E. Lang², S. Razavi³, A. Weichselberger⁶, Y. Ogura³, D. M. Brown⁴. ¹Retinal Consultants of AZ, Ltd, Phoenix, AZ; ²Ulm University, Ulm, Baden, Germany; ³Nagoya City University Graduate School of Medical Sciences, Nagoya, Japan; ⁴Retina Consultants of Houston, Houston, TX; ⁵Clinique Saint Gatien, Tours, France; ⁶Novartis AG, Basel, Switzerland *CR, ✗

1456 — C0018 Analysis of the serum and aqueous humor levels of IL-6 in patients with neovascular (wet) age-related macular degeneration (nAMD) receiving anti-vascular endothelial growth factor A monotherapy. Eric Wakshull, K. Hong, B. Day, M. Bao, H. Lin, I. Stoilov. *Genentech, Inc, South San Francisco, CA* *CR, ✗

1457 — C0019 TLR4-MAP4K4 Signaling Pathway in Retinal Vascular Endothelial Cells. Wenwen Chen, Q. Chang, F. Hu, J. Zhang, P. Zhang, T. Jiang. *Eye and ENT hospital of Fudan University, Galveston, TX*

1458 — C0020 Nanodelivery of Doxorubicin for Age-Related Macular Degeneration. Shannon J. Kelly, K. Halasz, V. Sutariya. *Pharmaceutical Sciences, University of South Florida, Tampa, FL*

1459 — C0021 Allergic reaction to intravitreal injection of aflibercept, an anti-vascular endothelial growth factor drug. Ryuzaburo Kawakami, R. Inoue, H. Bando, T. Ikeda, K. EMI. *Ophthalmology, Osaka Rosai Hospital, Sakai, Osaka, Japan*

1460 — C0022 Characteristics and factors associated with ocular pain after intravitreal and periocular injections. Timothy Boyce, A. Igelman, C. J. Flaxel. *Ophthalmology, Casey Eye Institute, Portland, OR*

1461 — C0023 Tolerating Subretinal Fluid in the Treatment of Neovascular Age-Related Macular Degeneration With Ranibizumab Using a Treat and Extend Regimen. Jennifer Arnold¹, C. Markey², I. McAllister³, M. C. Gillies⁴, A. Hunyor⁵, R. H. Guymer⁶. ¹Marsden Eye Specialists, Sydney, New South Wales, Australia; ²Markey Medical Consulting, Sydney, New South Wales, Australia; ³Centre for Ophthalmology and Visual Science, Lions Eye Institute, The University of Western Australia, Perth, Western Australia, Australia; ⁴Macular Research Group, Save Sight Institute, The University of Sydney, Sydney Eye Hospital, Sydney, New South Wales, Australia; ⁵Retina Associates, Chatswood; Save Sight Institute, The University of Sydney, Sydney Eye Hospital, Sydney, New South Wales, Australia; ⁶Centre for Eye Research Australia, Royal Victorian Eye and Ear Hospital and Ophthalmology, University of Melbourne, Melbourne, Victoria, Australia *CR, ✗

1462 — C0024 Effect of aflibercept and ranibizumab on reactive oxygen species (ROS) production in wet AMD cybrid cells. Jaime Toledo Corral, M. Mohamed, M. Chwa, S. Atilano, C. M. Kenney, B. D. Kuppermann. *Ophthalmology, University of California, Irvine, Irvine, CA* *CR

1463 — C0025 Trainee-led vs. specialist-led management of neovascular age-related macular degeneration. Rohan W. Essex^{1,2}, V. Nguyen³, V. Daien⁴, S. Steinmann⁵, R. Walton³, M. C. Gillies³, D. Barthelmes^{5,3}. ¹Academic Unit of Ophthalmology, Australian National University, Hughes, Australian Capital Territory, Australia; ²Royal Victorian Eye and Ear Hospital, Melbourne, Victoria, Australia; ³The Save Sight Institute, The University of Sydney, Sydney, New South Wales, Australia; ⁴Department of Ophthalmology, Gui De Chauliac Hospital, Montpellier, France; ⁵Department of Ophthalmology, University Hospital Zurich, University of Zurich, Zurich, Switzerland *CR

1464 — C0026 Comparative assessment of anatomical outcomes for nAMD patients treated with brolicizumab and aflibercept: 16-week data from the HAWK and HARRIER studies. Rishi P. Singh¹, A. Weichselberger², P. U. Dugel³. ¹Ophthalmology i-32, Cole Eye Institute, Cleveland, OH; ²Novartis Pharma AG, Basel, Switzerland; ³Retinal Consultants of Arizona LTD, Retinal Research Institute LLC, Phoenix, AZ *CR, ✗

1465 — C0027 Cytoprotective effect of ALG-1001 peptide (Luminate) on human retinal pigment epithelial cells exposed to oxidative injury. A novel functional-outcome for an anti-VEGF agent. Marco A. Beltran, R. Zamora-Alvarado, R. Gonzalez-Salinas, R. Guliás-Cañizo, H. Quiroz-Mercado, L. Hernandez, H. Karageozian, V. H. Karageozian, J. Y. Park, L. Ochoa-de la Paz. *research department, Asociación Para Evitar la Ceguera, Mexico, Mexico* *CR

1466 — C0028 Aflibercept treatment leads to Vascular abnormalization of the choroidal neovascularization.. Adam Wylegala, F. Wylegala, E. Wylegala. *Ophthalmology, Railway Hospital, Katowice, Katowice, Poland*

1467 — C0029 Relative Quiescence of Exudative Maculopathy Following Resolution of Post-Injection Endophthalmitis. Justin J. Arnett¹, D. S. Gallagher^{2,1}, J. Martel^{2,1}. ¹Ophthalmology, University of Pittsburgh School of Medicine, Pittsburgh, PA; ²Ophthalmology, University of Pittsburgh Medical Center, Pittsburgh, PA

1468 — C0030 Recurrence of Choroidal Neovascularization after cataract operation in Age Related Macular Degeneration. Robin D. Hamilton^{1,2}, A. Tasiopoulou¹, A. Mapani¹, P. Vasilopoulos¹, G. Preston¹. ¹Medical Retina, Moorfields Eye Hospital, London, United Kingdom; ²NIHR Biomedical Research Centre at Moorfields Eye Hospital, London, United Kingdom *CR

- 1469 — C0031 Mortality of patients under anti-VEGF therapy at a large tertiary ophthalmic hospital.** Gabriella C. Preston¹, N. Pontikos¹, F. Afshar¹, R. Chopra¹, S. K. Wagner^{1,2}, K. Fasler¹, K. U. Kortuem^{1,3}, T. Ramakrishnan¹, A. Tufail¹, K. Balaskas^{1,4}, P. Patel¹, P. A. Keane¹. ¹NIHR Biomedical Research Centre at Moorfields Eye Hospital NHS Foundation Trust and UCL Institute of Ophthalmology, London, United Kingdom; ²Institute of Ophthalmology, University College London, London, United Kingdom; ³University Eye Hospital Munich, Germany, Munich, Germany; ⁴University of Manchester, Manchester, United Kingdom *CR
- 1470 — C0032 Assessment of the outflow drainage system in AMD after multiple anti-VEGF intravitreal injections.** Pedro C. Carricondo¹, L. C. Zacharias¹, T. Rodrigues¹, L. Y. Yagaeshi¹, S. G. Pimentel¹, M. Abalem^{1,2}, C. De Moraes^{1,3}, R. Susanna¹. ¹Ophthalmology Department, Hospital das Clinicas HCFMUSP, Faculdade de Medicina, Universidade de Sao Paulo, Sao Paulo, SP, BR, Sao Paulo, Sao Paulo, Brazil; ²Ophthalmology and Vision Sciences, University of Michigan, Ann Arbor, MI; ³Ophthalmology and Vision Science, Columbia University, New York, NY *CR
- 1471 — C0033 Five-year visual acuity outcomes after treatment for neovascular age-related macular degeneration at a large tertiary ophthalmic hospital.** Thushanthi Ramakrishnan, K. Fasler, R. Chopra, K. U. Kortuem, N. Pontikos, S. K. Wagner, L. Raja, H. Al Janabi, F. Afshar, G. C. Preston, K. Balaskas, P. Patel, A. Tufail, P. Keane. Moorfields Eye Hospital, London, London, United Kingdom *CR
- 1472 — C0034 Multivalent Conjugates Using Hyaluronic Acid for Sustained Anti-VEGF Therapy.** Wesley Jackson¹, L. W. Brier¹, M. Mahomed¹, R. Lamy², M. F. Chan². ¹Research and Development, Valitor, Inc., Berkeley, CA; ²Ophthalmology, UC San Francisco, San Francisco, CA *CR
- 1473 — C0035 Utilization of Apatinib-Loaded Nanoparticles for the Treatment of Ocular Neovascularization.** Kathleen Halasz. University of South Florida, Tampa, FL *CR
- 1474 — C0036 Does Anti-VEGF Treatment for AMD Lower the Risk of Neovascularization in the Fellow Eye? A Meta-analysis.** Robert L. Avery, G. M. Gordon. California Retina Consultants, Santa Barbara, CA *CR
- 1475 — C0037 A Randomized, Double Masked, Prospective Clinical Trial To Evaluate Pain and Inflammation after Intravitreal Injection of Aflibercept or Ranibizumab in Patients with Diabetic Macular Edema: The SOLAR Study.** Arshad Khanani¹, G. L. Cohen¹, G. M. Gahn², L. Hill³, A. Aziz⁴, M. Koci², P. D. Freeman¹, S. A. Taylor⁵. ¹Sierra Eye Associates, Reno, NV; ²University of Nevada, School of Medicine, Reno, NV; ³Independent Statistical Consultant, Denver, CO; ⁴University of Nevada, Reno, NV; ⁵University of Massachusetts, Boston, MA *CR, ✗
- Exhibit Hall C0218-C0242
Monday, April 30, 2018 8:15 AM-10:00 AM
Retinal Cell Biology
222 Retinal glia: cell biology
- Moderator: Celso H. Alves**
- 1476 — C0218 Characterization of a spontaneously immortalized murine Müller glial cell line QMMuC-1.** Sofia Pavlou, J. Augustine, M. O'Hare, K. Harkin, A. W. Stitt, T. Curtis, H. Xu, M. Chen. Queen's University Belfast, Belfast, United Kingdom
- 1477 — C0219 Comparison of Serine metabolism in Müller Cells from the Macula and Peripheral Retina.** Ting Zhang^{1,2}, L. Zhu¹, M. C. Madigan^{3,4}, W. Shen¹, B. Bahrami¹, J. Du⁴, M. C. Gillies¹. ¹Save Sight Institute, The University of Sydney, Sydney, New South Wales, Australia; ²I. State Key Laboratory of Biotherapy and Cancer Center, Sichuan University, Chengdu, Sichuan, China; ³S. School of Optometry and Vision Sciences, University of New South Wales, Sydney, New South Wales, Australia; ⁴Health Sciences Center, West Virginia University, Morgantown, WV
- 1478 — C0220 Exploring Müller cell-cone interactions in human fovea using 3-dimensional volume electron microscopy (EM).** Ramya R. Singireddy¹, K. R. Sloan¹, J. W. Lichtman³, C. A. Curcio¹, D. M. Dacey². ¹Department of Ophthalmology, University of Alabama at Birmingham, Birmingham, AL; ²Department of Biological Structure, University of Washington, Seattle, WA; ³Department of Molecular and Cellular Biology, Harvard University, Cambridge, MA *CR
- 1479 — C0221 Development of a novel biomarker panel to monitor gliosis in Müller cells.** Vijay P. Sarthy, V. Dudley, C. Haldin. Ophthalmology Med Sch, Northwestern University, Chicago, IL
- 1480 — C0222 Müller cell survival and function is maintained by the presence of lactate.** Rupali Vohra¹, D. M. Skyt¹, B. I. Aldana¹, K. Freude³, H. Waagepetersen¹, L. H. Bergersen^{1,5}, M. Kolko^{1,2}. ¹Department of Drug Design and Pharmacology, University of Copenhagen, Copenhagen Ø, Denmark; ²Department of Ophthalmology, Copenhagen University Hospital Rigshospitalet, Glostrup, Denmark; ³Institute of Clinical Veterinary and Animal Sciences, University of Copenhagen, Frederiksberg C, Denmark; ⁴Center of Healthy Aging, University of Copenhagen, Copenhagen N, Denmark; ⁵Institute of Oral Biology, University of Oslo, Oslo, Norway
- 1481 — C0223 Interleukin 33 stimulates Müller cell migration and proliferation.** Malia M. Edwards, R. Baldeosingh, M. Gedam, G. A. Luty. Wilmer Eye Institute, Johns Hopkins University, Baltimore, MD
- 1482 — C0224 Electrostimulation promotes Müller glial cell proliferation.** Sam Enayati^{1,2}, K. Cho¹, T. P. Utheim^{2,1}, D. F. Chen¹. ¹Department of Ophthalmology, Harvard medical school, Schepens Eye Research Institute, Boston, MA; ²Department of medical biochemistry, Oslo University hospital, Oslo, Norway
- 1483 — C0225 Tumor Necrosis Factor alpha stimulates Müller cell migration and proliferation.** Rajkumar Baldeosingh, M. Gedam, G. A. Luty, M. M. Edwards. Wilmer Eye Institute, Johns Hopkins University School of Medicine, Baltimore, MD
- 1484 — C0226 Nuclear Cyclic-AMP Signaling in Developing Astrocytes.** Evan G. Cameron, S. Shah, J. Galvao, M. Nahmou, M. Ashouri, M. Kapiloff, J. L. Goldberg. Stanford University, Palo Alto, CA
- 1485 — C0227 Genomic analyses of Müller glia identifies additional factors to improve Ascl1-mediated retinal regeneration in mice.** Nikolas Jorstad, M. Wilken, L. VandenBosch, T. A. Reh. Biological Structures, University of Washington, Seattle, WA
- 1486 — C0228 What happens when astrocytes talk to neurons? A proteomic PI3K interactome study.** Samih Alqawlaq^{1,2}, i. Livne-bar^{1,2}, D. Chan^{1,2}, J. M. Sivak^{1,2}. ¹Department of Vision Science, Krembil Research Institute, Toronto, Ontario, Canada; ²Vision Science Research Program, University of Toronto, Toronto, Ontario, Canada
- 1487 — C0229 Gene Expression Profile of Microglia at Sites of Laser-Induced Choroidal Neovascularization.** Anja Schlecht¹, P. Wieghofer^{2,3}, P. Zhang¹, M. Gruber¹, G. Schlunck¹, H. Agostini¹, M. Prinz², C. Lange¹. ¹Eye Center, University of Freiburg, Freiburg, Germany; ²Institute of Anatomy, University of Leipzig, Leipzig, Germany; ³Institute of Neuropathology, University of Freiburg, Freiburg, Germany

1488 — C0230 Effect of curcumin on retinal microglia in GFAP-IL6 mice. Victor Perez Fernandez, A. Liang, G. Muench, M. A. Cameron. Western Sydney University, Penrith, New South Wales, Australia *CR

1489 — C0231 Transcriptome Analysis of Zebrafish Microglia During Retinal Regeneration. Diana Mitchell, C. SUN, D. L. Stenkamp. Biological Sciences, University of Idaho, Moscow, ID

1490 — C0232 Replacement of retinal microglia with donor bone marrow-derived macrophages yields microglia-like cells. Dale S. Gregerson, N. D. Heuss, S. W. McPherson. Ophthalmology and Visual Neurosciences, University of Minnesota, Minneapolis, MN

1491 — C0233 The effect from β -chemokine to microglia and photoreceptor cells of mice in vitro. Qian Liu, H. Zeng. Beijing Ophthalmology & Visual Sciences Key Laboratory, Beijing Institute of Ophthalmology, Beijing, China

1492 — C0234 The consequences of selectively knocking down key metabolic genes in Müller cells of the mouse retina. Weiyong Shen¹, S. Lee¹, M. Yam¹, N. L. Barnett², A. Mathai¹, R. Zhang¹, L. Zhu¹, J. Hurley³, J. Du⁴, P. Seth⁵, Y. Hirabayashi⁶, S. Furuya⁷, M. C. Gillies¹. ¹Clin Ophthal & Eye Health, University of Sydney, Sydney, New South Wales, Australia; ²Queensland Eye Institute, Brisbane, Queensland, Australia; ³Dept. of Biochemistry and Ophthalmology, University of Washington, Seattle, WA; ⁴Dept. of Biochemistry and Ophthalmology, West Virginia University, Morgantown, WV; ⁵Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, MA; ⁶RIKEN Brain Science Institute, Wako, Japan; ⁷Laboratory of Metabolic Regulation Research, Kyushu University Bio-Architecture Center, Fukuoka, Japan

1493 — C0235 Retinal glial cell behaviour and survival on arrays of vertical nanowires. Vijayalakshmi Rajendran^{1,2}, M. Lard^{2,3}, B. Custódio^{1,3}, C. Prinz^{2,3}, M. Perez^{1,2}. ¹Department of Clinical sciences, Division of Ophthalmology, Lund university, Lund, skane, Sweden; ²NanoLund, Lund university, Lund, Skane, Sweden; ³Department of Physics, Division of Solid State Physics, Lund university, Lund, skane, Sweden

1494 — C0236 Isolation and propagation of Müller glia from human iPSC and ESC derived retinal organoids. Karen Eastlake, W. Wang, C. Ramsden, C. Murray-Dunning, P. T. Khaw, P. J. Coffey, G. Limb. National Institute for Health Research (NIHR) Biomedical Research Centre at Moorfields Eye Hospital NHS Foundation Trust and UCL Institute of Ophthalmology, University College London, London, ENGLAND, United Kingdom

1495 — C0237 Müller glia isolated from human iPSC/ESC derived retinal organoids produce neuroprotective antioxidants against oxidative stress. Weixin Wang, K. Eastlake, C. Murray-Dunning, E. Aquino, P. J. Coffey, G. Limb. NIHR Biomedical Research Centre for Ophthalmology, UCL Institute of Ophthalmology and Moorfields Eye Hospital, London, UK, London, ENGLAND, United Kingdom

1496 — C0238 Identification of extracellular vesicles released by Müller glial cells *in vitro*. William D. Lamb¹, K. Eastlake^{1,3}, P. T. Khaw^{1,2}, G. Limb^{1,3}. ¹UCL Institute of Ophthalmology, London, United Kingdom; ²Moorfields Eye Hospital, London, United Kingdom; ³NIHR Biomedical Research Centre for Ophthalmology, London, United Kingdom

1497 — C0239 Expression of Galectins 1 and 3 by Müller glia and their effect on cell proliferation. Joshua Luis, I. Sun, E. Aquino, K. Eastlake, A. Limb. Institute of Ophthalmology, UCL, London, London, United Kingdom

1498 — C0240 Primary Culture and Characterization of Porcine Retinal Microglial Cells. Rayne Lim¹, A. Ghosh², R. R. Mohan¹, S. S. Chaurasia¹. ¹Veterinary Medicine & Surgery, University of Missouri, Columbia, MO; ²Narayana Nethralaya Foundation, Bangalore, India

1499 — C0241 Pharmacological induced Heme Oxygenase-1in Müller cells has a potential protective role against angiogenesis and proliferation in endothelial cells under stress. Jiawen Fan, G. Xu, T. Jiang. Ophthalmology, Eye & ENT Hospital of Fudan University, Shanghai, China

1500 — C0242 Müller glial swelling activates TRPV4 and increases photoreceptor cell death in retinal detachment. Koji Shibasaki¹, S. Sugio¹, D. Krizaj², Y. Ishizaki¹, H. Matsumoto³. ¹Department of Molecular and Cellular Neurobiology, Gunma University Graduate School of Medicine, Maebashi, Japan; ²Moran Eye Institute, University of Utah School of Medicine, Salt Lake City, UT; ³Department of Ophthalmology, Gunma University Graduate School of Medicine, Maebashi, Japan

Exhibit Hall C0342-C0384

Monday, April 30, 2018 8:15 AM-10:00 AM

Retina / Retinal Cell Biology

223 Clinical Imaging Retina

Moderators: John A. Gonzales and Caroline R. Baumal

1501 — C0342 Comparison of retinal pathology visualization in multi-spectral scanning laser imaging. Amit Meshi¹, T. Lin^{1,2}, K. Dans¹, M. Amador^{1,3}, K. Chen¹, K. Hasenstab¹, I. Muftuoglu^{1,4}, E. Nudleman¹, D. Chao¹, D. G. Bartsch¹, W. R. Freeman¹. ¹Ophthalmology, UCSD, San Diego, CA; ²Ophthalmology, He University, Shenyang, China; ³Escuela Superior de O, Instituto Barraquer de America, Bogota, Colombia; ⁴Ophthalmology, Istanbul Training and Research Hospital, Istanbul, Turkey

1502 — C0343 Choroidal Nevus with Retinal Invasion in 8 Cases. Stephanie Weiss^{1,2}, C. Stathopoulos², C. L. Shields². ¹Drexel University College of Medicine, Richboro, PA; ²Wills Eye Hospital, Philadelphia, PA

1503 — C0344 A Standardized Toolkit to Compare Next-Generation Fundus Cameras. Ravi Pandit, C. J. Brady. Wilmer Eye Institute, Baltimore, MD

1504 — C0345 Diagnosis of pars plana retinoschisis using ultrasound biomicroscopy. Meira Neudorfer^{1,2}, A. Barak^{1,2}, A. Barzelay^{1,2}, A. Ieshno^{3,2}. ¹Department of Ophthalmology, Tel-Aviv Medical Center, Tel Aviv, Israel; ²Sackler Faculty of Medicine, Tel Aviv University, Tel Aviv, Israel; ³Department of Ophthalmology, Goldschleger Eye Institute, Sheba Medical Center, Tel Hashomer, Israel

1505 — C0346 Evidence Suggesting a Familial Trait in some Features of the Retinal Blood Vessel Arborization. Anne Bouthillier, L. Berthiaume, S. Lalla, O. Bedard, M. Gauvin, J. M. Little, P. Lachapelle. Departments of Ophthalmology and Neurology-Neurosurgery, Research Institute of the McGill University Health Centre-Montreal Children's Hospital, Montreal, Quebec, Canada

1506 — C0347 Visualizing melanosomes (M) in apical processes (AP) of human retinal pigment epithelium (RPE) using volumetric serial block-face scanning electron microscopy (SBFSEM). Andreas Pollreis¹, M. Neschi¹, K. R. Sloan², U. Schmidt-Erfurth¹, C. A. Curcio², D. M. Dacey³. ¹Ophthalmology, Medical University Vienna, Vienna, Austria; ²University of Alabama at Birmingham, Birmingham, AL; ³University of Washington, Seattle, WA *CR

- 1507 — C0348 Photodynamic therapy vs. bevacizumab for Retinal Angiomatous Proliferation treatment monitored with Optical Coherence Tomography Angiography.** Lisette Smid¹, K. A. Vermeer¹, V. Davidou^{1,2}, H. d. Jong¹, J. De boer², M. v. Velthoven³. ¹Rotterdam Ophthalmic Institute, Rotterdam, Netherlands; ²Institute for Lasers, Life and Biophotonics, Amsterdam, Netherlands; ³Rotterdam Eye Hospital, Rotterdam, Netherlands *CR
- 1508 — C0349 Effect of Fasting and Food Ingestion On Quality of Oral Fluorescein Angiography.** Manuel Amador, A. Meshi, T. Lin, K. C. Dans, K. Chen, W. R. Freeman. Ophthalmology, Shiley Eye Institute- UCSD (University of California San Diego), San Diego, CA
- 1509 — C0350 Choroidal structural analysis and choroidal vascularity index in normal Indian subjects – A study of 460 eyes.** Pukhraj Rishi¹, Z. Akhtar², R. Agrawal³, E. Rishi¹, A. Agarwal¹. ¹Shri BHagwan Mahavir Vitreoretinal Services, Sankara Nethralaya/Medical Research Foundation, Chennai, Tamilnadu, India; ²Elite School of Optometry, Sankara Nethralaya, Chennai, India, Chennai, Tamilnadu, India; ³Tan Tock Seng Hospital, Singapore, Singapore
- 1510 — C0351 Correlation between the light scattering of optical coherence tomography and the mitochondrial content of the neuroretinal lamellae on histology.** Jongshin Kim¹, Y. Ko¹, H. Hong¹, K. Park¹, D. McLeod², S. Woo¹. ¹Ophthalmology, Seoul National University Bundang Hospital, Seongnam-si, Gyeonggi-do, Korea (the Republic of); ²Ophthalmology, Manchester Royal Eye Hospital, Manchester, United Kingdom
- 1511 — C0352 Investigation of retinal capillary plexuses in normal eyes using optical coherence tomography angiography axial vessel density analysis.** Takao Hirano^{1,2}, K. Chanwimol^{1,3}, J. Weichsel⁴, T. C. Tepelus^{1,3}, S. R. Sadda^{1,3}. ¹Doheny Eye Institute, South Pasadena, CA; ²Department of Ophthalmology, Shinshu University School of Medicine, Matsumoto, Nagano, Japan; ³Department of Ophthalmology, David Geffen School of Medicine at UCLA, Los Angeles, CA; ⁴Heidelberg Engineering GmbH, Heidelberg, Germany *CR
- 1512 — C0353 Segmentation and characterization of intra-retina layer thickness in widefield SS-OCT: comparison of normal retina and diabetic retinopathy with/without macular edema.** Luis De Sisternes¹, H. Bagherinia¹, T. Perez¹, T. Callan¹, M. K. Durbin¹, S. S. Lee², J. J. Jung². ¹Carl Zeiss Meditec, Inc., Dublin, CA; ²East Bay Retina Consultants, Inc., Oakland, CA *CR
- 1513 — C0354 Relationship between Choroidal Structural Parameters and Photoreceptor Layer Area in Choroideremia.** Swetha Bindu Velaga¹, A. H. Hariri¹, M. G. Nittala¹, A. Girach², K. Vupparaboina³, J. Chhablani³, S. R. Sadda¹. ¹Ophthalmology, Doheny Eye Institute, Los Angeles, CA; ²NightstaRx Ltd, London, United Kingdom; ³L.V.Prasada Eye Institute, Hyderabad, India *CR
- 1514 — C0355 Fundus Autofluorescence in Congenital Aniridia.** Erlend C. Landsend^{1,2}, Ø. A. Utheim^{1,3}, H. Pedersen¹, R. C. Baraas¹, N. S. Lagali⁵, R. Bragadottir^{1,2}, M. C. Moe^{1,2}, T. P. Utheim^{1,3}. ¹Department of Ophthalmology, Oslo University Hospital, Oslo, Norway; ²Faculty of Medicine, University of Oslo, Oslo, Norway; ³Department of Medical Biochemistry, Oslo University Hospital, Oslo, Oslo, Norway; ⁴National Centre for Optics, Vision and Eye Care, Faculty of Health and Social Sciences, University College of Southeast Norway, Kongsberg, Buskerud, Norway; ⁵Department of Clinical and Experimental Medicine, Linköping University, Linköping, Linköping, Sweden
- 1515 — C0356 Analysis of choroidal neovascular membranes in white dot syndromes vs. age-related macular degeneration using optical coherence tomography angiography.** Arjun Sood, J. Wang, I. Lains, R. Silverman, L. K. Stanwyck, L. Sobrin, J. B. Miller. Ophthalmology, Massachusetts Eye and Ear Infirmary, Harvard Medical School, Boston, MA
- 1516 — C0357 Phenotypic heterogeneity of retinal degenerations caused by mutations in *CRX* examined by multimodal clinical imaging including adaptive optics retinal camera.** Katarina Stingl, L. Kuehlewein, M. Kempf, F. Sadler, F. Nasser, B. Wissinger, S. Kohl, N. Weisschuh, M. Ueffing, E. Zrenner. Center for Ophthalmology, Tübingen, Germany
- 1517 — C0358 Impact of Directional OCT Angiography on Retinal and Choriocapillaris Vessel Density Measurements.** Yue Shi^{1,2}, E. Borrelli^{1,2}, S. R. Sadda^{1,2}. ¹Doheny Eye Institute, UCLA, Los Angeles, CA; ²Department of Ophthalmology, David Geffen School of Medicine at UCLA, Los Angeles, CA *CR
- 1518 — C0359 Optical coherence tomography angiography and macular thinning in patients with uveitis.** Paula Pecen, A. G. Palestine, J. L. Patnaik. Ophthalmology, University of Colorado, Aurora, CO
- 1519 — C0360 High-resolution imaging analysis of foveal hypoplasia with a novel *PAX6* mutation.** Kiyoko Gocho¹, D. Kubota¹, S. Kikuchi¹, T. Igarashi², H. Takahashi², S. Kameya¹. ¹Ophthalmology, Nippon Med Univ, Chiba Hokusoh Hosp, Inzai, CHIBA, Japan; ²Ophthalmology, Nippon Medical School, Tokyo, Japan *CR
- 1520 — C0361 Distinct Features of Intraretinal Cystoid Changes in Patients of Inherited Retinal Degenerations.** Qian LI, X. Peng. Beijing Tongren Eye Center, Beijing, China
- 1521 — C0362 OCT-A in Staphylooma Induced Serous Maculopathy.** Suzanne Yzer. Medical retina, Rotterdam Eye Hospital, Rotterdam, Netherlands
- 1522 — C0363 Multimodal imaging in Syphilitic Uveitis.** Jorge A. Aguilera Partida¹, M. Ingolotti², B. A. Schlaen⁴, P. Madrigal-Ruiz², H. Ruiz-Garcia¹. ¹Uveitis, Clinica Santa Lucia, Guadalajara, Jalisco, Mexico; ²Retina, Hospital Civil De Guadalajara, Guadalajara, Jalisco, Mexico; ³Retina, Clinica Santa Lucia, Guadalajara, Jalisco, Mexico; ⁴Uveitis, Hospital De Clinicas, Buenos Aires, Capital Federal, Argentina
- 1523 — C0364 The development of a reference database with one-micron wavelength swept-source OCT DRI OCT Triton.** Danny Leung¹, M. W. Du², G. Comer³, M. Chaglasian⁴, E. Mehrabyan⁵, J. Fischer⁶, M. Fingeret^{2,7}, E. Ng⁸, W. Huang¹, C. Reisman¹. ¹Research and Development, Topcon Healthcare Solutions, Oakland, NJ; ²SUNY College of Optometry, New York, NY; ³Marshall B Ketchum University, Fullerton, CA; ⁴Illinois College of Optometry, Chicago, IL; ⁵AccessorEyes Optometry, Pasadena, CA; ⁶Fischer Laser Eye Center, Wilmar, MN; ⁷Dept of Veterans Affairs, New York Harbor Health Care System, Brooklyn, NY; ⁸Edmund Ng Consulting LLC., Seattle, WA *CR, ✗
- 1524 — C0365 Choriocapillaris Flow Signal Void on Optical Coherence Tomography Angiography in Myopic Eyes.** wenyang fan¹, M. Al-Sheikh¹, A. Uji¹, A. Prasad¹, M. Nassisi¹, D. Sarraf, T. Hirano¹, Y. Shi¹, S. R. Sadda¹. ¹doheny eye institute, Los Angeles, CA; ²stein eye institute, Los Angeles, CA *CR
- 1525 — C0366 Agreement and precision analyses of retinal measurements using Swept-Source and Spectral-Domain OCTs.** Wei Chieh Huang¹, J. Fischer², E. Ng³, D. Leung¹, C. Reisman¹. ¹Research and Development, Topcon Healthcare Solutions, Oakland, NJ; ²Fischer Laser Eye Center, Willmar, MN; ³Edmund Ng Consulting LLC., Seattle, WA *CR, ✗
- 1526 — C0367 Correlating Foveal Pit Morphology To Outer Nuclear and Henle Fiber Layer Topography.** Daniel Lee¹, M. A. Wilk², B. J. Lujan³, B. J. Antony⁴, J. Carroll^{5,6}. ¹Medical College of Wisconsin, Milwaukee, WI; ²Hudson Alpha Institute for Biotechnology, Huntsville, AL; ³Casey Eye Institute, Oregon Health & Science University, Portland, OR; ⁴IBM Research, Melbourne, Victoria, Australia; ⁵Cell Biology, Neurobiology and Anatomy, Medical College of Wisconsin, Milwaukee, WI; ⁶Ophthalmology & Visual Sciences, Medical College of Wisconsin, Milwaukee, WI *CR
- 1527 — C0368 80 degree field of view swept-source optical coherence tomography.** Leila Meyer-Hilberg, Y. Qui, R. Williams, S. Bello, D. Howard, M. A. Arain, A. Moghimi, J. Straub, T. Schmoll. Carl Zeiss Meditec, Inc., Dublin, CA *CR

1528 — C0369 Retinal vessel density within individual retinal structural layers using optical coherence tomography angiography. Alex Bedolla¹, K. Chanwimol^{1,2}, T. Hirano^{1,2}, J. Weichsel³, T. Tepelus^{1,2}, S. R. Sadda^{1,2}. ¹Doheny Eye Institute, Los Angeles, CA; ²Department of Ophthalmology, David Geffen School of Medicine at UCLA, Los Angeles, CA; ³Heidelberg Engineering GmbH, Heidelberg, Germany *CR

1529 — C0370 Impact of Availability of Automated OCT in a Busy Eye Urgent Care Department, a 15-month Experience. Masako Chen, R. Kaplan, M. Gupta, R. B. Rosen. Ophthalmology, New York Eye and Ear Infirmary of Mount Sinai, New York, NY *CR

1530 — C0371 The central foveal thickness is similar to age-matched controls in early stage choroideremia. Kirti M. Jasan^{1,2}, K. Xue^{1,2}, R. E. MacLaren^{1,2}. ¹Nuffield Laboratory of Ophthalmology, University of Oxford, Oxford, Oxfordshire, United Kingdom; ²Oxford Eye Hospital, John Radcliffe Hospital, Oxford, Oxfordshire, United Kingdom

1531 — C0372 Three dimensional analysis of SS-OCTA choroidal flow voids and correlation with indocyanine green angiography in patients with birdshot chorioretinopathy. Kathryn Pepple, Z. Chu, J. Weinstein, R. Van Gelder, R. K. Wang. University of Washington, Seattle, WA *CR

1532 — C0373 Degenerative “senile” retinoschisis: Observations from Ultra-widefield imaging. Aristomenis Thanos¹, B. Todorich^{2,3}, T. Khundkar³, C. Ung⁴, Y. Yonekawa⁴, A. Capone³, G. A. Williams³, J. D. Wolfe³. ¹Retina, Legacy Devers Eye Institute, Portland, OR; ²Pennsylvania Retina Specialists, Camp Hill, PA; ³Associated Retinal Consultants, Royal Oak, MI; ⁴Massachusetts Eye & Ear Infirmary, Boston, MA; ⁵New York Medical College, New York, NY

1533 — C0374 Peripheral Findings of Ultra-wide-field Angiography in Acute Vogt-Koyanagi-Harada Disease. Don-Il Ham¹, P. Kim¹, D. Shin¹, B. Kim¹, M. Kong^{2,3}. ¹Samsung Medical Center, Ophthalmology, Sungkyunkwan Univ Sch of Med, Seoul, Korea (the Republic of); ²Hangil Eye Hospital, Incheon, Korea (the Republic of); ³Ophthalmology, Catholic Kwandong University College of Medicine, Incheon, Korea (the Republic of)

1534 — C0375 Assessing the Variability and Repeatability of OCT-A in Uveitis Patients. Sonny Caplash¹, S. Cheng¹, M. Akanda¹, S. Kodati¹, S. Vitale², I. Thompson¹, B. Chaon¹, H. N. Sen¹. ¹Uveitis, National Eye Institute, Newtown, CT; ²Division of Epidemiology, National Eye Institute, Bethesda, MD

1535 — C0376 Spectral imaging of retinal structure after laser navigated subthreshold and threshold photocoagulation. Kathrin Hartmann¹, G. Eberlein¹, W. R. Freeman², A. J. Mueller¹. ¹Klinikum Augsburg, Augsburg, Germany; ²UCSD, San Diego, CA

1536 — C0377 Optical coherence tomography angiography assessment of choriocapillaris and outer retinal alterations in punctate inner choroidopathy and the vascular response to treatment. Ian Thompson, O. Sabbagh, S. Caplash, S. Cheng, B. Chaon, C. Okeagu, H. N. Sen. National Eye Institute, Silver Spring, MD

1537 — C0378 Structural and functional findings measured with macular OCT and microperimetry in presymptomatic patients with myotonic dystrophy type 1. Nayelli Rodríguez, A. Solis, D. Rodríguez, V. Gonzalez. Instituto Nacional de Rehabilitación, Puebla, Mexico

1538 — C0379 Outer Retinal Tubulations in Boucher-Neuhauser Syndrome. Terry Wood¹, R. G. Weleber². ¹Ophthalmology, West Virginia University, Morgantown, WV; ²Casey Eye Institute, Portland, OR

1539 — C0380 Atrophy of choroid could be crucial in the development of myopic macular degeneration. Jie Ye, Y. Shao, M. Shen, F. Lu. School of Ophthalmology and Optometry, Wenzhou Medical University, Wenzhou, Zhejiang, China

1540 — C0381 Multimodal imaging in choroideremia. Katharina G. Foote^{1,2}, N. Rinella², N. Bensaid³, Q. Zhang⁴, R. K. Wang⁴, T. Porco⁵, A. Roorda¹, J. L. Duncan². ¹School of Optometry and Vision Science Graduate Group, University of California, Berkeley, Berkeley, CA; ²Department of Ophthalmology, University of California, San Francisco, San Francisco, CA; ³Carl Zeiss Meditec AG, Berlin, Germany; ⁴Department of Bioengineering, University of Washington, Seattle, Seattle, WA; ⁵Francis I. Proctor Foundation, Department of Ophthalmology, University of California, San Francisco, San Francisco, CA *CR

1541 — C0382 Retinal Nerve Fiber Layer Thinning in Alzheimer’s Disease: A Histopathologic Validation of an Ocular Biomarker. Ernesto Barron¹, S. Asanad^{4,2}, F. N. Ross-Cisneros^{4,2}, E. A. Barron¹, A. Golston³, A. A. Sadun^{4,2}. ¹Ophthalmology, Doheny Eye Institute-UCLA, Covina, CA; ²Ophthalmology, David Geffen School of Medicine at University of California Los Angeles, Los Angeles, CA; ³Biostatistics, UCLA School of Public Health, Los Angeles, CA; ⁴Ophthalmology, Doheny Eye Institute-UCLA, Los Angeles, CA

1542 — C0383 High resolution measures of disease progression over 36 months in patients with retinal degenerations. Janette Tang¹, N. Rinella¹, J. Qin¹, T. Porco^{1,2}, A. Roorda³, J. L. Duncan¹. ¹Department of Ophthalmology, University of California, San Francisco, San Francisco, CA; ²Francis I. Proctor Foundation, Department of Ophthalmology, University of California, San Francisco, San Francisco, CA; ³School of Optometry and Vision Science Graduate Group, University of California, Berkeley, Berkeley, CA *CR

1543 — C0384 Retinal thickness differences in the presence or absence of brain amyloid-beta in adults with Down’s syndrome. Madeleine Walpert¹, M. Cordeiro², E. M. Normando², A. Holland¹. ¹Psychiatry, University of Cambridge, Cambridge, Cambridgeshire, United Kingdom; ²Glaucoma & Retinal Neurodegeneration Res Grp, UCL Institute of Ophthalmology and Western Eye Hospital, London, United Kingdom

Room 301AB

Monday, April 30, 2018 11:15 AM-1:00 PM

Immunology/Microbiology

224 New Insights into Bacterial Keratitis**Moderators: Mary E. Marquart and Pawan Kumar Singh****1544 — 11:15 P. aeruginosa internalization into epithelial cells is associated with intracellular triggering of the type three secretion system.**Abby Kroken¹, C. Chen¹, D. J. Evans^{2,1}, T. Yahr³, S. M. Fleiszig¹. ¹School of Optometry, University of California, Berkeley, Berkeley, CA; ²College of Pharmacy, Touro University California, Vallejo, CA; ³Department of Microbiology, University of Iowa, Iowa City, IA**1545 — 11:30 The miR-183/96/182 Cluster Modulates Pseudomonas aeruginosa-induced Keratitis Through Regulation of Innate Immune Cells.**Shunbin Xu¹, L. D. Hazlett², C. Muraleedharan¹, S. A. McClellan², S. Amarasingha Ekanayaka², R. P. Barrett². ¹Ophthalmology/Anatomy & Cell Biology, Wayne State University, Detroit, MI; ²Anatomy & Cell Biology, Wayne State University School of Medicine, Detroit, MI *CR**1546 — 11:45 Activation of NLRP3 pathway is required for clearance P. aeruginosa infection in C57BL/6 mouse corneas.**Noorjahan A. Panjwani¹, Z. Cao¹, V. Rathinam², M. G. Gadjeva³, G. Pier³, T. Zaidi³, A. Ramadan¹. ¹Ophthalmology, Tufts University Medical School, Boston, MA; ²Immunology, UConn Health School of Medicine, Farmington, CT; ³Medicine, Division of Infectious Diseases, Brigham and Women's Hospital, Harvard Medical School, Boston, MA**1547 — 12:00 Targeting ocular P. aeruginosa biofilms.**

Mihaela G. Gadjeva. Medicine, Brigham and Womens Hospital, Boston, MA

1548 — 12:15 VIP Treatment Mediates LTβ4-BLT1 Axis in Pseudomonas aeruginosa Induced Keratitis.Thomas W. Carion¹, D. J. Kracht¹, E. A. Berger^{1,2}. ¹Anatomy and Cell Biology, Wayne State School of Medicine, Detroit, MI; ²Ophthalmology, Kresge Eye Institute, Detroit, MI**1549 — 12:30 P. aeruginosa uses twitching motility to disperse within human corneal epithelial cells and multiple phospholipases for subsequent exit.**David J. Evans^{1,2}, V. Nieto², A. Kroken², B. Smith^{3,2}, M. Metruccio², J. Martinez², P. Hagan², S. M. Fleiszig². ¹College of Pharmacy, Touro University California, Vallejo, CA; ²School of Optometry, University of California, Berkeley, Berkeley, CA; ³Vision Science Program, University of California, Berkeley, Berkeley, CA**1550 — 12:45 CDCP1 as a New Regulator for the Development of Pseudomonas aeruginosa Keratitis in Mice.**Lingjun Zhang¹, Y. Beck², K. Bose², P. Huang¹, K. Tam², F. Lin¹. ¹Immunology, Cleveland Clinic, Cleveland, OH; ²Cole Eye Institute, Cleveland Clinic, Cleveland, OH

Room 306AB

Monday, April 30, 2018 11:15 AM-1:00 PM

Eye Movements/Strabismus/Amblyopia/ Neuro-Ophthalmology

225 Strabismus**Moderators: Zia Chaudhuri and Joseph L. Demer****1551 — 11:15 Complicated Strabismus Subtypes discovery using MRI technique for Chinese Population.**Yonghong Jiao¹, Y. Liang², Y. Wang¹, Q. Chang¹, Y. Liang¹. ¹Beijing Tongren Hospital, Beijing, China; ²University of Maryland, Baltimore, MD**1552 — 11:30 Magnetic resonance imaging (MRI) demonstrates different patterns of horizontal extraocular muscle co-contraction in fusional divergence to near and distant targets.**

Joseph L. Demer, R. A. Clark. Ophthalmology, Stein Eye Inst, UCLA, Los Angeles, CA

1553 — 11:45 Does the eye only rotate? : A three-dimensional magnetic resonance imaging study.Yumi Song^{1,2}, S. Hwang¹, W. Lee¹, Y. Kim¹, S. Ahn¹, B. Lee¹, H. Lim¹. ¹Ophthalmology, Hanyang University, Seoul, Korea (the Republic of); ²Hongik hospital, Seoul, Korea (the Republic of)**1554 — 12:00 Repeatability and agreement of an automated and objective cover test.**Clara Mestre¹, C. Otero Molins¹, F. Díaz-Doutón^{1,2}, J. Gautier³, J. Pujol¹. ¹Davalor Research Center (dRC), Universitat Politècnica de Catalunya, Terrassa, Spain; ²Center for Sensors, Instruments and Systems Development (CD6), Universitat Politècnica de Catalunya, Terrassa, Spain; ³Inria, Biovision Team, Sophia Antipolis, France**1555 — 12:15 A comparison of spatial patterns of fixation preference during visual & auditory tasks in strabismic monkeys.**

Santoshi Ramachandran, V. Das. College of Optometry, University of Houston, Houston, TX

1556 — 12:30 Longitudinal evaluation of ocular alignment in normal and prism-reared infant monkeys.

Apoorva Karsolia, E. Burns, M. Pulella, V. Das. University of Houston College of Optometry, Houston, TX

1557 — 12:45 Torsional Effect of the Adjustable Harada-Ito Procedure.

Jonathan M. Holmes, L. Liebermann, S. R. Hatt, D. A. Leske. Ophthalmology, Mayo Clinic, Rochester, MN

Room 310

Monday, April 30, 2018 11:15 AM-1:00 PM

Visual Psychophysics/Physiological Optics

226 20/20 Visual acuity is not enough – again - Minisymposium

20/20 visual acuity cannot characterize the complexity of human vision. The useful vision includes a wide array of sub-systems. All of these depend on optical and neural substrates that work in sometimes surprising ways, moreso with changes due to adaptation or to disease. All of the sub-systems interact, such as central and peripheral vision interacting. This seminar will discuss how the visual system can differ from the ideal, what accommodations are made by the visual system itself, and how the characteristics of visual subsystems guide the potential for translational rescue of vision.

Moderators: Ann E. Elsner, Thomas W. Raasch and Lisa A. Ostrin**— 11:15 Introduction****1558 — 11:20 Novel methods for generating phenomena that may prove useful for clinical assessment of visual function.**

Arthur G. Shapiro. Department of Psychology and Computer Science, American University, Washington, District of Columbia

1559 — 11:40 Cellular level retinal alterations despite 20/20 vision.

Kaitlyn Sapoznik. Indiana University School of Optometry, Bloomington, IN

1560 — 12:00 Performing tasks with peripheral vision.Russell L. Woods^{1,2}. ¹Schepens Eye Research Institute, Boston, MA; ²Ophthalmology, Harvard Medical School, Boston, MA**1561 — 12:20 Chronic neural adaptation to habitual ocular optics alters neural processing.**Geunyoung Yoon^{1,2}. ¹Flaum Eye Institute, University of Rochester; Rochester, NY; ²Center for Visual Science, University of Rochester; Rochester, NY *CR**1562 — 12:40 Complexities of Perception and Visual Illusions.**

Michael Bach. Eye Center, Medical Center, Freiburg University, Freiburg, Germany

Room 311

Monday, April 30, 2018 11:15 AM-1:00 PM

Retina

227 Inherited Retinal Diseases**Moderators: Mineo Kondo and Peter Charbel Issa****1563 — 11:15 Human iPSC-derived RPE and retinal organoids reveal impaired alternative splicing of genes involved in pre-mRNA splicing in PRPF31 autosomal dominant retinitis pigmentosa.** Majlinda Lako¹, A. Buskin¹, L. Zhu¹, V. Chichagova¹, B. Basu⁶, S. Mozaffari-Jovin⁵, D. Dolan², A. Droop³, J. Collin¹, G. Hilgen⁴, L. Armstrong¹, E. Sernagor⁴, R. Luehrmann⁵, S. Grellscheid², C. Johnson⁶.¹Institute of Genetic Medicine, Newcastle University, Newcastle, United Kingdom; ²Department of Biological Sciences, University of Durham, Durham, United Kingdom; ³MRC Medical Bioinformatics Centre, University of Leeds, Leeds, United Kingdom; ⁴Institute of Neuroscience, Newcastle University, Newcastle, United Kingdom; ⁵Max-Planck Institute of Biophysical Chemistry, Göttingen, Germany; ⁶Leeds Institute of Molecular Medicine, University of Leeds, Leeds, United Kingdom**1564 — 11:30 Longitudinal phenotypic characterization of type II Usher syndrome caused by mutations in USH2A.** Adam M. Dubis^{2,1}, A. Mitsios², M. Toms³, A. Webster², M. Moosajee². ¹Department of Visual Neuroscience, UCL - Institute of Ophthalmology, London, England, United Kingdom; ²NIHR BRC at Moorfields Eye Hospital and UCL Institute of Ophthalmology, London, United Kingdom; ³UCL Institute of Ophthalmology, London, United Kingdom**1565 — 11:45 Olfactory dysfunction in patients with CNGBI-related retinitis pigmentosa.** Peter Charbel Issa^{1,2}, P. Reuter³, L. Kuehlewein³, J. Birtel⁴, M. Gliem^{1,4}, A. Tropitzsch⁵, K. Whitcroft⁶, H. Bolz⁷, K. Ishihara⁸, R. E. MacLaren^{1,2}, S. Downes^{1,2}, A. Oishi⁸, E. Zrenner⁹, S. Kohl³, T. Hummel⁹. ¹Oxford Eye Hospital, University of Oxford, Oxford, United Kingdom; ²Nuffield Laboratory of Ophthalmology, Department of Clinical Neurosciences, University of Oxford, Oxford, United Kingdom; ³Centre for Ophthalmology, Institute for Ophthalmic Research, University of Tübingen, Tübingen, Germany; ⁴Department of Ophthalmology, University of Bonn, Bonn, Germany; ⁵Department of Otorhinolaryngology, Head and Neck Surgery, University of Tübingen, Tübingen, Germany; ⁶UCL Ear Institute and Royal National Throat Nose and Ear Hospital, London, United Kingdom; ⁷Institute of Human Genetics, University Hospital of Cologne, Cologne, Germany; ⁸Department of Ophthalmology and Visual Sciences, Kyoto University, Kyoto, Japan; ⁹Smell & Taste Clinic, Department of Otorhinolaryngology, Head and Neck Surgery, Technische Universität Dresden, Dresden, Germany**1566 — 12:00 Natural History of Retinal Function and Structure in a French Cohort of Patients with Usher Syndrome.** Saddek Mohand-Said¹, P. Boelle², N. Nassibi¹, C. Bonnet¹, C. Segaut-Prevost³, F. Joly³, I. S. Audo¹, J. A. Sahel¹. ¹Inserm, U968; UPMC Univ Paris 06, UMR_S968, Institut de la Vision; CNRS, UMR 7210; CHNO des Quinze-Vingts, INSERM-DHOS CIC 1423, Paris, France; ²IPLESP - Institut Pierre Louis d'Epidemiologie et de Sante Publique; AP-HP, Hôpital Saint-Antoine, Biostatistiques & Sante Publique; UPMC - Paris6; INSERM U1136, Paris, France; ³Sanofi, Chilly-Mazarin, France *CR**1567 — 12:15 Fluorescence Lifetime Imaging Ophthalmoscopy (FLIO) in Retinitis Pigmentosa Reveals Inheritance-Dependent Phenotypic Variance.** Karl Andersen^{1,2}, L. Sauer^{1,3}, R. H. Gensure¹, M. Hammer³, P. S. Bernstein¹. ¹Moran Eye Center, University of Utah, Salt Lake City, UT; ²Geisinger Commonwealth School of Medicine, Scranton, PA; ³Ophthalmology, University of Jena, Jena, Germany**1568 — 12:30 Progression of Stargardt disease as measured by spectral-domain optical coherence tomography (SD-OCT) in the ProgStar Study.** Rupert W. Strauss^{1,11}, X. Kong², B. E. Munoz², S. K. West², M. S. Ip³, A. Ho³, A. Jha³, P. S. Bernstein⁴, D. G. Birch⁵, A. V. Cideciyan⁶, M. Michaelides¹, J. Sahel⁷, J. S. Sunness⁸, E. I. Traboulsi⁹, E. Zrenner¹⁰, H. P. Scholl^{11,2}. ¹Moorfields Eye Hosp & Inst of Ophthalm UCL, London, ENGLAND, United Kingdom; ²Wilmer Eye Institute, Johns Hopkins University, Baltimore, MD; ³Doheny Imaging Reading Center, David Geffen School of Medicine, Los Angeles, CA; ⁴Moran Eye Institute, University of Utah, Salt Lake City, UT; ⁵Retinafoundation of the Southwest, Dallas, TX; ⁶University of Pennsylvania, Scheie Eye Institute, Philadelphia, PA; ⁷Sorbonne University, Institute de la vSion, Paris, France; ⁸Hoover Low Vision Rehabilitation Services, Greater Baltimore Medical Center, Baltimore, MD; ⁹Cole Eye Institute, Cleveland Clinic, Cleveland, OH; ¹⁰Center for Ophthalmology, Eberhard-Karls University Hospital, Tübingen, Germany; ¹¹Department of Ophthalmology, University of Basel, Basel, Switzerland *CR, ✗**1569 — 12:45 Complement C5 Inhibition as a Potential Treatment for Autosomal Recessive Stargardt Disease (STGD1): Design of a Clinical Trial Assessing a Novel Treatment and Primary Outcome Measure.** Karl G. Csaky¹, D. Bok², R. A. Radu², S. R. Sadda³. ¹Ophthalmology, Retina Foundation of the Southwest, Dallas, TX; ²Ophthalmology, Stein Eye Institute and Department of Ophthalmology, David Geffen School of Medicine at UCLA, Los Angeles, CA; ³Doheny Eye Institute, Stein Eye Institute, Los Angeles, CA *CR, ✗

Room 312

Monday, April 30, 2018 11:15 AM-1:00 PM

Cornea

228 Cornea surgery, non-refractive**Moderators: Mark A. Terry and Jodhbir S. Mehta****1570 — 11:15 The efficacy and safety of accelerated collagen crosslinking (CXL) for infectious keratitis: A randomized clinical trial.** Lucero Pedro Aguilar¹, A. Jimenez-Corona¹, V. Sanchez-Huerta², A. Lichtinger¹, E. Hernandez-Quintela², E. O. Graue-Hernandez¹. ¹Cornea, Instituto de Oftalmologia Conde de Valenciana, Mexico City, Mexico; ²Cornea, Asociacion Para Evitar la Ceguera, Mexico City, Mexico City, Mexico ✗**1571 — 11:30 Intra Stromal Keratoplasty (ISK): a new femtolasar technique in patient with keratoconus.** PAOLO BORDIN, G. Vizzari. Ophthalmology, Hospital of Legnago, Legnago, Verona, Italy**1572 — 11:45 Boston Type I Keratoprosthesis versus a low-cost design, the Auro Keratoprosthesis.** Juan Carlos Serna-Ojeda¹, V. Sangwan², S. Basu². ¹Ophthalmology, Patronato Banco de Ojos y Tejidos de Aguascalientes, Aguascalientes, Aguascalientes, Mexico; ²L.V.Prasad Eye Institute, Hyderabad, India**1573 — 12:00 Evaluation of Anterior Synechiae after Penetrating Keratoplasty in Infants and Children with Peters' Anomaly.** Yujing Yang, J. Xu, J. Xiang, X. Cui, J. Hong. Eye and Vision Research Department, Eye & ENT Hospital of Fudan University, Shanghai, China**1574 — 12:15 Combined corneal transplant, glaucoma drainage implantation and pars-plana vitrectomy outcomes in a pediatric population.** Kelley Bohm¹, A. Fernandez-Vega¹, J. Sugar¹, E. Tu¹, A. Traish², J. de la Cruz¹, A. Aref¹, T. S. Vajaranant¹, F. Chau¹, J. I. Lim¹, Y. Leiderman¹, R. V. Chan¹, M. S. Cortina¹. ¹Ophthalmology, Illinois Eye and Ear Infirmary, Chicago, IL; ²Ophthalmology, John H. Stroger Hospital of Cook County, Chicago, IL**1575 — 12:30 DMEK results in significantly less higher-order aberration than UT-DSAEK: Results from the DETECT trial.** Matthew Duggan¹, J. Rose-Nussbaumer^{3,4}, C. C. Lin², A. Austin³, W. Chamberlain¹. ¹Casey Eye Institute, Oregon Health and Science University, Portland, OR; ²Byers Eye Institute, Stanford University, Palo Alto, CA; ³Francis I. Procter Foundation, University of California San Francisco, San Francisco, CA; ⁴Epidemiology and Biostatistics, University of California San Francisco, San Francisco, CA ✗

1576 — 12:45 Preliminary results of a multicenter randomized clinical trial comparing Descemet Membrane Endothelial Keratoplasty (DMEK) with ultrathin Descemet Stripping Automated Endothelial Keratoplasty (UT-DSAEK). *Mor M. Dickman^{1,2}, S. Dunker¹, R. Wisse³, R. J. Wijdh⁴, S. Nobacht⁵, M. C. Bartels⁷, M. L. Tang⁶, F. J. van den Biggelaar¹, T. Berendschot¹, R. M. Nuijts¹.* ¹University Eye Clinic, Maastricht University Medical Center, Maastricht University, Maastricht, Netherlands; ²MERLN Institute for Technology-Inspired Regenerative Medicine, Maastricht, Netherlands; ³Utrecht Medical Center, Utrecht, Netherlands; ⁴Groningen University Medical Center, Groningen, Netherlands; ⁵Radboud UMC, Nijmegen, Netherlands; ⁶Gelre Ziekenhuis, Appeldoorn, Netherlands; ⁷Deventer Ziekenhuis, Deventer, Netherlands ✕

Room 313A

Monday, April 30, 2018 11:15 AM-1:00 PM

Anatomy and Pathology/Oncology

229 Anatomical changes during ocular development and disease

Moderators: Falk Schroedl and Vivian Choh

1577 — 11:15 The effect of corticosteroids on human choroidal endothelial cells: a model to study central serous chorioretinopathy. *Elon H. Van Dijk¹, M. Habeeb¹, A. Nikolaou¹, J. Brinks¹, R. Tsonaka², H. Peters^{3,5}, H. Sips⁴, A. van de Merbel⁶, E. de Jong⁷, R. Notenboom⁸, S. Kielbasa², S. van der Maarel⁹, P. Quax^{3,5}, O. Meijer⁴, C. Boon¹.* ¹Ophthalmology, Leiden University Medical Center, Leiden, Netherlands; ²Medical Statistics and Bioinformatics, Leiden University Medical Center, Leiden, Netherlands; ³Vascular Surgery, Leiden University Medical Center, Leiden, Netherlands; ⁴Medicine, Division of Endocrinology and Metabolism, Leiden University Medical Center, Leiden, Netherlands; ⁵Eindhoven Laboratory for Experimental Vascular Medicine, Leiden University Medical Center, Leiden, Netherlands; ⁶Urology, Leiden University Medical Center, Leiden, Netherlands; ⁷Ophthalmology, Radboud University Medical Center, Nijmegen, Netherlands; ⁸Anatomy and Embryology, Leiden University Medical Center, Leiden, Netherlands; ⁹Human Genetics, Leiden University Medical Center, Leiden, Netherlands

1578 — 11:30 Effect of Topical Latanoprost on Choroidal Thickness in Guinea Pigs. *Nevin El-Nimri¹, L. Jiang¹, D. Dahanayake², C. F. Wildsoet¹.* ¹Vision Science, UC Berkeley, Berkeley, CA; ²UC Berkeley, Berkeley, CA

1579 — 11:45 Endogenous alkaline phosphatase in the optic chiasm suggests a novel mechanism of retinal axonal guidance. *Daniel Elefant^{1,2}, I. Hernandez Morato², D. Badheka², J. Kumaratilake³, S. C. Sharma², S. A. Newman².* ¹Westchester Medical Center, Valhalla, NY; ²New York Medical College, Valhalla, NY; ³University of Adelaide, Adelaide, South Australia, Australia

1580 — 12:00 Loss of CXCR4 signaling in motor neurons leads to misrouting of the oculomotor nerve and oculomotor synkinesis. *Mary Whitman^{1,2}, E. Nguyen¹, E. Engle^{3,4}.* ¹Ophthalmology, Boston Childrens Hospital, Boston, MA; ²Ophthalmology, Harvard Medical School, Boston, MA; ³Neurology and Ophthalmology, Boston Children's Hospital, Boston, MA; ⁴Howard Hughes Medical Institute, Bethesda, MD

1581 — 12:15 Synthesis and axonal transport of retinal ganglion cell proteins following optic nerve injury. *Hollis Cline¹, L. Schiapparelli¹, S. Shah^{1,2}, D. McClatchy¹, Y. Ma¹, J. Yates¹, J. L. Goldberg².* ¹Neuroscience, TSRI, La Jolla, CA; ²Stanford University, Palo Alto, CA

1582 — 12:30 Correlation between amyloid beta deposits in ex vivo retinas and severity of Alzheimer's brain pathology. *Frank Corapi¹, M. C. Campbell¹, L. Emptage¹, R. Redekop¹, M. Kitor¹, V. Hirsch-Reinshagen³, R. Hsiung⁴, I. Mackenzie³.* ¹Physics and Astronomy, University of Waterloo, Toronto, Ontario, Canada; ²Physics and Astronomy/Sch of Optom, University of Waterloo, Waterloo, Ontario, Canada; ³Pathology and Laboratory Medicine, University of British Columbia, Vancouver, British Columbia, Canada; ⁴UBC Hospital Clinic for Alzheimer and Related Disorders, Vancouver, British Columbia, Canada *CR

1583 — 12:45 Does internal microstructure of retinal arteries change in Alzheimer disease? *Konstantin E. Kotliar¹, C. Hauser², M. Bilirer¹, M. Ortner³, I. Lanzl⁴, G. Drozdova⁵, C. Schmaderer², T. Grimmer³.* ¹FH Aachen, Biomedical Engineering, University of Applied Sciences, Juelich, Germany; ²Nephrology, Technische Universität München, Munich, Germany; ³Psychiatry and Psychotherapy, Technische Universität München, Munich, Germany; ⁴Ophthalmology, Technische Universität München, Munich, Germany; ⁵Pathonomia and Pathological Physiology, Peoples' Friendship University of Russia, Moscow, Russian Federation

Room 315

Monday, April 30, 2018 11:15 AM-1:00 PM

Retinal Cell Biology / Retina / Visual Neuroscience

230 Circadian clocks in retinal health and diseases - Minisymposium

Emerging evidence indicates that the intrinsic circadian clock of the retina not only regulates retinal physiology and function but is also implicated in pathogenic processes. This minisymposium will provide an overview of the molecular regulations and functions of the diurnal and circadian rhythms in the retina, and highlight recent findings on the contribution of the autonomous circadian and diurnal clocks to retinal disease such as a diabetic retinopathy and macular degeneration.

Moderators: Andrew J. Zele and David N. Zacks

— 11:15 Introduction

1584 — 11:17 Retinal circadian clocks: Organization and relationship to health and disease. *Douglas McMahon. Biological Sciences, Vanderbilt University, Nashville, TN*

1585 — 11:37 Neuropsin (OPN5)-mediated photic regulation of clock systems. *Russell Van Gelder. Ophthalmology, University of Washington, Seattle, WA*

1586 — 11:57 Effect of Melatonin on Photoreceptor Survival. *Gianluca Tosini^{1,2}.* ¹Pharmacology, Morehouse School of Medicine, Atlanta, GA; ²Ophthalmology, Emory University School of Medicine, Atlanta, GA

1587 — 12:17 Circadian dysfunction in the pathogenesis of diabetic retinopathy. *Maria Grant. Ophthalmology, University of Alabama, Birmingham, AL*

1588 — 12:37 Circadian control and proteostasis in NRF-2/PGC-1 alpha knock-out mice. *Kai Kaarniranta^{1,2}.* ¹Department of Ophthalmology, University of Eastern Finland, Kuopio, Finland; ²Department of Ophthalmology, Kuopio University Hospital, Kuopio, Finland

— 12:57 Conclusion

Room 316A

Monday, April 30, 2018 11:15 AM-1:00 PM

Physiology/Pharmacology

231 Retina I**Moderators: Craig E. Crosson and Claudio Bucolo**

1589 — 11:15 Sphingomyelinase Activity and Expression in Optic Nerve and Retina: Effects of Ocular Hypertensive and Ischemia. *Craig E. Crosson, J. Liu, J. Fan. Ophthalmology, Medical Univ of South Carolina, Charleston, SC*

1590 — 11:30 Dopamine differentially affects rod and cone circuits that underlie the response of transient-OFF-alpha retinal ganglion cells. *Rebekah A. Warwick, M. Rivlin-Etzion. Neurobiology, Weizmann Institute of Science, Rehovot, Israel*

1591 — 11:45 Prevention of photoreceptor degeneration with FDA-accepted compounds. *Henri O. Leinonen, T. Orban, Z. Dong, K. Palczewski. Department of Pharmacology, School of Medicine, Case Western Reserve University, Cleveland Heights, OH *CR*

1592 — 12:00 Protein acetylation in δ -opioid receptor mediated RGC neuroprotection. *Shahid Husain, S. Singh. Ophthalmology, Medical Univ of South Carolina, Charleston, SC*

1593 — 12:15 The Endothelin Receptor Antagonist Macitentan Attenuates Neurodegeneration in a Rodent Model of Glaucoma. *Raghu R. Krishnamoorthy¹, N. R. McGrady⁵, H. Jefferies², S. He³, D. L. Stankowska⁴. ¹Pharmacology and Neuroscience, UNT Health Science Ctr, Fort Worth, TX; ²Texas College of Osteopathic Medicine, UNT Health Science Center, Fort Worth, TX; ³Pharmacology and Neuroscience, UNT Health Science Center, Fort Worth, TX; ⁴Pharmacology and Neuroscience, UNT Health Science Center, Fort Worth, TX; ⁵Ophthalmology and Visual Sciences, Vanderbilt University Medical Center, Nashville, TN*

1594 — 12:30 12/15-lipoxygenase contributes to retinal inflammation in diabetic retinopathy via activation of ER stress/NADPH oxidase signaling pathway. *Khaled Elmasry^{1,3}, A. S. Ibrahim^{2,4}, H. Saleh², N. Elsherbiny⁴, S. Elshafey², K. Hussein^{3,1}, M. A. Al-Shabrawey^{2,3}. ¹Cellular Biology & Anatomy, Augusta University, Augusta, GA; ²Oral biology, Dental College of Georgia, Augusta University, Augusta, GA; ³Human Anatomy and Embryology, Faculty of Medicine, Mansoura University, Mansoura, Egypt; ⁴Biochemistry, Faculty of Pharmacy, Mansoura University, Mansoura, Egypt; ⁵Oral Medicine and Surgery Research Division, National Research Centre, Cairo, Egypt*

1595 — 12:45 Ferrochelatase inhibitor griseofulvin prevents retinal angiogenesis without ocular toxicity. *Timothy W. Corson, S. Sardar Pasha, D. White, T. Shetty. Ophthalmology, Indiana University School of Medicine, Indianapolis, IN *CR*

Room 316B

Monday, April 30, 2018 11:15 AM-1:00 PM

Clinical/Epidemiologic Research

232 Healthcare Delivery**Moderators: Lisa J. Keay and Roberta McKean-Cowdin**

1596 — 11:15 Correlating national glaucoma medication sale statistics with population based glaucoma prevalence data to estimate the prevalence and change in prevalence of untreated glaucoma in India from 2008-2016. *Ronnie J. George, V. Ashwini, R. Asokan, V. Lingam. Glaucoma, Sankara Nethralaya Eye Hospital, Chennai, Tamil nadu, India *CR*

1597 — 11:30 Psychosocial Predictors of Eye Care Utilization in the African American Eye Disease Study. *Roberta McKean-Cowdin^{1,2}, M. Barret¹, M. Torres², A. Fairbrother-Crisp², X. Jiang², B. Burkemper², R. Varma². ¹Preventive Medicine, Univ of Southern California, Los Angeles, CA; ²Ophthalmology, University of Southern California, Los Angeles, CA*

1598 — 11:45 Trends in eyecare access and affordability: The National Health Interview Survey (NHIS) 2008–2016. *Varshini Varadaraj¹, K. D. Frick², J. Saaddine³, D. S. Friedman¹, B. K. Swenor⁴. ¹Wilmer Eye Institute, Johns Hopkins University School of Medicine, Baltimore, MD; ²Johns Hopkins Carey Business School, Baltimore, MD; ³Centers for Disease Control and Prevention, Atlanta, GA*

1599 — 12:00 Offering Vouchers to Low-Income Minority Populations Increases Follow-up for Free Glaucoma Services. *Seema Kacker^{1,2}, M. Macis³, P. Gajwani², N. Kanwar², D. Zhao^{2,1}, E. Guallar^{2,1}, D. S. Friedman². ¹Johns Hopkins Bloomberg School of Public Health, Baltimore, MD; ²Johns Hopkins University School of Medicine, Baltimore, MD; ³Johns Hopkins Carey School of Business, Baltimore, MD*

1600 — 12:15 Feeling the pressure – Initial results from a shopping centre/mall Pop-Up for screening intra-ocular pressure (IOP) across England. *Laura Edwards, D. J. Taylor, R. Shah, P. Campbell, D. F. Edgar, D. P. Crabb. Division of Optometry and Visual Science, City, University of London, London, United Kingdom *CR*

1601 — 12:30 Provision of Near Glasses Improves Productivity in Indian Tea Pickers: PROSPER Randomized Trial. *Nathan G. Congdon^{2,3}, P. Reddy¹, G. MacKenzie⁴, P. Gogate⁵, C. Jan⁶, M. Clarke², Q. Wen², J. Kassalow⁷, E. Gudwin⁷, C. O'Neill⁸, J. Ling⁸, J. Tang², K. Basset^{9,10}, H. Cherwek³, R. Al³. ¹Aravind Eyecare System, Pondicherry, India; ²Queen's University Belfast, Belfast, United Kingdom; ³Orbis International, New York, NY; ⁴Clearly, London, United Kingdom; ⁵Community Eye Care Foundation, Pune, India; ⁶Beijing Tongren, Beijing, China; ⁷VisionSpring, New York, NY; ⁸Zhongshan Ophthalmic Center, Guangzhou, China; ⁹University of British Columbia, Vancouver, British Columbia, Canada; ¹⁰Seva Canada, Vancouver, British Columbia, Canada *CR*

Room 316C

Monday, April 30, 2018 11:15 AM-1:00 PM

Lens

233 Posterior capsular opacification (PCO)**Moderators: Michael Wormstone and Ram H. Nagaraj**

1602 — 11:15 Regulation of BMP and TGF β signaling in Posterior Capsular Opacification (PCO). *Mahbubul Shihan, E. Jackson, Y. Wang, M. K. Duncan. Biological Sciences, University of Delaware, Newark, DE*

1603 — 11:30 Effects of Interleukin-6 on Posterior Capsular Opacification. *Bo Ma, R. Jing, C. Pei. Ophthalmology, First Affiliated Hospital of Xi'an Jiaotong University, Xi'an, Shaanxi, China*

1604 — 11:45 Upregulation of TGF β signaling in lens cells by fibronectin: implications for PCO. *Linda Musil. Biochemistry & Molecular Biology, Oregon Health & Science Univ, Portland, OR*

1605 — 12:00 Effects of Gremlin on Posterior Capsular Opacification—An in vitro and in vivo study. *Cheng Pei, B. Ma, R. Jing. Department of Ophthalmology, First Affiliated Hospital of Xi'an Jiaotong University, Xi'an, Shaanxi, China*

1606 — 12:15 β -catenin/Smad3 interaction regulates myofibroblast transition of lens epithelial cells. *Aftab Taiyab, J. Holms, J. A. West-Mays. Pathology and Molecular Medicine, McMaster University, Milton, Ontario, Canada*

1607 — 12:30 Lens epithelial cells rapidly initiate the innate immune response following cataract surgery. *Melinda K. Duncan¹, J. Jiang^{2,1}, M. Shihan¹, Y. Wang¹, S. Novo¹. ¹Biological Sciences, University of Delaware, Newark, DE; ²Department of Ophthalmology, Xiangya Hospital, Central South University, Changsha, Hunan, China*

Room 320

Monday, April 30, 2018 11:15 AM-1:00 PM

Biochemistry/Molecular Biology / Retina / Retinal Cell Biology**234 Targeting mitochondrial dysfunction in retinal and optic nerve disease - Minisymposium**

Mitochondria are critical organelles for cell function and survival. Mitochondria are essential for cellular bioenergetics, regulation of cell metabolism and control of programmed cell death. Mitochondrial dysfunction severely affects tissue homeostasis and oxidative damage to mitochondrial DNA is a key determinant of cellular aging. Mitochondrial dysfunction and oxidative damage to the retina and optic nerve are involved in retinal aging and degenerative diseases including age-related macular degeneration, glaucoma, and diabetic retinopathy. Mitochondrial repair and attenuation of oxidative stress are critical to the long-term survival of the retina. Therapeutic strategies directed towards improving mitochondrial integrity and function and reducing oxidative stress have considerable potential for the treatment of retinal and optic nerve disease.

Moderators: Janis T. Eells and Renu A. Kowluru— 11:15 **Opening Remarks**

1608 — 11:18 Protecting mitochondrial homeostasis in diabetic retinopathy. Renu A. Kowluru. Wayne State Univ/Kresge Eye Inst, Detroit, MI

1609 — 11:36 Protecting the Mitochondria as a Therapeutic Strategy for dry Age-Related Macular Degeneration. Deborah A. Ferrington. Ophthalmology & Visual Neuroscience, University of Minnesota, Shoreview, MN

1610 — 11:54 The roles of BAX in mitochondrial dynamics pre and post the activation of the apoptotic pathway. Robert Nickells. Ophthalmology & Visual Science, Univ of Wisconsin-Madison, Madison, WI

1611 — 12:12 Mitochondrial integrity and function in hPSC-derived RPE. Divya Sinha^{1,2}. ¹Waisman Center, University of Wisconsin-Madison, Madison, WI; ²McPherson Eye Research Institute, University of Wisconsin-Madison, Madison, WI

1612 — 12:30 MicroRNA and Retinal Degeneration - Understanding Mechanisms to Find Treatments. Riccardo Natoli^{1,2}. ¹The John Curtin School of Medical Research, The Australian National University, Canberra, Australian Capital Territory, Australia; ²ANU Medical School, The Australian National University, Canberra, Australian Capital Territory, Australia

— 12:48 **Panel Discussion**

Ballroom A

Monday, April 30, 2018 11:15 AM-1:00 PM

Glaucoma / Multidisciplinary Ophthalmic Imaging**235 What's new in glaucoma imaging? - Minisymposium**

Attempts to improve monitoring and clinical endpoints in glaucoma have led to great advances in imaging. In the last five years, new ideas have been emerging to attempt to provide more tangible outcome measures. At the same time, existing techniques have been refined and adapted. This symposium will highlight new emerging methods which have great potential and application to glaucoma, and focus on advances in single cell and microstructural imaging.

Moderators: M Francesca Cordeiro, Tony Realini and Hiroshi Ishikawa— 11:15 **Introduction/Overview**

1613 — 11:20 Molecular imaging in the eye with photothermal optical coherence tomography. Melissa Skala^{1,2}. ¹University of Wisconsin - Madison, Madison, WI; ²Morgridge Institute for Research, Madison, WI

1614 — 11:40 Angiographic Aqueous Humor Outflow Imaging. Alex Huang^{1,2}. ¹Doheny Eye Institute, Arcadia, CA; ²Ophthalmology, University of California Los Angeles, Los Angeles, CA *CR

1615 — 12:00 Lamina cribrosa microstructural analysis using OCT. Hiroshi Ishikawa. Department of Ophthalmology, New York University, Edgewater, NJ

1616 — 12:20 Adaptive optics retinal imaging in glaucoma. Alfredo Dubra. Ophthalmology, Stanford University, Palo Alto, CA *CR, ⚡

1617 — 12:40 DARC and Glaucoma. M Francesca Cordeiro^{1,2}. ¹Glaucoma & Retinal Neurodegeneration Res Grp, UCL Inst Ophthal & Western Eye Hsp London, London, United Kingdom; ²Ophthalmology, Imperial College London, LONDON, London, United Kingdom *CR, ⚡

Ballrooms BC

Monday, April 30, 2018 11:15 AM-1:00 PM

Retina**236 AMD and Anti-VEGF****Moderators: Paul Sternberg and Rajendra Apte**

1618 — 11:15 Clinical feasibility of ultra-rapid, non-pharmacologic anesthesia for intravitreal injection in patients receiving anti-VEGF treatment. Cagri G. Besirli¹, S. Smith², K. Pipe³, G. Kim³, D. N. Zacks¹, T. W. Gardner¹, A. Shah¹. ¹Ophthalmology and Visual Sciences, University of Michigan, Ann Arbor, MI; ²Ophthalmology, Stanford University, Palo Alto, CA; ³Mechanical Engineering, University of Michigan, Ann Arbor, MI *CR, ⚡

1619 — 11:30 Outcomes Based on Baseline (BL) Features of Choroidal Neovascularization (CNV) in Patients (pts) with Neovascular Age-related Macular Degeneration (nAMD): Post-hoc Analysis from the VIEW Studies. Nathan Steinle¹, D. V. Do², D. Thompson³, A. Gibson³, N. Saroj³. ¹California Retina Consultants, Arroyo Grande, CA; ²Stanford University, Palo Alto, CA; ³Regeneron Pharmaceuticals, Inc., Tarrytown, NY *CR, ⚡

1620 — 11:45 Artificial intelligence to predict optimal retreatment intervals in treat-and-extend (T&E). Hrvoje Bogunovic, S. M. Waldstein, A. Sadeghipour, B. Gerendas, U. Schmidt-Erfurth. Department of Ophthalmology, Medical University of Vienna, Vienna, Austria *CR

1621 — 12:00 Real World Vienna: The VIBES Study - Outcomes and procedures in neovascular AMD. Bianca S Gerendas^{1,2}, A. Sadeghipour¹, W. Buehl³, S. Sacu^{2,3}, U. Schmidt-Erfurth^{2,4}. ¹Vienna Reading Center, Medical University of Vienna, Vienna, Austria; ²Department of Ophthalmology, Medical University of Vienna, Vienna, Austria; ³Vienna Clinical Trial Center, Medical University of Vienna, Vienna, Austria; ⁴Vienna Clinical Trial Center and Vienna Reading Center, Medical University of Vienna, Vienna, Austria *CR

1622 — 12:15 Canadian Treat and Extend Analysis Trial with Ranibizumab in Patients with Neovascular AMD: CANTREAT Study One Year Results. Peter Kertes^{1,4}, T. Sheidow^{2,5}, G. Williams^{3,6}, M. Greve^{7,8}, I. J. Galic⁹, E. Rampakakis¹⁰, J. Gavalakis¹¹, A. Scarino¹¹. ¹The John and Liz Tory Eye Centre, Toronto, Ontario, Canada; ²Ivey Eye Institute, London, Ontario, Canada; ³Calgary Retina Consultants, Calgary, Alberta, Canada; ⁴Sunnybrook Health Sciences Center, Toronto, Ontario, Canada; ⁵Western University, London, Ontario, Canada; ⁶University of Calgary, Calgary, Alberta, Canada; ⁷Alberta Retina Consultants, Edmonton, Alberta, Canada; ⁸University of Alberta, Edmonton, Alberta, Canada; ⁹Montreal Retina Institute, Montreal, Quebec, Canada; ¹⁰JSS Medical Research, Saint-Laurent, Quebec, Canada; ¹¹Novartis Pharma Canada, Dorval, Quebec, Canada *CR, ✕

1623 — 12:30 Visual Acuity Outcomes and Anti-Vascular Endothelial Growth Factor Therapy Intensity in Neovascular AMD Patients: A “Real World” Analysis in 49,485 Eyes. Thomas A. Ciulla^{1,2}, J. S. Pollack^{5,3}, D. Williams⁴. ¹Retina, Midwest Eye Institute, Indianapolis, IN; ²Ophthalmology, Indiana University School of Medicine, Indianapolis, IN; ³Rush University Medical Center, Chicago, IL; ⁴Vitreoretinal Surgery PA, Minneapolis, MN; ⁵Illinois Retina Associates, Chicago, IL *CR

1624 — 12:45 Phase III studies of brolicizumab versus aflibercept in nAMD: 48-week primary and key secondary outcomes from HAWK/HARRIER. Glenn J. Jaffe¹, A. C. Koh², Y. Ogura³, A. Weichselberger⁴, F. G. Holz⁵, P. U. Dugel⁶. ¹Duke University Eye Center, Durham, NC; ²Eye and Retina Surgeons, Camden Medical Centre, Singapore, Singapore; ³Nagoya City University Graduate School of Medical Sciences, Nagoya, Japan; ⁴Novartis Pharma AG, Basel, Switzerland; ⁵University of Bonn, Bonn, Germany; ⁶Retinal Consultants Arizona, Phoenix, AZ *CR, ✕

Exhibit Hall A0001-A0023

Monday, April 30, 2018 11:15 AM-1:00 PM

Anatomy and Pathology/Oncology

237 Retinoblastoma: From Bench to Bedside**Moderator: Vanessa M. Morales-Tirado**

1625 — A0001 Can Human Retinoblastoma Cell Lines Replacing Primary Cultured Retinoblastoma cells? Rong Lu, Z. Tang, C. Nie, Y. Chen, Y. Quan. Zhongshan Ophthalmic Center, Guangzhou, Guangdong, China

1626 — A0002 Mitochondrial bioenergetic characterization of cellular models of retinoblastoma. Sandipan Datta, G. Cortopassi. Molecular Bioscience, University of California, Davis, Davis, CA

1627 — A0003 Investigating Lsd1 in proper retinal development and retinoblastoma differentiation. Salma Ferdous, H. Grossniklaus, E. E. Geisert, J. M. Nickerson. Department of Ophthalmology, Emory University, Atlanta, GA

1628 — A0004 Targeting Nodal/TGF- β pathway to inhibit invasion and growth of retinoblastoma. Laura Asnaghi¹, L. Abu Safieh², D. White³, A. Mahale², H. Alkatan⁴, D. P. EDWARD^{3,5}, W. Yu⁶, S. Al Mesfer², A. Maktabi², A. Carcaboso⁷, J. S. Mumm³, C. Eberhart^{1,3}. ¹Dept of Pathology, Sch of Med, Johns Hopkins University, Baltimore, MD; ²King Khaled Eye Specialist Hospital, Riyadh, Saudi Arabia; ³Dept. of Ophthalmology, Johns Hopkins University, School of Medicine, Baltimore, MD; ⁴Dept. of Ophthalmology, King Saud University, Riyadh, Saudi Arabia; ⁵University of Illinois Eye and Ear Infirmary, Chicago, IL; ⁶Microarray Core Facility, Sidney Kimmel Cancer Center, Johns Hopkins University, School of Medicine, Baltimore, MD; ⁷Institut de Recerca Sant Joan de Deu, Barcelona, Spain

1629 — A0005 PI3K and MEK Signaling and Effects of Kinase Inhibitors in a Retinoblastoma Cell Model. Andrew Smith¹, M. Pawar¹, M. E. Van Dort^{2,3}, S. Galbán^{5,3}, G. Thurber⁴, B. D. Ross^{2,3}, C. G. Besirli¹. ¹Ophthalmology and Visual Sciences, University of Michigan, Ann Arbor, MI; ²Biological Chemistry, University of Michigan, Ann Arbor, MI; ³Radiology, University of Michigan, Ann Arbor, MI; ⁴Chemical Engineering, University of Michigan, Ann Arbor, MI; ⁵Center for Molecular Imaging, University of Michigan, Ann Arbor, MI *CR

1630 — A0006 Extracellular matrix remodelling in an Etoposide resistant WERI-Rb1 subclone. Vinodh Kakkassery^{1,2}, N. Wagner^{2,3}, M. Jarocki³, S. C. Joachim³, H. Dick², A. Faissner³, J. Reinhard³. ¹Department of Ophthalmology, University of Rostock, Rostock, Germany; ²Department of Ophthalmology, Ruhr-University Hospital Bochum, Bochum, Germany; ³Department of Cell Morphology and Molecular Neurobiology, Faculty of Biology and Biotechnology, Ruhr-University Bochum, Bochum, Germany

1631 — A0007 Selective death of Y79 retinoblastoma cells by magnetic hyperthermia via caspase dependent apoptotic pathway. Mercy D. Pawar¹, N. Slimani¹, Z. G. Ozkur¹, R. Tackett², R. E. Kumon², P. Vaishnav², C. G. Besirli¹, H. Demirci¹. ¹Ophthalmology and Visual Science, University of Michigan, Ann Arbor, MI; ²Keettering University, Flint, MI

1632 — A0008 Developing pH-dependent cancer-directed synergetic treatment for retinoblastoma. Zongchao Han^{1,2}, R. Gao^{1,3}, R. Mitra¹, M. Zheng¹. ¹Ophthalmology, The University of North Carolina at Chapel Hill, Chapel Hill, NC; ²Pharmacoengineering & Molecular Pharmaceutics, UNC Eshelman School of Pharmacy, Chapel Hill, NC; ³Institute of Medicinal Biotechnology, Chinese Academy of Medical Sciences and Peking Union Medical College, Beijing, China

1633 — A0009 Anti-tumor activity of cationic anti-microbial peptides (CAPs) and their synergism with Topotecan as a potential combination therapy for retinoblastoma tumors. Rajamani Lakshminarayanan¹, V. A. Barathi¹, V. Suresh Babu², A. Sinha Roy², N. Kumar Verma³, A. Ghosh². ¹Anti-Infectives, Singapore Eye Research Institute, Singapore, Singapore; ²Narayana Nethralaya Foundation, Bengaluru, Karnataka, India; ³LKC School of Medicine, Nanyang Technological University, Singapore, Singapore; ⁴Singapore Eye Research Institute, Singapore, Singapore

1634 — A0010 Cytotoxicity of Lactoferrin loaded Carboplatin and Etoposide drug delivery in Y79 Rb cell line and cancer stem cells. Geeta K. Vemuganti¹, N. RVL¹, R. M. Nair¹, N. Tomar², A. K. Kondapi², S. Kaliki³. ¹School of Medical Sciences, University of Hyderabad, Hyderabad, Andhra Pradesh, India; ²Department Of Biotechnology And Bioinformatics, University Of Hyderabad, Hyderabad, Telangana, India; ³The Operation Eyesight Universal Institute For Eye Cancer, Lv Prasad Eye Institute, Hyderabad, Telangana, India

1635 — A0011 Development of Biocompatible Photosensitizing Nanocomplex for Photodynamic Therapy Against Retinoblastoma After Intravitreal Injection. Dong Hyun Jo^{1,2}, K. Jeong³, J. Kim^{1,2}, J. Che⁴, W. Ryu⁵, N. Jeon⁷, S. Kim³, J. Kim^{1,6}. ¹Fight against Angiogenesis-Related Blindness (FARB) Laboratory, Clinical Research Institute, Seoul National University Hospital, Seoul, Korea (the Republic of); ²Tumor Microenvironment Research Center, Global Core Research Center, Seoul National University, Seoul, Korea (the Republic of); ³Center for Theragnosis, Korea Institute of Science and Technology, Seoul, Korea (the Republic of); ⁴Department of Experimental Animal Research, Biomedical Research Institute, Seoul National University Hospital, Seoul, Korea (the Republic of); ⁵Department of Mechanical Engineering, Yonsei University, Seoul, Korea (the Republic of); ⁶Department of Biomedical Sciences, Seoul National University College of Medicine, Seoul, Korea (the Republic of); ⁷School of Mechanical and Aerospace Engineering, Seoul National University, Seoul, Korea (the Democratic People's Republic of)

1636 — A0012 Retinoblastoma and Genome Instability. Yuning Jiang, W. CHU, C. Pang. Ophthalmology&Visual science, The Chinese University of HongKong, HongKong, Hong Kong

1637 — A0013 Chromosomal Analysis in the Aqueous Humor of Retinoblastoma eyes is predictive of globe salvage: the Surrogate Tumor Biopsy. Jesse L. Berry^{1,2}, I. Koo³, L. Xu⁴, A. L. Murphree^{1,2}, B. A. Le^{1,2}, S. Krishnan¹, K. Stachelek¹, T. C. Lee^{1,2}, J. W. Kim^{1,2}, P. Kuhn^{4,5}, D. Cobrinik^{1,2}, J. Hicks^{4,5}. ¹Children's Hospital Los Angeles, Los Angeles, CA; ²USC Roski Eye Institute, Los Angeles, CA; ³ISA Pharmaceuticals, Leiden, Netherlands; ⁴Department of Biological Sciences, Dornsife College of Letters, Arts, and Sciences, Los Angeles, CA; ⁵Norris Comprehensive Cancer Center, Keck School of Medicine, University of Southern California, Los Angeles, CA, Los Angeles, CA

1638 — A0014 Lack of correlation between Age at Diagnosis and RB1 mutations for Unilateral Retinoblastoma in a Predominantly Hispanic Population: The Importance of Genetic Testing. Abdul-Hadi Kaakour¹, J. L. Berry¹, L. Lewis³, E. J. Zolfaghari², S. Green², T. C. Lee^{1,2}, A. L. Murphree^{1,2}, J. W. Kim^{1,2}, R. Jubran³. ¹Ophthalmology, USC Roski Eye Institute, Los Angeles, CA; ²The Vision Center, Children's Hospital Los Angeles, Los Angeles, CA; ³Pediatrics, Children's Hospital Los Angeles, Los Angeles, CA

1639 — A0015 Spatiotemporal evolution of germline retinoblastoma. Sameh E. Gaballah^{1,2}, B. L. Gallie². ¹Ophthalmology, University of Alexandria, Alexandria, Egypt; ²Ophthalmology, University of Toronto, Toronto, Ontario, Canada

1640 — A0016 The Histopathological Changes of Recurrent Retinoblastoma After Vitrectomy. Bin Li, H. Bai. Lab of Ocular Pathology, Beijing Tongren Hospital; Beijing Institute of Ophthalmology, Beijing, China

Monday Posters
11:15 am – 1:00 pm

1641 — A0017 Mapping Global Prevalence, Treatment Capacity and Expertise for Retinoblastoma. Helen Dimaras, K. Hougham, J. Fujioka. *Ophthalmology & Vision Sciences, The Hospital for Sick Children, Toronto, Ontario, Canada*

1642 — A0018 Efficacy, Toxicity and Biodistribution of Intra-arterial vs. Intravenous Chemotherapy in a Rabbit Retinoblastoma Model. Anthony B. Daniels^{1,3}, M. T. Froehler², J. M. Pierce¹, A. H. Nunnally¹, I. Bozic⁴, Y. Tao⁴, Y. Zhang⁶, M. W. Calcutt⁶, L. Du^{5,3}, K. L. Boyd^{7,3}, D. L. Friedman^{8,3}, A. Richmond^{9,10}. ¹Department of Ophthalmology, Vanderbilt Eye Institute, Nashville, TN; ²Cerebrovascular Program, Vanderbilt University Medical Center, Nashville, TN; ³Vanderbilt-Ingram Cancer Center, Vanderbilt University Medical Center, Nashville, TN; ⁴Biomedical Engineering, Vanderbilt University, Nashville, TN; ⁵Biostatistics, Vanderbilt University, Nashville, TN; ⁶Biochemistry, Vanderbilt University, Nashville, TN; ⁷Pathology, Microbiology and Immunology, Vanderbilt University Medical Center, Nashville, TN; ⁸Pediatrics, Vanderbilt University Medical Center, Nashville, TN; ⁹Tennessee Valley Healthcare System, Department of Veterans Affairs, Nashville, TN; ¹⁰Cancer Biology Program, Department of Pharmacology, Vanderbilt University, Nashville, TN *CR

1643 — A0019 Frequency of atypical vascolarization during IAC for retinoblastoma. Jacob Pe'er¹, N. Levinger¹, J. Cohen², S. Frenkel¹. ¹Ophthalmology, Hadassah-Hebrew Univ Med Ctr, Jerusalem, Israel; ²Neurosurgery, Hadassah-Hebrew University Medical Center, Jerusalem, N/A, Israel

1644 — A0020 Total retinal detachments due to retinoblastoma: Outcomes following intra-arterial chemotherapy/ophthalmic artery chemosurgery. Megan Rowlands⁸, I. Mondesire-Crump¹, A. Levin¹, A. Mauguen², J. H. Francis^{1,3}, I. Dunkel^{4,5}, S. E. Brodie⁶, Y. P. Gobin^{1,7}, D. H. Abramson^{1,3}. ¹Surgery, The Memorial Sloan Kettering Cancer Center, New York City, NY; ²Epidemiology and Biostatistics, The Memorial Sloan Kettering Cancer Center, New York City, NY; ³Ophthalmology, Weill Cornell Medical College, New York City, NY; ⁴Pediatrics, Weill Cornell Medical College, New York City, NY; ⁵Pediatrics, The Memorial Sloan Kettering Cancer Center, New York City, NY; ⁶Ophthalmology, Mt. Sinai School of Medicine, New York City, NY; ⁷Neurosurgery, Weill Cornell Medical College, New York City, NY; ⁸Medicine, The Memorial Sloan Kettering Cancer Center, New York City, NY

1645 — A0021 Posterior Vitreous Detachment Associated with Retinoblastoma and Intravitreal Melphalan Injections for Vitreous Seeding. Ramon Lee¹, L. Patel¹, J. W. Kim^{1,2}, J. L. Berry^{1,2}. ¹USC Roski Eye Institute, Los Angeles, CA; ²Ophthalmology, Children's Hospital Los Angeles, Los Angeles, CA

1646 — A0022 Ophthalmic Vascular Events following Primary Intra-arterial Chemotherapy for Retinoblastoma Analysis of 243 infusions of 76 eyes at a single center. Lauren A. Dalvin^{2,1}, D. Ancona-Lazama², J. A. Lucio-Alvarez², P. Jabbour³, C. L. Shields². ¹Ophthalmology, Mayo Clinic, Rochester, MN; ²Wills Eye Hospital, Philadelphia, PA; ³Thomas Jefferson University, Philadelphia, PA *CR

1647 — A0023 Integrated Treatment During the Intravitreal Melphalan Era: Concurrent Intravitreal Melphalan and Systemic Chemoreduction. Fiona Kim^{1,2}, J. L. Berry^{1,2}, S. Shah^{1,2}, R. Jubran^{1,2}, J. W. Kim^{1,2}. ¹USC Roski Eye Institute, University of Southern California, Los Angeles, CA; ²The Vision Center, Children's Hospital Los Angeles, Los Angeles, CA

Exhibit Hall A0024-A0041

Monday, April 30, 2018 11:15 AM-1:00 PM

Physiology/Pharmacology

238 Aqueous humor dynamics, IOP

Moderator: Maurizio G. Uva

1648 — A0024 The effect of Ultrasound cycloplasty (UCP) using High Intensity Focused Ultrasound (HiFU) on aqueous humor dynamics. Pouya Alaghband^{1,2}, E. A. Galvis¹, M. Madekurozwa³, E. Eslah³, B. Chu⁴, D. R. Overby³, K. Lim^{1,2}. ¹Ophthalmology, St. Thomas' Hospital, London, United Kingdom; ²King's College London, London, United Kingdom; ³Imperial College London, London, United Kingdom; ⁴Oxford University, Oxford, United Kingdom; ⁵Eye, Al-Bahar, Kuwait, Kuwait ✗

1649 — A0025 sGC Stimulators and Trabecular Meshwork Biology. Iris Navarro¹, M. Kessler², U. L. Kelly¹, M. Parker¹, G. Hannig², P. Ge², W. Stamer¹. ¹Ophthalmology, Duke University Medical Center, Durham, NC; ²Ironwood Pharmaceuticals, Cambridge, MA *CR

1650 — A0026 A novel selective soluble guanylate cyclase activator MGV354, lowers intraocular pressure in preclinical models following topical ocular dosing. Ganesh Prasanna, L. Ferrara, B. Li, C. M. Adams, T. Ehara, L. Yang, C. Xiang, R. Newton, C. Towler, T. Topley, S. Kim, C. Ng, D. S. Rice, M. Mogi. *Bio Med (NIBR)/Ophthalmology Research, Novartis, Cambridge, MA *CR*

1651 — A0027 Genetic deletion of NOS3 gene in CAV1^{-/-} mice decreases drug sensitivity to nitric oxide donor and nitric oxide synthase inhibitor. Yuan Lei, M. Song, J. Wu, X. Sun. *Eye and ENT hospital of Fudan University, Shanghai, China*

1652 — A0028 Normal Aqueous Outflow Response To Elevated Intraocular Pressure in the Non-human Primate.. Faith M. McAllister, L. P. Pardon, R. S. Harwerth, N. B. Patel. *College of Optometry, University of Houston, Houston, TX*

1653 — A0029 In Vivo Angiographic Study of Rabbit Aqueous Outflow following Ab Interno Gelatin Stent Implantation. Susan S. Lee¹, S. Nagar¹, L. Rajagopalan¹, W. Orilla¹, K. G. Csaky², A. Huang³, A. Almazan¹, J. A. Burke¹, M. R. Robinson¹. ¹Allergan plc, Irvine, CA; ²Retina Foundation of the Southwest, Dallas, TX; ³Doheny Eye Institute and Department of Ophthalmology, University of California, Los Angeles, CA *CR

1654 — A0030 Visualization of conjunctival lymphatic vessels in normotensive rabbits. Lakshmi Rajagopalan¹, S. Nagar¹, W. Orilla¹, K. G. Csaky², A. Almazan¹, J. A. Burke¹, M. R. Robinson¹, S. S. Lee¹. ¹Allergan plc, Irvine, CA; ²Retina Foundation of the Southwest, Dallas, TX *CR

1655 — A0031 Mouse Eye Perfusion In-Vivo Versus Ex-Vivo: Influence on Aqueous Outflow Facility. J. Cameron Millar, N. N. Lopez, U. Raychaudhuri, A. F. Clark. *Pharmacology and Neuroscience, and North Texas Eye Research Institute, University of North Texas Health Science Center, Fort Worth, TX *CR*

1656 — A0032 A theoretical study of the role of conformational properties of transepithelial ion pumps on aqueous humor production. Riccardo Sacco¹, L. Sala², A. G. Mauri¹, D. Messenio³, G. Guidoboni⁴, B. Siesky⁵, A. Harris⁵. ¹Mathematics, Politecnico di Milano, Italy, Milan, Italy; ²Université de Strasbourg, CNRS, IRMA, Strasbourg, France; ³Eye Clinic, Department of Clinical Science, Luigi Sacco Hospital, University of Milan, Milan, Italy; ⁴Department of Electrical Engineering and Computer Science, College of Engineering, University of Missouri, Columbia, MO; ⁵Ophthalmology, Indiana University School of Medicine, Indianapolis, IN *CR

1657 — A0033 Relationship between ciliary and brain-derived neurotrophic factors in aqueous humor of patients with cataract and glaucoma. Alexander A. Shpak¹, A. Guekh², T. Druzhkova², K. Kozlova¹, N. Gulyaeva³. ¹The S. Fyodorov Eye Microsurgery Federal State Institution, Moscow, Russian Federation; ²Moscow Research and Clinical Center for Neuropsychiatry of the Healthcare Department of Moscow, Moscow, Russian Federation; ³Institute of Higher Nervous Activity and Neurophysiology of Russian Academy of Sciences, Moscow, Russian Federation

1658 — A0034 The effect of Dex on MYOC, AXIN2 and sFRP1 expression in primary human TM cells. Jie J. Zheng, C. Zhang, E. Tannous. *Department of Ophthalmology, Stein Eye Institute, UCLA, Los Angeles, CA*

1659 — A0035 Pentablock Copolymer Dexamethasone Nanoformulations Induced Ocular Hypertension in Mice. Guorong Li¹, V. Agrahari², I. Navarro¹, S. Farsi¹, A. K. Mitra³, W. Stamer¹. ¹Ophthalmology, Duke Eye Center, Durham, NC; ²Department of Biopharmaceutical Sciences, Bernard J Dunn School of Pharmacy, Shenandoah University, Winchester, VA; ³School of Pharmacy, University of Missouri-Kansas City, Kansas City, MO

1660 — A0036 Tandem-pore domain potassium channels are components of intracellular signaling pathways, determinants of pH sensitivity and mechanosensitivity of human trabecular meshwork cells. Oleg Yarishkin¹, T. Phuong¹, J. M. Baumann^{2,3}, A. S. Crandall¹, F. Ahmed⁴, K. Y. Torrejon⁴, D. Krizaj^{1,5}. ¹Department of Ophthalmology and Visual Sciences, University of Utah School of Medicine, Salt Lake City, UT; ²Department of Bioengineering, University of Utah, Salt Lake City, UT; ³Bioengineering Graduate Program, University of Utah, Salt Lake City, UT; ⁴Glauconix, Rochester, NY; ⁵Department of Neurobiology & Anatomy, University of Utah School of Medicine, Salt Lake City, UT

1661 — A0037 Factors Predictive of Intraocular Pressure Increases during Robotic-Assisted Radical Prostatectomy. Takashi Nagamoto¹, K. Akiyama^{1,2}, Y. Mizuno^{1,2}, M. Fukui^{1,2}, A. Naruo¹, S. Saito³, C. Ozu³, T. Noda^{1,2}. ¹Ophthalmology, National Hospital Organization, Tokyo Medical Center, Tokyo, Japan; ²Division of Vision Research, National Institute of Sensory Organs, National Hospital Organization, Tokyo Medical Center, Tokyo, Japan; ³Urology, National Hospital Organization, Tokyo Medical Center, Tokyo, Japan *CR

1662 — A0038 The Mont Blanc Study – The effect of altitude on intraocular pressure and central corneal thickness in healthy volunteers. Carlo Bruttini¹, A. Verticchio Vercellin^{1,2}, B. Montanaro¹, M. Manera¹, C. Tinelli³, A. De Silvestri³, G. Milano¹. ¹University Eye Clinic, Fondazione IRCCS Policlinico San Matteo, Pavia, Italy; ²Glaucoma Unit, IRCCS Fondazione G.B. Bietti, Rome, Italy; ³Clinical Epidemiology and Biometric Unit, IRCCS Policlinico San Matteo, Pavia, Italy

1663 — A0039 Intraocular pressure and ocular shape changes during altitude acclimatization from Beijing to Lhasa. Yuan Wu¹, Q. Ciren², X. Yan¹, Y. Shao³. ¹Ophthalmology, Peking University First Hospital, Beijing, China; ²Ophthalmology, Tibet Autonomous Region People's Hospital, Lhasa, China; ³State Key Laboratory of Nonlinear Mechanics, Chinese Academy of Sciences, Beijing, China

1664 — A0040 Yellow filter effect on melatonin secretion in the eye: Role in IOP regulation. Hanan A. Alkozi, V. Iledó, J. J. Pintor. Biochemistry and molecular biology, University Complutense of Madrid, Madrid, Spain

1665 — A0041 Relationship between intraocular pressure, blood pressure and cerebrospinal fluid pressure: a theoretical approach. Giovanna Guidoboni¹, F. Salerni², R. Repetto⁴, M. Szopos³, A. Harris⁵. ¹Electrical Engineering and Computer Science, University of Missouri, Columbia, MO; ²Physics, University of Parma, Parma, Italy; ³Université de Strasbourg, CNRS, IRMA UMR 7501, Strasbourg, France; ⁴Civil, Chemical and Environmental Engineering, University of Genova, Genova, Italy; ⁵Glick Eye Institute, Indiana University School of Medicine, Indianapolis, IN *CR

Exhibit Hall A0187-A0224

Monday, April 30, 2018 11:15 AM-1:00 PM

**Multidisciplinary Ophthalmic Imaging Group
239 Image Processing and Interpretation**

Moderators: Giovanni Gregori and Yuen P. Chui

1666 — A0187 Clinical Validation of Diabetic Retinopathy Lesion Segmentation in Ultra-Widefield images. Sandeep Bhat¹, C. Siagian¹, C. Ramachandra¹, M. Bhaskaranand¹, C. M. Sears², M. G. Niitala², S. R. Sadda², K. Solanki¹. ¹Eyenuk, Inc, Woodland Hills, CA; ²Doheny Eye Institute, Los Angeles, CA *CR

1667 — A0188 Characterizing OCTA Images with Gray Level Co-occurrence Matrix (GLCM) Statistics and Their Correlations to Capillary Density. Toco Y. Chui^{1,2}, J. S. Andrade Romo¹, G. Lynch^{1,2}, A. Zakik¹, R. E. Linderman³, J. Carroll^{4,3}, R. B. Rosen^{1,2}. ¹Ophthalmology, New York Eye & Ear Infirmary of Mount Sinai, New York, NY; ²Ophthalmology, Icahn School of Medicine at Mount Sinai, New York, NY; ³Cell Biology, Neurology and Anatomy, Medical College of Wisconsin, Milwaukee, WI; ⁴Ophthalmology & Visual Sciences, Medical College of Wisconsin, Milwaukee, WI *CR

1668 — A0189 Structure analysis of the choriocapillaris in normal eyes by multiple en face optical coherence tomography angiography image averaging. Ai Fukunishi, S. Ooto, A. Uji, T. Kamei, A. Tsujikawa. Ophthalmology, Kyoto University, Kyoto City, Japan *CR

1669 — A0190 Accurate measurement of retinal vascular density in cases with macular edema using an updated method of automatic segmentation. Akiko Jinno, k. tsuboi, M. Kamei. Ophthalmology, Aichi Medical University, Nagoya, AICHI, Japan

1670 — A0191 Comparative Assessment of Semi-Automated Conjunctival Vessel Quantification Methodologies for Spectral Domain Anterior Segment Optical Coherence Tomography Angiography. William Binotti, R. M. Nose, G. Dieckmann, A. Jamali, Y. Seyed-Razavi, P. Hamrah. Tufts Medical Center, Boston, MA *CR

1671 — A0192 Automated Algorithmic Analysis of OCT Scans for Vitreous Hyperreflective Foci in Patients with Retinal Vein Occlusion. Edward Korot^{1,2}, P. Keane³, K. Kortum³, D. A. Antonetti². ¹Beaumont Eye Institute, Royal Oak, MI; ²University of Michigan Kellogg Eye Center, Ann Arbor, MI; ³Moorfields Eye Hospital, London, United Kingdom

1672 — A0193 A Novel OCT Denoising Algorithm Based on Signal Decomposition and Constrained Wavelet Thresholding. Hiroshi Ishikawa¹, X. Sui², I. Selesnick², G. Wollstein¹, J. S. Schuman¹. ¹NYU Langone Eye Center, NYU School of Medicine, New York, NY; ²NYU Tandon School of Engineering, New York, NY *CR

1673 — A0194 ReLayer: a free, online tool for measuring retinal thickness based on a new automatic method for the segmentation of layers in OCT images. Giovanni Ometto¹, I. Moghul⁸, G. Montesano^{1,2}, A. Hunter³, N. Pontikos^{4,5}, P. Jones^{1,5}, P. A. Keane^{6,5}, A. K. Denniston^{6,7}, D. P. Crabb¹. ¹Division of Optometry and Visual Science, School of Health Sciences, City University of London, London, United Kingdom; ²School of Ophthalmology, University of Milan, Milan, Italy; ³School of Computer Science, University of Lincoln, Lincoln, United Kingdom; ⁴Moorfields Eye Hospital, London, United Kingdom; ⁵Institute of Ophthalmology, University College London, London, United Kingdom; ⁶University Hospitals Birmingham NHSFT, Birmingham, United Kingdom; ⁷Centre for Translational Inflammation Research, College of Medical and Dental Sciences, University of Birmingham, Birmingham, United Kingdom; ⁸UCL Cancer Institute, University College London, London, United Kingdom

1674 — A0195 Automated Quantification of Haller's Layer in Choroid using Swept-source Optical Coherence Tomography. Jay Chhablani, S. Rao Uppugunduri, M. Rasheed, A. Richhariya, S. Jana, K. Vupparaboina. Vitreo-Retina, L V Prasad Eye Institute, Hyderabad, India

1675 — A0196 Validation of 3-dimensional Analysis of Choroidal Neovascularization (CNV) as a surrogate marker for response to therapy. Rubbia Afridi¹, A. McKeown³, N. V. Nguyen^{1,2}, M. Hassan¹, M. S. Halim¹, S. Baluyor², Y. J. Sepah^{1,2}. ¹Ophthalmology, Byers Eye Institute, Menlo Park, CA; ²Ocular Imaging Research and Reading Center, Menlo Park, CA; ³Heidelberg Engineering, Franklin, MA *CR

1676 — A0197 A Novel Method of Averaging Ocular Coherence Tomography Angiography Images Using Photoshop Software. Mirriam Mikhail, C. Jiang, N. Choudhry. Faculty of Medicine, University of Toronto, Markham, Ontario, Canada

1677 — A0198 Multi-layer OCT segmentation in the presence of layer-disrupting pathology: Just-Enough Interaction Approach. Milan Sonka^{1,2}, K. Lee², Z. Guo², H. Zhang², A. Wahle², S. M. Waldstein³, B. Gerendas³, U. Schmidt-Erfurth³, M. D. Abramoff^{1,2}. ¹Ophthalmology & Visual Science, University of Iowa, Iowa City, IA; ²ECE, University of Iowa, Iowa City, IA; ³Christian-Doppler-Laboratory for Ophthalmic Image Analysis, Medical University of Vienna, Vienna, Austria *CR

1678 — A0199 Automated Retinal Layer Segmentation Algorithm for OCT Images: A Validation Study. Priyanka Roy^{1,2}, M. Kuppuswamy Parthasarathy¹, J. S. Zelek², V. Lakshminarayanan^{1,2}. ¹School of Optometry & Vision Science, University of Waterloo, Waterloo, Ontario, Canada; ²Department of Systems Design Engineering, University of Waterloo, Waterloo, Ontario, Canada

1679 — A0200 Automated Quantification of Posterior Vitreous Inflammation using Optical Coherence Tomography. Daniel Feiler, E. Binkley, I. C. Han, D. B. Critser, J. C. Folk. Department of Ophthalmology and Visual Sciences, University of Iowa, Iowa City, IA

1680 — A0201 The impact of scanning density on quantitative analyses in optical coherence tomography for choroideremia. Amy McIntosh¹, S. Velaga¹, M. G. Nittala¹, A. H. Hariri^{1,2}, A. Girach³, S. R. Sadda^{1,2}, M. S. Ip^{1,2}. ¹Doheney Eye Institute, Los Angeles, CA; ²Department of Ophthalmology, David Geffen School of Medicine at UCLA, Los Angeles, CA; ³NightstarX Ltd, London, United Kingdom *CR

1681 — A0202 Calculation and mapping of choroidal thickness in OCT images. Luis Mendonca¹, S. Faria², S. Penas³, J. Silva^{2,4}, A. Mendonça^{2,5}. ¹Hospital de Braga, Porto, Portugal; ²Center for Biomedical Engineering Research, INESC TEC, Porto, Portugal; ³Dept. Ophthalmology, Centro Hospitalar São João, Porto, Portugal; ⁴Dept. Informatics Engineering, FEUP, Porto, Portugal; ⁵Dept. Electrical and Computers Engineering, FEUP, Porto, Portugal

1682 — A0203 Groupwise 3D Nonlinear Registration of OCT Image Series for Analyzing Dynamic Lamina Cribrosa Changes. Sungmin Hong¹, M. Ravier¹, H. Ishikawa², C. Giroi³, J. Tauber², G. Wollstein², J. S. Schuman², J. Fishbaugh¹, G. Gerig¹. ¹Computer Science and Engineering, Tandon School of Engineering, New York University, Brooklyn, NY; ²NYU Langone Eye Center, NYU School of Medicine, New York, NY; ³Computer Science, CPE, Lyon, France *CR

1683 — A0204 Visual Analysis: A new method to analyze OCT thickness data of retinal layers. Ruby Kala Prakasam¹, M. Röhlig², D. - Fischer², A. G. Juenemann¹, H. Schumann², O. Stachs¹. ¹Department of Ophthalmology, University of Rostock, Rostock, Germany; ²Department of Computer science, University of Rostock, Rostock, Germany; ³Kinder- und Jugendklinik, University of Rostock, Rostock, Germany

1684 — A0205 Accuracy of algorithmic segmentations of ILM and RPE against manual grading. Ruchi Vyas, M. K. Durbin, A. Fard, H. Bagherinia. Carl Zeiss Meditec, Inc., Dublin, CA *CR

1685 — A0206 Automated 3-D segmentation of retinal layers from optical coherence tomography images using pattern recognition-based method. omar helmy¹, A. ElTanboly^{2,2}, A. Soliman², A. Sleman², H. Sandhu², A. El-Baz², S. Schaal¹. ¹Ophthalmology, University of Massachusetts, Worcester, MA; ²School of Engineering, University of Louisville, Louisville, KY

1686 — A0207 Quantification of Vitreous Opacity by a Newly Developed Method Based on Analysis of Interframe Differences in Slitlamp Movies. Chiemi Yamashiro¹, A. Nishimoto¹, Y. Kobayashi¹, S. Uchi¹, M. Hatano¹, M. Kobayashi¹, T. Orita¹, K. Tokuda¹, R. Takabatake⁴, M. Takahashi¹, K. Yamauchi², E. Uchino³, K. Kimura¹. ¹Yamaguchi University School of Medicine, Ube, Yamaguchi, Japan; ²Japanese Red Yamaguchi Hospital, Yamaguchi, Japan; ³Yamaguchi University, Yamaguchi, Japan; ⁴Takabatake West Eye Clinic, Okayama, Japan

1687 — A0208 Quantification of the images obtained with Optos 200Tx and Optos California. Yu Kato, M. Inoue, A. Hirakata. Kyorin Eye Center, Kyorin University School of Medicine, Tokyo, Japan

1688 — A0209 Image Quality Optimization Algorithm for Ultra-Wide-angle Fundus Color SLO. Naoto Honda¹, K. Ito², H. Nakanishi¹, M. Hanebuchi², N. Isogai¹. ¹Medical Development Dept., Eye Care Div., NIDEK CO., LTD., Gamagori, AICHI, Japan; ²Advanced Technology Development Dept., Eye Care Div., NIDEK CO., LTD., Gamagori, Japan *CR

1689 — A0210 Computer-Based comprehensive screening of eye diseases using retinal images, medical history and laboratory data. Jeffrey C. Wigdahl¹, N. Manivannan¹, S. C. Nemeth¹, G. Zamora¹, W. Bauman², P. Soliz¹, E. Barriga¹. ¹VisionQuest Biomedical, Albuquerque, NM; ²Retinal Institute of South Texas, San Antonio, TX *CR

1690 — A0211 Generation of features for retinal image quality evaluation using simulated annealing. Robert Karlsson², B. A. Jónsson³, S. H. Hardarson⁴, O. B. Olafsdottir^{4,1}, G. H. Halldórsson², E. Stefansson^{1,4}. ¹Ophthalmology, University of Iceland, Reykjavik, Iceland; ²Oxymap, Reykjavik, Iceland; ³Electrical and Computer Engineering, University of Iceland, Reykjavik, Iceland; ⁴Institute of Physiology, University of Iceland, Reykjavik, Iceland *CR

1691 — A0212 Can Fundus Photograph Montage Replace the Standard 7-Field Stereo Images for Diabetic Retinopathy Severity Scale Assessments? Sean Baluyot¹, M. Hassan², M. S. Halim², R. Afridi², N. V. Nguyen^{2,1}, Y. J. Sepah^{1,2}. ¹Ocular Imaging Research & Reading Center, Menlo Park, CA; ²Byers Eye Institute, Stanford University, Palo Alto, CA

1692 — A0213 Diagnostic assistance system to detect progression of diabetic retinopathy (DR) in fundus images of follow up examinations of patients with diabetes. Alexander Dietzel¹, C. Schanner², A. Falck^{2,3}, N. Hautala^{2,3}. ¹Multimodal data analysis in biomedical engineering, Institute of Biomedical Engineering and Informatics, Ilmenau, Germany; ²Medical Research Center, Department of Ophthalmology, PEDEGO Research Unit, University of Oulu, Oulu, Finland; ³Department of Ophthalmology, Oulu University Hospital, Oulu, Finland

1693 — A0214 Fully Automated Identification of Retinal Artery and Vein Graph Structure using a Novel Tree Growing Method. Shuang Yu, M. Mehdizadeh, D. Xiao, S. Frost, Y. Kanagasingam. CSIRO, Perth, Western Australia, Australia

1694 — A0215 A Novel Method for Classification of Exudates and Retinal Sheen in Fundus Photographs for Automated Disease Grading. Sajib Kumar Saha, D. Xiao, Y. Kanagasingam. CSIRO, Perth, Western Australia, Australia

1695 — A0216 Effective visualization of Retinal Vessel Analysis (RVA) data. Andras Joo^{1,2}, E. Scarpello¹, A. Ekar², D. Gherghel¹. ¹Vascular research laboratory, Ophthalmic Research Group, School of life and health Sciences, Aston University, Birmingham, England, United Kingdom; ²Computer Science, School of Engineering and Applied Science, Aston University, Birmingham, United Kingdom

1696 — A0217 Computer-assisted evaluation of vessels tortuosity in Fabry disease. Chiara Lenzetti¹, A. Sodi¹, D. Bacherini¹, L. Finocchio¹, F. Ullah Patwary¹, I. Tanini², I. Olivotto², G. Virgili¹, S. Rizzo¹. ¹Ophthalmology, University of Florence, Florence, Italy; ²Unit Cardiomiopatie, University of Florence, Florence, Italy

1697 — A0218 Automated analysis of the corneal sub-basal nerve plexus in neuropathic ocular pain. Ashlin Joye, G. Seitzman, J. D. Keenan, T. Lietman, J. A. Gonzales. Francis I. Proctor Foundation, UC San Francisco, San Francisco, CA

1698 — A0219 Beyond the average threshold: Alternatives in the analysis of microperimetry data. Iain R. Wilson¹, J. Jolly^{1,2}, S. Downes^{1,2}, R. E. MacLaren^{1,2}. ¹Nuffield Laboratory of Ophthalmology, University of Oxford, Oxford, United Kingdom; ²Oxford Eye Hospital, Oxford University Hospitals NHS Foundation Trust, Oxford, Oxfordshire, United Kingdom

1699 — A0220 A Novel Iridocorneal Angle Measurement Technique: Assessment of Inter- and Intra-Scorer Variability. Ashley Nguyen^{2,1}, Q. Ho¹, F. J. Lopez¹, K. Kerr¹, S. Schneider¹, J. Yang¹, M. L. Goodkin¹, M. Y. Chen¹. ¹Allergan, Irvine, CA; ²USC School of Pharmacy, Los Angeles, CA *CR

1700 — A0221 Automatic and Objective Assessment of Meibomian Glands Structure and Drop Out. Clara Llorens Quintana¹, L. Rico Del Viejo², P. Syga³, C. Sieluzycski¹, D. Iskander¹. ¹Department of Biomedical Engineering, Wroclaw University of Technology, Wroclaw, Poland; ²Optics and Optometry, University Complutense of Madrid, Madrid, Spain; ³Department of Computer Science, Wroclaw University of Science and Technology, Wroclaw, Poland

1701 — A0222 Visualization of Structural Changes After Transscleral Cyclophotocoagulation Using 3D Reconstruction of UBM Images. Richard Helms, F. Orge. Ophthalmology, University Hospitals Cleveland Medical Center, Cleveland, OH

1702 — A0223 3D reconstruction of UBM images; Automated volumetric measurement of anterior segment structures and iridocorneal angle. Faruk H. Orge, R. Helms. Ophthalmology, UH CMC and Rainbow B&C Hospital, Cleveland, OH

1703 — A0224 A Novel Approach Using ImageJ Analysis to Quantitatively Define Sickle Cell Retinopathy Lesions Pre-to-Post Treatment. Brett Malbin^{1,2}, J. Barbosa^{1,2}, X. Lin^{1,2}. ¹Ophthalmology, Kresge Eye Institute, Detroit, MI; ²Wayne State University School of Medicine, Detroit, MI

Exhibit Hall A0225-A0262

Monday, April 30, 2018 11:15 AM-1:00 PM

Multidisciplinary Ophthalmic Imaging Group / Visual Psychophysics/Physiological Optics

240 Machine Learning on Imaging

Moderators: Joseph A. Izatt and Aaron Y. Lee

1704 — A0225 Automated Detection of Diabetic Retinopathy. jie xu¹, w. Zhang², Z. Li³. ¹fundus, Beijing Institute of Ophthalmology, Beijing, China; ²Baidu AI, Beijing, China; ³UNC Charlotte, Charlotte, NC

1705 — A0226 Automatic identification of referral-warranted diabetic retinopathy using deep learning on mobile phone images. Theodore Leng³, M. Greven^{3,2}, S. Smith³, C. Ludwig³, R. Chang³, R. Gargeya¹. ¹Stanford University, Stanford, CA; ²Wake Forest University, Wake Forest, NC; ³Byers Eye Institute at Stanford, Stanford University School of Medicine, Palo Alto, CA *CR

1706 — A0227 Classic Risk Factors for Diabetic Retinopathy: Deep Learning versus Human Graders. Daniel Ting^{1,2}, C. Cheng², C. Y. Cheung³, G. Lim⁴, G. Tan¹, W. Hsu⁴, M. Lee⁴, T. Wong^{1,2}. ¹Vitreo-retinal Department, Singapore National Eye Center, Singapore, Singapore; ²Ophthalmology and Visual Science Academic Clinical Program, Duke-NUS Medical School, National University of Singapore, Singapore, Singapore; ³Ophthalmology, Chinese University of Hong Kong, Hong Kong, Hong Kong; ⁴School of Computing, National University of Singapore, Singapore, Singapore *CR

1707 — A0228 Exudate detection by a novel hybrid approach for diabetic retinopathy screening and progression monitoring. Di Xiao¹, S. Yu¹, D. An², M. Tay-Kearney², Y. Kanagasingam¹. ¹Australian e-Health Research Centre, CSIRO, Perth, Western Australia, Australia; ²Lions Eye Institute, Perth, Western Australia, Australia

1708 — A0229 Artificial intelligence for evaluating retinographies: beyond the diabetic retinopathy. Miguel A. Zapata^{1,2}, E. U. Moya-Sanchez³, J. Moreno³, D. Garcia-Gasulla³, F. Parés³, D. Royo², A. Vilalta^{3,4}, U. Cortés^{3,4}, E. Ayguadé^{3,4}, J. Labarta^{3,4}. ¹ophthalmology, Hospital Vall Hebron, Barcelona, Sant Cugat Valles, Barcelona, Spain; ²Opretina, Sant Cugat Valles, Barcelona, Spain; ³Barcelona Supercomputing Center (BSC), Barcelona, Barcelona, Spain; ⁴Universitat Politècnica de Catalunya - BarcelonaTECH, Barcelona, Barcelona, Spain *CR

1709 — A0230 Ensemble Effect of Spatial Representations of Features and A Deep Architecture for Automatic Diabetic Retinopathy Screening. Jeremy Benson^{1,2}, E. Barriga¹, T. Estrada², S. C. Nemeth¹, J. C. Wigdahl¹, J. Maynard¹, P. Soliz¹. ¹VisionQuest Biomedical, LLC, Albuquerque, NM; ²Computer Science, University of New Mexico, Albuquerque, NM *CR

1710 — A0231 Automatic Detection of Early Structural Changes in Nonproliferative Diabetic Retinopathy Using Optical Coherence Tomography Angiography Images. Harpal Sandhu¹, o. helmy², N. Eladawi¹, M. Elmogy¹, A. El-Baz¹, S. Schaaf¹. ¹Ophthalmology, University of Louisville, Louisville, KY; ²Ophthalmology, University of Massachusetts, Worcester, MA

1711 — A0232 Fully Convolutional Neural Networks for Automatic Extraction of Diabetic Retinopathy Features in Retinal Fundus Images. Jakob Andersen¹, W. K. Juel¹, J. Grauslund^{2,3}, T. Rajeeth Savarimuthu¹. ¹The Maersk McKinney Moller Institute, University of Southern Denmark, Odense M, Fyn, Denmark; ²Department of Ophthalmology, Odense University Hospital, Odense M, Fyn, Denmark; ³Research Unit of Ophthalmology, Odense University Hospital, Odense M, Denmark

1712 — A0233 Deep Learning System for Detection of Diabetic Macular Using Fundus Imaging and Optical Coherence Tomography. Yong Liu¹, D. Ting², X. X. Xu¹, G. Tjio¹, L. Shaohua¹, J. Du¹, S. S. Feng¹, T. Zhou¹, L. Schmetterer², G. Tan², C. Cheng², R. Goh¹, T. Y. Wong². ¹A*STAR's Institute of High Performance Computing, Singapore, Singapore; ²Singapore Eye Research Institute, Singapore, Singapore

1713 — A0234 A Deep Learning System for Myopic Macular Degeneration Using Fundus Images. Xinxing Xu¹, D. TING^{2,3}, Y. Liu¹, J. Du¹, Y. Tham³, N. Tan³, C. Wong^{2,3}, G. Cheung^{2,3}, C. Cheng^{2,3}, R. Goh¹, T. Y. Wong^{2,3}, S. SAW^{2,3}. ¹A*STAR's Institute of High Performance Computing, Singapore, Singapore; ²Singapore National Eye Center, Singapore Eye Research Institute, Singapore, Singapore; ³Duke-NUS Medical School, National University of Singapore, Singapore, Singapore

1714 — A0235 Automated Geographic Atrophy Segmentation in Infrared Reflectance Images Using Deep Convolutional Neural Networks. Zhihong Hu, Z. Wang, N. S. Abdelfattah, J. Sada, S. R. Sada. Retina, Doheny Eye Institute, Arcadia, CA *CR

1715 — A0236 Automatic classification of Age-related Macular Degeneration and normal OCT images using deep learning based approach. Guangzhou An^{1,2}, S. Takagi³, Y. Hirami³, M. Mandai^{3,4}, M. Takahashi^{3,4}, Y. Kurimoto³, H. Yokota^{2,5}, M. Akiba^{1,2}. ¹R&D Division, TOPCON Corporation, Tokyo, Japan; ²Cloud-Based Eye Disease Diagnosis Joint Research Team, RIKEN, Wako, Japan; ³Kobe City Eye Hospital, Kobe, Japan; ⁴Laboratory for Retinal Regeneration, Riken, Kobe, Japan; ⁵Image Processing Research Team, Riken, Wako, Japan *CR

1716 — A0237 Automated Identification of Age-Related Macular Degeneration from Color Fundus Photographs Using Deep Learning. Ankur S. Gupta¹, R. Gargeya¹, J. P. SanGiovanni³, T. Leng². ¹Spect Inc., Palo Alto, CA; ²Byers Eye Institute at Stanford, Stanford University School of Medicine, Palo Alto, CA; ³Georgetown University, Washington, District of Columbia *CR

1717 — A0238 Deep learning for prediction of AMD progression. Daniel B. Ruskoff¹, A. Lamin^{2,3}, J. D. Oakley¹, A. M. Dubis^{2,3}, S. Lightman^{2,3}, S. Sivaprasad^{2,3}. ¹Voxeleron LLC, Pleasanton, CA; ²UCL Institute of Ophthalmology, London, United Kingdom; ³Moorfields Eye Hospital, London, United Kingdom *CR

1718 — A0239 Most contributing quantified ocular parameters for classification of glaucomatous optic disc shape. Masahiro Akiba^{1,2}, G. An^{1,2}, H. Yokota^{3,2}, K. Omodaka⁴, S. Tsuda⁴, Y. Shiga⁴, n. takada⁴, T. Kikawa⁴, H. Takahashi⁴, T. Nakazawa^{3,4}. ¹R&D Division, Topcon Corp., Itabashi, Japan; ²Cloud-Based Eye Disease Diagnosis Joint Research Team, RIKEN, Wako, Japan; ³Image Processing Research Team, RIKEN, Wako, Japan; ⁴Ophthalmology, Tohoku University, Sendai, Japan *CR

1719 — A0240 Convolutional Neural Networks for identification and classification of optic nerve damage features. Sandra Belalcazar^{1,2}, H. A. Rios^{1,2}, V. Carpio^{1,2}, O. J. Perdomo³, C. R. Carvajal¹, F. A. Gonzalez³, H. Müller⁴. ¹Fundacion Oftalmologica Nacional, Bogota, Colombia; ²Universidad del Rosario, Bogota, Colombia; ³Universidad Nacional, Bogota, Colombia; ⁴University of Applied Sciences Western Switzerland HES-SO, Sierre, Switzerland

1720 — A0241 Machine learning for identifying glaucoma related features in fundus images. Derek Wu¹, N. Hammel^{1,2}, R. C. Dunn¹, L. Peng¹, D. Webster¹. ¹Research, Google, Mountain View, CA; ²Ophthalmology and Vision Science, University of California, Davis, Sacramento, CA

1721 — A0242 Longitudinal Data in Ophthalmic Imaging: Curation and Annotation. Joelle Hallak¹, D. Yi², V. Noorzi³, C. Lam², N. Mojab³, J. Baker⁴, D. Rubin⁴, D. T. Azar⁴, M. Rosenblatt⁴. ¹Ophthalmology & Visual Sciences, Illinois Eye & Ear Infirmary, Chicago, IL; ²Biomedical Data Science, Stanford, Stanford, CA; ³Computer Science, University of Illinois at Chicago, Chicago, IL

1722 — A0243 Deep Learning Is Effective for Classifying Non-referable versus Referable Eye Condition using Fundus Photographs. Jin Hyung Kim¹, T. Rim¹, S. Kim², H. Kim¹, J. Kim¹, T. Choi², S. Kim^{1,3}. ¹Ophthalmology, Department of Ophthalmology, Severance Hospital, Institute of Vision Research, Yonsei University College of Medicine, Seoul, Korea, Seoul, Korea (the Republic of); ²Medi Whale Inc., Seoul, Korea (the Republic of); ³Yonsei Healthcare Big Data Based Knowledge Integration System Research Center, Yonsei University College of Medicine, Seoul, Korea (the Republic of)

1723 — A0244 Deep Learning-Based Automated Classification of Multi-Categorical Abnormalities from Optical Coherence Tomography Images. Wei Lu^{2,1}, Y. Tong^{2,1}, Y. Yu³, B. Wang³, Q. Deng^{2,1}, X. Lei^{2,1}, Y. Shen^{2,1}. ¹Wuhan University, Wuhan, China; ²Eye Center, Wuhan University, Wuhan, China; ³Wuhan Hai Xing Tong Technology Limited Company, Wuhan, China

1724 — A0245 Identifying suspicious regions in optical coherence tomography angiography using convolutional neural networks. Conor Leahy¹, T. Perez¹, M. K. Durbin¹, A. H. Kashani², T. Murata³, N. Shemonski¹. ¹Carl Zeiss Meditec, Inc., Dublin, CA; ²Keck School of Medicine, Los Angeles, CA; ³Department of Cardiovascular Research, Shinsu University Graduate School of Medicine, Matsumoto, Japan *CR

1725 — A0246 The Retina Metric CNN (Convolutional Neural Network) Study: Using An Artificial Intelligence Platform To Learn And Improve Patient Outcomes. Michael Bennett¹, K. Demaine², C. Milroy³, B. Stark³. ¹Retina Institute of Hawaii, Honolulu, HI; ²Retina Metrics, LLC, Los Angeles, CA; ³Engility, Chantilly, VA

1726 — A0247 Retinal pathology screening with a multi-image convolutional neural network. Benoit Hijazi¹, G. Quellec¹, A. Erginay², M. Lamard¹, B. Cochener¹. ¹Finistère, Bretagne, France, CHRU Morvan Brest, Brest, France; ²APHP Paris, Paris, France

1727 — A0248 A machine learning approach to optic nerve head detection in widefield fundus images. Kevin Meng, C. Leahy, H. Bagherinia, G. C. Lee, L. De Sisternes, N. Shemonski. Carl Zeiss Meditec, Inc., Dublin, CA *CR

1728 — A0249 Predicting eye laterality for non-mydratic fundus images: A comparative study of deep learning and image processing. Keyur Ranipa, K. Patel. CARIn, Carl Zeiss India, Bengaluru, Karnataka, India *CR

1729 — A0250 Predicting refractive error from retinal fundus images using deep learning. Ryan Poplin¹, A. Varadarajan¹, K. Blumer¹, C. Angermueller¹, J. Ledsam², R. Chopra³, P. Keane^{2,3}, G. Corrado¹, L. Peng¹, D. Webster¹. ¹Google Research, Google, Inc., Mountain View, CA; ²Google DeepMind, Google, Inc., London, United Kingdom; ³NIHR Biomedical Research Centre for Ophthalmology, Moorfields Eye Hospital NHS Foundation Trust and UCL Institute of Ophthalmology, London, United Kingdom *CR

1730 — A0251 Deep-learning estimation of choroidal thickness from color fundus photographs: a validation study. Hidenori Takahashi¹, Y. Arai¹, T. Yamashita², T. Hasegawa⁴, T. Ohgami³, S. Sonoda², Y. Tanaka⁴, H. Tampo⁴, S. Inoda¹, S. Sakamoto¹, A. Kakehashi⁴, H. Kawashima⁴, Y. Yanagi^{5,6}. ¹Ophthalmology, Jichi Medical University, Shimotsuke-shi, Tochigi, Japan; ²Kagoshima University, Kagoshima, Japan; ³Ibaraki Seinan Medical Center, Sashima, Japan; ⁴Saitama Medical Center, Saitama, Japan; ⁵Singapore Eye Research Institute, Singapore, Singapore; ⁶Singapore National Eye Centre, Singapore, Singapore *CR

1731 — A0252 Disease prediction from thickness maps derived from OCT scans using Machine Learning and only a handful of data. Alexander Urich¹, K. Ranipa², K. Patel², M. K. Durbin³, C. Wojek⁴, A. Freytag⁵. ¹Carl Zeiss AG, Munich, Germany; ²Carl Zeiss India, Bangalore, India; ³Carl Zeiss Meditec, Inc, Dublin, CA; ⁴Carl Zeiss AG, Oberkochen, Germany; ⁵Carl Zeiss AG, Jena, Germany *CR

1732 — A0253 Automatic segmentation of retinal and choroidal thickness in OCT images using convolutional neural networks. David Alonso-Caneiro, S. A. Read, J. Hamwood, S. Vincent, M. J. Collins. Queensland University of Technology, Kelvin Grove, Queensland, Australia

1733 — A0254 Deep Learning Convolutional Neural Network for the Classification and Segmentation of In Vivo Confocal Microscopy Images. Pedram Hamrah^{1,2}, D. Koseoglu^{2,1}, I. Kovler³, A. Ben Cohen³, R. Soferman³. ¹Cornea/Ophthalmology, NEEC, Tufts Medical Center, Tufts University, Boston, MA; ²Center for Translational Ocular Immunology, Tufts Medical Center, Tufts University School of Medicine, Boston, MA; ³RSIP Vision, Jerusalem, Israel *CR

1734 — A0255 Comparing the assessment of image quality of Optical Coherence Tomography data with Deep Neural Networks and Image processing. Krunalkumar Ramanbhai Patel, K. Ranipa, N. Shivaram. CARIn, Carl Zeiss India, Bangalore, Karnataka, India *CR

1735 — A0256 Efficient estimation of eye fundus color image quality with convolutional neural networks. Etienne Decenciere¹, R. Alais¹, P. Dokladal¹, B. Figliuzzi¹, A. Erginay². ¹Center for Mathematical Morphology, MINES ParisTech, PSL Research University, Fontainebleau, France; ²Hôpital Lariboisière, AP-HP, Paris, Falkland Islands [Malvinas]

1736 — A0257 Unsupervised deep learning to identify markers in optical coherence tomography. Sebastian M. Waldstein², P. Seeboeck², R. Donner¹, A. Sadeghipour², G. Langs¹, B. Gerendas², A. Osborne³, U. Schmidt-Erfurth². ¹Department of Biomedical Imaging, Medical University of Vienna, Vienna, Austria; ²Department of Ophthalmology, Medical University of Vienna, Vienna, Austria; ³Genentech, Inc., South San Francisco, CA *CR

1737 — A0258 Convolutional neural network based detection of cones in multimodal adaptive optics scanning light ophthalmoscope images of achromatopsia. David Cunefare¹, E. J. Patterson², S. Blau¹, C. S. Langlo¹, A. Dubra², J. Carroll², S. Farsiu^{1,4}. ¹Biomedical Engineering, Duke University, Durham, NC; ²Ophthalmology, Medical College of Wisconsin, Milwaukee, WI; ³Ophthalmology, Stanford University, Palo Alto, CA; ⁴Ophthalmology, Duke University, Durham, NC *CR

1738 — A0259 Predicting visual acuity outcomes in nAMD, RVO and DME by machine learning. Amir Sadeghipour¹, S. M. Waldstein¹, B. Gerendas¹, A. Osborne², U. Schmidt-Erfurth¹. ¹Department of Ophthalmology, Medical University of Vienna, Vienna, Austria; ²Genentech, Inc., South San Francisco, CA *CR

1739 — A0260 Identification of Scleral Spur in images by Ultrasound Biomicroscope with a novel method using Neural Networks. Josefina Cynthia Villalobos Ojeda^{1,2}, L. Torres Treviño³, J. Gomez Correa^{3,4}, M. Mayorquin², S. Chavez¹, D. Malacara Hernandez¹. ¹Visual Optics, Optics Investigation Center, Leon, Guanajuato, Mexico; ²Asociación para Evitar la Ceguera, Mexico city, Mexico; ³Universidad Autónoma de Nuevo León, Facultad de Ingeniería Mecánica y Eléctrica, Monterrey, Mexico

1740 — A0261 Deep Learning Models for Visual Sensory-Perceptual-Cognitive Dynamical Systems from Eye Movement Data and Categories of Natural Images. Amir H. Assadi^{1,2}, H. Mirkia³, M. Nelson³, Y. C. Song⁴, H. Eghbalian¹, A. Ardalan¹, E. Qasemi¹, H. Gao⁵. ¹Mathematics, University of Wisconsin Madison, Madison, WI; ²Mathematics & Statistics, Beijing Institute of Technology, Beijing, China; ³Design Studies, University of Wisconsin Madison, Madison, WI; ⁴Beijing No.8 High School, Beijing, China; ⁵Mathematics, Zhejiang University, Hangzhou, China

1741 — A0262 Automatic prediction of capillarity patterns on Optical Coherence Tomography Angiography images. Hernan A. Rios^{3,1}, O. J. Perdomo², V. Carpio^{3,1}, C. R. Carvajal³, F. A. Gonzalez², H. Müller⁴, F. Rodriguez^{3,1}. ¹Universidad del Rosario, Bogota, Colombia; ²Universidad Nacional, Bogota, Colombia; ³Fundacion Oftalmologica Nacional, Bogota, Colombia; ⁴University of Applied Sciences Western Switzerland HES-SO, Sierre, Switzerland

Exhibit Hall B0057-B0109

Monday, April 30, 2018 11:15 AM-1:00 PM

**Cornea / Anatomy and Pathology/Oncology
241 Contact Lens**

Moderators: Jillian F. Ziemanski and Ji Yoon Kwak

1742 — B0057 A large-scale, epidemiologic study of the influence of ultraviolet exposure on myopia progression. - A 5-year follow-up study of approximately 460,000 Japanese patients' eyes. - Masao Yoshida¹, N. Mizuki², M. Takeuchi², T. Yamane², Y. Mizuki³, E. Okada⁴. ¹Department of Public Health, Kyorin University School of Medicine, Mitaka-shi, TOKYO, Japan; ²Department of Ophthalmology, Yokohama City University School of Medicine, Yokohama, Kanagawa, Japan; ³Department of Ophthalmology, Saiseikai Yokohamashi Nanbu Hospital, Yokohama, Kanagawa, Japan; ⁴Okada Eye Clinic, Yokohama, Kanagawa, Japan

1743 — B0058 Genetic, metagenomic, host response, and environmental factors influences on corneal infiltrative events in soft contact lens wearers: the MERGE pilot study. Kathryn Richdale¹, C. Chao², L. Akileswaran³, R. Van Gelder³, J. Cooke Bailey⁴, J. L. Haines⁵, F. Stapleton², C. Lakkis⁵, M. D. Willcox². ¹College of Optometry, University of Houston, Houston, TX; ²School of Optometry and Vision Science, University of New South Wales, Sydney, New South Wales, Australia; ³Department of Ophthalmology, University of Washington Medical School, Seattle, WA; ⁴Department of Population and Quantitative Health Sciences, Case Western Reserve University, Cleveland, OH; ⁵Johnson and Johnson Vision Care, Inc, Jacksonville, FL *CR

1744 — B0059 Clinical Effect of Toric Ortho-K lens. Jun Jiang, L. Lian, F. Wang, F. Lu. Eye Hospital of Wenzhou Medical University, Wenzhou, China ✕

1746 — B0061 Changes in the lower tear meniscus morphology during contact lens wear. Izabela Garaszczuk^{2,1}, M. Mousavi^{1,2}, A. Cerviño², D. Iskander¹. ¹Biomedical Engineering, Wrocław University of Science and Technology, Wrocław, Poland; ²Department of Optics, Optometry and Vision Sciences, University of Valencia, Valencia, Spain

1747 — B0062 Do the saturation and fatty acid chain length of meibum and tear lipids determine symptoms in contact lens wearers? Jaya Sowjanya Siddireddy, A. Vijay, J. Tan, M. Willcox. School of Optometry and Vision Science, University of New South Wales, Sydney, New South Wales, Australia *CR

1748 — B0063 Retinal image quality after orthokeratology. David A. Berntsen. College of Optometry, University of Houston, Houston, TX

1749 — B0064 Changes in tear film physiology during soft contact lens wear. Maryam Mousavi^{1,4}, I. Garaszczuk^{1,2}, D. H. Szczesna-Iskander³, D. Iskander¹. ¹Biomedical Engineering, Wrocław University of Science and Technology, Wrocław, Poland; ²University of Valencia, Valencia, Spain; ³Wrocław University of Science and Technology, Wrocław, Poland; ⁴Optics, Optometry and Vision Sciences, University of Valencia, Valencia, Spain

1750 — B0065 Determination of DMBT1 immobilization on soft contact lens. Kwaku Osei¹, C. Deivanayagam², J. J. Nichols¹. ¹School of Optometry, University of Alabama at Birmingham, Birmingham, AL; ²Department of Biochemistry and Molecular Genetics, University of Alabama at Birmingham, Birmingham, AL

1751 — B0066 Impact of Soft Contact Lens Wear on Tear Film Breakup Patterns, Meniscus Tear Volume, and Tear Film Stability. Norihiko Yokoi¹, R. Sakai¹, G. A. Georgiev³, H. Kato¹, C. Sotozono¹, S. Kinoshita². ¹Ophthalmology, Kyoto Prefectural Univ of Med, Kyoto, KYOTO, Japan; ²Frontier Medical Science and Technology for Ophthalmology, Kyoto Prefectural University of Medicine, Kyoto, Japan; ³Optics and Spectroscopy, Sofia University, Sofia, Bulgaria *CR

1752 — B0067 Assessment of the corneal endothelium in patients undergoing temporary myopia therapy (Ortho-K) with CRT lenses. Tania Schaefer¹, B. Koffler², F. C. Abib^{3,4}. ¹Ophthalmology, Clinica Schaefer, Curitiba, Parana, Brazil; ²Koffler Vision Group, Lexington, KY; ³Anatomy, Federal University of Paraná, Curitiba, Brazil; ⁴Ophthalmology, Erasto Gaertner Hospital, Curitiba, Brazil ✕

1753 — B0068 Short-term comfort comparison of two daily disposable contact lenses of different material and modulus. Jill Woods, A. Ng, D. Luensmann, S. Guthrie, L. Jones. Centre for Ocular Research & Education, University of Waterloo, Waterloo, Ontario, Canada *CR, ✕

1754 — B0069 Corneal Epithelium Changes during Three Months of Scleral Contact Lens Wear. Vivien Tse¹, T. Truong¹, Y. Zhou¹, B. Tan¹, K. Lin¹, M. C. Lin^{1,2}. ¹UC Berkeley Clinical Research Center, Berkeley, CA; ²Vision Science Graduate Program, University of California, Berkeley, Berkeley, CA

Monday Posters
11:15 am – 1:00 pm

1755 — B0070 Optical performance modelling of contact lenses used for myopia control.

Cathleen Fedtke^{1,2}, R. Bakaraju^{1,2}, ¹Brien Holden Vision Institute, Sydney, New South Wales, Australia; ²School of Optometry and Vision Science, University of New South Wales, Sydney, New South Wales, Australia *CR

1756 — B0071 Short-term Effect of Corneoscleral Contact Lenses in the Patients with Refractory Ocular Surface Diseases.

Sang-Mok Lee^{1,2}, Y. Kim^{3,4}, S. Choi^{4,5}, J. Oh^{4,5}, M. Kim^{4,5}, W. Wee^{4,5}. ¹Ophthalmology, Hallym University Sacred Heart Hospital, Seoul, Korea (the Republic of); ²HanGil Eye Hospital, Incheon, Korea (the Republic of); ³Ophthalmology, Hanyang University College of Medicine, Seoul, Korea (the Republic of); ⁴Ophthalmology, Seoul National University College of Medicine, Seoul, Korea (the Republic of); ⁵Laboratory of Corneal Regenerative Medicine and Ocular Immunology, Seoul Artificial Eye Center, Seoul National University Hospital Biomedical Research Institute, Seoul, Korea (the Republic of)

1757 — B0072 A Non-Clinical Study of Soft Contact Lens Compliance. Erin Rueff, J. Wolfe, M. D. Bailey. College of Optometry, The Ohio State University, Columbus, OH

1758 — B0073 Through-focus retinal image quality of commercial multifocal contact lenses.

Eon Kim¹, R. Bakaraju^{1,2}. ¹Brien Holden Vision Institute, Sydney, New South Wales, Australia; ²School of Optometry and Vision Science, University of New South Wales, Sydney, New South Wales, Australia *CR

1759 — B0074 Antioxidant Capacity of a Phenolic Benzotriazole (Norbloc) in Soft Contact Lens Materials: A Benefit Beyond UV Blocking.

Zohra Fadli, C. W. Scales, S. Mahadevan. Johnson&Johnson Vision, Jacksonville, FL *CR

1760 — B0075 Visual Outcomes with Scleral Lenses: a SCOPE Study.

Jennifer S. Harthan¹, C. B. Nau², M. Schornack², J. S. Fogt³, A. Nau⁴, E. Shorter⁵. ¹Cornea/Contact Lenses, Illinois College Of Optometry, Glenview, IL; ²Mayo Clinic, Rochester, MN; ³The Ohio State University, Columbus, OH; ⁴Korb and Associates, Boston, MA; ⁵Ophthalmology and Vision Sciences, University of Illinois at Chicago, Chicago, IL *CR

1761 — B0076 Crosslink density influences the adhesive strength of silicone hydrogel surfaces against corneal epithelial cells.

Chunzi Liu¹, C. W. Scales², G. G. Fuller¹. ¹Chemical Engineering, Stanford University, Stanford, CA; ²Research & Development, Johnson & Johnson Vision, Jacksonville, FL *CR

1762 — B0077 On the performance of monthly replacement contact lenses: A pilot study in Greece.

Dimitra Makrynioti¹, G. Vlachopoulos², P. Tsoukalis¹. ¹Optics & Optometry Department, T.E.I. of Western Greece, Patras, Achaia, Greece; ²Department of Medical Physics, School of Medicine, University of Patras, Patras, Achaia, Greece

1763 — B0078 Comparing scleral contact lenses generated by impression technology vs Scheimpflug images.

Bruno Lay¹, C. W. Sindr², R. Danno¹. ¹ADCIS, Saint Contest, France; ²Department of ophthalmology, University of Iowa, Iowa City, IA

1764 — B0079 Impact of scleral lens wear on ocular sensitivity, nerve fiber density and Langerhans cell density in keratoconus.

Edward Lum^{1,2}, A. Ng², L. Sorbara², P. J. Murphy^{2,3}. ¹School of Optometry and Vision Science, University of New South Wales, Waterloo, Ontario, Canada; ²School of Optometry and Vision Science, University of Waterloo, Waterloo, Ontario, Canada; ³School of Optometry and Vision Science, Cardiff University, Cardiff, United Kingdom ✕

1765 — B0080 Effect of Scleral Lens wear on Intraocular Pressure. A. Philip Aitseaomo, J. Wong-Powell, W. Miller, F. Amir. School of Optometry, University of the Incarnate Word, San Antonio, TX

1766 — B0081 The time-course of retention of anti-adhesion activity of Mel-4 peptide coated contact lenses.

Parthasarathi Kalaiselvan¹, D. Dutta¹, S. Sharma², M. Willcox¹. ¹School of Optometry and Vision Science, University of New South Wales, Sydney, New South Wales, Australia; ²Jhaveri Microbiology Centre, L V Prasad Eye Institute, Hyderabad, India *CR, ✕

1767 — B0082 Dexamethasone-eluting contact lens for the prevention of post-photorefractive keratectomy scar in a New Zealand White rabbit model.

Timothy Soeken¹, J. B. Ciolino^{2,3}, D. S. Kohane³, G. Legault¹, M. Caldwell¹, W. Brundridge¹, M. Merkley¹, R. Townley¹. ¹Ophthalmology, San Antonio Uniformed Services Health Education Consortium, San Antonio, TX; ²Ophthalmology, Massachusetts Eye and Ear Infirmary, Harvard Medical School, Boston, MA; ³Anesthesiology, Laboratory for Biomaterials and Drug Delivery, Boston, MA *CR

1768 — B0083 Ex vivo analysis of lipid deposition with silicone hydrogel contact lenses and EOBO-based lens care solutions.

Rachel L. Redfern¹, J. J. Nichols², W. Sickenberger³, J. S. Fogt⁴, M. Schulze⁸, C. Lievens⁵, L. Szczołka-Flynn⁶, S. Schwarz⁹, A. Shows⁷, J. M. Lemp⁷. ¹College of Optometry, University of Houston, Houston, TX; ²University of Alabama, Birmingham, AL; ³University of Applied Sciences, Jena, Germany; ⁴The Ohio State University, Columbus, OH; ⁵Southern College of Optometry, Memphis, TN; ⁶Case Western Reserve University, Cleveland, OH; ⁷Alcon, Fort Worth, TX; ⁸University of Waterloo, Waterloo, Ontario, Canada; ⁹Private Practice, Hildesheim, Germany *CR, ✕

1769 — B0084 Antioxidant Protection of a Model Tear-Film Component in Soft Contact Lenses.

Charles W. Scales, S. Mahadevan, L. Sonoda, M. Lada, P. Martin, D. Riederer, Z. Fadli. Research & Development, Johnson & Johnson Vision, Jacksonville, FL *CR

1770 — B0085 Investigation of Latanoprost Release from Contact Lens Materials in the presence of cells and under *in vitro* Tear Replenishment.

Saman Mohammadi¹, L. Jones^{2,3}, M. Gorbet^{1,2}. ¹Systems Desing Engineering, University of Waterloo, Waterloo, Ontario, Canada; ²School of Optometry & Vision Science, University of Waterloo, Waterloo, Ontario, Canada; ³Centre for Ocular Research & Education, University of Waterloo, Waterloo, Ontario, Canada

1771 — B0086 Morphological changes in the bulbar conjunctiva with short term mini-scleral contact lens wear.

Rajini Peguda, A. Yang, T. Xu, S. S. Tummanapalli, H. A. Swarbrick. School of Optometry and Vision Science, University of New South Wales, Kensington, New South Wales, Australia *CR

1772 — B0087 Cytokine and Protease Activity During Acute Scleral Lens Wear.

Maria Walker, R. L. Redfern. College of Optometry, University of Houston, Houston, TX

1773 — B0088 Baseline Corneal Parameters in Patients Fit with Scleral Lenses for Ocular Surface Disease.

Eric Kawulok, M. Schornack. Mayo Clinic, Scottsdale, AZ

1774 — B0089 Repeatability and Validation of Scheimpflug Scleral Data.

Christine W. Sindr¹, B. Lay², R. Danno³. ¹Ophthalmology, University of Iowa, Iowa City, IA; ²Adcis, Saint-contest, France; ³Adcis, Saint-contest, France *CR

1775 — B0090 SCOPE study: Comparing severity of dry eye symptoms in keratoconus patients using corneal gas permeable lenses versus scleral lenses.

Ellen Shorter¹, J. S. Harthan², A. Nau³, J. S. Fogt³, M. Schornack⁴, D. Cao¹, C. B. Nau⁴. ¹Ophthalmology and Vision Sciences, University of Illinois at Chicago, Chicago, IL; ²Illinois College of Optometry, Chicago, IL; ³Korb and Associates, Boston, MA; ⁴Mayo Clinic, Rochester, MN; ⁵The Ohio State University, Columbus, OH *CR

- 1776 — B0091 Visual performance of prototype extended depth-of-focus contact lenses against contact lenses used for myopia control.** Jennie Diec¹, J. Sha¹, D. Tilia¹, M. Jong², N. S. Yeotikar¹, V. Thomas¹, R. Bakaraju². ¹Clinical Research and Trials Centre, Brien Holden Vision Institute, Kensington, New South Wales, Australia; ²Brien Holden Vision Institute, Kensington, New South Wales, Australia *CR, ✕
- 1777 — B0092 Bacterial coaggregation and cohesion among the isolates from contact lens cases.** Ananya Datta, M. D. Willcox, F. Stapleton. School of Optometry and Vision Science, University of New South Wales (UNSW), Sydney, New South Wales, Australia
- 1778 — B0093 SCOPE study: Experience of keratoconus patients wearing RGP or Scleral lenses.** Cherie B. Nau¹, M. Schornack¹, J. S. Harthan², A. Nau³, J. S. Fogt⁴, D. Cao⁵, E. Shorter⁵. ¹Optometry, Mayo Clinic, Rochester, MN; ²Illinois College of Optometry, Chicago, IL; ³Korb and Associates, Boston, MA; ⁴The Ohio State University, Columbus, OH; ⁵University of Illinois at Chicago, Chicago, IL *CR
- 1779 — B0094 Relationship between symptoms and corneal sensitivity in symptomatic and asymptomatic contact lens wearers.** Ping Situ¹, C. G. Begley¹, T. L. Simpson², N. J. Keir³. ¹School of Optometry, Indiana University Bloomington, Bloomington, IN; ²School of Optometry and Vision Science, University of Waterloo, Waterloo, Ontario, Canada; ³R & D, CooperVision, Pleasanton, CA *CR
- 1780 — B0095 Diurnal Contact Lens Comfort Loss, Day to Day Variability.** Michel Guillon^{1,2}, T. Patel¹, R. Gupta¹, K. Patel¹, J. R. Kern³. ¹Ocular Technology Group - International, London, United Kingdom; ²School of Health Sciences, Aston University, Birmingham, United Kingdom; ³Alcon Research, Ltd, Fort Worth, TX *CR
- 1781 — B0096 Isoquinoline sulfonamides such as fasudil, H-1152, ripasudil and H-1129 produce IOP-lowering and neuroprotective effects through Rho kinase inhibition.** Kengo Sumi, Y. Yoshida, H. Hidaka. R&D Laboratory, D. Western Therapeutics Institute, Inc., Nagoyashi, Aichi, Japan *CR
- 1782 — B0097 Efficacy of Combined iStent Inject® with Phacoemulsification for Intraocular Pressure Lowering in Asian Subjects with Glaucoma.** Jeremy Y. Hu^{1,2}, B. Ang¹, L. Yip¹. ¹Ophthalmology, Tan Tock Seng Hospital, Singapore, Singapore; ²Ministry of Health Holdings, Singapore, Singapore
- 1783 — B0098 Orthokeratology treatment reduces myopic anisometropia through retarding axial elongation of the more myopic eye.** Wen Long, Z. Li, Y. Hu, D. Cui, X. Yang. State Key Laboratory of Ophthalmology, Zhongshan Ophthalmic Center, Sun Yat-sen University, Guangzhou, China
- 1784 — B0099 A ten-year large-scale follow-up study into the number of prescriptions of single vision and bifocal contact lenses in Japan. - The result of analysis of approximately 590,000 eyes of Japanese patients.** Eiichi Okada¹, N. Mizuki², M. Takeuchi², T. Yamane², Y. Mizuki³, M. Yoshida⁴. ¹Okada Eye Clinic, Yokohama, Kanagawa, Japan; ²Department of Ophthalmology, Yokohama City University School of Medicine, Yokohama, Kanagawa, Japan; ³Department of Ophthalmology, Saiseikai Yokohamashi Nanbu Hospital, Yokohama, Kanagawa, Japan; ⁴Department of Public Health, Kyorin University School of Medicine, Mitaka, Tokyo, Japan
- 1785 — B0100 Evaluation of surface pigment adherence in cosmetic colored contact lenses.** Grace Huang, M. Rhee. Ophthalmology, Mount Sinai School of Medicine, New York, NY *CR
- 1786 — B0101 Short-term changes in choroidal thickness and axial length in children fitted with orthokeratology lenses of different compression factors.** Jason K. Lau¹, S. Cheung¹, M. J. Collins², P. Cho¹. ¹School of Optometry, The Hong Kong Polytechnic University, Hung Hom, Hong Kong; ²School of Optometry and Vision Science, Queensland University of Technology, Brisbane, Queensland, Australia ✕
- 1787 — B0102 Changes in Corneal Parameters Associated with Scleral Lens Wear.** Muriel Schornack¹, S. Dodda², C. B. Nau¹. ¹Ophthalmology, Mayo Clinic, Rochester, MN; ²Illinois College of Optometry, Chicago, IL
- 1788 — B0103 Efficacy and safety of diquafosol ophthalmic solution for soft contact lens-related dry eye.** Hiroki Asano¹, T. Ogami², A. Iguchi¹, M. Sano², Y. Yamada³, T. Hiraoka⁴, T. Oshika⁴. ¹Ophthalmology, Namegata District Medical Center, Namegata, Ibaraki, Japan; ²Ophthalmology, Ibaraki Seinan Medical Center Hospital, Sakai-machi, Ibaraki, Japan; ³Global Research and Development, Santen Pharmaceutical Co., Ltd., Osaka, Osaka, Japan; ⁴Ophthalmology, Tsukuba Univ., Tsukuba, Ibaraki, Japan *CR, ✕
- 1789 — B0104 Visual performance and accommodative function with prototype extended depth-of-focus lenses against single-vision contact lenses.** Daniel Tilia^{1,2}, J. Sha¹, J. Diec¹, M. Jong^{1,2}, N. Yeotikar¹, V. Thomas¹, R. Bakaraju^{1,2}. ¹Clinical Research and Trials Centre, Brien Holden Vision Institute, Sydney, New South Wales, Australia; ²School of Optometry and Vision Science, University of New South Wales, Sydney, New South Wales, Australia *CR, ✕
- 1790 — B0105 Microorganism growth in multidose preservative-free saline solution commonly used off-label for scleral lens wear.** Karen Lee¹, S. Lee³, G. B. Chiu², R. She¹. ¹College of Optometry, University of Houston, Houston, TX; ²Roski Eye Institute, University of Southern California, Los Angeles, CA; ³Keck School of Medicine, University of Southern California, Los Angeles, CA; ⁴Keck Medical Center, University of Southern California, Los Angeles, CA *CR
- 1791 — B0106 The relationship between visual acuity, subjective vision and willingness to purchase simultaneous-image contact lenses.** Monica Jong, D. Tilia, J. Sha, J. Diec, V. Thomas, R. Bakaraju. Translational Research, Brien Holden Vision, Sydney, New South Wales, Australia *CR, ✕
- 1792 — B0107 Transmission of pathogenic bacteria to contact lenses from storage cases.** Ajay Kumar Vijay, A. Tang, R. Pham, J. Tan, M. D. Willcox. School of Optometry & Vision Science, University of New South Wales, Sydney, New South Wales, Australia *CR
- 1793 — B0108 Visual performance of daily disposable multifocal soft contact lenses.** Jennifer Sha¹, D. Tilia^{1,2}, D. Kho¹, J. Diec¹, N. Yeotikar¹, M. Jong^{1,2}, V. Thomas¹, R. Bakaraju^{1,2}. ¹Brien Holden Vision Institute, Sydney, New South Wales, Australia; ²School of Optometry and Vision Sciences, University of New South Wales, Sydney, New South Wales, Australia *CR, ✕
- 1794 — B0109 Hidden Topographic Differences between Post-LASIK Ectasia and Keratoconus that Affect Contact Lens Fitting.** Hsiao-Sang Chu^{1,2}, I. Wang¹, W. Chen¹, F. Hu¹. ¹Ophthalmology, National Taiwan University Hospital, Taipei, Taiwan; ²National Taiwan University College of Medicine, Graduate Institute of Clinical Medicine, Taipei, Taiwan ✕

Exhibit Hall B0143-B0159

Monday, April 30, 2018 11:15 AM-1:00 PM

Cornea

242 Corneal Neuropathy**Moderators: Carlo Iomini and celine m. portal**

1795 — B0143 Outcomes of Scleral Lens Therapy in Patients with Neurotrophic Keratopathy at a Tertiary Referral Center. Sarah Alshami^{1,2}, E. A. Bradley¹, C. B. Nau¹, M. Schornack¹. ¹Department of Ophthalmology, Mayo Clinic, Rochester, MN; ²University of Missouri-Kansas City School of Medicine, Kansas City, MO

1796 — B0144 Evaluating the in vitro and in vivo corneal neurotrophic ability of human platelet lysates. Wei-Li Chen^{1,4}, L. W. Chen¹, C. Huang^{1,2}, H. Chu^{1,3}. ¹Department of Ophthalmology, National Taiwan University Hospital, Taipei, Taiwan; ²Department of Ophthalmology, Buddhist Tzu Chi General Hospital, Institute of Medical Sciences, Tzu Chi University, Hualien, Taiwan; ³Graduate Institute of Clinical Medicine, National Taiwan University College of Medicine, Taipei, Taiwan; ⁴Center of Corneal Tissue Engineering and Stem Cell Biology, National Taiwan University Hospital, Taipei, Taiwan

1797 — B0145 Corneal sensation after glaucoma laser therapy. Alina Yang², A. E. Pouw¹, A. Shue¹, T. Liu², J. Chow¹, J. Liu¹. ¹Department of Ophthalmology and Visual Science, Yale University, New Haven, CT; ²School of Medicine, Yale University, New Haven, CT; ³Wilmer Eye Institute, Johns Hopkins University, Baltimore, MD

1798 — B0146 Chronic Ocular Pain is Modulated by Latent Sensitization. Jooyoung Cho, N. Bell, R. Albuquerque. Ophthalmology and Visual Sciences, University of Kentucky, Lexington, KY

1799 — B0147 Automated Analysis of In Vivo Confocal Microscopy Corneal Images Using Deep Learning. Jonathan D. Oakley¹, D. B. Russakoff¹, R. Weinberg², M. McCarron², S. Brill², S. Misra³, C. N. McGhee³, J. Mankowski². ¹Voxeleron LLC, Pleasanton, CA; ²Department of Molecular and Comparative Pathobiology, Johns Hopkins University School of Medicine, Baltimore, MD; ³Department of Ophthalmology, The University of Auckland, Auckland, New Zealand *CR

1800 — B0148 Epidemiology of neurotrophic keratitis: prevalence, etiologies, outcomes and clinical management. Eric E. Gabison^{1,2}, S. Saad^{1,2}, S. Doan^{2,1}, I. Cochereau^{1,2}. ¹Cornea and External Disorders, Fondation A. de Rothschild, Paris, IDF, France; ²Ophthalmology, Bichat Hospital, APHP, Paris, France

1801 — B0149 Incidence of neurotrophic keratopathy in a German cohort of persistent epithelial defects. Jan Alder, S. Schrader, G. Geerling. Department of Ophthalmology, University Hospital Duesseldorf, Germany, Duesseldorf, Germany

1802 — B0150 Neuropathic Corneal Pain in Post-Cataract Surgery Patients. Ramy Rashad^{1,3}, G. Dieckmann^{2,3}, D. Koseoglu^{2,3}, A. Akhlaq^{2,3}, R. Nose^{2,3}, P. Hamrah^{2,3}. ¹Tufts University School of Medicine, Boston, MA; ²Cornea Service, New England Eye Center, Boston, MA; ³Ophthalmology, Center for Translational Ocular Immunology, Boston, MA *CR

1803 — B0151 Genetic Ablation and Pharmaceutical Inhibition of Nox4 Protects Against Diabetic Keratopathy. Wenxin Zhao¹, X. Zhang², Q. Liu², L. Qin¹, J. Li¹. ¹First Affiliated Hospital of Xi'an Jiaotong University, Xi'an, Shaanxi, China; ²Affiliated Eye Hospital of Nanchang University, Nanchang, Jiangxi, China

1804 — B0152 Corneal inflammation in a spontaneous type 2 diabetes model rat. Machiko Shimmura-Tomita¹, H. Takano¹, N. Kinoshita¹, F. Toyoda¹, Y. Tanaka¹, S. Uehara¹, R. Takagi¹, M. Kobayashi¹, T. Ohta², T. Sasase², A. Kakehashi¹. ¹Jichi Medical Univ Saitama Med Ctr, Saitama, Japan; ²Japan Tobacco Inc., Central Pharmaceutical Research Institute, Osaka, Japan *CR

1805 — B0153 Raver2 knockout accelerates loss of sub-basal nerve fiber innervation in the mouse cornea. Lara S. Carroll, H. Uehara, S. Choi. Ophthalmology, Moran Eye Center, Salt Lake City, UT

1806 — B0154 Efficacy of Intranasal Neurostimulation for Peripheral Pain among Neuropathic Corneal Pain Patients. Gabriela Dieckmann, N. Koseoglu, A. Akhlaq, N. Pondelis, P. Hamrah. Tufts Medical Center, Chestnut Hill, MA *CR

1807 — B0155 Peripheral and central corneal sensation assessment after anti-VEGF intravitreal injection. Andrew E. Pouw¹, A. Yang², J. Chow¹, T. Liu², K. Nwanyanwu¹, R. A. Adelman¹, J. Liu¹. ¹Department of Ophthalmology, Yale University, New Haven, CT; ²School of Medicine, Yale University, New Haven, CT; ³Wilmer Eye Institute, Johns Hopkins University, Baltimore, MD

1808 — B0156 Corneal nerve morphology and its association with inflammatory mediators and neuropeptides in the healthy tear film. Maria Markoulli¹, L. H. Colorado², K. Edwards². ¹School of Optometry and Vision Science, University of New South Wales, Sydney, New South Wales, Australia; ²School of Optometry and Vision Science, Queensland University of Technology, Brisbane, Queensland, Australia

1809 — B0157 Corneal Confocal Microscopy in Type 1 Diabetes Mellitus: a Six-Year Longitudinal Study. James A. Slater¹, S. Misra¹, G. D. Braatvedt², C. N. McGhee¹. ¹Department of Ophthalmology, NZ-NEC, Auckland, New Zealand; ²Faculty of Medical and Health Sciences, University of Auckland, Auckland, New Zealand

1810 — B0158 The structural and neurochemical characteristics of regenerating corneal nerves after excimer laser ablation. Yong-Soo Byun^{1,2}, S. Chung^{1,2}, J. Mok², C. Joo^{1,2}. ¹Ophthalmology and Visual Science, Catholic University of Korea, College of Medicine, Seoul St. Mary's Hospital, Seoul, Korea (the Republic of); ²Catholic University of Korea, College of Medicine, Catholic Institute for Visual Science, Seoul, Korea (the Republic of)

1811 — B0159 Assessment of corneal nerve structure and peripheral nerve function in detection of diabetic peripheral neuropathy. Shyam S. Tummanapalli¹, T. Issar², N. Kwai³, A. Poyten⁴, A. Krishnan², M. D. Willcox¹, M. Markoulli¹. ¹School of Optometry and Vision Science, The University of New South Wales, Sydney, New South Wales, Australia; ²Prince of Wales Clinical School, University of New South Wales, Sydney, New South Wales, Australia; ³School of Medical Sciences, University of New South Wales, Sydney, New South Wales, Australia; ⁴Department of Endocrinology, Prince of Wales Hospital, Sydney, New South Wales, Australia

Exhibit Hall B0273-B0307

Monday, April 30, 2018 11:15 AM-1:00 PM

Clinical/Epidemiologic Research

243 Genetic and Retinal disease epidemiology

Moderators: Ching-Yu Cheng and Pirro G. Hysi

1812 — B0273 A Genome-wide Association Study of the Retinal Nerve Fiber Layer Thickness in a Multiethnic Population. Darryl Noursome¹, X. Jiang^{2,1}, R. McKean-Cowdin¹, B. Burkemper², M. Torres², R. Varma^{2,1}. ¹Preventive Medicine, University of Southern California, Los Angeles, CA; ²Ophthalmology, USC Roski Eye Institute, Los Angeles, CA

1813 — B0274 Association of Glaucoma Risk Variants with Retinal Nerve Fiber Layer Thickness: The Singapore Epidemiology of Eye Diseases (SEED) Study. Kok Yao Low^{3,1}, Y. Tham^{1,2}, W. Zhao^{4,1}, L. Zhang¹, N. Tan¹, C. Wong^{1,5}, C. Khor⁶, T. Aung^{1,3}, T. Wong^{1,3}, C. Cheng^{1,3}. ¹Singapore Eye Research Institute, Singapore, Singapore; ²Singapore National Eye Centre, Singapore, Singapore; ³Ophthalmology & Visual Sciences Academic Clinical Program (Eye ACP), Duke-NUS Medical School, Singapore, Singapore; ⁴Centre for Quantitative Medicine, Duke-NUS Medical School, Singapore, Singapore; ⁵Department of Ophthalmology, National University Hospital, Singapore, Singapore; ⁶Genome Institute of Singapore, Agency for Science, Technology and Research, Singapore, Singapore

1814 — B0275 Heritability of Glaucoma and Related Endophenotypes: A Systematic Review and Meta-Analysis. Anna Neustaeter^{1,2}, N. Asefa², N. M. Jansonius¹, H. Snieder². ¹Ophthalmology, University Medical Centre Groningen, Groningen, Groningen, Netherlands; ²Genetic Epidemiology, University Medical Centre Groningen, Groningen, Groningen, Netherlands

1815 — B0276 Cross-Sectional Analysis of Relationship Between The Idiopathic Long Anterior Zonule Trait and Glaucoma or Ocular Hypertension in a Clinic-Based Primary Eye Care Population. Daniel K. Roberts^{1,2}, J. McMahon¹, C. Morettin¹, T. L. Newman¹, M. F. Roberts¹, B. A. Teitelbaum¹, J. E. Winters¹. ¹Illinois College of Optometry, River Forest, IL; ²Epidemiology and Biostatistics, University of Illinois at Chicago, Chicago, IL

1816 — B0277 A Genome-Wide Association Study of Optic Disc Area in Latinos. Shizuka Tomatsu, H. Kim, H. Huang, X. Gao. Ophthalmology and Visual Sciences, University of Illinois at Chicago, Chicago, IL

- 1817 — B0278 Meta-analysis of genome-wide association studies on retinal nerve fiber layer thickness in multi-ethnic Asians.** Ching-Yu Cheng^{1,2}, M. Yoshikawa³, Y. Tham¹, Y. Wang⁴, W. Zhao¹, Y. Hosoda³, F. Matsuda⁵, Y. Tabara⁵, A. Tsujikawa³, C. Khor^{1,6}, T. Aung^{1,2}, J. B. Jonas^{4,7}, T. Y. Wong^{1,2}, K. Yamashiro³. ¹Singapore Eye Research Institute, Singapore National Eye Centre, Singapore, Singapore; ²Ophthalmology & Visual Sciences Academic Clinical Program, Duke-NUS Medical School, Singapore, Singapore; ³Department of Ophthalmology and Visual Sciences, Kyoto University Graduate School of Medicine, Kyoto, Japan; ⁴Beijing Institute of Ophthalmology, Beijing Tongren Eye Center, Beijing Tongren Hospital, Capital Medical University, Beijing Ophthalmology and Visual Science Key Lab, Beijing, China; ⁵Center for Genomic Medicine, Kyoto University Graduate School of Medicine, Kyoto, Japan; ⁶Genome Institute of Singapore, Agency for Science, Technology and Research, Singapore, Singapore; ⁷Department of Ophthalmology, Medical Faculty Mannheim of the Ruprecht-Karls-University of Heidelberg, Heidelberg, Heidelberg, Germany
- 1818 — B0279 Glaucoma Examination in the Amish of Holmes County, Ohio.** Jessica Cooke Bailey¹, Y. E. Song¹, J. M. Skarie², R. Lauw¹, D. Fuzzell¹, S. Fuzzell¹, L. R. Pasquale², J. L. Wiggs², J. L. Haines¹. ¹Population and Quantitative Health Sciences, Case Western Reserve University, Cleveland, OH; ²Ophthalmology, Mass Eye & Ear Infirmary, Harvard Medical School, Boston, MA; ³Ophthalmology and Visual Sciences, Ohio Eye Associates, Mansfield, OH
- 1819 — B0280 Genome-wide association analyses identify novel gene associated with central corneal thickness and keratoconus; The Nagahama Study.** Yoshikatsu Hosoda^{1,3}, M. Miyake^{1,3}, C. Khor⁵, Y. Tabara³, H. Nakanishi¹, A. Meguro², C. Cheng^{5,6}, S. Saw^{5,7}, N. Mizuki², R. Yamada³, F. Matsuda³, A. Tsujikawa¹, K. Yamashiro^{1,4}. ¹Ophthalmology and Visual Science, Kyoto University, Kyoto, Japan; ²Yokohama City University, Yokohama, Japan; ³Center for Genomic Medicine, Kyoto University, Kyoto, Japan; ⁴Otsu Red cross Hospital, Otsu, Japan; ⁵Singapore Eye Research Institute, Singapore, Singapore; ⁶Ophthalmology and Visual Sciences Academic Clinical Program, Singapore, Singapore; ⁷National University of Singapore, Singapore, Singapore
- 1820 — B0281 The Relationship of Functional SNP in 3'-UTR of XPC Gene and MicroRNA in Age-related Cataract.** Huaijin Guan. Ophthalmology, Affiliated Hospital of Nantong University, Nantong, China
- 1821 — B0282 Post-GWAS analysis on the molecular machinery in refractive error development.** Milly S. Tedja¹, R. Wojciechowski², P. G. Hysi³, V. J. Verhoeven¹, C. J. Hammond⁴, C. C. Klaver^{1,5}. ¹Ophthalmology & Epidemiology, Erasmus MC, Rotterdam, Netherlands; ²Epidemiology, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD; ³Twin Research and Genetic Epidemiology, King's College London School of Medicine, London, United Kingdom; ⁴Ophthalmology, King's College London School of Medicine, London, United Kingdom; ⁵Ophthalmology, Radboud University Medical Center, Nijmegen, Netherlands
- 1822 — B0283 Deconvoluting age, cohort, and genetic effects on refractive error in the Framingham Eye Study.** Robert Wojciechowski^{1,2}, P. Li¹. ¹Epidemiology, Johns Hopkins School of Public Health, Baltimore, MD; ²Wilmer Eye Institute, Johns Hopkins Medicine, Baltimore, MD
- 1823 — B0284 African-American families show genome-wide significant linkage to myopia at 7p15.2-14.2.** Joan E. Bailey-Wilson¹, A. Musolf¹, C. L. Simpson^{2,1}, L. Portas^{3,1}, F. Murgia^{3,1}, Q. Li¹, E. B. Ciner⁴, D. Stambolian⁵. ¹National Human Genome Research Inst, National Institutes of Health, Baltimore, MD; ²University of Tennessee Health Sciences Center, Memphis, TN; ³Institute of Population Genetics, CNR, Li Punti, Sassari, Italy; ⁴The Pennsylvania College of Optometry at Salus University, Elkins Park, PA; ⁵Department of Ophthalmology, University of Pennsylvania, Philadelphia, PA
- 1824 — B0285 Myopia in Amish Families Linked to Five Chromosomes.** Anthony Musolf¹, C. L. Simpson², L. Portas³, F. Murgia³, Q. Li¹, E. B. Ciner⁴, D. Stambolian⁵, J. E. Bailey-Wilson¹. ¹National Human Genome Research Institute, National Institutes of Health, Baltimore, MD; ²Department of Genetics, Genomics and Informatics, University of Tennessee Health Science Center, Memphis, TN; ³Institute of Population Genetics, Sassari, Italy; ⁴The Pennsylvania College of Optometry at Salus University, Elkins Park, PA; ⁵Department of Ophthalmology, University of Pennsylvania, Philadelphia, PA
- 1825 — B0286 Rare Variant TDT Association Study of Familial Myopia in Caucasian Families.** Deyana Lewis¹, C. L. Simpson^{2,1}, A. Musolf¹, K. Long³, L. Portas⁴, F. Murgia⁴, E. B. Ciner⁵, D. Stambolian⁶, J. E. Bailey-Wilson¹. ¹Computational and Statistical Genomics Branch, National Human Genome Research Institute, Baltimore, MD; ²Genetics, Genomics and Informatics, University of Tennessee Health Sciences Center, Memphis, TN; ³University of Texas at El Paso, El Paso, TX; ⁴Institute of Population Genetics, Sassari, Italy; ⁵Ophthalmology, Salus University, Elkins Park, PA; ⁶Ophthalmology, Perelman School of Medicine, University of Pennsylvania, Philadelphia, PA
- 1826 — B0287 Assessment of shared heritability between spherical equivalent and the age of the first spectacle wear in UK Biobank cohort.** Karina Patasova¹, P. G. Hysi¹, C. J. Hammond¹, R. Wojciechowski², P. Cumberland³, A. P. Khawaja⁴, J. Rahi³. ¹Department of Twin Research & Genetic Epidemiology, King's College, London, United Kingdom; ²Epidemiology, Bloomberg School of Public Health, Baltimore, MD; ³Faculty of Pop Health Sciences, UCL GOS Institute of Child Health, London, United Kingdom; ⁴Department of Public Health and Primary Care, University of Cambridge, Cambridge, United Kingdom
- 1827 — B0288 Assessing the genetic overlap between myopia and primary open-angle glaucoma.** Adriana I Iglesias², J. S. Ong³, P. Gharahkhani³, D. Stambolian⁴, C. C. Klaver^{2,5}, S. MacGregor³, C. van Duijn¹. ¹Epidemiology, Genetic Epidemiology Unit, Erasmus MC, Rotterdam, Netherlands; ²Ophthalmology/Epidemiology, Erasmus MC, Rotterdam, Netherlands; ³Statistical Genetics, QIMR Berghofer Medical Research Institute, Brisbane, Queensland, Australia; ⁴Ophthalmology, University of Pennsylvania, Philadelphia, PA; ⁵Ophthalmology, Radboud University Medical Center, Nijmegen, Netherlands
- 1828 — B0289 Inherited Retinal Disease in the Norwegian Population – A Clinical and Molecular Overview.** Josephine P. Prener Holtan^{1,2}, R. Bragadottir^{1,2}. ¹Ophthalmology, Oslo University Hospital, Oslo, Norway; ²Faculty of Medicine, University of Oslo, Oslo, Norway
- 1829 — B0290 Heritability of Ocular Traits in Hispanics: Findings from the Maracaibo Aging Study.** Gladys E. Maestre¹, N. B. Blackburn², J. Lee³, J. D. Terwilliger³, J. B. Yezzer^{4,5}, M. Petitto^{4,5}, F. Murati³, J. D. Melgarejo⁴, R. V. Pirela⁴, C. A. Chavez⁴, C. De Moraes³, M. P. Johnson², J. Blangero². ¹Biomedical Sciences, University of Texas Rio Grande Valley, Brownsville, TX; ²South Texas Diabetes and Obesity Institute, University of Texas Rio Grande Valley, Brownsville, TX; ³Columbia University, New York, NY; ⁴University of Zulia, Maracaibo, Venezuela, Bolivarian Republic of; ⁵Clinica de Ojos de Maracaibo, Maracaibo, Venezuela, Bolivarian Republic of
- 1830 — B0291 Retinitis Pigmentosa due to RP1 variants, phenotype and genotype aspects.** Ana Rita Sousa e Silva¹, M. V. Salles², F. Motta², J. M. Sallum². ¹Ophthalmology, Instituto de Oftalmologia Dr. Gama Pinto, Lisbon, Portugal; ²Ophthalmology, Universidade Federal de São Paulo, Sao Paulo, Brazil
- 1831 — B0292 Albinism in Israel: clinical and genetic characteristics.** Claudia Yahalom¹, A. Kimchi^{1,2}, M. Macarov^{1,2}, E. Shemesh¹, A. Rosenmann¹, A. Blumenfeld¹. ¹Ophthalmology, Hadassah-Hebrew University Medical Center, Jerusalem, Israel., Jerusalem, Israel; ²Genetics and Metabolic Diseases, Hadassah-Hebrew University Medical Center, Jerusalem, Israel., Jerusalem, Israel

1832 — B0293 Leber congenital amaurosis (LCA): Prevalence of mutations in a large German cohort and clinical characterization of the associated phenotype. Britta Feldhaus¹, S. Kohl¹, N. Weisschuh¹, F. Nasser¹, E. Zrenner^{1,2}, D. Zobor¹. ¹Centre for Ophthalmology, Institute for Ophthalmic Research, University of Tübingen, Tübingen, Germany; ²Werner Reichardt Center for Integrative Neuroscience, University of Tübingen, Tübingen, Germany

1833 — B0294 A Survey of Retina Specialists' Perspective on Symptomatic Vitreous Floaters (SVF) and its Management. Edward R. Chu¹, K. Beck¹, K. Wannamaker¹, D. Kermansy², K. MacLean¹, R. Membreno², S. Bahadorani¹, C. Mein^{3,4}, A. Khanani⁵, M. Singer⁵. ¹Department of Ophthalmology, UT Health San Antonio, San Antonio, TX; ²Long School of Medicine, UT Health San Antonio, San Antonio, TX; ³Retinal Consultants of San Antonio, San Antonio, TX; ⁴Sierra Eye Associates, Reno, NV; ⁵Medical Center Ophthalmology Associates, San Antonio, TX *CR

1834 — B0295 Analyses of data in Japanese Retina and Vitreous Society registry on eyes with rhegmatogenous retinal detachments. Takayuki Baba¹, T. Sakamoto², R. Kawasaki³, A. Hirakata³, S. Yamamoto¹, K. Nishitsuka⁴, T. Koto³, K. Yamakiri⁵, K. Kadonosono⁶, M. Ohji⁷, H. Yamashita⁴, Y. Ogura⁸. ¹Ophthalmology & Visual Science, Chiba Univ Grad School of Med, Chiba, CHIBA, Japan; ²Kagoshima Univ Sch of Medicine, Kagoshima, Japan; ³Kyorin Univ Sch of Medicine, Tokyo, Japan; ⁴Yamagata University Sch of Med, Yamagata, Japan; ⁵Kagoshima City Hospital, Kagoshima, Japan; ⁶Yokohama City Univ. Med Ctr, Yokohama, Japan; ⁷Shiga University of Medical Science, Ohtsu, Japan; ⁸Nagoya City Univ Medical School, Nagoya, Japan; ⁹Department of Vision Informatics, Osaka University Graduate School of Medicine, Osaka, Japan

1835 — B0296 An Analysis and Characterization of Patients in the Bronx Undergoing Tractional Retinal Detachment Repair for Proliferative Diabetic Retinopathy. Max D. Schlesinger¹, A. Shrivastava¹, U. Mian¹, J. Zonszein². ¹Ophthalmology and Visual Sciences, Montefiore Medical Center, Lawrence, NY; ²Endocrinology, Montefiore Medical Center, Bronx, NY

1836 — B0297 Macular Choroidal Small-Vessel Layer, Sattler's Layer and Haller's Layer Thickness: The Beijing Eye Study. Jing Zhao^{1,2}. ¹UCSF, San Francisco, CA; ²Tongren hospital, Beijing, China

1837 — B0298 Risk factors for hydroxychloroquine retinopathy in the Korean population. Kim Seeun^{1,2}, J. Hong², S. Kim², Y. Kim². ¹Cheil eye hospital, Daegu, Korea (the Republic of); ²Catholic University of Daegu School of Medicine, Daegu, Korea (the Republic of)

1838 — B0299 Spironolactone in the treatment of central serous chorioretinopathy : long-term results and recurrence rates. Jin Young Kim¹, J. Park¹, D. Kim². ¹Department of Ophthalmology, Jeju National University Hospital, Jeju National University School of Medicine, Jeju-si, Jeju-do, Korea (the Republic of); ²Department of Ophthalmology, Chungbuk National University Hospital, College of Medicine, Chungbuk National University, Cheongju-si, Korea (the Republic of)

1839 — B0300 Longitudinal Structure/ Function Correlation Between Microperimetry and OCT Imaging in Type 2 Macular Telangiectasia (MacTel). Traci E. Clemons¹, E. Y. Chew², E. M. Lad³, G. J. Jaffe³, S. Farsiu⁴, S. Duwel¹, D. Cunejare⁵, D. Mukherji⁶. ¹The Emmes Corporation, Rockville, MD; ²National Eye Institute, Clinical Trials Branch, Division of Epidemiology & Clinical Applications, National Institutes of Health, Bethesda, MD; ³Ophthalmology, Duke University Eye Center, Durham, NC; ⁴Ophthalmology & Biomedical Engineering, Duke University, Durham, NC; ⁵Biomedical Engineering, Duke University, Durham, NC *CR, ✗

1840 — B0301 Clinical and OCT findings in patients with epiretinal membranes. Carlos D. Liva, M. A. Andreau, C. Plataroti, C. A. Couto. Centro Privado de Ojos, Ciudad de Buenos Aires, Buenos Aires, Argentina

1841 — B0302 Surgical Outcomes of Epiretinal Membrane Removal in High Myopia. Seo Young Wy, S. Park, U. Park, H. Yu. Department of Ophthalmology, Seoul National University College of Medicine, Seoul National University Hospital, Seoul, Korea (the Republic of)

1842 — B0303 Coding patterns among ophthalmologists for hydroxychloroquine retinal toxicity. Stephan Chiu^{1,2}, T. Luong², M. Batech², J. Shaw¹, D. S. Fong^{3,4}, B. Modjtahedi^{3,4}. ¹Internal Medicine, Kaiser Permanente Los Angeles Medical Center, Los Angeles, CA; ²Research and Evaluation, Southern California Permanente Medical Group, Pasadena, CA; ³Ophthalmology, Southern California Permanente Medical Group, Baldwin Park, CA; ⁴Eye Monitoring Center, Kaiser Permanente Southern California, Baldwin Park, CA

1843 — B0304 Minimum Ultrasonic Gain as an Objective Density Measurement for Vitreous Hemorrhages. Manuel A. A. Trujillo-Alvarez¹, G. Salcedo-Villanueva², M. Mayorquín-Ruiz³, C. Becerra-Revollo³. ¹Asociación para Evitar la Ceguera en México, Mexico, DF, Mexico; ²Retina, Asociación para Evitar la Ceguera en México, Ciudad de México, Mexico; ³Ecography, Asociación para Evitar la Ceguera en México, Mexico, Mexico

1844 — B0305 Vitreoretinal Interface Characteristics by Optical Coherence Tomography (OCT) in Patients with Adult-Onset Foveomacular Vitelliform Dystrophy (AOFVD). Montserrat Pinto Croker, D. Meizner, J. Jimenez-Sierra. Retina, Asociación Para Evitar La Ceguera En Mexico, Mexico, Mexico, Mexico

1845 — B0306 Subretinal relapse of the leukemias. Andrew Stacey, T. B. Gillette. Ophthalmology, University of Washington, Seattle, WA

1846 — B0307 Acute symptomatic posterior vitreous detachments do not adversely affect contrast sensitivity. Kunny C. Dans, D. Chao, A. Meshi, T. Lin, M. Amador, S. Borooah, K. Chen, M. Gomez, D. G. Bartsch, E. Nudleman, W. R. Freeman. Shiley Eye Institute, San Diego, CA

Exhibit Hall C0151-C0166

Monday, April 30, 2018 11:15 AM-1:00 PM

Visual Neuroscience / Visual Psychophysics/ Physiological Optics

244 Ganglion Cells and Beyond

Moderator: Paul R. Martin

1847 — C0151 Features of the local field potential (LFP) in the superior colliculus during target selection. Kevin T. Willeford, R. McPeck. Biological & Vision Sciences, SUNY State College of Optometry, Queens, NY

1848 — C0152 Expression of the Novel Mechanosensitive Ion Channel Piezo1 in Zebrafish Retina. Taylor D. Friemel, D. McDevitt, S. L. Stella. Neural and Behavioral Sciences, The Pennsylvania State College of Medicine, Hershey, PA

1849 — C0153 Direct projection of retinal ganglion cells to mesencephalon Kölliker-Fuse nucleus. Lu Huang, Y. Xi, C. Ren. Jinan University, Guangzhou, Guangdong, China

1850 — C0154 Loss of complex retinogeniculate synapses in mice leads to impaired visual behavior. Gail Stanton¹, A. Monarvarfeshani², M. Fox². ¹Virginia Tech Carillon School of Medicine, Roanoke, VA; ²Virginia Tech Carillon Research Institute, Roanoke, VA

1851 — C0155 Morphological and functional abnormalities of retinal ganglion cells in STZ-induced diabetic mice. Yong-Mei Zhong, R. Cui, L. Wang, S. Qiao, S. Weng, X. Yang. Institutes of Brain Science, Fudan University, Shanghai, China

1852 — C0156 Profound effect of age-related macular degeneration on visual acuity and the white matter projecting to locations of retinal damage. Shumpei Ogawa^{1,2}, F. Pestilli^{3,4}, S. Yoshimine⁵, H. Horiguchi¹, M. Terao³, T. Makino^{1,2}, K. Matsumoto⁶, T. Nakano¹, Y. Masuda¹. ¹Ophthalmology, The Jikei university school of medicine, Tokyo, Minato-ku, Japan; ²Ophthalmology, Atsugi city hospital, Kanagawa, Japan; ³Department of Computer Science, Indiana University, Bloomington, IN; ⁴Department of Intelligent Systems Engineering, Indiana university, Bloomington, IN; ⁵Research Institute for Time Studies, Yamaguchi university, Yamaguchi, Japan; ⁶Brain Science Institute, Tamagawa university, Tokyo, Japan

1853 — C0157 Cell-type specific expression of Kv2 potassium channels in mouse and macaque inner retina. Teresa Puthussery¹, K. Lerner², J. Gayet¹. ¹University of California, Berkeley, Berkeley, CA; ²Casey Eye Institute, Oregon Health & Science University, Portland, OR

1854 — C0158 Correlated firing pattern of mouse and primate retina in spontaneous state. Jungryul Ahn¹, S. Cha¹, K. Koo², K. Kim³, Y. Goo¹. ¹Physiology, Chungbuk National University Med School, Cheong-Ju, Korea (the Democratic People's Republic of); ²Biomedical Engineering, University of Ulsan, Ulsan, Korea (the Republic of); ³Electronics and Control Engineering, Hanbat National University, Daejeon, Korea (the Republic of)

1855 — C0159 A bioengineering approach for promoting retina ganglion cell axon regeneration. Karen Chang^{1,2}, K. Cho¹, J. Wu³, C. Lin³, S. Luo³, T. Chen⁴, W. Su³, M. Chen², D. F. Chen¹. ¹Schepens Eye Research Institute, Boston, MA; ²Graduate Institute of Clinical Dentistry, National Taiwan University, Taipei, Taiwan; ³Department of Materials Science and Engineering, National Taiwan University, Taipei, Taiwan; ⁴Department of Ophthalmology, National Taiwan University Hospital, Taipei, Taiwan

1856 — C0160 Recruitment of Retinal Ganglion Cell Coherent Spiking is Mediated by Electrically Coupled Networks and not by Single Coupled Neighbors. Stewart A. Bloomfield, H. Ramakrishnan, A. Toychiev, F. Pan. Graduate Center for Vision Research, State University of New York College of Optometry, New York, NY

1857 — C0161 Light responses and amacrine cell modulation of morphologically-identified retinal ganglion cells in the mouse retina. Ji-Jie Pang, F. Gao, S. M. Wu. Ophthalmology, Baylor College of Medicine, Houston, TX

1858 — C0162 Differential expression of Ca²⁺ permeable AMPA receptors among RGC subtypes. Scott A. Nawy, X. Wen, A. L. Cahill, C. Barta, W. B. Thoreson. Ophthalmology and Visual Sciences, University of Nebraska Medical Center, Omaha, NE

1859 — C0163 Analysis of retinal ganglion cell and post-retinal phenotypes in Atrx-deficient mice. Pamela S Lagali^{1,2}, H. Bassam¹, D. Picketts^{1,3}, C. Tsilfidis^{1,2}. ¹Regenerative Medicine, Ottawa Hospital Research Institute, Ottawa, Ontario, Canada; ²University of Ottawa Eye Institute, Ottawa, Ontario, Canada; ³Biochemistry, Microbiology, and Immunology, University of Ottawa, Ottawa, Ontario, Canada

1860 — C0164 Cholinergic transmission in direction selective ganglion cells: Synaptic or Paracrine? Santhosh Sethuramanujam, G. Awatramani. Biology, University of Victoria, Victoria, British Columbia, Canada

1861 — C0165 A negative regulator of neurite growth – Insulin-like growth factor binding protein 7. Yingqian Li¹, K. Cho¹, Y. Yang², H. Lei², D. F. Chen¹. ¹Chen lab, Schepens Eye research institute, Boston, MA; ²Schepens Eye Research Institute, Boston, MA

1862 — C0166 Dendritic retraction is a prerequisite for efficient axonal regeneration of retinal ganglion cells. Lieve K. Moons¹, A. Beckers¹, A. Van Dyck¹, L. Andries¹, J. Agostinone², J. Van houcke¹, A. Di Polo², I. Bollaerts¹, K. Lemmens¹. ¹Biology Dept, Zoological Inst, KU Leuven, Leuven, Belgium; ²Department of Neuroscience, Université de Montréal, Montreal, Quebec, Canada

Exhibit Hall C0167-C0178

Monday, April 30, 2018 11:15 AM-1:00 PM

Visual Neuroscience

245 Inner Retinal circuits

Moderator: Sammy C. Lee

1863 — C0167 ATP-induced alterations in extracellular H⁺: a potent potential mechanism for modulation of neuronal signals by Müller (glial) cells in the vertebrate retina. Robert P. Malchow¹, B. K. Tchernookova², L. Holzhausen³, R. H. Kramer³, M. A. Kreitzer⁴. ¹Biological Sciences & Ophthalmology, University of Illinois at Chicago, Chicago, IL; ²Biological Sciences, University of Illinois at Chicago, Chicago, IL; ³Molecular and Cell Biology, University of California at Berkeley, Berkeley, CA; ⁴Biology, Indiana Wesleyan University, Marion, IN

1864 — C0168 NMDA receptor activity regulates synaptic connections between retinal ganglion and bipolar cells. Brent Young^{1,2}, C. M. Sanchez¹, C. Ramakrishnan³, P. Wang¹, K. Deisseroth³, N. Tian^{1,2}. ¹Ophthalmology and Visual Sciences, University of Utah, Salt Lake City, UT; ²Interdepartmental Program in Neuroscience, University of Utah, Salt Lake City, UT; ³Department of Bioengineering, Psychiatry and behavioral sciences, Stanford, Stanford, CA

1865 — C0169 Fine Spatiotemporal Balance of Excitation and Inhibition in the Direction-Selective Ganglion Cell circuit: A Modeling Study. Geoff deRoseRoll, B. Murphy-Baum, G. Awatramani. Biology, University of Victoria, Victoria, British Columbia, Canada

1866 — C0170 AMPA-lacking silent synapses in the mature direction-selective ganglion cells in the mouse retina. Laura Hanson, V. Jain, S. Sethuramanujam, G. Awatramani. University of Victoria, Victoria, British Columbia, Canada

1867 — C0171 Inhibitory Control of Starburst Amacrine Cells. Varsha Jain, G. Awatramani. University of Victoria, Victoria, British Columbia, Canada

1868 — C0172 Spatiotemporal coordination of excitation and inhibition mediated by starburst amacrine cells. Benjamin Murphy-Baum, G. deRoseRoll, V. Jain, A. Hoggarth, G. Awatramani. Biology, University of Victoria, Victoria, British Columbia, Canada

1869 — C0173 Inner Retina Signaling and Well-Preserved Vision during Photoreceptor Degeneration in the P23H Retinitis Pigmentosa Model. Frans Vinberg¹, H. O. Leinonen², K. Palczewski². ¹Ophthalmology and Visual Sciences, University of Utah, Salt Lake City, UT; ²Case Western Reserve University, Cleveland, OH

1870 — C0174 Independent mechanisms for the computation of local and global motion direction. Lea S. Ankri¹, N. Kaushansky², M. Rivlin-Etzion¹. ¹Neurobiology, Weizmann Institute of Science, Rehovot, Israel; ²Immunology, Weizmann Institute of Science, Rehovot, Israel

1871 — C0175 All amacrine cells in the fovea of human and non-human primates. Enrica Strettoi¹, R. A. Masri^{2,3}, U. Grunert^{2,3}. ¹CNR Neuroscience Institute, Pisa, Italy; ²Discipline of Ophthalmology and Save Sight Institute, The University of Sydney, Sydney, New South Wales, Australia; ³Australian Research Council Centre of Excellence for Integrative Brain Function, The University of Sydney, Sydney, New South Wales, Australia

1872 — C0176 The phosphorylation state of the retinal ribbon synapse t-SNARE syntaxin3B is regulated by neuronal activity. Albert J. Hunt Jr, Y. Wang, H. Li, X. Liu, R. Janz, R. Heideberger. Neurobiology and Anatomy, McGovern Medical School at The University of Texas Health Science Center at Houston (UTHealth), Houston, TX

1873 — C0177 A simulation study of information transmission in OFF cone bipolar cell pathway. Akito Ishihara. School of Engineering, Chukyo University, Nagoya, Aichi, Japan

1874 — C0178 Activation of anoctamin 1 is attributed to synergistic effect of voltage and Ca²⁺ in mouse retinal bipolar cells. Yongsoo Park^{1,2}, S. Paik^{1,2}, H. Kim³, S. Oh¹, M. Lee^{1,2}, I. Kim^{1,2}. ¹Department of Anatomy, The Catholic University of Korea, Seoul, Korea (the Democratic People's Republic of); ²Catholic Neuroscience Institute, College of Medicine, The Catholic University of Korea, Seoul, Korea (the Republic of); ³Integrative Research Support center, College of Medicine, The Catholic University of Korea, Seoul, Korea (the Republic of)

Exhibit Hall C0179-C0188

Monday, April 30, 2018 11:15 AM-1:00 PM

Visual Neuroscience

246 Visual Disease Models and Restoration

Moderator: Ronald G. Gregg

1875 — C0179 Stereotyped synaptic connectivity is restored during circuit repair in the adult mammalian retina. Corinne Beier^{1,2}, D. V. Palanker^{4,5}, A. Sher³. ¹Section on Light and Circadian Rhythms, National Institute of Mental Health, Washington, District of Columbia; ²Electrical Engineering, University of California, Santa Cruz, Santa Cruz, CA; ³SCIPP, University of California, Santa Cruz, Santa Cruz, CA; ⁴Ophthalmology, Stanford University, Stanford, CA; ⁵Hansen Experimental Physics Laboratory, Stanford University, Stanford, CA

1876 — C0180 Induction of local photoreceptor degeneration by a subretinal injection of N-Methyl-N-nitrosourea in rats. Hiroshi Tomita^{1,2}, E. Sugano¹, K. Tabata¹, T. Yamane¹, E. Nagasaka³, H. Kudo³, D. Yoshikawa³, M. Yoshikawa³, F. Nakazawa⁴, N. Kitaura⁴, M. Tama⁵. ¹Chemistry and Biological Sciences, Iwate University, Morioka, Iwate, Japan; ²Clinical Research, Innovation and Education Center, Tohoku University Hospital, Sendai, Miyagi, Japan; ³Mayo Corporation, Inazawa, Aichi, Japan; ⁴Life Science Laboratories, Ltd., Minamikawachi-gun, Osaka, Japan; ⁵Tohoku University Hospital, Sendai, Miyagi, Japan

1877 — C0181 Early Retinal Dysfunction in the Mouse EAE Model of Multiple Sclerosis: An Electrophysiological Characterisation. Melanie J. Murphy¹, S. G. Crewther¹, Z. Li², F. Connell², J. M. Orian². ¹Psychology and Counselling, La Trobe University, Melbourne, Victoria, Australia; ²Department of Biochemistry and Genetics, La Trobe Institute for Molecular Science, La Trobe University, Melbourne, Victoria, Australia

1878 — C0182 Deciphering visual deficits in a larval zebrafish model of mild traumatic brain injury. Salvatore L. Stella¹, M. A. Grillo¹, S. D. Chartrand², Y. Kim², M. C. Stahl^{2,1}. ¹Neural and Behavioral Sciences, Penn State University College of Medicine, Hershey, PA; ²Neurology, Penn State University College of Medicine, Hershey, PA

1879 — C0183 Early morphological and physiological signs of nerve degeneration in living retinal ganglion cells following optic nerve transection. Ben Sivyer, S. Tehrani, K. Delf, D. C. Lozano, W. Cepurna, T. Choe, E. C. Johnson, J. C. Morrison. Ophthalmology, Casey Eye Institute, Portland, OR

1880 — C0184 α -lipoic acid and phosphatidylserine effects on glutamate release from synaptosomes in rat retina. Sergio Zaccaria Scalinci¹, C. S. Limoli², P. G. Limoli³, L. Scorolli⁴, G. Bonanno². ¹University of Bologna, Dimes, Bologna, Italy; ²DiFar, University of Genoa, Genoa, Italy; ³Low Vision Research Center, Milan, Italy; ⁴EYE Clinic, S.Lucia Hospital, Bologna, Italy

1881 — C0185 Can co-exposure with anti-oxidants mitigate the adverse effects of aflatoxin B1 on the visual system of developing zebrafish larvae. Martin Connaughton¹, J. Rogers¹, V. P. Connaughton². ¹Biology, Washington College, Chestertown, MD; ²Biology, American University, Washington DC, District of Columbia

1882 — C0186 Age-dependent structural and microvascular changes in retina associated with progressive amyloid- β and Tau deposition in triple transgenic mouse model of Alzheimer's disease. Hossein Nazari Khanamiri¹, M. Montalbano², J. Luisi^{2,3}, G. Tagliatalata², G. Vargas^{2,3}, M. Motamedi^{1,3}. ¹Ophthalmology, University of Texas Medical Branch, Galveston, TX; ²University of Texas Medical Branch, Galveston, TX; ³Center for Biomedical Engineering, University of Texas Medical Branch, Galveston, TX

1883 — C0187 Correlation Between Stereopsis and Reverse Stereopsis in Homonymous and Bitemporal Hemianopias. Michael Dattilo¹, B. B. Bruce², C. F. Vasseneix¹, V. Biousse³, N. J. Newman⁴, J. Peragallo⁵. ¹Ophthalmology, Emory Eye Institute, Atlanta, GA; ²Ophthalmology, Neurology, and Epidemiology, Emory University, Atlanta, GA; ³Ophthalmology and Neurology, Emory University, Atlanta, AL; ⁴Ophthalmology, Neurology, and Neurological Surgery, Emory University, Atlanta, GA; ⁵Ophthalmology and Pediatrics, Emory University, Atlanta, GA

1884 — C0188 Morphology of the Neuroretina in Multiple System Atrophy: does the Pathology of MSA manifest in the retina? Kathrin Kaehler¹, H. Seitter¹, A. Sandbichler², G. Obermair⁴, N. Stefanova³, A. Koschak¹. ¹Pharmacology and Toxicology, University of Innsbruck, Innsbruck, Tyrol, Austria; ²Zoology, University of Innsbruck, Innsbruck, Austria; ³Neurology, Innsbruck Medical University, Innsbruck, Austria; ⁴Physiology and Medical Physics, Innsbruck Medical University, Innsbruck, Austria

Exhibit Hall C0285-C0313

Monday, April 30, 2018 11:15 AM-1:00 PM

Retina

247 Diabetic Retinopathy: Clinical

Moderators: Jay M. Stewart and Jennifer K. Sun

1885 — C0285 Visual acuity under lighting conditions with suboptimal contrast and glare in diabetic patients without retinopathy. Kevin C. Chen¹, A. Meshi¹, A. Li², Q. You¹, L. Saunders¹, E. Nudleman¹, M. L. Gomez¹, W. R. Freeman¹. ¹UCSD, San Diego, CA; ²Emory University, Atlanta, GA

1886 — C0286 Near reading speed changes after the panretinal photocoagulation in diabetic retinopathy patients; Using the reading speed measure application. Ji Soo Kim¹, J. Kim^{1,2}, J. Kim³, Y. Park¹, S. Hyung¹, J. Chae¹, D. Kim¹. ¹Department of Ophthalmology, Chungbuk National University Hospital, College of Medicine, Chungbuk National University, Cheongju, Korea, Cheongju-si, Chungcheongbuk-do, Seowon-gu, Korea (the Republic of); ²Seoul K Eye Center, Cheongju-si, Chungcheongbuk-do, Seowon-gu, Korea (the Republic of); ³Department of Ophthalmology, Jeju National University Hospital, College of Medicine, Jeju National University, Jeju-si, Korea (the Republic of); ⁴Department of Ophthalmology, ChangWon Gyeongsang National University Hospital, College of Medicine, Gyeongsang National University, ChangWon-Si, Korea (the Republic of)

1887 — C0287 One Year Results of Clinical Use of an Automatic Diabetic Retinopathy Screening System at Diabetes Care Clinics. E Simon Barriga¹, J. Benson^{1,2}, G. Zamora¹, J. Lozano³, S. C. Nemeth¹, P. Soliz¹. ¹VisionQuest Biomedical, Albuquerque, NM; ²Computer Science, The University of New Mexico, Albuquerque, NM; ³Clinicas del Azucar, Monterrey, Mexico *CR

1888 — C0288 Diabetic Retinopathy: Trends of Posterior Pole and Peripheral Involvement. J.R. Gallagher, J. P. Lockett, M. Reinoso. Ophthalmology, Louisiana State University HSC, Metairie, LA

1889 — C0289 Intravitreal Aflibercept Injection (IAI) for Moderately Severe to Severe Nonproliferative Diabetic Retinopathy (NPDR): The Phase 3 PANORAMA Study. David M. Brown. Retina Consultants of Houston, Houston, TX *CR, ∇

1890 — C0290 Analysis of Retinal Function in Patients with Proliferative Diabetic Retinopathy Treated with Panretinal Photocoagulation. Naheed W. Khan, A. Omari, K. Joltikov, J. Davila, T. W. Gardner. Ophthalmology, Univ of Michigan-Kellogg Eye Ctr, Ann Arbor, MI

1891 — C0291 Predictors of Anti-VEGF Treatment Initiation and Frequency in Diabetic Patients. Adam Van Horn¹, L. Verchinina¹, M. Wichorek⁴, D. Marke^{1,4}, T. W. Gardner², A. Shah². ¹Michigan State University College of Human Medicine, East Lansing, MI; ²Ophthalmology, Kellogg Eye Center University of Michigan, Ann Arbor, MI; ³Department of Learning Health Sciences, University of Michigan Medical School, Ann Arbor, MI; ⁴Brehm Center, University of Michigan Medical School, Ann Arbor, MI *CR

1892 — C0292 Peripapillary Neurovascular Coupling is Compromised in Early Diabetic Retinopathy. João Pedro Marques^{1,2}, T. M. Rodrigues¹, J. A. Teles³, M. Soares^{1,2}, S. Simão², M. Dolan⁴, J. N. Murta^{1,3}, R. M. Silva^{1,2}. ¹Retina Unit, Ophthalmology Department, Centro Hospitalar e Universitario de Coimbra (CHUC), Coimbra, Coimbra, Portugal; ²Association for Innovation and Biomedical Research on Light and Image (AIBILI), Coimbra, Portugal; ³Faculty of Medicine University of Coimbra (FMUC), Coimbra, Portugal; ⁴Janelia Research Campus, Howard Hughes Medical Institute, Ashburn, VA *CR

1893 — C0293 Changes in Macular function with Multifocal Pupillography and its spatial correlation with severity of Diabetic Retinopathy. Faran Sabeti^{1,2}, C. F. Carle², C. Nolan^{3,4}, A. Jenkins⁵, R. Essex^{3,6}, L. Baker⁴, R. M. Iyer⁴, C. E. Coombes³, V. Cheung³, M. Chiou³, T. Maddess². ¹Department of Optometry, University of Canberra, Bruce, Australian Capital Territory, Australia; ²Eccles Institute for Neuroscience, Australian National University, Canberra, Australian Capital Territory, Australia; ³Australian National University Medical School, Australian National University, Canberra, Australian Capital Territory, Australia; ⁴Department of Endocrinology, The Canberra Hospital, Canberra, Australian Capital Territory, Australia; ⁵NHMRC Clinical Trials Centre, University of Sydney, Sydney, Australian Capital Territory, Australia; ⁶Department of Ophthalmology, The Canberra Hospital, Canberra, Australian Capital Territory, Australia *CR

1894 — C0294 Socioeconomic Influences on Screening Rates for Diabetic Retinopathy. James Liu¹, J. Kuo¹, V. Shankar¹, K. Rao¹, T. P. Margolis¹, E. Fondahn², R. Rajagopal¹. ¹Department of Ophthalmology and Visual Sciences, Washington University in St. Louis, St. Louis, MO; ²Department of Medicine, Washington University in St. Louis, Saint Louis, MO

1895 — C0295 Survey of TREATment for Diabetic Macular Edema (STREAT-DME) Study: Results by treatment options from real world data in Japan. Daisuke Muramatsu¹, M. Shimura², S. Kitano³, T. Sakamoto⁴. ¹Ophthalmology, Tokyo Medical University, Shinjuku-ku, TOKYO, Japan; ²Tokyo Medical University, Hachioji Medical Center, Hachioji, Japan; ³Diabetes Center, Tokyo Women's Medical University, Tokyo, Japan; ⁴Kagoshima University, Kagoshima, Japan *CR

1896 — C0296 Factors Associated with Acute Worsening of Retinopathy in Diabetic Patients after Pancreas Transplantation in Chinese. Fang-Yi Tsai¹, L. Lau^{2,3}, A. Li^{2,3}, S. Chen^{2,3}, C. Liu^{2,3}. ¹Ophthalmology, Taipei Municipal Wanfang Hospital, Taipei, Taiwan; ²Ophthalmology, Taipei Veterans General Hospital, Taipei, Taiwan; ³School of Medicine, National Yang-Ming University, Taipei, Taiwan

1897 — C0297 Preoperative Timing of Intravitreal Bevacizumab Injection for Proliferative Diabetic Retinopathy Patients. Jing Feng^{1,2}, Y. Jiang¹. ¹Peking university people's hospital, Beijing, China; ²Beijing Chao-yang Hospital, Beijing, China

1898 — C0298 Second-Line Treatment with Iluvien for persistent pre-treated Diabetic Macular Edema. Michael Ulbig, K. Wehrmann, M. Maier. Technical University Munich, Munich, Germany *CR

1899 — C0299 Comparing intravitreal bevacizumab and sub threshold macular laser (STML) in the initial treatment of diabetic macular edema (DME) in a resident lead clinic. Mansoor Mughal, R. Phan, E. Chang, G. Kramer, J. Alexander, M. Morcos. Ophthalmology, Nassau University Medical Center, East Meadow, NY

1900 — C0300 Ultra-wide Field Fluorescein Angiography Guided Targeted Retinal Photocoagulation in Diabetic Retinopathy. Pallavi Singh, A. Kumar, P. Chandra, V. Kumar. Ophthalmology, All India Institute of Medical Sciences, New Delhi, Delhi, India ✕

1901 — C0301 High cardiovascular mortality in patients with diabetic neovascular glaucoma. Nùria Artells de Jorge¹, S. Sánchez Tabernero^{2,1}, S. Crespo Millas¹, C. Meneses Galicia¹, M. López Gálvez¹, L. Manzanos Leal¹, J. Juberías Sánchez¹. ¹Hospital Clínico Universitario Valladolid, Valladolid, Spain; ²Ashford and St Peter's Hospital, London, United Kingdom

1902 — C0302 Outcomes of Intravitreal Bevacizumab for Diabetic Macular Edema in Patients with Visual Acuity Worse than 20/200. Flavio M. Medina, C. Estacia, A. Gameiro Filho, M. Motta, A. Albuquerque Junior, A. Motta. UNICAMP, Rio de Janeiro, Brazil

1903 — C0303 Correlation of Functional and Structural Changes in non Proliferative Diabetic Retinopathy. sacha L. naso^{1,2}, A. Nguyen¹, R. H. Kardon³, A. K. Kawasaki¹. ¹Jules-Gonin Eye Hospital, Lausanne, Switzerland; ²Ospedale Italiano, Lugano, Switzerland; ³University of Iowa, Iowa, IA

1904 — C0304 Baseline characteristics of diabetic patients presenting to a retina clinic. Nish Patel¹, L. Verchinina², P. Hughes³, M. Wichorek², T. W. Gardner², D. Marke^{1,4}, A. Shah³. ¹University of Michigan Medical School, Ann Arbor, MI; ²The Brehm Center, University of Michigan, Ann Arbor, MI; ³Ophthalmology and Visual Sciences, University of Michigan, Ann Arbor, MI; ⁴Learning Health Sciences, University of Michigan Medical School, Ann Arbor, MI; ⁵Rutgers Robert Wood Johnson Medical School, Piscataway, NJ *CR

1905 — C0305 Rapid structural and functional improvements following 0.19 mg fluocinolone acetonide (FAc) implant in diabetic macular edema patients with poor visual acuity: 6-month audit results from The United Arab Emirates. Ahmed Elbarky. Sheikh Khalifa Medical City, Abu Dhabi, United Arab Emirates *CR

1906 — C0306 United Kingdom multicenter Medisoft™ electronic medical record real-world audit following implant of ILUVIEN® (fluocinolone acetonide 190 µg) – the first 3-year results from the UK. Fahd Quhill¹, C. Bailey², U. Chakravarthy³, A. Lotery⁴, G. Menon⁵, J. S. Talks⁶. ¹Eye Department, Sheffield Teaching Hospital, Sheffield, ENGLAND, United Kingdom; ²Bristol Eye Hospital, Bristol, United Kingdom; ³Queen's University Belfast, Belfast, United Kingdom; ⁴University of Southampton, Southampton, United Kingdom; ⁵Frimley Park Hospital, Camberley, United Kingdom; ⁶Royal Victoria Hospital Newcastle upon Tyne, Newcastle, United Kingdom *CR

1907 — C0307 Cardiovascular risk factors impact in periferow flow in Type 1 Diabetes Mellitus (T1DM) assessed by OCT Angiography (OCTA). Anibal Alé-Chile¹, M. Barras², T. Hernandez², C. Oliva², A. Adán², J. Zarranz-Ventura². ¹resident, Hospital Clinic de Barcelona, Barcelona, Barcelona, Spain; ²Hospital Clinic de Barcelona, Barcelona, Barcelona, Spain

1908 — C0308 Effect of panretinal photocoagulation on confocal laser scanning ophthalmoscopy and stereo photographic parameters of the optic disc topography in diabetic retinopathy patients. Breno Azevedo, R. Barbosa de Araujo, M. Ciongoli, L. P. Cunha, R. C. Preti, M. Hatanaka, L. C. Zacharias, M. L. Monteiro. Ophthalmology, University of Sao Paulo, Sao Paulo, Sao Paulo, Brazil

1909 — C0309 Short-Term effects of Ranibizumab on Diabetic Retinopathy Severity and Progression in the Ranibizumab for Edema of the Macula in Diabetes – Protocol 3 with High Dose (READ-3) Study. Muhammad Hassan¹, M. A. Sadiq¹, M. S. Halim¹, R. Afridi¹, N. V. Nguyen^{1,2}, Y. J. Sepah^{1,2}. ¹Ophthalmology, Byers Eye Institute, Palo Alto, CA; ²Ocular Imaging Research and Reading Center, Menlo Park, CA *CR

1910 – 1929 – Monday – Posters

1910 — C0310 The Correlation of Retinal Vascular Perfusion Density and Dark Adaptation in Diabetic Retinopathy. Hsueh-min Hsu, C. Hsiao, C. Yang, C. Yang. National Taiwan University Hospital, New Taipei City, Taiwan

1911 — C0311 Novel Genetic Variants in Extreme Phenotypes of Diabetic Retinopathy: DRGen Study. Arup Das¹, S. Rangasamy², M. Naymik³, F. Monickaraj¹, C. Legendre², C. Balak², D. Duggan², N. Schork², P. McGuire². ¹MSC10-5610 Surgery, Univ of New Mexico Sch of Med, Albuquerque, NM; ²Translational Genomics Research Institute, Phoenix, AZ; ³University of New Mexico School of Medicine, Albuquerque, NM

1912 — C0312 Retinal nerve fiber layer thickness changes after intravitreal fluocinolone acetonide implant for chronic diabetic macular edema. Manuel Falcao^{1,2}, M. I. Silva¹, T. C. Madeira¹, V. A. Fernandes¹, V. Rosas¹, F. Alves¹, F. Falcao-Reis^{1,2}. ¹Ophthalmology, Hospital Sao Joao, Porto, Portugal; ²Department of Surgery and Physiology, Faculty of Medicine of the University of Porto, Porto, Portugal *CR

1913 — C0313 Effect of adherence to the Mediterranean diet on diabetic retinopathy and choroidal thickness. Antonio Ferreras^{1,2}, B. Abadia¹, P. Calvo^{1,2}, F. Bartol¹, G. Verdes³, C. Isanta¹, M. M. Iester⁵, M. Figus⁶, A. Pajarin^{4,2}. ¹Miguel Servet University Hospital, Zaragoza, Spain; ²University of Zaragoza, Zaragoza, Spain; ³Hospital de Alcañiz, Teruel, Spain; ⁴Centro de Salud Universitat, Zaragoza, Spain; ⁵University of Genoa, Genoa, Italy; ⁶University of Pisa, Pisa, Italy

Exhibit Hall C0314-C0341

Monday, April 30, 2018 11:15 AM-1:00 PM
Retina

248 Diabetic Retinopathy: Imaging

Moderator: Thomas W. Gardner

1914 — C0314 Effect of Intravitreal Aflibercept on Optical Coherence Tomography Angiography Vessel Density in Subjects with Proliferative Diabetic Retinopathy. Muneeswar Gupta Nittala¹, w. fan¹, S. Velaga¹, S. Lampen², M. S. Ip¹, C. C. Wykoff², S. R. Sadda¹. ¹Ophthalmology, Doheny Eye Institute, Los Angeles, CA; ²Retina Consultants of Houston, Houston, TX *CR

1915 — C0315 OCT angiography (OCTA) changes following intravitreal dexamethasone implant in patients with diabetic macular edema (DME). Tommaso Micelli Ferrari¹, M. Lorusso¹, L. Micelli Ferrari², E. Nikolopolou¹, G. Addabbo², S. Ciani¹, R. Zito¹, L. Di Pilato¹. ¹UOC Oculistica, Ente Ecclesiastico "F Miulli" Acquaviva, Bari, Italy; ²"G. Moscati" Hospital, Taranto, Italy *CR

1916 — C0316 Associations between retinal arteriole tortuosity, retinopathy and peripheral neuropathy in type II diabetes. Wendy W. Harrison¹, D. Weiler^{2,3}, M. Rhodes², C. Engelke^{2,3}, C. Bishop². ¹University of Houston College of Optometry, Houston, TX; ²Optometry Section, Southern Arizona Veterans Affairs Health Care System, Tucson, AZ; ³Southern California College of Optometry at Marshall B Ketchum University, Fullerton, CA

1917 — C0317 Retinal and Choriocapillaris Evaluation of Diabetic Patients using Optical Coherence Tomography Angiography. Vivian Qin², F. Conti¹, S. Sharma¹, A. V. Rachitskaya¹, J. Ehlers¹, R. P. Singh¹. ¹Cole Eye Institute, Cleveland, OH; ²Case Western Reserve University School of Medicine, Cleveland, OH *CR

1918 — C0318 Synergistic Use of Novel Imaging Technology in Type I Diabetes Screenings. Loka Thangmathesvaran, B. Szirth, A. S. Khouri. Ophthalmology, Rutgers University- New Jersey Medical School, Monmouth Junction, NJ

1919 — C0319 Retinal diabetic neurodegeneration as a predictive marker for progression of diabetic retinopathy in type 2 diabetes. Kiyoun Kim, J. Kim, E. Kim, S. Yu. Kyung Hee University Medical Center, Seoul, Korea (the Republic of)

1920 — C0320 Evaluation of Diabetic Retinopathy Severity and Underlying Panretinal Ischemic Index. Alice Jiang^{1,2}, J. Boss², S. Srivastava², J. Reese², J. Ehlers². ¹Case Western Reserve University School of Medicine, Cleveland Heights, OH; ²Cole Eye Institute, Cleveland Clinic, Cleveland, OH *CR

1921 — C0321 Structural changes in the inner retina assessed by slab en face optical coherence tomography in diabetic eyes. Atsuko Katsuyama, S. Kusuhara, W. Matsumiya, S. Honda, M. Nakamura. Ophthalmology, Kobe University Graduate School of Medicine, Kobe, Japan

1922 — C0322 Wide field SS-OCT Angiography and diabetic retinopathy. Jean-Francois Korobelnik, M. B. Rougier, B. Gontier, M. Delyfer. Service d'Ophthalmologie, Hopital Pellegrin, Bordeaux, France *CR

1923 — C0323 Association of Retinal Ischemia with Retinal Neovascularization in Proliferative Diabetic Retinopathy. Michelle Lin^{1,2}, S. N. Moysidis^{1,2}, B. Burkemper¹, C. Ryu^{1,2}, R. Murgai^{1,2}, A. Arbabi^{1,2}, H. Ameri^{1,2}. ¹Keck School of Medicine, Roski Eye Institute, Los Angeles, CA; ²University of Southern California, LAC+USC Medical Center, Los Angeles, CA

1924 — C0324 Quantification of longitudinal changes in microvascular density and morphology among subjects with diabetic retinopathy using SD-OCT angiography. Kyle M. Green¹, X. Jiang¹, Z. Chu², R. K. Wang³, A. H. Kashani¹. ¹Ophthalmology, USC Roski Eye Institute, University of Southern California, Los Angeles, CA; ²Bioengineering, University of Washington, Seattle, WA; ³Bioengineering, University of Washington, Seattle, WA *CR

1925 — C0325 Optic coherence tomography angiography to evaluate preoperative intravitreal Conbercept before vitrectomy for proliferative diabetic retinopathy (PDR). Qinghui Liu, Z. Hu, P. Xie, Y. Su, L. Chen, J. Ji. Department of Ophthalmology, The first affiliated hospital of Nanjing Medical University, Nanjing, Jiangsu, China

1926 — C0326 Biomarkers of diabetic retinopathy based on dynamic fluorescein angiography in control and diabetic patients. William F. Mieler¹, P. Moghianesi², J. Wu², C. Y. Cheung³, D. Ng³, Z. Sun³, Y. W. Yip³, K. M. Tichauer², J. J. Kang-Mieler². ¹Illinois Eye & Ear Infirmary, Winnetka, IL; ²Dept of Biomedical Engineering, Illinois Institute of Technology, Chicago, IL; ³Dept of Ophthalmology and Visual Sciences, The Chinese University of Hong Kong, Hong Kong, Hong Kong

1927 — C0327 12x12mm Optical Coherence Tomography Angiography for the Clinical Diagnosis of Proliferative Diabetic Retinopathy. Christoph Mitsch, S. Karst, C. Scholda, R. Scharinger, U. Schmidt-Erfurth. Department of Ophthalmology and Optometry, Medical University of Vienna, Vienna, Austria

1928 — C0328 Quantitative Analysis of Capillary Non-Perfusion in Diabetic Retinopathy using Widefield OCT-Angiography. A. Yasin Alibhai¹, L. R. De Pretto^{2,3}, E. Moul², J. Schottenhamml⁴, C. Or¹, M. Arya¹, M. McGowan¹, C. R. Bauman¹, A. J. Witkin¹, J. S. Duker¹, J. G. Fujimoto², N. K. Waheed¹. ¹Ophthalmology, New England Eye Center, Tufts Medical Center, Boston, MA; ²Department of Electrical Engineering and Computer Science/Research Laboratory of Electronics, Massachusetts Institute of Technology, Boston, MA; ³Institute for Nuclear and Energy Research, University of São Paulo, Sao Paulo, Brazil; ⁴Pattern Recognition Lab, Friedrich-Alexander-Universität Erlangen-Nürnberg, Erlangen, Germany *CR

1929 — C0329 Analysis of Retinal Blood Flow in Diabetic Retinopathy Patients with or without Metformin Treatment. Jacob Diskin^{2,1}, Y. Li², P. A. Edwards², H. Gao², X. Qiao². ¹Wayne State University School of Medicine, Detroit, MI; ²Ophthalmology, Henry Ford Health System, Detroit, MI

1930 — C0330 Correlation of Anatomic Features with Panretinal Ischemic Index in Diabetic Retinopathy. Joseph D. Boss, A. Jiang, S. Srivastava, J. Reese, J. P. Ehlers. Cole Eye Institute, Cleveland Clinic Foundation, Cleveland, MI *CR

1931 — C0331 Analysis of Foveal Avascular Zone and Macular Vasculature using Optical Coherence Tomography Angiography in Type 2 Diabetic Eyes without Diabetic Retinopathy. Eunyoungh Choi, M. Kim. Yonsei University College of Medicine, Seoul, Korea (the Republic of)

1932 — C0332 Decreased capillary vessel density is associated with a higher risk of diabetic retinopathy in patients with diabetes. Cecilia Czako, G. Sandor, M. Ecsedy, Z. Récsán, H. Horváth, Z. Nagy, I. Kovacs. Ophthalmology, Semmelweis University, Budapest, Hungary

1933 — C0333 Correlation of choroidal thickness changes with systemic risk factors and the severity of diabetic retinopathy (assessed by swept-source optical coherence tomography). Hajnalka Horváth¹, I. Kovacs¹, G. Sandor¹, C. Czako¹, Z. Récsán¹, A. Somogyi², Z. Nagy¹, M. Ecsedy¹. ¹Ophthalmology, Semmelweis University, Budapest, Hungary; ²Internal Medicine, Semmelweis University, Budapest, Hungary

1934 — C0334 Intrasession and between-visit variability of retinal capillary density values measured by OCT angiography in diabetic patients. Illes Kovacs, C. Czako, G. Sandor, M. Ecsedy, Z. Récsán, H. Horváth, Z. Nagy. Department of Ophthalmology, Semmelweis University, Budapest, Hungary

1935 — C0335 Assessment of Retinal Vessel Tortuosity and Oxygenation in African Americans at Stages of Diabetic Retinopathy. Sarah L. Garvey¹, M. Khansari², X. Jiang², R. Varma², M. Shahidi². ¹Medicine, University of Illinois at Chicago, Chicago, IL; ²Ophthalmology, University of Southern California, Los Angeles, CA

1936 — C0336 Choroidal vascular layer changes correlates better than thickness with Diabetic Retinopathy. LILLIANNE DUARTE^{1,2}, J. Salgado-Borges^{3,6}, M. D. Pinazo-Duran^{4,2}, R. Gallego-Pinazo⁵. ¹Oftalmologia, Centro Hospitalar Entre o Douro e o Vouga, Vila Nova de Famalicão, Portugal; ²Medicine and Odontology Faculty, University of Valencia, Valencia, Spain; ³Hospital Privado da Boa Nova, Porto, Portugal; ⁴Ophthalmic Research Unit Santiago Grisolia, Valencia, Spain; ⁵Oftalvist, Valencia, Spain; ⁶Clinica Prof. Salgado-Borges, Porto, Portugal *CR

1937 — C0337 Peripapillary OCT-Angiography in Patients with Diabetes Mellitus. Andrea Muraca¹, V. Gatti¹, L. Masoero¹, B. Cannillo², M. Brambilla², S. De Cilla¹, S. Vujosevic¹. ¹Ophthalmology, University Hospital "Maggiore della Carità" Novara, Novara, Italy; ²Medical Physics, University Hospital "Maggiore della Carità" Novara, Novara, Italy

1938 — C0338 Effect of intravitreal ranibizumab on intraretinal hard exudates in eyes with diabetic macular edema. Sowmya Srinivas¹, M. G. Nittala¹, J. Gasperini², S. R. Sadda^{1,3}. ¹Ophthalmology, Doheny Eye Institute, Los Angeles, CA; ²Ophthalmology, South Coast Retina Center, Long Beach, CA; ³Department of Ophthalmology, David Geffen School of Medicine at UCLA, Los Angeles, CA *CR

1939 — C0339 Impact of peripheral non-perfusion on macular retinal layer morphology in subjects with proliferative diabetic retinopathy. Tyler Brown¹, M. G. Nittala², w. fan², T. Hirano², S. Velaga², Z. Hu³, X. Wu⁴, C. C. Wykoff⁵, M. S. Ip^{1,6}, S. R. Sadda^{1,6}. ¹DIRC, Doheny Eye Institute, Los Angeles, CA; ²DIRRL, Doheny Eye Institute, Los Angeles, CA; ³DIAL, Doheny Eye Institute, Los Angeles, CA; ⁴Electrical and Computer Engineering, University of Iowa, Iowa City, IA; ⁵Retina Consultants of Houston, Blanton Eye Institute & Houston Methodist Hospital, Houston, TX; ⁶Department of Ophthalmology, David Geffen School of Medicine at UCLA, Los Angeles, CA *CR, ✗

1940 — C0340 Near-infrared reflectance imaging of proliferative diabetic retinopathy. Sara Vaz-Pereira^{1,2}, M. Monteiro-Grillo^{2,3}, M. Engelbert^{4,5}. ¹Department of Ophthalmology, Hospital de Santa Maria, Lisbon, Portugal; ²Department of Ophthalmology, Faculty of Medicine, Universidade de Lisboa, Lisbon, Portugal; ³ALM - Oftalmolaser, Lisbon, Portugal; ⁴Vitreous Retina Macula Consultants of New York, New York, NY; ⁵New York University School of Medicine, New York, NY

1941 — C0341 Optical Coherence Tomography Angiography Characteristics of Retinal Vasculature in Diabetic Retinopathy. Kelvin Z. Li¹, D. Wong², L. Lim¹, C. S. Tan^{1,3}. ¹Ophthalmology, Tan Tock Seng Hospital, Singapore, Singapore; ²Lee Kong Chian School of Medicine, Singapore, Singapore; ³Fundus Imaging Reading Center, Tan Tock Seng Hospital, Singapore, Singapore *CR

Room 301AB

Monday, April 30, 2018 1:30 PM-3:00 PM

Immunology/Microbiology / Glaucoma / Retina

249 Telemedicine and Artificial Intelligence using Deep Learning Systems to Screen and Monitor Diabetic Retinopathy, Glaucoma and Age-related Macular Degeneration using Different Imaging Modalities - SIG

This SIG will focus on the design, implementation and potential pitfalls of tele-medicine programs and deep learning systems for 3 major eye conditions - diabetic retinopathy (DR), glaucoma and age-related macular degeneration (AMD) on multi-modal imaging.

Moderator: Tien Yin Wong

Artificial Intelligence using Deep Learning Systems for Tele-Retinal Diabetic Retinopathy Screening Programs: Fully-automated versus Semi-automated System. *Daniel Ting.* ¹Vitreo-retinal Department, Singapore National Eye Center, Singapore, Singapore; ²Ophthalmology and Visual Science Academic Clinical Program, Duke-NUS Medical School, National University of Singapore, Singapore, Singapore *CR

Artificial Intelligence using Deep Learning Systems for Tele-Retinal Diabetic Retinopathy Screening Programs: Fully-automated versus Semi-automated System. *Tien Yin Wong.* ¹Vitreo-retinal Department, Singapore National Eye Center, Singapore, Singapore; ²Ophthalmology and Visual Science Academic Clinical Program, Duke-NUS Medical School, National University of Singapore, Singapore, Singapore *CR

Various Strategies and the Role of Artificial Intelligence in a Tele-Glaucoma Screening Service. *Louis R. Pasquale.* Massachusetts Eye and Ear, Harvard Medical School, Boston, MA

The Current Updates of the Machine Learning Technologies in Ophthalmology for Fundus-based and OCT-based Images. *Phillippe Burlina.* Applied Physics Laboratory, Johns Hopkins University, Laurel, MD *CR

The Current Updates of the Machine Learning Technologies in Ophthalmology for Fundus-based and OCT-based Images. *Aaron Lee.* Ophthalmology, Washington University School of Medicine, Seattle, WA

Various Strategies and the Role of Artificial Intelligence in a Tele-Glaucoma Screening Service. *Robert Chang.* Ophthalmology, Stanford University Medical Center, Palo Alto, CA *CR

Artificial Intelligence using Deep Learning Systems for Tele-Retinal Diabetic Retinopathy Screening Programs: Fully-automated versus Semi-automated System. *Gavin S. Tan.* ¹Vitreo-retinal Department, Singapore National Eye Center, Singapore, Singapore; ²Ophthalmology and Visual Science Academic Clinical Program, Duke-NUS Medical School, National University of Singapore, Singapore, Singapore

Various Strategies and the Role of Artificial Intelligence in a Tele-Glaucoma Screening Service. *Rohit Varma.* Ophthalmology, USC Roski Eye Institute, Los Angeles, CA

The Current Updates of the Machine Learning Technologies in Ophthalmology for Fundus-based and OCT-based Images. *Leopold Schmetterer.* Ophthalmology and Visual Science Academic Clinical Program, Duke-NUS Medical School, National University of Singapore, Singapore, Singapore

Various Strategies and the role of Artificial Intelligence in a Tele-Glaucoma Screening Service. *Mingguang He.* Ophthalmology, Center of Eye Research Australia, Melbourne, Victoria, Australia

Artificial Intelligence using Deep Learning Systems for Tele-Retinal Diabetic Retinopathy Screening Programs: Fully-automated versus Semi-automated System. *Jennifer K. Sun.* Joslin Diabetes Center, Harvard Medical School, Boston, MA

Various Strategies and the Role of Artificial Intelligence in a Tele-Glaucoma Screening Service. *Tin Aung.* ¹Glaucoma, Singapore National Eye Center, Singapore, Singapore; ²Ophthalmology and Visual Science Academic Clinical Program, Duke-NUS Medical School, National University of Singapore, Singapore, Singapore

Room 306AB

Monday, April 30, 2018 1:30 PM-3:00 PM

Retinal Cell Biology / Biochemistry/Molecular Biology / Cornea / Genetics / Immunology/Microbiology / Physiology/Pharmacology / Retina / Visual Neuroscience

250 Phagocytic mechanisms in ocular tissues: from physiological to pathological processes - SIG

Phagocytic processes are part of the normal eye homeostasis. However, phagocytosis is also linked to pathological developments. This SIG will highlight the importance of maintaining a functional equilibrium from the cornea to the RPE/choroid.

Moderator: Emeline F. Nandrot

Macrophages in the cornea and uveal tract - distribution, phenotype and function. *Paul G. McMenamin.* Department of Anatomy & Developmental Biology, School of Biomedical and Psychological Sciences and Monash Biomedical Discovery Institute, Faculty of Medicine, Nursing and Health Sciences, Monash University, Clayton, Victoria, Australia

Non-professional phagocytes in the cornea. *Derek J. Royer.* Department of Ophthalmology, University of Oklahoma Health Sciences Center, Oklahoma City, OK

Mononuclear phagocytes as a potential new target for therapy of AMD. *Florian Sennlaub.* Therapeutics Department, Institut de la Vision, Faculté des Sciences Sorbonne Université, INSERM U968, CNRS UMR 7210, Paris, France

Room 310

Monday, April 30, 2018 1:30 PM-3:00 PM
Cornea / Clinical/Epidemiologic Research

251 Omega-3 Fatty Acid Supplementation for Dry Eye Disease: Data on Efficacy and Safety from the Dry Eye Assessment and Management (DREAM®) Study - SIG

Results of the Dry Eye Assessment and Management (DREAM®) Study, an NEI-sponsored clinical trial of omega-3 supplementation for moderate to severe dry eye disease, will be available in April 2018. Data on efficacy and their interpretation will be discussed.

Moderator: Maryann Redford

Design of the DREAM Study. *Maureen G. Maguire.* Ophthalmology, University of Pennsylvania, Philadelphia, PA *CR

Results of the DREAM Study. *Penny A. Asbell.* Ophthalmology, Mount Sinai School of Medicine, New York, NY *CR

Subgroup Analyses in DREAM. *Reza Dana.* Massachusetts Eye and Ear Infirmary, Boston, MA *CR

Panelist Discussion. *Meng C. Lin.* Optometry, University of California Berkeley, Berkeley, CA

Room 311

Monday, April 30, 2018 1:30 PM-3:00 PM

Retina / Clinical/Epidemiologic Research / Cornea / Genetics / Immunology/Microbiology / Multidisciplinary Ophthalmic Imaging / Physiology/Pharmacology / Visual Neuroscience / Visual Psychophysics/Physiological Optics

252 Managing Patients with Diabetic Macular Edema, Diabetic Retinopathy, Neovascular and Non-Neovascular AMD, and Retinal Vein Occlusion: How to Best Utilize the Latest Data from Clinical Trials - SIG

The SIG will provide a forum for interpretation of significance of data and discussion on how results will be applied to clinical practice. There will be no rehash of data presented elsewhere at ARVO. Strong audience participation will be encouraged

Moderators: Peter A. Campochiaro and Diana V. Do

What Are Desired Endpoints in the Management of DME and Diabetic Retinopathy? *Quan Dong Nguyen.* Byers Eye Institute, Stanford University, Palo Alto, CA *CR

What are the Roles of OCT-Angiography, Wide-angle and Other Advanced Retinal Imaging Technologies in the Management of Retinal Vascular Diseases? *David S. Boyer.* Retina Vitreous Associates Medical Group, Beverly Hills, CA *CR

What Factors Lead to GA Development in Patients with Neovascular AMD? Should One Be Concerned with Frequent Anti-VEGF Therapy? *Judy E. Kim.* Department of Ophthalmology, Medical College of Wisconsin, Milwaukee, CA *CR

What is the Role of Ocular Inflammation and Corticosteroids in the Pathogenesis and Management of DME and Diabetic Retinopathy? *Robert L. Avery.* California Retina Consultants, Santa Barbara, CA *CR

Room 313A

Monday, April 30, 2018 1:30 PM-3:00 PM

**Multidisciplinary Ophthalmic Imaging Group
253 MOI Group - Visible Light OCT**

The utility of visible light OCT has been demonstrated in both clinical and research studies for retinal imaging (Anatomy, angiography and oximetry). This is a rapidly evolving technology that could have a significant impact on ophthalmic research and clinical studies. This MOI session provides the most updated information regarding visible OCT and discusses the current limitations and future directions.

Moderators: Hao F. Zhang, Vivek J. Srinivasan and Robert J. Zawadzki

— 1:30 **Introductions and Remarks**

— 1:35 **Overview of visible light OCT development.** *Hao F. Zhang.* Biomedical Engineering, Northwestern University, Evanston, IL *CR

— 1:48 **Exposure safety considerations for visible OCT.** *Francois Delori.* Ophthalmology, Harvard Medical School, Schepens Eye Research Institute, Boston, MA

— 2:01 **Optophysiology of mouse photoreceptors with SLO and OCT.** *Edward N. Pugh.* Physiology & Membrane Biology, University of California, Davis, Davis, CA

— 2:14 **Visible light OCT angiography.** *Acner Camino.* OHSU, Portland, OR

— 2:27 **Quantitative imaging using visible light OCT.** *Shau Poh P. Chong.* University of California, Davis, Davis, CA

— 2:40 **Clinical applications of visible-light OCT.** *Amani Fawzi.* Ophthal-Feinberg School of Med, Northwestern University, Chicago, IL

— 2:53 **Panel Discussion**

Room 313BC

Monday, April 30, 2018 1:30 PM-3:00 PM

254 China-ARVO Networking Forum

This is the 13th annual China - ARVO Networking Forum. The purpose of this event is to provide a platform for vision researchers from China, the USA and another country to interact, discuss and exchange knowledge in the field of vision research & ophthalmology and to promote collaboration among the scientists. Speakers include leading ophthalmic researchers from China, the USA, and another country. At the upcoming meeting, topics will align with the 2018 ARVO "Stand Strong for Science: Stand for Strong Vision Science" theme that will show the advanced researchers in major blindness eye diseases. Everyone is welcome to attend the meeting; a limited lunch will be provided.

Moderators: Ningli Wang and Mingwu Wang

— 1:30 **Opening Remarks**

— 1:35 **OCAVER AWARDS**

— 1:40 **Design and analysis of bio-mechanical scaffolds for orbital reconstruction.** *Juan Ye.* Department of Ophthalmology, Second Affiliated Hospital of Zhejiang University School of Medicine, Hangzhou, Zhejiang, China

— 1:50 **Implants for Ophthalmology.** *Mark S. Humayun.* University of Southern California, Los Angeles, CA *CR, ✕

— 2:00 **Trans laminal cribodsa pressure gradient and deformation of optic disc.** *Ningli Wang.* Beijing Tongren Hospital, Capital Medical University, Beijing, China

— **The role of inflammation in the pathogenesis of diabetic retinopathy.** *Zongming Song.* Vitreoretinal Department, Henan Eye Hospital & Henan Eye Institute, Zhengzhou, Henan, China

— 2:10 **Pre-clinical study of hESC 3D optic cup-derived C-kit + retinal progenitor cells for retinitis pigmentosa treatment.** *Zhengqin Yin.* Ophthalmology, Southwest Hospital, Chongqing, China ✕

— 2:20 **Mechanisms of cone photoreceptor production during retinal development.** *Michel Cayouette.* Montreal Clinical Res. Institute (IRCM), Montreal, Quebec, Canada

— 2:30 **Endoplasmic Reticulum Stress and Angiogenic Progenitor Dysfunction in Diabetes.** *Sarah X. Zhang.* Ophthalmology, SUNY/ University at Buffalo, Buffalo, NY

Room 314

Monday, April 30, 2018 1:30 PM-3:00 PM

**255 EVER/ARVO Workshop:
Multi-omics, mechanisms and
stratification – paradigms for
understanding and targeting immune
responses in disease**

The use of multiple genomic/transcriptomic platforms alongside the platforms that permit in-depth endophenotyping for immune responses in man has opened unparalleled advantages to understand immune responses, disease, and therapeutic stratification. This will enable a refined molecular classification of disease alongside targets and prediction of responses to therapies. We can learn from rare inflammatory disorders, and we can translate findings across disease groups both organ-specific and systemic. The workshop will focus on key advances that will take us away from traditional classifications to a more targeted and personalized approach to disease and therapies.

Moderators: Andrew D. Dick and Richard W. Lee

— 1:30 **Meta-genomics and inflammation of the eye.** *Lai Wei. Research Institute, Zhongshan Ophthalmic Center, Sun Yat-sen Univ., Guangzhou, China*

— 1:50 **Role of GWAS and rare immune mediated diseases in understanding mechanisms of immune responses.** *Jonas Kuiper. Ophthalmology, University Medical Center Utrecht, Utrecht, Netherlands*

— 2:10 **Interrogation of immune responses to stratify pathways informing patient response to corticosteroids.** *Richard W. Lee. Bristol and Moorfields (NIHR BRC), London, United Kingdom* *CR

— 2:30 **Transcriptomics inform mechanisms and pathways in systemically-mediated orbital disorders.** *James T. Rosenbaum^{1,2}. ¹Legacy Devers Eye Institute, Portland, OR; ²Ophthalmology and Medicine, Oregon Health & Science University, Portland, OR*

— 2:50 **Panel Discussion**

Room 316A

Monday, April 30, 2018 1:30 PM-3:00 PM

**256 Keys to writing manuscripts and
determining where to publish**

This workshop is part of an annual series co-sponsored by the ARVO Publications and Members-in-Training Committees. Peer-reviewed publications are not only a valuable tool to share one's research findings but are also more commonly being included in metrics used to assess one's research performance and productivity. The ability to effectively communicate one's research in the peer-reviewed literature has, therefore, become an increasingly important skill to master and implement. The goal of this workshop will be to discuss nuances of the writing and journal selection (or avoidance) processes. Invited speakers will provide their perspectives on how to most effectively write your work for publication, how to confront the challenging issues of authorship and factors to consider regarding their listing, how to recognize and negotiate predatory journals and how to understand preprint publications and their potential impact on the peer-reviewed literature.

Moderators: Mehrnoosh Saghizadeh, Thomas A. Fuchsluger and Patrick Yu-Wai-Man

— 1:30 **Introductions and Remarks**

— 1:35 **How to Prepare a Manuscript and Get it Published.** *Elizabeth G. Phimister. The New England Journal of Med, Brookline, MA*

— 1:55 **Authorship: From Collaboration to Conundrum.** *Joseph Carroll. Ophthalmology, Medical College of Wisconsin, New Berlin, WI*

— 2:15 **Journals to consider and those to avoid.** *Martine J. Jager. Ophthalmology, Leiden University Med Center, Leiden, Netherlands*

— 2:35 **Preprint servers and publications - what are they and do they limit what I can publish?** *Andrew Watson. Apple, Cupertino, CA* *CR

— 2:55 **Q & A and Discussion**

Room 316B

Monday, April 30, 2018 1:30 PM-3:00 PM

**257 NIH-CSR workshop on the peer
review of grant applications**

Sponsored by the Center for Scientific Review (CSR) at the National Institutes of Health (NIH) this workshop is designed to inform grant applicants about the NIH peer review process and also explain what reviewers look for in applications, as well as provide information about the study sections that review visual system grant applications. Scientific Review Officers (SROs) from CSR will be present for the presentation and to answer any questions.

Moderator: Michael H. Chaitin

— 1:30 **NIH-CSR Workshop: Information and Expectations for the Peer Review of Grant Applications.** *Michael H. Chaitin. Ctr for Scientific Review/NIH, Bethesda, MD*

— 2:15 **NIH-CSR Workshop: Information and Expectations for the Peer Review of Grant Applications.** *Nataliya V. Gordiyenko. Center for Scientific Review, NIH, Bethesda, MD*

— 2:25 **NIH-CSR Workshop: Information and Expectations for the Peer Review of Grant Applications.** *Paek-Gyu Lee. Emerging Tech & Training in Neuroscience, Center for Scientific Review/NIH, Bethesda, MD*

— 2:35 **NIH-CSR Workshop: Information and Expectations for the Peer Review of Grant Applications.** *Maqsood A. Wani. National Eye Institute, National Institute of Health, Bethesda, MD*

Room 316C

Monday, April 30, 2018 1:30 PM-3:00 PM

258 Civic and community engagement for stronger science: Effective communication strategies

As scientists, we strive to understand and become experts in our fields to make an impact in our diverse world. Effective communication beyond disciplines is necessary to build a scientific case for what we do and to engage diverse groups in order to share our findings, gain funding, translate our work to patient care, and promote unwavering support for our efforts to make an impact. Science communication is more effective when our focus goes beyond content to structure so that the message is understood. This workshop will allow you to make a difference, by learning how to communicate with diverse audiences including lay-people, experts in other fields, patients, technology developers, policy makers, and the general public about what you know, what you do, and why vision science matters. Our speakers include Maria Zacharias (Director of the NEI Communications Office), Dr. Peter Soliz (Chief Executive Officer of VisionQuest Biomedical, Inc.) and Dr. Matthew Windsor (ARVO Senior Manager of Science Communications). Based on their experiences working with non-scientists, at-risk patient populations, and policy makers, they will share principles of scientific communication and outreach important for all of us to communicate technical information to a diverse variety of audiences including under-represented populations. We hope that at the end of this workshop you will feel motivated to enter into a meaningful dialogue with interested audiences about why what we do matters and how it impacts the world so that together we can take action for stronger science. We believe this proposed workshop will serve the goals of promoting communication of the value of vision science and of engaging under-represented and diverse communities to be involved in research and the products of its translation to health services.

Moderators: *Dolly A. Padovani-Claudio and M Natalia Vergara*

— 1:30 Introductions and Remarks

— 1:45 **Strategies for communicating with non-scientists and minority populations regarding eye diseases with disproportionate effect on minorities.** *Maria Zacharias. Office of Communications, National Eye Institute, Bethesda, MD*

— 2:00 **Helping reach underserved populations in the US and Mexico to help save vision.** *Peter Soliz. VisionQuest Biomedical, Albuquerque, NM* *CR

— 2:15 **Promoting ARVO science: staff efforts and member opportunities.** *Matt Windsor. ARVO, Rockville, MD*

— 2:30 **Advocacy for Vision Care and Science.** *Leonard Seibold. Ophthalmology, University of Colorado, Denver, CO*

— 2:45 **Panel Discussion**

Room 320

Monday, April 30, 2018 1:30 PM-3:00 PM

Visual Neuroscience / Biochemistry/Molecular Biology / Eye Movements/Strabismus/ Amblyopia/Neuro-Ophthalmology / Glaucoma / Immunology/Microbiology / Multidisciplinary Ophthalmic Imaging / Retina

259 Eye and Brain - the interrelationship and pathology - SIG

There is increasing evidence supporting the link between eye and brain diseases. The panel will discuss the phenomenon of bidirectional neurodegeneration in the visual pathway and the potential use of ocular findings as biomarkers for brain pathology

Moderators: *Alessandro Invernizzi and Yuyi You*

Panelist/Organizer. *Yuyi You. Save Sight Institute, Sydney University, Sydney, New South Wales, Australia*

Panelist/Organizer. *Alessandro Invernizzi.*

Department of Biomedical and Clinical Science “L. Sacco”, University of Milan, Milan, Italy

Panelist. *Neeru Gupta. Ophthalmology & Vision Sciences, University of Toronto, Toronto, Ontario, Canada*

Panelist. *Stuart L. Graham. Faculty of Medicine and Human Science, Macquarie University, North Ryde, New South Wales, Australia*

Panelist. *Alfredo A. Sadun. Doheny Eye Center, UCLA, Los Angeles, CA*

Ballroom A

Monday, April 30, 2018 1:30 PM-3:00 PM

Retinal Cell Biology / Biochemistry/Molecular Biology / Immunology/Microbiology / Physiology/Pharmacology / Retina

260 Membrane dynamics in RPE health and disease - SIG

The SIG will focus on membrane trafficking in the RPE in relation to retinal physiology and pathology. Panelists will discuss mechanisms that regulate the maintenance of apical processes and tight junctions in the RPE, and how impaired membrane dynamics can impact phagosome degradation, intracellular complement activation, and formation of sub-RPE deposits.

Moderators: *Aparna Lakkaraju and Goldis Malek*

Primary Cilium Regulates Induction of Retinal Pigment Epithelium Apical Processes. *Kapil Bharti. National Eye Institute, National Institutes of Health, Bethesda, MD*

RPE phagosome dynamics. *David S. Williams. Stein Eye Institute, UCLA, Los Angeles, CA*

The Role of Complement at the RPE-Bruch’s Membrane Interface and in Sub-RPE

Deposit Formation. *Catherine Bowes Rickman. Ophthalmology & Cell Biology, Duke University, Durham, NC*

Ballrooms BC

Monday, April 30, 2018 1:30 PM-3:00 PM

Glaucoma / Biochemistry/Molecular Biology / Retinal Cell Biology

261 The Lasker/IRRF Initiative for Innovation in Vision Science: Glaucoma and Diabetic Retinopathy - SIG

The Lasker/IRRF Initiative for Innovation in Vision Science aims to accelerate understanding and treatments of diseases of the retina and visual system. This SIG will highlight programs on glaucoma and diabetic retinopathy.

Moderator: *John E. Dowling*

Ganglion cells, glial cells, and the optic nerve. *Leonard A. Levin. Ophthalmology, McGill University Health Centre - Royal Victoria Hospital, Montreal, Quebec, Canada*

Axonal damage - possible causes. *Claude F. Burgoyne. Ophthalmic Research, Devers Eye Institute - Discoveries in Sight Research Laboratories, Portland, OR*

Therapies and axonal regeneration. *David J. Calkins. Vanderbilt University Medical Center, Vanderbilt Eye Institute, Nashville, TN*

Monday Workshops/SIGs
1:30 pm – 3:00 pm

Monday – Workshops/SIGs

Vascular and neuronal changes. *M Francesca F. Cordeiro.* Glaucoma and Retinal Neurodegeneration Studies, UCL Institute of Ophthalmology, London, England, United Kingdom

Etiology; glucose, lipids and oxygen. *Timothy S. Kern.* Pharmacology, Case Western Reserve University, Cleveland, OH

Therapeutic approaches. *Lloyd P. Aiello.* Ophthalmology, Harvard Medical School, Boston, MA

Monday Workshops/SIGs
1:30 pm – 3:00 pm

Room 306AB

Monday, April 30, 2018 3:30 PM-5:15 PM

Low Vision Group

262 Functional Vision and Visual Function*Moderators: Alex A. Black and Lauren N. Ayton*

1942 — 3:30 Hazard Perception in Older Adults with Visual Impairment. Joanne M. Wood¹, A. A. Black¹, K. J. Anstey², M. S. Horswill³. ¹School of Optometry and Vision Science, Queensland University of Technology, Brisbane, Queensland, Australia; ²Centre for Research on Ageing, Health and Wellbeing, Australian National University, Canberra, Australian Capital Territory, Australia; ³School of Psychology, The University of Queensland, Brisbane, Queensland, Australia

1943 — 3:45 Visual features most relevant to functional impairment in glaucoma. Pradeep Y. Ramulu, A. Mihailovic. Ophthalmology, Wilmer Eye Inst/Johns Hopkins, Baltimore, MD

1944 — 4:00 Balance and brain connectivity in glaucoma. Rakie Cham¹, C. O'Connell¹, M. Redfern¹, I. Conner², G. Wollstein³, K. C. Chan^{3,4}. ¹Bioengineering, University of Pittsburgh, Pittsburgh, PA; ²Ophthalmology, University of Pittsburgh, Pittsburgh, PA; ³Ophthalmology, New York University, Pittsburgh, NY; ⁴Radiology, New York University, New York, NY

1945 — 4:15 Gaze strategy and balance in patients with varying degrees of glaucomatous visual field damage. Aleksandra Mihailovic, D. S. Friedman, S. K. West, P. Y. Ramulu. Glaucoma Center for Excellence, Johns Hopkins University/Wilmer Eye Institute, Baltimore, MD

1946 — 4:30 Visual Scanning in Retinitis Pigmentosa. Matthew A. Petoe^{1,2}, S. A. Titchener^{1,2}, M. N. Shivdasani^{1,2}, J. B. Fallon^{1,2}, C. J. Abbott³, L. N. Ayton^{3,4}. ¹Bionics Institute, East Melbourne, Victoria, Australia; ²Medical Bionics Department, University of Melbourne, Melbourne, Victoria, Australia; ³Centre for Eye Research Australia, Department of Surgery (Ophthalmology), University of Melbourne, Melbourne, Victoria, Australia; ⁴Bionic Eye Technologies Inc., Ithaca, NY *CR

1947 — 4:45 Visual Field Patterns in a Large Sample of People with Retinitis Pigmentosa. Russell L. Woods^{1,2}, M. Sandberg^{3,2}, C. Weigel-DiFranco³, T. Elze^{1,2}. ¹Schepens Eye Research Institute, Boston, MA; ²Department of Ophthalmology, Harvard Medical School, Boston, MA; ³Berman-Gund Laboratory for the Study of Retinal Degenerations, Massachusetts Eye and Ear, Boston, MA

Room 310

Monday, April 30, 2018 3:30 PM-5:15 PM

Visual Psychophysics/Physiological Optics

263 Accommodation and Binocular Vision*Moderators: Fuensanta A. Vera-Diaz and Frank Schaeffel*

1948 — 3:30 Ciliary muscle and ciliary process area: aging changes versus lens dimensions at rest and during accommodation. Mary Ann Croft¹, T. Nork^{1,4}, J. P. McDonald¹, G. A. Heatley¹, E. Lütjen-Drecoll², P. L. Kaufman^{1,3}. ¹Ophthalmology, Univ of Wisconsin-Madison, Madison, WI; ²Department of Anatomie, University Erlangen-Nürnberg, Nürnberg, Germany; ³Wisconsin National Primate Research Center, Madison, WI; ⁴McPherson Eye Research Institute's Retina Research Foundation Kathryn & Latimer Murfee Chair, Madison, WI *CR

1949 — 3:45 Quantification of Synchronized Lens and Pupil Dynamics During Accommodation. Yu-Cherng Chang^{1,2}, F. Cabot^{1,3}, S. Williams^{1,2}, G. Gregori⁴, M. Ruggeri¹, A. Ho^{1,5}, S. H. Yoo^{1,3}, J. A. Parel^{1,6}, F. Manns^{1,2}. ¹Ophthalmic Biophysics Center, Bascom Palmer Eye Institute, University of Miami Miller School of Medicine, Miami, FL; ²Department of Biomedical Engineering, University of Miami College of Engineering, Coral Gables, FL; ³Anne Bates Leach Eye Hospital, Bascom Palmer Eye Institute, University of Miami Miller School of Medicine, Miami, FL; ⁴Quantitative Imaging Center, Bascom Palmer Eye Institute, University of Miami Miller School of Medicine, Miami, FL; ⁵Brien Holden Vision Institute, Sydney, New South Wales, Australia; ⁶Brien Holden Vision Institute and Vision Cooperative Research Centre, Sydney, New South Wales, Australia *CR

1950 — 4:00 Assessment of scleral shape and thickness during accommodation using OCT. Marco Ruggeri¹, Y. Chang^{1,2}, S. Williams^{1,2}, F. Cabot^{1,3}, G. Gregori⁴, A. Ho^{1,5}, S. H. Yoo^{1,3}, J. A. Parel^{1,6}, F. Manns^{1,2}. ¹Ophthalmic Biophysics Center, Bascom Palmer Eye Institute, University of Miami Miller School of Medicine, Miami, FL; ²Department of Biomedical Engineering, University of Miami College of Engineering, Coral Gables, FL; ³Anne Bates Leach Eye Hospital, Bascom Palmer Eye Institute, University of Miami Miller School of Medicine, Miami, FL; ⁴Quantitative Imaging Center, Bascom Palmer Eye Institute, University of Miami Miller School of Medicine, Miami, FL; ⁵Brien Holden Vision Institute, Sydney, New South Wales, Australia; ⁶Vision Cooperative Research Centre, Sydney, New South Wales, Australia *CR

1951 — 4:15 Large-field binocular suppression mediated by naso-temporal asymmetry and contour processing. Teng Leng Ooi¹, C. Han¹, M. D. Plaumann¹, Z. J. He². ¹The Ohio State University, Columbus, OH; ²University of Louisville, Louisville, KY

1952 — 4:30 Comparing the Monocular Performance of Monocular and Binocular Subjects on Near Chart Tests of Acuity, Contrast Sensitivity and Reading. J. Vernon Odom, B. Stephens, M. J. Leys, J. Nguyen, C. Antonini. Ophthalmology, West Virginia Univ Eye Inst, Morgantown, WV

1953 — 4:45 Is a Receded Near Point of Convergence (NPC) Diagnostic of Convergence Insufficiency in Post-Concussion Patients? Aparna Raghuram^{1,2}, S. A. Cotter³, A. S. Shah^{1,2}. ¹Department of Ophthalmology, Boston Children's Hospital, Boston, MA; ²Ophthalmology, Harvard Medical School, Boston, MA; ³Marshall B Ketchum University, Fullerton, CA

1954 — 5:00 Novel sound localization deficit in unilateral amblyopia. Michael D. Richards¹, H. C. Goltz^{1,4}, A. M. Wong^{1,3}. ¹Ophthalmology and Vision Sciences, University of Toronto, Toronto, Ontario, Canada; ²Institute of Medical Science, University of Toronto, Toronto, Ontario, Canada; ³Ophthalmology and Vision Sciences, The Hospital for Sick Children, Toronto, Ontario, Canada; ⁴Neurosciences and Mental Health, The Hospital for Sick Children, Toronto, Ontario, Canada

Room 311

Monday, April 30, 2018 3:30 PM-5:15 PM

Retina

264 Diabetic Macular Edema Clinical*Moderators: Sapna Gangaputra and Giovanni Staurengli*

1955 — 3:30 The Association of Aqueous Cytokines with Long-Term Response to Intravitreal Ranibizumab in Diabetic Macular Edema. Verena Juncal^{1,2}, T. Felfeli¹, R. Hillier³, E. Ojaimi⁴, D. T. Wong^{1,2}, M. Y. Mak⁵, A. R. Berger^{1,2}, R. P. Kohly^{1,6}, P. Kertes^{1,6}, F. Forooghian^{2,1}, S. R. Boyd^{1,2}, F. Altomare^{1,2}, L. R. Giavedoni^{1,2}, R. Nisenbaum², R. H. Muni^{1,2}. ¹University of Toronto, Toronto, Ontario, Canada; ²Ophthalmology, St. Michael's Hospital, Toronto, Ontario, Canada; ³Newcastle Eye Centre, Newcastle University, Newcastle, United Kingdom; ⁴Clinical Ophthalmology and Eye Health, Central Clinical School, The University of Sydney, Sydney, Australian Capital Territory, Australia; ⁵Ophthalmology, University of Calgary, Calgary, Ontario, Canada; ⁶Ophthalmology, Sunnybrook Health Science Centre, Toronto, Ontario, Canada ✕

1956 — 3:45 Dexamethasone Implant for Diabetic Macular Edema in Naïve Compared To Refractory Eyes – A 24 Month The International Retina Group Real-Life Multicenter Study - IRGRel-DEX Study. Catharina Busch¹, M. Iglück², D. Zur³, M. Okada⁴, J. Chhablani⁵, Z. Cebeci⁶, S. Fraser-Bell⁷, V. Chaikitmongkol⁸, A. Couturier⁹, E. Giancipoli¹⁰, P. Rodriguez¹¹, M. Rehak¹, M. Lupidi¹², A. T. Fung⁷, M. Goldstein³, A. Loewenstein³.
¹Department of Ophthalmology, University Hospital Leipzig, Leipzig, Germany; ²Private Retina Office, University of Buenos Aires, Buenos Aires, Argentina; ³Division of Ophthalmology, Tel Aviv Sourasky Medical Center, Sackler Faculty of Medicine, Tel Aviv University, Tel Aviv, Israel; ⁴Royal Victorian Eye and Ear Hospital, Melbourne, Victoria, Australia; ⁵L.V. Prasad Eye Institute, Banjara Hills, Hyderabad, India; ⁶Department of Ophthalmology, Istanbul University, Istanbul Faculty of Medicine, Istanbul, Turkey; ⁷Department of Ophthalmology, Save Sight Institute, University of Sydney, Sydney, New South Wales, Australia; ⁸Retina Division, Department of Ophthalmology, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand; ⁹Service d'Ophthalmologie, Hôpital Lariboisière, Université Paris, Sorbonne Paris Cité, Paris, France; ¹⁰Department of Ophthalmology, Azienda Ospedaliera Universitaria Sassari, Sassari, Italy; ¹¹Servicio de Retina, Centro Medico Zambrano Hellion, Tecnológico de Monterrey, San Pedro Garza García, Nuevo Leon, Mexico, Monterrey, Mexico; ¹²Department of Biomedical and Surgical Sciences, Section of Ophthalmology, University of Perugia, Perugia, Italy *CR

1957 — 4:00 Treat and Extend Versus Bi-monthly dosing with Afibercept for the Treatment of Diabetic Macular Edema, One Year Outcomes (EVADE Study). Jack M. Giust, A. Castellarin, N. Steinle, D. J. Pieramici, R. F. See, R. L. Avery, G. M. Gordon, D. Dhoot. Research Department, California Retina Consultants, Santa Barbara, CA ✕

1958 — 4:15 The DiMECat Trial: A Prospective, Randomised Clinical Trial Of Intravitreal Bevacizumab vs. Triamcinolone In Patients With Diabetic Macular Oedema At The Time Of Cataract Surgery – 6 Month Results. Lyndell L. Lim^{1,2}, M. Constantinou¹, S. Rogers¹, S. S. Sandhu^{1,2}, S. Wickremasinghe^{1,2}, S. Al-Qureshi^{1,2}.
¹Centre for Eye Research Australia, University of Melbourne, East Melbourne, Victoria, Australia; ²Royal Victorian Eye and Ear Hospital, Melbourne, Victoria, Australia *CR, ✕

1959 — 4:30 Anti-VEGF/anti-angiopoietin-2 bispecific antibody RG7716 in diabetic macular edema: complete 36-week results from the phase 2, multicenter, randomized, active treatment-controlled BOULEVARD clinical trial. Sunil S. Patel¹, J. Sahni², S. Sadikhov², M. Pauly-Evers², P. Szczesny², R. Weikert².
¹West Texas Retina Consultants, Abilene, TX; ²Roche Pharma Research and Early Development, Roche Innovation Center, Basel, Switzerland *CR, ✕

1960 — 4:45 Randomized, Prospective, Double-Masked, Controlled Phase 2b Trial to Evaluate the Safety & Efficacy of ALG-1001 (Luminate®) in Diabetic Macular Edema. Hugo Quiroz-Mercado¹, D. S. Boyer², P. A. Campochiaro³, J. S. Heier⁴, P. K. Kaiser⁵, J. Kornfield⁶, B. D. Kuppermann⁷, V. H. Karageozian⁸, H. L. Karageozian⁸, L. Karageozian⁸, J. Y. Park⁸, M. Sarayba⁸.
¹Retina, Asociacion para Evitar la Ceguera en Mexico, Denver, CO; ²Retina-Vitreous Associates Medical Group, Los Angeles, CA; ³The Wilmer Eye Institute, Johns Hopkins University School of Medicine, Baltimore, MD; ⁴Ophthalmic Consultants of Boston, Boston, MA; ⁵Cleveland Clinic Lerner College of Medicine, Cleveland, OH; ⁶Caltech, Pasadena, CA; ⁷Ophthalmology, Gavin Herbert Eye Institute, UCI, Irvine, CA; ⁸Allegro Ophthalmics, San Juan Capistrano, CA *CR, ✕

1961 — 5:00 First-in human study of SF0166 Topical Ophthalmic Solution in patients with diabetic macular edema. D. Edwards¹, D. S. Boyer^{2,1}, P. K. Kaiser^{3,1}, J. S. Heier^{4,1}, B. Askew¹.
¹SciFluor Life Sciences, Cambridge, MA; ²Retina Vitreous Associates, Beverly Hills, CA; ³Cole Eye Institute, Cleveland, OH; ⁴Ophthalmic Consultants of Boston, Boston, MA *CR, ✕

Room 312

Monday, April 30, 2018 3:30 PM-5:15 PM

Cornea

265 Dry Eye Clinical

Moderators: Kyung Chul Yoon and Tor P. Utheim

1962 — 3:30 A GWAS investigation of dry eye disease in two European populations. Jelle Vehof¹, C. J. Hammond², P. G. Hys².
¹Ophthalmology, University Medical Center Groningen, Groningen, Netherlands; ²Department of Twin Research and Genetic Epidemiology, King's College London, London, United Kingdom

1963 — 3:45 Environmental factors and symptoms and signs of dry eye disease at baseline in the Dry Eye Assessment and Management (DREAM®) Study. Joanne F. Shen¹, E. Berg², G. Ying³, P. Sheffield⁴, L. Szczotka-Flynn³.
¹Department of Ophthalmology, Mayo Clinic in Arizona, Scottsdale, AZ; ²Medical School, Midwestern University, Glendale, AZ; ³Department of Ophthalmology, University Hospitals, Cleveland, OH; ⁴Icahn School of Medicine at Mount Sinai, New York, NY; ⁵University of Pennsylvania, Philadelphia, PA *CR, ✕

1964 — 4:00 The relationship between occupation and dry eye disease. Shehnaz Bazeer, L. Wolpert, C. J. Hammond, J. Vehof. King's College London, London, ENGLAND, United Kingdom

1965 — 4:15 Diagnosis of dry eye subtype by artificial intelligence software based on the interferometric fringe pattern of the tear film obtained with the Kowa DR-1a instrument. Reiko Arita^{1,2}, K. Yabusaki³, T. Yamauchi³, T. Ichihashi³, N. Morishige^{4,2}, Itoh Clinic, Bunkyo-ku, TOKYO, Japan; ²Lid and meibomian gland working group, Tokyo, Japan; ³Kowa Company, Tokyo, Japan; ⁴Oshima Eye Hospital, Fukuoka, Japan *CR

1966 — 4:30 IL-14: a Putative Biomarker for Stratification of Dry Eyes in Primary Sjögren's Syndrome. Jing He¹, Y. Liang².
¹Peking Univ. People's Hospital, Williamsville, NY; ²Xiamen Univ., Xiamen, China

1967 — 4:45 A Randomized, Double-Masked, Parallel-Group, Phase 2a Dry Eye Disease Clinical Trial to Evaluate the Safety and Efficacy of Topical Ocular ADX-102, a Novel Aldehyde Sequestering Agent. David Clark¹, G. W. Ousler², D. Hollander², T. Brady¹.
¹Clinical, Aldeyra Therapeutics, Lexington, MA; ²Ora Inc., Andover, MA *CR, ✕

1968 — 5:00 Cyclic change of fatty acid composition in the meibum of premenopausal women. Tomo Suzuki^{1,2}, S. Fujiwara³, S. Kinoshita⁴.
¹Department of Ophthalmology, Kyoto Prefectural University of Medicine, Kyoto, KYOTO, Japan; ²Ophthalmology, Kyoto City Hospital, Kyoto, Japan; ³Shimadzu Techno-Research INC., Kyoto, Japan; ⁴Frontier Medical Science and Technology for Ophthalmology, Kyoto Prefectural University of Medicine, Kyoto, Japan

Room 313A

Monday, April 30, 2018 3:30 PM-5:15 PM

Multidisciplinary Ophthalmic Imaging Group

266 Highlights of Imaging Technologies**Moderators: Gadi Wollstein, Yoshiaki Yasuno and Anthony N. Kuo**

1969 — 3:30 Retinotopic Imaging of the Central Visual Pathway in Optic Nerve and Outer Retinal Disease. Vivek R. Patel¹, E. Jung², J. Choupan³, C. Purington³, N. Stiles², J. I. Morgan⁴, A. S. Bock⁵, K. K. Gokoffski^{1,2}, J. Wang⁶, M. Law^{7,8}, A. H. Kashani¹, A. A. Moshfeghi¹, H. Ameri¹, G. K. Aguirre⁹, J. D. Weiland¹⁰, Y. Shi⁶. ¹USC Roski Eye Institute, Keck School of Medicine of USC, Los Angeles, CA; ²Ophthalmology, Keck School of Medicine, University of Southern California, Los Angeles, CA; ³The Laboratory for Functional and Computational Vision, USC Dornsife, Dana and David Dornsife College of Letters, Arts and Science, Department of Psychology, Los Angeles, CA; ⁴Center for Advanced Retinal and Ocular Therapeutics, Scheie Eye Institute, Philadelphia, PA; ⁵Neurology, University of Pennsylvania, Philadelphia, CA; ⁶Laboratory of Neuro Imaging, USC Mark and Mary Stevens Neuroimaging institute, Keck School of Medicine of USC, Los Angeles, CA; ⁷Radiology, Neurology, Neurological Surgery, and Biomedical Engineering, Keck School of Medicine of USC, Los Angeles, CA; ⁸Viterbi School of Engineering, University of Southern California, Los Angeles, CA; ⁹The Hospital of the University of Pennsylvania, Philadelphia, PA; ¹⁰Departments of Biomedical Engineering and Ophthalmology and Visual Sciences, University of Michigan, Ann Arbor, MI

1970 — 3:45 Optical Coherence Tomography Detected Axonal Loss but Failed to Identify Acute Optic Nerve Axonal Injury: A Diffusion MRI Study. Tsen-Hsuan (Abby) Lin¹, Y. Shui², Y. Liu², H. Yang¹, M. Wallendorf³, C. J. Siegfried², S. Song^{1,3}. ¹Radiology, Washington University School of Medicine, Saint Louis, MO; ²Ophthalmology & Visual Sciences, Washington University School of Medicine, St Louis, MO; ³The Hope Center for Neurological Disorders, Washington University School of Medicine, St Louis, MO; ⁴Biostatistics, Washington University School of Medicine, St Louis, MO*CR

1971 — 4:00 Automated Measurement of Oxygen Saturation in Retinal Blood Vessels with Visible-light OCT. Shaohua Pi, A. Camino, X. Wei, W. Cepurna, D. Huang, J. C. Morrison, Y. Jia. Casey Eye Institute, Oregon Health & Science University, PORTLAND, OR *CR

1972 — 4:15 Clinical retinal imaging with Sensorless Adaptive Optics OCT and Angiography. Myeong Jin Ju¹, M. Heisler¹, A. Athwal¹, G. Docherty², R. Martens², H. AKIL², Y. Jian¹, E. V. Navajas², M. Sarunic¹. ¹School of Engineering Science, Simon Fraser University, Burnaby, British Columbia, Canada; ²Department of Ophthalmology and Visual Sciences, University of British Columbia, Vancouver, British Columbia, Canada

1973 — 4:30 Real-time quantification of single blood-cell velocity in living human and mouse eye using adaptive optics. Aby Joseph^{1,2}, K. Parkins², Q. Yang², A. Guevara-Torres^{1,2}, J. Schallek³. ¹Institute of Optics, University of Rochester, Rochester, NY; ²Center for Visual Science, University of Rochester, Rochester, NY; ³The Flaum Eye Institute, University of Rochester, Rochester, NY*CR

1974 — 4:45 OCTA-guided functional OCT imaging of retinal neural activation and hemodynamic response. Taeyoon Son, M. Alam, d. toslak, Y. Lu, X. Yao. Bioengineering, University of Illinois at Chicago, Chicago, IL *CR

1975 — 5:00 Three-dimensional corneal layer thickness measurement with PS-OCT using a conical scan pattern. Florian Beer^{1,2}, A. Wartak¹, B. Baumann¹, M. Pircher¹, C. K. Hitzenberger¹. ¹Center for Medical Physics and Biomedical Engineering, Medical University of Vienna, Vienna, Austria; ²Institute of Applied Physics, Vienna University of Technology, Vienna, Austria

Room 314

Monday, April 30, 2018 3:30 PM-5:15 PM

Visual Neuroscience

267 Photosensitive cells**Moderators: Maarten Kamermans and Maureen A. McCall**

1976 — 3:30 Calcium modulates basal phosphodiesterase activity in mouse rod photoreceptors. Teemu T. Turunen, A. Koskelainen. Department of Neuroscience and Biomedical Engineering, Aalto University School of Science, Espoo, Finland

1977 — 3:45 Cones adapt to higher-order stimulus statistics. Matthew Yedutenko¹, M. Howlett¹, M. Kamermans^{1,2}. ¹Retinal Signal Processing Lab, Netherlands Institute for Neuroscience, Diemen, Netherlands; ²Department of Genom Analysis, Academic Medical Center, University of Amsterdam, Amsterdam, Netherlands

1978 — 4:00 Mouse cones expressing only S-opsin exhibit rod-like saturation. Gabriel Peinado¹, K. Ronning¹, W. Baehr⁴, M. E. Burns^{1,5}, E. N. Pugh^{2,3}. ¹Center for Neuroscience, UC Davis, Davis, CA; ²Physiology & Membrane Biology, University of California Davis, Davis, CA; ³Cell Biology & Human Anatomy, University of California Davis, Davis, CA; ⁴John A. Moran Eye Center, University of Utah, Salt Lake City, UT; ⁵Ophthalmology & Vision Science, University of California Davis, Davis, CA

1979 — 4:15 A Role for Release Regularity in Improving Signal Detection at Rod Synapses. Johan Pahlberg, C. Ratliff, A. P. Sampath. Stein Eye Institute, UCLA, Los Angeles, CA

1980 — 4:30 Melanopsin regulates circadian rhythms in contrast sensitivity but not pupillary light responses. Jovi C. Wong^{2,1}, C. A. Potheary², G. T. Banks³, M. W. Hankins², P. M. Nolan³, R. Foster², S. N. Peirson². ¹University of British Columbia, Vancouver, British Columbia, Canada; ²Nuffield Laboratory of Ophthalmology, University of Oxford, Oxford, United Kingdom; ³MRC Mammalian Genetics Unit, Medical Research Council, Harwell, United Kingdom

1981 — 4:45 Melanopsin tristability for robust and sustained photoreception under various light conditions. Takesi Matsuyama¹, Y. Shichida², M. Takahashi¹. ¹RIKEN CDB, Nishinomiya, Hyogo, Japan; ²Ritsumeikan University, Kusatsu, Shiga, Japan

1982 — 5:00 Cannabinoid CB1 receptor modulation of rod-cone gap junctional coupling in day and night depends on dopamine D₄ receptor activation. Stuart C. Mangel^{1,2}, J. Cao^{1,2}, M. Ishii¹. ¹Dept of Neuroscience, Ohio State Univ Coll of Med, Columbus, OH; ²Dept of Pharmacology, OSU College of Pharmacy, Columbus, OH

Room 315

Monday, April 30, 2018 3:30 PM-5:15 PM

Retinal Cell Biology

268 Stem Cells: from retinal organoids to transplantation**Moderators: Valeria Canto Soler and Michael J. Young**

1983 — 3:30 Monitoring the developing photoreceptors in the hiPSC-derived three dimension retinal organoid culture using bicistronic 2A-peptide-based co-expression reporter knock-in system. Kohei Homma¹, N. Ozato¹, K. Tsubota¹, H. Okano², Y. Ozawa¹. ¹Ophthalmology, Keio University School of Medicine, Tokyo, Japan; ²Physiology, Keio University School of Medicine, Tokyo, Japan*CR

Monday Papers/
Minisymposia
3:30 pm – 5:15 pm

1984 — 3:45 Human pluripotent stem cell derived retinal organoids reveal an important role for IMPG1 and CD44 in the development of photoreceptors and their synaptic connections. Majed Felemban, B. Dorgau, N. Hunt, J. Collin, D. Steel, S. Lindsay, C. B. Mellough, M. Lako. *Institute of Genetic Medicine, Newcastle University, Newcastle, United Kingdom*

1985 — 4:00 ABCA4 in Human Retinal Pigment Epithelium: a New Link to Stargardt Pathogenesis. Mitra Farnoodian-Tedrick¹, P. Joseph Susaimanickam^{2,1}, V. Khristov¹, Q. Wan¹, K. Y. Barbosa-Sabanero¹, S. S. Miller¹, K. Bharti¹. ¹NIH/NEI, Bethesda, MD; ²L.V. Prasad Eye Institute, Hyderabad, India

1986 — 4:15 Ocular albinism disease modeling using patient-derived induced pluripotent stem cells. Edouard Baulier, D. B. Farber. *Dpt. of Ophthalmology, Stein Eye Institute-UCLA, Los Angeles, CA*

1987 — 4:30 Genetically engineered iPSC-retina for improved retinal reconstruction after transplantation. Hung-Ya Tu, T. Matsuyama, J. Sun, T. Hashiguchi, J. Sho, G. A. Sunagawa, M. Fujii, A. Onishi, M. Takahashi, M. Mandai. *Center for Developmental Biology, Riken, Kobe, Japan* *CR

1988 — 4:45 Single-Cell Transcriptome Profiling of Human Stem Cell-Derived Retinal Ganglion Cells in a Dominant Optic Atrophy Model. Jie Cheng¹, M. Liu¹, A. M. Kaushik², X. Chang¹, Y. Duan¹, L. Chen², J. Wang², C. Berlinicke¹, D. J. Zack¹. ¹Ophthalmology, Wilmer Eye Institute, Johns Hopkins University, Baltimore, MD; ²Department of Mechanical Engineering, Johns Hopkins University, Baltimore, MD

1989 — 5:00 Transplantation of diverse miPSC-derived RGCs into mouse models of Glaucoma. Julia Oswald^{2,1}, P. Y. Baranov^{2,1}. ¹Ophthalmology, Harvard Medical School, Cambridge, MA; ²Schepens Eye Research Institute, Boston, MA

Room 316A

Monday, April 30, 2018 3:30 PM-5:15 PM

Physiology/Pharmacology

269 From optics to electronics: New technologies for improving vision in health and disease - Minisymposium

This minisymposium focus on some applications of the electronics in the field of vision (tunable liquid cristal lens, graphene contact lens for accommodation, adjustable power intraocular lens, organic and electronic retinal prosthesis): their concepts, technologies, and performance will be presented.

Moderators: Teresio Avitabile and Filippo Drago

— 3:30 Introduction & Welcome

1990 — 3:32 Systems for autofocusing eyeglasses. Carlos H. Mastrangelo^{1,2}. ¹Electrical and Computer Engineering Dept., University of Utah, Salt Lake City, UT; ²Biomedical Engineering, University of Utah, Salt Lake City, UT *CR

— 3:47 Discussion

1991 — 3:52 Dynamic Liquid crystal contact lenses for the correction of presbyopia. James Bailey. *School of Physics and Astronomy, University of Leeds, Leeds, United Kingdom*

— 4:07 Discussion

1992 — 4:12 Adjustable power lenses for vision correction. Pablo Artal. *Laboratorio de Optica, Universidad de Murcia, Murcia, Spain*

— 4:27 Discussion

1993 — 4:32 Organic retinal prosthesis: Concepts and results in experimental models. Fabio Benfenati. *Center for Synaptic Neuroscience and Technology, Istituto Italiano di Tecnologia, Genova, Genova, Italy*

— 4:47 Discussion

1994 — 4:52 Electronic retinal prosthesis: concepts and clinical results. James D. Weiland^{1,2}. ¹Ophthalmology, University of Michigan, Los Angeles, CA; ²Biomedical Engineering, University of Michigan, Ann Arbor, MI *CR, ✗

— 5:07 Discussion

— 5:12 Final Remarks

Room 316C

Monday, April 30, 2018 3:30 PM-5:15 PM

Glaucoma

270 IOP Measurement, Clinical Trials and Drug Studies

Moderators: Peng T. Khaw and Leopold Schmetterer

1995 — 3:30 Six years longitudinal study on aging, systemic blood pressure and intraocular pressure in Asians. Leopold Schmetterer^{1,2}, J. Chua^{1,2}, M. Chee¹, P. Gupta¹, Y. Tham¹, C. Sabanayagam^{1,2}, T. Aung^{1,2}, C. Cheng^{1,2}, T. Y. Wong^{1,2}. ¹Singapore Eye Research Institute, Singapore, Singapore; ²Duke-NUS Medical School, Singapore, Singapore

1996 — 3:45 Visual Field Progression in Eyes with Seemingly Well-Controlled Intraocular Pressure. Bianca Nicoleta. Susanna¹, N. Ogata², A. A. Jammal², F. Medeiros². ¹Faculdade de Medicina do ABC, Sao Paulo, Sao Paulo, Brazil; ²Duke University, Durham, NC *CR

1997 — 4:00 Precision Wireless Implantable Continuous Intraocular Pressure Sensors Utilizing Parylene-on-oil Encapsulation. Damien C. Rodger^{1,3}, A. Shapero², A. Agarwal², A. Emami², M. S. Humayun^{1,3}, Y. Tai². ¹USC Roski Eye Institute, Los Angeles, CA; ²California Institute of Technology, Pasadena, CA; ³USC Institute for Biomedical Therapeutics, Los Angeles, CA

1998 — 4:15 Association of corneal biomechanical factors, IOPg and IOPcc with primary open angle glaucoma in a large community cohort: The EPIC-Norfolk Eye Study. Michelle P. Chan¹, A. P. Khawaja², D. C. Broadway³, J. L. Yip², R. Luben², S. Hayat², K. Khaw², P. J. Foster^{1,4}. ¹UCL Institute of Ophthalmology, London, United Kingdom; ²University of Cambridge, Cambridge, United Kingdom; ³University of East Anglia, Norwich, United Kingdom; ⁴NIHR Biomedical Research Centre Moorfields Eye Hospital NHS Foundation Trust, London, United Kingdom *CR

1999 — 4:30 Stepped Medication Use, Associated Symptoms, and Treatment Failure among Participants in the Medication Arm of the Collaborative Initial Glaucoma Treatment Study. David C. Musch^{1,2}, L. M. Niziol¹, B. W. Gillespie³, P. R. Lichter¹. ¹Ophthalmology & Visual Sciences, Univ of Michigan-Kellogg Eye Ctr, Ann Arbor, MI; ²Epidemiology, University of Michigan, Ann Arbor, MI; ³BioStatistics, University of Michigan, Ann Arbor, MI *CR, ✗

2000 — 4:45 A novel 3D printed eye flow resistance model for intraocular pressure after glaucoma surgery: R1, R2 and R3. Yann Bouremel^{2,1}, C. Henein^{2,3}, R. M. Lee^{2,3}, I. Eames^{1,2}, S. Brocchini³, P. T. Khaw². ¹Department of Mechanical Engineering, University College London, London, United Kingdom; ²National Institute for Health Research (NIHR) Biomedical Research Centre at Moorfields Eye Hospital NHS Foundation Trust and UCL Institute of Ophthalmology, London, United Kingdom, London, United Kingdom; ³School of Pharmacy, University College London, London, United Kingdom

2001 — 5:00 Bilateral intraocular pressure (IOP) changes in a non human primate (NHP) microbead model of chronic IOP elevation: Can both eyes achieve similar elevations for therapeutics evaluation? Anita Chan^{1,2}, M. N. Lynn², S. Tun², V. A. Barathi^{2,3}, T. Aung^{1,4}. ¹Ophthalmology, Singapore National Eye Centre, Singapore, Singapore; ²Ophthalmology, Singapore Eye Research Institute, Singapore, Singapore; ³Academic, Duke NUS Medical School, Singapore, Singapore; ⁴Ophthalmology, National University of Singapore, Singapore, Singapore

Room 320

Monday, April 30, 2018 3:30 PM-5:15 PM

**Cornea / Eye Movements/Strabismus/
Amblyopia/Neuro-Ophthalmology / Retinal Cell
Biology / Visual Psychophysics/Physiological
Optics**

271 Corneal regeneration in health and disease - Minisymposium

The overall goal of this minisymposium is to inform the scientific community of major break-throughs that have been made in recent times in the realm of corneal regeneration and how these findings can be used to develop novel clinical approaches for patients with blinding corneal disease. Talks will cover the three cellular layers of the cornea (endothelium, stroma, and epithelium) and how stem cells maintain each during steady-state, wound-healing, disease and transplantation.

Moderators: Nick Di Girolamo and Sophie X. Deng

— 3:30 Introduction

2002 — 3:33 Ocular and non-ocular precursor cells for corneal endothelial regeneration. Shigeto Shimmura. *Ophthalmology, Keio Univ School of Medicine, Tokyo, Japan* *CR

2003 — 3:50 Update on the clinical trial using cultivated corneal endothelial cell injection. Shigeru Kinoshita. *Frontier Medical Science for Ophth, Kyoto Prefectural Univ of Med, Kamigyo-Ku, Japan* *CR, ✕

2004 — 4:07 Mechanism of Stem Cell Mediated Corneal Regeneration. James Funderburgh. *Ophthalmology, Univ of Pittsburgh School of Medicine, Pittsburgh, PA*

2005 — 4:24 Organogenesis in vitro: Mini-corneas from iPSCs. Indumathi Mariappan. *Centre for Ocular Regeneration, LV Prasad Eye Institute, Hyderabad, Telangana, India*

2006 — 4:41 Limbal epithelial stem cells in corneal development and wound-healing. Nick Di Girolamo. *School of Medical Sciences - Pathology, University of New South Wales, Sydney, New South Wales, Australia*

2007 — 4:58 In vivo imaging in the assessment of limbal stem cell function. Sophie X. Deng. *Ophthalmology, Stein Eye Institute, Los Angeles, CA* *CR

Ballroom A

Monday, April 30, 2018 3:30 PM-5:15 PM

Glaucoma

272 Neurodegeneration

Moderators: Yvonne Ou and Dong F. Chen

2008 — 3:30 Ultrastructural and transcriptional changes in aging and glaucomatous murine optic nerve heads.

Ying Zhu^{2,1}, A. Pappas¹, R. Wang^{3,1}, P. Seifert¹, A. Savol⁴, R. Sadreyev⁴, D. Sun¹, T. C. Jakobs¹. ¹Ophthalmology, Harvard Medical School/Mass Eye and Ear Infirmary, Boston, MA; ²Ophthalmology, Tongji Hospital, Huazhong University of Science and Technology, Wuhan, Hubei, China; ³Ophthalmology, The first affiliated hospital of Xi'an Jiaotong University, Xi'an, China; ⁴Molecular Biology, Massachusetts General Hospital, Boston, MA *CR

2009 — 3:45 Inflammation activation in the inner retina contributes to ganglion cell loss in acute ocular hypertension.

I. Shestopalov^{1,2}, A. Pronin², D. G. Pham¹, W. An¹, S. Kurtenbach¹, Z. Kozhebaeva², G. Dvorianchikova¹, G. S. Gaidosh¹. ¹Bascom Palmer Eye Institute Dept. Ophtha, Univ. of Miami Miller School of Medicine, Miami, FL; ²Cell Biology, University of Miami Miller School of Medicine, Miami, FL; ³Molecular Pharmacology, University of Miami Miller School of Medicine, Miami, FL

2010 — 4:00 Degenerating retinal ganglion cells disconnect from bipolar cells using diverse strategies. Luca Della Santina, A. Yu, A. Tran, K. Mai, Y. Ou. *Ophthalmology, University of California San Francisco, San Francisco, CA*

2011 — 4:15 Energy Transfer between Normal and Glaucomatous Optic Projections in Mice. Melissa Cooper^{1,2}, D. J. Calkins^{2,3}. ¹Neuroscience, Vanderbilt University, Nashville, TN; ²Vanderbilt Eye Institute, Nashville, TN; ³Vanderbilt Vision Research Center, Nashville, TN

2012 — 4:30 Amacrine cells control retinal Zn²⁺ levels, ganglion cell survival, and axon regeneration after optic nerve injury via two opposing effects of nitric oxide. Yiqing Li^{1,2}, K. Yuki¹, K. Omura¹, H. Gilbert¹, Y. Yin¹, S. de Lima¹, M. Walter³, P. Huang⁴, S. Lippard³, Y. Zhuo², P. A. Rosenberg¹, L. I. Benowitz¹. ¹Departments of Neurosurgery and Neurology and F.M. Kirby Neurobiology Center, Boston Children's Hospital and Harvard Medical School, Boston, MA; ²State Key Laboratory of Ophthalmology, Zhongshan Ophthalmic Center, Sun Yat-sen University, Guangzhou, Guangdong, China; ³Department of Chemistry, MIT, Cambridge, MA; ⁴Department of Medicine, MGH and Harvard Medical School, Boston, MA

2013 — 4:45 The role of microglia in the mechanism of retinal circuit disassembly in a mouse model of ocular hypertension. Alfred Yu, L. Della Santina, Y. Ou. *Ophthalmology, University of California, San Francisco, San Francisco, CA*

2014 — 5:00 Regulation of microglia activation by CSFs drives neurodegeneration in glaucoma. Min Ji¹, K. Cho², H. Guan¹, D. F. Chen². ¹Ophthalmology Institute, Affiliated hospital of Nantong University, Nantong, China; ²Schepens Eye Research Institute, Boston, MA

Exhibit Hall A0042-A0068

Monday, April 30, 2018 3:30 PM-5:15 PM

Glaucoma

273 Biomechanics

Moderator: Massimo A. Fazio

2015 — A0042 Detection of rapid eye movement sleep periods with a smart contact lens. Syril Dorairaj¹, L. Beltran-Agullo², Y. M. Buys², G. E. Trope², C. Shapiro², S. Simon-Zoula³, K. Mansouri⁴. ¹Ophthalmology, Mayo Clinic, Jacksonville, FL; ²Glaucoma Service, Toronto Western Hospital, Toronto, Ontario, Canada; ³Sensimed AG, Lausanne, Switzerland; ⁴Clinique Montchoisi, Lausanne, Switzerland *CR

2016 — A0043 Iris Stromal Cell Nuclear Aspect Ratio Alters After Pharmacologically-Induced Miosis and Mydriasis. Rouzbeh Amini¹, N. Rashidi¹, S. Dorairaj², A. Pant¹, M. Shah¹, G. Zhang¹, V. Thomas¹. ¹Dept of Biomedical Engineering, University of Akron, Akron, OH; ²Ophthalmology, Mayo Clinic, Jacksonville, FL

2017 — A0044 Comparison of central corneal thickness between optical and ultrasound pachymeters in glaucoma patients. Sören Waibel, K. R. Pillunat, E. Spoerl, L. E. Pillunat. Universitätsaugenklinik Dresden, Dresden, Germany

2018 — A0045 Detection of normal pressure glaucoma with the Dresden biomechanical glaucoma index. Karin R. Pillunat, R. Herber, E. Spoerl, G. Lorenz, C. Jaepel, L. E. Pillunat. Dept of Ophthalmology, Univ Clinic Carl Gustav Carus Dresden, Dresden, Germany *CR

2019 — A0046 Influence of glaucoma on corneal biomechanical properties measured with a dynamic Scheimpflug analyzer. yuichi yasukura^{2,1}, A. Miki¹, T. Asai¹, Y. Ikuno¹, N. Maeda¹, K. Nishida¹. ¹Ophthalmology, Osaka University, Suita, Osaka, Japan; ²Ophthalmology, Yodogawa Christian Hospital, Osaka, Osaka, Japan *CR

2020 — A0047 Corneal pulse characteristic in response to elevated intraocular pressure during ocular pulse simulation in porcine eye. A pilot in-vitro study. Maja M. Rogala¹, D. Lewandowski¹, A. Antonczyk², J. Detyna¹, D. Iskander³, M. E. Danielewska³. ¹Department of Mechanics, Material Science and Engineering, Wroclaw University of Science and Technology, Wroclaw, Poland; ²Department of Surgery, Wroclaw University of Environmental and Life Science, Wroclaw, Poland; ³Department of Biomedical Engineering, Wroclaw University of Science and Technology, Wroclaw, Poland

2021 — A0048 Corneal Tomographic Findings in Patients with Glaucoma and Abnormal Corneas. Laura Cañola, J. Izquierdo, L. Izquierdo, C. Maldonado, M. Henriquez. Lima, Instituto de Ojos Oftalmosalud, Lima, Peru

2022 — A0049 The effect of canaloplasty on changes in corneal pulse parameters: a follow-up study. Monika E. Danielewska¹, M. M. Placek¹, A. Kicinska², K. Lewczuk², M. Rekas². ¹Department of Biomedical Engineering, Wroclaw University of Science and Technology, Wroclaw, Poland; ²Department of Ophthalmology, Military Institute of Medicine, Warsaw, Poland

2023 — A0050 Relationship between corneal hysteresis and positional change in intraocular pressure in healthy adults. Sayoko E. Moroi¹, S. Ferguson¹, D. M. Reed¹, V. Gulati², A. Kazemi³, A. J. St⁴, D. C. Musch^{1,4}, C. B. Toris⁵. ¹Ophthalmology & Visual Sciences, Univ of Michigan-Kellogg Eye Ctr, Ann Arbor, MI; ²Ophthalmology and Visual Sciences, University of Nebraska Medical Center, Omaha, NE; ³Ophthalmology, The Mayo Clinic, Rochester, MN; ⁴Epidemiology, University of Michigan, Ann Arbor, MI; ⁵Ophthalmology and Visual Sciences, Case Western Reserve University, Cleveland, OH *CR, *CR

2024 — A0051 In vivo assessment of visual acuity following genipin-induced scleral crosslinking. Bailey Hannon¹, J. Fu², A. T. Read³, M. T. Pardue^{2,3}, C. R. Ethier³. ¹Mechanical Engineering, Georgia Institute of Technology, ATLANTA, GA; ²Center for Visual and Neurocognitive Rehabilitation, Atlanta VA Medical Center, Atlanta, GA; ³Biomedical Engineering, Georgia Institute of Technology and Emory University, Atlanta, GA

2025 — A0052 Validation of a Non-Invasive OCT-based Method to Measure Ocular Rigidity using Intravitreal Injections of Bevacizumab. Diane N. Sayah^{1,2}, D. Descovich¹, J. Mazzaferri¹, R. Duval^{1,2}, F. Rezendes^{1,2}, S. Costantino^{1,2}, M. R. Lesk^{1,2}. ¹Maisonneuve-Rosemont Hospital Research Center, Montreal, Quebec, Canada; ²Department of Ophthalmology, University of Montreal, Montreal, Quebec, Canada

2026 — A0053 Focal circumpapillary scleral elastosis develops after childhood. Alan Le, A. Shyr, A. Baig, J. Park, V. Poukens, J. L. Demer. Ophthalmology, UCLA, Los Angeles, CA

2027 — A0054 Determinant factors of optic disc shape in myopic congenital glaucoma. Eun Jung Lee, J. Han, C. Kee. Ophthalmology, Samsung Medical Center, Seoul, Korea (the Democratic People's Republic of)

2028 — A0055 Effect of Age and Glaucoma on Anterior Peripapillary Sclera Shape. Tin A. Tun¹, X. Wang², B. Mani¹, M. E. Nongpiur¹, C. Cheng¹, N. Strouthidis³, T. Aung^{1,2}, M. J. Girard¹. ¹Glaucoma, Singapore Eye Research Institute, Singapore, Singapore; ²National University of Singapore, Singapore, Singapore; ³Glaucoma Service, Moorfields Eye Hospital, London, United Kingdom

2029 — A0056 Sensitivity of mechanical strain in human peripapillary region to adduction tethering evaluated by hyperelastic characterization and finite element analysis (FEA). Joseph Park, A. Shin, t. Liu, J. L. Demer. Jule Stein Eye Institute, University of California - Los Angeles, Los Angeles, CA

2030 — A0057 Optic nerve tethering occurs in hypertropia but not in exotropia. Soh Youn Suh, J. L. Demer. Ophthalmology, Stein Eye Institute, UCLA, Los Angeles, CA

2031 — A0058 Lamina Cribrosa Pore Movement after Acute Intraocular Pressure Rise. Ya Xing Wang¹, Q. Zhang¹, N. Wang¹, J. B. Jonas^{1,2}. ¹Beijing Institute of Ophthalmology, Beijing Tongren Hospital, Beijing, China; ²Medical Faculty Mannheim of the Ruprecht-Karls-University Heidelberg, Mannheim, Germany

2032 — A0059 Ethnicity Based Differences in the Lamina Cribrosa Microstructure of Healthy Eyes. Katie Lucy¹, H. Ishikawa¹, J. S. Schuman¹, M. Wu^{1,2}, J. Shin³, K. SUNG³, G. Wollstein¹. ¹Department of Ophthalmology, NYU Langone Eye Center, NYU School of Medicine, New York, NY; ²Division of Biostatistics, Departments of Population Health and Environmental Medicine, NYU School of Medicine, New York, NY; ³Ophthalmology, Asan Medical Center, University of Ulsan, College of Medicine, Seoul, Korea (the Republic of) *CR

2033 — A0060 Age-Dependent Variation in the Lamina Cribrosa Displacement During Valsalva Maneuver. Yong Woo Kim^{1,2}, S. Baek¹, D. Lee², H. Lim², B. Oh^{1,2}, Y. Kim¹, K. Park¹, J. Jeoung¹. ¹Ophthalmology, Seoul National University Hospital, Seoul, Korea (the Republic of); ²Ophthalmology, Armed Forces Capital Hospital, Seongnam, Korea (the Republic of)

2034 — A0061 Regional Differences in Deformation of the Posterior Eye During IOP Elevation. Elias Pavlatos¹, Y. Ma¹, K. Clayson^{1,2}, X. Pan⁴, J. Liu^{1,3}. ¹Department of Biomedical Engineering, The Ohio State University, Columbus, OH; ²Biophysics Interdisciplinary Group, The Ohio State University, Columbus, OH; ³Department of Ophthalmology and Visual Sciences, The Ohio State University, Columbus, OH; ⁴Department of Biomedical Informatics, The Ohio State University, Columbus, OH

2035 — A0062 Lamina cribrosa deformation in glaucoma: is it global or regional? Jiah Kim, E. Lee, G. Lee, T. Kim. Ophthalmology, Bundang Seoul National University Hospital, Seoungnam-si, Korea (the Republic of)

2036 — A0063 In Vivo Mechanical Deformations of the Optic Nerve Head (ONH) Induced by Manometrically Controlled IOP and Body Position: Imaging and Quantification Method. Massimo A. Fazio^{1,2}, M. E. Clark¹, C. A. Girkin¹. ¹Ophthalmology, The University of Alabama in Birmingham, Birmingham, AL; ²Biomedical Engineering, The University of Alabama at Birmingham, Birmingham, AL *CR

2037 — A0064 Finite Element Modeling Predicts Neural Tissue Shear in the Neuroretinal Rim Caused by Pulsatile Blood Pressure. Yuejiao Jin^{3,2}, X. Wang¹, L. Zhang¹, J. B. Jonas⁴, T. Aung^{3,6}, L. Schmetterer^{5,6}, M. J. Girard^{1,5}. ¹Biomedical Engineering, National University of Singapore, Singapore, Singapore; ²NUS Graduate School for Integrative Sciences and Engineering, National University of Singapore, Singapore, Singapore; ³Department of Biomedical Engineering, National University of Singapore, Singapore, Singapore; ⁴Department of Ophthalmology of the Medical Faculty Mannheim, Ruprecht-Karls-University Heidelberg, Heidelberg, Germany; ⁵Singapore National Eye Centre, Singapore Eye Research Institute, Singapore, Singapore; ⁶Duke-NUS Medical School, Singapore, Singapore

2038 — A0065 Central Retinal Vessel Trunk Caliber and Position Changes after Short-Term Intraocular Pressure Elevation. Qi Zhang¹, C. Lin¹, J. B. Jonas^{1,2}, N. Wang¹, Y. Wang¹. ¹Beijing Institute of Ophthalmology, Beijing Tongren Hospital, Beijing, China; ²Medical Faculty Mannheim of the Ruprecht-Karls-University Heidelberg, Mannheim, Germany

2039 — A0066 Human optic nerve sinusity is not caused by orbital blood vessel proximity. Kajal Patel, A. Le, R. A. Clark, V. Poukens, J. Giaconi, K. Nouri-Mahdavi, S. Law, L. Bonelli, A. L. Coleman, J. Caprioli, J. L. Demer. ¹Ophthalmology, UCLA, Los Angeles, CA *CR

2040 — A0067 Influence of substrate elasticity on primary retinal ganglion cell culture. Charlotte Fischer², F. Rehfeldt¹, M. Kortleben², M. Khattab², C. van Oterendorp². ¹3rd Institut of Physics, Biophysics, Georg August University, Goettingen, Germany; ²Ophthalmology, University Medicine, Goettingen, Germany

2041 — A0068 Effect of Rate of Hydrostatic Pressure Depressurization on Cells in Culture. Mark Johnson^{1,2}, E. Tworokski¹, M. Glucksberg¹. ¹Biomedical Engineering, Northwestern University, Evanston, IL; ²Ophthalmology, Northwestern University, Evanston, IL

Exhibit Hall A0100-A0136

Monday, April 30, 2018 3:30 PM-5:15 PM

Glaucoma

274 Surgery and Wound Healing II

Moderators: Vikas Gulati and Robert Chang

2042 — A0100 Early safety and efficacy study of the use of the CyPass suprachoroidal microstent for glaucoma in a tertiary referral centre in the United Kingdom. Miles Parnell, M. Abu-Bakra, Y. Tham, A. Kulkarni, S. Trikha. ¹Ophthalmology, King's College Hospital, London, United Kingdom

2043 — A0101 Level one evidence for minimally invasive glaucoma surgery: clinical trial design lessons from COMPASS. Alvin Relucio, J. He, P. Ellingson. Alcon, a Novartis Division, Ft Worth, TX *CR, ⚡

2044 — A0102 Retrospective Review of a Suprachoroidal Micro-Stent as a Stand Alone Procedure for the Treatment of Refractory Primary Open Angle Glaucoma: 6-Month Results. Steven D. Vold, M. R. McFarland. Vold Vision P.L.L.C., Fayetteville, AR *CR

2045 — A0103 Reduction of Ocular Antihypertensive Medication Use After iStent Implantation in a Large U.S. Managed Care Network. Sophia Y. Wang, R. Chang. Byers Eye Institute, Stanford University, Daly City, CA *CR

2046 — A0104 iStent Outcomes after Selective Laser Trabeculoplasty. Geraldine Slean, K. Tang, S. So, G. Tanaka. ¹Ophthalmology, CPMC, San Francisco, CA

2047 — A0105 iStent and ECP combine effectively with cataract surgery in patients with POAG and cataract. Dhakshi Muhundhakumar^{1,2}, M. Arunakiranthan^{3,2}, A. Porteous², G. Julley^{4,2}, P. Bloom², L. Crawley², S. Ameen², F. Ahmed². ¹Moorfields Eye Hospital, London, United Kingdom; ²Glaucoma, Western Eye Hospital, London, United Kingdom; ³Central Middlesex Hospital, London, United Kingdom; ⁴John Radcliffe Hospital, Oxford, United Kingdom *CR

2048 — A0106 Effect of Race on Clinical Outcomes in Combined Phacoemulsification-iStent® Compared to Phacoemulsification Alone. Shaza N. Al-Holou, S. Havens, D. A. Ghate, V. Gulati. Truhlsen Eye Institute, University of Nebraska, Omaha, NE

2049 — A0107 The Long-Term Efficacy and Safety of the Glaukos iStent Implant in Open Angle Glaucoma (OAG). Arwa Alsamarrae, M. Hamid, P. Baciou, D. Crandall, N. Imami. ¹Ophthalmology, Henry Ford Health System, Dearborn, MI

2050 — A0108 Sustainable Staining of the Xen Gel Stent. Jeanie Ling^{2,1}, N. P. Bell¹, R. M. Feldman^{2,1}. ¹Robert Cizik Eye Clinic, Houston, TX; ²Ruiz Department of Ophthalmology and Visual Science, McGovern Medical School at The University of Texas Health Science Center at Houston, Houston, TX *CR

2051 — A0109 Safety and efficacy of the XEN-45 glaucoma gelatin stent implantation in 100 eyes with 1-year results at Essex County Hospital UK: the OXI technique. Chrysostomos Dimitriou^{1,2}, H. Mukherjee^{1,3}, B. Bhatia^{1,3}, M. Radwan^{1,3}, D. Lindfield^{4,2}. ¹Glaucoma Service, The Essex County Hospital, Colchester; Essex, United Kingdom; ²Glaucoma Service, Moorfields Eye Hospital NHS Foundation Trust, London, United Kingdom; ³Addenbrooke's Hospital, Cambridge University Hospitals NHS Foundation Trust, Cambridge, United Kingdom; ⁴Ophthalmology, Royal Surrey County Hospital NHS Foundation Trust, Guildford, Surrey, United Kingdom

2052 — A0110 XEN Gel Stent Outcomes in an African American Population. Sachin Rajpal, P. Angadi, L. S. Jones. ¹Ophthalmology, Howard University Hospital, Washington DC, District of Columbia

2053 — A0111 Outcomes of the XEN Subconjunctival Gel Stent: One-Year Results in a Tertiary Referral Centre. Mohammed. Abu-Bakra, M. Parnell, M. teo, R. Petrarca, Y. Tham, S. Trikha, A. Kulkarni. ¹Ophthalmology, King's College Hospital, London, United Kingdom

2054 — A0112 Supraciliary micro-stent device for glaucoma after keratoplasty. Jasbeth Ledesma Gil¹, K. Van-Dick Sánchez¹, E. O. Graue-Hernandez², A. Navas². ¹Glaucoma, Institute of Ophthalmology Conde de Valenciana, Mexico City, Mexico; ²Cornea and Refractive Surgery, Institute of Ophthalmology Conde de Valenciana, Mexico City, Mexico

2055 — A0113 Intraocular pressure lowering effect of the Hydrus Microstent implantation combined with cataract surgery in moderate to advanced glaucoma. Marta Toth, G. Gazzard. ¹Glaucoma Service, Moorfields Eye Hospital, London, United Kingdom *CR

2056 — A0114 Complete responders following ab interno gelatin stent at 12M in refractory glaucoma patients. Michael R. Robinson¹, D. Grover², K. P. Bashford³, M. C. Stiles⁴, J. Zhang¹, R. S. Nangia¹, J. Ling¹, S. S. Lee¹. ¹Ophthalmology, Allergan, Irvine, CA; ²Glaucoma Associates of Texas, Dallas, TX; ³Eye Center of Northern Colorado, Tinnath, CO; ⁴Stiles Eyecare Excellence and Glaucoma Institute, Overland Park, KS *CR, ⚡

2057 — A0115 Comparing the predicted efficacy of one versus two supraciliary microstents for lowering IOP in glaucoma patients using an ocular computational fluid dynamic model. Paul Missel, R. Sarangapani. ¹Modeling & Simulation, Alcon Research, Ltd, Fort Worth, TX *CR

Monday Posters
3:30 pm – 5:15 pm

2058 — A0116 Mid and long-term outcomes of viscodilation associated with trabeculotomy using the VISCO360 microinvasive device for the treatment of Open Angle Glaucoma. Gabriele Vizzari, P. Bordin. *Ophthalmology, Hospital of Legnago, Verona, Italy*

2059 — A0117 Effect of systemic comorbidities on clinical outcomes after trabecular micro-bypass stent with cataract extraction and cataract extraction alone. Gillian Treadwell, S. N. Al-Holou, S. Havens, D. A. Ghate, V. Gulati. *Ophthalmology, University of Nebraska Medical Center, Omaha, NE*

2060 — A0118 Efficacy of targeted versus non-targeted trabecular micro-bypass stents. Vinay Kansal¹, Y. Patodia², M. Schlenker², D. Varma², I. Ahmed². ¹Department of Ophthalmology, University of Saskatchewan, Saskatoon, Saskatchewan, Canada; ²Department of Ophthalmology and Vision Sciences, University of Toronto, Toronto, Ontario, Canada *CR

2061 — A0119 Long-term Results of Canaloplasty with Stegmann's Canal Expander[®] for Open-angle Glaucoma. Irene Brazitikos¹, A. Stangos^{1,2}, E. Mameletzi^{1,2}, G. Sunaric-Megevand^{1,2}. ¹Memorial A de Rothschild, Clinical Eye Research Centre, Geneva, Switzerland; ²Centre Ophtalmologique de Florissant, Geneva, Switzerland

2062 — A0120 Combining ab-interno canaloplasty and trabecular bypass stenting lowers IOP more than bypass stenting alone during phacoemulsification. Marius Heersink¹, M. Heersink³, J. Dovich². ¹Department of Medical Education, University of Alabama at Birmingham, Birmingham, AL; ²Department of Ophthalmology, Loma Linda University, Loma Linda, CA; ³Pacific Eye Institute, Upland, CA

2063 — A0121 Ocular Fornix Reconstruction prior to Combined Boston Keratoprosthesis (KPro) and Glaucoma Drainage Implant (GDI) Surgery. Faris I. Karas¹, C. S. Bouchard², A. Aref¹, A. R. Djalilian¹, F. Chau¹, M. S. Cortina¹, T. S. Vajaranant¹. ¹Ophthalmology, University of Illinois at Chicago, Eye and Ear Infirmary., Chicago, IL; ²Ophthalmology, Loyola University, Chicago, IL

2064 — A0122 Randomized Clinical Trial for Postoperative Complications of Ex-PRESS Implantation versus Trabeculectomy: Complications Postoperatively of Ex-PRESS versus Trabeculectomy Study (CPETS). Shogo Arimura, S. Miyake, K. Iwasaki, m. gozawa, t. matsumura, Y. Takamura, M. Inatani. *Ophthalmology, University of Fukui, Yoshida, Fukui, Japan* *CR, ✗

2065 — A0123 Comparison of sutureless scleral tunnel implantation of Ex-Press mini shunt versus conventional technique in patients with glaucoma. Ricardo Mata, C. Prado-Larrea, L. Laneri Pusineri, R. Castañeda, R. Gonzalez-Salinas, J. Jimenez Roman. *Asociación para evitar la ceguera en México, México city, Mexico*

2066 — A0124 Ahmed Glaucoma Valve FP7 and FP8 in pediatric glaucoma: A randomized clinical trial. Camila Netto, B. L. Esporcatte, L. Soares de Melo, I. M. Tavares, C. R. de Moura. *Ophthalmology, Federal University of São Paulo, Sao Paulo, Sao Paulo, Brazil* ✗

2067 — A0125 Ahmed valve implantation and laser cyclophotocoagulation as elected treatment for diabetic neovascular glaucoma: a retrospective study. Carolina Meneses Galicia², J. Juberías Sánchez^{1,2}, S. Sánchez Tabernero^{3,1}, N. Artells de Jorge¹, S. Crespo Millas¹, L. Manzanar Leal¹, M. López Gálvez^{1,2}. ¹Hospital Clínico Universitario, Valladolid, Spain; ²Instituto de Oftalmobiología Aplicada, Valladolid, Valladolid, Spain; ³Ashford and St Peter's Hospital, London, United Kingdom

2068 — A0126 Comparison of clinical results of placement of Ahmed Valve in anterior chamber versus ciliary sulcus. Ernesto J. Vidaurre Mora, C. A. Haro Zuno, J. Jimenez Roman, N. Ramos Betancourt. *Asociación para Evitar la Ceguera, Ciudad de Mexico, Mexico*

2069 — A0127 Efficacy of surgical excision of encapsulated bleb in patients with Ahmed glaucoma valve implant. Rodrigo I. Lozano Garza. *Glaucoma, Instituto de Oftalmología Hospital Conde de Valenciana, Ciudad de Mexico, Mexico*

2070 — A0128 Xen-augmented Baerveldt tube vs. Ahmed valve in glaucoma. David Sousa^{1,2}, N. Martins Machado³, I. Cardoso Leal^{1,2}, L. Abegão Pinto^{1,2}. ¹Ophthalmology, Hospital de Santa Maria, Lisboa, Portugal; ²Vision Sciences Study Center, CECV, Faculdade de Medicina, Universidade de Lisboa, Lisboa, Portugal; ³Faculdade de Medicina, Universidade de Lisboa, Lisboa, Portugal

2071 — A0129 Diplopia in Baerveldt 250, Baerveldt 350, and Ahmed FP7 Patients. Khin Kilgore¹, F. Wang^{1,2}, N. Diehl³, C. Khanna¹. ¹Ophthalmology, Mayo Clinic, Rochester, MN; ²Ophthalmology, First Affiliated Hospital of Anhui Medical University, Hefei City, Anhui Province, China; ³Department of Health Sciences Research, Mayo Clinic, Rochester, MN

2072 — A0130 Baerveldt glaucoma drainage device induces diplopia and motility changes. Esma Islamaj¹, C. P. Jordaan-Kuip², K. A. Vermeer², H. G. Lemij^{3,2}, P. W. De Waard³. ¹Glaucoma, ROI - Rotterdam Eye Hospital, Rotterdam, Netherlands; ²Rotterdam Ophthalmic Institute, Rotterdam Eye Hospital, Rotterdam, Netherlands; ³Glaucoma, Rotterdam Eye Hospital, Rotterdam, Netherlands ✗

2073 — A0131 Scheduled postoperative ripcord removal in Baerveldt 350 implants corresponds with increased complications: a prospective, randomized trial. Selena J. An¹, J. C. Wen², M. Quist¹, A. Vin³, L. Mathenge¹, L. Herndon¹. ¹Duke Eye Center, Durham, NC; ²University of Washington, Seattle, WA; ³Alamance Eye Center, Burlington, NC ✗

2074 — A0132 Primary Baerveldt glaucoma implant surgery for neovascular glaucoma. Akira Sugano, K. Nishitsuka, H. Yamashita. *Yamagata university, Yamagata, Japan* *CR

2075 — A0133 Prospective cohort study for corneal endothelial cell loss after Baerveldt glaucoma implantation. Kentaro Iwasaki, S. Arimura, Y. Takihara, Y. Takamura, M. Inatani. *Department of Ophthalmology, University of Fukui, Yoshida, Fukui, Japan* *CR, ✗

2076 — A0134 Comparing the Baerveldt and Molteno Shunts for Treatment of Refractory Glaucoma. Maxwell W. Dixon, J. Palko, A. Sheybani. *Department of Ophthalmology and Visual Sciences, Washington University School of Medicine, Saint Louis, MO*

2077 — A0135 Incidence of Conjunctival Complications in patients with Glaucoma Drainage Devices in Puerto Rico. Gabriela J. Trabal¹, J. E. Fossas², M. Blasini¹. ¹Ophthalmology, University of Puerto Rico, San Juan, Puerto Rico; ²Universidad Central del Caribe, Bayamon, Puerto Rico

2078 — A0136 Surgical outcome of tube shunt implantation for pediatric glaucoma. Xinyu Zhang^{1,2}, A. Yang^{1,3}, J. Liu¹. ¹Department of Ophthalmology and Visual Science, Yale University, New Haven, CT; ²Xinagya School of Medicine, Central South University, Changsha, Hunan Province, China; ³School of Medicine, Yale University, New Haven, CT

Exhibit Hall A0137-A0186

Monday, April 30, 2018 3:30 PM-5:15 PM

Glaucoma

275 Imaging: Posterior Segment I

Moderators: Jost B. Jonas and Yu Xiang George Kong

2079 — A0137 Assisting glaucoma diagnosis with optical coherence tomography and color fundus images using machine learning approach. Maiko Abe¹, K. Omodaka¹, G. An^{2,3}, T. Kikawa², M. Akiba^{2,3}, H. Yokota^{3,4}, T. Nakazawa^{1,4}. ¹Department of ophthalmology, Graduate School of Medicine, Tohoku University, Sendai, Miyagi, Japan; ²R&D Division, TOPCON Corporation, Tokyo, Japan; ³Cloud-Based Eye Disease Diagnosis Joint Research Team, RIKEN, Tokyo, Japan; ⁴Image Processing Research Team, RIKEN, Saitama, Japan *CR

- 2080 — A0138 Automated Evaluation of Optic Disc Images for Manifest Glaucoma Detection Using a Deep-Learning, Neural Network-Based Algorithm.** Emily Seo¹, N. Jaccard², S. Trikha^{2,3}, L. R. Pasquale^{4,5}, B. J. Song^{1,4}. ¹Ophthalmology, Massachusetts Eye and Ear, Boston, MA; ²Visulytix Ltd, London, United Kingdom; ³King's College Hospital NHS Foundation Trust, London, United Kingdom; ⁴Ophthalmology, Harvard Medical School, Boston, MA; ⁵Channing Division of Network Medicine, Brigham and Women's Hospital, Boston, MA *CR
- 2081 — A0139 Automated analysis of optic nerve head changes in patients with glaucoma.** Barbara Zangerl^{1,2}, A. Ly^{1,2}, M. P. Hennessy^{3,1}, A. Agar^{3,4}, K. Masselos^{3,1}, S. Dance^{3,1}, M. Yapp^{1,2}, M. Kalloniatis^{1,2}. ¹Center for Eye Health, UNSW Sydney, Sydney, New South Wales, Australia; ²SOVS, UNSW Sydney, Sydney, New South Wales, Australia; ³Ophthalmology, Prince of Wales Hospital, Sydney, New South Wales, Australia; ⁴Medicine, UNSW Sydney, Sydney, New South Wales, Australia *CR
- 2082 — A0140 The Accuracy and Reproducibility of Optic Disc Criteria to Diagnose Glaucoma.** Kulawan Rojananuangnit, D. Srimaneekarn, S. Jongrak. Ophthalmology, Mettaphracharak hospital, Sam Pran, Nakhon Pathom, Thailand
- 2083 — A0141 Applicability of ISNT rule using BMO-MRW to differentiation between healthy and glaucomatous eyes.** Do Young Park, C. Kee. Sungkyunkwan university school of medicine, samsung medical center, Seoul, Korea (the Republic of)
- 2084 — A0142 Examiner Level of Experience on Assessing Optic Discs in a Telemedicine System.** Sara Y Otero Sanchez Garcia Aurora¹, J. A. Paczka^{2,3}, L. A. Paczka-Giorgi², L. A. Giorgi-Sandoval^{5,6}, J. Rueda^{7,8}, M. Sánchez-Uzcátegui⁹, D. Rueda-Latorre¹⁰. ¹Ophthalmology, Issste, Zapopan, JALISCO, Mexico; ²Instituto de Oftalmología y Ciencias Visuales, Universidad de Guadalajara, Guadalajara, Jalisco, Mexico; ³Research & Development, Telemedicine LATAM, Guadalajara, Jalisco, Mexico; ⁴Research & Development, Telemedicine LATAM, Toronto, Ontario, Canada; ⁵Unidad de Diagnóstico Temprano del Glaucoma, Research & Development, Guadalajara, Jalisco, Mexico; ⁶Research & Development, Centro de Prevención y Consultoría en Glaucoma, Guadalajara, Jalisco, Mexico; ⁷Research & Development, Telemedicine LATAM, Bucaramanga, Santander, Colombia; ⁸Research & Development, Asistencia e investigación en Glaucoma, Guadalajara, Jalisco, Mexico; ⁹Research & Development, Telemedicine LATAM, Bucaramanga, Santander, Colombia; ¹⁰Research & Development, Telemedicine LATAM, Bogotá, Colombia
- 2085 — A0143 Co-screening for glaucoma and diabetic retinopathy utilizing fundus photography and glaucoma score.** Nicholas Wiltshire¹, J. Bekker², W. E. Sponse³, S. Cook². ¹Optometry, Eye Centre, East London, Eastern Cape, South Africa; ²Eye Centre, East London, Eastern Cape, South Africa; ³Vision Sciences, WESMDPA/UIW/UTSA, San Antonio, TX
- 2086 — A0144 A deep learning system for detecting glaucomatous optic neuropathy and age-related macular degeneration based on color fundus photographs.** Mingguang He^{1,2}, Z. Li¹, S. Keel³, R. Chang³. ¹Zhongshan Ophthalmic Center, Guangzhou, China; ²University of Melbourne, Melbourne, Victoria, Australia; ³Byers Eye Institute at Stanford University, Palo Alto, CA
- 2087 — A0145 A Comparison of Glaucomatous Damage seen with Fundus Photographs and Optical Coherence Tomography.** Lynn Shi¹, C. De Moraes², D. Blumberg², L. A. Al-Aswad², D. C. Hood^{2,3}. ¹Columbia University College of Physicians and Surgeons, New York, NY; ²Ophthalmology, Columbia University Medical Center, New York, NY; ³Psychology, Columbia University, New York, NY *CR
- 2088 — A0146 Comparison in optic nerve cupping between optical coherence tomography and widefield slit scanning ophthalmoscopy.** Katherine Makedonsky, M. H. Chen, P. Sha, G. C. Lee, M. K. Durbin. Carl Zeiss Meditec, Inc., Dublin, CA *CR
- 2089 — A0147 A Comparison of Qualitative and Quantitative Assessment of Glaucoma Progression Using Optical Coherence Tomography.** Eleanor Kim³, A. Sun³, Z. Wu³, C. G. Moraes¹, R. Ritch², D. C. Hood³. ¹Ophthalmology, Columbia University, New York, NY; ²Einhorn Clinical Research Center, NYEE Infirmary of Mount Sinai, New York, NY; ³Psychology, Columbia University, New York, NY *CR
- 2090 — A0148 Deep Learning Approaches Can Detect Glaucomatous Functional Loss better than standard SD-OCT Retinal Nerve Fiber Layer Thickness.** Mark Christopher, A. Belghith, C. Bowd, M. H. Goldbaum, R. N. Weinreb, L. M. Zangwill. Hamilton Glaucoma Center, Shiley Eye Institute, Department of Ophthalmology, University of California San Diego, La Jolla, CA *CR
- 2091 — A0149 A novel deep learning approach for glaucoma detection from 3D OCT volumes and fundus images.** Gabriel Tjio¹, Y. Tham², S. Li¹, Y. Liu¹, X. X. Xu¹, S. S. Feng¹, J. Du¹, T. Y. Wong^{2,3}, R. Goh¹, C. Cheng^{2,3}. ¹Institute of High Performance Computing, A*STAR, Singapore, Singapore; ²Singapore Eye Research Institute, Singapore National Eye Centre, Singapore, Singapore; ³Ophthalmology, Yong Loo Lin School of Medicine, National University of Singapore, Singapore, Singapore
- 2092 — A0150 Changes in Bruch's membrane opening-minimum rim width after reduction of intraocular pressure in eyes with chronic open-angle glaucoma.** Tetsuro Takumi^{2,1}, N. Enomoto², F. Yagi², G. Tomita². ¹Department of Ophthalmology, Toho University Graduate School of Medicine, Tokyo, Japan; ²Toho University Ohashi Medical Center, Tokyo, Japan *CR
- 2093 — A0151 Comparison of Bruch's membrane opening detection between DRI OCT Triton and Zeiss Cirrus in a myopic cohort.** Charles Reisman¹, Y. Dong¹, Q. Yang¹, W. Huang¹, T. Kikawa². ¹Research and Development, Topcon Healthcare Solutions, Oakland, NJ; ²R&D Division, Topcon Corporation, Tokyo, Japan *CR, ✕
- 2094 — A0152 Relationship between visual function and changes in optic nerve head parameters in open angle glaucoma patients with diabetes mellitus.** June Geng¹, A. Harris¹, T. A. Ciulla³, A. Verticchio Vercellin^{3,2}, A. Shah¹, D. Camp¹, G. Eckert⁴, B. A. Siesky¹. ¹Ophthalmology, Indiana University School of Medicine, Indianapolis, IN; ²University Eye Clinic, Dipartimento di Scienze Clinico-Chirurgiche, Diagnostiche e Pediatriche, Fondazione IRCCS, Policlinico San Matteo, Pavia, Italy; ³Glaucoma Unit, Istituto di Ricovero e Cura a Carattere Scientifico, Fondazione G.B. Bietti, Rome, Italy; ⁴Biostatistics, Indiana University, Indianapolis, IN; ⁵Retina Service, Midwest Eye Institute, Indianapolis, IN *CR
- 2095 — A0153 Pulsatile Dynamics of the Optic Nerve Sheath and Intracranial Pressure in open angle glaucoma patients.** hanruo liu, T. Ma, W. Shi, N. Wang. Beijing Tongren Eye Center, Beijing, China
- 2096 — A0154 In-Vivo Macro and Micro-Structure Optic Nerve Head Deformations Due to Gaze and Intracranial Pressure Changes.** Jenna Tauber¹, K. Lucy¹, I. A. Sigal³, J. Wei³, S. Schmitt², Z. Nadler², H. Ishikawa¹, J. S. Schuman¹, M. A. Smith³, G. Wollstein². ¹NYU Langone Eye Center, NYU School of Medicine, New York, NY; ²Lewis Katz School of Medicine, Philadelphia, PA; ³UPMC Eye Center, Eye and Ear Institute, Department of Ophthalmology, University of Pittsburgh Medical Center, Pittsburgh, PA *CR

2097 — A0155 Automated Segmentation of the Anterior Lamina Cribrosa Surface (ALCS) within Optic Nerve Head (ONH) Optical Coherence Tomography (OCT) B-scans. Haomin Luo^{1,2}, J. Weichsel³, S. K. Gardiner⁴, J. Reynaud¹, C. Hardin¹, C. Albert⁴, J. R. Vianna⁵, G. Sharpe⁵, V. R. Lanoe⁵, J. Quach⁵, S. Demirel⁴, B. Fortune⁴, B. C. Chauhan⁵, C. F. Burgoyne¹, H. Yang¹. ¹Optic Nerve Research Lab, Devers Eye Institute, Portland, OR; ²Department of Ophthalmology, The 2nd Xiangya Hospital of Central South University, Changsha, Hunan, China; ³Ruprecht-Karls-University of Heidelberg, Heidelberg, Germany; ⁴Discoveries in Sight Research Labs, Devers eye Institute, Portland, OR; ⁵Department of Ophthalmology and Visual Sciences, Dalhousie University, Halifax, Nova Scotia, Canada *CR

2098 — A0156 Comparison of mean optic disc cup surface depth between glaucoma suspect and primary open-angle glaucoma with large cup-to-disc ratio. YONGSEOK MUN, A. Ha, J. Jeoung, K. Park, Y. Kim. Ophthalmology, Seoul National University Hospital, Seoul, Seongbuk-gu, Korea (the Republic of)

2099 — A0157 Association of Optic Nerve Head and Macular OCT Measures with Glaucoma-related Disability. Luke Bonham, A. Mihailovic, S. K. West, D. S. Friedman, P. Y. Ramulu. Wilmer Eye Institute, Johns Hopkins School of Medicine, Baltimore, MD

2100 — A0158 Relationship between retinal nerve fiber layer thickness, optic nerve cup to disc ratio, and intraocular pressure in pediatric glaucoma suspects. Lindsay Machen, I. Jang, M. C. Mocan. Ophthalmology, University of Illinois at Chicago, Chicago, IL

2101 — A0159 Lamina Cribrosa is More Steeply Curved in Glaucomatous Eyes than in Contralateral Healthy Eyes in Unilateral Treatment Naïve Normal Tension Glaucoma. Jeong-Ah Kim¹, T. Kim¹, G. Lee¹, E. Lee¹, M. J. Girard². ¹Ophthalmology, Seoul National University, Bundang Hospital, Seongnam, Gyeonggi-do, Korea (the Republic of); ²Singapore Eye Research Institute, Singapore National Eye Centre, Singapore, Singapore

2102 — A0160 Automatic segmentation of lamina beam using multi-functional Jones matrix optical coherence tomography. Deepa Kasaragod¹, S. Makita¹, M. Miura², Y. Yasuno¹. ¹Computational Optics Group, University of Tsukuba, Tsukuba, Ibaraki, Japan; ²Department of Ophthalmology, Tokyo Medical University, Tokyo, Japan *CR

2103 — A0161 Stability Analysis of Lamina Cribrosa Structure in Repeated Optical Coherence Tomography Scans. James Fishbaugh¹, S. Hong¹, H. Ishikawa², M. Ravier¹, G. Wollstein², J. S. Schuman², G. Gerig¹. ¹Computer Science and Engineering, NYU Tandon School of Engineering, Brooklyn, NY; ²NYU Langone Eye Center, NYU School of Medicine, New York, NY *CR

2104 — A0162 The effects of short-term intraocular pressure elevation on the optic nerve head. Laura P. Pardon, F. M. McAllister, R. S. Harwerth, N. B. Patel. University of Houston College of Optometry, Houston, TX

2105 — A0163 Optic disc tilt and glaucoma progression in myopic glaucoma: A longitudinal match pair case-control study. Bo Ram Seol¹, K. Park², J. Jeoung². ¹VHS medical center, Seoul, Korea (the Republic of); ²Seoul National University Hospital, Seoul, Korea (the Republic of)

2106 — A0164 Displacement of optic nerve head structures following a small acute elevation in intra-ocular pressure. Phillip Bedggood¹, F. Tanabe², A. Turpin³, A. J. Anderson¹, A. M. McKendrick¹, B. V. Bui¹. ¹Department of Optometry and Vision Sciences, The University of Melbourne, Melbourne, Victoria, Australia; ²Department of Ophthalmology, Kinki University Faculty of Medicine, Osaka, Japan; ³Department of Computing and Information Systems, The University of Melbourne, Melbourne, Victoria, Australia *CR

2107 — A0165 Foveal Slope as a Biomarker for Detection of Glaucoma Progression with Macular OCT Imaging. Navid Amini, N. Fatehi, S. Henry, J. Caprioli, K. Nouri-Mahdavi. Ophthalmology, Jules Stein Eye Institute at UCLA, Los Angeles, CA *CR

2108 — A0166 Effect of Trabeculectomy on Optical Coherence Tomography (OCT) Measurements of the optic nerve head Neuroretinal Rim Tissue. Jessica Moon, S. K. Gardiner, B. Fortune, J. Reynaud, S. L. Mansberger. Ophthalmology, Devers Eye Institute, Portland, OR

2109 — A0167 Differences between central retinal and optic nerve disc parameters in patients with Alzheimer's disease, normal tension glaucoma, and healthy controls using SS-OCT. Akvile Daveckaite^{1,2}, L. Siaudvytyte¹, I. Januleviciene¹, J. Skruodyte¹, K. Petrikonis², A. Vaitkus², A. Harris^{3,1}. ¹Eye Clinic, Lithuanian University of Health Sciences, Kaunas, Lithuania; ²Neurology Department, Lithuanian University of Health Sciences, Kaunas, Lithuania, Lithuania; ³Eugene and Marilyn Glick Eye Institute, Indiana University School of Medicine, Indianapolis, IN ✗

2110 — A0168 Lamina cribrosa curvature in glaucoma patients, glaucoma suspects and healthy controls. Patrycja Krzyzanowska-Berkowska¹, K. Czajor¹, P. Syga², C. Sieluzycy³, M. Asejczyk-Widlicka⁴, D. Iskander³. ¹Department of Ophthalmology, Wrocław Medical University, Wrocław, Poland; ²Computer Science, Wrocław University of Science and Technology, Wrocław, Poland; ³Biomedical Engineering, Wrocław University of Science and Technology, Wrocław, Poland; ⁴Optics and Photonics, Wrocław University of Science and Technology, Wrocław, Poland

2111 — A0169 Prelaminar Tissue Thickness in Moderate to Advanced Glaucoma. Julia Fallon¹, F. Lavinsky¹, J. S. Schuman¹, M. Wu¹, K. Lucy¹, M. Liu¹, J. G. Fujimoto², H. Ishikawa¹, G. Wollstein¹. ¹NYU Langone Eye Center, NYU School of Medicine, New York, NY; ²Department of Electrical Engineering and Computer Science, Massachusetts Institute of Technology, Cambridge, MA *CR

2112 — A0170 Pitfalls of Ganglion Cell Complex Analysis in Eyes With Vitreomacular Traction Syndrome. Hugh Slifirski^{1,2}, M. Rawlings¹, Q. Qin¹, D. S. Chauhan¹. ¹Vision Eye Institute - Box Hill, Box Hill, Victoria, Australia; ²Science, University of Melbourne, Melbourne, Victoria, Australia

2113 — A0171 Progression Detection in Advanced Glaucoma Eyes with Non-Progressing Ganglion Cell-Inner Plexiform Layer. Fabio Lavinsky¹, M. Wu^{1,2}, J. S. Schuman¹, K. Lucy¹, M. Liu^{1,2}, J. Fallon¹, H. Ishikawa¹, G. Wollstein¹. ¹NYU Langone Eye Center, NYU School of Medicine, New York, NY; ²Division of Biostatistics, Department of Population Health and Environmental Medicine, NYU School of Medicine, New York, NY *CR

2114 — A0172 The NFL (Nerve Fiber Layer) Synthetic Analyst Study. Kent Demaine¹, M. Bennett², C. Milroy³, B. Stark³. ¹Retina Metrics, LLC, Los Angeles, CA; ²Retina Institute of Hawaii, Honolulu, HI; ³Engility, Chantilly, VA

2115 — A0173 Retinal inner plexiform layer (IPL) alterations in patients with glaucoma. Ceren Durmaz Engin^{1,2}, R. Aydin³, L. A. Al-Aswad², J. D. Auran², D. Blumberg², G. A. Cioffi², J. M. Liebmann², T. H. TezeP, G. TezeP. ¹Ophthalmology, Dokuz Eylul University, Izmir, Turkey; ²Ophthalmology, Columbia University, New York, NY

2116 — A0174 Relationship between Intraocular Pressure (IOP) Peak and Rates of Retinal Nerve Fiber Layer (RNFL) Loss by Spectral-Domain Optical Coherence Tomography (SD-OCT). Sebastiao Cronemberger, A. C. Veloso, G. Scarpelli, Y. C. Sasso. Ophthalmology, Federal Univ of Minas Gerais, Belo Horizonte, MINAS GERAIS, Brazil

2117 — A0175 Towards an accurate and robust retinal nerve fiber layer thickness assessment with OCT. Tuomas J. Heikka¹, B. Cense², N. M. Jansonius¹. ¹Ophthalmology, University Medical Center Groningen, Groningen, Netherlands; ²Lions Eye Institute, The University of Western Australia, Perth, Western Australia, Australia

2118 — A0176 Evaluation of three distinct diameter sizes for circular scanning of peripapillary retinal nerve fiber layer (pRNFL) thickness in glaucoma diagnostics. Philip Enders¹, W. Adler², O. El-Malahi¹, F. Schaub¹, M. Hermann¹, T. S. Dietlein¹, C. Cursiefen¹, L. M. Heindl¹. ¹Center of Ophthalmology, University Hospital of Cologne, Cologne, Germany; ²University of Erlangen-Nuremberg, Erlangen, Germany

- 2119 — A0177 Three Ways to Reduce False Positive Glaucoma Diagnosis in OCT Measurement of Retinal Nerve Fiber Layer Thickness.** *Ou Tan, X. Zhang, D. Huang.* Ophthalmology, Oregon Health & Science Univ, Portland, OR *CR, ✕
- 2120 — A0178 The relationship between microperimetric retinal sensitivity and ganglion cell complex thickness in patients with low tension glaucoma.** *Akanksha Prasad^{1,2}, T. C. Tepelus¹, M. G. Nittala¹, S. Song¹, V. Chopra¹, S. R. Sadda^{1,2}.* ¹Doheny Eye Institute, Los Angeles, CA; ²Retina, Jules Stein Eye Institute, Los Angeles, CA *CR
- 2121 — A0179 Between-session vs. within-session variability of local macular optical coherence tomography (OCT) thickness measurements.** *Nima Fatehi, S. Henry, J. Caprioli, K. Nouri-Mahdavi.* Glaucoma Division, Stein Eye Institute, UCLA, Los Angeles, CA *CR
- 2122 — A0180 Optical coherence tomography measured retinal nerve fiber layer thickness values compensated with a multivariate model correspond with progressive optic disc change as documented in a longitudinal follow up with confocal scanning laser tomography in glaucoma suspects.** *Hemma Resch¹, A. B. Hommer², F. Schwarzhans³, P. Fuchs¹, C. Vass¹.* ¹Ophthalmology and Optometry, Medical University of Vienna, Vienna, Austria; ²Sanatorium Hera, Vienna, Austria; ³Medical university of Vienna, CeMSIIS, Vienna, Austria *CR
- 2123 — A0181 Comparison of the glaucoma diagnostic performance of individualized and of age corrected normal limits of retinal nerve fiber layer thickness values as measured with optical coherence tomography.** *Clemens Vass¹, F. Schwarzhans², H. Resch¹, I. Pereira², P. Fuchs¹, G. Fischer².* ¹Dept of Ophthalmology, Medical University of Vienna, Vienna, Austria; ²CeMSIIS, Medical University of Vienna, Vienna, Austria *CR
- 2124 — A0182 Comparison of retinal ganglion cell indices determined from different SITA threshold strategies.** *Sophia Yu¹, G. C. Lee¹, T. Callan¹, B. Cunningham¹, M. K. Durbin¹, A. Heijl², A. Iwase³, L. X. Chong⁴, J. G. Flanagan⁴, C. Leung⁵, B. Bengtsson².* ¹Carl Zeiss Meditec, Inc., Dublin, CA; ²Lund University, Malmö, Sweden; ³Tajimi Iwase Eye Clinic, Tajimi, Japan; ⁴University of California- Berkeley, Berkeley, CA; ⁵The Chinese University of Hong Kong, Shatin, Hong Kong *CR
- 2125 — A0183 Retinal Nerve Fiber Layer Thickness Correlates Well with Glaucoma Severity in African Americans with Primary Open Angle Glaucoma.** *Naomi E. Gutkind¹, Q. N. Cui², G. Ying², Y. Yu², V. Addis², J. J. Chen², R. Lee², S. Merriam², J. M. O'Brien².* ¹Perelman School of Medicine, University of Pennsylvania, Philadelphia, PA; ²Scheie Eye Institute, University of Pennsylvania, Philadelphia, PA
- 2126 — A0184 Use Measurements by Optical Coherence Tomography as Baseline Risk Factors to Predict Confirmed Rapid Significant Visual Field Progression in Glaucoma.** *Xinbo Zhang¹, O. Tan¹, R. Varma², J. S. Schuman³, D. S. Greenfield⁴, D. Huang¹.* ¹Casey Eye Institute, Oregon Health & Science University, Portland, OR; ²Ophthalmology, University of Southern California, Los Angeles, CA; ³Ophthalmology, New York University, New York City, NY; ⁴Ophthalmology, University of Miami, Miami, FL *CR, ✕
- 2127 — A0185 Effect of factors related to the arcuate nerve fiber extension pattern on the structure-function relationships between retinal nerve fiber layer (RNFL) and visual field (VF) sensitivity.** *Jae Hyuck Kwak¹, H. Chang^{2,1}, S. Hong¹.* ¹Department of Ophthalmology and Visual Sciences, Medical College, the Catholic university of Korea, Seoul, Korea (the Republic of); ²Department of Ophthalmology and Visual Sciences, College of Veterinary Medicine, Konkuk University, Seoul, Korea (the Republic of)
- 2128 — A0186 Comparison of subfoveal choroidal thickness with the difference between right and left eye in POAG patients.** *Mengxue Zhou¹, K. Imai², K. Mori², Y. Ikeda², M. Ueno², N. Okumura¹, S. Kinoshita², C. Sotozono², N. Koizumi¹.* ¹Doshisha University, Kyoto, Japan; ²Kyoto Prefectural University of Medicine, Kyoto, Japan
-
- Exhibit Hall A0263-A0293
Monday, April 30, 2018 3:30 PM-5:15 PM
Anatomy and Pathology/Oncology
- 276 Optics, imaging, biometry and function in normal and myopic eye growth**
-
- Moderator: Dibyendu Pusti**
- 2129 — A0263 Association of Corneal Biomechanics Properties with Myopia in a Children and a Parent Cohort: Hong Kong Children Eye Study.** *Shu Min Tang, M. Yu, K. Kam, D. Ng, L. Chen, C. Cheung, J. YAM.* Ophthalmology and Visual Sciences, The Chinese University of Hong Kong, Hong Kong, Hong Kong
- 2130 — A0264 Corneal shape factors are correlated with ocular aberrations in myopes with or without astigmatism.** *Tsz Wing Leung, C. Kee, E. de Lestrang.* School of Optometry, The Hong Kong Polytechnic University, Hong Kong, Hong Kong
- 2131 — A0265 The anterior chamber volume after cataract surgery changed less in patients with longer axial length.** *Minjie Chen, W. He, Y. Lu, X. Zhu.* Eye and ENT Hospital of Fudan University, Shanghai, China ✕
- 2132 — A0266 Axial elongation rate in eyes of junior high school students.** *Takehiro Yamashita, N. Yoshihara, N. Kakiuchi, T. Sakamoto.* Ophthalmology, Kagoshima University, Kagoshima, Kagoshima, Japan ✕
- 2133 — A0267 Determination of IOLMaster Number of Measurements for Tracking Axial Length Changes in Myopia.** *Sally M. Dillehay⁵, J. Cooper¹, S. Eiden⁴, T. Aller^{2,3}.* ¹Cooper Eye Care, New York, NY; ²School of Optometry, University of California, Berkeley, Berkeley, CA; ³College of Optometry, University of Houston, Houston, TX; ⁴North Suburban Vision Consultants, Deerfield, IL; ⁵Visioneering Technologies, Inc, Alpharetta, GA
- 2134 — A0268 Relationship of axial length and corneal curvature in myopic patients with albinism in East Africa.** *Rebecca Kammer^{1,2}, M. Van Toney³.* ¹School of Pharmacy, Chapman University, Anaheim, CA; ²Osteopathic Medicine, Western University, Pomona, CA; ³Ophthalmology, Muhimbili University of Health and Allied Sciences, Dar es Salaam, Tanzania, United Republic of
- 2135 — A0269 Long-term changes in ocular axial length in adult myopes and hypermetropes after Artisan implantation.** *Zoraida S. Gaurisankar, G. A. Rijn, S. Veselinovic, J. Beenakker, G. P. Luyten.* Ophthalmology, Leiden university medical center, Leiden, Netherlands
- 2136 — A0270 Do volume, height and width of the eye determine refractive error? Results from 10-year-old European children from the Generation R Study.** *Willem Tideman^{1,3}, K. Marstal¹, J. Polling¹, V. Jaddoe³, M. Vermeulen^{1,3}, A. van der Lugt⁴, W. Niessen², D. Poot², C. C. Klaver^{1,3}.* ¹Ophthalmology, Erasmus Medical Centre, Capelle aan den IJssel, Netherlands; ²Medical informatics, Erasmus MC, Rotterdam, Netherlands; ³Epidemiology, Erasmus MC, Rotterdam, Netherlands; ⁴Radiology, Erasmus MC, Rotterdam, Netherlands
- 2137 — A0271 Topographical differences in the sclera of myopes and emmetropes.** *Alejandra Consejo^{1,2}, J. J. Rozema^{1,3}.* ¹Department of Ophthalmology, Antwerp University Hospital, Antwerp, Belgium; ²Department of Biomedical Engineering, Wrocław University of Science and Technology, Wrocław, Poland; ³Department of Medicine and Health Sciences, University of Antwerp, Antwerp, Belgium
- 2138 — A0272 Longitudinal retinal shape and structure with myopic axial elongation in children.** *Christopher A. Clark, A. E. Elsner.* School of Optometry, University of Indiana, Bloomington, IN *CR
- 2139 — A0273 Regional alterations in human choroidal thickness in response to short-term monocular hemifield myopic defocus.** *Hosein Hoseini-Yazdi, S. Vincent, M. J. Collins, S. A. Read.* Contact Lens & Visual Optics Laboratory, School of Optometry and Vision Science, Queensland University of Technology, Brisbane, Queensland, Australia

2140 — A0274 Population variability of temporal raphe in myopia. Soumya Mukherjee¹, P. A. Bedggood^{1,2}, B. N. Nguyen¹, A. Turpin², A. M. McKendrick¹. ¹Department of Optometry and Vision Science, The University of Melbourne, Melbourne, Victoria, Australia; ²School of Computing & Information Systems, The University of Melbourne, Parkville, Victoria, Australia *CR

2141 — A0275 Measuring Ultraviolet Autofluorescence (UVAF) and Sodium Fluorescein (NaFl) Emission Spectra. Brett A. Davis, P. V. Rajasingam, M. J. Collins. School of Optometry, Queensland University of Technology, Kelvin Grove, Queensland, Australia

2142 — A0276 Immunofluorescence of intraocular structures combined with the optical clearing method See Deep Brain (SeeDB). Antonio Bergua¹, C. Baumgart¹, W. Neuhuber², B. Hohberger¹. ¹Department of Ophthalmology, Erlangen, Germany; ²University of Erlangen-Nuremberg, Erlangen, Germany

2143 — A0277 Using the Lenstar Optical Biometer in Small Animal Research with A-Scan Ultrasonography-Matched Refractive Indices. Mustapha El Hamdaoui², D. Gann³, R. Grytz¹. ¹Department of Ophthalmology, University of Alabama at Birmingham, Birmingham, AL; ²Department of Ophthalmology, University of Alabama at Birmingham, Birmingham, AL; ³Department of Vision Sciences, University of Alabama at Birmingham, Birmingham, AL

2144 — A0278 The effect of neonatal hyperglycaemia on visual acuity and ocular biometry in children born very preterm. Myra Leung^{1,2}, T. Poppe¹, A. Tottman³, B. Thompson⁴, J. Black¹, J. Harding³, F. Bloomfield³, J. Alswelner². ¹School of Optometry and Vision Science, University of Auckland, Auckland, New Zealand; ²Department of Paediatrics: Child and Youth Health, University of Auckland, Auckland, New Zealand; ³Liggins Institute, University of Auckland, Auckland, New Zealand; ⁴School of Optometry and Vision Science, University of Waterloo, Ontario, Ontario, Canada

2145 — A0279 The relationship between violet light transmittance of contact lenses and axial length elongation. Hidemasa Torii^{1,2}, T. Kurihara^{1,2}, S. Kondo¹, X. Jiang^{1,2}, K. Mori^{1,2}, S. Ikeda^{1,2}, E. Yotsukura^{1,2}, K. Kato³, K. Negishi¹, K. Tsubota¹. ¹Department of Ophthalmology, Keio University School of Medicine, Tokyo, Japan; ²Laboratory of Photobiology, Keio University School of Medicine, Tokyo, Japan; ³Kato Eye Center, Miyagi, Japan *CR

2146 — A0280 Spherical Aberration as a Function of Refractive Shift in Mesopic Luminance. Philipp Hessler, M. Stinn, J. Dolata, S. Degle. Ernst-Abbe-University of Applied Sciences Jena, Klingenberg, Germany *CR, ⚡

2147 — A0281 Defocus signal pattern maps for asian myopic subjects. Miguel Garcia Garcia^{1,2}, A. Ohlendorf¹, H. Wietschorke³, S. Wahl¹. ¹Technology & Innovation, Carl Zeiss Vision International GmbH, Aalen, Baden-Württemberg, Germany; ²Ophthalmic Research Institute, University of Tuebingen, Tuebingen, Germany; ³Carl Zeiss Vision GmbH, Aalen, Baden-Württemberg, Germany *CR

2148 — A0282 Mapping peripheral refraction over a 90° field of view (FOV) using a modified widefield fundus camera. Matthew J. Everett, C. Leahy, J. Qiu, K. O'Hara. Carl Zeiss Meditec, Inc., Dublin, CA *CR

2149 — A0283 Axial length elongation and the distribution of peripheral relative power in myopic children treated with overnight orthokeratology. Jinghui Wang¹, H. Bi², D. Yang¹, R. Wei¹, B. Zhang². ¹Tianjin University Eye Hospital, Davie, FL; ²Nova Southeastern University, Davie, FL

2150 — A0284 Asymmetry in peripheral refraction profile in children and young adults. Nicola S. Logan, B. Gilmartin. School of Optometry, Aston University, Birmingham, England, United Kingdom

2151 — A0285 Factors affecting overall efficacy and 6-month efficacy of optical interventions for myopia control in clinical trials. Sofia Peixoto-de-Matos, A. I. Amorim-de-Sousa, J. Gonzalez-Meijome. Physics - Optometry and Vision Science, University of Minho, Braga, Portugal

2152 — A0286 Measuring Face Illumination and Near Work Distance Using Personal Mobile Devices. Mateusz T. Jaskulski^{2,3}, Y. Liu², N. Lopez-Gil¹. ¹Physics, University of Murcia, Murcia, Spain; ²School of Optometry, Indiana University, Bloomington, IN; ³Optics and Optometry, CiViUM Vision Science Research Group at the University of Murcia, Murcia, Murcia, Spain *CR

2153 — A0287 Night Myopia and Dark Focus of Accommodation. Elena Grossmann, P. Hessler, S. Degle. University of Applied Sciences Jena, Jena, Germany ⚡

2154 — A0288 Development of a protocol to perform behavioural measurements of accommodative response in naïve marmosets. Reynolds Ablordeppay, X. Zhu, D. Troilo, A. Benavente-Perez. Biological and Vision Sciences, State University of New York, State College of Optometry, New York, NY *CR

2155 — A0289 Are focusing errors produced by insufficient accommodation responses driving emmetropization in chicks? Andrea Carrillo Aleman, F. Schaeffel. Neurobiology of the Eyes, Institute for Ophthalmic Research, Tuebingen, Baden-Wuerttemberg, Germany

2156 — A0290 Examining axial length in congenital achromatopsia. Joshua Z. Warren¹, A. Arora², B. P. Higgins¹, E. Curran¹, J. Carroll¹. ¹Ophthalmology & Visual Sciences, Medical College of Wisconsin, Milwaukee, WI; ²School of Medicine, Medical College of Wisconsin, Milwaukee, WI *CR

2157 — A0291 Influence of refractive error and axial length on retinal vessel oxygen saturation. Laurence S. Lim^{1,2}, X. Lim^{1,2}, L. Tan^{1,2}. ¹Ophthalmology, Singapore National Eye Center, Singapore, Singapore; ²Singapore Eye Research Institute, Singapore, Singapore

2158 — A0292 Retinal structure & oxygen metabolism in highly myopic vs emmetropic eyes. Katrin Hirsch, R. Cubbage, R. Heitmar. Optometry, Aston University, Birmingham, England, United Kingdom

2159 — A0293 Relationship Between Myopia and 10-2 Visual Fields. Tiffany Yanase, J. Kwan. Southern California College Of Optometry, Marshall B. Ketchum University, Fullerton, CA *CR

Exhibit Hall A0329-A0342

Monday, April 30, 2018 3:30 PM-5:15 PM

**Eye Movements/Strabismus/Amblyopia/
Neuro-Ophthalmology**

277 Eye Movements

Moderator: Avery H. Weiss

2160 — A0329 Development of an automatic eye detector using Haar cascade training and z-score. Peng Guo¹, C. Lauren¹, L. Chang^{1,2}, B. Thompson^{3,2}, M. Sangi¹, J. Turuwhehus^{1,2}. ¹Auckland Bioengineering Institute, Auckland University, Auckland, New Zealand; ²School of Optometry and Vision Science, Auckland University, Auckland, New Zealand; ³Optometry and Vision Science, Waterloo University, Waterloo, Ontario, Canada

2161 — A0330 ReVAS: An open-source tool for eye motion extraction from retinal videos obtained with scanning laser ophthalmoscopy. Mehmet N. Agaoglu, M. Sit, D. Wan, S. T. Chung. School of Optometry, University of California, Berkeley, Berkeley, CA

2162 — A0331 A holographic waveguide based eye tracking device. changgeng liu¹, B. Pazzucconi¹, J. Liu³, L. Liu², X. Yao^{1,4}. ¹Department of Bioengineering, university of Illinois at Chicago, Chicago, IL; ²Department of Optometry, University of Alabama at Birmingham, Birmingham, AL; ³School of Optoelectronics, Beijing Institute of Technology, Beijing, China; ⁴Department of Ophthalmology and Visual Sciences, University of Illinois at Chicago, Chicago, IL

- 2163 — A0332 Vertical rotational gaze tracking errors in baseball batting.** Nick Fogt¹, T. Persson^{1,2}. ¹Optometry, Ohio State University, Columbus, OH; ²Kaiser Permanente, Denver, CO *CR
- 2164 — A0333 Learning how to recognize objects with a simulated scotoma: an eye-tracking analysis.** Hyongsok Ryu, C. Wallraven. Brain and cognitive engineering, Korea University, Seoul, Korea (the Democratic People's Republic of)
- 2165 — A0334 Oculomotor behavior in monocular versus binocular gaze-contingent scotomas.** Tiffany Arango¹, J. Martire², N. C. Ross², P. J. Bex¹. ¹Northeastern University, Boston, MA; ²New England College of Optometry, Boston, MA
- 2166 — A0335 The Use of Electromyography (EMG) Signals to Assess Covert Processing of Motor Plans.** Hannah Canuto, K. T. Willeford, R. McPeck. SUNY College of Optometry, Piscataway, NJ
- 2167 — A0336 Influences of aerobic fitness and sex on exercise-induced oculomotor fatigue.** Nicholas Gant², C. J. Connell², B. Thompson^{1,2}. ¹University of Waterloo, Waterloo, Ontario, Canada; ²University of Auckland, Auckland, New Zealand *CR
- 2168 — A0337 Decrease in gaze time to peripheral symbology in optically misaligned binocular night vision systems.** Amanda Douglass¹, R. Karas², M. Gavrilescu³, D. White⁴, P. Gibbs³, L. A. Abel⁵. ¹Optometry, Deakin University, Geelong, Victoria, Australia; ²Advanced VTOL Technologies, Ballarat, Victoria, Australia; ³Aerospace, Defence Science and Technology Group, Melbourne, Victoria, Australia; ⁴ScienceFX, Melbourne, Victoria, Australia; ⁵Optometry, The University of Melbourne, Melbourne, Victoria, Australia
- 2169 — A0338 Chronic Progressive External Ophthalmoplegia (CPOE) in Childhood: A Disorder of Supranuclear Bioenergetics.** Avery H. Weiss^{1,2}, J. O. Phillips^{1,3}, R. Saneto⁴, J. P. Kelly^{1,2}. ¹Ophthal, Roger Johnson Vis Lab, Seattle Children's Hosp/W-7729, Seattle, WA; ²Ophthalmology, University of Washington, Seattle, WA; ³Otolaryngology, University of Washington, Seattle, WA; ⁴Neurology, Seattle Childrens Hospital, Seattle, WA
- 2170 — A0339 Neuromuscular junctions from patients treated with botulinum toxin type-A for blepharospasm after myectomy of their Orbicularis oculi muscle.** Brigitte Girard¹, A. Couesnon², M. Popoff³, J. Molgo⁴. ¹Ophthalmology, Hopital Tenon, Paris, France; ²Institut Des Neurosciences Paris-Saclay, SACLAY, France; ³Institut PASTEUR, PARIS, France; ⁴Institut des Neurosciences Paris-Saclay, GIF sur Yvette, France
- 2171 — A0340 Thyroid stimulating hormone (TSH) receptor expression in human extraocular muscle cells in *in vitro* primary culture.** Jaeho Jung², H. Jeon¹, J. Kwon². ¹Ophthalmology, Pusan National University Hospital, BUSAN, Korea (the Republic of); ²Ophthalmology, Pusan National University Yangsan Hospital, Yangsan, Korea (the Republic of)
- 2172 — A0341 Epigenetic regulation of myocyte dedifferentiation and myofiber growth during zebrafish EOM regeneration.** Phillip E. Kish¹, C. Tingle¹, B. Magnuson², C. Heisel³, A. Kahana¹. ¹Ophthalmology and Visual Sciences, University of Michigan, Ann Arbor, MI; ²Biostatistics and School of Public Health, University of Michigan, Ann Arbor, MI; ³Medical School, University of Michigan, Ann Arbor, MI
- 2173 — A0342 Optic Nerve Head Abnormalities Associated with Congenital Fibrosis of Extraocular Muscles.** Mervyn G. Thomas¹, G. Maconachie¹, W. Chan², V. Sheth¹, R. McLean¹, R. Purohit¹, M. Hisaund¹, B. Barry², F. A. Proudlock¹, E. Engle², I. Gottlob¹. ¹University of Leicester, Leicester, ENGLAND, United Kingdom; ²Department of Neurology, Harvard Medical School, Boston, MA
- Exhibit Hall A0343-A0356
Monday, April 30, 2018 3:30 PM-5:15 PM
Eye Movements/Strabismus/Amblyopia/Neuro-Ophthalmology
278 Neuro-ophthalmology
- Moderator: Donny W. Suh**
- 2174 — A0343 Health-Related Quality of Life in Patients With Giant Cell Arteritis Treated With Tocilizumab in a Phase 3 Randomized Controlled Trial.** Zdenka Haskova¹, V. Strand², S. Dimonaco³, K. Tuckwell¹, M. Kleerman¹, N. Collinson³, J. Stone⁴. ¹Genentech, South San Francisco, CA; ²Division of Immunology/Rheumatology, Stanford University, Palo Alto, CA; ³Roche Products Ltd., Welwyn Garden City, United Kingdom; ⁴Massachusetts General Hospital Rheumatology Unit, Harvard Medical School, Boston, MA *CR, ✕
- 2175 — A0344 Ocular motor abnormalities during saccadic reading in different neuro-ophthalmic diseases.** Angela Oh^{1,2}, T. Chen^{1,4}, A. Shariati¹, N. Jehangir¹, R. Yu¹, C. Yu¹, C. Mercado⁵, Y. J. Liao^{1,3}. ¹Ophthalmology, Stanford School of Medicine, Redwood City, CA; ²School of Medicine, University of California, Los Angeles, Los Angeles, CA; ³Neurology, Stanford School of Medicine, Palo Alto, CA; ⁴University of California, Berkeley, Berkeley, CA; ⁵Byers Eye Institute, Palo Alto, CA
- 2176 — A0345 Population-based incidence and visual outcomes of cerebral venous sinus thrombosis.** Aaron Fairbanks, K. Chodnicki, E. Lesser, D. Hodge, J. Leavitt, J. Garrity, J. J. Chen. Mayo Clinic, Rochester, MN
- 2177 — A0346 Relationship of diabetic retinopathy in cognitive and functional state in patients with stroke.** Alejandra S. Ruiz Franco. Ophthalmology, Unam, Mexico, Mexico City, Mexico
- 2178 — A0347 Remote ischemia preconditioning protects retinal ganglion cells in streptozotocin induced diabetic rats via antioxidant and anti-inflammation.** xuxiang Zhang¹, Y. Jizhang², H. Wu¹, D. Liu¹. ¹Department of Ophthalmology, Xuanwu Hospital, Capital Medical University, Beijing, Please Select, China; ²Center of Cerebrovascular Disease Research, University of Pittsburgh School of Medicine, Pittsburgh, PA
- 2179 — A0348 Incorporating ocular assessment in diagnosis of sport-related concussion (SRC) in semi-professional rugby union players.** Premkumar Gunasekaran¹, C. Hodge¹, C. Fraser², A. Cohen², K. A. Rose¹. ¹University of Technology Sydney, Wattle Grove, New South Wales, Australia; ²University of Sydney, Sydney, New South Wales, Australia
- 2180 — A0349 Choroidal Thinning in Leber's Hereditary Optic Neuropathy (LHON) using *In Vivo* Optical Coherence Tomography.** Christian M. Felix^{2,1}, S. Asana^{2,1}, F. Darvizeh³, F. N. Ross-Cisneros^{2,1}, P. Barboni⁴, A. A. Sadum^{2,1}. ¹Ophthalmology, David Geffen School of Medicine at University of California Los Angeles, Los Angeles, CA; ²Ophthalmology, Doheny Eye Institute-UCLA, Los Angeles, CA; ³Ophthalmology, San Raffaele Scientific Institute, Milan, Italy; ⁴Department of Ophthalmology, University of Ottawa, Ottawa, Ontario, Canada
- 2181 — A0350 Novel analysis of macular RNFL thickness in Alzheimer's disease using OCT and point-wise functional shapes (FSHape) registration.** Siyun Lee¹, C. Y. Cheung², C. Chen³, T. Y. Wong⁴, M. Sarunic¹, M. Beg¹. ¹School of Engineering Science, Simon Fraser University, Burnaby, British Columbia, Canada; ²Department of Ophthalmology and Visual Sciences, The Chinese University of Hong Kong, Sha Tin, Hong Kong; ³Memory Aging and Cognition Centre, National University Health System, Singapore, Singapore; ⁴Singapore Eye Research Institute, Singapore, Singapore
- 2182 — A0351 High prevalence of visual field impairments in acute stroke patients.** Sheila G. Crewther¹, C. Wijesundera¹, T. Wijeratne^{1,3}, G. Kong⁴, A. J. Vingrys². ¹Psychological Science, La Trobe University, Melbourne, Victoria, Australia; ²Optometry, University of Melbourne, Melbourne, Victoria, Australia; ³Neurology, University of Melbourne, Melbourne, Victoria, Australia; ⁴Ophthalmology, Royal Eye and Ear Hospital, Melbourne, Victoria, Australia *CR

2183 — A0352 The Retinal Vascular Perfusion Using by OCT Angiography in Amaurosis Fugax.

Ari Kamei. Ari Eye Clinic, Oshu-Mizusawa, Iwate, Japan

2184 — A0353 The neuro-ophthalmology of orthostatic tremor.jIdeofor K. Ndulue¹, S. Kedar^{1,2}, D. Whitney², J. Shou², D. Torres². ¹Ophthalmology, University of Nebraska Medical Center, Omaha, NE; ²Neurological Sciences, University of Nebraska Medical Center, Omaha, NE**2185 — A0354 Genotype and phenotype characteristics of Leber hereditary optic neuropathy (LHON) patients in Slovenia.**Sanja Petrovic Pajic¹, M. Jarc-Vidmar², A. Fakin², M. Sustar², J. Breclj², L. Lapajne², D. Glavac³, M. Tajnik³, B. Peterlin⁴, M. Volk⁴, A. Maver⁴, M. Hawlina². ¹Vitreoretinal surgery, Clinic for eye diseases, Clinical Center of Serbia, Belgrade, Serbia, Serbia; ²Neuro-ophthalmology, Eye Clinic, Ljubljana, Slovenia; ³Department of Molecular Genetics, Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia; ⁴Department of Obstetrics and Gynecology, Clinical Institute of Medical Genetics, University Medical Centre Ljubljana, Ljubljana, Slovenia**2186 — A0355 Smartphone App Visual Function Tests in Multiple Sclerosis Patients With and Without Optic Neuritis.**Kasra Zarej^{1,2}, S. David^{3,4}, C. Pflieger^{3,4}, D. Berman^{3,4}, P. Poolman^{1,2}, O. W. Gramlich^{1,2}, J. Bailey^{1,2}, R. H. Kardon^{1,2}. ¹Ophthalmology and Visual Science, University of Iowa, Iowa City, IA; ²Iowa City VA Health System, Center for the Prevention and Treatment of Visual Loss, Iowa City, IA; ³Department of Ophthalmology, Aalborg University Hospital, Aalborg, Denmark; ⁴Department of Neurology, Aalborg University Hospital, Aalborg, Denmark *CR**2187 — A0356 Visual System Manifestations of Cerebral Venous Sinus Thrombosis.**

Justin Karlin, E. A. Thompson, S. A. Newman. University of Virginia, Charlottesville, VA

Exhibit Hall A0357-A0366

Monday, April 30, 2018 3:30 PM-5:15 PM

Eye Movements/Strabismus/Amblyopia/Neuro-Ophthalmology**279 Neuro-ophthalmology Intracranial HTN and papilledema****Moderator: Nicholas J. Volpe****2188 — A0357 Population-based evaluation of the variability of lumbar puncture opening pressures.**John J. Chen^{1,2}, F. Wang^{1,5}, E. Lesser³, K. Kilgore¹, J. Graff-Radford², J. Cutsforth-Gregory², R. Petersen², D. Knopman², M. Mielke⁴, D. Hodge³, J. Leavitt¹. ¹Ophthalmology, Mayo Clinic, Rochester, MN; ²Neurology, Mayo Clinic, Rochester, MN; ³Health Sciences Research/ Biomedical Statistics and Informatics, Mayo Clinic, Jacksonville, FL; ⁴Health Sciences Research, Mayo Clinic, Rochester, MN; ⁵Ophthalmology, First Affiliated Hospital of Anhui Medical University, Hefei, Anhui, China**2189 — A0358 Secondary Intracranial Hypertension in Pediatric Patients with Growth Hormone Deficiency.**

Mea A. Weaver, D. L. Rogers, M. K. McGroeger, S. C. Aylward. Nationwide Children's Hospital, Columbus, OH

2190 — A0359 Secondary Intracranial Hypertension in Pediatric Patients with Cryopyrin-Associated Periodic Syndrome.Sage Rogers¹, S. C. Aylward³, S. Akoghanian⁴, R. E. Reem², D. L. Rogers². ¹Psychology, Brigham Young University, Provo, UT; ²Ophthalmology, Nationwide Children's Hospital, Columbus, OH; ³Neurology, Nationwide Children's Hospital, Columbus, OH; ⁴Rheumatology, Nationwide Children's Hospital, Columbus, OH**2191 — A0360 Idiopathic intracranial hypertension associated with gender transitioning hormonal therapy.**Huy V. Nguyen¹, E. Fortin¹, A. L. Gilbert¹, I. Vodopivec¹, N. Torun², D. M. Cestari¹, J. F. Rizzo¹. ¹Massachusetts Eye and Ear Infirmary, Harvard Medical School, Boston, MA; ²Ophthalmology, Beth Israel Deaconess Medical Center, Boston, MA**2192 — A0361 Mechanical Factors contributing to ocular globe flattening in states of elevated intracranial pressure: A Finite Element Analysis.**Jafar A. Arash Mehr¹, H. E. Moss², H. Hatami-Marbini¹. ¹Department of Mechanical & Industrial Engineering, University of Illinois at Chicago, CHICAGO, IL; ²Ophthalmology; Neurology & Neuroscience, Stanford University, Palo Alto, CA**2193 — A0362 Elevated Intracranial Pressure in Mice Causes Retinal Ganglion Cell Loss, Dysfunction, and Hypoxia.**Benjamin J. Frankfort^{1,2}, G. Shen¹, S. Link¹, S. Kumar¹, D. Nusbaum^{1,2}, D. Tse^{1,3}, Y. Fu^{1,2}, S. M. Wu^{1,2}. ¹Ophthalmology, Baylor College of Medicine, Houston, TX; ²Neuroscience, Baylor College of Medicine, Houston, TX; ³School of Optometry, The Hong Kong Polytechnic University, Hong Kong, Hong Kong**2194 — A0363 Visual Functions in Children with Optic Disc Drusen and Idiopathic Intracranial Hypertension.**Ji Kwan Park¹, A. Sunnich², J. Lloren³, T. Winter¹. ¹Ophthalmology, Loma Linda University, Loma Linda, CA; ²School of Medicine, Loma Linda University, Loma Linda, CA; ³Adventist Health Study, Loma Linda University, Loma Linda, CA**2195 — A0364 Widefield Whole Eye SSOC Measurement of Retinal Curvature for Screening of Elevated Intracranial Pressure.**Ryan P. McNabb¹, T. Bhatti¹, L. C. Meekins¹, S. M. Gospe¹, M. El-Dairi¹, J. A. Izatt^{2,1}, A. N. Kuo^{1,2}. ¹Ophthalmology, Duke University Medical Center, Durham, NC; ²Biomedical Engineering, Duke University, Durham, NC *CR**2196 — A0365 Differentiation between papilledema and nonarteritic anterior ischemic optic neuropathy using retinal layer shape and regional volume features in spectral-domain optical coherence tomography.**John W. Miller¹, J. Wang¹, M. Thurtell^{3,4}, R. H. Kardon^{2,3}, M. K. Garvin^{2,1}. ¹Electrical and Computer Engineering, University of Iowa, Iowa City, IA; ²Center for the Prevention and Treatment of Visual Loss, Iowa City VA Health System, Iowa City, IA; ³Ophthalmology and Visual Sciences, University of Iowa Hospital and Clinics, Iowa City, IA; ⁴Neurology, University of Iowa Hospital and Clinics, Iowa City, IA *CR**2197 — A0366 Automated Detection of Retinal Folds in Papilledema Using En-Face Spectral-Domain Optical Coherence Tomography.**Jui-Kai Wang¹, J. Agne¹, Q. Su¹, R. H. Kardon^{2,3}, M. K. Garvin^{2,1}. ¹Electrical and Computer Engineering, University of Iowa, Iowa City, IA; ²Center for the Prevention and Treatment of Visual Loss, Iowa City VA Health System, Iowa City, IA; ³Ophthalmology and Visual Science, The University of Iowa, Iowa City, IA *CR, X

Exhibit Hall A0367-A0387

Monday, April 30, 2018 3:30 PM-5:15 PM

Lens

280 Cataract Surgery - IOLs*Moderator: Kevin L. Schey*

2198 — A0367 Evaluating Visual Outcomes in Small-Aperture IOL, Accommodating IOL, and Multifocal IOL Patients. Ling Lin¹, J. S. Pepose^{2,3}, S. Vilupuru¹. ¹AcuFocus Inc, Irvine, CA; ²Pepose Vision Institute, St. Louis, MO; ³Washington University School of Medicine, St. Louis, MO *CR, ✕

2199 — A0368 Impact of Multifocal Intraocular Lenses on Contrast Sensitivity Function in Vision Degraded Vitreopathy. Kenneth M. Yee, J. Nguyen, J. Nguyen-Cuu, J. Sebag. *Neuro-Ophthalmology, VMRI Institute for Vitreous Macula Retina, Huntington Beach, CA*

2200 — A0369 Initial clinical evaluation of a novel extended-depth-of-focus intraocular lens. Steven Schallhorn, J. Schallhorn. *Ophthalmology, University of California, San Francisco, SAN DIEGO, CA* *CR

2201 — A0370 Assessing and predicting the effective addition power of Multifocal intraocular lens. Elizabeth Law^{1,2}, H. D. Buckhurst¹, R. Aggarwal^{2,1}, H. Kasaby², P. J. Buckhurst¹. ¹University of Plymouth, Plymouth, United Kingdom; ²BMI Southend Hospital, Southend on Sea, United Kingdom ✕

2202 — A0371 Comparison of the ocular biometry and intraocular lens power measured by a new optical biometry device and standard biometers. Jae Yong Han, H. Kang, H. Lee. *Gangnam Severance Hospital, Seoul, Korea (the Republic of)*

2203 — A0372 A Clinical Comparison of Visual Outcomes for Tecnis Multifocal +2.75 (ZKB00) and ReSTOR Multifocal +3.00 (SN6AD1). Pruthvi Kothari, M. Vakharia, K. Gomez. *University of Illinois College of Medicine, Rockford, IL*

2204 — A0373 Cost-effectiveness of multifocal intraocular lenses compared to monofocal intraocular lenses in cataract surgery. Jenny Q. Hu¹, R. Sarkar², J. Murphy², N. A. Afshari¹. ¹Shiley Eye Institute, UC San Diego, San Diego, CA; ²Radiation Medicine and Applied Sciences, UC San Diego, San Diego, CA

2205 — A0374 Results of sulcus-fixated IOLs in Marfan children with subluxated lenses. Beatrice E. Frueh¹, D. Steinmair³, C. Tappeiner¹, D. Epstein². ¹Ophthalmology, Univ of Bern Inselspital, Bern, Switzerland; ²Refractive Vision Bern, Bern, Switzerland; ³City Hospital Vienna, Vienna, Austria

2206 — A0375 Biometric variable effect on IOL calculation errors. Alexander Lin, N. Deruyter, L. Ding, H. Jung. *Ophthalmology, University of Washington, Seattle, WA*

2207 — A0376 Refractive and visual outcomes of a new trifocal toric IOL. Osama Giasin¹, M. Muhtaseb^{1,2}. ¹NHS Wakes, UK, Cardiff, United Kingdom; ²Nuffield Health Cardiff Bay Hospital, Cardiff, United Kingdom

2208 — A0377 Effect of proportion between axial length and keratometry on intraocular lens power calculations for long eyes. Yosai Mori, S. Tokuda, J. Lee, K. Yasushi, K. Minami, K. Miyata. *Miyata Eye Hospital, Miyakonojo, Miyazaki, Japan*

2209 — A0378 Accuracy of intraocular lens power calculation in eyes with keratoconus. Takashi Kojima^{2,1}, R. Horai³, N. Isogai³, T. Nakamura³, A. Tamaoki⁴, K. Ichikawa⁵. ¹Ophthalmology, Keio Univ School of Medicine, Nagoya, AICHI, Japan; ²Ophthalmology, Japanese Red Cross Gifu Hospital, Gifu, Japan; ³Ophthalmology, Nagoya Eye Clinic, Nagoya, - Non US -, Japan; ⁴Ophthalmology, JCHO Chukyo Hospital, Nagoya, Japan; ⁵Chukyo eye clinic, Nagoya, Japan *CR

2210 — A0379 Computer programs for the detection of the IOL-stiffness and -stability in cataract surgery. Elfriede Friedmann¹, S. Doersam¹, L. Kuppel¹, A. Drobny¹, P. Merz², Q. Wang², G. Auffarth². ¹Institute of Applied Mathematics, Heidelberg University, Heidelberg, Germany; ²Department of Ophthalmology, Heidelberg University, Heidelberg, Germany

2211 — A0380 The force of lens growth on the uvea. Lawrence M. Strenk¹, S. Guo², K. Lu³, B. Tjan⁴, L. Werner⁵, S. Strenk¹. ¹MRI Research Inc, Middleburg Heights, OH; ²The Institute of Ophthalmology and Visual Science, NJ Medical School-Rutgers University, Newark, NJ; ³Doheny Eye Center UCLA, Los Angeles, CA; ⁴Psychology, University of Southern California, Los Angeles, CA; ⁵John A Moran Eye Center, Salt Lake City, UT *CR

2212 — A0381 Toric Calculation Errors and Optical Misalignment creating Astigmatism. Paul van Saarloos. *Independent Researcher, Taupo, New Zealand* *CR

2213 — A0382 Comparison of the refractive error measured for the trifocal intra-ocular lens AcrySof® IQ PanOptix™ using two types of biometry. Alejandro Sanchez-Hoíl, J. Montoya-Silva, E. Fernandez-Muñoz, B. Garibay-Velazquez. *Asociacion Para Evitar la Ceguera en Mexico, Merida, Mexico* ✕

2214 — A0383 Refractive outcomes of phacoemulsification after pars plana vitrectomy using traditional and new IOL calculation formulas. Jane Song, T. Lamson, A. Abazari, T. Chou, R. A. Honkanen, P. Pakk, K. Chaudhary, S. B. Weissbart. *Ophthalmology, Stony Brook University School of Medicine, Stony Brook, NY*

2215 — A0384 Refractive Error Using Intraoperative Aberrometry Versus Traditional Measurements for Selection of Intraocular Lens Power. John H. Zeiter¹, F. Hussain², C. Kim¹, J. Todaro¹, J. Tannir¹, G. Sosne¹. ¹Ophthalmology, Kresge Eye Institute, Detroit, MI; ²Wayne State University School of Medicine, Detroit, MI

2216 — A0385 Comparison of Astigmatism Prediction Error Taken with Galilei, Barrett Formula for Non-toric Intraocular Lens Implantation. Yi-Ju Ho. *Ophthalmology, Chang Gung Memorial Hospital, Taoyuan, Taiwan* ✕

2217 — A0386 Effects of Calculator with Posterior Corneal Astigmatism on Toric Intraocular Lens Selection and Simulated Residual Astigmatism. Yumi Hasegawa¹, T. Hiraoka¹, M. Seki¹, S. Nakano², T. Oshika¹. ¹Ophthalmology, Tsukuba University, Tsukuba, Ibaraki, Japan; ²Ryugasaki Saiseikai Hospital, Ryugasaki, Japan

2218 — A0387 Prospective Assessment of Binocular Visual Outcomes after Staged Implantation of Diffractive Multifocal Intraocular Lenses with Three Near Additional Powers. Yuka Ota, K. Nakamura, S. Yaguchi, M. Hirasawa, K. Minami, H. Bissen-Miyajima. *Ophthalmology, Tokyo Dental College Suidobashi Hospital, Chiyoda-ku, Tokyo, Japan* *CR, ✕

Exhibit Hall A0388-A0409

Monday, April 30, 2018 3:30 PM-5:15 PM

Lens

281 Cataract Surgery Procedures II*Moderator: Christine A. Petersen*

2219 — A0388 Effects of intraocular pressure on Peripapillary and Macular Vessel Density after cataract surgery: An Optical Coherence Tomography Angiography Study. Guiqiu Zhao, L. Zhang, J. Lin, C. Li, X. Li. *Ophthalmology, The Affiliated Hospital of Qingdao University, Qingdao, China*

2220 — A0389 Single-incision phacoemulsification cataract surgery performed by ophthalmology residents: a review of 1466 consecutive cases. Lai Jiang¹, C. Ray¹, Z. Mortensen¹, A. Compton¹, E. Larumbe², D. McCartney¹. ¹Ophthalmology and Visual Sciences, Texas Tech Health Sciences Center, Lubbock, TX; ²Clinical Research Institute, Texas Tech University Health Sciences Center, Lubbock, TX

2221 — A0390 SPIRALIS: A Smart Pupil Expander for Cataract Surgery. *Royston K. Tan¹, S. A. Perera^{2,3}, M. J. Girard^{1,3}.* ¹Department of Biomedical Engineering, National University of Singapore, Singapore, Singapore; ²Duke-NUS Medical School, Singapore, Singapore; ³Singapore Eye Research Institute, Singapore National Eye Centre, Singapore, Singapore *CR

2222 — A0391 Phacoemulsification Cataract Surgery in Patients Receiving Novel Oral Anticoagulant. *Janice Jing Chee Cheung¹, K. Li², S. Liu².* ¹Ophthalmology, The University of Hong Kong, Hong Kong, Hong Kong; ²Ophthalmology, United Christian Hospital, Hong Kong, Hong Kong

2223 — A0392 Factors influencing pupil behaviour during femtosecond laser assisted cataract surgery. *Magdalena Popiel¹, T. Young-Zvandasara¹, P. Nidamanuri², V. Kumar¹.* ¹NHS, Cardiff, United Kingdom; ²Medical School, Canton, OH

2224 — A0393 Intra-Ocular Pressure Evolution After Cataract Surgery, Percepolis Study Report Number 4. A Randomized Clinical Trial. *Florian BLOCH^{2,3}, M. LUC^{1,3}, M. Zaidi¹, J. Vermion^{1,3}, C. Goetz⁴, C. Dubroux^{1,3}, G. Hayek^{1,3}, J. Perone¹.* ¹Ophthalmology Department, CHR de Metz-Thionville, Mercy Hospital, Metz, France; ²Ophthalmology, Metz-Thionville Regional Hospital Center, Metz, France; ³Faculty of medicine, University of Lorraine, Nancy, France; ⁴Clinical Research support Unit, Metz-Thionville Regional Hospital Center, Metz, France ✕

2225 — A0394 An Alternative Method of Providing Effective Drug Concentrations in the Posterior Segment as Demonstrated in a Canine Pharmacokinetic Model. *L David Waterbury.* Raven Biosolutions LLC, San Carlos, CA *CR

2226 — A0395 Impact of Cataract Surgery Technique on Endothelial Cell Loss (ECL): Subgroup analysis according to nucleus hardness. *Jean-Charles Vermion^{1,2}, C. Goetz³, G. Hayek¹, F. Bloch¹, M. Luc¹, M. Zaidi¹, L. Lhuillier¹, N. Ouamara³, J. Perone¹.* ¹Ophthalmology, Metz-Thionville Regional Hospital Center, Metz, France; ²Faculty of Medicine, University of Lorraine, Nancy, France; ³Clinical Research Support Unit, Metz-Thionville Regional Hospital Center, Metz, France ✕

2227 — A0396 Tensile Strength of IntelliAxis-L: a Novel Femtosecond Laser Capsulotomy with Guiding Marks for Toric IOL Alignment. *E Valas Teuma, G. P. Gray.* R&D, LENSAR Inc, Orlando, FL *CR

2228 — A0397 Final Astigmatism Formula: An easy way to predict astigmatism after cataract surgery. *Sara Sanchez Taberno^{1,2}.* ¹Cornea, Ashford and St Peter's Hospital, London, London, United Kingdom; ²Hospital Clínico Universitario de Valladolid, Valladolid, Spain

2229 — A0398 Experimental Evaluation of Lens Capsule Stability Using Capsular Tension Rings with Different Degrees of Zonular Dehiscence. *Saori Yaguchi¹, H. Bissen-Miyajima¹, K. Minami¹, Y. Ota¹, S. Yaguchi².* ¹Ophthalmology, Tokyo Dental College Suidobashi Hospital, Tokyo, Japan; ²Ophthalmology, Kozawa Eye Hospital and Diabetes Center, Mito, Japan

2230 — A0399 Femtosecond Laser Assisted Cataract Surgery: An NHS Experience. *Hala Ali, H. Naveed, T. Poole.* Ophthalmology, Frimley Park Hospital, Camberley, United Kingdom *CR

2231 — A0400 Evaluation of the Best Corrected Visual Acuity Outcome in Patients Undergoing Phacoemulsification vs Small Incision Cataract Surgery in older patients with cost concerns. *Gabriela Acosta Suarez¹, J. Soria^{2,3}, L. Jaramillo³, R. Rios^{4,2}.* ¹Universidad Espíritu Santo, Samborondon, Ecuador; ²Sociedad Ecuatoriana de Oftalmología y Ortopédica, Guayaquil, Ecuador; ³Sociedad Ecuatoriana de Estadística en la Sección de Bioestadística, Guayaquil, Guayas, Ecuador; ⁴Servicio de Oftalmología, Hospital Luis Vernaza, Guayaquil, Guayas, Ecuador

2232 — A0401 Cataract grading: assessment of a new objective and automatized lens density quantification method using ophthalmology technology integrated into the iolmaster 700 and comparison with existing methods. *Christophe Panthier¹, A. Wazieres¹, H. ROUGER¹, A. SAAD^{1,2}, D. Gatinel¹.* ¹Dr Gatinel, Fondation Rothschild, Paris, France; ²American university, Beyrouth, Lebanon

2233 — A0402 Using smartphone-delivered stereoscopic vision in microsurgery: a feasibility study. *Derek Kwun-Hong Ho.* Singleton Hospital, Swansea, United Kingdom

2234 — A0403 Phone Screening for Preoperative Medical Clearance for Cataract Surgery. *Avni Badami^{2,1}, F. Vavrek², P. Rosenkranz², S. Rowe², M. Subramanian².* ¹Scheie Eye Institute, Philadelphia, PA; ²Boston Medical Center, Boston, MA

2235 — A0404 Safety and efficacy of a novel submicron loteprednol etabonate gel in the treatment of inflammation and pain post-cataract surgery. *Jason L. Vittitow¹, T. LoBue², J. Martel³.* ¹Clinical Affairs, Bausch + Lomb, Bridgewater, NJ; ²LoBue Laser & Eye Medical Center Inc., Murrieta, CA; ³Martel Eye Medical Group, Rancho Cordova, CA *CR, ✕

2236 — A0405 Surgical simulator training significantly improves the outcomes in resident cataract surgery. *Cristina Lopez Beauchamp¹, K. Chin Loy¹, L. Kueny³, W. Grover³, T. Magone², S. Shin², G. Singh².* ¹Ophthalmology, Howard University Hospital, Washington, District of Columbia; ²Veterans Administration Hospital, Washington, District of Columbia; ³Georgetown University Hospital, Washington, District of Columbia

2237 — A0406 Novel Model Development for Preclinical Safety Evaluation of Ophthalmic Viscosurgical Devices. *Ling C. Huang, B. Gray, R. Leang.* R&D - Biological Sciences, Abbott Medical Optics, Santa Ana, CA *CR

2238 — A0407 Evaluation of effectiveness of the arc sterile as a solution to ambulatory ophthalmologic surgery. *Monica Saucedo Ulloa.* Instituto De Oftalmología Fundación Conde De Valenciana, Ciudad De Mexico, Mexico

2239 — A0408 Assessment of a pre-clinical model of phacoemulsification and aspiration of cataracts in rabbits. *Justin Prater¹, D. Culp¹, G. Spiga¹, D. Launer², B. C. Gilger².* ¹Powered Research, RTP, NC; ²Clinical Services, North Carolina State University, Raleigh, NC *CR

2240 — A0409 Prediction of Visual Acuity after Cataract Surgery using Optical Coherence Tomography Findings in Eyes with Retinitis Pigmentosa. *Jianbo Mao.* Wenzhou Medical University, Hangzhou, China

Exhibit Hall B0195-B0247

Monday, April 30, 2018 3:30 PM-5:15 PM

Cornea

282 Corneal Development, Cell and Molecular Biology

Moderators: Matilda F. Chan and Sheyla Gonzalez

2241 — B0195 Visualizing the fate of transplanted K14-Confetti corneal epithelia in a mouse model of limbal stem cell deficiency. *Nick Di Girolamo¹, A. Richardson¹, M. Park¹, S. L. Watson², D. Wakefield¹.* ¹School of Medical Sciences - Pathology, University of New South Wales, Sydney, New South Wales, Australia; ²Save Sight Institute, University of Sydney, Sydney, New South Wales, Australia

2242 — B0196 Development of Biomimetic Cornea Using 3D Cell Printing Technology: In Vitro Characterization. *Hyeonji Kim, D. Cho, J. Jang.* Postech, Pohang, Korea (the Republic of)

- 2243 — B0197 K14⁺ epithelial-targeted Myc ablation induces ΔDNp63 overexpression in corneal epithelium.** *J. Mario Wolosin¹, Q. Liu¹, Z. Wang¹, C. Portal¹, D. K. Scott², C. Iomini¹.* ¹Ophthalmology, Icahn School of Medicine at Mount Sinai, New York, NY; ²Medicine, Icahn School of Medicine, New York, NY
- 2244 — B0198 Adult and Pup Trigeminal Ganglion Neuronal Cells Exhibit Differential Expression of Neuropeptide Receptor Kisspeptin Receptor 1.** *Abdo Abou-Slaybi^{1,2}, A. Jamali¹, D. L. Harris¹, P. Hamrah^{1,2}.* ¹Ophthalmology, Tufts Medical Center, Boston, MA; ²Immunology, Sackler School of Graduate Biomedical Sciences, Boston, MA
- 2245 — B0199 Characterization of ocular neural crest stem cells derived from human iPSCs.** *Jiagang Zhao, J. Q. Hu, N. A. Afshari.* Shiley Eye Center, University of California San Diego, La Jolla, CA
- 2246 — B0200 Expression of a stabilized β-catenin mutant in keratocytes retards corneal epithelial stratification.** *Lingling Zhang¹, Y. Zhang¹, Y. Wang¹, Y. Okada^{1,2}, C. Liu¹.* ¹School of Optometry, Indiana University, Bloomington, IN; ²Wakayama Medical University, Wakayama, Japan
- 2247 — B0201 Restoration of the epithelial stem cell population by the grafting of a tissue-engineered human corneal epithelium: a case report.** *Louis-Philippe Guérin¹, G. Le-Bel^{1,2}, P. Carrier^{1,2}, R. Bazin¹, L. Germain^{1,2}, S. Guérin¹.* ¹Department of Ophthalmology, CHU de Québec - Laval University, Québec, Québec, Canada; ²Department of Surgery, Centre de recherche en organogenèse expérimentale de l'Université Laval (LOEX), Québec, Québec, Canada
- 2248 — B0202 Directed differentiation of human corneal endothelial cells from human embryonic stem cells by using cell-conditioned culture media.** *Xiaoniao Chen^{2,4}, L. Wu^{1,3}, Y. Huang², L. Wang^{2,3}.* ¹Nephrology, Chinese PLA General Hospital, Beijing, China; ²Ophthalmology, Chinese PLA General Hospital, Beijing, China; ³State Key Laboratory of Kidney Diseases, Beijing, China; ⁴Ophthalmology, Massachusetts Eye And Ear Infirmary, Boston, MA
- 2249 — B0203 Notch1 Signaling Pathway in Aniridia-Related Keratopathy, Normal Fetal and Adult Human Corneas.** *Berit Byström, A. Vicente, F. Pedrosa Domellof.* Ophthalmology, Umeå University - Department of Clinical Science, Umeå, Sweden
- 2250 — B0204 Decellularized human keratocyte matrices for ocular surface reconstruction.** *Sonja Mertsch, C. Neumann, G. Geerling, S. Schrader.* Department of Ophthalmology, University Clinic Düsseldorf, Duesseldorf, NRW, Germany
- 2251 — B0205 Double-crosslinked bioengineered collagen implants for corneal stromal transplantation: evaluation in a porcine model.** *Neil S. Lagali¹, M. Xeroudaki¹, M. Thangavelu¹, P. Fagerholm¹, A. Mukwaya¹, A. Lennikov¹, M. Rafat^{2,3}.* ¹Ophthalmology, Linköping University, Linköping, SE, Sweden; ²Dept of Biomedical Engineering, Linköping University, Linköping, Sweden; ³LinkoCare Life Sciences AB, Linköping, Sweden *CR
- 2252 — B0206 Regeneration of Corneal Stromal Tissue Using Components of Extracellular Matrix.** *Irona Khandaker⁴, M. L. Funderburgh⁴, G. Shojaati¹, L. Huleihel^{2,3}, J. D. Naranjo^{2,3}, S. Badylak^{2,3}, J. Funderburgh^{4,2}.* ¹Department of Ophthalmology, Kantonsspital Winterthur, Zurich, Zurich, Switzerland; ²University of Pittsburgh, McGowan Institute for Regenerative Medicine, Pittsburgh, PA; ³University of Pittsburgh, Department of Surgery, Pittsburgh, PA; ⁴Department of Ophthalmology, University of Pittsburgh, Eye and Ear institute, Pittsburgh, PA
- 2253 — B0207 Bioengineering of a cornea-like construct for clinical applications.** *Gudiseva Chandrasekher, S. Bhattacharya, J. Sandgren.* Pharmaceutical Sciences, South Dakota State University, Brookings, SD
- 2254 — B0208 Structural characterization of corneal dystrophy-related TGFB1p mutants.** *Nadia S. Nielsen^{1,2}, T. A. Ammitzbøll^{1,2}, I. B. Thøgersen¹, E. T. Poulsen¹, J. J. Enghild^{1,2}.* ¹Molecular Biology and Genetics, Aarhus University, Aarhus, Denmark; ²The Interdisciplinary Nanoscience Center, Aarhus University, Aarhus University, Denmark
- 2255 — B0209 Clinical Grade Magnetic Human Corneal Endothelial Cells for Cell Therapy.** *Olga Kuzmenko¹, A. Bartakova², N. J. Kunzevitzky^{1,3}, J. L. Goldberg¹.* ¹Byers Eye Institute and Spencer Vision Center at Stanford University, Palo Alto, CA; ²Shiley Eye Institute at University of California San Diego, La Jolla, CA; ³Emmecell, Menlo Park, CA *CR
- 2256 — B0210 Generation and purification of functional corneal endothelium-like cells differentiated from human embryonic stem cells.** *Xin Xia¹, K. Chang¹, O. Kuzmenko¹, N. J. Kunzevitzky^{1,2}, C. Sun^{1,3}, X. Zhang³, K. Tenerelli³, J. L. Goldberg¹.* ¹Ophthalmology, Stanford University, Palo Alto, CA; ²Emmecell, Menlo Park, CA; ³Shiley Eye Center, San Diego, CA *CR
- 2257 — B0211 Comparison between Human Corneal Endothelial Cells (HCEC) expansion with corneas preserved in intermedium-term and long-term corneal storage media.** *Francisco B. Bandeira^{1,2}, C. A. Reverte³, R. R. Loureiro¹, J. Covre¹, N. Otero³, P. Cristovam¹, J. Guell¹, R. P. Casaroli-Marano⁴, J. A. Gomes¹.* ¹Ophthalmology and Visual Sciences, Federal University of São Paulo, Rio de Janeiro, Rio de Janeiro, Brazil; ²Cornea, Instituto de Microcirurgia Ocular, Barcelona, Catalunya, Spain; ³Eye Bank, Barcelona Tissue Bank, Barcelona, Catalunya, Spain; ⁴Department of Surgery, Universitat de Barcelona, Barcelona, Catalunya, Spain
- 2258 — B0212 Culture of corneal endothelial cells from resident progenitor cells.** *Karl D. Brown, M. Daniell.* Surgical Research Unit, Centre for Eye Resrch Australia, Melbourne, Victoria, Australia
- 2259 — B0213 Silicate-doped hydroxyapatite coating on Ti improve the biocompatibility of keratoprosthesis skirt material.** *ying dong.* Department of Ophthalmology, First Hospital Affiliated to Chinese PLA General Hospital, Beijing, China
- 2260 — B0214 Pigment epithelial-derived factor peptide facilitates simple limbal epithelial transplantation for ocular surface reconstruction in the rabbit model of total limbal deficiency.** *Shu-I Yeh^{1,2}, T. Ho¹, H. Cheng¹, Y. Tsao¹.* ¹Ophthalmology, Mackay Memorial Hospital, Taipei, Taiwan, Taiwan; ²Medicine, Mackay Medical College, Taipei, Taiwan
- 2261 — B0215 The Effect of Antiamoebic Agents on Viability, Proliferation and Migration of Human Epithelial Cells, Keratocytes and Endothelial Cells, in vitro.** *Lei Shi^{1,2}, T. Stachon¹, B. Seitz¹, S. Wagenpfeil³, a. langensbuecher⁴, n. Szentmáry^{1,5}.* ¹Department of Ophthalmology, Saarland University Medical Center, Homburg/Saar, Germany; ²Department of Ophthalmology, Anhui Provincial Hospital, Hefei, Anhui, China; ³Institute of Medical Biometry, Epidemiology and Medical Informatics, Homburg/Saar, Germany; ⁴Institute of Experimental Ophthalmology, Homburg/Saar, Germany; ⁵Department of Ophthalmology, Semmelweis University, Budapest, Hungary
- 2262 — B0216 N-Acetylmuramyl-L-alanine amidase activity in human corneal epithelial cells.** *Maxwell Burch, P. Lam, W. Byrd, T. Redens, M. P. Langford.* Ophthalmology, LSUHSC, Shreveport, LA

2263 — B0217 A siRNA primary based cell model to confirm results from mRNA sequencing of Aniridia limbal epithelial cells.

Lorenz Latta¹, K. Nordström², T. Stachon¹, F. Fabian¹, n. Szentmáry^{1,3}, B. Seitz¹, B. Käsmann-Kellner¹. ¹Department of Ophthalmology, Saarland University Medical Center, Homburg/Saar, Saarland, Germany; ²Saarland University, Department of Genetics and Epigenetics, Saarbrücken, Saarland, Germany; ³Department of Ophthalmology, Semmelweis University, Budapest, Hungary

2264 — B0218 Identification of redox-sensitive protein interactions in the human cornea.

Marie Vestergaard Lukassen¹, E. T. Poulsen², J. J. Enghild^{1,2}. ¹Interdisciplinary Nanoscience Center (iNANO), Aarhus University, Aarhus C, Denmark; ²Department of Molecular Biology and Genetics, Aarhus University, Aarhus C, Denmark

2265 — B0219 3D ultrastructure studies on epithelial cell-derived exosomes in biosynthetic CLP-PEG and CLP-PEG MPC hydrogel corneal substitutes one year after implantation in mini pigs..

Philip N. Lewis¹, m. griffith², P. Fagerholm³, O. Buznyk³, K. M. Meek¹. ¹school of optometry and vision sciences, Cardiff University, Cardiff, UK, United Kingdom; ²Department of Ophthalmology, University of Montreal, Montreal, Quebec, Canada; ³Department of Clinical and experimental medicine, Linköping University, Linköping, Sweden

2266 — B0220 Shp2 protein tyrosine phosphatase affects the interplay between corneal epithelium and nerve fibers.

Yuka Okada^{1,2}, L. Zhang², Y. Zhang², Y. Wang², S. Saika¹, C. Liu². ¹Ophthalmology, Wakayama Medical University, Wakayama, Wakayama, Japan; ²Optometry, Indiana University, Bloomington, IN

2267 — B0221 PEDF promotes limbal regeneration through regulation of Sonic Hedgehog signaling pathway using murine partial limbal deficiency model.

Nai-Wen Fan^{1,2}, T. Ho³, Y. Tsao^{3,4}. ¹Department of Ophthalmology, Taipei veterans general hospital, Taipei, Taiwan; ²Institute of clinical medicine, National Yang-Ming University, Taipei, Taiwan; ³Department of Medical Research, Mackay Memorial Hospital, Taipei, Taiwan; ⁴Department of Ophthalmology, Mackay Memorial Hospital, Taipei, Taiwan

2268 — B0222 Mechanical properties of collagen gels crosslinked by copper-free click chemistry and their effects on encapsulated keratocytes.

Hyun Jong Lee¹, G. Fernandes-Cunha¹, S. Heilshorn², D. Myung¹. ¹Ophthalmology, Stanford University, Palo Alto, CA; ²Materials Science and Engineering, Stanford University, Palo Alto, CA

2269 — B0223 UV-A irradiation and 4-hydroxyestradiol induce endothelial-mesenchymal transition in human corneal endothelial cells.

Tomas L. White, U. V. Jurkunas. Ophthalmology, Harvard Medical School, Chelsea, MA

2270 — B0224 Regeneration of the anterior cornea through a standardized, non-xenogenic, cultivated limbal stem cell transplantation: Results of a phase II clinical trial.

Joséphine Behaegel^{1,2}, C. Koppen^{1,2}, S. Ni Dhubhghaill¹, I. Leysen¹, M. Haagdoorens^{1,2}, E. Melsbach¹, J. J. Rozema¹, M. Tassignon^{1,2}, N. Zakaria^{1,2}. ¹Ophthalmology, Antwerp University Hospital, Edegem, Belgium; ²Ophthalmology, University of Antwerp, Antwerp, Belgium *CR, ✗

2271 — B0225 Using Genipin-crosslinked Acellular Porcine Corneal Stroma for Individual Design for Cosmetic Corneal Lens Implants.

Zhao Liu, C. Pei. Department of Ophthalmology, The First Affiliated Hospital of Xi'an Jiaotong University, Xi'an, Shaanxi, China

2272 — B0226 Prospective consecutive case series of patients with neurotrophic keratopathy (NK) associated with unilateral total limbal stem cell deficiency (LSCD) caused by severe ocular surface burns.

Gustavo S. Figueiredo^{1,2}, O. J. Baylis^{1,3}, M. Lako¹, F. C. Figueiredo^{2,1}. ¹Institute of Genetic Medicine, Newcastle University, Newcastle upon Tyne, United Kingdom; ²Department of Ophthalmology, Royal Victoria Infirmary, Newcastle upon Tyne, United Kingdom; ³Sunderland Eye Infirmary, Sunderland, United Kingdom ✗

2273 — B0227 Bone morphogenetic protein 7 (BMP7) mimics the function of transforming growth factor (TGF)-β during corneal wound healing.

Oliver Stachs, T. Stahnke, A. G. Juenemann, B. S. Kowtharapu. Department of Ophthalmology, University of Rostock, Rostock, Germany

2274 — B0228 In Vivo Confocal Microscopy Demonstrates Normal Sub-Basal Nerve Plexus After Direct Corneal Neurotization.

Silvia Mariani¹, G. Giannaccare¹, F. Bolognesi², C. Marchetti², F. Biglioli³, E. C. Campos¹. ¹Ophthalmology Unit, Sant'Orsola Malpighi - Bologna University, Bologna, Italy; ²Maxillo Facial Surgery, Bologna University, Bologna, Italy; ³Maxillofacial Unit, San Paolo Hospital, Milano, Italy

2275 — B0229 A novel mouse model carrying a mutation in Gsdma3 resembles late stage Evaporative Dry Eye (EDE) disease and presents with alopecia and corneal inflammation.

John P. Neidhardt^{1,2}, C. Röger¹, A. Pienkowska-Schelling³, C. Ihlenburg⁴, G. Fischer⁴, O. May¹, M. Vorm¹, M. Owczarek-Lipska¹, S. Swirski¹. ¹Human Genetics, University of Oldenburg, Oldenburg, Germany; ²Research Center Neurosensory Science, University Oldenburg, Oldenburg, Germany; ³Institute of Genetics, University of Bern, Bern, Switzerland; ⁴Institut für Pathologie, Wilhelmshaven, Germany

2276 — B0230 Comparative genetic analysis of human mesenchymal stem cells isolated from corneal stroma and bone marrow.

Steffi Matthysen¹, V. Van Gerwen¹, C. Koppen^{1,2}, N. Zakaria^{1,2}. ¹Ophthalmology, Visual Optics and Visual Rehabilitation, Translational Neurosciences, University of Antwerp, Wilrijk, Belgium; ²Ophthalmology, Antwerp University Hospital, Edegem, Belgium *CR

2277 — B0231 Changes in metabolome for identifying pathways involved in arsenical vesicating agent-induced corneal injury.

Neera Tewari-Singh¹, D. Goswami¹, R. Kant¹, D. A. Ammar², J. Petrash², R. Agarwal¹. ¹Department of Pharmaceutical Sciences, University of Colorado Denver, Aurora, CO; ²Department of Ophthalmology, University of Colorado Denver, Aurora, CO

2278 — B0232 Long-term Outcomes of Cultivated Epithelial Sheet Transplantation for Chemical or Thermal Burns of the Cornea.

Jun Shimazaki^{1,2}, K. Higa², Y. Satake¹. ¹Department of Ophthalmology, Tokyo Dental College, Ichikawa, Chiba, Japan; ²Cornea Center Eye Bank, Tokyo Dental College, Ichikawa General Hospital, Ichikawa, Chiba, Japan

2279 — B0233 Corneal Extracellular Vesicles Studied in 3D Construct and Ex Vivo Model.

Audrey E. Hutcheon, X. Q. Guo, J. D. Zieske. Department of Ophthalmology, Harvard Medical School, Schepens Eye Research Institute/Mass. Eye and Ear, Boston, MA *CR

2280 — B0234 Recombinant human collagen type I hydrogels as superior cell carriers for corneal epithelial stem cells.

Nadia Zakaria^{1,2}, M. Haagdoorens², A. Liszka³, A. Ulcinas⁴, V. Ceplá², R. Valiokas⁴, M. Kozak Ljunggren³, A. Samanta⁵, M. B. Tassignon¹, Y. Tal⁶, N. Orr⁶, O. Shoseyov⁶, i. pintelon², m. griffith⁸. ¹Ophthalmology - CCRG, Antwerp University Hospital, Antwerp, Belgium; ²University of Antwerp, Antwerp, Belgium; ³Linköping University, Linköping, Sweden; ⁴Ferentis, Vilnius, Lithuania; ⁵Department of Chemistry - Ångström, Polymer Chemistry, Uppsala University, Lägerhyddsvägen 1, 752 37 Uppsala, Sweden; ⁶Uppsala University, Uppsala, Sweden; ⁷Collplant, 3 Sapir St. Weizmann Science Park; P.O.B 4132, 74140 Ness Ziona, Israel, Jerusalem, Israel; ⁸CPST, Vilnius, Lithuania; ⁹10 University of Montreal and Maisonneuve-Rosemont Hospital Research Centre, Montreal, Quebec, Canada *CR

2281 — B0235 Surface-modified hyaluronan hydrogels for regeneration of corneal epithelium and stroma.

Laura Koivusalo¹, T. Ilmarinen¹, S. Miettinen¹, H. Skottman¹, O. P. Oommen². ¹University of Tampere, Tampere, Finland; ²Tampere University of Technology, Tampere, Finland

2282 — B0236 Postprandial changes in interleukin-6 (IL-6) in autologous eye drops.

Anayansy González, V. Freire, A. Bilbao. Instituto Clinico Quirurgico de Oftalmologia, Bilbao, Spain

2283 — B0237 Nicotine effect on primary human pterygium cells. Tsz Kin Ng¹, Q. Yang¹, K. Chan¹, S. Tan², D. Cao¹, C. Pang¹, V. Jhanji¹. ¹Ophthalmology & Visual Sciences, The Chinese University of Hong Kong, Kowloon, Hong Kong; ²Department of Biomedical Engineering, The Chinese University of Hong Kong, Shatin, Hong Kong

2284 — B0238 Regulatory networks defining human corneal limbal epithelial cells identity through epigenomes. Suguru Nakagawa^{4,1}, R. Nakaki², S. Yamagami^{3,4}, T. Usui⁴, H. Aburatani². ¹Ophthalmology, Saitama Red Cross Hospital, Saitama-shi, Japan; ²RCAST, Univ of Tokyo, Tokyo, Japan; ³Ophthalmology, Nihon Univ, Tokyo, Japan; ⁴Ophthalmology, Univ of Tokyo, Tokyo, Japan

2285 — B0239 Estrogen modulates trigeminal ganglia gene expression and enhance corneal nerve regeneration by activating the estrogen receptor α . Thang L. Pham, J. He, A. H. Kakazu, H. E. Bazan. Neuroscience, LSU Health Science Center, New Orleans, LA

2286 — B0240 Atrophy and Impaired Contraction of the Myoepithelial Cells in Lacrimal Glands of Sjögren's Syndrome Animal Models of Dry Eye Disease. Driss Zoukhri^{2,1}, D. Hawley², X. Tang³, T. Zyrianova³, M. Shah⁴, S. R. Janga⁴, A. Letourneau², M. Schicht⁶, F. P. Paulsen⁶, S. Hamm-Alvarez^{4,5}, H. P. Makarekova³. ¹Ophthalmology, Tufts University School of Medicine, Boston, MA; ²Comprehensive Care, Tufts University School of Dental Medicine, Boston, MA; ³Molecular Medicine, The Scripps Research Institution, La Jolla, CA; ⁴Ophthalmology, USC Roski Eye Institute, Keck School of Medicine of University of Southern California, Los Angeles, CA; ⁵University of Southern California School of Pharmacy, Los Angeles, CA; ⁶Anatomy II, Friedrich Alexander University Erlangen-Nürnberg, Erlangen, Germany

2287 — B0241 In vitro expanded human purified ABCB5-positive limbal stem cells for treatment of limbal stem cell deficiency. Bruce Ksander^{1,2}, E. Korobkina^{1,2}, C. Ganss^{7,8}, A. Kluh^{7,8}, N. Frank^{3,4}, M. H. Frank^{5,6}. ¹Schepens Eye Research Institute, Harvard Medical School, Boston, MA; ²Ophthalmology, Mass Eye & Ear, Boston, MA; ³Division of Genetics, Brigham & Women's Hospital, Boston, MA; ⁴Harvard Medical School, Boston, MA; ⁵Transplantation Research Program, Boston Children's Hospital, Boston, MA; ⁶Harvard Stem Cell Institute, Harvard Medical School, Boston, MA; ⁷Ticeba GmbH, Heidelberg, Germany; ⁸Rheacell GmbH & Co, Heidelberg, Germany *CR

2288 — B0242 Comprehensive transcriptome analyses of ABCB5-positive limbal stem cells. Yuzuru Sasamoto¹, G. Gonzalez^{1,2}, B. Ksander³, M. H. Frank⁴, N. Frank^{1,2}. ¹Department of Medicine, Brigham and Women's Hospital, Brookline, MA; ²Medicine, VA Boston Healthcare System, Boston, MA; ³Mass Eye & Ear, Schepens Eye Research Institute, Boston, MA; ⁴Transplant Research Program, Boston Children's Hospital, Boston, MA *CR

2289 — B0243 Transforming growth factor beta 3 of human corneal stromal stem cells plays a pivotal role in suppression of mouse corneal scar formation. Lin Weng, M. L. Funderburgh, I. Khandaker, M. Geary, K. Davoli, J. Funderburgh. Department of ophthalmology, University of Pittsburgh School of Medicine, Pittsburgh, PA

2290 — B0244 Acetylcholine decreases formation of myofibroblasts and excessive extracellular matrix components production in an *in vitro* human corneal fibrosis model. Marta Sloniecka, P. Danielson. Integrative Medical Biology, Umeå University, Umeå, Sweden

2291 — B0245 Stem Cell Therapy Suppresses Infiltration of Platelets into Healing Corneal Wounds. Martha L. Funderburgh, I. Khandaker, J. Funderburgh. Department of Ophthalmology, Univ of Pittsburgh Sch of Med, Pittsburgh, PA

2292 — B0246 Hepatocyte growth factor modulates TGF- β -mediated human corneal stromal cell differentiation. Hidetaka Miyagi^{1,2}, S. M. Thomas¹, P. Russell¹, C. J. Murphy¹. ¹Surgical and Radiological Sciences, University of California, Davis, CA; ²Ophthalmology and Visual Sciences, Hiroshima University, Hiroshima, Hiroshima, Japan

2293 — B0247 Effects of engineered cellular microenvironments on the secretome of human mesenchymal stem cells. Sarah Hull¹, G. Fernandes-Cunha², H. Lee², S. Heilshorn³, D. Myung². ¹Chemical Engineering, Stanford University, Palo Alto, CA; ²Ophthalmology, Stanford University, Palo Alto, CA; ³Materials Science & Engineering, Stanford University, Stanford, CA

Exhibit Hall B0248-B0272

Monday, April 30, 2018 3:30 PM-5:15 PM

Clinical/Epidemiologic Research / Anatomy and Pathology/Oncology

283 Trauma

Moderators: Stephanie L. Watson and Emi Sanders

2294 — B0248 Open versus closed hyphema: lessons learned in Operations Iraqi Freedom and Enduring Freedom. Natalie R. Miller¹, G. Justin^{3,1}, D. Brooks², D. Ryan⁴, M. Colyer^{2,1}. ¹Uniformed Services University of the Health Sciences, Bethesda, MD; ²Walter Reed National Military Medical Center, Bethesda, MD; ³San Antonio Military Medical Center, San Antonio, TX; ⁴Warfighter Refractive Eye Surgery Program and Research Center, Fort Belvoir, VA

2295 — B0249 Development of Testing Methodology for Ocular Trauma Using Intraocular Pressurization. Jake Fladd¹, N. Pellizzi¹, J. DesJardins¹, R. Sharpe², G. Magrath². ¹Bioengineering, Clemson University, Clemson, SC; ²Medical University of South Carolina, Charleston, SC *CR

2296 — B0250 A tissue-engineering poly(propylene fumarate)-2-hydroxyethyl methacrylate copolymer scaffold for tarsal plate repair and eyelid reconstruction. Qi Gao, J. Xie, J. Ye. Ophthalmology, the Second Affiliated Hospital, Zhejiang University, Hangzhou, Zhejiang, China

2297 — B0251 In vitro study of customized porous magnesium-doped bioceramic scaffolds for orbital reconstruction on biological performance. Jiajun Xie¹, Q. Gao¹, H. Shao², Z. Gou³, J. Ye¹. ¹Eye Center, Second Affiliated Hospital, Zhejiang University School of Medicine, Hangzhou, Zhejiang, China; ²Zhejiang Province's Key Laboratory of 3D Printing Process and Equipment, Zhejiang University School of Mechanical Engineering, Hangzhou, Zhejiang, China; ³Zhejiang-California International Nanosystem Institute, Zhejiang University, Hangzhou, Zhejiang, China

2298 — B0252 Biomechanics study on the choosing of implant and internal fixation method for zygomatic-orbito-maxillary fract. Wei Lu¹, P. Wu¹, D. Kikkawa². ¹Ophthalmology, The Second Hospital of Dalian Medical University, Dalian, Liaoning, China; ²Shiley Eye Institution, La Jolla, CA USA, American Samoa

2299 — B0253 Clinical histopathology of intra-choroidal splitting in open-globe injury—a retrospective case series of 4 patients. Liang Han, Y. Cho, Z. Ma. Ophthalmology, Peking University Third Hospital, Beijing, China

Monday Posters
3:30 pm – 5:15 pm

2300 — B0254 Orbital roof fractures as an indicator for concomitant ocular injury. Joseph Santamaria, A. Mehta, D. Reed, B. Bishop, B. Davies. *Ophthalmology, San Antonio Military Medical Center, San Antonio, TX*

2301 — B0255 Traffic accident-related open globe injuries. Kimitaka Oda, F. Okamoto, S. Morikawa, Y. Okamoto, T. Oshika. *Ophthalmology, Tsukuba University, Tsukuba, Ibaraki, Japan*

2302 — B0256 Paediatric Ocular Trauma: A prospective nation-wide survey of presenting features and management. Robert J. Barry¹, A. Bruynseels², F. Si^{2,3}, J. Abbott¹, R. J. Blanch², C. J. MacEwen³, P. Shah^{2,3}. ¹Academic Unit of Ophthalmology, University of Birmingham, Birmingham, England, United Kingdom; ²Department of Ophthalmology, Queen Elizabeth Hospital Birmingham, Birmingham, United Kingdom; ³Birmingham Institute for Glaucoma Research, Birmingham, United Kingdom; ⁴Department of Ophthalmology, Birmingham Children's Hospital NHS Foundation Trust, Birmingham, United Kingdom; ⁵Department of Ophthalmology, Ninewells Hospital and Medical School, Dundee, United Kingdom

2303 — B0257 Outcomes following pediatric ocular trauma. Abdelhalim Awidi^{1,2}, C. Kraus². ¹Faculty of Medicine, University of Jordan, Amman, Jordan; ²Strabismus and Pediatric Ophthalmology, Wilmer eye institute. Johns Hopkins University, Baltimore, MD

2304 — B0258 Spectrum of Firearms-Associated Ocular Injuries. Timothy Truong¹, C. He¹, A. Parsikia², J. Mbekeani^{1,3}. ¹Montefiore Medical Center/ Albert Einstein College of Medicine, Bronx, NY; ²Department of Surgery (Trauma), Jacobi Medical Center, Bronx, NY; ³Department of Surgery (Ophthalmology), Jacobi Medical Center, Bronx, NY

2305 — B0259 Evaluation of Factors Effecting Disposition of Firearms-related Ocular Trauma: Analysis of National Patterns. Ari Brandsdorfer¹, R. Gise¹, D. Poulsen¹, A. Parsikia², J. Mbekeani^{1,3}. ¹Department of Ophthalmology & Visual Sciences, Montefiore Medical Center/ Albert Einstein College of Medicine, Bronx, NY; ²Department of Surgery (Trauma), Jacobi Medical Center, Bronx, NY; ³Department of Surgery (Ophthalmology), Jacobi Medical Center, Bronx, NY

2306 — B0260 Clinical characteristics and outcomes of open globe injuries in Japan. Rieko Fukuda, F. Okamoto, S. Morikawa, Y. Okamoto, T. Oshika. *Tsukuba University, Ibaraki, Japan, Ophthalmology, Tsukuba, Ibaraki, Japan*

2307 — B0261 Demographic and socioeconomic disparities in ocular trauma management. Nitin Chopra¹, K. Gervasio^{1,2}, B. Kalosza¹, L. Shumate¹, A. Wu^{1,3}. ¹Icahn School of Medicine at Mount Sinai, New York, NY; ²Memorial Sloan Kettering Cancer Center, New York, NY; ³Stanford School of Medicine, Palo Alto, CA

2308 — B0262 Epidemiology, management, and outcomes of orbital fractures at a major trauma centre. Enis D. Kocak, J. W. Quigley, A. J. Hall. *Ophthalmology, The Alfred, Williamstown, Victoria, Australia*

2309 — B0263 Clinical and epidemiologic characteristics of corneal trauma presented at the emergency department of an ophthalmological referral center in Central Mexico. Norma Morales, A. J. Ramirez-Miranda, J. Serna-Ojeda, A. Navas, E. O. Graue-Hernandez. *Instituto de Oftalmologia Conde de Valenciana, Ciudad de Mexico, DF, Mexico*

2310 — B0264 Clinical characteristics and visual outcomes of work-related open globe injuries. Shoko Takahashi, F. Okamoto, S. Morikawa, Y. Okamoto, T. Oshika. *Ophthalmology, Tsukuba University, Ibaraki, Japan*

2311 — B0265 Clinical characteristics and visual outcomes of sport-related open globe injuries. Fumiki Okamoto, S. Morikawa, Y. Okamoto, T. Oshika. *Ophthalmology, Tsukuba University, Ibaraki, Japan*

2312 — B0266 Ophthalmic surgical interventions following open globe repair in patients ultimately requiring enucleation. Adam Sweeney, A. Y. Lee, E. Hanna. *Ophthalmology, University of Washington, Seattle, WA*

2313 — B0267 Elderly patient dispositions after ocular trauma. Catherine He¹, A. Parsikia², J. Mbekeani^{1,3}. ¹Montefiore Medical Center/ Albert Einstein College of Medicine, Bronx, NY; ²Surgery (Trauma), Jacobi Medical Center, Bronx, NY; ³Surgery (Ophthalmology), Jacobi Medical Center, Bronx, NY

2314 — B0268 The DoD Joint Pathology Center (JPC)/ Vision Center of Excellence (VCE) ocular foreign body compositional analysis program. Robert A. Mazzoli^{1,2}, M. Snider⁶, M. Lewin-Smith³, N. Merezhinskaya⁴, S. L. Strausborger³, H. M. Jenkins³, J. Egan¹, P. Latkany⁴, M. J. Mines^{6,2}, M. Colyer^{5,2}, M. Weber^{7,2}, E. Chou^{5,2}, E. Seefeldt^{6,2}, N. Jordan⁶, A. Buchanan^{6,2}, G. Cockerham⁸. ¹Ophthalmology, Madigan Army Medical Center, DoD-VA Vision Center of Excellence, Tacoma, WA; ²Ophthalmology (Surgery), Uniformed Services University of the Health Sciences, Bethesda, MD; ³DoD Joint Pathology Center, Silver Spring, MD; ⁴DoD-VA Vision Center of Excellence, Bethesda, MD; ⁵Ophthalmology, Walter Reed National Military Medical Center, Bethesda, MD; ⁶Ophthalmology, Madigan Army Medical Center, Tacoma, WA; ⁷Ophthalmology, San Antonio Military Medical Center, San Antonio, TX; ⁸Ophthalmology, VA Palo Alto Health Care System--Palo Alto Division, Palo Alto, CA

2315 — B0269 Role of Eye Providers in Protective Eyewear Use. Heather Leisy. *Stony Brook University, Stony Brook, NY*

2316 — B0270 Prospective analysis of pediatric corneal chemical burns: the harm of laundry detergent pods. Mark P. Breazzano, R. R. Day, U. L. Tran. *Vanderbilt University Medical Center, Vanderbilt University School of Medicine, Nashville, TN*

2317 — B0271 Pre- and post-intervention study of corneal chemical burns: exclusive implementation of broad spectrum pH strips. Russell R. Day¹, M. P. Breazzano², U. L. Tran². ¹Vanderbilt University School of Medicine, Nashville, TN; ²Vanderbilt University Medical Center, Nashville, TN

2318 — B0272 Eyetracker outcomes in a randomized trial of hyperbaric oxygen or sham in participants with persistent post-concussive symptoms. Anne S. Lindblad¹, P. A. Wetzel², L. K. Weaver³, C. Mulatya¹, S. H. Wilson¹, M. A. Kannan², Z. D. Villamar². ¹Emmes Corporation, Rockville, MD; ²Biomedical Engineering, Virginia Commonwealth University, Richmond, VA; ³Hyperbaric Medicine, LDS Hospital, Salt Lake City, UT

Exhibit Hall B0308-B0336

Monday, April 30, 2018 3:30 PM-5:15 PM

Genetics Group

284 Genetics of Retinal dystrophies and Functional GenomicsModerators: *Sudha K. Iyengar and Petra Liskova*

2319 — B0308 Foveal hyper fundus autofluorescence in paediatric Bardet-Biedl syndrome-1 (BBS1) patients before electrophysiological and visual function findings of retinal dysfunction. Damien C. Yeo¹, W. Moore^{1,2}, I. C. Lloyd^{1,2}, E. Forsythe³, D. Thompson^{1,2}. ¹Clinical and Academic Department Of Ophthalmology, Great Ormond Street Hospital for Children, London, United Kingdom; ²Ulverschroft Vision Research Group, UCL Great Ormond Street Institute of Child Health, London, United Kingdom; ³ICH Genetics and Genomic Medicine Programme, UCL Great Ormond Street Institute of Child Health, London, United Kingdom

2320 — B0309 Targeted re-sequencing of ciliopathy genes in Bardet Biedl Syndrome patients from India. Sripriya Sarangapani¹, S. Chandrasekar³, P. Periasamy¹, P. Sen². ¹SNONGC Dept of Genetics & Molecular Biology, Vision Research Foundation, Sankara Nethralaya, Chennai, Tamilnadu, India; ²Vitreoretina, Medical Research Foundation, Chennai, Tamilnadu, India; ³Formerly at SNONGC Department of Genetics and Molecular Biology, Vision Research Foundation, Sankara Nethralaya, Chennai, Tamilnadu, India

2321 — B0310 Homozygous mutations in KIAA1549, encoding a ciliary protein, cause autosomal recessive retinitis pigmentosa. Susan Roosing^{1,2}, S. de Bruijn^{1,2}, S. K. Verbakel³, H. Kremer^{1,4}, L. van den Born³, C. C. Hoyng^{5,2}, F. P. Cremers^{1,2}. ¹Human Genetics, Radboud university medical center, Nijmegen, Netherlands; ²Donders Institute for Brain Cognition and Behaviour, Nijmegen, Netherlands; ³The Rotterdam Eye Hospital, Rotterdam, Netherlands; ⁴Otorhinolaryngology, Radboud university medical center, Nijmegen, Netherlands; ⁵Ophthalmology, Radboud university medical center, Nijmegen, Netherlands

2322 — B0311 Mutations in IMPG1 cause autosomal dominant and recessive retinitis pigmentosa. Gael Manes^{1,2}, X. ZANLONGHI¹, C. Ayuso³, G. Black⁶, G. OLIVIER^{1,2}, B. Bocquet^{3,2}, A. Sénéchal¹, I. Meunier^{3,2}, C. Hamel^{3,2}. ¹U1051, Inserm, Montpellier, France; ²University of Montpellier, Montpellier, France; ³CHU Montpellier, Centre de référence maladies sensorielles génétiques, Montpellier, France; ⁴Eye Clinic Jules Verne, Nantes, France; ⁵Departamento de Genética, Instituto de Investigación Sanitaria-Fundación Jiménez Díaz, Madrid, Spain; ⁶The University of Manchester, Manchester, United Kingdom

2323 — B0312 Mutation in ATP1A3 is associated with dominant cone-rod dystrophy. Gao-Hui Zhou, L. Xiang, X. Huang, X. Lei, J. Lv, K. Wu, X. Wang, Z. Jin. Division of Ophthalmic Genetics, Lab for Stem Cell & Retinal Regeneration, Wenzhou Medical University, Wenzhou, China

2324 — B0313 Novel mutations in Polish patients with hereditary retinal disorders. Anna M. Traciewska-Siemiatkowska¹, J. Murawska², B. Kocyla-Karczmarewicz³, M. Szalinski⁴, M. Rydzanicz⁵, P. Stawinski⁵, M. I. Khan^{6,7}, A. Hoischen^{6,8}, C. Gilissen^{6,7}, M. van de Vorst⁶, F. P. Cremers^{6,7}, R. Ploski⁵, K. Chrzanowska³. ¹DNA Analysis Laboratory, Wrocław Research Centre EIT+, Wrocław, Poland; ²Department of Ophthalmology, University Clinical Centre, Gdansk, Poland; ³Children's Memorial Health Institute, Warsaw, Poland; ⁴Department of Ophthalmology, Wrocław Medical University, Wrocław, Poland; ⁵Department of Medical Genetics, Medical University of Warsaw, Warsaw, Poland; ⁶Department of Human Genetics, Radboud University Medical Center, Nijmegen, Netherlands; ⁷Donders Institute for Brain, Cognition and Behavior, Radboud University Medical Center, Nijmegen, Netherlands; ⁸Radboud Institute for Molecular Life Sciences, Radboud University Medical Center, Nijmegen, Netherlands

2325 — B0314 X-linked cone dystrophy and Blue Cone Monochromacy caused by novel and rare L/M opsin interchange haplotypes. Jessica C. Gardner¹, P. Liskova^{2,3}, J. Ruddle^{4,5}, B. Kousal⁶, M. Michaelides^{1,6}, A. J. Hardcastle¹. ¹University College of London Institute of Ophthalmology, London, United Kingdom; ²Department of Pediatrics and Adolescent Medicine, Charles University and General University Hospital in Prague, Prague, Czechia; ³Department of Ophthalmology, First Faculty of Medicine, Charles University and General University Hospital in Prague, Prague, Czechia; ⁴Department of Pediatrics and Adolescent Medicine, University of Melbourne, Melbourne, Victoria, Australia; ⁵Centre for Eye Research, Royal Victorian Eye and Ear Hospital, Melbourne, Victoria, Australia; ⁶Moorfields Eye Hospital, London, United Kingdom

2326 — B0315 H3K27me3-based Chip-Seq reveals distinct occupancy of specific genes during retinal degeneration. Martial K. Mbefo¹, M. Quinodoz², C. Rivolta², Y. Arsenijevic¹. ¹Jules-Gonin Eye Hospital, University Of Lausanne, Lausanne, Vaud, Switzerland; ²Department of Computational Biology, Unit of Medical Genetics, University Of Lausanne, Lausanne, Vaud, Switzerland

2327 — B0316 PRPF31 deficiency implicates key genes and pathways of photo-transduction as its tissue specific role (Proof-of-concept mechanism study in an ex-vivo model of RP11). Narsis Daftarian^{1,2}, L. Azizzadeh Pormehr³, S. Ahmadian³, C. Rivolta⁴, S. Mousavi⁵, M. Rezaeikanavi¹, H. Ahmadi². ¹Ophthalmology, Ocular Tissue Engineering Research Center, Tehran, Tehran, Iran (the Islamic Republic of); ²Ophthalmology, Ophthalmic Research Center, Tehran, Tehran, Iran (the Islamic Republic of); ³Biochemistry and Biophysics, Biochemistry and Biophysics, Dept. of Biochemistry, Institute of Biochemistry and Biophysics, University of Tehran, Tehran, Tehran, Iran (the Islamic Republic of); ⁴Medical Genetics, Department of Medical Genetics, University of Lausanne, Lausanne, Switzerland; ⁵Department of stem cells and developmental biology, Cell science research center, Royan institute for stem cell biology and technology, ACECR, Tehran, Iran (the Islamic Republic of)

2328 — B0317 Role of the voltage-gated potassium channel subunit Kv8.2 in inherited retinal disease and interaction with other channel proteins. David M. Hunt^{1,2}, N. Hart³, J. K. Mountford^{2,1}, M. Barth¹, P. Fuller-Carter¹, L. S. Carvalho¹. ¹Lions Eye Institute, University of Western Australia, Perth, Western Australia, Australia; ²School of Biological Sciences, University of Western Australia, Perth, Western Australia, Australia; ³Department of Biological Sciences, Macquarie University, Sydney, New South Wales, Australia

2329 — B0318 The spectrum of RPI mutations confirms a dominant negative disease mechanism. Anika Nanda¹, M. McClements², M. Shanks³, R. MacLaren². ¹Oxford Eye Hospital, Oxford, United Kingdom; ²Nuffield Laboratory of Ophthalmology, University of Oxford, Oxford, United Kingdom; ³Oxford Medical Genetics Laboratories, Oxford University Hospitals NHS Foundation Trust, Oxford, United Kingdom

2330 — B0319 High Throughput Clinical Testing of RPGR ORF15 Mutations in Patients with Inherited Retinal Dystrophy. John (P-W) Chiang¹, T. Lamey², J. Duan¹, N. Wang¹, T. McLaren², J. Thompson², J. Ruddle², J. De Roach². ¹Molecular Vision Laboratory, Hillsboro, OR; ²Sir Charles Gairdner Hospital, Perth, Western Australia, Australia; ³Royal Children's Hospital, Melbourne, Victoria, Australia *CR

2331 — B0320 Analysis of the PRPH2-associated Retinopathy Cohort within the National Ophthalmic Disease Genotype Phenotype Network (eyeGENE®). Santa J. Tumminia¹, W. M. Zein², R. B. Hufnagle², K. E. Goetz², M. Reeves². ¹Office of the Director, National Eye Inst/NIH, Bethesda, MD; ²Ophthalmic Genetics and Visual Function, National Eye Institute/NIH, Bethesda, MD ✗

Monday Posters
3:30 pm – 5:15 pm

2332 — B0321 Genotype-Phenotype Correlations of Patients Given a Diagnosis of Congenital Stationary Night Blindness (CSNB). How Stationary Are Some Forms of CSNB? Paul F. Kenna^{1,2}, N. Wynne², M. Carrigan¹, A. Dockery¹, K. Collins², H. Dempsey², G. J. Farrar¹. ¹Ocular Genetics Unit, Trinity College Dublin, Dublin, Ireland; ²Research Foundation, The Royal Victoria Eye and Ear Hospital, Dublin, Ireland

2333 — B0322 Phenotype-Genotype Correlation among Patients with Pathogenic CRB1 gene Variants. Yousef J. Cruz Inigo^{1,2}, K. Klein^{1,2}, B. Bakall^{1,2}. ¹Associated Retina Consultants, Phoenix, AZ; ²University of Arizona College of Medicine, Phoenix, AZ

2334 — B0323 Clinical data and natural history of retinitis punctata albescent with RLBPI mutations for the purpose of gene therapy. Isabelle Meunier, H. El Alami, B. Bocquet. Ophthalmology CHU Gui de Chauliac, 80 av A Fliche 34295 Montpellier, National center in rare diseases Inherited sensorial diseases, Montpellier, France

2335 — B0324 Clinical characterization of a COL2A1 variant manifesting solely in the retina. Gabrielle Fridman^{1,3}, J. D. Sengillo^{2,3}, S. H. Tsang³. ¹John T Mather Memorial Hospital, Port Jefferson, NY; ²SUNY Downstate Medical Center, Brooklyn, NY; ³Edward S. Harkness Eye Institute, Columbia University Medical Center, New York, NY

2336 — B0325 Tubulations of the Outer Retinal Layers in the CHM Carrier State of Choroideremia. Jesse D. Sengillo^{1,2}, G. Fridman³, S. H. Tsang². ¹College of Medicine, SUNY Downstate, Brooklyn, NY; ²Ophthalmology, Columbia University Medical Center, New York, NY; ³John T. Mather Memorial Hospital, Port Jefferson, NY

2337 — B0326 Identification and phenotypic expression of RDH12-related retinitis pigmentosa by panel-based NGS and CRISPR/Cas9 gene editing. Ding-Siang Huang¹, B. Chang², P. Chen², C. Lin¹, T. Lai¹, H. Hsu¹, M. Chiu¹, C. Chen³, Y. Chou¹, C. Yang¹, C. Yang¹, T. Chen¹. ¹Department of Ophthalmology, National Taiwan University Hospital, Taipei, Taiwan; ²Graduate Institute of Oral Biology, National Taiwan University College of Medicine, Taipei, Taiwan; ³Graduate Institute of Medical Genomics and Proteomics, National Taiwan University College of Medicine, Taipei, Taiwan

2338 — B0327 Identification of candidate genes involved in proliferative sickle cell retinopathy by RNAseq. Sueli M. da Silva Costa¹, M. Ito¹, B. B. Souza¹, P. R. Cruz¹, M. G. Vitorino², S. O. Prieto³, R. C. Saez³, M. C. Ozele³, F. F. Costa³, M. B. Melo¹. ¹Center for Molecular Biology and Genetic Engineering, University of Campinas, Campinas, São Paulo, Brazil; ²Ophthalmology, University of Campinas, Campinas, São Paulo, Brazil; ³Hematology and Hemotherapy Center, University of Campinas, Campinas, São Paulo, Brazil

2339 — B0328 Next Generation Sequencing in Pigmented Paravenous Retinochoroidal Atrophy. Huber M. Vasconcelos¹, A. Mitchell¹, F. Gregorian², P. Chiang³, R. Chen⁴, Y. Li⁴, R. G. Weleber², M. E. Pennesi², P. Yang². ¹Retina/Genetics, OHSU/Casey Eye Institute, Portland, OR; ²Ophthalm & Molecular Med Genetics, OHSU/Casey Eye Institute, Portland, OR; ³OHSU, Portland, OR; ⁴Baylor College of Medicine, Houston, TX *CR

2340 — B0329 Beyond SNVs: comprehensive cohort-level analytics of 100 samples from the eyeGENE® program. Robert B. Hufnagel^{1,2}, B. Guan¹, D. McGaughey³, M. Reeves², W. Zein³, K. Wetherby³, D. Blain³, A. Turriff³, B. P. Brooks³, S. Tumminia². ¹Ophthalmic Genomics Laboratory, National Eye Institute, NIH, Bethesda, MD; ²eyeGENE(R) program, National Eye Institute, Bethesda, MD; ³Ophthalmic Genetics and Visual Function Branch, National Eye Institute, Bethesda, MD

2341 — B0330 Usher genes; from a clinical and genetic perspective. Helena M. Feenstra¹, M. Shah³, M. Shanks², R. E. MacLaren³, P. Clouston², S. Downes³. ¹Oxford Eye Hospital, OUH, Oxford, United Kingdom; ²Oxford Medical Genetics Laboratories, University of Oxford, Oxford, United Kingdom; ³Oxford Eye Hospital, OUH, University of Oxford, Oxford, United Kingdom

2342 — B0331 Comprehensive Molecular Screening in a Large Chinese Cohort with Usher Syndrome. Tengyang Sun¹, K. Xu², X. Zhang², Y. Li². ¹Capital Medical University, Beijing, China; ²Beijing Institute of Ophthalmology, Beijing, China

2343 — B0332 Next Generation Sequencing characterizes disease progression in a murine model of Usher syndrome. Katelyn N. Robillard¹, M. Hathaway¹, F. Rigo², J. J. Lentz¹. ¹Neuroscience Center, LSU Health Sciences Center, New Orleans, LA; ²Ionis Pharmaceuticals, Carlsbad, CA *CR

2344 — B0333 A Population Study of Common Ocular Abnormalities in C57BL/6N Rd8 Mice. Ala Moshiri¹, B. Moore⁵, M. J. Roux², L. Sebbag⁶, A. Cooper⁵, S. Edwards⁵, B. Leonard⁵, D. M. Imai³, S. Griffey³, L. Bower⁴, D. Clary⁴, K. Lloyd⁴, Y. Herculat¹, S. M. Thomasy^{1,5}, C. J. Murphy^{1,5}. ¹Ophthalmology, U.C. Davis, Sacramento, CA; ²Université de Strasbourg, Strasbourg, France; ³Comparative Pathology Laboratory, UC Davis, Davis, CA; ⁴Mouse Biology Program, UC Davis, Davis, CA; ⁵School of Veterinary Medicine, UC Davis, Davis, CA; ⁶College of Veterinary Medicine, Iowa State University, Ames, IA *CR

2345 — B0334 A new mouse model, nob10, with no b wave and late onset retinal degeneration.. Bo Chang, J. Wang, B. Fitzmaurice, P. M. Nishina. The Jackson Laboratory, Bar Harbor, ME

2346 — B0335 Disruption of murine EmI1 results in mislocalization of mitotic neuroblastic cells and early dysplasia of the developing retina. Gayle Collin^{1,2}, J. Won¹, W. L. Hicks¹, J. K. Naggert², M. P. Krebs¹, P. M. Nishina¹. ¹Nishina Lab, The Jackson Laboratory, Bar Harbor, ME; ²Naggert Lab, The Jackson Laboratory, Bar Harbor, ME

2347 — B0336 A point mutation in the novel lncRNA, ROBO2-AS, correlates with phenotype severity in canine RPGR-XLPRA1. Tatyana Appelbaum, L. Murgiano, D. Becker, E. Santana, G. D. Aguirre. Clinical Studies, U of Penn School Vet Med, Philadelphia, PA

Exhibit Hall B0358-B0381

Monday, April 30, 2018 3:30 PM-5:15 PM

Biochemistry/Molecular Biology

285 Proteostasis and systems biology approaches for ocular cellular profiling

Moderators: T. Michael Redmond and Luminita I. Paraoan

2348 — B0358 14-3-3 regulates the expression of HCN1. Sheila Baker, J. Laird, S. Inamdar, C. Lanford. Biochemistry, University of Iowa, Iowa City, IA

2349 — B0359 Human Retinal Pigment Epithelium Transcriptional Response to Stress Induced by Advanced Glycation End Products and Lipid Peroxidation. Wasu Supharattanasitthi^{1,2}, J. M. Butler¹, A. Maminishkis³, Y. C. Yang⁴, L. I. Paraoan¹. ¹Eye and Vision Science, Institute of Ageing and Chronic Disease, University of Liverpool, Liverpool, United Kingdom; ²Physiology, Faculty of Pharmacy, Mahidol University, Bangkok, Thailand; ³National Eye Institute, National Institutes of Health, Bethesda, MD; ⁴Ophthalmology, The Royal Wolverhampton NHS Trust, Wolverhampton, United Kingdom *CR

2350 — B0360 An integrative approach to identify transcript isoforms essential for retina function. Jun Wang¹, R. Dharmat¹, Y. Li¹, L. Owen², M. M. DeAngelis², R. Chen¹. ¹Baylor College of Medicine, Houston, TX; ²University of Utah School of Medicine, Salt Lake City, UT

2351 — B0361 Single molecule sequencing elucidates retinal mRNA isoform diversity – implications for CRB1 retinopathies. Thomas Ray^{1,2}, K. Cochran³, J. Kay^{1,2}. ¹Neurobiology, Duke University, Durham, NC; ²Ophthalmology, Duke University, Durham, NC; ³Computer Science, Duke University, Durham, NC

- 2352 — B0362 Nuclear genome protection in asymptomatic LHON-carriers.** Isabel Lopez Sanchez^{1,2}, N. Van Bergen^{1,2}, L. Kearns^{1,2}, S. Lim³, M. McKenzie³, A. Hewitt^{1,2}, H. Liang^{1,2}, J. G. Crowston^{1,2}, D. Mackey^{4,5}, I. Truncelle^{1,2}. ¹Centre for Eye Research Australia, Royal Victorian Eye and Ear Hospital, Melbourne, Victoria, Australia; ²Department of Surgery, Ophthalmology, University of Melbourne, Melbourne, Victoria, Australia; ³Centre for Genetic Diseases, Hudson Institute of Medical Research, Monash University, Melbourne, Victoria, Australia; ⁴Menzies Institute for Medical Research, University of Tasmania, Hobart, Tasmania, Australia; ⁵Lions Eye Institute, University of Western Australia, Perth, Western Australia, Australia
- 2353 — B0363 Insulin-like growth factor 1 receptor is necessary for rod photoreceptor structure and function.** Raju V. Rajala^{1,2}, Y. Wang¹, A. Rajala¹. ¹Ophthal/Dean McGee Eye Inst, Univ of Oklahoma Hlth Sci Ctr, Oklahoma City, OK; ²Physiology, University of Oklahoma Health Sciences Center, Oklahoma City, OK
- 2354 — B0364 Conformational flexibility of the arrestin-rhodopsin complex.** Vsevolod V. Gurevich¹, N. Van Eps³, S. Vishnivetskii¹, L. Shamambo¹, N. A. Perry¹, W. L. Hubbell². ¹Pharmacology, Vanderbilt University, Nashville, TN; ²Jules Stein Eye Institute, UCLA, Los Angeles, CA; ³Biochemistry, University of Toronto, Toronto, Ontario, Canada
- 2355 — B0365 Preferential membrane binding of phosphodiesterase 6 compared to other photoreceptor proteins.** Christian Salesses^{1,2}, A. Yamazaki³, E. Demers^{1,2}. ¹Ophthalmologie, Université Laval, Quebec, Quebec, Canada; ²Centre rech CHU de Quebec, CUO-Recherche, Quebec, Quebec, Canada; ³The Kresge Eye Institute, Detroit, MI
- 2356 — B0366 Quantitative proteomic analysis of ocular fluid in rabbits.** Qiang Yang, X. Shen, X. Wang, Y. Tong, S. Shen, X. Zhao. Shenyang Sinqi Pharmaceutical Co.,LTD, Shenyang, China
- 2357 — B0367 Comprehensive proteomic study of chick vitreous during normal growth.** Ka Wai, Jimmy CHEUNG¹, J. Bian¹, F. Yu¹, K. Li¹, C. To¹, L. Zhou², T. Lam¹. ¹Laboratory of Experimental Optometry, Centre for Myopia Research, The Hong Kong Polytechnic University, Kowloon, Hong Kong; ²Ocular Proteomics Laboratory, Singapore Eye Research Institute, Singapore
- 2358 — B0368 PDE6D dependent G_{off} subunit trafficking in olfactory epithelium.** Michelle Reed, G. Ying, W. Baehr. Ophthalmology and Visual Science, University of Utah, Salt Lake City, UT
- 2359 — B0369 The Tyrp1 protection of human tyrosinase activity do not involve interaction between tyrosinase domains..** Monika B. Dolinska¹, K. Young¹, P. Wingfield², B. P. Brooks¹, Y. Sergeev¹. ¹OGVFB, NEI/NIH, Bethesda, MD; ²Protein Expression Laboratory, NIAMS/NIH, Bethesda, MD
- 2360 — B0370 Retinal degeneration and protein mislocalization in MKS6 mutants.** Alecia K. Gross^{1,2}, M. J. Croyle², S. C. Waldrop³, A. Reyes Moon¹, H. Thomas³, J. M. Parant³, B. K. Yoder², K. Bales¹. ¹Optometry and Vision Science, Univ of Alabama at Birmingham, Birmingham, AL; ²Cellular, Developmental and Integrative Biology, University of Alabama at Birmingham, Birmingham, AL; ³Pharmacology and Toxicology, University of Alabama at Birmingham, Birmingham, AL
- 2361 — B0371 Congenital knock-out of transition zone protein BBS5 reveals cone-rod dystrophy with light induced protein mislocalization.** Katie Bales¹, M. J. Croyle², A. Reyes Moon¹, B. K. Yoder², A. K. Gross¹. ¹Optometry and Vision Science, University of Alabama at Birmingham, Birmingham, AL; ²Cell, Developmental, and Integrative Biology, University of Alabama at Birmingham, Birmingham, AL
- 2362 — B0372 Aqueous humor protein changes in response to the different portions of lensectomy with intraocular lens (IOL) implantation in the juvenile rabbit.** Jonathon Young¹, T. Keppel², C. Skumatz³, R. L. Gundry², I. S. Kassems^{1,3}. ¹Cell Biology, Neurobiology and Anatomy, Medical College of Wisconsin, Milwaukee, WI; ²Center for Biomedical Mass Spectrometry Research, Medical College of Wisconsin, Milwaukee, WI; ³Department of Ophthalmology & Visual Sciences, Medical College of Wisconsin, Milwaukee, WI
- 2363 — B0373 Biodegradable thermogel functions as a vitreous tamponade agent *in-vivo* and stimulates production of vitreous-like body in vitrectomised rabbit eyes.** Xinyi Su^{1,2}, S. Lai², Z. Liu¹, W. Hunziker², G. Lingam¹, X. Loh³, G. Jayantha². ¹Ophthalmology, National University Hospital, Singapore, Singapore; ²Institute of Molecular Cellular Biology, A*STAR, Singapore, Singapore; ³Institute of Materials Research Engineering, A*STAR, Singapore, Singapore
- 2364 — B0374 In silico Comparison of Chlamydia trachomatis drug binding pocketome vs. human and prioritization of potential drug targets.** Umashankar Vetrivel, A. Sadhasivam. Centre for Bioinformatics, Kamalnayan Bajaj Institute for Research in Vision and Ophthalmology, Vision Research Foundation, Sankara Nethralaya, India, Chennai, Tamilnadu, India
- 2365 — B0375 Global computational mutagenesis of ocular proteome indicates a role of protein destabilization in inherited eye disease..** Yuri Sergeev, F. Wood Ortiz, M. Laryukhin, C. McCafferty. National Eye Institute, BETHESDA, MD
- 2366 — B0376 Early biomarkers of retinal injury in rat optic nerve crush and blunt injury models of ocular trauma.** Adam M. Thompson, C. N. Thomas, G. Begum, Z. Ahmed, A. Logan, R. J. Blanch, M. Berry. Neuroscience and Ophthalmology, University of Birmingham, Birmingham, West Midlands, United Kingdom
- 2367 — B0377 Mass spectral study of the impact of diabetes in the distribution of glucose and lipids in human vitreous humor.** Abigail Schnepf¹, M. C. Yappert¹, D. Borchman². ¹Chemistry, University of Louisville, Louisville, KY; ²Ophthalmology, University of Louisville, Louisville, KY
- 2368 — B0378 Mechanism of Mutant STRA6 in causing the Ocular Phenotypes of Matthew-Wood Syndrome.** Yi Shi^{1,2}, G. P. LOBO¹. ¹Department of Medicine, Medical University of South Carolina, Charleston, SC; ²Tianjin Medical University Eye Hospital, Tianjin, China
- 2369 — B0379 Synthesis and identification of two docosanoids in mouse corneas and tears stimulated with pigment epithelium-derived factor (PEDF) plus docosahexaenoic acid (DHA).** Azucena H. Kakazu, T. L. PHAM, J. He, B. Jun, N. G. Bazan, H. E. Bazan. Ophthalmology/ Neuroscience Center, LSU Health Sciences Center, New Orleans, LA
- 2370 — B0380 Mutations in Leber's Congenital Amaurosis Disrupt Retinal Guanylate Cyclase Interaction with Rhodopsin in Vitro; Involvement In Phototransduction.** Vladimir A. Bondarenko. Basic Science, Touro University Nevada, College of Osteopathic Medicine, Henderson, NV
- 2371 — B0381 Ligand-induced perturbation in flexible proteins and its implications for structure-based virtual screening.** Charles Sader, J. J. Zheng. Ophthalmology, Stein Eye Institute, Los Angeles, CA

Exhibit Hall C0038-C0071

Monday, April 30, 2018 3:30 PM-5:15 PM

Retina

286 Neovascular AMD

Moderators: Diana V. Do and Eric H. Souied

2372 — C0038 The Cilioretinal Artery is Protective Against Choroidal Neovascularization in Age-Related Macular Degeneration. Kiersten Snyder^{1,2}, A. Yazdanyar², A. Mahajan², G. Yu². ¹George Washington University School of Medicine and Health Sciences, Washington, District of Columbia; ²Department of Ophthalmology, University of California, Davis, Sacramento, CA

2373 — C0039 Early identification of high-risk patients for visual decay in neovascular age related macular degeneration by SD-OCT. Erdal Tahmaz¹, R. Hoerster¹, A. Anselm², P. Muether². ¹Augenambulenz Erkelenz, Erkelenz, Germany; ²Center of Ophthalmology, University of Cologne, Cologne, Germany

2374 — C0040 The SWIM 2 (Switching from Intermittent Anti-VEGF to Monthly Therapy in Neovascular AMD) Study. Kellen Kashiwa¹, M. Bennett¹, C. Hooten¹, K. Demaine³, C. Milroy², B. Stark². ¹Retina Institute of Hawaii, Honolulu, HI; ²Engility, Chantilly, VA; ³Retina Metrics, LLC, Los Angeles, CA

2375 — C0041 Dynamics of metamorphopsia characteristics during progression from intermediate to advanced age-related macular degeneration. Daniela Claessens. *Augenheilkunde Lindenthal, Cologne, Germany* *CR

2376 — C0042 Retinal vascular fractal dimension as a marker of treatment-response in neovascular age-related macular degeneration. Thomas Lee Torp^{1,2}, D. B. Jakobsen^{1,2}, E. Stefansson⁴, T. Peto^{3,2}, J. Grauslund^{1,2}. ¹Department of Ophthalmology, Odense University Hospital, Odense, Denmark; ²Department of Clinical Research, University of Southern Denmark, Odense, Region of Southern Denmark, Denmark; ³School of Medicine, Dentistry and Biomedical Sciences, Queen's University Belfast, Belfast, Ireland; ⁴Department of Ophthalmology, National Hospital Reykjavik, Reykjavik, Iceland *CR, ✗

2377 — C0043 Progression to late AMD: Role of SDOCT-biomarkers in patients with drusenoid PED. Julia Lemke¹, V. Sitniska¹, E. Kersten², T. Schick¹, P. Enders¹, C. C. Hoyng², A. I. Den Hollander², S. Fauser³, L. Altay¹. ¹Department of Ophthalmology, University Hospital Cologne, Cologne, Germany; ²Department of Ophthalmology, Radboud university medical center, Nijmegen, Netherlands; ³F. Hoffmann-La Roche AG, Basel, Switzerland *CR

2378 — C0044 Macular Structure-function Correlation in Patients with Age-related Macular Degeneration Treated with Intravitreal Ranibizumab -12-month-results-. Tomoharu Nishimura, S. Machida. ophthalmology, Dokkyo Medical University Saitama Medical center, Koshigaya-shi, Saitama-ken, Japan

2379 — C0045 Vertical metamorphopsia improved in patients treated with Afibercept for neovascular AMD at eighteen months follow-up. Marion Schroeder, M. Loevestam-Adrian. *Ophthalmology, Lund University, Lund, Sweden* *CR, ✗

2380 — C0046 Effect of Statin Exposure on Choroidal Neovascularization in Nonexudative Age-Related Macular Degeneration Patients. Nitya Rajeshuni, C. A. Ludwig, D. M. Moshfeghi. *Ophthalmology, Byers Eye Institute, Stanford University School of Medicine, Stanford, CA*

2381 — C0047 Association of Diet to the Development of Late AMD in Participants of AREDS. Elvira Agron¹, E. Y. Chew¹, J. A. Mares³, E. Mezhibovsky⁴, T. E. Clemons², F. Van Asten¹. ¹National Eye Institute, Rockville, MD; ²EMMES Corporation, Rockville, MD; ³Department of Ophthalmology and Visual Sciences, University of Wisconsin-Madison, Madison, WI; ⁴Madison, University of Wisconsin-Madison, Madison, WI

2382 — C0048 Agreement in CNV Lesion Location as Assessed by SD-OCT vs. Fluorescein Angiography. Mary K. Wilda, E. Corkery, C. Hurtenbach, A. Domalpally, R. Trane, B. A. Blodi. *Dept of Ophthalmology & Visual Sciences, University of Wisconsin, Madison, WI*

2383 — C0049 Clinical outcomes of switching to aflibercept using a pro re nata treatment regimen in patients with neovascular age-related macular degeneration who incompletely responded to ranibizumab. Peter Cackett^{1,4}, F. Elwes², P. Aspinall^{3,4}, P. Sim⁴, C. Y. Loo⁴, B. Dhillon^{1,4}, A. Armbrecht¹, A. Al-Ani¹, S. Borooah^{1,4}. ¹Ophthalmology, Princess Alexandra Eye Pavilion, Edinburgh, Scotland, UK, Edinburgh, United Kingdom; ²New Royal Infirmary, Edinburgh, Edinburgh, United Kingdom; ³Heriot Watt University, Edinburgh, Edinburgh, United Kingdom; ⁴University of Edinburgh, Edinburgh, United Kingdom *CR

2384 — C0050 The conundrum of relations in the multivariate dataset of nvAMD treatment. Fabian Lehmann¹, R. Wilke¹, R. P. Finger², H. Sachs¹. ¹Ophthalmology, Medical Center Dresden Friedrichstadt, Dresden, Germany; ²Ophthalmology, University of Bonn, Bonn, Germany

2385 — C0051 Systemic Beta-Blockers and Risk of Progression to Neovascular Age-related Macular Degeneration. Anton M. Kolomeyer. *Ophthal & Visual Science, University of Pennsylvania, Philadelphia, PA*

2386 — C0052 Home-monitoring by age-related macular degeneration patients using a tablet perimeter. Selwyn M. Prea², Y. Kong^{4,3}, R. H. Guymer^{4,3}, E. K. Baglin⁴, P. Sivarajah⁴, A. J. Vingrys¹. ¹Optometry and Visions Sciences, The University of Melbourne, Point Cook, Victoria, Australia; ²Optometry and Visions Sciences, The University of Melbourne, Parkville, Victoria, Australia; ³Royal Victorian Eye & Ear Hospital, East Melbourne, Victoria, Australia; ⁴Centre for Eye Research Australia, East Melbourne, Victoria, Australia *CR

2387 — C0053 Change of retinal pigment epithelial atrophy after anti-vascular endothelial growth factor treatment in exudative age-related macular degeneration. Seung Jun Lee. *Kangwon National University, Chuncheon, Kangwon, Korea (the Republic of)*

2388 — C0054 The impact of anti-VEGF treatment delay on the visual acuity of patients with wet age-related macular degeneration (AMD). Nishal Patel, S. Stirrup. *Kent and Canterbury Hospital, East Kent Hosp Univ Fdn NHS Trust, Canterbury, England, United Kingdom*

2389 — C0055 Efficacy of adjuvant topical dorzolamide-timolol in patients with neovascular age-related macular degeneration unresponsive to anti-vascular endothelial growth factor therapy. Joo Yeon Kim^{1,2}, J. Lee², S. Lee², C. Lee². ¹National Health Insurance Service Ilsan Hospital, Seoul, Korea (the Republic of); ²Ophthalmology, Yonsei university college of medicine, Seoul, Korea (the Republic of)

2390 — C0056 Three year real world outcomes of aflibercept treatment for wet age-related macular degeneration and results of variable treatment regimes in the second year. Sajjad Mahmood^{1,2}, Z. C. Ali¹, T. M. Aslam^{1,2}, K. Balaskas^{3,2}. ¹Manchester Royal Eye Hospital, Manchester, United Kingdom; ²University of Manchester, Manchester, United Kingdom; ³NHR Biomedical Research Centre at Moorfields Eye Hospital NHS Foundation Trust and UCL Institute of Ophthalmology, London, United Kingdom *CR

2391 — C0057 Comparison of fluorescein angiography lesion size of choroidal neovascularization associated with age-related macular degeneration in participants and non-participants of the home tele-monitoring study (ForeseeHome Study). Ramiro S. Maldonado¹, E. Agron¹, T. E. Clemons², E. Y. Chew¹. ¹National Eye Institute, National Institutes of Health, Bethesda, MD; ²The EMMES Corporation, Rockville, MD ✗

2392 — C0058 Obesity-related genetic variation may associate to outcome of wet AMD treatment. Jussi Paterno^{1,2}, S. Helisalmi³, K. Kaarmiranta^{1,2}. ¹Department of Ophthalmology, Kuopio University Hospital, Kuopio, Finland; ²Department of Ophthalmology, University of Eastern Finland, Kuopio, Finland; ³Neurology Clinical Research Centre, University of Eastern Finland, Kuopio, Finland

2393 — C0059 Superficial and deep capillary plexuses evolution in retinal angiomatous proliferation during 1-year aflibercept treatment assessed by means of swept-source optical coherence tomography angiography. Slawomir Teper, A. Nowinska, A. Wylegala, E. Wylegala. *Chair and Clinical Dept. of Ophthalmology, Medical University of Silesia, Katowice, slaskie, Poland*

2394 — C0060 Topical VEGF receptor inhibitor, LHA510, did not demonstrate efficacy in a Proof-of-Concept study in patients with neovascular age-related macular degeneration (nv AMD). Stephen H. Poor, C. M. Adams, M. Ferriere, A. Weichselberger, C. L. Grosskreutz, G. Weissgerber. *Ophthalmology, Novartis, Cambridge, MA* *CR, ✗

2395 — C0061 Retrospective analysis of intravitreal injections for age related macular degeneration (ARMD) from 2012 to 2016.

Gerhard Kieselbach¹, C. Zehetner¹, M. Kralinger¹, I. Walt¹, A. Vavrovsky². ¹Ophthalmology, Medical University, Innsbruck, Austria; ²MH, Vienna, Austria

2396 — C0062 Association between Oral Iron Supplementation and Retinal or Subretinal Hemorrhage in the Comparison of Age-Related Macular Degeneration Treatments Trials.

Delu Song¹, G. Ying¹, J. L. Dunaief¹, R. Bhuyan¹, Y. Li¹, M. G. Maguire¹, J. E. Grunwald¹, E. Daniel¹, S. A. Hagstrom², D. F. Martin². ¹Scheie Eye Institute, University of Pennsylvania, Philadelphia, PA; ²Cole Eye Institute, Cleveland, OH *CR, ✗

2397 — C0063 Choroidal reflectivity as an indicator of choroidal structure in neovascular age-related macular degeneration.

Sufian Elfandi, S. Ooto, A. Uji, M. Hata, A. Oishi, H. Tamura, K. Yamashiro, A. Tsujikawa. Ophthalmology, Kyoto University, Kyoto-shi, Japan

2398 — C0064 Improved visual prognosis with early vitrectomy and subretinal tissue plasminogen activator injection in patients with submacular hemorrhage due to neovascular age-related macular degeneration.

Sarina Amin¹, Y. Kusne², D. Goldenberg¹, D. Y. Kunimoto¹, K. Jamal¹. ¹Retinal Consultants of Arizona, Phoenix, AZ; ²University of Arizona, Phoenix, AZ

2399 — C0065 Prevalence of thickened choroid in eyes with a CNVM -an indicator for long term treatment.

Sumita Phatak, M. Eleftheriadou, R. Anjos-Serrano, B. Pal. Medical Retina, Moorfields Ey Hospital NHS Foundation trust, London, United Kingdom

2400 — C0066 Results of switch patients from Ranibizumab to Aflibercept in chronically active choroidal neovascular membrane (CNVM).

Filofteia Tacea, C. Schiesser, T. Rajhbeharrysingh, V. Kotamarthi. Ophthalmology, Leighton Hospital, Ewloe, ENGLAND, United Kingdom

2401 — C0067 Correlation of Baseline Visual Acuity Score with Subcomponents of Choroidal Neovascularization Lesions.

Ashley Yamileth Murillo Valle¹, A. H. Hariri^{1,2}, S. Velaga^{1,2}, M. G. Nittala^{1,2}, M. S. Ip^{1,2}, S. R. Sadda^{1,2}. ¹Doheny Eye Institute, Los Angeles, CA; ²Ophthalmology, University of California - Los Angeles, Los Angeles, CA *CR

2402 — C0068 Prevalence and Clinical Characteristics of Pachydrusen in Polypoidal Choroidal Vasculopathy: Multimodal image study.

Junwon Lee, S. Byeon. Department of Ophthalmology, Yonsei University College of Medicine, Seoul, Korea (the Republic of)

2403 — C0069 Nine-year treatment outcome of naïve polypoidal choroidal vasculopathy in clinical practice.

Byung Ju Jung, W. Lee. Seoul St. Mary's Hospital, College of Medicine, The Catholic University of Korea, Seoul, Korea (the Republic of)

2404 — C0070 Screening failure rates in the EVEREST II clinical trial: challenges in the diagnosis of symptomatic macular polypoidal choroidal vasculopathy.

Colin S. Tan¹, S. Parikh². ¹Ophthalmology, National Healthcare Group Eye Institute, Singapore, Singapore; ²Novartis Pharma AG, Basel, Switzerland *CR, ✗

2405 — C0071 A Novel Group of mid-Peripheral Polypoidal Choroidal Vasculopathy with Diffuse RPE Atrophy.

xiaoling liu¹, H. Fu^{2,3}. ¹Retina Department, School of Ophthalmology & Optometry and Eye Hospital, Wenzhou Medical University, Wenzhou, China; ²Vascular Biology Program, Boston Children's Hospital, Boston, MA; ³Harvard University, Boston, MA

Exhibit Hall C0072-C0097

Monday, April 30, 2018 3:30 PM-5:15 PM

Retina / Retinal Cell Biology

287 Dry AMD

Moderator: Jordi Mones

2406 — C0072 Subretinal drusenoid deposits in Chinese age-related macular degeneration patients.

Xiaoyu Xu¹, Y. Zhang², X. Liu¹. ¹State Key Laboratory of Ophthalmology, Zhongshan Ophthalmic Center, Sun Yat-sen University, Guangzhou, China; ²Department of Ophthalmology, School of Medicine, University of Alabama at Birmingham, Birmingham, AL

2407 — C0073 Retinal layer thicknesses in early age-related macular degeneration: results from the German AugUR-study.

Caroline Brandl^{1,2}, C. Brücklmayer², M. E. Zimmermann², F. Günther^{3,2}, H. Küchenhoff³, H. Helbig¹, B. H. Weber¹, I. M. Heid², K. J. Stark². ¹Department of Ophthalmology, University Hospital Regensburg, Regensburg, Germany; ²Department of Genetic Epidemiology, University of Regensburg, Regensburg, Germany; ³Statistical Consulting Unit StaBLab, Department of Statistics, Ludwig-Maximilians-University Munich, Munich, Germany; ⁴Institute of Human Genetics, University of Regensburg, Regensburg, Germany

2408 — C0074 Clinical characteristics of the peripheral retina in Age-related Macular Degeneration (AMD) in an ageing population.

Nicola B. Quinn, D. Wright, T. Peto, I. Young, F. Kee, U. Chakravarthy, R. Hogg. Centre for Public Health, Queen's University Belfast, Belfast, Northern Ireland, United Kingdom *CR

2409 — C0075 Changes in inner retinal thickness in age-related macular degeneration (AMD) detected using a grid-wise analysis of optical coherence tomography scans.

Lisa Nivison-Smith^{1,2}, N. Tan², N. Yoshioka^{1,2}, A. Choi^{1,2}, B. Zangerl^{1,2}, M. Kalloniatis^{1,2}. ¹School of Optometry and Vision Science, University of New South Wales, Kensington, New South Wales, Australia; ²Centre for Eye Health, Sydney, New South Wales, Australia

2410 — C0076 A functional biomarker for early detection of age-related macular degeneration (ARMD) and other retinal diseases.

Clinton N. Sims. Association of Ophthalmology, Ft Myers, FL *CR

2411 — C0077 Topographic rod functional recovery profiles after prolonged dark-adaptation in eyes with reticular pseudodrusen.

Chi D. Luu^{1,2}, R. Tan^{1,2}, E. Caruso¹, E. L. Fletcher³, R. H. Guymer^{1,2}. ¹Macular Research Unit, Centre for Eye Research Australia, East Melbourne, Victoria, Australia; ²Department of Surgery (Ophthalmology), The University of Melbourne, Melbourne, Victoria, Australia; ³Department of Anatomy and Neuroscience, The University of Melbourne, Melbourne, Victoria, Australia

2412 — C0078 Impact of Fundus Autofluorescence Pattern on Geographic Atrophy Progression in Untreated Eyes: A Meta-analysis.

Liangbo L. Shen¹, F. Liu², H. Grossetta Nardini¹, I. Del Priore¹. ¹Ophthalmology & Visual Science, Yale University School of Medicine, New Haven, CT; ²Biomedical Engineering, Yale University, New Haven, CT

2413 — C0079 Reticular drusen and systemic disease in age-related macular degeneration.

Celine Saade, M. Krzystolik, P. B. Greenberg. Ophthalmology, Brown University, Providence, RI

2414 — C0080 Non-invasive, in-vivo measurement of lutein and zeaxanthin in the central retina.

Pinakin G. Davey¹, D. L. Gierhart², S. Rowe³. ¹College of Optometry, Western University of Health Sciences, Pomona, CA; ²ZeaVision, St Louis, MO; ³Rowe Technical Design, Inc., Dana Point, CA *CR

2415 — C0081 Final Analysis of LIGHTSITE I: A Double-Masked, Randomized, Sham-Controlled Study with Photobiomodulation in Dry Age-Related Macular Degeneration Subjects.

Marion R. Munk¹, S. N. Markowitz², R. Devenyi^{2,3}, C. Croissant⁴, S. Tedford⁴, R. Ruckert⁵, M. Walker⁶, B. Patino², L. Chen², M. Daibert-Nido², c. tedford⁴. ¹Dept of Ophthalmology, Inselspital, University Hospital Bern, Bern, Switzerland; ²Ophthalmology, University of Toronto, Toronto, Ontario, Canada; ³Ophthalmology, University Health Network, Toronto, Ontario, Canada; ⁴LumiThera Inc., Poulsbo, WA; ⁵Eyegenos, Bern, Switzerland; ⁶Walker Bioscience, Carlsbad, CA *CR, ✗

2416 — C0082 Flash electroretinogram (fERG) in Age-related Macular Degeneration (AMD).

Olga Kraszewska¹, Q. Davis¹, B. Stintzman¹, R. Feig², R. Levy³, C. Manning⁴. ¹LKC Technologies Inc, Gaithersburg, MD; ²Brooklyn Eye Center, Brooklyn, NY; ³DR's Eyecare Center, Burlington, NJ; ⁴Wedgwood Optometry, Fort Worth, TX *CR, ✗

2417 — C0083 Identification of Novel Biomarkers in Geographic Atrophy using Wide Spectrum Multiplexing.

Kameran Lashkari¹, G. C. Teague¹, U. Beattie², M. McLaughlin³, F. J. Lopez⁴. ¹Schepens Eye Research Institute, Massachusetts Eye and Ear, Boston, MA; ²Harvard Stem Cell Center; Harvard University, Boston, MA; ³Virtual Proof of Concept DPU, GlaxoSmithKline, King of Prussia, PA; ⁴Ophthalmology, Allergan plc, Irvine, CA *CR

2418 — C0084 Color Contrast Sensitivity in Age-Related Macular Degeneration(AMD).

Jessica Capri¹, H. McLeod¹, L. V. Messner¹, A. S. Hariprasad², D. Leong¹. ¹Illinois College of Optometry, Chicago, IL; ²University of Chicago Laboratory Schools, Chicago, IL *CR

2419 — C0085 Fast mesopic and scotopic retinal sensitivity in eyes with drusen and reticular pseudodrusen. Federico Corvi, M. Belotti, C. Bianchi, L. Pace, M. Pellegrini, G. Staurenghi. Ophthalmology, Luigi Sacco Hospital University of Milan, Milan, Italy *CR

2420 — C0086 The effect of epiretinal membrane on drusen volume as quantified by SD-OCT. Emily Li¹, O. Shakir¹, J. Kempton¹, P. Coady^{1,2}. ¹Biomedical Sciences, Yale University, New Haven, CT; ²New England Retina Associates, Hamden, CT

2421 — C0087 Dark-adapted two-color fundus-controlled perimetry in the junctional zone of geographic atrophy. Maximilian Pfau¹, P. Mueller¹, L. von der Emde¹, M. Lindner^{2,1}, R. Hassenrik¹, P. T. Möller¹, M. Fleckenstein¹, F. Holz¹, S. Schmitz-Valckenberg¹. ¹Department of Ophthalmology, University of Bonn, Bonn, Germany; ²The Nuffield Laboratory of Ophthalmology, Sleep and Circadian Neuroscience Institute, Nuffield Department of Clinical Neurosciences, University of Oxford, Oxford, United Kingdom *CR

2422 — C0088 Fundus autofluorescence risk factors for progression of geographic atrophy (GA) in the Age-Related Eye Disease Study 2. Jeong W. Pak¹, A. Domalpally¹, E. Agron², R. P. Danis¹, T. E. Clemons³, E. Y. Chew². ¹Ophthalmology and Visual Sciences, University of Wisconsin - Madison, Madison, WI; ²Clinical Trials Branch, Division of Epidemiology and Clinical Applications, National Eye Institute/National Institutes of Health, Bethesda, MD; ³The EMMES Corporation, Rockville, MD *CR

2423 — C0089 Longitudinal Study of Dark Adaptation as a Functional Outcome Measure for Age-Related Macular Degeneration.

Katherine G. Chen, J. Alvarez, W. T. Wong, H. Wiley, E. Y. Chew, F. L. Ferris, C. A. Cukras. National Eye Institute, National Institutes of Health, Bethesda, MD

2424 — C0090 Tablet-Based Reading Tests in Early Dry Age-Related Macular Degeneration.

Divya Narayanan¹, J. D. Rodriguez¹, G. Wallstrom², D. L. Welch¹, K. J. Lane¹, A. Shapiro¹, D. Hollander¹, M. B. Abelson¹. ¹Ora, Inc, Andover, MA; ²Statistics & Data Corporation, Tempe, AZ *CR

2425 — C0091 Determining optimal test parameters for assessing dark adaptation in people with intermediate age-related macular degeneration. Alison M. Binns, L. Edwards, D. Taylor, D. Crabb. Optometry and Visual Science, City, University of London, London, United Kingdom *CR

2426 — C0092 Microperimetry fixation characteristics in an Amish Population with Age-Related Macular Degeneration. Kristina Espino¹, S. Velaga^{1,2}, M. G. Nittala^{1,2}, A. H. Hariri^{1,2}, D. G. Birch⁴, D. Stambolian³, M. S. Ip^{1,2}, S. R. Sadda^{1,2}. ¹Doheny Eye Institute, Los Angeles, CA; ²Department of Ophthalmology, David Geffen School of Medicine at UCLA, Los Angeles, CA; ³Department of Ophthalmology, University of Pennsylvania, Perelman School of Medicine, Philadelphia, PA; ⁴Retina Foundation of Southwest, Dallas, TX *CR

2427 — C0093 Lower Use of Hormone Replacement Therapy among Cases of Age-related Macular Degeneration. Jennifer L. Patnaik¹, A. M. Lynch¹, C. N. Jennifer¹, L. L. Echali¹, J. Hodges², M. T. Mathias¹, F. S. Siringo¹, B. D. Wagner^{3,1}, A. G. Palestine¹, N. Mandava¹. ¹Department of Ophthalmology, University of Colorado Denver School of Medicine, Broomfield, CO; ²Obstetrics and Gynecology, University of Colorado School of Medicine, Aurora, CO; ³Biostatistics, University of Colorado Denver, Aurora, CO

2428 — C0094 Evaluation and comparison of objective and psychophysical techniques to measure macular pigment optical density. Angeline Ngo¹, P. G. Davey², F. Spors², S. Amonoo-Monney², D. L. Gierhart³, S. Rowe⁴. ¹Graduate College of Biomedical Sciences, Western University of Health Sciences, Pomona, CA; ²College of Optometry, Western University of Health Sciences, Pomona, CA; ³ZeaVision, Chesterfield, MO; ⁴Rowe Technical Design, Inc., Dana Point, CA *CR

2429 — C0095 Age-related macular degeneration: both myopia and sunglasses decrease retinal light dose which may explain their protective effect. Michael Quigley¹, I. Powell¹, W. Wittich². ¹Ophthalmology, CHUM, Montreal, Quebec, Canada; ²Powell Inc, Ottawa, Ontario, Canada; ³School of Optometry University of Montreal, Montreal, Quebec, Canada

2430 — C0096 Use of mobile MyVisionTrack (mVT) technology as a remote visual function metric in Early and Intermediate Age-Related Macular Degeneration. Mary Labowsky^{1,2}, S. Stinnett³, U. F. Luhmann⁴, L. Vajzovic³, A. Horne³, C. A. Toth², S. W. Cousins³, E. M. Lad². ¹Internal Medicine, University of Hawaii, Honolulu, HI; ²Ophthalmology, New York Eye and Ear, New York, NY; ³Ophthalmology, Duke Eye Center, Durham, NC; ⁴Roche Pharmaceutical Research and Early Development, Translational Medicine Ophthalmology, Roche Innovation Center, Basel, Switzerland *CR, ✗

2431 — C0097 New Insights into the Development and Progression of Geographic Atrophy after Full Thickness Autologous Choroidal Graft. Maurizio Mete¹, G. Pertile¹, A. Peroglio Deiro², A. Alfano¹, M. Sartore¹, A. Polito¹, M. Guerriero³. ¹Ophthalmology, Ospedale Sacro Cuore Don Calabria, Negrar, Italy; ²Ophthalmology, San Gerardo Hospital, Monza, Italy; ³Computer Science, University of Verona, Verona, Italy

Exhibit Hall C0098-C0125

Monday, April 30, 2018 3:30 PM-5:15 PM

Retinal Cell Biology

288 Early and Atrophic AMD

Moderators: Jason Miller and Malia M. Edwards

2432 — C0098 CIDEA genetic variants identified in slow progressing Age-related Macular Degeneration patients affect lipid droplet formation. Sehyun Kim, H. Qin, A. Dressen, P. Chang, M. Sagolla, J. Elstrott, B. Yaspan, M. Jeanne. Genentech, South San Francisco, CA *CR

2433 — C0099 Clinical and nano-analytical imaging identify calcified nodules as progression markers for age-related macular degeneration. Anna C. Tan^{2,1}, M. Pilgrim², S. Fearn³, S. Bertazzo⁴, E. Tsolaki⁴, A. P. Morrell⁵, M. Li⁶, J. Messinger⁶, R. Dolz-Marco⁷, J. Ler⁸, M. G. Nittala⁸, S. R. Sadda^{8,10}, I. Lengyel^{2,9}, K. Freund⁷, C. A. Curcio⁶. ¹Singapore Eye Research Institute, Singapore, Singapore; ²UCL Institute of Ophthalmology, London, United Kingdom; ³Department of Materials, Imperial College London, London, United Kingdom; ⁴Department of Medical Physics & Biomedical Engineering, Imperial College London, London, United Kingdom; ⁵Material Physics, Aston University, Birmingham, United Kingdom; ⁶Department of Ophthalmology, University of Alabama at Birmingham, Birmingham, AL; ⁷Vitreous Retina Macula Consultants of New York, New York, NY; ⁸Doheny Eye Institute, Los Angeles, CA; ⁹Centre for Experimental Medicine, Queen's University Belfast, Belfast, United Kingdom; ¹⁰Department of Ophthalmology, David Geffen School of Medicine at UCLA, Los Angeles, CA *CR

- 2434 — C0100 Choriocapillaris pericyte dropout: an early event in the development of age-related macular degeneration.** Mones S. Abu-Asab, H. Mohammed, J. Sastry, A. Grewe, M. M. Campos. Section of Histopathology, National Eye Institute, Bethesda, MD
- 2435 — C0101 Choriocapillaris dropout in early age-related macular degeneration.** Gerard A. Lutty¹, I. A. Bhutto^{1,2}, M. M. Edwards¹, D. S. McLeod¹. ¹Wilmer Eye Inst, Johns Hopkins Univ Sch of Med, Baltimore, MD; ²Ophthalmology, U. of Pittsburgh, Pittsburgh, PA
- 2436 — C0102 Subretinal mononuclear phagocyte accumulation on drusen in early age related macular degeneration.** Chiara M. Eandi^{1,2}, M. Paques¹, X. P. Guillonnetau¹, F. Sennlaub¹. ¹Institut de la Vision, Paris, France; ²University of Torino, Torino, Italy
- 2437 — C0103 Phenotypes of Retinal Pigment Epithelium (RPE) Autofluorescence (AF) and Morphology in Donor Eyes with Age-Related Macular Degeneration (AMD).** John A. Gambri¹, K. R. Sloan¹, C. E. Huisin¹, J. D. Messinger¹, T. Ach², C. A. Curcio¹. ¹Ophthalmology, University of Alabama at Birmingham School of Medicine, Birmingham, AL; ²Ophthalmology, University Hospital Würzburg, Würzburg, Germany *CR
- 2438 — C0104 Amelotin, a promoter of hydroxyapatite mineralization, is induced in serum-deprived RPE cells and colocalizes with calcium deposits in AMD eyes.** Dinusha Rajapakse, K. Peterson, S. Mishra, G. Wistow. National Eye Institute, National Institutes of Health, Bethesda, MD
- 2439 — C0105 Fibulin-3 distribution in sections of postmortem human retina containing drusen.** Alistair J. Barber, W. Wang, J. Etzel, C. Ondeck, J. M. Sundstrom. Ophthalmology, Penn State Hershey Eye Center, Penn State Hershey College of Medicine, Hershey, PA
- 2440 — C0106 Glycemicly stressed Nrf2-null mice develop features of age-related macular degeneration and diabetic retinopathy.** Sheldon Rowan^{1,2}, S. Jiang¹, C. Moreira-Neto², M. Chang¹, D. Smith¹, N. K. Waheed², A. Taylor^{1,2}. ¹Human Nutrition Research Center on Aging, Tufts University, Boston, MA; ²Dept. Ophthalmology, Tufts University School of Medicine, Boston, MA
- 2441 — C0107 Determining ocular HtrA1 activity and inhibition using novel activity based probe.** Irene Tom¹, J. Gutierrez¹, K. J. Katschke², I. Figueroa³, V. Pham⁴, H. S. Booter⁵, L. Rangell⁶, S. Ulufatu⁷, G. Salvesen⁸, J. Lill⁴, M. Van Lookeren Campagne², A. Baruch¹. ¹OMNI Biomarker Development, Genentech, South San Francisco, CA; ²Immunology, Genentech, South San Francisco, CA; ³PTPK, Genentech, South San Francisco, CA; ⁴Microchemistry, Proteomics & Lipidomics, Genentech, South San Francisco, CA; ⁵Safety Assessment, Genentech, South San Francisco, CA; ⁶Pathology, Genentech, South San Francisco, CA; ⁷DevSci SA gNO, Genentech, South San Francisco, CA; ⁸Medical discovery institute, Sanford Burnham Prebys, La Jolla, CA *CR
- 2442 — C0108 Identification of endpoints appropriate in evaluating potential therapeutics for retinal degenerations using apoB100 transgenic mice.** Mayur Choudhary², F. Tayyari², J. T. Handa³, G. Malek^{2,1}. ¹Pathology, Duke University School of Medicine, Durham, NC; ²Ophthalmology, Duke University School of Medicine, Durham, NC; ³Wilmer Eye Institute, John Hopkins School of Medicine, Baltimore, MD *CR
- 2443 — C0109 Geographic Atrophy: Correlation Between Confocal Scanning Laser Ophthalmoscopy (SLO), Histology and Immunohistology of Retinal Sections in the Region of Expanding Lesions.** Vera L. Bonilha, B. A. Bell, M. E. Rayborn, J. G. Hollyfield, S. A. Hagstrom, G. J. Pauer. Ophthalmology, Cole Eye Inst/Cleveland Clin Lerner Ctr, Cleveland, OH
- 2444 — C0110 Bexarotene blocks the pathogenic effects of amyloid- β oligomers on RPE cells.** Steven C. McLoon, V. Rogness. Neuroscience, University of Minnesota, Minneapolis, MN
- 2445 — C0111 Light-Induced Retinal Damage in Rodents as an Interventional Model for Neurotrophic Treatment for Geographic Atrophy.** Alexander Hua, T. Turunen, G. C. Teague, M. Shantos, K. Lashkari. Schepens Eye Research Institute, Boston, MA
- 2446 — C0112 Preclinical Animal Safety Study with CR4-RPE Cells.** John Mazzilli¹, J. Snook², K. Simmons¹, A. Domozhrov¹, C. A. Garcia¹, R. Wetsel¹, E. Zsigmond¹, P. Westenskow². ¹University of Texas, Houston, TX; ²Baylor College of Medicine, Houston, TX
- 2447 — C0113 Response of murine retinal microglia towards subretinal injection of human lipofuscin.** Peter Heiduschka¹, N. Su¹, J. König², A. Höhn², T. Grune³, C. Uhlig⁴, N. Eter³. ¹Research laboratory, Univ Eye Hosp Muenster, Muenster, Germany; ²German Institute of Human Nutrition, Potsdam-Rehbrücke, Germany; ³Univ Eye Hosp Muenster, Münster, Germany; ⁴Cornea Bank Münster, Univ Eye Hosp Muenster, Münster, Germany
- 2448 — C0114 A potent LXR (liver X receptor) agonist can restore lysosome-mediated clearance in RPE cells from a mouse model with AMD-like phenotype.** Debasish Sinha^{2,1}, M. Yazdankhah², P. Shang², C. Maugeais³, H. Ratni³, S. L. Hose², I. A. Bhutto², A. Jayagopal³. ¹Ophthalmology, Johns Hopkins Wilmer Eye Inst, Baltimore, MD; ²Ophthalmology, University of Pittsburgh School of Medicine, Pittsburgh, PA; ³Pharma Research and Early Development, Ophthalmology Discovery and Biomarkers, F. Hoffmann-La Roche Ltd., Roche Innovation Center Basel, Basel, Switzerland *CR
- 2449 — C0115 miR-126 is required for maintaining mouse choroidal vascular integrity.** jing ma, F. Zhao, c. anderson, s. karnes, S. Wang. cell and molecular biology, Tulane University, New Orleans, LA
- 2450 — C0116 Establishing a method for serial vitreous humor sampling in rabbits: Reducing animal numbers and improving read-out quality.** Claudia Senn. Pharmaceutical Science, Hoffmann La Roche, Basel, Switzerland
- 2451 — C0117 Preclinical safety study of ultra-rapid, non-pharmacologic anesthesia for intravitreal injections.** Stephen Smith¹, G. Kim³, K. P. Pipe³, C. Besirli². ¹Ophthalmology, Stanford University, Mountain View, CA; ²Ophthalmology, University of Michigan, Ann Arbor, MI; ³Mechanical Engineering, University of Michigan, Ann Arbor, MI *CR
- 2452 — C0118 Genetic deficiency of nuclear receptor REV-ERBa causes retinal pigment epithelial cell degeneration in mice.** Shuo Huang, C. Liu, Z. Wang, Y. Sun, Z. Fu, R. Duran, A. Poblete, S. S. Cho, J. Chen. Department of Ophthalmology, Boston Children's Hospital, Harvard Medical School, Boston, MA
- 2453 — C0119 Superoxide Dismutase 2 Deletion in Retinal Pigment Epithelium (RPE) Results in Age and Light-Dependent Mitochondrial Oxidative Stress and RPE-damage.** Emily Brown^{1,2}, A. S. Lewin³, J. D. Ash¹. ¹Ophthalmology, University of Florida, Gainesville, FL; ²Clinical and Translational Science Institute, University of Florida, Gainesville, FL; ³Department of Molecular Genetics and Microbiology, University of Florida, Gainesville, FL
- 2454 — C0120 The ABCA1/G1 lipid-efflux pathway in the retinal pigment epithelium (RPE): a role in development of age-related macular degeneration (AMD)?** Federica Storti¹, K. Klee¹, R. Steiner², T. Hornemann², J. L. Dunaief³, A. von Eckardstein², J. Fingerle⁴, C. Maugeais⁵, C. Grimm¹. ¹Lab for Retinal Cell Biology, University of Zurich, Schlieren, Switzerland; ²Institute of Clinical Chemistry, University of Zurich, Schlieren, Switzerland; ³Scheie Eye Institute, University of Pennsylvania, Philadelphia, PA; ⁴Natural and Medical Sciences Institute, University of Tübingen, Tübingen, Germany; ⁵Neuroscience, Ophthalmology and Rare Diseases, F. Hoffmann-La Roche Ltd, Basel, Switzerland *CR

2455 — C0121 NRF-2/PGC-1 α deficiency induces retinal degeneration in mice. Niko Kivinen^{1,2}, S. Felszeghy^{3,4}, J. Paterno^{1,2}, J. Viiri², M. Chen⁵, D. Sinha⁶, D. A. Ferrington⁷, R. Kannan⁸, A. Kauppinen⁹, K. Kaarniranta^{1,2}. ¹Department of Ophthalmology, Kuopio University Hospital, Kuopio, Finland; ²Department of Ophthalmology, University of Eastern Finland, Kuopio, Finland; ³Institute of Dentistry, University of Eastern Finland, Kuopio, Finland; ⁴Institute of Biomedicine, University of Eastern Finland, Kuopio, Finland; ⁵Wellcome-Wolfson Institute of Experimental Medicine, Queen's University Belfast, Belfast, United Kingdom; ⁶The Wilmer Eye Institute, The Johns Hopkins University School of Medicine, Baltimore, MD; ⁷Department of Ophthalmology and Visual Neurosciences, University of Minnesota, Minneapolis, MN; ⁸Arnold and Mabel Beckman Macular Research Center, Doheny Eye Institute, Los Angeles, CA; ⁹School of Pharmacy, University of Eastern Finland, Kuopio, Finland

2456 — C0122 Non-integrated, reverse transcribed Alu complementary DNAs in Geographic Atrophy cause RPE toxicity. Shinichi Fukuda¹, B. J. Fowler², T. Yasuma², A. Varshney¹, K. Ambati¹, N. Kerur¹, B. Gelfand¹, J. Ambati¹. ¹University of Virginia, Charlottesville, VA; ²University of Kentucky, Lexington, KY *CR

2457 — C0123 α B crystallin peptide fused to elastin-like polypeptide provides long-term neuroprotection in a mouse model of AMD. Parameswaran G. Sreekumar¹, Z. Li², W. Wang², C. Spee³, J. MacKay^{2,3}, D. R. Hinton^{4,3}, R. Kannan¹. ¹Ophthalmology, Doheny Eye Institute, Los Angeles, CA; ²Pharmacology and Pharmaceutical Sciences, University of Southern California, Los Angeles, CA; ³USC Roski Eye Institute, University of Southern California, Los Angeles, CA; ⁴Pathology, University of Southern California, Los Angeles, CA

2458 — C0124 Loss of mitochondrial pyruvate carrier 1 in the retina causes retinal degeneration by disrupting mitochondrial metabolism. Allison B. Grenell^{1,3}, Y. Wang^{1,2}, M. Yam^{1,2}, J. Linton², E. Gregor^{1,3}, A. Hauer^{1,3}, J. Murphy^{1,3}, S. Kollandaivelu^{1,3}, J. Hurley^{1,3}, J. Du^{1,3}. ¹Ophthalmology, West Virginia University, Morgantown, WV; ²Biochemistry, The University of Washington, Seattle, WA; ³Biochemistry, West Virginia University, Morgantown, WV; ⁴Ophthalmology, Washington University, Seattle, WA

2459 — C0125 Nucleoside reverse transcriptase inhibitors are broad-spectrum RPE protectants. Shuichiro Hirahara¹, S. Fukuda¹, Y. Kim², R. Yasuma¹, K. Ambati¹, J. Fukuhara¹, D. Fu¹, D. BANERJEE¹, B. J. Fowler², T. Yasuma², N. Kerur¹, B. Gelfand¹, J. Ambati¹. ¹Ophthalmology, University of Virginia, Charlottesville, VA; ²Ophthalmology, University of Kentucky, Lexington, KY *CR

Exhibit Hall C0126-C0150

Monday, April 30, 2018 3:30 PM-5:15 PM

Retinal Cell Biology

289 Disease modeling and potential therapies

Moderator: Emeline F. Nandrot

2460 — C0126 Loss of Translocator Protein 18 kDa (TSPO) in the retinal pigment epithelium (RPE) of mice may lead to impaired visual function and abnormal RPE morphology. Katrin Klee¹, F. Storti¹, J. L. Dunai¹, T. Langmann², C. Grimm¹. ¹Lab for Retinal Cell Biology, University of Zurich, Schlieren, Switzerland; ²Experimental Immunology of the Eye, University of Cologne, Cologne, Germany; ³Scheie Eye Institute, University of Pennsylvania, Philadelphia, PA *CR

2461 — C0127 Effect of Tec Kinases Inhibitor on Complement-mediated Release of Basic Fibroblast Growth Factor from Human RPE Cells. Ping Yang¹, G. M. Tewkesbury¹, K. L. Buehne¹, J. Yang², P. Baciuc², G. J. Jaffe¹. ¹Ophthalmology, Duke University Eye Center, Durham, NC; ²Biology, Allergan, Inc, Irvine, CA *CR

2462 — C0128 PGAM5 deficiency renders RPE cells resistance to oxidant-induced necroptosis. Bo Yu², J. Ma², Z. Wang³, S. Wang^{2,1}. ¹Ophthalmology, Tulane University, New Orleans, LA; ²Department of Cell and Molecular Biology, Tulane University, New Orleans, LA; ³Department of Molecular Biology, University of Texas Southwestern Medical Center, Dallas, TX

2463 — C0129 Specific induction of the internalization and degradation of inflammatory Wnt5a in damaged RPE cells by neuroprotection D1 (NPD1). Jorgelina M. Calandria, S. Kala-Bhattacharjee, N. G. Bazan. Neuroscience Center, LSU Health Sciences Center, New Orleans, LA

2464 — C0130 Association of cone density with RPE morphology in the rd1 mouse. Xuke Ji¹, M. J. Chung², T. Boettcher³, C. L. Cepko², D. M. Wu¹. ¹Massachusetts Eye and Ear Infirmary, Boston, MA; ²Genetics, Harvard Medical School, Boston, MA; ³Laboratory for Nuclear Science, Massachusetts Institute of Technology, Cambridge, MA *CR

2465 — C0131 RAC1 regulates the expression of VEGF via targeting HIF-1 α in ARPE-19 cells under hyperglycemic condition. Rashidul Haque, L. He, A. Ngo, S. Gokhale, M. Aseem, D. Park. Ophthalmology, Emory University, Atlanta, GA

2466 — C0132 Polymeric Nanoparticles: A promising platform for gene delivery to RPE monolayers. Bibhudatta Mishra¹, D. Wilson^{2,3}, S. Sripathi¹, Y. Rui^{2,3}, M. P. Suprenant^{2,3}, B. S. Hansen¹, C. Berlinicke¹, J. Green^{1,2}, D. J. Zack¹. ¹Ophthalmology, Johns Hopkins University School of Medicine, Baltimore, MD; ²Biomedical Engineering, Baltimore, MD; ³Translational Tissue Engineering Center, Baltimore, MD *CR

2467 — C0133 L-DOPA activation of GPR143 decreases lysosomal pH in RPE. Mariel Piechowicz, A. Figueroa, N. R. Congrove, S. A. Sillik, B. S. McKay. Ophthalmology and Vision Science, University of Arizona, Tucson, AZ

2468 — C0134 Human retinal progenitor cells (hRPCs) protect age-related macular degeneration (AMD) transmissitochondrial ARPE-19 cybrids from cellular damage. Jeffrey Yu, G. Hsiang, K. Schneider, M. Chwa, H. J. Klassen, C. M. Kenney, J. Yang. Ophthalmology, UC Irvine School of Medicine, Long Beach, CA

2469 — C0135 Using ARPE-19 cells to investigate pathways associated with retinal pigment epithelium differentiation. Amanda-Jayne F. Carr¹, C. Swann², M. J. Radeke³, T. Rudd², J. Man², H. Keun⁴, T. Athersuch⁴, P. J. Coffey^{1,3}. ¹Institute of Ophthalmology, University College London, London, United Kingdom; ²National Institute for Biological Standards and Control, South Mimms, United Kingdom; ³Neuroscience Research Institute, UC Santa Barbara, Santa Barbara, CA; ⁴Imperial College London, London, United Kingdom

2470 — C0136 Differentiation of ARPE-19 cells in X-Vivo culture medium. Joseph J. Smith, S. I. Wardani, A. F. Carr. UCL Institute of Ophthalmology, London, United Kingdom

2471 — C0137 Outcomes of Insulin-like growth factor-1 treatment on the morphology and junctional integrity of retinal pigment epithelial cells. Aysegül Tura, M. Ranjbar, C. Örin, S. Grisanti. Department of Ophthalmology, University Clinic Schleswig-Holstein, University of Luebeck, Luebeck, Germany

2472 — C0138 Mechanical Stress in RPE Cells Induces VEGF Expression and Promotes *in vitro* Angiogenesis. Farhad Farjood, E. Vargis. Biological Engineering, Utah State University, Logan, UT

2473 — C0139 Effect of zeaxanthin on GSTP1 expression by ARPE-19 cells. Michael E. Ferguson^{1,2}, K. M. Knight², J. M. Gray², C. Dorey^{1,2}. ¹Virginia Tech Carilion School of Medicine, Roanoke, VA; ²Carilion Clinic, Roanoke, VA *CR

2474 — C0140 Expression of lactate transporters in the RPE and photoreceptors is required for health and functional activity of the outer retina. John Y. Han¹, J. Kinoshita², B. A. Bell³, R. Nowak³, N. J. Philp¹, N. S. Peachey^{2,4}. ¹Pathology, Anatomy, & Cell Biology, Thomas Jefferson University, Philadelphia, PA; ²Cole Eye Institute, Cleveland Clinic, Cleveland, OH; ³University of Illinois at Urbana-Champaign, Urbana-Champaign, IL; ⁴Louis Stokes Cleveland VA Medical Center, Cleveland, OH

- 2475 — C0141 Nucleoside reverse transcriptase inhibitors (NRTI) prevent inflammasome activation in retinal pigmented epithelium cells.** Daipayan Banerjee¹, J. Fukuhara², D. Fu¹, S. Fukuda¹, S. Hirahara¹, Y. Kim², B. J. Fowler², T. Yasuma², R. Yasuma², K. Ambati¹, N. Kerur¹, B. Gelfand¹, J. Ambati¹. ¹Ophthalmology, University of Virginia, Charlottesville, VA; ²University of Kentucky, Lexington, KY *CR
- 2476 — C0142 Pharmaceutical induction of PGC-1 α protects retinal pigment epithelium from oxidative stress.** Magali Saint-Geniez^{1,3}, S. Satish², H. Philipose³, M. Rosales^{1,3}. ¹Ophthalmology, Harvard Medical School, Boston, MA; ²Boston University School of Medicine, Boston, MA; ³Schepens Eye Research Institute of Massachusetts Eye and Ear, Boston, MA
- 2477 — C0143 Nicotinamide protects against PVR by preventing RPE cells to undergo EMT.** Marie Fernandes^{1,2}, L. Schiff^{1,2}, T. Swigut³, N. Boles⁴, R. Srinivasan³, A. Rada-Iglesias⁵, Q. Wang⁴, J. Saini⁴, T. Kieh⁴, J. Stern⁴, J. Wysocka⁶, S. Temple⁴, T. A. Blenkinsop^{1,2}. ¹Cell, Developmental and Regenerative Biology, Icahn School of Medicine at Mount Sinai, New York, NY; ²The Black Family Stem Cell Institute, New York, NY; ³Stanford University, Stanford, CA; ⁴Neural Stem Cell Institute, Rensselaer, NY; ⁵University of Cologne, Cologne, Germany; ⁶Howard Hughes Medical Institute, Stanford, CA; ⁷Center for Molecular Medicine Cologne, Cologne, Germany
- 2478 — C0144 Autophagy confers resistance against endoplasmic reticulum stress-induced cell death in human retinal pigment epithelial cells.** NARAE HWANG¹, J. Woo^{2,1}, S. Chung¹. ¹Ulsan University, ULSAN, Korea (the Republic of); ²Ulsan university hospital, Ulsan, Korea (the Republic of)
- 2479 — C0145 Recovering of inflammatory and oxidative stress damage in retinal epithelial and endothelial cells: synergistic action of anti-oxidant and vitamin D.** Sergio Recalde^{1,2}, M. Hernandez^{1,2}, J. Bezunartea^{1,2}, M. Moreno^{1,2}, J. Belza^{1,2}, A. Garcia-Layana^{1,3}, P. Fernandez^{1,2}. ¹Ophthalmology Experimental Laboratory, Clinica Universidad de Navarra, Pamplona, Navarra, Spain; ²IDISNA, Navarra Institute for Health Research, Pamplona, Navarra, Spain; ³Ophthalmology Department, Clinica Universidad de Navarra, Pamplona, Navarra, Spain *CR
- 2480 — C0146 Protective effects of zinc and cAMP against A2E-induced toxicity in ARPE19 cells: Possible involvement of lysosomal acidification.** Jeong A Choi¹, B. SEO¹, J. Koh^{1,3}, Y. Yoon². ¹Neuronal Injury Research Center, Asan Institute for Life Sciences, SEOUL, Korea (the Republic of); ²Ophthalmology, ASAN Medical Center, SEOUL, Korea (the Republic of); ³Neurology, ASAN Medical Center, Seoul, Korea (the Republic of) *CR
- 2481 — C0147 Aged Basement Membrane Reduces Autophagic Activity in Retinal Pigment Epithelium Through MAPK/ERK Signal Transduction Pathway: Implications for Age-related Macular Degeneration.** Hui Cai¹, M. A. Fields¹, J. Gong¹, C. Cai², L. Del Priore¹. ¹Ophthalmology, Yale School of Medicine, New Haven, NY; ²Harkness Eye Institute, Columbia University Medical Center, New York, NY
- 2482 — C0148 Ferroptosis involves in excessive light induced damage of retinal pigment epithelium.** Yun Sun, Y. Zheng, Y. Liu. The State Key Laboratory of Ophthalmology, Zhongshan Ophthalmic Center, Sun Yat-sen University, Guangzhou, China., Guangzhou, China
- 2483 — C0149 Elovonoids (ELV) counteract A β peptide-induced retinal pigment epithelial cell senescence progression.** Khanh Do, M. I. Kautzmann, N. G. Bazan. LSU Health Science Center, New Orleans, LA *CR
- 2484 — C0150 Resveratrol Ameliorates Retinal Ischemia/Reperfusion Injury Induced Cell Death in C57BL/6J Mice by Downregulation of Caspase-8 and Caspase-3.** Seong wook Seo^{1,2}, H. Seong³, J. Ryu³, S. Hwang³, H. Kang^{1,2}, Y. Han^{1,2}, J. M. Park^{1,2}, S. Kang³. ¹Ophthalmology, Gyungang National University Hospital, Jinju, Korea (the Republic of); ²Medicine, Gyungang National University, Gyungang Institute of Health Science, Jinju, Korea (the Republic of); ³Anatomy and Convergence Medical Science, Gyeongsang National University, College of Medicine, Jinju, Korea (the Republic of)
-
- Exhibit Hall C0189-C0217
Monday, April 30, 2018 3:30 PM-5:15 PM
Retinal Cell Biology
290 Neuroprotection
-
- Moderators: Chai-An Mao and Antonia Stefanov**
- 2485 — C0189 P7C3 Suppresses Neuroinflammation and Protects Retinal Ganglion Cells of Rats from Optic Nerve Crush.** Hidehiro Oku, T. Horie, T. Kida, T. Ikeda. Ophthalmology, Osaka Medical College, Takatsuki, Japan
- 2486 — C0190 Monomethyl fumarate protects the retina in a mouse model of light-induced retinal degeneration.** Dan Jiang¹, R. C. Ryals¹, S. J. Huang^{1,2}, K. K. Weller¹, H. E. Titus¹, B. M. Robb¹, F. W. Saad¹, R. A. Salam¹, P. Yang¹, M. E. Pennesi¹. ¹Ophthalmology, Casey Eye Institute, OHSU, Portland, OR; ²Physiology and Pharmacology, OHSU, Portland, OR
- 2487 — C0191 Neuroprotective effects of topical neurotrophic factors applied individually or in combination on retinal ganglion cells of rats after optic nerve crush.** Yuta Kitamura, T. Oshitari, G. Bikbova, T. Baba, S. Yamamoto. Ophthalmology, Chiba University, Chiba, CHIBA, Japan
- 2488 — C0192 Neuroprotection of photoreceptors bearing the P23H mutation in Rhodopsin.** Valeria Marigo¹, A. Comitato¹, C. La Marca¹, D. Schirotti¹, P. Subramanian², M. Llado³, S. Becerra², A. Auricchio³. ¹Life Sciences, Univ of Modena and Reggio Emilia, Modena, Italy; ²Laboratory of Retinal Cell and Molecular Biology, NIH-NEI, Bethesda, MD; ³Telethon Institute of Genetics and Medicine, Naples, Italy
- 2489 — C0193 Comparison of neuroprotective effects of oil- and water-soluble fractions of sea buckthorn juice against light-induced retinal degeneration in rats.** Yoshihiro Takai¹, D. Mori², A. Sugai³, A. Sema¹, Y. Mitsuguchi¹, E. Sugano³, H. Tomita³, T. Kurose¹, Y. Honma¹. ¹Rohto Pharmaceutical Co., Ltd, Kizugawa, Japan; ²Gifu Shellac Manufacturing Co., Ltd., Gifu, Japan; ³Department of Chemistry and Bioengineering, Iwate University, Morioka, Iwate, Japan *CR
- 2490 — C0194 Avenues for Acute Neuroprotection in Traumatic Optic Neuropathy.** Galina Dvoriantchikova, W. Tao, B. Tse, T. Chou, R. Seemungal, V. Porciatti, D. V. Ivanov, D. T. Tse, D. Pelaez. Bascom Palmer Eye Institute, University of Miami Miller School of Medicine, Miami, FL
- 2491 — C0195 Repurposing PARP inhibitors as a promising approach for the therapy of inherited retinal degenerative diseases.** Ayse Sahaboglu¹, N. Savystka¹, J. Ferial¹, W. Haq¹, M. Miranda², E. Zrenner¹. ¹Division of Experimental Ophthalmology, University-Eye-Clinic Tuebingen, Tuebingen, Germany; ²Universidad CEU Cardenal Herrera, Spain, Valencia, Spain
- 2492 — C0196 Neuroprotective effects of GHRH analogs in traumatic optic neuropathy involve antioxidant and anti-inflammatory activities.** Christian U. Kim, O. A. Oluwole, M. Thounaojam, P. M. Martin, D. Gutsaeva, M. Bartoli. Ophthalmology, Medical College of Georgia at Augusta University, Augusta, GA
- 2493 — C0197 Identification of a retinal neuroprotective kinase inhibitor with preferential activity against DLK compared to LZK.** Derek S. Welsbie^{1,3}, H. Schirok², K. Mitchell², M. Koch², B. Kim³, M. Lobell², A. K. Patel¹, S. Holton⁴, D. Hristodorov⁴, J. Esteve-Rudd², C. Berlinicke³, C. Terjung², B. S. Hansen³, N. Werbeck⁴, W. Schubert², D. J. Zack³. ¹Shiley Eye Institute, University of California San Diego, La Jolla, CA; ²Bayer AG Pharmaceuticals, Wuppertal, Germany; ³Wilmer Ophthalmological Institute, The Johns Hopkins University School of Medicine, Baltimore, MD; ⁴Bayer AG Pharmaceuticals, Berlin, Germany *CR

2494 — C0198 Resveratrol nanoparticles are neuroprotective in vitro suggesting a potential to cure glaucoma and Alzheimer's disease.

Ehtesham Shamsheer¹, B. Davis¹, P. Dev¹, L. Grgic¹, S. Somavarapu², L. Guo¹, M. Cordeiro^{1,3}. ¹Institute of Ophthalmology, University College London, London, United Kingdom; ²School of pharmacy, University College London, London, United Kingdom; ³Western Eye Hospital, London, United Kingdom

2495 — C0199 Induction of Erk phosphorylation by MANF in retinal Müller cells.

XINYUE ZHU¹, X. Pei^{1,2}, Z. Gao^{1,3}, Y. Li¹, R. Wen⁴. ¹Department of Ophthalmology, Nanjing University School of Medicine, Nanjing, China; ²Beijing Tongren Eye Center, Capital Medical University, Beijing, China; ³School of Medicine, Xuchang University, Xuchang, China; ⁴Bascom Palmer Eye Institute, University of Miami, Miami, FL

2496 — C0200 Screening GPCR compounds for their ability to protect photoreceptors using a 661W light-induced cell death assay.

Renee C. Ryals, B. M. Robb, M. E. Pennesi. Ophthalmology, Oregon Health & Science University, Portland, OR

2497 — C0201 Optogenetic Regulation of Retinal Ganglion Cell Survival and Axon Regeneration. Ning Sun^{1,3}, Y. Liu^{2,3}. ¹Florida International University, Miami, FL; ²University of Miami, Miami, FL; ³Bascom Palmer Eye Institute, Miami, FL

2498 — C0202 Neuroprotective effect of astaxanthin in a rat model of anterior ischemic optic neuropathy.

Wei-Ning Lin¹, Y. Wen², R. Tsai^{2,3}. ¹Ophthalmology, Kaohsiung Medical University Hospital, Kaohsiung Medical University, Kaohsiung, Taiwan; ²Institute of Eye Research, Hualien Tzu Chi Hospital, Hualien, Taiwan; ³Institute of Medical Sciences, Tzu Chi University, Hualien, Taiwan

2499 — C0203 Neuroprotective Effects of Oroxylin A in a Rodent Model of Nonarteritic Anterior Ischemic Optic Neuropathy. Shun-Ping Huang^{1,2}, J. Chien¹, K. Kapupara³, Y. Chou¹, R. Tsai³. ¹Molecular Biology and Human Genetics, Tzu Chi University, Hualien, Taiwan; ²Ophthalmology, Taichung Tzu Chi Hospital, Taichung, Taiwan; ³Institute of eye research, Tzu Chi general hospital, Hualien, Taiwan

2500 — C0204 A combined treatment approach emphasizing neuroprotective effects in a rat model of anterior ischemic optic neuropathy (rAION).

Yao-Tseng Wen¹, R. Tsai¹, W. Lin². ¹Buddhist Tzu Chi General Hospital, Hualien, Taiwan; ²Optometry, Central Taiwan University of Science and Technology, Taichung, Taiwan

2501 — C0205 Neurodegenerative changes in retina after mild traumatic brain injury: Protective role of paracrine secretions of adipose derived stem cells.

Kumar Abhiram Jha¹, R. Rajesh Lenin¹, S. L. Elshaer¹, J. Gentry¹, N. Del Mar², T. Hollingsworth³, A. Reiner², R. Gangaraju¹. ¹Ophthalmology, University of Tennessee Health science center, Memphis, TN; ²Anatomy & Neurobiology, University of Tennessee Health science center, Memphis, TN; ³Neuroscience Institute, UTHSC, Memphis, TN *CR

2502 — C0206 Alleviation of Synaptic Disruption in a Mouse Model of Retinitis Pigmentosa by CNTF.

Kun Do Rhee¹, A. A. Hirano¹, D. Teng², C. Luan¹, X. Yang¹. ¹Ophthalmology, UCLA, Los Angeles, CA; ²The Johns Hopkins University, Baltimore, MD

2503 — C0207 Early Treatment with Mycophenolate Mofetil Reduces Retinal Degeneration and cGMP Dysregulation in rd10 and rd1 mice.

Paul Yang¹, R. Lockard¹, H. E. Titus¹, K. K. Weller¹, A. S. Coyner¹, R. M. Duvoisin², R. G. Weleber¹, C. W. Morgans², M. E. Pennesi¹. ¹Ophthalmology, Casey Eye Inst, Oregon Hlth & Science Univ, Portland, OR; ²Physiology & Pharmacology, Oregon Health & Science University, Portland, OR *CR

2504 — C0208 Neuroprotective effects of Hericium erinaceus polysaccharide (HEP) in a rat model of optic nerve crush.

Yi-Ping Huang^{1,2}, C. Huang^{2,3}, Y. Wen⁴, R. Tsai^{4,3}. ¹Department of Pathology, Changhua Show Chwan Memorial Hospital, Changhua, Taiwan; ²Department of Ophthalmology, Institute of Eye Research, Buddhist Tzu Chi General Hospital, Hualien, Taiwan; ³Institute of Medical Sciences, Tzu Chi University, Hualien, Taiwan; ⁴Institute of Eye Research, Buddhist Tzu Chi General Hospital, Hualien, Taiwan

2505 — C0209 Mechanisms of Müller gliamediated neuroprotection in diabetic retinopathy and hypoxic retinal diseases.

Yun-Zheng Le², M. Zhu¹. ¹Medicine, Univ of Oklahoma Hlth Sci Ctr, Oklahoma City, OK; ²Medicine, Cell Biology, and Ophthalmology and Harold Hamm Diabetes Center, University of Oklahoma Health Sciences Center, Oklahoma City, OK

2506 — C0210 Pigment epithelium-derived factor promotes retinal ganglion cell neuroprotection by suppression of caspase-2.

Zubair Ahmed. University of Birmingham, Birmingham, England, United Kingdom

2507 — C0211 The Mechanisms of ERK1/2 Involvement in Neuron Death after Ischemic Injury and Axotomy.

Philippe M. D'Onofrio, B. Choi, P. D. Koerberle. Department of Rehabilitation Science, University of Toronto, Toronto, Ontario, Canada

2508 — C0212 STAT3 directly regulates stress-induced expression of Edn2, to promote protection of photoreceptors through the activation of EdnrA.

Marcus Hooper, C. Santiago, J. D. Ash. Ophthalmology, University of Florida, Gainesville, FL

2509 — C0213 Removal of early senescent cells to protect retinal ganglion cells (RGCs) in glaucoma.

Dorota Skowronska-Krawczyk, V. Nguyen Huu, L. Rocha Jimenez, M. Jabari. Ophthalmology, University of California San Diego, San Diego, CA

2510 — C0214 A four-drug combination promotes functional axonal regeneration in the rat optic nerve crush model.

Christopher L. Passaglia¹, M. M. Siddiq², Y. Zorina², S. Davis¹, E. Kaplan², R. Blitzer², R. Iyengar². ¹Chemical and Biomedical Engineering, University of South Florida, Tampa, FL; ²Icahn School of Medicine at Mount Sinai, New York, NY

2511 — C0215 Müller cell transcriptional unit to regulate stress induced LIF expression.

Clayton Santiago¹, M. Hooper¹, T. Hoang², J. Wang³, J. Qian³, S. Blackshaw², J. D. Ash¹. ¹Ophthalmology, University of Florida, Gainesville, FL; ²Neuroscience, Johns Hopkins University School of Medicine, Baltimore, MD; ³Ophthalmology, Johns Hopkins University School of Medicine, Baltimore, MD

2512 — C0216 Microglia suppression during hibernation prevents axonal injury-induced retinal ganglion cell death in the ground squirrel retina.

Wei Li¹, T. Zhao^{2,1}, J. Ou¹, F. M. Nadal-Nicolas¹, J. Ball¹. ¹Retinal Neurophysiology Section, National Eye Institute, NIH, Bethesda, MD; ²The 2nd Xiangya Hospital, Zhongnan University, Changsha, China

2513 — C0217 Pyruvate protects retinal neurons in culture from nutrient deprivation, excitotoxicity and oxidative stress.

John P. Wood^{1,2}, G. Chidlow^{1,2}, C. Guymer², T. Mammone^{1,2}, R. J. Casson^{1,2}. ¹Ophthalmology, Royal Adelaide Hospital, Adelaide, South Australia, Australia; ²Ophthalmology, University of Adelaide, Adelaide, South Australia, Australia

Exhibit Hall C0243-C0284

Monday, April 30, 2018 3:30 PM-5:15 PM

Immunology/Microbiology

291 Inflammatory Disease Processes in Humans and Experimental Models

Moderator: Gerhild Wildner

2514 — C0243 Immunologic Aspects of Vision Loss in Alzheimer's Disease. Charles E. Thirkill. Ocular Immunology, UC Davis, Davis, CA

2515 — C0244 IL-27 regulates HIF-1 α -mediated VEGFA response in macrophages of diabetic retinopathy patients and healthy individuals. Qin Zhang¹, A. Cunha¹, S. Li², Q. Hao³, V. Kainz¹, Q. Huang¹, H. Wu¹. ¹OPH, Novartis Institutes for Biomedical Research, Cambridge, MA; ²Biotherapeutic and Analytical Technologies, Novartis Institutes for Biomedical research, Cambridge, MA

2516 — C0245 Unilateral Acute Anterior Uveitis is Associated with Ipsilateral Changes of the Tear Fluid Proteome Involving the LXR/RXR Pathway. Jon Roger Eidet¹, I. G. Fostad², M. Pepaj³, O. K. Olstad⁴, R. Ø. Sørland¹, Ø. K. Jørstad¹, M. C. Moe¹, G. Petrovski¹. ¹Department of Ophthalmology, Oslo University Hospital, Oslo, Norway; ²Faculty of Dentistry, Department of Oral Biology, University of Oslo, Oslo, Norway; ³Department of Medical Biochemistry, Hormone Laboratory, Oslo University Hospital, Oslo, Norway; ⁴Blood Cell Research Group, Section for Research, Department of Medical Biochemistry, Oslo University Hospital, Oslo, Norway

2517 — C0246 Differentially Expressed Gene Analysis of HLA-B27-associated Acute Anterior Uveitis Families. Yunli Ling³, S. Yu¹, C. Mao², H. Lu³. ¹Peking University Third Hospital, Beijing, China; ²The Third Affiliated Hospital of Chongqing Medical University, Chongqing, China; ³Beijing Chaoyang Hospital, Capital Medical University, Beijing, China

2518 — C0247 Diagnostic efficiency of Serum amyloid A in acute anterior uveitis associated with ankylosing spondylitis. Yuqin Wang, S. Fan, M. Dai, D. Lin. Eye Hospital, Wenzhou Medical University, Wenzhou, China

2519 — C0248 Evidence of the inflammation amplifier activation in patients with uveitis. Hamada Satoshi¹, N. Kitaichi^{1,2}, K. Namba¹, D. Kamimura³, K. Noda¹, A. Kanda¹, M. Murakami³, S. Ishida¹. ¹Ophthalmology, Faculty of Medicine and Graduate School of Medicine, Hokkaido University, Sapporo, Japan; ²Ophthalmology, Health Sciences University of Hokkaido, Sapporo, Japan; ³Division of Molecular Psychoimmunology, Institute for Genetic Medicine and Graduate School of Medicine, Hokkaido University, Sapporo, Japan

2520 — C0249 Clinical Remission of Sight-threatening Uveitits is Characterised by an Upregulation of Peripheral TIGIT⁺ Treg and an Increased Ratio of T reg to T-bet⁺ T cells. Rachel J. Healy¹, E. G. Hearne², R. Gilbert^{3,4}, X. Zhang^{3,4}, O. Tomkins-Netzer^{3,4}, M. Ehrenstein³, V. Calder³, S. Lightman^{3,4}. ¹Ophthalmology, Musgrove Park Hospital, Cheltenham, United Kingdom; ²Royal United Hospital, Bath, United Kingdom; ³University College London, London, United Kingdom; ⁴Moorfields Eye Hospital, London, United Kingdom

2521 — C0250 Gut microbial dysbiosis is associated with fatigue in Behçet's Disease. Kusy Suleiman, L. Low, M. Murad, M. Shamdas, D. Mitton, D. Situnayake, P. I. Murray, G. R. Wallace, S. Rauz. Academic Unit, Birmingham & Midland Eye Centre, Birmingham, West Midlands, United Kingdom

2522 — C0251 Alterations in the taxonomic and predicted functional profile of gut microbiota in Behçet's Disease. Liying Low¹, K. Suleiman¹, M. Murad¹, M. Shamdas¹, D. Mitton², D. Situnayake², P. I. Murray¹, G. R. Wallace¹, S. Rauz¹. ¹Academic Unit of Ophthalmology, University of Birmingham, Birmingham, United Kingdom; ²Behçet's Disease National Centre of Excellence, Birmingham, United Kingdom

2523 — C0252 CD19⁺CD24^{hi}CD38^{hi} B regulatory cell levels correlate with disease remission in patients with non-infectious uveitis. Xiaozhe Zhang¹, R. Gilbert¹, R. Sampson¹, O. Tomkins-Netzer^{1,2}, V. Calder^{1,2}, S. Lightman^{1,2}. ¹University College London, London, United Kingdom; ²Moorfields Eye Hospital, London, United Kingdom

2524 — C0253 Immunogenetic Basis of Uveitis comorbid with Multiple Sclerosis. Alejandra De-La-Torre Cifuentes^{1,2}, C. Silva³, L. B. Piñeros-Hernández³, D. J. Fonseca³, O. Otero⁴, M. A. Dominguez², L. A. Faciolince^{2,4}, N. C. Contreras-Bravo³, C. A. Mastronardi², M. M. Arcos-Burgos³, C. M. Restrepo³. ¹Immunology Department, Escuela de Medicina y Ciencias de la Salud, Universidad del Rosario, Bogota, Cund, Colombia; ²NeUros research group, Universidad del Rosario, Bogotá Colombia, Bogotá, Cund, Colombia; ³Centro de investigación en genética y genómica de la Universidad del Rosario (CIGGUR), Instituto de Medicina Traslacional (IMT), Universidad del Rosario, Bogotá Colombia, Bogotá, Cund, Colombia; ⁴Uveitis, Escuela Superior de Oftalmología-Instituto Barraquer de América, Bogotá, Colombia

2525 — C0254 Intraocular fluid analysis in patients with autoimmune uveitis and its implications. Jarmila Heissigerova¹, P. Seidler Stangova¹, A. Klimova¹, M. Kverka², M. Brichova¹, H. Tlaskalova Hogenova², P. Svozilkova¹. ¹Dept. of Ophthalmology, Charles University, Prague 2; ²Czechia; ³Inst. of Microbiology, Academy of Sciences of the Czech Republic, Prague, Czechia

2526 — C0255 Expression of cytokines in porcine iris, retina and choroid tissues stimulated by microbe-associated molecular patterns. Yong Seop Han^{1,3}, E. Rivera-Grana¹, J. T. Rosenbaum^{1,4}, M. Schleisman¹, S. Davin¹, N. Jain², M. Alvarado³, M. Asquith². ¹Casey Eye Institute, Oregon Health and Science University, Portland, OR; ²Division of Arthritis and Rheumatology, Oregon Health and Science University, Portland, OR; ³Ophthalmology, Gyeongsang National University, Jinju, Korea (the Republic of); ⁴Legacy Devers Eye Institute, Portland, OR

2527 — C0256 The intracameral fibrinolytic capacity and toxicity of Dmsoteplase compared to tissue plasminogen activator in a rabbit model. Katrin Voelter¹, C. Tappeiner², K. Klein³, N. Borel⁴, D. Bruetsch¹, F. Laguna Sanz⁵, S. Pot¹. ¹Veterinary Ophthalmology, Equine Clinic, Vetsuisse Faculty, University of Zurich, Switzerland, Zurich, Switzerland; ²Ophthalmology, Inselspital, Bern University Hospital, Bern, Switzerland; ³Center for Applied Biotechnology and Molecular Medicine, University of Zurich, Zurich, Switzerland; ⁴Pathology, Vetsuisse Faculty, University of Zurich, Zurich, Switzerland; ⁵Hospital Veterinario Puchol, Madrid, Spain

2528 — C0257 Anterior uveitis, increased IOP, γ -glutamyl transpeptidase, and hyperlipidemia in rabbits induced by intravenous injection of NOD1 ligand (C12-iE-Diaminopimelic acid). Kim Dinh, A. S. Kavanaugh, M. P. Langford, C. Liang. Ophthalmology, Louisiana State University Health Science Center - Shreveport, Shreveport, LA

2529 — C0258 Corneal injury causes retinal inflammation. Fengyang Lei^{1,2}, C. H. Dohlman¹, J. Chodosh¹, E. I. Paschalis^{1,2}. ¹Cornea, Massachusetts Eye and Ear Infirmary, Boston, MA; ²Boston Keratoprosthesis Lab, Schepens Eye Research Institute, Boston, MA

2530 — C0259 Genetic ablation of TGF β R2 in microglia results in neuroinflammatory and neurodegenerative changes in the retina. Wenxin Ma¹, S. Silverman¹, L. Zhao¹, R. Villasmil², R. N. Fariss³, M. M. Campos⁴, J. Amaral⁵, W. T. Wong¹. ¹UNGIRD, National Eye Institute, Bethesda, MD; ²Flow Cytometry Core Facility, NEI, Bethesda, MD; ³Biological Image Core, NEI, Bethesda, MD; ⁴NEI Histopathology Core Facility, NEI/NIH, Bethesda, MD; ⁵OSD, NEI, Bethesda, MD

2531 — C0260 Retinal Pigment Epithelial Exosomes Mediate Macrophage Activity and Survival. Andrew W. Taylor, N. Sanjiv, S. Nocco, A. Chiloyan, T. Ng. Ophthalmology, Boston University School of Medicine, Boston, MA

2532 — C0261 The hierarchy of pro-inflammatory cytokines in ocular inflammation. Xiaoqi Wu, A. Cunha, Q. Zhang, M. Prentiss, V. Kainz, Y. Xu, J. Vrovljanis, H. Li, N. Rangaswamy, B. Leehy, T. Mc Gee, C. Bell, C. E. Bigelow, V. Kansara, Q. Huang, H. Wu. Ophthalmology, Novartis, Cambridge, MA

2533 — C0262 Gene expression analysis of Hedysarum polybotrys saccharide(HPS) in Endotoxin induced acute anterior uveitis. Shuo Yu¹, X. Liu⁴, N. Zhang³, C. Mao², H. Lu³. ¹Ophthalmology, Peking University Third Hospital, Beijing, China; ²Ophthalmology, The Third Affiliated Hospital of Chongqing Medical University, Chongqing, China; ³Ophthalmology, Beijing Chaoyang Hospital, Capital Medical University, Beijing, China; ⁴Ophthalmology, Haidian Maternal & Child Health Hospital, Beijing, China

2534 — C0263 Effect of Anti-Human C5 Antibodies on Ocular Inflammation in Experimental Autoimmune Uveitis in Humanized C5 Mice Aixu Sun, Henry Chen, Hua Yang, Adrianna Latuszek, Ying Hu, Pamela Krueger, Tammy Huang, Jingtai Cao, Carmelo Romano Regeneron Pharmaceuticals, Inc. Tarrytown, NY. Aixu Sun, H. Chen, H. Yang, A. Latuszek, Y. Hu, P. Krueger, T. Huang, J. Cao, C. Romano. Regeneron Pharmaceuticals INC, Tarrytown, NY *CR

2535 — C0264 Interleukin-34 provide neuroprotection to the neural retina in a mouse model of experimental autoimmune uveoretinitis. Mary J. Mattapallil¹, Y. Jittayasothorn¹, Z. Wu², H. N. Sen¹, R. R. Caspi¹. ¹Laboratory of Immunology, National Eye Institute, Bethesda, MD; ²Ocular Gene Therapy Core, National Eye Institute, Bethesda, MD

2536 — C0265 New treatment options for chorioretinal neovascularizations mediated by autoreactive T cells in rat EAU. Gerhild Wildner, M. Diedrichs-Möhring, S. R. Thurau. Immunobiology, Department of Ophthalmology, University Hospital LMU Munich, Munich, Germany

2537 — C0266 Non-redundant requirement for CXCR3 signaling for effective treatment of eye-specific autoimmunity with type I IFNs. Jun Chen¹, C. Li¹, W. Wang¹, Z. Chen¹, Y. Chen¹, H. Zhou¹, W. Chong¹, I. Gery², R. R. Caspi². ¹State Key Laboratory of Ophthalmology, Zhongshan Ophthalmic Center, Guangzhou, China; ²NEI/NIH, Bethesda, MD

2538 — C0267 Treatment of IRBP-induced Uveitis via PD-1 Blockade is Mediated Through Regulatory T cell Activation. Michel M. Sun¹, A. M. Chan¹, R. D. Levinson¹, M. Wadehra², L. K. Gordon¹. ¹Ophthalmology, Stein Eye Institute, UCLA, Los Angeles, CA; ²Pathology, University of California, Los Angeles, Los Angeles, CA

2539 — C0268 Doxycycline Suppresses Ocular Inflammation by Stat3/MiR155/Th17 Pathway. Xiaoqing Chen, D. Liang. Zhongshan Ophthalmic Center, Guangzhou, China

2540 — C0269 Lipoxin A₄ Dampens T Effector Cell Responses in Autoimmune Uveitis. Jessica Wei¹, R. Horai², R. R. Caspi², K. Gronert¹. ¹Vision Science, UC Berkeley, Berkeley, CA; ²Laboratory of Immunology, NEI, NIH, Bethesda, MD

2541 — C0270 Effects of α 4 β 1 Integrin Inhibitor on Leucocyte Subset Migration in Experimental Autoimmune Uveitis. Yi hsing Chen^{1,2}, M. Eskandarpour¹, G. Galatowicz¹, M. Chaudhry¹, X. Zhang¹, S. Lightman^{1,3}, V. Calder¹. ¹Institute of Ophthalmology, University College London, London, United Kingdom; ²Department of Ophthalmology, Chang Gung Memorial Hospital, Taoyuan, Taiwan; ³Moorfields Eye Hospital, London, United Kingdom

2542 — C0271 Dependence of pathogenic cytokines differs between spontaneous and induced models of autoimmune uveitis. Reiko Horai, S. Bing, P. B. Silver, Y. Jittayasothorn, J. Chen, R. R. Caspi. Lab of Immunology, National Eye Institute, Bethesda, MD

2543 — C0272 Baicalin modulates Treg/Teff cell balance to alleviate autoimmune uveitis via activating aryl hydrocarbon receptor. Wenjie Zhu, D. Liang, W. Su. Zhongshan Ophthalmic Center, Sun Yat-sen University, Guangzhou, Guangdong, China

2544 — C0273 Loss of interferon regulatory factor 8 (IRF-8) in B cells promotes the expansion of regulatory B cells (Bregs) and suppresses intraocular autoimmune disease. Chengrong Yu, H. Lee, D. Gebreselassie, J. Choi, M. Mattapallil, F. Oladipupop, C. E. Egwuagu. Laboratory Immunology, National Eye Inst/NIH, Bethesda, MD

2545 — C0274 Interferon Regulatory Factor 8 (IRF8) antagonizes IL-10 and CTLA4 production in T cells. Hyunsu Lee, C. Yu, C. E. Egwuagu. Laboratory of Immunology, National Eye Institute, Bethesda, MD

2546 — C0275 Systemic antigen exposure increases intraocular inflammation in primed mycobacterial uveitis (PMU). Leslie Wilson, R. Van Gelder, K. Pepple. Ophthalmology, University of Washington, Seattle, WA

2547 — C0276 Duration of antibiotic treatment affects gut microbiota and intestinal immunity, and determines susceptibility to ocular autoimmunity. Ryan Salvador, R. Horai, Y. Jittayasothorn, R. R. Caspi. National Eye Institute, National Institutes of Health, North Bethesda, MD

2548 — C0277 Treatment of Lewis rats with IFN-alpha - analyzing the immune mechanisms in relapsing and monophasic rat experimental autoimmune uveitis. Maria Diedrichs-Moehring¹, X. Liu^{1,2}, G. Wildner¹. ¹Section of Immunobiology, Department of Ophthalmology, University Hospital, LMU Munich, Munich, Germany; ²Ophthalmic Center of the Second Hospital, Jilin University, Changchun, China

2549 — C0278 Dendritic cell-specific Syk/ Card9-signaling is essential for induction of autoimmune uveitis. Holly Rosenzweig¹, R. Napier¹, P. Snow¹, K. Samson¹, E. Vance¹, R. R. Caspi², E. J. Lee¹. ¹Molecular Microbiology & Immunology, Oregon Health & Science University/Portland VA Medical Center, Portland, OR; ²Laboratory of Immunology, NEI, Bethesda, MD

2550 — C0279 Therapeutic potential of IL-12p35 Subunit for treatment of uveitis and multiple sclerosis. Jin Kyeong Choi, C. Yu, A. Uche, M. J. Mattapallil, F. Oladipupop, M. Kang, R. R. Caspi, C. E. Egwuagu. Laboratory of Immunology, National Eye Institute, Bethesda, MD

2551 — C0280 Nod2 is a T cell-intrinsic suppressor of Th17 cell-mediated uveitis. Ellen J. Lee^{1,2}, R. Napier^{1,2}, P. Snow¹, E. Vance^{1,2}, K. Samson^{1,2}, M. Mattapallil³, J. Furtado⁴, J. R. Smith⁵, R. R. Caspi³, H. Rosenzweig^{1,2}. ¹Portland VAMC, Mail code: R&D 14, Oregon Health & Science University, Portland, OR; ²Molecular Microbiology & Immunology, Oregon Health & Science University, Portland, OR; ³National Eye Institute, National Institutes of Health, Bethesda, MD; ⁴Department of Ophthalmology, University of São Paulo, Sao Paulo, Brazil; ⁵School of Medicine, Flinders University, Adelaide, South Australia, Australia

2552 — C0281 Obesity Exacerbates Experimental Autoimmune Uveitis. Darren J. Lee, F. Y. Muhammad, D. Wang. Ophthalmology/Dean McGee Eye Institute, University of Oklahoma Health Sciences Center, Oklahoma City, OK

2553 — C0282 Enhanced orbital adipogenesis in a mouse model of T-cell-mediated autoimmunity, zymosan A-treated SKG mice: Implications for Graves' ophthalmopathy. Dong Hui Lim¹, J. Kim¹, T. Chung¹, J. Han². ¹Ophthalmology, Samsung Medical Center, Seoul, Korea (the Republic of); ²Ophthalmology, Myongji Hospital, Goyang-si, Korea (the Republic of)

2554 — C0283 Interleukin-23 is Essential for Development of Pathogenic Memory T Helper-17 Cells in Chronic Dry Eye Disease. Yihe Chen, C. Shao, T. Nakao, S. Chauhan, R. Dana. Schepens Eye Research Ins /MEEI, Boston, MA

2555 — C0284 Pro-inflammatory cytokines in autoimmune Sjögren's syndrome alter thrombospondin-1 expression in epithelial cells from lacrimal glands. Sharmila Masli, B. Turpie. Ophthalmology, Boston University School of Medicine, Boston, MA

Ballrooms BC

Monday, April 30, 2018 5:30 PM-6:45 PM

**292 ARVO/Alcon Keynote Session:
CRISPR-Cas gene editing: biology,
technology and ethics**

Gene editing with CRISPR technology is transforming biology. Understanding the underlying chemical mechanisms of RNA-guided DNA and RNA cleavage provides a foundation for both conceptual advances and technology development. I will discuss how bacterial CRISPR adaptive immune systems inspire creation of powerful genome engineering tools, enabling advances in both fundamental biology and applications in medicine. I will also discuss the ethical challenges of some of these applications.

— 5:30 **CRISPR-Cas gene editing: biology, technology and ethics: Jennifer Doudna, UC Berkeley**

ARVO/Alcon
Keynote Session
5:30 pm – 6:45 pm

Ballroom A

Monday, April 30, 2018 7:00 PM-8:30 PM

293 Military Relevant Priorities and Strategies for Injury Diagnostics and Treatments

The military recognizes that the diagnosis and treatment of combat ocular trauma injuries is a critical medical capability shortfall. Engagement with academic, industry, interagency, and other partners is vital to obtain the necessary diagnostics and treatments for this capability gap. Ocular injuries sustained during combat are often in austere environments, presenting a unique challenge regarding both the severity of the injury and the timely access to definitive care. These vision-related gaps are considered a critical problem area for the Army that requires discussion surrounding clinical guidelines and strategies, ocular injury diagnostics, and treatments. Exploring these operational constraints will facilitate a better understanding of what solutions could be applied by the military to address these injuries as close to the point of injury as possible.

Moderator: Carol Rymer

2556 — 7:00 Understanding Military Capability-Gap Based Research. *David O. Zamora. Ocular Trauma, U.S. Army Institute of Surgical Research, San Antonio, TX*

2557 — 7:20 The Vision Center of Excellence (VCoE): Ocular Combat Injuries and the Continuum of Ocular Casualty Care. *Robert A. Mazzoli^{1, 1}. ¹Ophthalmology, Vision Center of Excellence, Madigan Army Medical Center, Tacoma, WA; ²Ophthalmology, Madigan Army Medical Center, Tacoma, WA*

2558 — 7:40 Advanced Development Considerations for Ocular Injury Solutions. *Leigh A. Alexander. Advanced Development Medical Devices, US Army Medical Materiel Agency (USAMMA), Ft. Detrick, MD*

2559 — 8:00 Sensory Systems Traumatic Injury Restoration and Rehabilitation Research. *Brandon M. Tourtillot^{1, 2}. ¹Clinical Rehabilitative Medicine Research Programs (CRM RP), Fort Detrick, MD; ²United States Air Force, Fort Detrick, MD*

Monday Special Session
7:00 pm – 8:30 pm

Tuesday

May 1, 2018

ARVO Annual Meeting
Registration
Main Lobby
7am – 6pm

Exhibit hours
8:15am – 5:15pm

10th Annual
WEAVR Luncheon
1:30 – 3pm
Ala Moana
410 Atkinson Dr.
(tickets required)

ARVO
2018

April 29 – May 3 | Honolulu

Stand strong for science
Stand for strong vision science

Tuesday, May 1 – Minisymposia, papers, general business meetings, workshop and SIGs

Time	Session	Title	Location
8:15 –10am	301	Near Tasks and Reading with Vision Impairment [LV, VI] #2560-2565	306AB
	302	Retinal Vascular Diseases I [RE] #2566-2572	311
	303	Corneal Neovascularization and Immunology [CO] #2573-2579	312
	304	The nuts and bolts of novel drug development — Minisymposium [AP, GL, RE, VN] #2580-2584	313A
	305	Ganglion cells and beyond [VN] #2585-2591	314
	306	Retinal Development [RC] #2592-2598	315
	307	Diabetic eye disease and other retinal diseases [CL] #2599-2605	316B
	308	Molecular and cellular insights into lens and cornea regeneration — Minisymposium [CO, LE] #2606-2611	316C
	309	Neuroprotection [GL] #2612-2618	Ballroom A
	310	AMD Imaging I [RE] #2619-2625	Ballrooms BC
10:15 –11am	324	General Business Meeting	320
11:15 – 1pm	325	Metabolic regulation of ocular immune responses — Minisymposium [IM, BI, CO, LE, PH, RE] #2970-2974	301AB
	326	Lens optics and IOLs [VI] #2975-2981	310
	327	Retinal Gene Therapy and Stem Cell Transplantation [RE] #2982-2987	311
	328	Corneal epithelium [CO] #2988-2994	312
	329	Bipolar, Horizontal and Amacrine cells [VN] #2995-3001	314
	330	Diabetic retinopathy: Molecular mechanisms and novel therapeutic targets [RC] #3002-3008	315
	331	Nutrition and Eye Disease [CL] #3009-3015	316B
	332	Functional Genomics and Epigenetics in Ocular Disease [GEN] #3016-3022	316C
	333	New Ideas [GI] #3023-3029	Ballroom A
	1:30 – 3pm	347	Objective Quantification of Intraocular Inflammation: Using Newer Technologies to Overcome an Old Challenge — SIG [CL, IM, RE, MOI]
348		Next-Gen autofluorescence imaging — let's get ready — SIG [BI, RC, RE, MOI]	306AB
349		Immune tolerance in steady state and ocular surface/corneal diseases — SIG [CO, IM]	310
350		Molecular Imaging of the Retina in Health and Disease — SIG [AP, BI, IM, PH, RC, RE, VI, VN, MOI]	311
351		Optical Coherence Tomography Angiography of the Eye — SIG [AP, GL, RE, MOI]	312
352		GEN Group - Making good on the promise of genetics for eye diseases: The successes and challenges along the translational pathway [GEN]	313A
353		Bridging and bootstrapping in today's risk averse environment	314
354		Gene therapy of glaucoma — SIG [GL]	315
355		Clinician-Scientist Forum: How to become a successful clinician-scientist	316A
356		Addressing global blindness and eye diseases through international research collaborations	316B
357	How to promote vision research to patients and policymakers in different regions of the world	316C	
358	Lipid and Lipid Targeted Therapies for Eye Diseases- past, present and future — SIG [BI, CO, EY, PH, RE, RC]	320	
359	The Lasker/IRRF Initiative for Innovation in Vision Science: Restoring Vision to the Blind and Amblyopia — SIG [GL, RC, VN, NT]	Ballrooms BC	

Symposia and minisymposia highlighted in **boldface**

Tuesday, May 1 – Minisymposia, papers, lectures, MIT Outstanding Poster Award Competition (continued)

Time	Session	Title	Location
3:30 – 5:15pm	360	Vergence eye movements and strabismus — Minisymposium [EY] #3430-3434	306AB
	361	Corneal Imaging and Topography [CO] #3435-3441	310
	362	Diabetic Retinopathy Imaging [RE] #3442-3448	311
	363	Corneal Development and Regenerative Medicine [CO] #3449-3455	312
	364	Surgery and Wound Healing [GL] #3456-3462	313A
	365	Neovascularization and Vascular Permeability [RE] #3463-3468	314
	366	AMD pathogenesis and preclinical studies [RC] #3469-3475	315
	367	Anterior segment, ion channels, IOP [PH] #3476-3482	316A
	368	Lens Biochemistry [LE] #3483-3488	316C
	369	Regulation of Ocular Gene Expression and Epigenetics [BI] #3489-3495	320
	370	Imaging Posterior Segment and Progression [GL] #3496-3502	Ballroom A
5:30 – 6:30pm	383	ARVO/Champalimaud Award Lecture	Ballrooms BC
5:30 – 7pm	384	MIT Outstanding Poster Award Competition	Exhibit Hall
7 – 8:30pm	385	Special Session: Bringing Regenerative Medicine Therapies to the Clinic #3903-3907	Ballroom A

Symposia and minisymposia highlighted in **boldface**

Tuesday, May 1 – Posters

Time	Session	Title	Program No.	Board No.
8:15 – 10am	311	Neovascular AMD [RC]	2626 - 2639	A0131 - A0144
	312	Retinal vascular biology [RC]	2640 - 2651	A0145 - A0156
	313	Toxicology, anti-inflammatory, antibiotics [PH]	2652 - 2667	A0379 - A0394
	314	Anterior segment [PH]	2668 - 2679	A0395 - A0406
	315	IOP [GL]	2680 - 2720	B0001 - B0041
	316	Glaucoma risk factors, progression and management [CL]	2721 - 2745	B0100 - B0124
	317	ROP 1 [RE, VI]	2746 - 2788	B0125 - B0167
	318	OCT Angiography - Clinical Applications [MOI]	2789 - 2841	B0207 - B0259
	319	OCT Angiography - Experimental Applications and Technical Improvements [MOI]	2842 - 2887	B0260 - B0305
	320	Corneal Endothelium II [CO]	2888 - 2914	C0185 - C0211
	321	Genetics of Corneal dystrophies [GEN]	2915 - 2927	C0212 - C0224
	322	Strabismus: Therapy [EY]	2928 - 2939	C0250 - C0261
	323	Accommodation and Binocular Functions [VI, VN, EY]	2940 - 2969	C0262 - C0291
	11:15am – 1pm	334	Lens Biochemistry, Physiology and Biomechanics [LE]	3030 - 3044
335		Biochemistry and molecular biology of the retina/RPE [BI, VN]	3045 - 3094	A0016 - A0065
336		Retinal Cell and Developmental Biology [RC]	3095 - 3122	A0103 - A0130
337		Macular diseases excluding AMD [RE, GEN, LV, BI]	3123 - 3165	A0240 - A0282
338		Melanoma: Basic and Translational [AP]	3166 - 3188	A0309 - A0331
339		Blood flow, ischemia [PH]	3189 - 3206	B0189 - B0206
340		AMD imaging [RE]	3207 - 3256	B0306 - B0355
341		AMD basic research [RE]	3257 - 3272	B0356 - B0371
342		Dry eye non-clinical I [CO]	3273 - 3306	C0067 - C0100
343		Corneal Neovascularization and Immunology [CO]	3307 - 3342	C0149 - C0184
344		Neuro-ophthalmology: Optic neuropathy excepting glaucoma [EY]	3343 - 3367	C0225 - C0249
345		Refractive error epidemiology and management [CL]	3368 - 3407	C0292 - C0331
346		Functional Impacts of Vision Impairment [LV, VI]	3408 - 3429	C0332 - C0353
3:30 – 5:15pm		371	Biochemical processes and disease mechanisms involved in glaucoma [BI]	3503 - 3539
	372	Diabetic retinopathy - Cell Biology [RC]	3540 - 3572	A0157 - A0189
	373	Diabetic retinopathy - preclinical studies [RC]	3573 - 3591	A0190 - A0208
	374	Diabetic Macular Edema Anti-VEGF [RE]	3592 - 3621	A0210 - A0239
	375	Melanoma: Clinical Innovations [AP]	3622 - 3647	A0283 - A0308
	376	Epidemiology, Treatments, and Outcomes of Infection [IM]	3648 - 3694	A0332 - A0378
	377	Neurodegeneration [GL]	3695 - 3752	B0042 - B0099
	378	ROP 2 [RE]	3753 - 3773	B0168 - B0188
	379	Cataract, cornea and ocular surface disease [CL]	3774 - 3805	C0001 - C0032
	380	Dry eye non-clinical II [CO]	3806 - 3839	C0033 - C0066
	381	Corneal epithelium [CO]	3840 - 3887	C0101 - C0148
	382	Profound Low Vision and Low-vision Clinical Trials [LV, VI]	3888 - 3902	C0354 - A0368

Poster board numbers correspond to poster location in Exhibit Hall; A = Poster Area A , B = Poster Area B and C = Poster Area C.

Room 306AB

Tuesday, May 01, 2018 8:15 AM-10:00 AM

Low Vision Group / Visual Psychophysics/
Physiological Optics**301 Near Tasks and Reading with
Vision Impairment****Moderators: Antonio F. Macedo and
Susana T. Chung****2560 — 8:15 Reported functional difficulty with near tasks in those with mild and moderate visual impairment.** Nicole Ross¹, T. L. Chan³, A. G. Malkin¹, K. Protosow², A. K. Bitner⁴. ¹New England College of Optometry, Boston, MA; ²Eye Vision Associates, Ronkonkoma, NY; ³California Pacific Medical Center, San Francisco, CA; ⁴Optometry, Nova Southeastern University, Fort Lauderdale, FL *CR**2561 — 8:30 Relationship between reading ability and executive function in young children with vision impairment.** Dawn K. DeCarlo^{1,3}, E. L. Forte¹, G. McGwin³, C. Blair². ¹UAB Center for Low Vision Rehabilitation, Univ of Alabama at Birmingham, Birmingham, AL; ²Applied Psychology, New York University, New York, NY; ³Ophthalmology, University of Alabama at Birmingham, Birmingham, AL**2562 — 8:45 Fonts Designed for Macular Degeneration: Impact on Reading.** Yingzi Xiong¹, E. Lorsche¹, J. Mansfield², C. Bigelow³, G. E. Legge¹. ¹Department of Psychology, University of Minnesota, Minneapolis, MN; ²Department of Psychology, SUNY College at Plattsburgh, Plattsburgh, NY; ³RIT Cary Graphic Arts Collection Scholar in Residence, Rochester, NY**2563 — 9:00 Evaluation of a Virtual Bioptic Telescope and Virtual Projection Screen for Low Vision Patients.** Ashley Deemer¹, J. Deremeik¹, R. W. Massof¹, C. Bradley¹, K. Fujiwara¹, F. S. Werblin², B. K. Swenor¹. ¹Low Vision Rehabilitation, Johns Hopkins Wilmer Eye Institute, Baltimore, MD; ²Division of Neurobiology, University of California Berkeley, Berkeley, CA *CR**2564 — 9:15 Visual performance at the PRL in monocular versus binocular viewing using simulated gaze-contingent scotomas.** Joella Martire¹, T. Arango², P. J. Bex², N. C. Ross¹. ¹New England College of Optometry, Boston, MA; ²Psychology, Northeastern University, Boston, MA**2565 — 9:30 Increased equivalent noise may explain a loss of foveal contrast sensitivity in glaucoma.** MiYoung Kwon, R. Liu. Department of Ophthalmology, University of Alabama at Birmingham, Birmingham, AL

Room 311

Tuesday, May 01, 2018 8:15 AM-10:00 AM

Retina

302 Retinal Vascular Diseases I**Moderators: Philip G. Hykin and Bish Pal****2566 — 8:15 Real-world outcomes of ranibizumab in patients with retinal vein occlusion from the LUMINOUS™ study.** Ian Pearce¹, S. Parikh², W. Macfadden². ¹St Paul's Eye Unit, Royal Liverpool University Hospital, Liverpool, Merseyside, England, United Kingdom; ²Novartis Pharma AG, Basel, Switzerland *CR, ✕**2567 — 8:30 Association between retinal microvascular caliber and chronic kidney disease: participant-level and aggregate-data meta-analyses.** Charumathi Sabanayagam^{1,8}, W. Lye⁸, R. Banu¹, E. Tai¹⁰, T. Kayama¹¹, M. Shlipak⁷, A. Ikram¹³, J. Shaw⁶, P. Mitchell⁵, B. E. Klein², R. Klein², K. Matsushita⁴, A. Maxwell¹², C. Patterson¹², T. Y. Wong^{1,9}, G. McKay³. ¹Singapore Eye Research Institute, Singapore National Eye Centre, Singapore, Singapore; ²Department of Ophthalmology & Visual Sciences, University of Wisconsin School of Medicine and Public Health, Madison, WI; ³Centre for Public Health, Queen's University Belfast, Belfast, United Kingdom; ⁴Epidemiology, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD; ⁵Centre for Vision Research, University of Sydney, Sydney, New South Wales, Australia; ⁶Baker Heart and Diabetes Institute, Melbourne, Victoria, Australia; ⁷Kidney Health Research Collaborative, UCSF School of Medicine, San Francisco, CA; ⁸Centre for Quantitative Medicine, Duke-NUS Medical School, Singapore, Singapore; ⁹Ophthalmology and Visual Sciences Academic Clinical Program, National University of Singapore, Singapore, Singapore; ¹⁰Division of Endocrinology, National University Hospital, Singapore, Singapore; ¹¹Yamagata University Hospital, Japan, Japan; ¹²Queen's University Belfast, Belfast, United Kingdom; ¹³Erasmus University Medical Center, Rotterdam, Netherlands**2568 — 8:45 Predictors for very Long time visual outcome in macular edema secondary to retinal vein occlusion treated in real-world setting.** Matus Rehak, C. Busch, P. Lamprecht, P. M. Wiedemann. Department of Ophthalmology, University of Leipzig, Leipzig, Germany *CR**2569 — 9:00 A Multicentre Double-masked Randomised Controlled Non-Inferiority Trial comparing clinical and cost effectiveness of intravitreal therapy with ranibizumab (Lucentis) vs aflibercept (Eylea) vs bevacizumab (Avastin) for Macular Oedema due to Central Retinal Vein Occlusion [LEAVO]: Baseline patient sociodemographic and ocular characteristics.** Philip G. Hykin¹, J. Vasconcelas², T. Prevost², S. Sivaprasad¹, B. Hounsome³, U. Chakravarthy⁴, S. Harding⁷, A. Lotery⁵, Y. C. Yang⁶, P. Sen¹, J. Ramu¹, L. Nicholson¹, T. Peto⁴. ¹Moorfields Eye Hospital, London, England, United Kingdom; ²Imperial College, London, United Kingdom; ³Kings College CTU, London, United Kingdom; ⁴Queen's University Belfast, Belfast, United Kingdom; ⁵University of Southampton, Southampton, United Kingdom; ⁶Royal Wolverhampton NHS Trust, Wolverhampton, United Kingdom; ⁷University of Liverpool, Liverpool, United Kingdom *CR, ✕**2570 — 9:15 Elevated Expression of Angiopoietin-like 4 in the Aqueous of Retinal Vein Occlusion Patients Who Develop Neovascular Glaucoma.** Kathleen Jee¹, S. Hassan¹, D. Grover², G. Semenza³, S. Montaner⁴, A. Sodhi¹. ¹Wilmer Eye Institute, Baltimore, MD; ²Glaucoma Associates of Texas, Dallas, TX; ³Vascular Program, Institute for Cell Engineering; Departments of Pediatrics, Medicine, Oncology, Radiation Oncology, Biological Chemistry, and Genetic Medicine, Johns Hopkins University School of Medicine, Baltimore, MD; ⁴Department of Oncology and Diagnostic Sciences, School of Dentistry; Department of Pathology, School of Medicine; Greenebaum Cancer Center, University of Maryland, Baltimore, MD**2571 — 9:30 Microglia Phenotypic Switching from M1 to M2 as a Novel Target for Suppressing Retinal Angiogenesis.** Xiaowei Sun, Y. Liu, Z. Huang, T. Zhou, X. Zhu, M. Li, B. Cheng, C. He, X. Liu. State Key Laboratory of Ophthalmology, Zhongshan Ophthalmic Center, Sun Yat-Sen University, Guang Zhou, China**2572 — 9:45 Therapeutic eyedrops inhibiting caspase-9 reduce edema and protect retinal function in mouse model of RVO.** Maria Avrutsky¹, Y. Jean¹, A. White¹, s. snipas², G. Salvesen², C. Troy^{1,3}. ¹Pathology and Cell Biology, Columbia University, New York, NY; ²Sanford Burnham Prebys, La Jolla, CA; ³Neurology, Columbia University, New York, NYTuesday Papers/
Minisymposia
8:15 am – 10:00 am

Room 312

Tuesday, May 01, 2018 8:15 AM-10:00 AM

Cornea

303 Corneal Neovascularization and Immunology**Moderators: Victor L. Perez, Dimitri T. Azar and Daniel R. Saban**

2573 — 8:15 In Situ Hybridization Visualizes Bacterial Clusters on Cells of the Human Conjunctival Epithelium. Olof H. Sundin¹, E. Morales¹, E. Nieto¹, B. Tudor¹, M. Maldonado², P. Nelson², C. Ray³, P. Tran³, T. W. Reid³, K. Mitchell³, D. McCartney³. ¹Department of Biomedical Sciences, Texas Tech Health Sciences Center at El Paso, El Paso, TX; ²Department of Surgery, Texas Tech Health Sciences Center at El Paso, El Paso, TX; ³Department of Ophthalmology and Visual Sciences, Texas Tech Health Sciences Center, Lubbock, TX

2574 — 8:30 Local Delivery of Regulatory T Cells Promotes Corneal Allograft Survival. Chunyi Shao^{1,2}, Y. Chen¹, T. Nakao¹, A. Amouzegar¹, J. Yin¹, M. Tahvildari¹, S. Chauhan¹, R. Dana¹. ¹Schepens Eye Research Institute, Massachusetts Eye & Ear Infirmary, Harvard Medical School, Boston, MA; ²Ophthalmology, Shanghai Ninth People's Hospital, Shanghai Jiao Tong University School of Medicine, Shanghai, China

2575 — 8:45 Caspase-8 Promotes Inflammation-Induced Lymphangiogenesis and Allograft Rejection in the Cornea. Wenru Su¹, X. Chen¹, Y. Xiao¹, S. Zheng², D. Liang¹. ¹State Key Laboratory of Ophthalmology, Zhongshan Ophthalmic Center, Sun Yat-sen University, Guangzhou, China; ²Department of Medicine, Penn State University Hershey College of Medicine, Hershey, PA

2576 — 9:00 Severing corneal nerves induces the release of substance P which converts ocular surface CD11c+ cells to contrasuppressor cells that abolish ocular immune privilege. Sudha Neelam, A. Wilkerson, J. Mellon, J. Y. Niederkorn. Ophthalmology, UT southwestern Medical center, Dallas, TX

2577 — 9:15 Analysis of inflammasome formation in the lacrimal gland during acute and chronic inflammation. Helen P. Makarenkova¹, V. I. Shestopalov^{2,3}, M. Moghadam¹, L. Basova¹. ¹Molecular Medicine, The Scripps Research Institute, La Jolla, CA; ²Ophthalmology, University of Miami Miller School of Medicine, Miami, FL; ³Cell Biology, University of Miami Miller School of Medicine, Miami, FL

2578 — 9:30 Characterization of Injury-induced Corneal Angiogenesis and Lymphangiogenesis in Prox1-GFP/Flt1-dsRed Transgenic Mice. Jin-Hong Chang, K. Han, D. T. Azar. Ophthalmology, Univ of Illinois at Chicago, Chicago, IL

2579 — 9:45 Evaluation of a sustained drug delivery system for anti-VEGF antibody after alkali burns to the eye. Chengxin Zhou¹, V. Kapoulea¹, J. Chodosh^{2,3}, C. H. Dohlman^{2,3}, E. I. Paschalidis^{1,3}. ¹Schepens Eye Research Institute-Massachusetts Eye and Ear, Boston, MA; ²Department of Ophthalmology, Massachusetts Eye and Ear Infirmary, Boston, MA; ³Harvard Medical School, Boston, MA

Room 313A

Tuesday, May 01, 2018 8:15 AM-10:00 AM

Anatomy and Pathology/Oncology / Glaucoma / Retina / Visual Neuroscience**304 The nuts and bolts of novel drug development - Minisymposium**

This minisymposium will bring together diverse experts to describe the process of translating research findings into new therapies. It will highlight aspects of the development of laboratory findings into clinical models, finding lead compounds and biologics, biomarkers, and the challenges of funding trials of new agents.

Moderators: Shahar Frenkel, Timothy W. Corson and M Francesca Cordeiro

— 8:15 Introduction

2580 — 8:20 High throughput screening for bioactive compound discovery. Timothy W. Corson. Ophthalmology, Indiana University School of Medicine, Indianapolis, IN *CR

2581 — 8:38 DARC (Detection of Apoptosing Retinal Cells) as a means for early detection of retinal neuronal damage, and how that can lead to a change in diagnosis and treatment. M Francesca Cordeiro^{1,2}. ¹Glaucoma & Retinal Neurodegeneration Res Grp, UCL Inst Ophthalmol & Western Eye Hsp London, London, United Kingdom; ²Surgery, Imperial College London, London, United Kingdom *CR, ✗

2582 — 8:56 Derivation of RPE cells from human embryonic stem cells: The journey from basic research to clinical application. Eyal Banin. Ophthalmology, Hadassah-Hebrew Univ Med Ctr, Jerusalem, Israel *CR, ✗

2583 — 9:14 Imaging biomarkers for AMD and retinal dystrophies for testing new drugs. Srinivas R. Sadda^{1,2}. ¹Ophthalmology, University of California - Los Angeles, Los Angeles, CA; ²Doheny Eye Institute, Los Angeles, CA *CR

2584 — 9:32 Funding drug development for rare ocular diseases - NIH mechanisms. Michael Steinmetz. Division of Extramural Science Programs, National Eye Institute/NIH, Bethesda, MD

— 9:50 Discussion

Room 314

Tuesday, May 01, 2018 8:15 AM-10:00 AM

Visual Neuroscience

305 Ganglion cells and beyond**Moderators: Juliette E. McGregor and Paul R. Martin**

2585 — 8:15 Dissecting Rod and Cone Inputs to OFF Transient Alpha Ganglion Cells. Christophe Ribelayga¹, N. Jin¹, L. Tian¹, Z. Zhang¹, E. Silveira¹, I. Fahrenfort¹, F. Potsma², P. David², S. C. Massey¹. ¹Ophthalmology & Visual Science, University of Texas Medical School at Houston, Houston, TX; ²Neurobiology, Harvard University Medical School, Cambridge, MA

2586 — 8:30 Development of the midgut connectome of the human fovea. Chi Zhang, A. Hoshino, T. A. Reh, R. O. Wong, D. M. Dacey. Department of Biological Structure, University of Washington, Seattle, WA

2587 — 8:45 Cone type specific dendritic calcium signaling in the blue-yellow color opponent ganglion cells of the primate retina. Peter B. Detwiler¹, O. S. Packer², F. Viana³, D. M. Dacey². ¹Physiology and Biophysics, University of Washington, Seattle, WA; ²Biological Structure, University of Washington, Seattle, WA; ³Systems Neurobiology, Instituto de Neurociencias, Alicante, Valencia, Spain

2588 — 9:00 Retinal ganglion cell types expressing the transcription factor FoxP2 in primate retina. Sammy C. Lee^{1,2}, P. R. Martin^{1,2}, U. Grunert^{1,2}. ¹Discipline of Ophthalmology and Save Sight Institute, The University of Sydney, Sydney, New South Wales, Australia; ²Australian Research Council Centre of Excellence for Integrative Brain Function, The University of Sydney, Sydney, New South Wales, Australia

2589 — 9:15 Channelrhodopsin mediated retinal ganglion cell responses in the living macaque. Juliette E. McGregor¹, T. Godat^{1,3}, K. Parkins¹, J. Strazzeri^{1,2}, D. R. Williams^{1,3}, W. H. Merigan^{1,2}. ¹Center for Visual Science, University of Rochester, Rochester, NY; ²Flaum Eye Institute, University of Rochester, Rochester, NY; ³Institute of Optics, University of Rochester, Rochester, NY *CR

2590 — 9:30 Retinal ganglion cell targeting is more efficient than bipolar cell targeting for optogenetic vision restoration. Qi Lu¹, T. H. Ganjawala¹, G. W. Abrams², Z. Pan^{1,2}. ¹Anatomy, Wayne State University, Detroit, MI; ²Department of Ophthalmology, Wayne State University, Detroit, MI *CR

2591 — 9:45 Modulation of the visual cortex contrast response function by the pulvinar. Christian Casanova, B. Oliveira Ferreira de Souza, N. Cortes Hernandez. School of Optometry, University of Montreal, Montreal, Quebec, Canada

Room 315

Tuesday, May 01, 2018 8:15 AM-10:00 AM

Retinal Cell Biology

306 Retinal Development**Moderators: Deborah L. Stenkamp and Sumiko Watanabe**

2592 — 8:15 Mechanistic dissection of Hedgehog signaling in early eye morphogenesis. Kristen Kwan, H. B. Gordon, S. Lusk, E. O. Wirick, B. Froelich. *Human Genetics, University of Utah, Salt Lake City, UT*

2593 — 8:30 Siah E3 ubiquitin ligase indirectly regulates Pax2 expression by targeting Nlz2 for proteosomal degradation during retinal morphogenesis. Warlen Piedade, J. Famulski. *Biology, University of Kentucky, Lexington, KY*

2594 — 8:45 Conditional knockout of mTORC1 in retina blocks developmental formation of the astrocyte network and retinal vasculature. Steven F. Abcouwer, D. Kong, L. Elghazi-Cras, P. E. Fort, T. W. Gardner. *Ophthalmology & Visual Science, Univ of Michigan Kellogg Eye Ctr, Ann Arbor, MI*

2595 — 9:00 Glycogen Synthase Kinase 3 restrain the genesis of displaced ganglion cells during retinal development. Jerome E. Roger¹, E. Braginskaja¹, L. Thomas¹, A. Swaroop², M. Perron¹. ¹Neuropsi, Certo / CNRS, Orsay, France; ²NNRL, NEI, Bethesda, MD

2596 — 9:15 Growth differentiation factors regulate retinal ganglion cell development. Kun-Che Chang, C. Sun, X. Xia, S. Wu, J. L. Goldberg. *Ophthalmology, Stanford University, Palo Alto, CA*

2597 — 9:30 Integrative and rapid discovery of retinal regulatory molecules. Melanie Samuel¹, B. Liu¹, N. A. Albrecht¹, D. Jiang¹, C. Burger¹, F. Li¹, J. Alevy¹, J. Wang², C. Hsu¹, S. Kalaga¹, R. Bohat⁵, M. Justice⁶, S. Yamamoto³, J. Seavitt⁴, A. Beaudet³, D. Mary^{4,5}. ¹Department of Neuroscience, HCOA, Baylor College of Medicine, Houston, TX; ²Program in Developmental Biology, Baylor College of Medicine, Houston, TX; ³Jan and Duncan Neurological Research Institute, Texas Children's Hospital, Houston, TX; ⁴Department of Molecular Physiology and Biophysics, Baylor College of Medicine, Houston, TX; ⁵Department of Molecular and Human Genetics, Baylor College of Medicine, Houston, TX; ⁶Program in Genetics and Genome Biology, Hospital for Sick Children, Toronto, Ontario, Canada

2598 — 9:45 Molecular determinants of photoreceptor pre-synapse morphogenesis. Anand Swaroop, D. T. Whitaker, S. Kim, P. Hargrove, H. Fann. *National Eye Institute, Bethesda, MD*

Room 316B

Tuesday, May 01, 2018 8:15 AM-10:00 AM

Clinical/Epidemiologic Research

307 Diabetic eye disease and other retinal diseases**Moderators: Ecosse L. Lamoureux and Gerald Liew**

2599 — 8:15 Five-year progression of newly diagnosed untreated diabetic retinopathy in a real-world setting from a large US claims database. Andrew A. Moshfeghi¹, A. Ghanekar², I. Abbass², D. Sheinson², C. Quezada-Ruiz², V. Garmo². ¹USC Roski Eye Institute, Los Angeles, CA; ²Genentech, Inc., South San Francisco, CA *CR

2600 — 8:30 Six-year Incidence and Progression of Diabetic Retinopathy In Indian Adults: The Singapore Indian Eye Study. Neelam K. Kumari Bhaskar^{1,2}, Q. duc nguyen², N. Tan², C. Wong², G. Tan², N. Cheung², J. Wang³, P. Mitchell⁴, E. L. Lamoureux^{2,3}, C. Cheng^{2,2}, T. Wong^{2,2}, C. Sabanayagam^{2,3}. ¹Ophthalmology and Visual Sciences, Khoo Teck Puat Hospital, Singapore, Singapore; ²Singapore Eye Research Institute, Singapore, Singapore; ³Duke-NUS Medical School, Singapore, Singapore; ⁴Westmead Research Institute, Sydney, New South Wales, Australia

2601 — 8:45 Are Person- and Areal-Level Socio-Economic Status Associated With the Onset and Progression of Diabetic Retinopathy? Ecosse L. Lamoureux^{1,2}, L. Li^{1,3}, W. Win², A. T. Gan¹, R. Man^{1,2}, Q. duc nguyen¹, E. Fenwick^{1,2}, P. Gupta¹, C. Sabanayagam^{1,2}, N. Kumari^{1,4}, J. Wang^{1,2}, P. Mitchell⁵, C. Cheng^{1,4}, T. Wong^{1,4}. ¹Singapore Eye Research Institute, Singapore, Singapore, Singapore; ²Duke-NUS Medical School, Singapore, Singapore, Singapore; ³Division of Obstetrics and Gynecology, KK Women's and Children's Hospital, Singapore, Singapore, Singapore; ⁴Singapore National Eye Centre, Singapore, Singapore, Singapore; ⁵Centre for Vision Research, Department of Ophthalmology and the Westmead Institute, University of Sydney, Sydney, New South Wales, Australia, Sydney, New South Wales, Australia

2602 — 9:00 Association between diabetic retinopathy and incident cognitive impairment. Preeti Gupta¹, A. T. Gan¹, R. Man¹, E. Fenwick¹, C. Sabanayagam¹, C. L. Chen², N. Ramani², X. Xu², S. Hilal², T. Wong¹, C. Cheng¹, E. L. Lamoureux¹. ¹Ophthalmology, Singapore Eye Research Institute, Singapore, Singapore, Singapore; ²National University of Singapore, Singapore, Singapore, Singapore

2603 — 9:15 Retinopathy Signs and Risk of Cardiovascular Disease in Asians with and without Diabetes. Ning Cheung^{1,2}, Y. Tham², M. Chee², P. Mitchell³, T. Wong², G. Tan¹, C. Sabanayagam², C. Cheng². ¹Surgical Retina, Singapore National Eye Centre, Singapore, Singapore; ²Singapore Eye Research Institute, Singapore, Singapore; ³Univeristy of Sydney, Sydney, New South Wales, Australia

2604 — 9:30 Treatment patterns for diabetic macular edema (DME) in the United States: Analysis of the IRIS[®] Registry (Intelligent Research in Sight). Jeffrey R. Willis¹, L. S. Morse², W. Rich IIP³, F. Lum³, C. Salman³, R. A. Cantrell¹. ¹Genentech, Inc, South San Francisco, CA; ²Department of Ophthalmology, UC Davis, Sacramento, CA; ³American Academy of Ophthalmology, San Francisco, CA *CR

2605 — 9:45 Phase 2 Trial of Ciliary Neurotrophic Factor for Macular Telangiectasia Type 2. Emily Y. Chew¹, T. E. Clemons³, G. J. Jaffe², S. Farsiu², e. lad², M. Friedlander⁴. ¹Epidemiology & Clinical Applications, National Eye Inst/NIH, Bethesda, MD; ²Duke University, Durham, NC; ³The Emmes Corporation, Rockville, ME; ⁴Scripps Research Institute, La Jolla, CA *CR, ✗

Room 316C

Tuesday, May 01, 2018 8:15 AM-10:00 AM

Lens / Cornea

308 Molecular and cellular insights into lens and cornea regeneration - Minisymposium

Regeneration is an exciting area of research for lens and cornea with new discoveries arising at a staggering pace. This mini will explore novel discoveries in lens and cornea regeneration, focusing on the molecular and cellular mechanisms underlying commitment to lens and cornea fates, and generation of lens and cornea tissues for analyses and transplantation.

Moderators: Jeffrey M. Gross and Salil A. Lachke**— 8:15 Welcome & Introductions**

2606 — 8:18 Lens Regeneration from the Cornea in Xenopus. Dr. Jonathan Henry. *Cell and Developmental Biology, University of Illinois, Urbana, IL*

2607 — 8:35 RNA-seq, ATAC-seq, and proteomic analysis of mammalian lens differentiation. Ales Cvekl. *Ophthalmology & Vis Sci & Genetics, Albert Einstein Coll of Medicine, Bronx, NY*

2608 — 8:52 Generation of lentoid bodies from patient-specific induced pluripotent stem cells derived from urinary cells. Qiuli FU. *Eye Center, the 2nd Affiliated Hospital of Zhejiang University, Hangzhou, China*

2609 — 9:09 Lens and Cornea Regeneration Using Endogenous Stem Cells. Kang Zhang. *Ophthalmology, University Of California, San Diego, La Jolla, CA*

2610 — 9:26 Development of cornea organoids from human induced pluripotent stem cells and their future use. Shukti Chakravarti^{1,2}. ¹Medicine, Johns Hopkins School of Medicine, Baltimore, MD; ²Ophthalmology, Johns Hopkins School of Medicine, Baltimore, MD

2611 — 9:43 Challenges to the clinical application of iPSC- derived cornea. Kohji Nishida. *Ophthalmology, Osaka Univ School of Medicine, Suita, Japan* *CR

Ballroom A

Tuesday, May 01, 2018 8:15 AM-10:00 AM

Glaucoma

309 Neuroprotection

Moderators: Tatjana C. Jakobs and Tonia S. Rex

2612 — 8:15 Identification of MAP4K4/GSK-3 as a parallel acting pathway with DLK/LZK signaling to control cell death programs in retinal ganglion cells. Amit K. Patel¹, K. Mitchell², B. Hansen², C. Berlinicke², M. Montgomery¹, R. Broyer¹, D. J. Zack², D. S. Welsbie¹.

¹Ophthalmology, University of California San Diego, La Jolla, CA; ²Johns Hopkins University, Baltimore, MD

2613 — 8:30 The ability of retinal ganglion cells to regenerate dendrites and synapses requires insulin signaling and is impaired by high fat diet intake. Jessica Agostinone, L. Alarcon-Martinez, H. Quintero, S. Vucetic, N. A. Belforte, A. Di Polo. *Neurosciences, University of Montreal and CRCHUM, Montréal, Quebec, Canada*

2614 — 8:45 Astrocyte-Produced Lipoxins Protect Retinal Ganglion Cells from Acute and Chronic Stress. izhar Livne-bar¹, J. Wei², Z. Liu³, S. Alqawlaq^{1,2}, G. Won¹, A. Tuccitto^{1,2}, K. Groner², J. G. Flanagan³, J. M. Sivak^{1,2}. ¹Vision Science, University Health Network-Krembil Research Institute, Toronto, Ontario, Canada; ²Ophthalmology and Vision Science, University of Toronto, Toronto, Ontario, Canada; ³Vision Science Program, UC Berkeley, School of Optometry, Berkeley, CA

2615 — 9:00 BMSC-derived exosomes promote retinal ganglion cell survival in multiple rodent models of glaucoma. Ben Mead¹, J. Amaral¹, Z. Ahmed², S. I. Tomarev¹. ¹Laboratory of Retinal Cell and Molecular, NEI, National Institutes of Health, Bethesda, MD; ²Neuroscience and Ophthalmology, Institute of Inflammation and Ageing, University of Birmingham, Edgbaston, Birmingham, United Kingdom

2616 — 9:15 Protection of the injured optic nerve with forced and voluntary exercise in aged mice: can there be too much of a good thing? Vicki Chrysostomou, P. van Wijngaarden, J. Paul, T. Colgan, I. A. Trounce, J. G. Crowston. *Centre For Eye Research Australia, University of Melbourne, Melbourne, Victoria, Australia*

2617 — 9:30 Overexpression of Parkin Protects Retinal Ganglion Cells in Experimental Glaucoma. Hu xinxin^{1,2}, Y. Dai¹, X. Sun¹.

¹Department of Ophthalmology and Vision Science, Eye & ENT Hospital, Shanghai, Shanghai, China; ²Key Laboratory of Myopia of State Health Ministry and Key Laboratory of Visual Impairment and Restoration of Shanghai, Shanghai, China

2618 — 9:45 Oral pyruvate supplementation protects against neurodegeneration in a rat model of glaucoma. Chelsea Guymer¹, G. Chidlow¹, J. P. Wood¹, R. J. Casson^{1,2}.

¹Ophthalmology & Visual Sciences, University of Adelaide, Adelaide, South Australia, Australia; ²Ophthalmology, Royal Adelaide Hospital, Adelaide, South Australia, Australia

Ballrooms BC

Tuesday, May 01, 2018 8:15 AM-10:00 AM

Retina

310 AMD Imaging I

Moderators: Ursula Schmidt-Erfurth and Steven Saraf

2619 — 8:15 Choroidal Vessel Changes in Age-Related Macular Degeneration using Swept-Source Optical Coherence Tomography. John B. Miller¹, I. Lains¹, J. Wang¹, J. Providencia Costa^{2,3}, R. F. Silverman¹, D. Vavvas¹, I. Kim¹, J. W. Miller⁴, D. Husain¹, R. M. Silva^{4,2}. ¹Harvard Medical School, Department of Ophthalmology, Massachusetts Eye and Ear, Boston, MA; ²Coimbra University Hospital, Coimbra, Portugal; ³Association for Innovation and Biomedical Research on Light and Image, Coimbra, Portugal; ⁴Faculty of Medicine, University of Coimbra, Coimbra, Portugal *CR

2620 — 8:30 Projection-resolved optical coherence tomography angiography of choroidal neovascularization. Steven T. Bailey, R. Patel, J. WANG, A. Lauer, J. Campbell, L. Kiang, C. J. Flaxel, T. S. Hwang, D. Huang, Y. Jia. *Ophthalmology, Casey Eye Institute, OHSU, Portland, OR* *CR

2621 — 8:45 Optical coherence tomography angiography of long-term progression of type 1 neovascularization in age-related macular degeneration. David Xu¹, J. Davila¹, M. Rahimi¹, C. Rebhun², A. Alibhai², N. K. Waheed², D. Sarraf¹. ¹Stein Eye Institute, Los Angeles, CA; ²New England Eye Center, Tufts Medical Center, Boston, MA *CR

2622 — 9:00 Detection of the angiofibrotic switch in neovascular AMD: A quantitative analysis. Philipp K. Roberts¹, S. Zotter², A. Montuoro¹, M. Pircher², B. Baumann², S. Sacu¹, C. K. Hitzenberger², U. Schmidt-Erfurth¹. ¹Department of Ophthalmology and Optometry, Medical University of Vienna, Vienna, Austria; ²Center for Medical Physics and Biomedical Engineering, Medical University of Vienna, Vienna, Austria *CR

2623 — 9:15 Automated identification of disease activity and therapeutic response in neovascular AMD by deep learning. Ursula Schmidt-Erfurth^{1,2}, W. Vogl², S. M. Waldstein¹, B. Gerendas¹, T. Schlegl², H. Bogunovic². ¹Department of Ophthalmology, Medical University of Vienna, Vienna, Austria; ²Christian Doppler Laboratory OPTIMA, Vienna, Austria *CR

2624 — 9:30 Photoreceptor (PR) degeneration, gliosis, and relation to supporting tissues in geographic atrophy (GA) of age-related macular degeneration (AMD). Miaoling Li^{1,2}, C. Huisin¹, J. D. Messinger¹, R. Dolz-Marco^{3,4}, D. Ferrara⁵, K. Freund^{3,4}, C. A. Curcio¹. ¹Ophthalmology, School of Medicine, University of Alabama at Birmingham, Birmingham, AL; ²State Key Laboratory of Ophthalmology, Zhongshan Ophthalmic Center, Sun Yat-sen University, Guangzhou, Guangdong, China; ³Vitreous Retina Macula Consultants of New York, New York, NY; ⁴LuEsther T Mertz Retinal Research Center, Manhattan Eye, Ear and Throat Hospital, New York, NY; ⁵Genentech, South San Francisco, CA *CR

2625 — 9:45 Fluorescence Lifetime Imaging Ophthalmoscopy (FLIO) in Non-exudative AMD. Lydia Sauer^{1,2}, K. Andersen^{3,1}, R. H. Gensure¹, G. S. Hageman¹, M. Hammer², P. S. Bernstein¹. ¹Ophthalmology and Visual Sciences, John A Moran Eye Center, Salt Lake City, UT; ²Department of Ophthalmology, University Hospital Jena, Jena, Germany; ³Geisinger Commonwealth School of Medicine, Scranton, PA

Exhibit Hall A0131-A0144

Tuesday, May 01, 2018 8:15 AM-10:00 AM

Retinal Cell Biology

311 Neovascular AMD

Moderator: Yin Shan Eric Ng

2626 — A0131 Suppression of development of laser-induced choroidal neovascularization by TRPA1 gene deletion in mice. Yuta Usui, H. Iwanishi, K. Kusumoto-Usui, K. Nishi, T. Sumioka, Y. Okada, S. Saika. *Ophthalmology, Wakayama Medical University, Wakayama, Japan*

2627 — A0132 Interferon Regulatory Factors in Microglia and their role in retinal homeostasis and formation of choroidal neovascularization. Peipei Zhang¹, P. Wieghofer^{2,3}, A. Schlecht¹, S. K. Boneva¹, J. Koch¹, F. Ludwig¹, Y. Laich¹, M. Boeckl¹, G. Schlunck¹, H. Agostini¹, M. Prinz^{2,4}, C. Lange¹. ¹Eye Center, University of Freiburg, Freiburg im Breisgau, Germany; ²Institute of Neuropathology, University of Freiburg, Freiburg, Germany; ³Institute of Anatomy, University of Leipzig, Leipzig, Germany; ⁴BIOSS Center for Biological Signaling Studies, University of Freiburg, Freiburg, Germany

2628 — A0133 New insights towards the progression and retinal dysfunction in the laser-induced choroidal neovascularization mouse model. Anna Salas Torras, A. Badia, L. Fontrodona, B. Ferreira de Souza, M. A. Zapata, J. Garcia-Arumi. *Ophthalmology, Vall d'Hebrón Research Institute, Barcelona, Catalunya, Spain*

2629 — A0134 Targeting endothelial-to-mesenchymal transition (EndMT) driven fibrosis for choroidal neovascularization (CNV) in age-related macular degeneration (AMD). Franco Aparecido Rossato^{1,2}, Y. Su^{1,2}, A. Mackey^{1,2}, Y. Ng^{1,2}. ¹Ophthalmology, Harvard Medical School, Boston, MA; ²Schepens Research Eye Institute of Mass. Eye and Ear, Boston, MA

2630 — A0135 Inhibition of VEGF-A upregulates other VEGF family members and VEGF receptors. Xuri Li. *zhongshan Ophthalmic Center, Sun Yat-sen University, Guangzhou, China*

2631 — A0136 Aflibercept shows strong dose-dependency when administered intravitreally in the mouse CNV model. Ruta Maciulaitiene¹, S. Ragauskas², A. M. Haapaniemi², S. Kaja^{2,3}, I. Januleviciene¹, G. Kalesnykas². ¹Lithuanian University of Health Sciences, Kaunas, Lithuania; ²Experimentica Ltd., Kuopio, Finland; ³K&P Scientific LLC, Oak Park, IL *CR

2632 — A0137 Liver X receptors agonist attenuates experimental choroidal neovascularization stimulated by oxidized low density lipoprotein in mice. Hongjun Du¹, T. Wu¹, W. Xu¹, P. Shaw². ¹Department of Ophthalmology, Xijing Hospital, Fourth Military Medical University, Xi'an, Shaanxi Province, China; ²Department of Ophthalmology and Shiley Eye Institute, University of California in San Diego, San Diego, CA

2633 — A0138 Inhibition of CNV (choroidal neovascularization) by berberine. Rong Wen¹, P. Li^{1,2}, Z. Luo³, Y. Li¹. ¹Bascom Palmer Eye Institute, University of Miami, Miami, FL; ²Department of Ophthalmology, Second Affiliated Hospital, Dalian Medical University, Dalian, China; ³Department of Biochemistry, Boston University, School of Medicine, Boston, MA

2634 — A0139 Topical administration of siRNA targeting NRARP as a new treatment for choroidal neovascularization. Veronica Ruz, C. Paneda, T. Martinez, S. Monteiro, A. Guerra, V. Gonzalez, A. Jimenez. *Sylentis, Madrid, Spain* *CR

2635 — A0140 Transduction Patterns of an Adeno-associated Viral Vector in a Laser-induced Choroidal Neovascularization Mouse Model. Tae Kwann Park, S. Lee, Y. Kim, S. Nah, Y. Ohn. *Ophthalmology, Soonchunhyang Univ Hospital, Bucheon-si, Korea (the Democratic People's Republic of)*

2636 — A0141 HTRA1 synergizes with oxidized phospholipids in activation of VEGF and inflammatory factors in ARPE-19 cells. Peter Shaw, V. Lin, Z. Lu, A. May, B. Che, K. Tran. *UC San Diego, La Jolla, CA*

2637 — A0142 Lacking TNF α accelerates development of Argon laser-induced choroidal neovascularization with augmentation of neutrophil population and increased vascular endothelial cell apoptosis in mice. Hiroki Iwanishi, T. Sumioka, S. Saika. *Ophthalmology, Wakayama Medical University, Wakayama, Japan*

2638 — A0143 Neupilin-1-Expressing Myeloid Cells Partake in Choroidal Neovascularization. Elisabeth Andriessen^{1,2}, F. Binet¹, S. Crespo^{1,2}, N. Beaulieu¹, K. Beauchemin¹, P. La Plante¹, J. G. Clement¹, M. Sapiha^{1,2}. ¹Maisonneuve Rosemont Hospital Research Center, Montreal, Quebec, Canada; ²University of Montréal, Montréal, Quebec, Canada *CR

2639 — A0144 Serine phosphorylation of IQGAP1 regulates VEGF-mediated Rac1 activation and choroidal endothelial cell migration. Haibo Wang¹, X. Han³, D. B. Sacks², M. Hartnett¹. ¹John A Moran Eye Ctr, Ophthalmology, University of Utah, Salt Lake City, UT; ²Department of Laboratory Medicine, National Institutes of Health, Bethesda, MD; ³Zhongshan Eye Institute, Zhongshan Medical University, Guangzhou, China

Exhibit Hall A0145-A0156

Tuesday, May 01, 2018 8:15 AM-10:00 AM

Retinal Cell Biology

312 Retinal vascular biology

Moderators: Jing Chen and Kip M. Connor

2640 — A0145 Modulation of CD140b on Adipose-derived stem cells enhance their angiogenic potential through direct but not paracrine pathways. Sally L. Elshaer, R. RAJESH LENIN, R. Gangaraju. *Ophthalmology, Hamilton Eye Institute, University of Tennessee Health Sciences Center, Memphis, TN* *CR

2641 — A0146 MEK inhibition prevents upregulation of endothelin-1-mediated vasoconstriction following occlusion of the rat ophthalmic artery. Frank W. Blixt¹, K. Haanes², K. Sörensen², V. Fedulov², K. Warfvinge^{1,2}, L. Edvinsson^{1,2}. ¹Department of Clinical Sciences, Lund University, Lund, Sweden; ²Department of Clinical Experimental Research, Copenhagen University Hospital, Rigshospitalet, Glostrup, Denmark

2642 — A0147 The role of a novel metabolic regulator in human retinal vascular endothelial cell function. Sze Yuan Ho¹, B. Qiu², G. Cheung³, T. Wong^{3,4}, W. Hong², X. Wang^{1,2}. ¹Lee Kong Chian School of Medicine, Nanyang Technological University, Singapore, Singapore, Singapore; ²Institute of Molecular and Cell Biology, Singapore, Singapore, Singapore; ³Singapore Eye Research Institute, Singapore, Singapore, Singapore; ⁴Ophthalmology & Visual Sciences Academic Clinical Program (ACP), Duke-NUS Medical School, Singapore, Singapore, Singapore

2643 — A0148 CGRP and PACAP induced vasodilation in the porcine retinal vasculature. Kristian Agmund Haanes¹, F. W. Blixt², V. Fedulov¹, M. Sheykhzade³, K. Sörensen¹, L. Edvinsson^{1,2}, K. Warfvinge^{1,2}. ¹Department of Clinical Experimental Research, Copenhagen University Hospital, Rigshospitalet, Glostrup, Denmark; ²Department of Clinical Sciences, Lund University, Lund, Sweden; ³Department of Drug Design and Pharmacology, Faculty of Health and Medical Sciences, University of Copenhagen, Copenhagen, Denmark

2644 — A0149 PERK inhibition suppresses pathological retinal neovascularization and promotes physiological retinal vascular repair in a mouse model of oxygen-induced retinopathy. Shuang Zhu¹, H. Liu^{1,2}, Y. Ha¹, W. Zhang^{1,3}. ¹Ophthalmology, The University of Texas Medical Branch, Galveston, TX; ²Center for Biomedical Engineering, The University of Texas Medical Branch, Galveston, TX; ³Neuroscience and Cell Biology, The University of Texas Medical Branch, Galveston, TX

Tuesday Posters
8:15 am – 10:00 am

2645 — A0150 Effects of Calcitonin Gene-related Peptide on the rat ciliary artery vasodilation and retinal function. Vadim Fedulov¹, F. W. Blixt², K. Sörensen¹, L. Edvinsson^{1,2}, K. Warfvinge^{1,2}, K. Haanes¹. ¹Department of Clinical Experimental Research, Copenhagen University Hospital, Rigshospitalet, Glostrup, Denmark; ²Department of Clinical Sciences, Lund University, Lund, Sweden

2646 — A0151 MFAP4 supports retinal endothelial cell proliferation. Bartosz Pilecki¹, A. Schlosser¹, D. O. Bates², L. Ravn^{2,3}, U. Holmskov¹, S. Heegaard^{4,5}, J. Grauslund^{2,3}, G. L. Sorensen¹. ¹Department of Cancer and Inflammation Research, Institute of Molecular Medicine, Odense, Denmark; ²Department of Ophthalmology, Odense University Hospital, Odense, Denmark; ³Department of Clinical Research, University of Southern Denmark, Odense, Denmark; ⁴Department of Ophthalmology, University Hospital Rigshospitalet, Copenhagen, Denmark; ⁵Department of Pathology, University of Copenhagen, Copenhagen, Denmark; ⁶Division of Oncology, University of Nottingham, Nottingham, United Kingdom *CR

2647 — A0152 Changes in Metabolomic Profiles of Rat OIR Model. Fang Lu¹, Y. Liu², Y. Tang². ¹Ophthalmology, West China Hospital, Chengdu, Sichuan, China; ²Chengdu Institute of Biology, Chinese Academy of Sciences, Chengdu, Sichuan, China

2648 — A0153 Persistent Choroidal Involvement is p53-Dependent in Oxygen-Induced Retinopathy. Tianwei (Ellen) Zhou^{1,2}, H. Tahir², S. Omri², T. Zhu³, J. C. Rivera², I. Lahaie², C. Deal³, S. Nattel^{1,4}, P. Hamel⁵, S. Chemtob^{3,2}. ¹Medicine, McGill University, Montreal, Quebec, Canada; ²Hôpital Maisonneuve-Rosemont, Montreal, Quebec, Canada; ³CHU Sainte-Justine, Montreal, Quebec, Canada; ⁴Montreal Heart Institute, Montreal, Quebec, Canada

2649 — A0154 A prospective longitudinal optical coherence tomography imaging study demonstrates focal chorioretinal atrophy is a progressive disease in Sprague-Dawley rats. Joshua T. Bartoe¹, R. F. Boyd¹, M. T. Leahy¹, K. G. Nelson², T. S. Vihtelic¹. ¹Ophthalmology Services, MPI Research, Mattawan, MI; ²Pathology Services, MPI Research, Mattawan, MI

2650 — A0155 Expression and distribution of mitochondria, glycolytic enzymes, lactate dehydrogenase isoenzymes and lactate transporters in the vascular retina. Robert Casson, J. P. Wood, G. Chidlow. Ophthalmology, University of Adelaide, Adelaide, South Australia, Australia

2651 — A0156 Expression and distribution of mitochondria, glycolytic isoenzymes and lactate transporters in the avascular retina: implications for retinal metabolism. Glyn Chidlow^{1,2}, J. P. Wood^{1,2}, R. Casson^{1,2}. ¹Ophthalmology, Royal Adelaide Hospital, Adelaide, South Australia, Australia; ²Ophthalmology, University of Adelaide, Adelaide, South Australia, Australia

Exhibit Hall A0379-A0394

Tuesday, May 01, 2018 8:15 AM-10:00 AM

Physiology/Pharmacology

313 Toxicology, anti-inflammatory, antibiotics

Moderator: Cheryl L. Rowe-Rendleman

2652 — A0379 Intravitreal Administrations of pH 4.0-5.5 Vehicle Solutions are Well Tolerated in NZW rabbits. Florence Lorget¹, S. T. Laing¹, C. Schuetz¹, I. De Jong², J. Aaronson³, N. Tassew¹. ¹Safety Assessment, Genentech, South San Francisco, CA; ²Formulation, Genentech, South San Francisco, CA; ³Drug Delivery, Genentech, South San Francisco, CA *CR

2653 — A0380 Biochemical characterization of aqueous and vitreous humor in the Göttingen Minipig. Vittoria Badalone¹, C. Li², L. Negro Silva², R. Tavcar², R. Foster², S. Authier². ¹Business Development, CiToxLAB North America Inc., Laval, Quebec, Canada; ²Study Management, CiToxLAB North America, Laval, Quebec, Canada

2654 — A0381 Background Biometric and Morphometric Anterior Ocular Changes in the Juvenile Dutch-Belted Rabbits Compared to the Adult. Mark Vezina¹, K. Tenneson¹, M. Bussieres². ¹Ocular And Neuroscience, Charles River, Senneville, Quebec, Canada; ²V&O Services, St. Lazare, Quebec, Canada *CR

2655 — A0382 Finasteride Induced Clinical Ocular Toxicity. Lynnette H. Nguyen, A. Makino, P. Namkoong, Y. Yiannakou, K. Narain. South Bay Retina, Inc., Sunnyvale, CA

2656 — A0383 Ocular and Systemic Distribution of ¹⁴C- Perfluorohexyloctane following Topical Ocular Administration to Rabbits. Sonja Kroesser¹, E. Spencer², R. Grillenberger¹, C. B. Struble², K. Fischer¹. ¹Novaliq GmbH, Heidelberg, Germany; ²Covance Laboratories Ltd., Madison, WI *CR

2657 — A0384 Flow Cytometry analysis of stratified human corneal epithelial cell culture for biocompatibility study. Maud Gorbet^{1,2}, P. Hamilton¹, S. Mohammadi¹. ¹Systems Desing Engineering, University of Waterloo., Waterloo, Ontario, Canada; ²School of Optometry and Vision Science, University of Waterloo, Waterloo, Ontario, Canada

2658 — A0385 Safety study in cynomolgus monkeys after subretinal injection of rAAV. hPDE6A. Tobias Peters¹, B. Wilhelm¹, B. Korbmacher², S. Korte², K. Bartz-Schmidt³, S. Michalak⁴, G. Ochakovski¹, M. Fischer¹. ¹Institute for Ophthalmic Research, University Eye Hospital Tuebingen, Tuebingen, Germany; ²Covance Preclinical Services GmbH, Muenster, Germany; ³Department for ophthalmology, University of Tuebingen, Tuebingen, Germany; ⁴Department of Pharmacy, Ludwig-Maximilians-Universität, Munich, Germany *CR

2659 — A0386 Antibiotic Resistance in Ocular Pathogens – Preliminary Results from the 2017 ARMOR Surveillance Program. Christine M. Sanfilippo¹, M. E. Cavet¹, H. DeCory¹, P. A. Asbell². ¹Medical Affairs, Bausch + Lomb, Rochester, NY; ²Ophthalmology, Icahn School of Medicine at Mount Sinai, New York, NY *CR

2660 — A0387 Topical Penicillin Treatment of Staphylococcus aureus with Elevated MICs to Penicillin in a Rabbit Keratitis Model. Regis P. Kowalski, E. G. Romanowski, K. A. Yates, J. E. Romanowski, A. Grewal, R. A. Bilonick. Ophthalmology/Microbiology, Univ of Pittsburgh, Pittsburgh, PA

2661 — A0388 Meso-zeaxanthin (MZ) Protects Retina from Photo-oxidative Stress by Modulation of Rod-Specific Gene Expression: An In vivo Model. Vijaya Juturu¹, C. Orhan², F. Akdemir³, M. Tuzcu⁴, N. Sahin², I. Yilmaz⁵, K. Sahin². ¹Research and Development, OmniActive Health Technologies Inc, Morristown, NJ; ²Nutrition, Firat University, Elazig, Turkey; ³Fisheries, Inonu University, Malatya, Turkey; ⁴Biology, Firat University, Elazig, Turkey; ⁵Pharmacology, Inonu University, Malatya, Turkey *CR

2662 — A0389 In Vivo Pharmacokinetics of Bromfenac Ophthalmic Solution 0.075%, Bromfenac Ophthalmic Solution 0.07%, and Nepafenac/Amfenac Ophthalmic Suspension 0.3% in Rabbits. Paul Cockrum¹, A. Justice², M. C. Jasek², J. D. Sheppard³. ¹HealthKinetics, Fort Worth, TX; ²Sun Pharmaceutical Industries, Inc., Princeton, NJ; ³Virginia Eye Consultants, Norfolk, VA *CR

2663 — A0390 Novel Small Molecule Aldehyde Sequestering Agents Demonstrate Broad Therapeutic Potential for Ocular Inflammation. Susan Macdonald, A. Halilovic, T. Brady. Aldeyra Therapeutics, Lexington, MA *CR

2664 — A0391 Anti-TNF- α treatment in skin burns. Vassiliki Kapoulea¹, C. Zhou¹, F. Lei¹, N. Wolkow², L. Ma², T. P. Dryja², J. Chodosh¹, C. H. Dohlman¹, E. I. Paschalis¹. ¹Cornea, Mass Eye and Ear, Boston, MA; ²Mass Eye and Ear, Boston, MA

2665 — A0392 Acetylsalicylic acid reduces collagen contraction, remodelling and myofibroblast proliferation in subconjunctival tissue mimetic. James J. Armstrong, J. Denstedt, C. M. Hutnik. Ophthalmology and Pathology, Schulich School of Medicine, London, Ontario, Canada

2666 — A0393 Loteprednol etabonate gel 0.5% vs prednisolone acetate suspension 1% for the treatment of inflammation post-cataract surgery in children. Bibiana Jin J. Reiser^{2,1}, J. I. Williams³, J. L. Vittitow¹. ¹USC Roski Eye Institute, Los Angeles, CA; ²The Vision Center, Children's Hospital Los Angeles, Los Angeles, CA; ³Bausch + Lomb, Irvine, CA; ⁴Bausch + Lomb, Bridgewater, NJ *CR, \otimes

2667 — A0394 Retrospective study on periocular steroid ointment use and its effect on intraocular pressure. Michelle M. Maeng, L. R. Dagi Glass. *Ophthalmology*, Edward S. Harkness Eye Institute / Columbia University Medical Center, New York, NY

Exhibit Hall A0395-A0406

Tuesday, May 01, 2018 8:15 AM-10:00 AM

Physiology/Pharmacology

314 Anterior segment

Moderator: Ganesh Prasanna

2668 — A0395 Current Practice in the Treatment of Acanthamoeba Keratitis used by International Cornea Specialists: Preliminary Survey results obtained by ODAK Team.

Antonino Asero¹, C. Olsen², R. Head², V. Papa¹. ¹SIFI SPA, Laviniaio, Italy; ²Ceratium, The Haven 20 Burlington Avenue CH48 8AP, United Kingdom *CR

2669 — A0396 The corneal pharmacokinetics of a new antibacterial eye drops between multiple and single administration.

Hongmin Zhang, K. Yang, X. Dou, S. Liu. *Henan Eye Hospital & Henan Eye Institute, Zhengzhou, Henan, China*

2670 — A0397 Application of native mass spectrometry in early stage drug discovery for the identification of novel TGFBIp-ligand interactions. Marina Linova. *University of Southern Denmark, Odense, Denmark*

2671 — A0398 In vivo imaging of Posterior Polymorphous Corneal Dystrophy using Confocal Microscopy. Lucia Lapenna, A. Acquaviva. *Ophthalmology, Di Venere Hospital, Bari, Italy*

2672 — A0399 Cathepsin S Inhibitor Reduces Lacrimal Gland Inflammation and Increases Tear Flow In a Mouse Model of Sjögren's Syndrome.

Wannita Klinngam¹, S. R. Janga², M. C. Edman², M. Shah², F. Yarber², H. Guo¹, B. Cooperman¹, D. Wang³, S. Hamm-Alvarez^{2,1}. ¹Department of Pharmaceutical Sciences, University of Southern California, Los Angeles, CA; ²Department of Ophthalmology, Roski Eye Institute and Keck School of Medicine, University of Southern California, Los Angeles, CA; ³Department of Anatomic and Clinical Pathology, Los Angeles County + University of Southern California Medical Center, Los Angeles, CA

2673 — A0400 Utility of approved dry-eye drugs as reference compounds in SiccaSystem™ - a standardized mouse desiccating stress model for dry-eye disease. Simon Kaja^{2,1}, S. Ragauskas², A. Ziniauskaitė², A. M. Haapaniemi², J. J. Hakkarainen², H. Martiskainen², G. Kalesnykas². ¹Ophthalmology, Loyola University Chicago, Maywood, IL; ²Experimentica Ltd., Kuopio, Finland*CR

2674 — A0401 Differential expression of corneal and limbal cytokines and chemokines during the clinical course of sulfur mustard induced ocular injury. Vered Horwitz, S. Dachir, M. Cohen, H. Gutman, L. Cohen, H. Buch, R. Gez, T. Kadar, A. Gore. *Pharmacology, Israel Institute for Biological Research, Ness Ziona, Israel*

2675 — A0402 Pterygium Pathology: A Prospective Case-Control Study on Tear Film Cytokines. Sara I. Van Acker¹, M. Haagdoorens^{1,2}, J. J. Rozema², M. B. Tassignon^{1,2}, V. De Groot², c. koppen^{1,2}, N. Zakaria^{1,2}. ¹Ophthalmology, Visual Optics and Visual Rehabilitation, University of Antwerp, Edegem, Antwerp, Belgium; ²Department of Ophthalmology, Antwerp University Hospital, Edegem, Antwerp, Belgium *CR

2676 — A0403 Development of natamycin-hydroxypropyl-beta-Cyclodextrin inclusion complex, ion-triggered *in situ* gel for sustained ocular delivery: *in vitro*, *ex vivo* evaluation and ocular pharmacokinetics study. Junjie Zhang^{1,2}, Y. Xie², T. Zhou¹, J. Li¹, J. He¹, H. Xia¹, L. Wang². ¹Henan Eye Institute, Henan Eye Hospital, Zhengzhou, China; ²Henan Eye Institute, Henan Provincial People's Hospital, Zhengzhou, Henan, China

2677 — A0404 Ocular Distribution of Cyclosporine Following Topical Administration of OTX-101 in New Zealand White Rabbits. Sidney L. Weiss^{1,2}, W. Kramer⁴, P. Velagaleti², B. C. Gilger³. ¹Auven Therapeutics, Randolph, NJ; ²i-novion, Inc., Randolph, NJ; ³North Carolina State University, Raleigh, NC; ⁴Kramer Consulting LLC, North Potomac, MD *CR

2678 — A0405 Molecular Analysis of Murine Calcium-Activated Chloride Channel Regulator Clca4c. Elizabeth Snyder¹, N. J. Philp², L. Mundhenk³, A. D. Gruber³, S. Evans¹. ¹Biology, Bryn Athyn College, Bryn Athyn, PA; ²Department of Pathology, Anatomy, and Cell Biology, Thomas Jefferson University, Philadelphia, PA; ³Department of Pathology, Freie Universität, Berlin, Germany

2679 — A0406 Evaluation of Selective Na_v1.7 Inhibitors for the Treatment of Ocular Pain. Anton Delwig¹, H. Pajouhesh¹, D. Yeomans^{1,2}, J. Du Bois^{1,2}, G. Miljanich¹, J. Mulcahy¹. ¹SiteOne Therapeutics, South San Francisco, CA; ²Stanford University, Palo Alto, CA *CR

Exhibit Hall B0001-B0041

Tuesday, May 01, 2018 8:15 AM-10:00 AM

Glaucoma

315 IOP

Moderators: Bianca Nicoleta, Susanna and Damien C. Rodger

2680 — B0001 Goldmann applanation tonometry error relative to intracameral pressure and partial correction with a shaped applanating prism surface. Sean J. McCafferty^{1,2}, J. Levine¹. ¹Arizona Eye Consultants, Tucson, AZ; ²Intuor Technologies, Tucson, AZ *CR, ✕

2681 — B0002 Factors affecting IOP measurement with the Icare tonometer and Tonopen. Nikhil R. Menon^{1,3}, J. Mallios², S. A. Kane¹, S. E. Brooks¹. ¹Ophthalmology, Columbia University Medical Center, New York, NY; ²SUNY College of Optometry, New York, NY; ³Pediatrics, Columbia University Medical Center, New York, NY

2682 — B0003 Investigation of factors influencing intracranial pressure (ICP), as well as pulsations in both ICP and intraocular pressure (IOP), in glaucomatous and normal subjects. Cynthia J. Roberts^{2,3}, A. Springer¹, J. Pandya¹, R. Small¹, A. M. Mahmoud^{2,3}, C. Pappa², W. Bloom², G. Fleming². ¹Anesthesiology, The Ohio State University, Columbus, OH; ²Ophthalmology & Visual Science, The Ohio State University, Columbus, OH; ³Biomedical Engineering, The Ohio State University, Columbus, OH *CR

2683 — B0004 Comparison of IOP peak pressure using two different volumes of fluid intake in patients with medically controlled primary open angle glaucoma. Carolina Susanna¹, C. De Moraes³, B., Susanna¹, R. Susanna², M. Hatanaka², F. Susanna². ¹Faculdade de Medicina do ABC, Miami, FL; ²Ophthalmology, Universidade de São Paulo, São Paulo, São Paulo, Brazil; ³Ophthalmology, Columbia University Medical Center, New York, NY *CR, ✕

2684 — B0005 Effect of postural changes on the trans lamina cribrosa pressure difference – a pilot study. Yvonne M. Buys¹, A. Belkin¹, R. Greene¹, G. E. Trope¹, Y. Jin^{1,3}, F. Gentil². ¹Ophthalmology & Vision Sciences, University of Toronto, Toronto, Ontario, Canada; ²Division of Neurosurgery, Toronto, Ontario, Canada; ³Dalla Lana School of Public Health, University of Toronto, Toronto, Ontario, Canada

2685 — B0006 Effect of Manual Eyelid Manipulation on Intraocular Pressure Measurement by Rebound Tonometry. SungUk Baek, J. Kim, Y. Kim, J. Jeoung, K. Park. *Ophthalmology, Department of Ophthalmology, Seoul National University Hospital, Seoul, Korea (the Republic of)*

Tuesday Posters
8:15 am – 10:00 am

2686 — B0007 Eyelid pressures in glaucoma patients under treatment with prostaglandin ophthalmic solutions. Koji Namiguchi, A. Shiraishi. *Ophthalmology, Ehime University, Graduate School of Medicine, Toon-city, EHIME, Japan *CR*

2687 — B0008 The ability of patients to measure their own intraocular pressure using a rebound tonometer and the influence of corneal biomechanics. Andrew J. Tatham, L. Brown, S. Pronin, R. Megaw. *Department of Ophthalmology, University of Edinburgh, Edinburgh, Scotland, United Kingdom *CR*

2688 — B0009 Value of short-protocol office hour phasing in the management of glaucomas. Carolyn Ford, K. Lim, P. Campbell, I. Rodrigues, H. Ho. *Ophthalmology, Guys and St Thomas' Foundation Trust, Suffolk, England, United Kingdom*

2689 — B0010 Effect of glaucoma surgery on post-injection IOP elevation in patients undergoing intravitreal anti-VEGF injections. Jocelyn Lam, I. Luttrell, K. Rezaei, J. R. Chao, Y. Chee, L. Ding, J. C. Wen. *University of Washington, Seattle, WA*

2690 — B0011 The relationship between intraocular pressure and central corneal thickness in pediatric ocular hypertensive suspects. Mehmet C. Mocan, L. Machen, I. Jang. *University of Illinois at Chicago, Chicago, IL*

2691 — B0012 24-hour intraocular pressure (IOP) monitoring with Goldmann applanation (GAT) tonometry and Tono-Pen AVIA® in keratoconic eyes. Rafael V. Merula, S. Cronemberger, A. C. Veloso, A. Diniz-Filho. *Visual Sciences Laboratory, Faculty of Medicine, Federal University of Minas Gerais, Belo Horizonte, Minas Gerais, Brazil*

2692 — B0013 Comparative Study between the Goldmann Applanation Tonometer and non-contact tonometer in patients of a Ophthalmological reference Hospital. Glenda Maria Gallerani Pacheco, P. H. De Lima Abreu, M. Neves De Melo Carneiro, A. Caiado, J. J. Nassaralla. *Instituto De Olhos De Goiania, Goiânia, GO, Brazil ✗*

2693 — B0014 Scleral Indentation Measurement of IOP with Schiötz Tonometry. Comparison with Rebound and Goldmann Tonometries. Marco Cuadros^{1,2}, J. A. Paczka^{1,3}, Y. Dorantes Diez¹, M. Romo Sainz¹. ¹Universidad de Guadalajara, Guadalajara, Jalisco, Mexico; ²Glaucoma, Centro Oftalmológico Virgilio Galvis R., Bucaramanga, Santander, Colombia; ³Research, Global Glaucoma Institute, Guadalajara, Jalisco, Mexico

2694 — B0015 Effect of Pneumatography on Anterior Chamber Biometrics in Rabbit Eyes. Eric Chan¹, G. Anunike², R. Helms², P. P. Pattabiraman², M. Kohen¹, I. Gupta², C. B. Toris². ¹Ophthalmology, Case Western Reserve-University Hospitals Eye Institute, Cleveland, OH; ²Case Western Reserve University, Cleveland, OH

2695 — B0016 The effect of head positions during sleep on intraocular pressure in control and glaucoma groups. Auguste Rakstyte¹, S. Galgauskas^{1,2}, R. S. Asoklis^{1,2}. ¹Faculty of Medicine, Vilnius University, Vilnius, Lithuania; ²The clinic of Ear, Nose, Throat and Eyes Clinic, Vilnius University Hospital Santaros Klinikos, Vilnius, Lithuania

2696 — B0017 Investigating the relationship between retinal nerve fibre layer thickness and intraocular pressure in an aging twin population. Claire L. Wong, M. J. Simcoe, D. Kozareva, C. J. Hammond. *Twin Research and Genetic Epidemiology, King's College London, London, United Kingdom*

2697 — B0018 Intraocular pressure changes during the water drinking test in glaucomatous patients according to glaucoma severity. Glauco Almeida, P. Stina, L. Barbosa, R. D. Fernandes, R. Germano, M. Hatanaka, R. Susanna. *Glaucoma, University of São Paulo, Campo Grandew, Mato Grosso do Sul, Brazil*

2698 — B0019 Clinical applicability of a model eye for intraocular pressure measurement. Seung Hyen Lee¹, H. Cho², H. Lee², T. Kim³, E. Lee³, S. Jeoung². ¹Department of Ophthalmology, Bundang Jesaeng General Hospital, Daejin Medical Center, Seongnam, Korea (the Republic of); ²Korea Research Institute of Standards and Science, Daejeon, Korea (the Republic of); ³Department of Ophthalmology, Seoul National University Bundang Hospital, Seoul National University, Seongnam, Korea (the Republic of)

2699 — B0020 Utility of Goldmann Applanation Tonometry for Monitoring Intraocular Pressure in Glaucoma Patients with a History of Laser Refractory Surgery. Sang Yeop Lee, H. Bae, C. Park, G. Seong, C. Y. Kim. *Department of Ophthalmology, Institute of Vision Research, Yonsei University College of Medicine, Seoul, Korea (the Republic of)*

2700 — B0021 The value of Icare HOME tonometry in detecting diurnal variation in IOP and its association with glaucoma progression. Mona S. Awadalla, T. Nguyen, S. Amjadi, J. Landers, J. E. Craig. *Ophthalmology, Flinders University, Adelaide, South Australia, Australia*

2701 — B0022 Association of Icare and Applanation Tonometry in a Central African Population. Richard Chitedze¹, V. Saka¹, J. Msosa², S. Cook³, E. Chemey⁶, W. E. Sponset^{4,5}. ¹Ophthalmology, Sponset Foundation/Child Legacy International, Msundwe, Malawi; ²Ophthalmology, KCH National Hospital, Lilongwe, Malawi; ³Ophthalmology, The Eye Centre, East London, Eastern Cape, South Africa; ⁴Glaucoma Service, WESMDPA, San Antonio, TX; ⁵Vision Sciences/Biomedical Engineering, UIW/UTSA, San Antonio, TX; ⁶Medical Director, Child Legacy International Hospital, Msundwe, Malawi

2702 — B0023 Intraocular Pressure Changes during Pregnancy in Latino Women. Monica Monserrat Gonzalez-Lomeli, J. A. Paczka, F. Alanis-de la O. *Universidad de Guadalajara, Guadalajara, Mexico*

2703 — B0024 Glaucoma screening in Rural Malawi Using a Risk Scoring Questionnaire. Vincent saka¹, R. Chitedze¹, J. Msosa², W. E. Sponset^{3,4}, S. Cook⁵. ¹Ophthalmology, Sponset Foundation/Child Legacy International, Msundwe, Malawi; ²Ophthalmology, KCH National Hospital, Lilongwe, Malawi; ³Glaucoma Service, WESMDPA, San Antonio, TX; ⁴Vision Sciences/Biomedical Engineering, UIW/UTSA, San Antonio, TX; ⁵Ophthalmology, The Eye Centre, East London, Eastern Cape, South Africa

2704 — B0025 Effects of body posture on eyelid pressure and intraocular pressure. Yasuhiko Torikai, A. Shiraishi, K. Namiguchi. *Ophthalmology, Ehime University, Toon city, Ehime, Japan*CR*

2705 — B0026 The Effects of Temporary Intraocular Pressure Spikes after Intravitreal Dexamethasone Implantation (DEX) on the Retinal Nerve Fiber Layer. Kendall Wannamaker¹, J. Comstock¹, S. Bahadorani¹, N. Gresores², K. Maclean¹, E. R. Chu¹, K. Beck¹, C. Krambeer², J. M. Iltis¹, D. Kermany², R. Diaz-Rohena¹, D. Nolan², J. Sohn¹, M. Singer². ¹Ophthalmology, University of Texas Health Science Center San Antonio, San Antonio, TX; ²Medical Center Ophthalmology Associates, San Antonio, TX *CR

2706 — B0027 Is there a difference in IOP control following GDD between primary and secondary glaucomas and phakic vs pseudophakic eyes? Phuong Nguyen, N. Rosenberg, A. Meyer, M. Sherwood. *Department of Ophthalmology, University of Florida, Gainesville, FL*

2707 — B0028 Intraocular pressure outcomes after complex cataract surgery in glaucoma and non-glaucoma patients. Nicole Mendez, P. Shah, H. Parikh, N. Kalbag, A. S. Khouri. *Department of Ophthalmology, Rutgers New Jersey Medical School, Newark, NJ*

2708 — B0029 Cataract Surgery in Low Tension Glaucoma Patients. Caroline L. Minkus¹, S. Hunt², A. Anchala¹, M. Chakur². ¹Department of Ophthalmology, Northwestern University, Chicago, IL; ²Department of Ophthalmology, Loyola University, Chicago, IL

2709 — B0030 The impact of proteinaceous solutions on the outflow facility of micro-tubes. Christin Henein¹, Y. Bouremel^{1,2}, S. Brocchini³, P. T. Khaw¹, R. M. Lee¹. ¹National Institute for Health Research (NIHR) Biomedical Research Centre at Moorfields Eye Hospital NHS Foundation Trust and UCL Institute of Ophthalmology, London, United Kingdom; ²UCL Department of Mechanical Engineering, London, United Kingdom; ³UCL School of Pharmacy, London, United Kingdom

- 2710 — B0031 Development of an evaluation protocol to assess aqueous humor outflow after MIGS procedures.** Franziska Kopp¹, T. Stahnke¹, N. Grabow², K. Schmitz^{2,3}, R. F. Guthoff¹, S. Siewert³. ¹Ophthalmology, University Medical Center Rostock, Rostock, Germany; ²Institute for Biomedical Engineering, University Medical Center Rostock, Rostock, Germany; ³Institute for ImplantTechnology and Biomaterials e.V., Rostock, Germany
- 2711 — B0032 Relationship between preoperative IOP and progression of the RNFL thinning after glaucoma surgery.** Woo-Jin Kim, K. Kim, C. Kim. Ophthalmology, Chungnam National University College of Medicine, Daejeon, Korea (the Republic of)
- 2712 — B0033 Effect of IOP-lowering drugs on episcleral venous pressure in mouse eye.** Reiko Yamagishi, M. HONJO, M. Aihara. Ophthalmology, University of Tokyo, Tokyo, Bunkyo-ku, Japan
- 2713 — B0034 Characterization of SHP639, a novel topical C-type natriuretic peptide analog, on intraocular pressure and aqueous humor dynamics in mice.** Iok-Hou Pang^{1,2}, J. Millar², S. T. Josiah³, A. Savinainen³. ¹Pharmaceutical Sciences, University of North Texas Health Science Center, Fort Worth, TX; ²North Texas Eye Research Institute, University of North Texas Health Science Center, Fort Worth, TX; ³Shire, Lexington, MA *CR
- 2714 — B0035 Reduction of intraocular pressure by SHP639, a novel C-type natriuretic peptide analog, and its exposure in aqueous humor of normotensive Dutch Belted rabbits and beagle dogs.** Anneli Savinainen¹, J. J. Prusakiewicz², J. Oswald², E. Spencer², Z. Lou¹, M. Larsson Cohen¹, H. Rashidzadeh¹, S. Josiah¹. ¹Shire, Lexington, MA; ²Covance Laboratories Inc, Madison, WI*CR
- 2715 — B0036 Comparison of the change in intraocular pressure with a fixed-dose combination of brinzolamide 1% and brimonidine 0.2% vs brinzolamide or brimonidine alone in patients with open-angle glaucoma or ocular hypertension: A post hoc, pooled, phase 3 analysis.** Xiangyi Meng¹, K. N. Sall², D. Wirta³, S. Burmaster⁴, Q. Cai⁵, J. Bacharach⁶. ¹Novartis Pharmaceuticals Corporation, East Hanover, NJ; ²Sall Research Medical Center, Artesia, CA; ³Aesthetic Eye Care Institute & Eye Research Foundation, Newport Beach, CA; ⁴Novartis Pharmaceuticals Corporation, Fort Worth, TX; ⁵Novartis Pharmaceuticals Corporation, East Hanover, NJ; ⁶North Bay Eye Associates Inc., Petaluma, CA *CR, ✗
- 2716 — B0037 The pharmacodynamic effect of LatanoSol® eye drops on IOP of normotensive dogs.** Kirsten Fischer¹, J. J. Prusakiewicz², C. B. Struble², F. Loescher¹, S. Kroesser¹. ¹Novaltiq GmbH, Heidelberg, Germany; ²Covance Laboratories Inc., Madison, WI *CR
- 2717 — B0038 Effects of a Novel Selective EP2 Receptor Agonist, Omidenepag Isopropyl, on Aqueous Humor Dynamics in Laser-induced Ocular Hypertensive Monkeys.** Masahiro Fuwa¹, C. B. Toris^{2,3}, S. Fan², T. Taniguchi¹, M. Ichikawa¹, N. Odani-Kawabata⁴, R. Iwamura⁵, K. Yoneda⁵, T. Matsugi¹, N. K. Shams^{4,6}, J. Zhang^{1,6}. ¹Santen Pharmaceutical Co., Ltd., Ikoma, Japan; ²Department of Ophthalmology, University of Nebraska Medical Center, Omaha, NE; ³Department of Ophthalmology, Case Western Reserve University, Cleveland, OH; ⁴Santen Pharmaceutical Co., Ltd., Osaka, Japan; ⁵Ube Industries, Ltd., Ube, Japan; ⁶Santen Inc., Emeryville, CA *CR
- 2718 — B0039 Effects of a selective EP2 receptor agonist, omidenepag isopropyl, on eyelash growth in mice.** Yoshihiko Esaki¹, O. Katsuta¹, T. Taniguchi¹, R. Iwamura², K. Yoneda², N. Odani-Kawabata³, M. Maeda¹, H. Mano¹, T. Matsugi¹, N. K. Shams⁴. ¹Santen Pharmaceutical Co., Ltd., Ikoma, Japan; ²Ube Industries, Ltd., Ube, Japan; ³Santen Pharmaceutical Co., Ltd., Osaka, Japan; ⁴Santen Inc., Emeryville, CA *CR
- 2719 — B0040 Topical or Subcutaneous Administration of AKB-9778, a Tie2 Activator, Reduces IOP in NZW Rabbits.** Glenwood G. Gum¹, J. Janusz², B. Soldo², B. Walker², A. Buch², S. Pakola², K. G. Peters². ¹Absorption Systems, San Diego, CA; ²Aerpio Pharmaceuticals, Cincinnati, OH *CR
- 2720 — B0041 Agonistic β 2-Adrenergic Receptor Autoantibodies: Longitudinal analysis of the efficacy of beta-adrenoceptor antagonist on intraocular pressure.** Bettina Hohberger¹, R. Kunze², G. Wallukat², R. Lämmer¹. ¹Ophthalmology, University of Erlangen-Nürnberg, Erlangen, Germany; ²Max Delbrück Center for Molecular Medicine, Berlin, Germany *CR, ✗
- Exhibit Hall B0100-B0124
Tuesday, May 01, 2018 8:15 AM-10:00 AM
Clinical/Epidemiologic Research
- 316 Glaucoma risk factors, progression and management**
- 2721 — B0100 Six-year Incidence and Risk Factors of Primary Glaucoma in the Singapore Indian Eye Study.** Victor T. Koh^{2,1}, Y. Tham¹, N. Y. Tan², Q. duc nguyen¹, C. Wang^{1,2}, C. Sabanayagam¹, T. Wong^{1,2}, T. Aung^{1,2}, C. Cheng^{1,2}. ¹Singapore Eye Research Institute, Singapore, Singapore; ²Ophthalmology, National University of Singapore, Singapore, Singapore
- 2722 — B0101 Intraocular pressure and its associations in a Russian population: The Ural Eye and Medical Study.** Mukharram Bikbov¹, R. Fayzrakhmanov¹, V. Salavatova¹, G. Kazakbaeva¹, J. B. Jonas². ¹Ufa Eye Research Institute, Ufa, Russian Federation; ²Department of Ophthalmology, Medical Faculty Mannheim, Mannheim, Germany
- 2723 — B0102 Pseudoexfoliation and its associations in a Russian population: The Ural Eye and Medical Study.** Dilya Yakupova¹, M. Bikbov¹, R. Fayzrakhmanov¹, T. Gilmanshin¹, G. Bikbova², J. B. Jonas³. ¹Ufa Eye Research Institute, Ufa, Russian Federation; ²Department of Ophthalmology and Visual Science, Chiba University Graduate School of Medicine, Chiba, Japan; ³Department of Ophthalmology, Medical Faculty Mannheim, Mannheim, Germany
- 2724 — B0103 The Prevalence of Glaucoma among the Jirel Ethnic Group in Nepal: the Jiri Eye Study.** Peter Dentone¹, M. P. Johnson², A. C. Bowman¹, S. Laston², B. Towne³, J. Subedi⁴, S. S. Thapa⁵, S. Williams-Blangero², J. Blangero², K. L. Anderson¹. ¹Ophthalmology, University of Texas Health San Antonio, San Antonio, TX; ²South Texas Diabetes and Obesity Institute, University of Texas Rio Grande Valley, Brownsville, TX; ³Department of Population and Public Health Sciences, Boonshoft School of Medicine, Wright State University, Kettering, OH; ⁴Department of Sociology and Gerontology, College of Arts and Science, Miami University, Oxford, OH; ⁵Tilganga Institute of Ophthalmology, Kathmandu, Nepal
- 2725 — B0104 Prevalence and Characteristics of Primary Angle Closure Disease in an Adult Chinese American Population: The Chinese American Eye Study.** Benjamin Xu, B. Burkemper, D. Grisafe, M. Torres, X. Jiang, R. McKean-Cowdin, R. Varma. University of Southern California, South Pasadena, CA
- 2726 — B0105 Investigating the Risk Factors for the Development of Glaucoma Using Electronic Health Records: A Big Data Approach.** Murugesan Raju², K. Shanmugam¹. ¹Department of Ophthalmology, Mason Eye Institute-University of Missouri School of Medicine, Columbia, MO; ²MU Informatics Institute, Columbia, MO
- 2727 — B0106 Identification of risk factors influencing primary open-angle glaucoma incidence - a longitudinal cohort study based on health claims data.** Stefanie Frech¹, D. Kreft^{2,3}, R. F. Guthoff¹, G. Doblhammer^{2,3}. ¹Department of Ophthalmology, Rostock University Medical Center, Rostock, Germany; ²Institute for Sociology and Demography, University of Rostock, Rostock, Germany; ³Rostock Center for the Study of Demographic Change, Rostock, Germany
- 2728 — B0107 Use of Topical Intraocular Pressure Lowering Medications in the United States Population: Results from the NHANES study 1999-2014.** Eugene Lowry, S. Chansangpetch, S. Lin. Ophthalmology, University of California San Francisco, San Francisco, CA
- 2729 — B0108 High Blood Pressure and Glaucoma Risk.** Eric Shieh, V. Tseng, F. Yu, A. L. Coleman. Ophthalmology, UCLA Stein Eye Institute, Los Angeles, CA *CR

2730 — B0109 Diabetes at baseline and its association with risk of developing glaucoma in 10 years in a large Australian cohort: the 45 and Up Study. Yu Jiang, X. Han, M. He. Zhongshan Ophthalmic center, Sun Yat-sen university, Guangzhou, Guangdong, China

2731 — B0110 Association between Long and Short Sleep Duration and Glaucoma in the United States Population in the 2005-2008 National Health and Nutrition Examination Survey. Mary Qiu, M. V. Boland, P. Y. Ramulu. Ophthalmology, Wilmer Eye Institute, Baltimore, MD

2732 — B0111 The relationship between female reproductive factors and optic disc parameters in young female adults. Samantha Lee^{1,2}, S. Yazar^{1,2}, L. R. Pasquale³, P. Sanfilippo⁴, A. W. Hewitt^{5,4}, M. Hickey⁶, R. Skinner⁷, D. Mackey^{1,2}. ¹Centre for Ophthalmology and Visual Sciences, University of Western Australia, Perth, Western Australia, Australia; ²Lions Eye Institute, Perth, Western Australia, Australia; ³Department of Ophthalmology, Harvard Medical School, Boston, MA; ⁴Centre for Eye Research Australia, University of Melbourne, Melbourne, Victoria, Australia; ⁵School of Medicine, University of Tasmania, Hobart, Tasmania, Australia; ⁶Department of Obstetrics and Gynaecology, University of Melbourne, Melbourne, Victoria, Australia; ⁷Discipline of child and Adolescent Health, University of Sydney, Sydney, New South Wales, Australia

2733 — B0112 Associations between Type of Exercise and Glaucoma in the National Health and Nutrition Examination Survey. Victoria Tseng, F. Yu, A. L. Coleman. Ophthalmology, UCLA Stein Eye Institute, Los Angeles, CA *CR

2734 — B0113 Progression of Glaucoma in Patients of Low and High Socioeconomic Status and Various Age Groups. Brendan Tamm, M. Kanwar, N. Nassiri, C. Kim, A. Goyal, B. Hughes, M. S. Juzych. Kresge Eye Institute, Detroit, MI

2735 — B0114 Progression of Primary Open Angle Glaucoma in Diabetic and Non-diabetic Patients. Huiyuan Hou¹, T. Shoji^{1,2}, L. M. Zangwill¹, S. Moghimi¹, L. Saunders¹, K. Hasenstab¹, E. Ghahari¹, P. C. Manalastas¹, T. Akagi^{1,3}, M. Christopher⁴, R. Penteado¹, R. N. Weinreb¹. ¹Ophthalmology, Shiley Eye Institute, UCSD, La Jolla, CA; ²Saitama Medical University, Iruma, Japan; ³Kyoto University Graduate School of Medicine, Kyoto, Japan *CR

2736 — B0115 Six year progression of primary angle closure disease following laser peripheral iridotomy in the Chennai Eye Disease Incidence Study. Vijaya Lingam, R. Asokan, V. Venkatasrinivasan, R. J. George. Glaucoma Services, Medical and Vision Research Foundation, Chennai, Tamil Nadu, India *CR

2737 — B0116 Philadelphia Telemedicine Glaucoma Detection and Follow-up Study: Interphysician Agreement for Screening Images. Natasha N. Kolomeyer¹, L. A. Hark^{1,2}, L. Katz¹, J. S. Myers¹, D. Lee¹, M. Razeghinejad¹, S. Leite¹, K. Rahmatnejad¹, T. Zhan³, B. Leiby³, S. Hegarty³, P. P. Lee⁴. ¹Glaucoma Research Center, Wills Eye Hospital, Philadelphia, PA; ²Department of Ophthalmology, Columbia University Medical Center, New York, NY; ³Department of Pharmacology and Experimental Therapeutics, Division of Statistics, Thomas Jefferson University, Philadelphia, PA; ⁴Department of Ophthalmology and Visual Sciences, W.K. Kellogg Eye Center, University of Michigan, Ann Arbor, MI X

2738 — B0117 Effectiveness of Van Herick assessment by ophthalmic technicians, ophthalmology residents, and glaucoma specialists in identifying angle closure. Thomas V. Johnson, P. Y. Ramulu, H. A. Quigley, E. L. Singman. Wilmer Eye Institute, Johns Hopkins University, Baltimore, MD

2739 — B0118 Evaluation of the anterior chamber angle in the Ugandan population with use of ultrasound biomicroscopy. Tejal Magan, A. Pouncey, M. Katta, K. Gadhvi, M. Posner, N. Little, R. Asaria, C. Davey. Ophthalmology, Royal Free Hospital, London, London, United Kingdom

2740 — B0119 Decomposition Analysis of Weighting of Factors in Selecting a Glaucoma Drop. Andrew Lawton¹, S. Covey², K. Lofffield¹, J. Nussdorf¹. ¹Ophthalmology, Ochsner Health Services, New Orleans, LA; ²Eye Consultants of Texas, Grapevine, TX

2741 — B0120 Predisposing Factors and Treatment Outcomes of Aqueous Misdirection. Jenny Wang, E. Bitrian. Mayo Clinic, Rochester, MN

2742 — B0121 Risk of drug-induced acute angle closure glaucoma in northeast Osaka. Haruhiko Yamada^{1,2}. ¹Ophthalmology, Kansai Medical University, Takatsuki, OSAKA, Japan; ²Yamada Eye Clinic, Sakai, Osaka, Japan

2743 — B0122 Glaucoma, sex and compliance. Gregor Thomaschewski, K. R. Pillunat, S. Eberhardt, L. E. Pillunat. Ophthalmology, Augenlinik Universit?t Dresden, Dresden, Germany X

2744 — B0123 Glaucoma in the very elderly. Catherine M. Birt¹, C. M. Hutnik², A. C. Crichton³, C. Kranemann¹, A. Clark⁴. ¹University of Toronto, East York, Ontario, Canada; ²Ophthalmology, University of Western Ontario, London, Ontario, Canada; ³Division of Ophthalmology, University of Calgary, Calgary, Alberta, Canada; ⁴University of Western Australia, Perth, Western Australia, Australia

2745 — B0124 Glaucoma type proportion of glaucoma outpatient in Beijing Tongren Hospital from 2014 to 2016. Jianjun Li. Beijing Institute of Ophthalmology, Beijing, China

Exhibit Hall B0125-B0167

Tuesday, May 01, 2018 8:15 AM-10:00 AM

Retina / Visual Psychophysics/Physiological Optics

317 ROP 1

Moderators: Anne M. Lynch and Marco H. Ji

2746 — B0125 Fluorescein angiography findings post intravitreal bevacizumab for Retinopathy of Prematurity: Can it predict the late-onset risk of recurrence? Swati Agarwal-Sinha, A. Gonzales. Department of Ophthalmology, University of Florida, Gainesville, FL

2747 — B0126 Smartphone-based Ophthalmic Imaging with Paxos Scope™ for Retinopathy of Prematurity Screening in India. Ketaki Panse¹, J. Frenkel¹, S. Manwani², P. Andru², R. Ayyala^{1,2}. ¹Ophthalmology, Tulane University School of Medicine, New Orleans, LA; ²Anand Eye Institute, Hyderabad, India

2748 — B0127 Screening Criteria for Retinopathy of Prematurity in Ulaanbaatar, Mongolia. Shelbi Olson^{1,2}, T. Chuluunbat³, K. Jonas¹, M. Bayalag³, C. Chuluunkhuu⁴, H. Cherwek⁴, N. G. Congdon⁴, L. MacKeen⁷, J. Hallak¹, V. Yap⁵, S. Ostimo⁸, W. Wu⁶, J. Campbell⁸, M. F. Chiang⁸, R. V. Chan^{1,2}. ¹Department of Ophthalmology and Visual Sciences, Illinois Eye and Ear Infirmary, University of Illinois at Chicago College of Medicine, Chicago, IL; ²Center for Global Health, University of Illinois at Chicago College of Medicine, Chicago, IL; ³National Center for Maternal and Child Health, Ulaanbaatar, Mongolia; ⁴Orbis International, New York, NY; ⁵Weill Cornell Medical College, New York, NY; ⁶Chang Gung Memorial Hospital, Taoyuan, Taiwan; ⁷The Hospital for Sick Children, Toronto, Ontario, Canada; ⁸Department of Ophthalmology, Casey Eye Institute, Oregon Health & Science University, Portland, OR *CR

2749 — B0128 Evaluation of birth weight and gestational age in infants with treatment requiring retinopathy of prematurity in ROPE-SOS trial. Nita Valikodath¹, P. Shah³, R. V. Chan¹, J. Campbell², M. F. Chiang², K. Bohm¹, R. Chee¹, S. Olson¹, F. Beca⁴, R. Ramyadevi³, S. Murugan³, N. Venkatapathy³. ¹Ophthalmology and Visual Sciences, Illinois Eye and Ear Infirmary, University of Illinois at Chicago, Chicago, IL; ²Ophthalmology, Casey Eye Institute, Oregon Health and Science University, Portland, OR; ³Aravind Eye Hospital, Coimbatore, India *CR

- 2750 — B0129 Training of residents and fellows in retinopathy of prematurity (ROP) around the world: an international web-based survey.** Tala Al-Khaled¹, M. Mikhail², K. Jonas¹, W. Wu³, R. Anzures⁴, A. Amphongphruet⁵, T. Chuluunbat⁶, L. Wu⁷, J. Campbell⁸, R. V. Chan¹. ¹Ophthalmology and Visual Sciences, University of Illinois Eye and Ear Infirmary, Chicago, IL; ²Associated Retinal Consultants, P.C., William Beaumont Hospital, Royal Oak, MI; ³Ophthalmology, Chang Gung Memorial Hospital, Taipei, Taiwan; ⁴St. Luke's Medical Center Eye Institute, Quezon City, Philippines; ⁵National Center for Maternal and Child Health, Ulaanbaatar, Mongolia; ⁶Casey Eye Institute, Portland, OR; ⁷Asociados de Macula Vitreo y Retina de Costa Rica, San Jose, Costa Rica; ⁸Rajavithi Hospital, Rangsit University College of Medicine, Bangkok, Thailand
- 2751 — B0130 Identifying infants at lowest risk of developing any Retinopathy of Prematurity (ROP) among very low birth weight (VLBW) infants enrolled in the Telemedicine Approaches to Evaluating of Acute-Phase ROP (e-ROP) Study.** Agnieszka Baumritter¹, K. C. Wade², G. E. Quinn³, G. Ying³, A. Gong⁴, A. Kemper⁵. ¹Ophthalmology, Children's Hospital of Philadelphia, Philadelphia, PA; ²Neonatology, Children's Hospital of Philadelphia, Philadelphia, PA; ³Ophthalmology, University of Pennsylvania, Philadelphia, PA; ⁴Department of Pediatrics, University of Texas, San Antonio, TX; ⁵Department of Pediatrics, Nationwide Children's Hospital, Columbus, OH ✗
- 2752 — B0131 IGF-1 in relation to early postnatal plasma glucose concentrations in very preterm infants.** Bertan Cakir^{1,2}, R. Liegl¹, I. Hansen-Pupp⁴, G. Hellgren³, A. Poblete¹, S. S. Cho¹, R. Duran¹, C. Lofqvist³, L. E. Smith¹, A. Hellstrom³. ¹Department of Ophthalmology, Boston Children's Hospital, Harvard Medical School, Boston, MA; ²Eye Center, Medical Center, Faculty of Medicine, University of Freiburg, Freiburg, Germany; ³Department of Ophthalmology Sahlgrenska Academy, University of Gothenburg, Gothenburg, Sweden; ⁴Department of Pediatrics, Institute of Clinical Sciences Lund, Lund University and Skane University Hospital, Lund, Sweden *CR
- 2753 — B0132 The relationship between foveal avascular zone and fixation stability in patients with a history of retinopathy of prematurity.** Akiko Miki, M. Hayashida, Y. Inoue, Y. Yamada, M. Nakamura. ophthalmology, Kobe University Graduate School of Medicine, Kobe, Hyogo, Japan
- 2754 — B0133 Asymmetry of retinopathy of prematurity (ROP) border and correlation with ROP severity in the Telemedicine Approaches to Retinopathy of Prematurity (e-ROP) Study.** Tianyu Liu¹, G. Ying², W. Pan², E. Smith², A. Baumritter¹, G. E. Quinn¹. ¹Division of Pediatric Ophthalmology, The Children's Hospital of Philadelphia, Philadelphia, PA; ²Department of Ophthalmology, Scheie Eye Institute, Philadelphia, PA *CR
- 2755 — B0134 Whole exome sequencing of phenotypically extreme preterm infants identifies innate immune system-related biological pathways in retinopathy of prematurity.** Sang Jin Kim^{1,8}, K. Sonmez², R. Swan³, J. Campbell¹, S. Ostmo¹, R. V. Chan^{4,5}, X. Li⁶, Y. I. Chen⁶, C. Simmons⁷, J. I. Rotter⁶, M. F. Chiang^{1,3}. ¹Ophthalmology, Casey Eye Institute, Oregon Health & Science University, Portland, OR; ²Knight Cancer Institute, Cancer Early Detection Advanced Research Center, Oregon Health & Science University, Portland, OR; ³Department of Medical Informatics & Clinical Epidemiology, Oregon Health & Science University, Portland, OR; ⁴Department of Ophthalmology and Visual Sciences, Illinois Eye and Ear Infirmary, University of Illinois at Chicago, Chicago, IL; ⁵Center for Global Health, College of Medicine, University of Illinois at Chicago, Chicago, IL; ⁶Institute for Translational Genomics and Population Sciences and Department of Pediatrics, Los Angeles Biomedical Research Institute at Harbor-UCLA Medical Center, Torrance, CA; ⁷Department of Pediatrics, Cedars-Sinai Medical Center, Los Angeles, CA; ⁸Ophthalmology, Samsung Medical Center, Sungkyunkwan University School of Medicine, Seoul, Korea (the Republic of) *CR
- 2756 — B0135 Risk of Retinopathy of Prematurity Across Fenton Chart Birth Weight Percentiles.** Anna G. Mackin², J. L. Jung², J. L. Patnaik², B. D. Wagner¹, E. Wymore³, J. Hodges⁴, J. K. Singh², E. A. McCourt², C. N. Jennifer², A. G. Palestine², A. M. Lynch². ¹School of Public Health, University of Colorado, Aurora, CO; ²Ophthalmology, University of Colorado School of Medicine, Aurora, CO; ³Neonatal-Perinatal Medicine, University of Colorado School of Medicine, Aurora, CO; ⁴Obstetrics and Gynecology, University of Colorado School of Medicine, Aurora, CO
- 2757 — B0136 Characteristics of Plus Disease and Accuracy of Remote Image Grading for Plus Disease in Retinopathy of Prematurity (ROP) in the Telemedicine Approaches to Evaluating of Acute-Phase ROP (e-ROP) Study.** Gui-Shuang Ying², G. E. Quinn¹, W. Pan², E. Daniel², A. Baumritter¹. ¹Ophthalmology, Children's Hospital of Philadelphia, Philadelphia, PA; ²Ophthalmology, University of Pennsylvania, Philadelphia, PA *CR
- 2758 — B0137 Characterization of progression pattern in retinopathy of prematurity subtypes.** Yoko Fukushima¹, T. Fujino², Y. Hatsukawa², K. Nishida¹. ¹Ophthalmology, Osaka University Graduate School of Medicine, Suita, Osaka, Japan; ²Ophthalmology, Osaka Women's and Children's Hospital, Izumi, Osaka, Japan
- 2759 — B0138 Influence of Vitamin D and Vascular Endothelial Growth Factor in the Tears of Asian Indian Preterm Infants with Retinopathy of Prematurity.** Anand Vinekar¹, M. Ponnalagu², M. Subramani³, S. Sinha⁴, V. Anandula², A. Vathyar², R. Shetty⁴, D. Das³. ¹Pediatric Retina, Narayana Nethralaya Eye Hospital, Bangalore, Karnataka, India; ²Microbiology & Molecular Diagnostics, Narayana Nethralaya Eye Institute, Bangalore, India; ³GROW lab, Narayana Nethralaya Eye Institute, Bangalore, India; ⁴Cornea & Refractive Service, Narayana Nethralaya Eye Institute, Bangalore, India
- 2760 — B0139 Trends in Retinopathy of Prematurity over 10 years in a Colorado Cohort.** Lauren C. Mehner, B. D. Wagner, J. K. Singh, S. Oliver, J. E. Chasan, C. N. Jennifer, J. Patniak, A. G. Palestine, E. A. McCourt, A. M. Lynch. Ophthalmology, University of Colorado, Aurora, CO
- 2761 — B0140 Influence of serial retinal images on the diagnosis and management of retinopathy of prematurity (ROP).** Shin Hae Park^{1,3}, K. Kang¹, S. Kim^{2,4}, K. Jonas¹, S. Ostmo², J. Campbell², M. F. Chiang², R. V. Chan¹. ¹Department of Ophthalmology, University of Illinois at Chicago, Chicago, IL; ²Department of Ophthalmology, Casey Eye Institute, Oregon Health & Science University, Portland, OR; ³Department of Ophthalmology, Seoul St. Mary's Hospital, The Catholic University of Korea, Seoul, Korea (the Republic of); ⁴Samsung Medical Center, Sungkyunkwan University, Seoul, Korea (the Republic of) *CR
- 2762 — B0141 Deep Learning for Image Quality Assessment of Fundus Images in Retinopathy of Prematurity.** Aaron S. Coyner¹, R. Swan¹, J. M. Brown², J. Kalpathy-Cramer², S. J. Kim¹, J. Campbell¹, K. Jonas³, R. P. Chan³, S. Ostmo¹, M. F. Chiang¹. ¹Oregon Health & Science University, Portland, OR; ²MGH/Harvard Medical School, Boston, MA; ³University of Illinois College of Medicine, Chicago, IL *CR
- 2763 — B0142 ROP - Guided Embryology for Retinal Vessels.** Michael W. Gaynon. Ophthalmology, Byers Eye Institute at Stanford/Stanford Univ, Palo Alto, CA
- 2764 — B0143 Artificial intelligence in retinopathy of prematurity: identification of clinically significant retinal vascular findings using computer-based image analysis.** Michael F. Chiang¹, J. M. Brown², V. Yildiz³, P. Tian³, L. Ghergherehchi⁴, J. Campbell⁴, S. Ostmo⁴, S. J. Kim^{4,5}, R. V. Chan⁶, J. Dy³, D. Erdogmus³, S. Ioannidis³, J. Kalpathy-Cramer². ¹Ophthalmology and Medical Informatics, Oregon Health & Science University, Portland, OR; ²Radiology, Massachusetts General Hospital, Charlestown, MA; ³Electrical and Computer Engineering, Northeastern University, Boston, MA; ⁴Ophthalmology, Oregon Health & Science University, Portland, OR; ⁵Ophthalmology, Samsung Medical Center, Seoul, Korea (the Republic of); ⁶Ophthalmology, University of Illinois at Chicago, Chicago, IL *CR

2765 — B0144 OCT in acute phase Retinopathy of Prematurity. Lorenzo Orazi¹, G. Amorelli², D. Lepore², F. Molle², M. H. Ji². ¹Polo nazionale Iprovisione-I.A.P.B. Italia Onlus, Rome, Italy; ²Ophthalmology, Catholic university of the sacred Heart -Rome, Rome, Italy

2766 — B0145 Retinopathy of prematurity incidence and outcomes following implementation of a new oxygen protocol in a neonatal intensive care unit. Shelley Jelineo^{1,2}. ¹Case Western Reserve University School of Medicine, Cleveland, OH; ²UH Rainbow Babies and Children's Hospital, Cleveland, OH

2767 — B0146 Risk assessment in retinopathy of prematurity: improvement of clinical models using automated image analysis. Jayashree Kalpathy-Cramer^{1,2}, J. M. Brown¹, J. Campbell³, S. Ostmo³, P. Tian⁴, V. Yildiz², S. J. Kim^{3,5}, R. V. Chan⁶, J. Dy⁴, D. Erdogmus⁴, S. Ioannidis⁴, M. F. Chiang⁷. ¹Athinoula A. Martinos Center for Biomedical Imaging, Massachusetts General Hospital, Boston, MA; ²Center for Clinical Data Science, Massachusetts General Hospital & Brigham and Women's Hospital, Boston, MA; ³Ophthalmology, Oregon Health & Science University, Boston, MA; ⁴Electrical and Computer Engineering, Northeastern University, Boston, MA; ⁵Ophthalmology, Samsung Medical Center, Seoul, Korea (the Republic of); ⁶Ophthalmology, University of Illinois at Chicago, Chicago, IL; ⁷Ophthalmology and Medical Informatics, Oregon Health & Science University, Portland, OR *CR

2768 — B0147 Characteristics and treatment outcomes of Type 1 Retinopathy of Prematurity after 40 weeks postmenstrual Age. Jiao Lyu, Q. Zhang, P. Zhao. Ophthalmology, Xinhua Hospital, School of medicine, Shanghai Jiaotong University, Shanghai, China

2769 — B0148 Retinopathy of prematurity assessment via cloud-based teleophthalmology remote management. Maria Martinez-Castellanos¹, A. Gonzalez-H.Leon², S. Soberon², J. F. Perez-Vazquez², R. Gonzalez-Salinas², V. Morales-Canton¹, H. Quiroz-Mercado². ¹Retina, Asociación para evitar la ceguera en México (APEC), Mexico City, Mexico; ²Research, Asociación para evitar la ceguera en México (APEC), Mexico City, Mexico *CR

2770 — B0149 Inter-rater agreement of posterior segment images in premature babies using the ultra-widefield camera OPTOS®. Ana Gonzalez-H.Leon¹, G. Salcedo-Villanueva¹, R. Velez-Montoya¹, H. Quiroz-Mercado², K. J. Herrera-Juarez¹, V. Morales-Canton¹, J. F. Perez-Vazquez¹, J. Romo-Aguas¹, M. Martinez-Castellanos¹. ¹Retina, Asociación Para Evitar la Ceguera en México, Ciudad de México, Ciudad de México, Mexico; ²Research, Asociación Para Evitar la Ceguera en México, Mexico City, Mexico

2771 — B0150 Ultra-widefield fluorescein angiography in adults with spontaneously regressed versus treated retinopathy of prematurity. Felix V. Chen¹, L. Cernichiaro-Espinosa^{1,2}, K. D. Tran^{1,2}, C. I. Negron^{1,2}, A. M. Berrocal^{1,2}. ¹University of Miami Miller School of Medicine, Miami, FL; ²Bascom Palmer Eye Institute, Miami, FL

2772 — B0151 Artificial intelligence in retinopathy of prematurity (ROP): diagnostic performance of a supervised machine learning system (i-ROP ASSIST). Susan Ostmo¹, V. Yildiz², P. Tian², J. M. Brown³, J. Campbell¹, S. J. Kim¹, J. Dy², S. Ioannidis², D. Erdogmus², R. V. Chan⁴, J. Kalpathy-Cramer³, M. F. Chiang¹. ¹Casey Eye Institute, Oregon Health & Sciences University, Portland, OR; ²Northeastern University, Boston, MA; ³Massachusetts General Hospital, Boston, MA; ⁴University of Illinois, Chicago, Chicago, IL *CR

2773 — B0152 “Delayed Retinal Vascularization”: Initiating event in the pathogenesis of retinopathy of prematurity (ROP). Tailoi Chan-Ling, L. C. Baxter, S. J. Adamson. Department of Anatomy & Histology, University of Sydney, Sydney, New South Wales, Australia

2774 — B0153 Symmetry of Disease in Retinopathy of Prematurity. Alyssa Spiller¹, A. Jensen¹, G. Ying², G. E. Quinn¹, L. Tomlinson¹, G. Binenbaum^{1,2}. ¹Ophthalmology, The Children's Hospital of Philadelphia, Philadelphia, PA; ²Scheie Eye Institute, Perelman School of Medicine at the University of Pennsylvania, Philadelphia, PA

2775 — B0154 A Receiver Operating Characteristic Analysis for Accuracy of Remote Image Grading of Retinopathy of Prematurity (ROP) in the Telemedicine Approaches to Evaluating of Acute-Phase ROP (e-ROP) Study. Wei Pan¹, G. E. Quinn², E. Daniel¹, A. Baumritter², G. Ying¹. ¹Ophthalmology, University of Pennsylvania, Philadelphia, PA; ²Ophthalmology, Children's Hospital of Philadelphia, Philadelphia, PA *CR

2776 — B0155 The Retinopathy of Prematurity - Save Our Site Program: Analysis of Gender and Socioeconomic Status in a ROP Telemedicine Program in Southern India. Flavius Beca¹, T. A. Duge³, P. Shah², R. Ramyadevi², S. Murugan², R. V. Chan¹, N. Venkatapathy². ¹Ophthalmology and Visual Sciences, Illinois Eye and Ear Infirmary, University of Illinois at Chicago, Chicago, IL; ²Aravind Eye Hospital, Coimbatore, India; ³Columbia University, New York, NY

2777 — B0156 Non-contact smartphone-based fundus photography in retinopathy of prematurity. Maximilian Wintergerst, M. Petrak, P. Larsen, J. Li, F. Holz, R. P. Finger, T. U. Krohne. Ophthalmology, University of Bonn, Bonn, Germany *CR

2778 — B0157 Pilot Study on the Educational Value of a Retinopathy of Prematurity Clinical Immersion Training Program for Ophthalmology Residents. Andres Gonzalez, S. Amin, S. Agarwal-Sinha. Department of Ophthalmology, University of Florida, Gainesville, FL

2779 — B0158 Degree, timing, and duration of thrombocytopenia as a risk factor for the development of severe ROP in the Postnatal Growth and ROP (G-ROP) Study. Alejandra de Alba Campomanes¹, A. Jensen², G. Ying², L. Tomlinson², G. Binenbaum². ¹Ophthalmology, UCSF, San Francisco, CA; ²University of Pennsylvania, Philadelphia, PA

2780 — B0159 Evaluation of birth weight and gestational age of children at risk of developing retinopathy of prematurity (ROP) in the imaging and informatics for ROP research consortium (i-ROP). Daniel Oh¹, S. Olson¹, S. Ostmo², K. Jonas¹, S. J. Kim², J. Horowitz³, J. Campbell², M. F. Chiang², R. V. Chan¹. ¹Ophthalmology, Illinois Eye and Ear Infirmary, Chicago, IL; ²Ophthalmology, Casey Eye Institute, Portland, OR; ³Columbia University Medical Center, New York City, NY

2781 — B0160 Retinopathy of prematurity: Preferred practice patterns among pediatric ophthalmologists. Samiksha Fouzdar Jain¹, H. Song², S. Al Holou², D. W. Suh². ¹Pediatric Ophthalmology, Illinois Eye And Ear Infirmary, Omaha, NE; ²University Of Nebraska Medical Center, Omaha, NE

2782 — B0161 Application of a Quantitative Image Analysis Scale Using Deep Learning for Detection of Clinically Significant ROP. Travis Redd¹, J. Campbell¹, J. M. Brown², S. J. Kim¹, S. Ostmo¹, R. V. Chan³, J. Dy⁴, D. Erdogmus⁴, S. Ioannidis⁴, J. Kalpathy-Cramer^{2,5}, M. F. Chiang^{1,6}. ¹Casey Eye Institute, Oregon Health & Science University, Portland, OR; ²Athinoula A. Martinos Center for Biomedical Imaging, Department of Radiology, Massachusetts General Hospital, Charlestown, MA; ³Department of Ophthalmology and Visual Sciences, Illinois Eye and Ear Infirmary, University of Illinois at Chicago, Chicago, IL; ⁴Department of Electrical and Computer Engineering, Northeastern University, Boston, MA; ⁵Center for Clinical Data Science, Massachusetts General Hospital & Brigham and Women's Hospital, Boston, MA; ⁶Department of Medical Informatics and Clinical Epidemiology, Oregon Health & Science University, Portland, OR *CR

2783 — B0162 Winter Season of Conception Associated with an Increased Risk for Retinopathy of Prematurity (ROP): A Report from the Postnatal Growth and ROP (G-ROP) Study. Michael B. Yang¹, G. Ying², L. Tomlinson³, G. Binenbaum^{2,3}. ¹Abrahamson Pediatric Eye Institute, Cincinnati Childrens Hospital Medical Center, Cincinnati, OH; ²Scheie Eye Institute, Perelman School of Medicine at the University of Pennsylvania, Philadelphia, PA; ³The Children's Hospital of Philadelphia, Philadelphia, PA

2784 — B0163 Incidence, Risk Factors, and Treatment of Retinopathy of Prematurity In Low-Birthweight Infants. Tomoki Kurihara, T. Kurihara, N. Nagai, M. Kamoshita, Y. Hidaka, H. Sonobe, H. Shinoda, K. Tsubota, Y. Ozawa. Department of Ophthalmology, Keio University School of Medicine, Tokyo, Japan *CR

2785 — B0164 Assessment of Human Fetal Circulating Oxytocin Levels in Cord Blood. Claudette O. Adegboro¹, B. Pattnaik², N. W. York³, P. J. King¹. ¹Neonatology, University of Wisconsin -Madison, Madison, WI; ²Pediatrics, Ophthalmology and Visual Sciences, University of Wisconsin -Madison, Madison, WI; ³University of Wisconsin -Madison, Madison, WI

2786 — B0165 Modified Screening Criteria for Retinopathy of Prematurity: Primary Results of the G-ROP Study. Gil Binenbaum^{1,2}, J. Shaffer², L. Tomlinson¹, G. Ying². ¹Ophthalmology, Children's Hospital of Philadelphia, PHILADELPHIA, PA; ²Ophthalmology, University of Pennsylvania, Philadelphia, PA

2787 — B0166 The Colorado Retinopathy of Prematurity Algorithm in a High Risk Population. Sneha Padidam¹, M. Burke¹, K. Le², J. Cao³, X. Lin¹. ¹Ophthalmology, Kresge Eye Institute/Wayne State University, Detroit, MI; ²Ophthalmology, Henry Ford Hospital, Detroit, MI; ³Ophthalmology, UT Southwestern, Dallas, TX

2788 — B0167 Screening for retinopathy of prematurity in very preterm infants: Epipage 2 cohort study. Thibaut Chapron^{3,2}, G. Caputo², J. Rozé^{4,5}, E. Kermorvant-Duchemin^{1,6}, A. BarjoF¹, M. Durox³, P. Ance^{3,1}, H. Torchin^{3,7}. ¹Paris Descartes University, Paris, France; ²Ophthalmopediatry, Fondation Rothschild, Paris, France; ³Center for Epidemiology and Statistics Sorbonne Paris Cité, DHU Risks in pregnancy, INSERM UMR 1153, Paris, France; ⁴Service de Néonatalogie, Nantes University Hospital, Nantes, France; ⁵CIC 004, INSERM, Nantes, France; ⁶Department of Neonatal medicine, Necker Hospital, Paris, France; ⁷Service de Médecine et Réanimation néonatales de Port-Royal, AP-HP, Hôpital Cochin, Paris, France

Exhibit Hall B0207-B0259

Tuesday, May 01, 2018 8:15 AM-10:00 AM
Multidisciplinary Ophthalmic Imaging Group
318 OCT Angiography - Clinical Applications

Moderators: Jeffrey M. Liebmann and Linda M. Zangwill

2789 — B0207 Foveal Avascular Zone in high risk proliferative diabetic retinopathy treated with intravitreal aflibercept injection (ELYSIAN). Hamzah Khalaf, M. Rostamizadeh, V. H. Gonzalez. Valley Retina Institute, McAllen, TX *CR, ✕

2790 — B0208 Comparison of Foveal Avascular Zone Metrics in Diabetic Retinopathy. Kimberly E. Stepien¹, E. Corkery², S. Watson², C. Hurtenbach², R. Trane², J. W. Pak², A. Domalpally². ¹Ophthalmology & Visual Sciences, University of Wisconsin - Madison, Madison, WI; ²Fundus Photography Reading Center, University of WI-Madison, Madison, WI

2791 — B0209 Predictor Intake Form with OCTA Validation in Type I Diabetic Retinopathy Triage. Hadeel Sadek¹, S. Chandrasekaran¹, R. Amador², P. Khouri², B. Szirth². ¹Rutgers New Jersey Medical School, Newark, NJ; ²IOVS, Newark, NJ *CR

2792 — B0210 Synergetic Digital Ocular Imaging for Baselines upon Diagnosis of Type 1 Diabetes Mellitus. Subhashini Chandrasekaran¹, H. Sadek¹, P. Khouri², B. Szirth². ¹Rutgers New Jersey Medical School, Newark, NJ; ²IOVS, Newark, NJ

2793 — B0211 Enlargement of foveal avascular zone in diabetic children without diabetic retinopathy shown by OCT angiography. Magdalena Nistrata-Ortiz¹, W. Stankiewicz², P. Fichna², K. Pecold², M. Stopa². ¹Ophthalmology, Western Eye Hospital London, London, England, United Kingdom; ²Poznan University of Medical Sciences, Poznan, Poland

2794 — B0212 Optical coherence tomography angiography of choriocapillary in diabetic choroidopathy. Jingyuan Yang^{2,1}, C. Zhang^{2,1}, Y. Chen^{2,1}, X. Zhang^{2,1}, H. Chen^{2,1}. ¹Chinese Academy of Medical Sciences, Beijing, China; ²Ophthalmology, Peking Union Medical College Hospital, Beijing, China

2795 — B0213 Optical Coherence Tomography Angiography (OCTA) Visibility of Diabetic Microaneurysms (MAs): associations with wall characteristics and blood flow parameters. Konstantina Sampani¹, O. Abu-Qamar¹, N. Raval¹, Y. Lu¹, M. O. Bernabeu³, W. Fickweiler¹, L. P. Aiello^{1,2}, J. K. Sun^{1,2}. ¹Beetham Eye Institute, Joslin Diabetes Center, Boston, MA; ²Ophthalmology, Harvard Medical School, Boston, MA; ³Centre for Medical Informatics, University of Edinburgh, Usher Institute, Edinburgh, United Kingdom *CR

2796 — B0214 Lower Macular Vascular Density and Larger Foveal Avascular Zone Area in Diabetic Patients and its Risk of Diabetic Retinopathy Using Optical Coherence Tomography Angiography. Qi Chen¹, F. Tan¹, M. Shen¹, F. Lu¹, C. Wu², X. Zhuang¹. ¹School of Ophthalmology and Optometry, Wenzhou Medical University, Wenzhou, Zhejiang, China; ²The Second Affiliated Hospital & Yuying Children's Hospital, Wenzhou Medical University, Wenzhou, Zhejiang, China

2797 — B0215 Evaluation of perifoveal vascular network using optical coherence tomography angiography and relationship with diabetic retinopathy grade and structural parameters in type I Diabetes Mellitus. Marina Barraso, A. Alé-Chilet, T. Hernandez, C. Oliva, A. Adán, J. Zarranz-Ventura. Hospital Clinic de Barcelona, Barcelona, Spain

2798 — B0216 Parafoveal Vessel Density Assessment by Optical Coherence Tomography Angiography (OCTA) in Diabetic Eyes. Malvika Arya, V. Varikuti, A. Alibhai, C. Or, C. R. Bauman, A. J. Witkin, J. S. Duker, N. K. Waheed. Ophthalmology, New England Eye Center at Tufts Medical Center, Boston, MA *CR

2799 — B0217 Diabetic Macular Ischemia: Angio-OCT measurement compared to fluorescein angiography. Jose Francisco V. Valdez Lopez. Retina, Instituto Nacional De Rehabilitacion, Tlalpan, Ciudad de Mexico, Mexico

2800 — B0218 Characterization of the initial stages of diabetic retinal disease using optical coherence tomography (OCT) and OCT Angiography (OCTA). Mary K. Durbin¹, I. P. Marques², L. Mendes², T. Santos², C. Neves², A. Santos², D. Alves², J. G. Cunha-Vaz^{2,3}. ¹Carl Zeiss Meditec, Inc., Dublin, CA; ²Association for Innovation and Biomedical Research on Light and Image, Coimbra, Portugal; ³University of Coimbra, Coimbra, Portugal *CR

2801 — B0219 Progressive Changes in Microvasculature in Eyes with Different Diabetic Retinopathy Severity: A Longitudinal Study. Fangyao Tang, Z. Sun, R. Wong, D. Ng, C. Y. Cheung. Ophthalmology and Visual Sciences, The Chinese University of Hong Kong, Hong Kong, China

2802 — B0220 Glycated Haemoglobin (HbA1c) levels correlate with superficial perifoveal network vessel and perfusion density assessed by optical coherence tomography angiography (OCTA) in type I Diabetes Mellitus: A large scale prospective OCTA study. Javier Zarranz-Ventura¹, A. Alé-Chilet¹, M. Barraso¹, T. Hernandez¹, C. Oliva¹, M. Figueras-Roca¹, A. Sala-Puigdollers¹, I. Vinagre², E. Ortega², E. Esmatjes², A. Adán¹. ¹Institut Clinic de Oftalmologia (ICOF), Hospital Clinic Barcelona, Barcelona, Spain; ²Institut Clinic de Malalties Digestives i Metabòliques (ICMDM), Hospital Clinic Barcelona, Barcelona, Spain *CR

2803 — B0221 Use of Optical Coherence Tomography Angiography in Tele-Screenings to Determine Early Foveal Avascular Changes in Type 1 Diabetes Mellitus Compared to Retinal Imaging Sensitivity. Daniel Camras, A. S. Khouri, B. Szirth. Rutgers New Jersey Medical School, Bloomfield, NJ

2804 — B0222 Correlation of Optical Coherence Tomography Angiography vascular density to color ETDRS severity level in eyes with diabetic retinopathy. Ellie Corkery, A. Domalpally, D. Myers, J. W. Pak, R. Trane, B. A. Blodi. FPRC, University of Wisconsin, Madison, WI

2805 — B0223 Analysis of foveal avascular zone in diabetic eyes without retinopathy before and after small-incision phacoemulsification using optical coherence tomography angiography. Mehreen Adhi, H. J. Kaplan, D. K. Sigford. *Ophthalmology, University of Louisville School of Medicine, Louisville, KY*

2806 — B0224 Optical Coherence Tomography Angiography of Inflammatory Choroidal Neovascularization Early Response after Anti-VEGF Treatment. Wenyi Tang, W. Liu, G. Xu. *Department of Ophthalmology, Eye and Ear Nose Throat Hospital of Fudan University, Shanghai, China*

2807 — B0225 Vascular remodeling of choroidal neovascularization after anti-VEGF therapy visualized on optical coherence tomography angiography. Alexandra Miere¹, P. Butori¹, S. Y. Cohen¹, O. Semoun¹, V. Capuano¹, C. Jung², E. H. Souied¹. ¹Ophthalmology, Centre Hospitalier intercommunal de Creteil, Creteil, France; ²Clinical Research Center, GRC Macula, and Biological Ressources Center, Centre Hospitalier Intercommunal de creteil, Créteil, France

2808 — B0226 Choriocapillaris structure in the fellow eye of neovascular age-related macular degeneration patients: an OCT angiography image averaging study. Takuro Kamei, S. Ooto, A. Uji, A. Fukunishi, A. Tsujikawa. *ophthalmology, Kyoto university, Kyoto, Japan *CR*

2809 — B0227 Detection of choroidal neovascularization due to pathologic myopia: Optical Coherence Tomography angiography vs. Fluorescein angiography. Dominic Heinrich, K. Rütger, K. Wehrmann, N. Feucht, C. P. Lohmann, M. Maier. *Augenlinik Klinikum rechts der Isar TU Munich, Muenchen, Germany*

2810 — B0228 Chorioretinal Vascular Reactivity in Central Serous Chorioretinopathy. Marco Lupidi¹, F. Cardillo Piccolino², C. Cagini¹, D. Fruttini¹, C. M. Eandi³, S. Tito². ¹Biochemical and Surgical Sciences, Section of Ophthalmology, University of Perugia, Perugia, Italy; ²Fondazione per la Macula Onlus, Genova, Italy

2811 — B0229 Optical Coherence Tomography Angiography Compared to Indocyanine Green Angiography in Chronic Central Serous Chorioretinopathy. Jinfeng Qu, J. Hu, M. Zhao. *Peking University People's Hospital, Beijing, China*

2812 — B0230 Choriocapillaris flow features and choroidal vasculature in fellow eyes of patients with central serous chorioretinopathy. Cheolmin Yun, B. Lee, S. Kim, J. Oh. *Ophthalmology, Korea University College of Medicine, Seoul, Korea (the Republic of) *CR*

2813 — B0231 Spectrum of Vascular Abnormalities in Branch Retinal Vein Occlusion Assessed with Wide-Field Montage Optical Coherence Tomography Angiography. kotaro tsuboi, M. Kamei. *Ophthalmology, Aichi Medical University, Nagakute, AICHI, Japan*

2814 — B0232 Comparison of Findings on Optical Coherence Tomography Angiography Images with Fluorescein Angiography Images in Eyes with Retinal Artery Occlusion. Ami Konno, A. Ishibazawa, S. Ishiko, M. Tomoko, A. Yoshida. *Ophthalmology, Asahikawa Medical University, Asahikawa, Japan *CR*

2815 — B0233 Correlation of En Face OCTA Averaging versus Single Image Quantitative Measurements with Retinal Vein Occlusion Visual Outcomes. Jesse J. Jung^{1,2}, M. H. Chen³, Y. Shi^{4,7}, M. Nassisi^{4,7}, K. Marion^{4,7}, N. Shemonski³, S. R. Sadda^{4,7}, Q. V. Hoang^{5,6}. ¹East Bay Retina Consultants, Inc., San Francisco, CA; ²Department of Ophthalmology, University of California, San Francisco, San Francisco, CA; ³Carl Zeiss Meditec Inc., Dublin, CA; ⁴Doheny Eye Institute, Los Angeles, CA; ⁵Department of Ophthalmology, Edward S. Harkness Eye Institute, Columbia College of Physicians and Surgeons, New York, NY; ⁶Singapore Eye Research Institute, Singapore National Eye Centre, Singapore, Singapore; ⁷Department of Ophthalmology, David Geffen School of Medicine at UCLA, Los Angeles, CA *CR

2816 — B0234 Quantitative OCT-A analysis in patients treated with anti-VEGF therapy for macular edema. Humberto Ruiz-Garcia^{1,2}, M. Ingolotti², P. Madrigal-Ruiz², R. Lopez-Cervantes², E. Roig-Melgranados^{2,1}. ¹Clinica Santa Lucia, Guadalajara, Jalisco, Mexico; ²Universidad de Guadalajara, Guadalajara, Mexico

2817 — B0235 Repeatability of OCT Angiography Retinal Vascular Density Measurement in Retinal Vascular Disease. Parisa Emami-naeini, M. Chang, S. S. Park. *Ophthalmology, UC Davis, Sacramento, CA *CR*

2818 — B0236 Comparison of Retinal Microvasculature and Neurodegenerative Changes among Alzheimer's disease, Mild Cognitive Impairment, and Controls. Stephen P. Yoon², D. S. Grewal³, B. W. Polascik¹, C. Dunn¹, K. Johnson⁴, J. Burke⁴, S. Fekrat³. ¹Duke University, Durham, NC; ²Duke University School of Medicine, Durham, NC; ³Ophthalmology, Duke University, Durham, NC; ⁴Neurology, Duke University, Durham, NC *CR

2819 — B0237 Retinal capillary abnormality is associated with cognitive impairment and neurodegeneration in mild Alzheimer's disease. Meixiao Shen¹, W. Kwapong¹, W. Zhen², L. Zhang¹, F. Lu¹. ¹Ophthalmology, Wenzhou Medical University Affiliated Eye Hospital, Wenzhou, China; ²Neuroscience, Wenzhou Medical University the First Affiliated Hospital, Wenzhou, China

2820 — B0238 Association between circumpapillary retinal nerve fiber layer and optic disc morphological characteristics with radial peripapillary capillary density using OCT angiography. Deepayan Kar, L. Yudcovitch, J. R. Hayes. *Pacific University Oregon, Forest Grove, OR*

2821 — B0239 Choriocapillary blood flow in myopic patients measured with OCT Angiography. Pauline Scherm, M. Pettenkofer, M. Maier, C. P. Lohmann, N. Feucht. *Ophthalmology, Klinikum Rechts der Isar, Munich, Germany*

2822 — B0240 Novel Optical Coherence Tomography Angiography (OCTA) Scleral Vasculature Imaging in Thyroid Eye Disease (TED) Patients. Hsi-Wei Chung¹, K. Devarajan². ¹Oculoplastics, Singapore National Eye Centre, SINGAPORE, Singapore; ²Singapore Eye Research Institute, Singapore, Singapore

2823 — B0241 Morphological changes of iris neovascularization evaluated with anterior OCT angiography. chiaki nogawa, T. Handa, k. tsuboi, M. Kamei. *Aichi Medical University, Nagakute, Aichi, Japan*

2824 — B0242 Anterior Segment Optical Coherence Tomography Angiography in Vascular Iris Disorders. Claudio Zeit Lobos^{1,2}, R. T. Kato³, Y. Li³, D. Huang³, N. Allemann^{2,4}. ¹Medical Technology, Pontifical Catholic University of Valparaiso, Valparaiso, Chile; ²Ophthalmology and Visual Sciences, Federal University of Sao Paulo, Sao Paulo, SP, Brazil; ³Casey Eye Institute, Oregon Health & Science University, Portland, OR; ⁴Ophthalmology and Visual Sciences, University of Illinois at Chicago, Chicago, IL *CR

2825 — B0243 Scleral Vessel Density Using Novel Optical Coherence Tomography Angiography Methodology. Muhammad Sohail Halim¹, M. Hassan¹, R. Afridi¹, N. V. Nguyen^{1,2}, A. Maleki¹, S. C. Baluyor², Y. Sepah^{1,2}. ¹Byers Eye Institute, Stanford University, Palo Alto, CA; ²Ocular Imaging Research and Reading Center, Menlo Park, CA

2826 — B0244 Correlation Between Focal Blood Flow in Macular Capillary Plexuses and Focal Light Sensitivity in Eyes Affected by Idiopathic Epiretinal Membrane. Andrea M. Coppe¹, L. Giuliana², G. Facciolo¹, F. Petruzzelli¹, G. Ripandelli¹. ¹Ophthalmology, GB Foundation Study Ophth IRCCS, Rome, Italy; ²AMC Research Group, Rome, Italy

2827 — B0245 Macular displacement after vitrectomy on eyes with idiopathic macular hole determined by optical coherence tomography angiography. Takeshi Iwase, T. Akahori, E. Ra, Y. Ito, H. Terasaki. *Ophthalmology, Nagoya University Hospital, Nagoya, NAGOYA, Japan*

2828 — B0246 A study of optical coherence tomography angiography of changes in retina and choroid immediately after hemodialysis. Sunjin Hwang, S. Ryu, Y. Shin, H. Cho. *Department of Ophthalmology, Hanyang University Guri Hospital, Guri, Korea (the Republic of)*

2829 — B0247 Morphological classification of retinal arterial macroaneurysms using OCT angiography. Ai Suzuki¹, k. tsuboi¹, Y. Ishida^{1,2}, M. Kamei¹. ¹aichi medical university, Nagakute, Aichi, Japan; ²Osaka Rosai Hospital, Sakai, Japan

2830 — B0248 RPGR-associated retinitis pigmentosa display unique outer retinal and choroidal vascular changes on optical coherence tomography angiography. Peter H. Tang¹, S. Tsang², A. Bassuk³, D. V. Do¹, V. B. Mahajan¹. ¹Ophthalmology, Stanford University School of Medicine, Palo Alto, CA; ²Ophthalmology, Pathology, and Cell Biology, Columbia University College of Physicians and Surgeons, New York, NY; ³Department of Pediatrics, University of Iowa, Iowa City, IA

2831 — B0249 Insight into Wolfram Syndrome Pathophysiology using Optical Coherence Tomography-Angiography. Jessica Wu^{1,2}, S. Asanad^{1,2}, F. N. Ross-Cisneros^{1,2}, A. A. Sadun^{1,2}. ¹Ophthalmology, Dokey Eye Institute - UCLA, Los Angeles, CA; ²Ophthalmology, David Geffen School of Medicine at University of California Los Angeles, Los Angeles, CA

2832 — B0250 First Peak Fractal Analysis of Optical Coherence Tomography Angiography in Eyes with Papilledema. Akash Gupta¹, S. Sarrafpour¹, B. Chiu¹, E. Tsui¹, E. Young¹, D. Fell², S. Raouf², N. K. Sripesma³, S. Zahid⁴, S. Dave², P. Garcia³, T. Chiu³, R. B. Rosen³, R. Banik³, J. Young¹. ¹Ophthalmology, New York University, New York, NY; ²Ophthalmology, Stony Brook University, New York, NY; ³Ophthalmology, New York Eye and Ear Infirmary, New York, NY; ⁴Ophthalmology, Illinois Eye and Ear Infirmary, Chicago, IL

2833 — B0251 Analysis of segmented retinal thickness and vessel density in lupus related maculopathy and plaquenil toxicity. Thomas Perez¹, M. H. Chen¹, H. Bagherinia¹, S. Yu¹, N. Shemonski¹, M. K. Durbin¹, J. J. Jung². ¹Carl Zeiss Meditec, Inc., Dublin, CA; ²East Bay Retina Consultants, Oakland, CA *CR

2834 — B0252 The Utility of Optical Coherence Tomography Angiography (OCT-A) in Vitelliform Macular Dystrophy. Justin Yamamuh^{1,2}. ¹Medical Retina, Mayo Clinic Health System La Crosse, La Crosse, WI; ²Ophthalmology, Mayo Clinic, Rochester, MN

2835 — B0253 Assessing Response of Retinal Microvasculature Density and Morphology to Intra-vitreous Dexamethasone Implant Injections for Ocular Inflammatory Disease with Spectral Domain Optical Coherence Tomography Angiography (SD-OCTA). Youning Zhang¹, B. Do¹, D. Mustafi¹, K. Kogachi¹, Z. Chu², R. K. Wang², D. C. Rodger¹, N. A. Rao¹, A. H. Kashani¹. ¹Ophthalmology, USC Roski Eye Institute Keck School of Medicine, Los Angeles, CA; ²Bioengineering, University of Washington, Seattle, WA *CR

2836 — B0254 Optical Coherence Tomography Angiography in Stargardt Disease. Daniela Bacherini, A. Sodi, L. Caprara, L. Finocchio, C. Lenzetti, V. Murro, D. Mucciolo, F. Dragotto, F. Cipollini, G. Virgili, S. Rizzo. Surgery and Translational Medicine, Eye Clinic, Careggi teaching Hospital, University of Florence, Florence, Italy, Italy

2837 — B0255 Relating Retinal Blood Flow and Vessel Density in Sickle Cell Retinopathy. Shayan Farzad¹, M. Khansari¹, O. Tan², D. Huang², J. I. Lim³, M. Shahidi¹. ¹Ophthalmology, University of Southern California, Los Angeles, CA; ²Casey Eye Institute, Oregon Health & Science University, Portland, OR; ³Ophthalmology and Visual Sciences, University of Illinois at Chicago, Chicago, IL

2838 — B0256 Optical Coherence Tomography Angiography in Fabry disease. Lucia Finocchio¹, A. Sodi¹, D. Bacherini¹, C. Lenzetti¹, A. Berni¹, D. Mucciolo¹, I. Tanini², I. Olivotto², G. Virgili¹, S. Rizzo¹. ¹Ophthalmology, University of Florence, Udine, Italy; ²Unit Cardiomiopatie, University of Florence, Florence, Italy

2839 — B0257 Investigation of retinal microcirculation in haemodialysed patients with angio OCT. Akos I. Vadnay^{1,2}, J. Kakuk¹, P. Nagy³, N. Csufor¹, T. Komar¹. ¹Department of Ophthalmology, Markhot Ferenc Hospital Eger, Hungary, Budapest, Hungary; ²Department of Ophthalmology, Buda Hospital of the Hospitaller Order of Saint John of God, Budapest, Hungary; ³Dialysis Center Eger, Fresenius Medical Care, Eger, Hungary; ⁴VIDIDIT Innovative Digital Diagnostics and Therapy Ltd, Budapest, Hungary

2840 — B0258 Detection of retinal microcirculation changes with angio OCT in haemodialysed patients. Timea Komar¹, J. Kakuk², P. Nagy³, N. Csufor⁴, A. I. Vadnay^{2,5}. ¹VIDIDIT Innovative Digital Diagnostics and Therapy Ltd, Budapest, Hungary; ²Department of Ophthalmology, Markhot Ferenc Hospital Eger, Hungary, Eger, Hungary; ³Dialysis Center Eger, Fresenius Medical Care, Eger, Hungary; ⁴Department of Ophthalmology, Markhot Ferenc Hospital Eger, Hungary, Eger, Hungary; ⁵Department of Ophthalmology, Buda Hospital of the Hospitaller Order of Saint John of God, Budapest, Hungary

2841 — B0259 Multimodal imaging and non invasive oct angiography- correlation in different stages of best vitelliform dystrophy. Priyanka Patkar, P. B. s. gadde, N. Naik, N. Yadav. VR Surgery-Ophthalmology, Narayana Nethralaya, Badlapur, India

Exhibit Hall B0260-B0305

Tuesday, May 01, 2018 8:15 AM-10:00 AM
**Multidisciplinary Ophthalmic Imaging Group
319 OCT Angiography - Experimental Applications and Technical Improvements**

Moderators: Masanori Hangai and Marinko Sarunic

2842 — B0260 Projection-Resolved Optical Coherence Tomography Angiography of Retinal Plexuses in Retinitis Pigmentosa and Usher Syndrome Type 1. Ahmed M. Hagag¹, J. WANG¹, T. Wood¹, J. M. Simonetti¹, G. Harman¹, K. Liu^{1,2}, D. Huang¹, R. G. Weleber¹, M. E. Pennesi¹, P. Yang¹, Y. Jia¹. ¹Casey Eye Institute, Oregon Health and Science University, Portland, OR; ²Donald and Barbara Zucker School of Medicine, Hempstead, NY *CR

2843 — B0261 MASS optical coherence tomography angiography. Peng Li, p. li. Optical Engineering, Zhejiang University, Hangzhou, Zhejiang, China

2844 — B0262 Automated registration and montage algorithm for wide-field OCT angiogram. JIE WANG, X. Hua, L. Liu, T. S. Hwang, D. Huang, Y. Jia. Casey Eye Institute, Oregon Health & Science University, Portland, OR *CR

2845 — B0263 Wide field of view optical coherence tomography angiography. Muzammil A. Arain, T. Schmoll, J. Qiu, R. Williams, S. Bello, D. Howard, N. Shemonski, B. Normand, A. Moghimi, J. Straub. Carl Zeiss Meditec, Inc., Dublin, CA *CR

2846 — B0264 Large area vascular density quantification using montaged OCT angiography (OCTA) scans. Warren Lewis^{1,2}, S. Kubach², T. Perez². ¹Bayside Photonics, Inc., Yellow Springs, OH; ²Carl Zeiss Meditec, Inc., Dublin, CA *CR

2847 — B0265 Advances in wide field optical coherence tomography angiography imaging. Sophie Kubach¹, W. Lewis², T. Callan¹, T. Perez¹, R. A. Goldberg³. ¹Carl Zeiss Meditec, Inc, Dublin, CA; ²Bayside Photonics, Inc, Yellow Springs, OH; ³Bay Area Retina Associates, Walnut Creek, CA *CR

2848 — B0266 Four-Layered Retinal Vasculature and Retinal Circulatory Unit Differentiated using High-Resolution Optical Coherence Tomography Angiography. Yuki Muraoka, A. Uji, M. Ishikura, S. Ooto, A. Tsujikawa. Ophthalmology and Visual Sciences, Kyoto University Graduate School of Medicine, Kyoto, Japan *CR

Tuesday Posters
8:15 am – 10:00 am

2849 — B0267 Initial Quality Control Assessment of Optical Coherence Tomography Angiography Data in the EyeDOC Study.

Brandon J. Lujan¹, A. Tomlinson¹, B. Hasan¹, J. Carroll¹, G. Xinxing², X. Kong², L. R. Erker¹, Y. Jia¹, D. Huang¹, D. J. Wilson¹, P. Y. Ramulu², A. Abraham². ¹Casey Eye Institute, Oregon Health & Science University, Portland, OR; ²Wilmer Eye Institute, Johns Hopkins University, Baltimore, MD *CR

2850 — B0268 Prevalence of segmentation errors and motion artifacts in OCT-Angiography differs among retinal diseases. Jost L.

Lauermann, A. Wötzel, M. Treder, M. Alnawaiseh, C. R. Clemens, N. Eter, F. Alten. Department of Ophthalmology, University of Muenster Medical Center, Muenster, Germany *CR

2851 — B0269 Evaluation of Pseudoflow Artifact with OCT Angiography. Kirk K. Hou, A. Au, D. Sarraf. Ophthalmology, Jules Stein Eye Institute/UCLA, Los Angeles, CA**2852 — B0270 Motion-free optical coherence tomography angiography by Lissajous scan.**

Yoshiaki Yasuno, Y. Chen, Y. Hong, S. Makita. Computational Optics Group, Univ. Tsukuba, University of Tsukuba, Tsukuba, IBARAKI, Japan *CR

2853 — B0271 Enhanced quantification of retinal perfusion by improved discrimination of blood flow from bulk motion signal in OCTA.

Acner Camino¹, Y. Jia¹, M. Zhang², L. Liu¹, J. WANG¹, D. Huang¹. ¹OHSU, Portland, OR; ²Optovue, Fremont, CA *CR

2854 — B0272 Parameters influencing signal strength in lipid emulsion-based OCT-angiography. Christian van Oterendorp¹, H. Gottschalk¹, C. Russmann², H. Hoerauf¹.

¹Dpt. of Ophthalmology, University Medical Center Göttingen, Goettingen, Germany; ²Medical Photonics, University of Applied Sciences and Art, Goettingen, Germany

2855 — B0273 The effect of axial length and signal strength on the measurement of peripapillary capillaries based on swept source optical coherence tomography angiography.

Chan Wen, J. Lei, C. Pei. Ophthalmology department, The first affiliated hospital of Xi'an JiaoTong University, Xi'an, China *CR

2856 — B0274 Evaluation of Diurnal Variation of Ocular Vasculature in Healthy Eyes using Optical Coherence Tomography Angiography. Rajuella Penteado, L. M. Zangwill, K. Hasenstab, P. C. Manalastas, N. J. Fuller, J. Han, A. Yarmohammadi, R. N. Weinreb. Hamilton Glaucoma Center, Shiley Eye Institute, Department of Ophthalmology, UCSD, San Diego, CA *CR**2857 — B0275 Impact of pupil dilation on retinal microvasculature in healthy eyes using optical coherence tomography angiography.**

George Villatoro^{1,2}, P. C. Manalastas², K. Hasenstab², K. D. Nguyen^{3,2}, C. Bowd², H. Hou², A. J. Li^{4,2}, R. Penteado², S. Moghimi², E. Ghahari², R. N. Weinreb^{2,1}, L. M. Zangwill^{2,1}. ¹UC San Diego Medical School, La Jolla, CA; ²Ophthalmology, Hamilton Glaucoma Center, Shiley Eye Institute, La Jolla, CA; ³Northeast Ohio Medical University, Rootstown, OH; ⁴Dartmouth College, Hanover, NH *CR

2858 — B0276 Impact of Hypertension on Retinal Microvascular Changes on Optical Coherence Tomographic Angiography.

Jacqueline Chua^{1,2}, J. Hong^{1,3}, C. W. Chin^{4,2}, M. Chee¹, D. Ting^{1,2}, T. Y. Wong^{1,2}, L. Schmetterer^{1,3}. ¹Singapore Eye Research Institute, Singapore National Eye Centre, Singapore, Singapore, Singapore; ²Academic Clinical Program, Duke-NUS Medical School, Singapore, Singapore, Singapore; ³Department of Ophthalmology, Lee Kong Chian School of Medicine, Nanyang Technological University, Singapore, Singapore, Singapore; ⁴National Heart Research Institute Singapore, National Heart Centre Singapore, Singapore, Singapore

2859 — B0277 Ethnic differences in normal retinal capillary density and foveal avascular zone measurements. Audrey Giocanti Auregan, G. Gazeau, L. Hrarat, V. Lévy, F. Fajnkuchen.

Ophthalmology, Hospital Avicenne, Bobigny, France

2860 — B0278 Diurnal variation of macular and choroidal perfusion using optical coherence tomography angiography in healthy subjects. Felix Rommel, S. Grisanti, M. Ranjbar.

Ophthalmology, University of Lübeck, Lübeck, Germany

2861 — B0279 Cross-sectional association between OCT angiography-measured optic nerve head and macular vessel densities and age in healthy eyes. Khoa D. Nguyen^{2,1}, P. C. Manalastas², C. Bowd², K. Hasenstab², A. J. Li^{2,3}, R. Penteado², H. Hou², T. Shoji^{2,5}, G. Villatoro^{2,4}, E. Ghahari², S. Moghimi², R. N. Weinreb², L. M. Zangwill².

¹Northeast Ohio Medical University, Rootstown, OH; ²Hamilton Glaucoma Center, Shiley Eye Institute and Department of Ophthalmology, University of California, San Diego, La Jolla, CA; ³Dartmouth College, Hanover, NH; ⁴UCSD School of Medicine, University of California, San Diego, La Jolla, CA; ⁵Department of Ophthalmology, Saitama Medical University, Iruma, Saitama, Japan *CR

2862 — B0280 Optical Coherence Tomography Angiography Retinal Vascular Response of Dorzolamide in Healthy Eyes. Elizabeth Dosch, C. Majcher, R. Trevino, W. E. Sponsel, D. Juett, K. Price, A. Henry. Optometry, University of the Incarnate Word, San Antonio, TX**2863 — B0281 Impact of image display on clinical utility of OCT Angiography.** Gregory Anderson, A. R. Tumlinson. Carl Zeiss Meditec, Inc., Dublin, CA *CR**2864 — B0282 The effects of LSO-based tracking resolution on OCTA image quality.**

Simon Bello¹, S. Kubach¹, L. De Sisternes¹, P. Krawec¹, T. Callan¹, M. K. Durbin¹, J. J. Jung², J. Straub¹. ¹Carl Zeiss Meditec Inc., Dublin, CA; ²East Bay Retina Consultants, Inc, Oakland, CA *CR

2865 — B0283 Multi-acquisition averaging optical coherence tomography angiography for diabetic retinopathy. Handan AKIL¹, A. Athwal², M. Heisler², R. Martens¹, M. Bhalla², M. Ju², Z. Mammo¹, Y. Jian², M. Sarunic², E. V. Navajas¹.

¹Ophthalmology, University of British Columbia Vancouver General Hospital, Vancouver, British Columbia, Canada; ²School of Engineering Science, Simon Fraser University, Vancouver, British Columbia, Canada

2866 — B0284 Correlation of Quantitative Measurements with Diabetic Disease Severity utilizing Multiple En Face OCTA Image Averaging. Michael H. Chen¹, Q. V. Hoang^{4,6}, M. Nassisi^{2,5}, Y. Shi^{2,5}, K. Marion^{2,5}, N. Shemonski¹, S. R. Sadda^{2,5}, J. J. Jung^{3,7}.

¹Carl Zeiss Meditec, Inc., Dublin, CA; ²Doheny Eye Institute, Los Angeles, CA; ³East Bay Retina Consultants, Oakland, CA; ⁴Singapore Eye Research Institute, Singapore National Eye Centre, Singapore, Singapore; ⁵Department of Ophthalmology, David Geffen School of Medicine at UCLA, Los Angeles, CA; ⁶Department of Ophthalmology, Edward S. Harkness Eye Institute, Columbia College of Physicians and Surgeons, New York, NY; ⁷Department of Ophthalmology, University of California, San Francisco, San Francisco, CA *CR

2867 — B0285 Optical coherence tomography angiography reproducibility quantification – segmentation of superficial, deep and choroidal plexus. Rita Laiginhas^{1,2}, J. Chibante Pedro¹, M. Falcao^{3,4}.

¹Ophthalmology, Centro Hospitalar de Entre o Douro e Vouga, Santa Maria da Feira, Portugal; ²PDICSS, Faculty of Medicine of Porto University, Porto, Portugal; ³Ophthalmology, Hospital de São João, Porto, Portugal; ⁴Department of Surgery and Physiology, Faculty of Medicine of Porto University, Porto, Portugal

2868 — B0286 Repeatability of Foveal Avascular Zone Morphometry Using Optical Coherence Tomography Angiography En Face Images. Ayesha N. Karamat^{1,2}, S. Balasubramanian^{1,2}, J. Lei^{1,2}, E. Baghdasaryan^{1,2}, S. R. Sadda^{1,2}.

¹Doheny Eye Institute, Santa Clarita, CA; ²Ophthalmology, UCLA, Los Angeles, CA *CR

- 2869 — B0287 Correlation of macular thickness with microvascular density and morphology using spectral domain optical coherence tomography angiography (SD-OCTA) among normal subjects.** Anoush Shahidzadeh¹, Y. Chen¹, Z. Chu², R. K. Wang², A. H. Kashani^{1,3}. ¹Ophthalmology, University of Southern California, Pasadena, CA; ²Bioengineering, University of Washington, Seattle, WA; ³Institute of Biomedical Therapeutics, University of Southern California, Los Angeles, CA *CR
- 2870 — B0288 Macular vessel density at the superficial capillary plexus in the normal population.** Nauman Hashmani, S. Hashmani. Ophthalmology, Hashmanis Hospital, Karachi, Pakistan
- 2871 — B0289 The Repeatability of Superficial Retinal Vessel Density Measurements in Eyes with Long Axial Length Using Optical Coherence Tomography Angiography.** Mengyang Li, C. Zhang, M. Zhao, J. Qu. Department of Ophthalmology, Peking University People's Hospital, Beijing, China
- 2872 — B0290 Differences in macular vessel density and retinal blood flow between healthy black and white subjects using optical coherence tomography angiography.** Lindsay Chun¹, M. Silas², L. Golas², J. Kulenkamp¹, C. Smith¹, D. Skondra^{2,3}. ¹University of Chicago Pritzker School of Medicine, Chicago, IL; ²Department of Ophthalmology and Visual Sciences, University of Chicago Medical Center, Chicago, IL; ³J. Terry Ernest Ocular Imaging Center, University of Chicago Medical Center, Chicago, IL
- 2873 — B0291 Repeatability and Reproducibility of Quantitative Assessment of the Retinal Microvasculature Using Optical Coherence Tomography Angiography Based on Optical Microangiography.** Qi Zhao¹, X. Wang², W. Yang¹, R. K. Wang³, Q. You², Z. Chu³, C. Xin², M. Zhang¹, D. Li¹, Z. Wang¹, W. Chen¹, Y. Li¹, R. Cui¹, L. Shen¹, w. wei¹. ¹Department of Ophthalmology, Beijing Tongren Eye Center, Beijing Tongren Hospital, Capital Medical University, Beijing, China; ²Beijing Institute of Ophthalmology, Beijing Tongren Eye Center, Beijing Tongren Hospital, Capital Medical University, Beijing, China; ³Department of Bioengineering, University of Washington, Seattle, WA *CR
- 2874 — B0292 Comparison of Optic Nerve Head and Peripapillary Vascular Density and Flow Area Between Healthy Black and White Subjects Using Optical Coherence Tomography Angiography.** Megan Silas¹, L. Chun², L. Golas¹, J. Kulenkamp², D. Skondra^{1,3}. ¹Department of Ophthalmology and Visual Science, University of Chicago, Chicago, IL; ²University of Chicago Pritzker School of Medicine, Chicago, IL; ³J. Terry Ernest Ocular Imaging Center, University of Chicago, Chicago, IL
- 2875 — B0293 Reproducibility of AngioAnalytics Measurements of OCTA Retina Scans in Normal, Glaucoma and Diabetic Retinopathy Eyes.** Yulia Wolfson¹, E. Nudleman², M. H. Goldbaum², L. M. Zangwill², J. Tian¹, K. A. Soules¹, B. K. Jang¹, R. N. Weinreb², Q. Zhou¹. ¹Optovue, Inc., San Diego, CA; ²UCSD, San Diego, CA *CR
- 2876 — B0294 Vessel Density Correlation Between Differing Optical Coherence Tomography Angiography Devices is Variable and Dependent on Diabetic Retinopathy Severity.** Yousef Aldairy^{1,2}, K. Sampani¹, M. A. Elmasry¹, A. U. Pisig¹, P. S. Silva^{1,2}, L. P. Aiello^{1,2}, J. K. Sun^{1,2}. ¹Beetham Eye Institute, Joslin Diabetes Center, Boston, MA; ²Ophthalmology, Harvard Medical School, Boston, MA *CR, ✗
- 2877 — B0295 Reproducibility of AngioAnalytics Measurements of OCTA Angio Disc Scans in Glaucoma and Normal Eyes.** Kelly A. Soules¹, L. M. Zangwill², J. Tian¹, Y. Wolfson¹, B. K. Jang¹, R. N. Weinreb², Q. Zhou¹. ¹Optovue, Fremont, CA; ²University of California San Diego, La Jolla, CA *CR
- 2878 — B0296 Comparing swept source OCT choroidal vasculography (CVG) to conventional ICG Angiography for visualizing the morphological structures of the choroidal vasculature.** Carl G. Glittenberg^{1,2}. ¹Topcon Europe Medical, Capelle an den IJssel, Netherlands; ²Karl Landsteiner Institute for Retinal Research and Imaging, Vienna, Austria *CR
- 2879 — B0297 Comparing SS-OCTA and En-face OCT Images of the Choroid in Macular Area of Healthy Human Eye.** Erqian Wang, Y. Chen. Ophthalmology, Peking Union Medical College Hospital, Beijing, China
- 2880 — B0298 Accurate visualization and quantification of choriocapillaris with swept source OCTA through averaging repeated volume scans.** Zhongdi Chu¹, Y. Chen¹, Q. Zhang¹, K. Pepple², G. Gregori³, P. J. Rosenfeld³, R. K. Wang^{1,2}. ¹Bioengineering, University of Washington, Seattle, WA; ²Ophthalmology, University of Washington, Seattle, WA; ³Bascom Palmer Eye Institute, Miami, FL *CR
- 2881 — B0299 Computerized Texture Analysis of Choriocapillaris in Optical Coherence Tomography Angiography Images.** Asadolah Movahedan¹, L. Chun¹, P. Vargas², C. Smith¹, P. La Riviere², D. Skondra³. ¹University of Chicago, Chicago, IL; ²Radiology, The University of Chicago, Chicago, IL; ³Ophthalmology, The University of Chicago, Chicago, IL *CR
- 2882 — B0300 Interocular symmetry of foveal avascular zone area in healthy eyes: an examination using swept-source optical coherence tomography angiography.** Atsushi Fujiwara, L. Mengxuan, Y. Morizane, M. Hosogi, S. Kimura, M. Hosokawa, Y. Shiode, H. Masayuki, S. Doi, S. Toshima, K. Takahashi, Y. Kanzaki, F. Shiraga. Department of Ophthalmology, Okayama University Graduate School of Medicine, Dentistry and Pharmaceutical Sciences, Okayama city, Okayama-ken, Japan
- 2883 — B0301 Quantitative assessment of normal iris vascular density using anterior segment optical coherence tomography angiography.** Muhammad Hassaan Ali¹, J. Davila Gonzalez¹, F. Velez^{1,2}, A. E. Diaz³, D. Sarraf¹, S. L. Pineles¹. ¹Jules Stein Eye Institute, University of California Los Angeles, Los Angeles, CA; ²Doheny Eye Institute, UCLA; ³Olive View-UCLA Medical Center, Los Angeles, CA; ⁴David Geffen School of Medicine, Los Angeles, CA
- 2884 — B0302 Comparison of different approaches for quantification of retinal ischemia in OCTA.** Peer Lauerermann, C. van Oterendorp, N. Feltgen, H. Hoerauf, S. Bemme. Augenklinik, Universitätsmedizin Göttingen, Göttingen, Germany
- 2885 — B0303 Quantitative metrics in Swept Source-Optical Coherence Tomography in healthy eyes: fractal dimension, an interesting tool?** Louis Arrould¹, P. Gabrielle¹, F. Baudin¹, B. Aliahmad², M. Sarossy², A. M. Bron¹, C. P. Creuzot Garcher¹. ¹Ophthalmology, Dijon University Hospital, Dijon, France; ²MIT University, Melbourne, Victoria, Australia
- 2886 — B0304 Automatic detection of capillary dilation and looping in patients with diabetic retinopathy from optical coherence tomography angiography data.** Lennart Husvagt^{1,2}, M. Arya³, A. Alibhai³, E. Moul², J. S. Duker³, N. K. Waheed³, J. G. Fujimoto², A. K. Maier¹. ¹Pattern Recognition Lab, Friedrich-Alexander-Universität Erlangen-Nürnberg, Erlangen, Germany; ²Research Laboratory for Electronics, Massachusetts Institute of Technology, Cambridge, MA; ³New England Eye Center, Tufts Medical Center, Boston, MA *CR
- 2887 — B0305 Quantitative evaluation of peripapillary capillaries: A comparison among 4 optical coherence tomography angiography devices.** Jianqin Lei, C. Wen, C. Pei. 1st affiliated hospital of Xi'an Jiaotong university, Xi'an, China

Exhibit Hall C0185-C0211

Tuesday, May 01, 2018 8:15 AM-10:00 AM

Cornea

320 Corneal Endothelium II**Moderators: JeongGoo Lee and Ricardo F. Frausto**

2888 — C0185 Effect of Diabetes Mellitus and Metformin on Central Corneal Endothelial Cell Density in Eye Bank Eyes. Isaac M. Chocron, D. Rai, J. Y. Hu, G. Rand, N. Bernstein, J. Lee, M. Heo, J. W. Kwon, R. S. Chuck. *Ophthalmology, Montefiore Medical Center, NYC, NY*

2889 — C0186 Diabetes mellitus in eye bank donors does not impact corneal transplant suitability. Gabriel M. Rand¹, I. M. Chocron¹, J. Y. Hu¹, P. Gore², L. Forest-Smith², T. Livesay², R. S. Chuck¹. ¹Department of Ophthalmology and Visual Sciences, Albert Einstein College of Medicine, New York, NY; ²Saving Sight, Kansas City, MO

2890 — C0187 Changes in Corneal Endothelial Morphology Over Four Years In Subjects With Type 2 Diabetes: A population-based study. Sangeetha Srinivasan, V. Khetan, V. Kulothungan, R. Roy, S. Ganesan, T. Sharma, R. Raman. Shri Bhagwan Mahavir Vitreoretinal Services, Sankara Nethralaya, Chennai, Tamil Nadu, India

2891 — C0188 Safety of Antifungal Additives in Optisol-GS® Corneal Storage Medium on Human Cadaver Endothelial Cells. So Hee Kim, E. Kim, S. Kim. Department of Ophthalmology and Visual Science, Uijeongbu St. Mary's Hospital, College of Medicine, The Catholic University of Korea, Seoul, Korea (the Republic of)

2892 — C0189 Comparison of endothelial cell density determined by eye banks and by a centralized reading center in the Cornea Preservation Time Study (CPTS). Beth Ann Benetz¹, H. Menegay¹, A. Ayala², L. Szczołka-Flynn^{1,3}, R. O'Brien², M. G. Maguire⁴, K. Ross⁵, J. H. Lass^{1,3}. ¹Ophthalmology and Visual Sciences, Case Western Reserve University, Cleveland, OH; ²Jaeb Center for Health Research, Tampa, FL; ³University Hospitals Eye Institute, Cleveland, OH; ⁴Ophthalmology, University of Pennsylvania, Philadelphia, PA; ⁵Eversight, Ann Arbor, MI *CR, ✗

2893 — C0190 Impact of death/preservation interval, cause of death and age on donor corneal endothelial cell density. Pedro P. Vizibelli Chaves¹, L. A. Freire¹, J. M. Wong¹, F. A. Nogueira¹, M. M. De Oliveira², D. Chen Wu¹, A. L. Netto¹, P. A. Poletto¹, R. Y. Hida¹. ¹Oftalmologia, Irmandade da Santa Casa de Misericórdia de São Paulo, São Paulo, Brazil; ²Centro Universitário de Belo Horizonte, Belo Horizonte, Brazil

2894 — C0191 The impact of routine storage in the human donor corneal endothelium. Cinthia Kim¹, F. C. Abib³, D. Marques², A. F. Silva², R. Holzchuh², i. C. Teixeira², F. U. Carvalho², R. Y. Hida². ¹Ophthalmology, Irmandade Santa Casa de Misericórdia, São Paulo, SP, Brazil; ²Ophthalmology, Irmandade Santa Casa de Misericórdia de São Paulo, São Paulo, SP, Brazil; ³Ophthalmology, Universidade Federal do Paraná, Curitiba, PR, Brazil

2895 — C0192 Assessing the Validity of RE-One: A comparison study of corneal excision techniques. Rahul Raghu¹, K. Jones², K. McCoy², E. Holland², S. Paskowski². ¹Ophthalmology, University Hospitals Eye Institute, Cleveland, OH; ²Eversight Ohio, Cleveland, OH

2896 — C0193 Intraoperative Optical Coherence Tomography-Assisted Descemet Membrane Endothelial Keratoplasty in the DISCOVER Study. Aparna Shah, J. M. Goshe, J. Ehlers. *Ophthalmology, Cleveland Clinic Cole Eye Institute, Cleveland, OH* *CR

2897 — C0194 Effect of Donor Characteristics on Visual Outcomes and Endothelial Cell Count in the Descemet Endothelial Thickness Comparison Trial. Yijie Lin^{1,6}, W. Chamberlain², C. C. Lin³, A. Austin¹, N. Shubach³, J. Clover⁴, S. Mcleod⁶, T. Porco^{1,5}, T. Lietman^{1,6}, J. Rose-Nussbaumer^{1,6}. ¹Ophthalmology, Proctor Foundation, UCSF, San Francisco, CA; ²Ophthalmology, Byers Eye Institute, Stanford University, Palo Alto, CA; ³Ophthalmology, Casey Eye Institute, Oregon Health Sciences University, Portland, OR; ⁴Lions VisionGift, Portland, CA; ⁵Epidemiology and Biostatistics, University of California San Francisco, San Francisco, CA; ⁶Department of Ophthalmology, University of California, San Francisco, San Francisco, CA ✗

2898 — C0195 Study of predictive factors corneal failure on DMEK (Descemet Membrane Endothelial Keratoplasty). Chloé Dubroux^{1,2}, C. Goetz³, L. Lhuillier¹, M. Zaidi¹, M. Da Costa^{1,2}, P. Rolland^{1,2}, N. Ouamara³, J. Perone¹. ¹Ophthalmology, Metz-Thionville Regional Hospital Center, Metz, France; ²Faculty of Medicine, University of Lorraine, Nancy, France; ³Clinical Research Support Unit, Metz-Thionville Regional Hospital Center, Metz, France

2899 — C0196 Association between donor-related, preservation and storage parameters on endothelial cell density after DMEK. Petra Schollmayer, Z. Luznik, L. Lapajne, M. Hawlina. Eye hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia

2900 — C0197 Graft attachment after Descemet Membrane Endothelial Keratoplasty (DMEK) comparing two different anterior chamber tamponades. Sebastian Siebemann, S. Lopez Ramos, P. Scholz, M. Matthaei, S. Schrittenlocher, L. M. Heindl, B. Bachmann, C. Cursiefen. Department of Ophthalmology, University Hospital of Cologne, Cologne, Germany

2901 — C0198 Measuring endothelial cell loss in Descemet Membrane Endothelial Keratoplasty (DMEK) grafts after transplantation in human cadaveric whole eyes. Rolake Alabi¹, K. D. Tran², K. Odell², P. K. Dye², K. Downes², C. S. Sales^{2,1}. ¹Weill Cornell Medical College, New York, NY; ²Lions VisionGift, Portland, OR

2902 — C0199 Asymmetrical endothelial cell migration from *in vitro* Quarter-DMEK grafts. Lamis Baydoun, D. Spinozzi, A. Miron, M. Bruinsma, S. Oellerich, G. Melles. NIOS, Rotterdam, Netherlands *CR

2903 — C0200 Characterization of Endothelial Cell Loss in Pre-Descemet's endothelial keratoplasty (PDEK). Peter Bedard, J. H. Hou. Dept of Ophthalmology and Visual Neuroscience, University of Minnesota, St. Paul, MN

2904 — C0201 DWEK vs DMEK for Treatment of Fuchs' Endothelial Corneal Dystrophy. Marshall J. Huang¹, S. Kane², D. Dhaliwal¹. ¹University of Pittsburgh, Pittsburgh, PA; ²The Eye Institute of West Florida, Tampa, FL

2905 — C0202 Proteomic analysis of the aqueous humor: Complement activation is the major pathway in the Aqueous humor in eyes with complicated pseudophakic bullous keratopathy. Takefumi Yamaguchi^{1,3}, K. Ueda², K. Higa¹, Y. Satake⁴, K. Tsubota³, J. Shimazaki^{1,3}. ¹Cornea Center Eye Bank, Tokyo Dental College Ichikawa General Hospital, Chiba, CHIBA, Japan; ²Project for Personalized Cancer Medicine, Cancer Precision Medicine Center, Japanese Foundation for Cancer Research, Tokyo, Japan; ³Ophthalmology, Keio University School of Medicine, Tokyo, Japan; ⁴Ophthalmology, Tokyo Dental College Ichikawa General Hospital, Chiba, Japan

2906 — C0203 Classification of different morphometric profiles of human corneal endothelium. Lais Y. Sakano¹, G. C. C. Caiado¹, R. Y. Hida¹, F. U. Carvalho¹, R. Holzchuh¹, F. C. Abib². ¹Irmandade da Santa Casa de Misericórdia de São Paulo, São Paulo, Brazil; ²Federal University of Parana, Curitiba, Brazil

2907 — C0204 Endothelial cell changes of the cornea after Baerveldt glaucoma drainage device implantation. Hans G. Lemij¹, K. A. Vermeer², E. Islamaj². ¹Glaucoma Service, Rotterdam Eye Hosp (Oogziekenhuis Rotterdam), Rotterdam, Netherlands; ²Rotterdam Ophthalmic Institute, Rotterdam Eye Hospital, Rotterdam, Netherlands ✗

2908 — C0205 Morphometric analysis of corneal endothelium of hispanic elderly population. Jorge E. Valdez, J. L. Domene Hickman, D. Loya, J. Zavala, P. Lopez, J. C. Hernandez-Camarena, J. A. Nava, A. Rodriguez Garcia. Dean's Office, Tecnológico de Monterrey Sch of Med, San Pedro Garza Garca, NUEVO LEON, Mexico

2909 — C0206 Different Types of Human Subnormal Corneal Endothelium according to Lifetime Cornea Transparency. *Fernando C. Abib^{1,2}, R. Holzchuh³, R. Y. Hida⁴.* ¹Anatomy, Federal University of Parana, Curitiba, PARANA, Brazil; ²Ocular Oncology, Erasto Gaertner Hospital, Curitiba, Brazil; ³Santa Casa de Misericordia, São Paulo, Brazil; ⁴Santa Casa de Misericordia, São Paulo, Brazil *CR

2910 — C0207 Contact or Non-Contact Corneal Specular Microscopes: Which specular microscope is suggested for each patient? *Gustavo C. C. Caiado¹, L. Y. Sakano¹, F. U. Carvalho¹, R. Y. Hida^{1,3}, i. C. Teixeira¹, R. Holzchuh^{1,3}, F. C. Abib².* ¹Ophthalmology, Irmandade da Santa Casa de Misericórdia de São Paulo, São Paulo, São Paulo, Brazil; ²Anatomy, Universidade Federal Do Paraná, Curitiba, Paraná, Brazil; ³Ophthalmology, Universidade de São Paulo, São Paulo, São Paulo, Brazil *CR

2911 — C0208 Specular microscope using automatic counting can generate unacceptable Sample error in normal corneas. *Joao Godinho¹, F. U. Carvalho¹, R. Holzchuh¹, F. C. Abib³, R. Y. Hida^{1,2}.* ¹Santa Casa de Sao Paulo, Sao Paulo, Sao Paulo, Brazil; ²Universidade de Sao Paulo, Sao Paulo, Brazil; ³Universidade Federal do Parana, Curitiba, Brazil

2912 — C0209 Morphological change of corneal endothelial cells post instillation of rho-associated kinase inhibitor eye drops. *Yoko Ikeda^{1,2}, Y. Maruyama¹, K. Mori¹, K. Yoshii³, M. Ueno¹, Y. Yamamoto¹, H. Yoshikawa¹, C. Sotozono¹, S. Kinoshita⁴.* ¹Ophthalmology, Kyoto Prefectural Univ of Med, Kamigyo-ku, Kyoto, Japan; ²Oike Ikeda Eye Clinic, Kyoto, Japan; ³Medical Statistics, Kyoto Prefectural University of Medicine, Kyoto, Japan; ⁴Frontier Medical Science and Technology for Ophthalmology, Kyoto Prefectural University of Medicine, Kyoto, Japan *CR

2913 — C0210 Value of Scheimpflug Photography in Predicting Corneal Decompensation Requiring Keratoplasty Following Cataract Surgery in Patients with Fuchs Dystrophy. *Jawad Arshad¹, A. Sankovic², R. R. Sayegh¹.* ¹University Hospitals Cleveland Medical Center / Case Western Reserve University, Cleveland, OH; ²Northeast Ohio Medical University, Rootstown, OH

2914 — C0211 Functions of the corneal endothelium as measured by swelling and deswelling dynamics in response to contact lens-induced transient hypoxia. *Sangly P. Srinivas¹, S. Murugan², S. Rachapalle³, P. Padmanabhan².* ¹Optometry, Indiana University, Bloomington, IN; ²Cornea and Refractive Surgery, Medical Research Foundation, Sankara Nethralaya, Chennai, India

Exhibit Hall C0212-C0224

Tuesday, May 01, 2018 8:15 AM-10:00 AM

Genetics Group

321 Genetics of Corneal dystrophies

Moderator: Mitchell A. Watsky

2915 — C0212 Endothelial corneal dystrophy is penetrant in mitochondrial disorders. *Mathieu Bakhom^{1,2}, K. Bube¹, M. Reinsbach², J. Alexander³, M. Morcos², K. Freund³, D. Sarraf¹, H. Perry², S. H. Tsang¹.* ¹Columbia University Medical Center, Glen Oaks, NY; ²Nassau University Medical Center, East Meadow, NY; ³Vitreous Retina Macula Consultants of New York, New York, NY; ⁴UCLA, Los Angeles, CA

2916 — C0213 Genetic Testing for Corneal Dystrophies using Target Region Capture Sequencing identified Novel Mutations in Han Chinese Population. *Zhang Jing, D. Wu, J. Xu.* ¹Ophthalmology, Eye & ENT Hospital of Fudan University, Shanghai, China

2917 — C0214 Five novel ZEB1 mutations including a 0.34 Mb deletion detected by whole genome sequencing in patients with posterior polymorphous corneal dystrophy type 3. *Petra Liskova^{1,2}, L. Dudakova¹, C. J. Evans³, P. Skalicka², N. Pontikos⁴, A. Horinek⁷, T. Kubena⁵, A. Davidson³, A. J. Hardcastle³, S. J. Tuft⁶.* ¹Department of Pediatrics and Adolescent Medicine, First Faculty of Medicine, Charles University and General University Hospital in Prague, Prague, Czechia; ²Department of Ophthalmology, First Faculty of Medicine, Charles University and General University Hospital in Prague, Prague, Czechia; ³UCL Institute of Ophthalmology, London, United Kingdom; ⁴UCL Genetics Institute, London, United Kingdom; ⁵Ophthalmology Clinic of Dr. Tomas Kubena, Zlin, Czechia; ⁶Moorfields Eye Hospital, London, United Kingdom; ⁷Institute of Biology and Human Genetics, First Faculty of Medicine, Charles University and General University Hospital in Prague, Prague, Czechia

2918 — C0215 Investigating the pathogenicity of missense mutations in VSX1 and their association with corneal dystrophies. *Anastasia M. Litke¹, S. Samuelson², K. Delaney¹, Y. Sauve², R. L. Chow¹.* ¹Biology, University of Victoria, Victoria, British Columbia, Canada; ²Ophthalmology and Visual Sciences, University of Alberta, Edmonton, British Columbia, Canada

2919 — C0216 The impact of CHED- and FECD-associated SLC4A11 mutations on protein localization in human corneal endothelial cells. *Doug D. Chung, A. J. Aldave.* ¹Ophthalmology, Stein Eye Institute, UCLA, Los Angeles, CA

2920 — C0217 Relationship of severity of Fuchs endothelial corneal dystrophy with triplet repeat expansion in TCF4 and The Potential Implications to Surgical Intervention. *Kirithika Muthusamy^{1,2}, B. Sanchez-Pintado², N. Hafford Tear², P. Liskova^{3,4}, P. S. Adamson², A. J. Hardcastle², A. E. Davidson², S. J. Tuft^{2,1}.* ¹Cornea and External Disease, Moorfields Eye Hospital, London, United Kingdom; ²Institute of Ophthalmology, University College London, London, United Kingdom; ³Department of Pediatrics and Adolescent Medicine, First Faculty of Medicine, Charles University and General University Hospital in Prague, Prague, Czechia; ⁴Department of Ophthalmology, First Faculty of Medicine, Charles University and General University Hospital, Prague, Czechia

2921 — C0218 A novel missense mutation, G2284E, in the Zinc Finger Protein Gene, ZNF469, contribute to the Pathogenesis of Korean Keratoconus patients. *Jeewon Mok, J. Lee, C. Joo.* ¹Catholic Institutes of Visual Science, Catholic Univ Korea, Seoul, Korea (the Democratic People's Republic of)

2922 — C0219 Transcriptomic analysis of corneas from Keratoconus patients in Saudi Arabia and the United States. *Nan Hu, V. Shinde, J. W. Foster, U. Soiberman, Y. J. Daoud, A. Mahale, S. A. Al-Swailem, A. Jun, S. Chakravarti.* ¹Johns Hopkins School of Medicine, Baltimore, MD

2923 — C0220 Role of FOXO1 in the progression of Keratoconus. *Vishal Shinde, J. W. Foster, Y. J. Daoud, A. Jun, S. Chakravarti.* ¹Johns Hopkins School of Medicine, Baltimore, MD

2924 — C0221 Confirmation and Refinement of the Heterozygous Deletion of the Small Leucine-rich Proteoglycans Associated with Posterior Amorphous Corneal Dystrophy. *Anthony Aldave¹, A. Cervantes¹, K. Gee¹, M. Whiting², R. F. Frausto¹.* ¹Stein Eye Institute, Los Angeles, CA; ²University of Maryland School of Medicine, Baltimore, MD

2925 — C0222 Sclerocornea-microphthalmia-aphakia complex: Description of two additional cases associated with novel FOXE3 mutations and review of the literature. *Natalia Paulina Quiroz-Castan², O. Chacon-Camacho¹, T. Barragan-Arevalo¹, J. Nava-Valdez¹, A. Navas², E. O. Graue-Hernandez², J. C. Zenteno¹.* ¹Department of Genetics-Research Unit, Institute of Ophthalmology "Conde de Valenciana" M, Mexico City, DF, Mexico; ²Cornea and Refractive Surgery, Instituto de oftalmología Fundación Conde de Valenciana, Mexico City, CDMX, Mexico

2926 — C0223 Analysis of gene mutations in lecithin cholesterol acyltransferase deficiency and fish eye disease of Japanese cases. *Takashi Ono^{1,3}, T. Iwasaki¹, R. Nejima¹, Y. Mori¹, A. Yoshimura², A. Ando², Y. Okamoto², H. Takashima², M. Aihara³, K. Miyata¹.* ¹Ophthalmology, Miyata Eye Hospital, Miyakonojo-city, Japan; ²Neurology and Geriatrics, Kagoshima University Graduate School of Medical and Dental Sciences, Kagoshima, Japan; ³The university of Tokyo, Tokyo, Japan

2927 — C0224 A New TGFBI-Corneal Dystrophy ? Combination with Adult-Onset-Vitelliform Macular Dystrophy. *Bart Van Dooren^{1,2}, F. Sloot¹, C. C. Klaver^{3,4}, A. A. Thiadens^{1,3}.* ¹Ophthalmology, Erasmus Medical Center, Breda, Netherlands; ²Ophthalmology, Amphia Hospital, Breda, Netherlands; ³Epidemiology, Erasmus Medical Center, Rotterdam, Netherlands; ⁴Ophthalmology, Radboud University, Nijmegen, Netherlands

Exhibit Hall C0250-C0261

Tuesday, May 01, 2018 8:15 AM-10:00 AM

Eye Movements/Strabismus/Amblyopia/
Neuro-Ophthalmology

322 Strabismus: Therapy

Moderator: Sachin Kedar

2928 — C0250 Management of Restrictive Esotropia Following Pterygium Surgery. *Irma Muminovic¹, D. Toffoli², S. R. Lambert¹.* ¹Ophthalmology, Stanford University, San Jose, CA; ²Ophthalmology, Montreal Children's Hospital, Montreal, Quebec, Canada

2929 — C0251 Evaluation of early postoperative conjunctival surface after small-incision strabismus surgery using a novel conjunctival tassel method. *kiyo shibata¹, I. Hamasaki¹, T. Shimizu¹, S. Hasebe², H. Ohtsuki³, F. Shiraga¹.* ¹ophthalmology, Okayama Univ.Hospital, Okayama, Okayama, Japan; ²Kawasaki Hospital, Okayama, Japan; ³Saiseikai General Hospital, Okayama, Japan *CR

2930 — C0252 Features of ocular motility disorders due to traffic accidents requiring extraocular muscle surgery. *Mana Okamoto.* ¹Ophthalmology, Hyogo College of Medicine, Nisinomiyasi, Hyogo, Japan

2931 — C0253 Clinical Observations and Surgical Management of Restrictive Strabismus following implantation of Glaucoma Drainage Device. *Milad Modabber, H. Saheb, M. Flanders.* ¹Dept of Ophthalmology, McGill University, Montreal, Quebec, Canada

2932 — C0254 Diagnosis strategies of Congenital Fibrosis of the Extraocular Muscles (CFEOM) Families. *lin li¹, Q. Shen¹, X. JIAO², J. F. Hejtmancik², X. Fan¹.* ¹Department of Ophthalmology, Shanghai JiaoTong University, School of Medicine, Huangpu District, China; ²OGVFB/NEI/NIH, Rockville, MD

2933 — C0255 Efficacy of Collagen Matrix Implant on Adhesions in Restrictive Strabismus: An Experimental Study in a Rabbit Model. *Yung Ju Yoo¹, H. Yang², S. Lee¹, J. Hwang².* ¹Ophthalmology, Kangwon National University Hospital, Chuncheon-si, Gangwon-do, Korea (the Republic of); ²Seoul National University College of Medicine, Seoul, Korea (the Republic of)

2934 — C0256 Adjustable nasal transposition of the inferior rectus for superior oblique palsy using the “Cyclophorometer”. *Kakeru Sasaki, T. Hayashi, Y. Tane, K. Sasaki, G. Terauchi.* ¹Teikyo University, Itabashi, Tokyo, Japan *CR

2935 — C0257 Surgical outcome of unilateral medial rectus recession for congenital and acquire esotropia. *Alice Behrens^{2,1}, H. Wang³, R. S. Lowery^{2,1}.* ¹Ophthalmology, University of Arkansas for Medical Sciences, Little Rock, AR; ²Ophthalmology, Arkansas Children's Hospital, Little Rock, AR; ³College of Medicine, University of Arkansas for Medical Sciences, Little Rock, AR

2936 — C0258 Double-angle Modification of Parks Surgical Table Improves the Outcomes of Unilateral Medial Rectus Recession in Adult Patients with Small-angle Esotropia. *Satoshi Hasebe, S. Morisawa, T. Furuse, R. Kobashi.* ¹Ophthalmology, Kawasaki Medical School, Okayama, Okayama, Japan

2937 — C0259 The effect of isolated inferior oblique muscle recession for superior oblique palsy with vertical deviations. *Sang Hoon Rah, J. Kim.* ¹Department of Ophthalmology, Yonsei University Wonju College of Medicine, Wonju, Korea (the Republic of)

2938 — C0260 Effect of Combining Inferior Oblique Muscle Weakening Procedures with the Exotropia Surgery on the Surgical Correction of Exotropia. *Dong Gyu Choi, Y. Lee, S. Bae.* ¹Ophthalmology, Kangnam Sacred Heart Hospital College of Medicine Hallym University, Seoul, Korea (the Republic of)

2939 — C0261 Comparison of surgical outcome between bilateral lateral rectus recession and unilateral recession-plication for intermittent exotropia. *Haeng Jin Lee, E. Jung, Y. Yu, S. Kim.* ¹Ophthalmology, Seoul National University Hospital, Seoul, Korea (the Democratic People's Republic of)

Exhibit Hall C0262-C0291

Tuesday, May 01, 2018 8:15 AM-10:00 AM

Visual Psychophysics/Physiological Optics / Eye Movements/Strabismus/Amblyopia/
Neuro-Ophthalmology / Visual Neuroscience

323 Accommodation and Binocular Functions

Moderators: Tawna L. Roberts and Andrew D. Pucker

2940 — C0262 Ciliary muscle thickness profiles in far and near accommodation. *Sandra Wagner¹, T. Strasser¹, E. Zrenner^{1,2}.* ¹Institute for Ophthalmic Research, Eberhard Karls University Tuebingen, Tuebingen, Germany; ²Werner Reichardt Centre for Integrative Neuroscience (CIN), Tuebingen, Germany

2941 — C0263 An automated accommodative facility test with unpredictable stimuli. *Jaume Pujol¹, C. Otero Molins¹, M. Aldaba², S. Lopez-Bausili¹, F. Díaz-Doutón^{1,2}, F. A. Vera-Díaz³.* ¹Davalor Research Center (dRC), Universitat Politècnica de Catalunya (UPC), Terrassa, Spain; ²Centre de Desenvolupament de Sensors, Instrumentació i Sistemes (CD6), Universitat Politècnica de Catalunya (UPC), Terrassa, Spain; ³New England College of Optometry, Boston, MA

2942 — C0264 Impact of Cognitive Effort on Accommodation and Pupil Size in Adults. *Molly K. Lalonde, A. Gehring, T. L. Roberts.* ¹Vision Science Center, Akron Children's Hospital, Akron, OH

2943 — C0265 Effectiveness of barrier-free display on accommodation. *Takushi Kawamori¹, K. Miyazaki², T. Yamazaki³, S. Takahashi¹, M. Nakatani¹, S. Miyaji¹, T. Handa¹, N. Shoji⁴.* ¹Department of Orthoptics and Visual Science, Kitasato University, Sagami-hara, Kanagawa, Japan; ²Olympus Co Ltd, Hachioji, Tokyo, Japan; ³Olympus Communication Technology of America, San Diego, CA; ⁴Department of Ophthalmology, Kitasato University School of Medicine, Sagami-hara, Kanagawa, Japan *CR

2944 — C0266 Comparison of the short-term effect after 6 weeks of treatment of accommodative infacility with either +0.5D addition in spectacles or accommodation exercises with Hard Chart. *Martin Balke, P. O. Lundmark.* ¹Optometry, Radiography and Lighting Design, University College of Southeast Norway, Kongsberg, Buskerud, Norway

2945 — C0267 Investigating the influence of using smart devices on the ocular accommodative response. *Phillip J. Buckhurst¹, M. Bin Abdul Rahim^{2,1}, C. Purslow¹, H. D. Buckhurst¹.* ¹School of Health Professions, Plymouth University, Plymouth, Devon, United Kingdom; ²International Islamic University Malaysia, Department of Optometry and Vision Science, Pahang, Kuantan, Malaysia

2946 — C0268 Simultaneous Detection of Anterior Segment and Ciliary Muscle during Accommodation with Spectral Domain Optical Coherence Tomography. *Ming Li, L. Cui, M. Shen.* ¹The Eye Hospital of Wenzhou Medical University, Wenzhou, China

2947 — C0269 Relationship between the sign of defocus and accommodation of the human eye. *Najnin Sharmin, B. Vohnsen.* ¹School of Physics, University College Dublin, Dublin, Dublin 4, Ireland

2948 — C0270 In vivo assessment of ciliary muscle morphology using swept source optical coherence tomography. *Nicola Szostek, H. D. Buckhurst, A. Collinson, C. Purslow, P. J. Buckhurst.* ¹School of Health Professions, Plymouth University, Plymouth, Devon, United Kingdom

- 2949 — C0271 Evaluation of ciliary body's morphological changes using anterior segment spectral domain optical coherence tomography and ultrasound biomicroscopy.** Eva Juhasz, B. Csakany, G. Sandor, I. Kovacs, T. Filkorn, K. Kranitz, Z. Nagy. *Ophthalmology Department, Semmelweis University, Budapest, Hungary*
- 2950 — C0272 Comparison of Simultaneous Measures of Accommodation Using the PowerRef 3 and Grand Seiko WAM-5500.** Alyssa Gehring, M. K. Lalonde, T. L. Roberts. *Akron Children's Hospital, Akron, OH*
- 2951 — C0273 Axial length and dynamic disaccommodation changes accompanying prolonged near work.** Yilei Shao. *School of Ophthalmology & Optometry, Wenzhou Medical University, Wenzhou, Zhejiang, China*
- 2952 — C0274 Accommodative Responses to E-ink vs LCD vs Ink on Paper in Young Adults.** Jennifer Nguyen, P. Cisarik. *Southern College of Optometry, Memphis, TN*
- 2953 — C0275 What happens to the accommodative response after sustained near tasks in young uncorrected hyperopes?** Michael Nodie, K. J. Saunders, J. Little. *Biomedical Sciences Research Institute, Ulster University, Coleraine, United Kingdom*
- 2954 — C0276 Perceptual eye dominance in human adults quantified using binocular orientation combination.** Jiawei Zhou¹, Y. Wang¹, Y. Liang¹, Z. Yao¹, D. Spiegel², J. Qu¹, F. Lu¹, R. Hess². ¹*School of Ophthalmology and Optometry and Eye hospital, and State Key Laboratory of Ophthalmology, Optometry and Vision Science, Wenzhou Medical University, Wenzhou, Zhejiang, China;* ²*McGill Vision Research, Dept. Ophthalmology, McGill University, Montreal, Quebec, Canada*
- 2955 — C0277 On the relationship between eye dominance and stereopsis: normative data.** Yonghua Wang¹, W. Lin¹, Z. He¹, F. Lu¹, J. Zhou¹, R. Hess². ¹*School of Ophthalmology and Optometry and Eye hospital, and State Key Laboratory of Ophthalmology, Optometry and Vision Science, Wenzhou Medical University, Wenzhou, Zhejiang, China;* ²*McGill Vision Research, Dept. Ophthalmology, McGill University, Montreal PQ, Quebec, Canada*
- 2956 — C0278 Difference on California Standards Test (CST) Results as a Function of Ocular Dominance.** Kristy Remick-Waltman, E. Cheung, P. G. Davey. *optometry, Western University of Health Sciences, Pomona, CA*
- 2957 — C0279 How repeatable are measures of heterophoria? Implications for clinical practice.** Joanna Black, B. Davidson, B. Field, J. Mathan, N. S. Anstice. *School of Optometry and Vision Science, University of Auckland, Auckland, New Zealand*
- 2958 — C0280 Higher Response Variance in Sensory Dominant Eye.** haoran wu^{1,2}, B. Zhang³, W. Lan^{1,2}, Z. Chen^{2,1}, X. Li^{2,1}, Z. Yang^{1,2}. ¹*Aier School of Ophthalmology, Central South University, Changsha, Hunan, China;* ²*Aier Institute of Optometry and Vision Science, Changsha, Hunan, China;* ³*College of Optometry, Nova Southeastern University, Davie, FL*
- 2959 — C0281 The interaction of vergence and tonic accommodation in pediatric myopic contact lens wear.** Kate Gifford^{1,2}, K. L. Schmid¹, P. L. Hendicott¹. ¹*Queensland University of Technology, Brisbane, Queensland, Australia;* ²*Myopia Profile Pty Ltd, Brisbane, Queensland, Australia*
- 2960 — C0282 The effect of base-up and base-down vertically yoked prisms on binocular vision and accommodation.** Katrina L. Schmid¹, S. D. Beavis¹, J. Chen¹, Y. Chien¹, T. Nguyen¹, A. N. Tran¹, S. I. Wallace¹, S. R. Varnas², D. A. Atchison¹. ¹*Queensland University of Technology, Brisbane, Queensland, Australia;* ²*Carl Zeiss Vision Australia, Lonsdale, South Australia, Australia* *CR
- 2961 — C0283 Contribution of binocular vision to the performance of a precision manipulation task in 8-14 years old children.** Ewa Niechwiej-Szwedo¹, G. Thai¹, L. Christian². ¹*Kinesiology, University of Waterloo, Waterloo, Ontario, Canada;* ²*School of Optometry and Vision Science, University of Waterloo, Waterloo, Ontario, Canada*
- 2962 — C0284 The Effects of Monocular versus Binocular Aiming on Archery Performance.** kristen lantz, J. Webster, J. Krueger, A. Hickenbotham, E. Kinzer. *College of Optometry, University of Pikeville, Pikeville, KY*
- 2963 — C0285 Dissociation before accommodative function tests does not appear to impact results.** Lisa Asper, K. Watt, A. Chan, A. Tang, P. Kang. *Optometry and Vision Science, UNSW-Sydney, Sydney, New South Wales, Australia*
- 2964 — C0286 Changing Vergence Function in Persons with Parkinson's Disease and Convergence Insufficiency.** Elizabeth L. Irving¹, C. Machan¹, E. Chriqui², C. Law², M. Alhassan¹, Q. Almeida³, J. K. Hovis¹, H. Kergoat². ¹*School of Optometry and Vision Science, University of Waterloo, Waterloo, Ontario, Canada;* ²*Ecole d'optometrie, Universite de Montreal, Montreal, Quebec, Canada;* ³*Movement Disorders Research and Rehabilitation Centre, Wilfrid Laurier University, Waterloo, Ontario, Canada*
- 2965 — C0287 Effects of Monocular and Binocular Viewing on Virtual Reality Sickness while using a 3D Stereoscopic Roller Coaster Simulation.** Catherine Donaldson, S. Nunez, B. Dakin, A. Hickenbotham. *Kentucky College of Optometry, Pikeville, KY*
- 2966 — C0288 The effect of angle kappa in visual performance in diffractive intraocular lenses.** Mengchan Sun¹, A. Alarcon¹, C. Canovas¹, M. State¹, H. A. Weeber¹, J. Domingo², P. Piers¹. ¹*Johnson & Johnson Vision, Groningen, Groningen, Netherlands;* ²*Johnson & Johnson Vision, Santa Ana, CA* *CR
- 2967 — C0289 Reducing prismatic imbalance at near in progressive addition lenses.** Yohann Benard, A. Seidemann, H. Altheimer, A. Welk, G. Esser. *R&D, Rodenstock, Muenchen, Germany**CR
- 2968 — C0290 Effect of Fixed versus Adjustable Pupillary Distance (PD) on User Visual Comfort for Virtual Reality viewers.** Breck Dakin, S. Nunez, C. Donaldson, A. Hickenbotham. *Kentucky College of Optometry, University of Pikeville, Pikeville, KY*
- 2969 — C0291 Visuomotor effects of immersive virtual reality viewing on young children.** Paul E. Foeller, L. Tychsen. *Ophthalmology & Visual Science, Washington Univ Sch of Med, St Louis, MO*

Tuesday – General Business Meeting

Room 320

Tuesday, May 01, 2018 10:15 AM-11:00 AM

324 General Business Meeting

Welcome — ARVO President, Claude Burgoyne, MD, FARVO

- Presentation of ARVO Distinguished Service Awards

-Emily Y. Chew, MD, FARVO

-Sarah Coupland, MBBS, PhD, FARVO

-J. Mark Petrash, PhD, FARVO

-Dennis Levi, OD, PhD, FARVO

-Thomas Yorio, PhD, FARVO

-Presentation of the Joanne G. Angle Award to Harry A. Quigley, MD, FARVO

-Presentation of the Dr. David L. Epstein Award to Janey Wiggs, MD, PhD, FARVO

-Presentation of Membership Update and Election Results

-Membership and Annual Meeting attendance update

-Introduction of Incoming Officers

-2018 Achievement Award recipients

-2019 Achievement Award nominees

-Conclude Meeting

**Tuesday General
Business Meeting
10:15 am – 11:00 am**

Room 301AB

Tuesday, May 01, 2018 11:15 AM-1:00 PM

**Immunology/Microbiology / Biochemistry/
Molecular Biology / Cornea / Lens / Physiology/
Pharmacology / Retina**

325 Metabolic regulation of ocular immune responses - Minisymposium

Immunometabolism is an emerging area of investigation bridging distinct disciplines of microbiology, immunology, and biochemistry. It is well-established that both innate and adaptive immune cells are highly dynamic for their ability to rapidly transition from resting/patrolling to activated states in response to injury or infectious stimuli. Recent studies have revealed an important role of metabolic reprogramming, including dynamic regulation of aerobic glycolysis (the Warburg effect), lipid synthesis and degradation, and mitochondrial activity, and the outcome of immune responses. This symposium will discuss the molecular underpinnings of immunological/metabolic cross-talk in shaping immunity and in providing metabolic check points to modulate ocular immune responses.

Moderators: Claudio Bucolo, Marina S. Gorbatyuk and Mary E. Marquart

— 11:15 Introduction

2970 — 11:20 Interplay of energy metabolism and retinal innate responses to infection. Ashok Kumar. *Ophthalm & Anatomy/Cell Biology, Wayne State Univ/Kresge Eye Inst, Detroit, MI*

2971 — 11:37 Manipulating host metabolism to manage ocular inflammation. Barry T. Rouse. *Pathobiology, Univ of Tennessee Coll of Vet Med, Knoxville, TN*

2972 — 12:09 Retinal Metabolism in Aging and Disease. Rajendra Apte. *Ophthalmology, Washington Univ - St Louis, Saint Louis, MO*

2973 — 12:26 Intrinsic lipid mediator circuits: keys regulators of ocular adaptive immune responses. Karsten Gronert. *Vision Science Program, School of Optometry, University of California Berkeley, Berkeley, CA*

2974 — 12:43 Diet, Metabolomics, Microbiome, and Proteolytic Processes Related to Retinal Diseases. Allen Taylor. *Nutrition & Vision Res-USDA-HNRCA, Tufts University, Boston, MA*

Room 310

Tuesday, May 01, 2018 11:15 AM-1:00 PM

Visual Psychophysics/Physiological Optics

326 Lens optics and IOLs

Moderators: Susana Marcos and Pablo De Gracia

2975 — 11:15 A New Polynomial Decomposition Method for Ocular Wavefront Analysis. Damien Gatine^{1,2}, J. Malet³, L. Dumas⁴. ¹Ophthalmology, Rothschild Foundation, Paris, France; ²CEROC, Paris, France; ³Institute of Statistics, Pierre et Marie Curie University, Paris, France; ⁴Applied Mathematics, University of Versailles St Quentin (UVSQ), Versailles, France

2976 — 11:30 Basis Functions for Designing Progressive Addition Lenses. Jim Schwiegerling. *Optical Sciences, University of Arizona, Tucson, AZ*

2977 — 11:45 Wavefront and biometric measurement of the aging human eyes. Ji C. He¹, J. Wang², M. Wei¹, J. Mao¹. ¹New England College of Optometry, Acton, MA; ²Bascom Palmer Eye Institute, Miami, FL

2978 — 12:00 Age-dependence of the peripheral defocus of the isolated human crystalline lens. Fabrice Manns^{1,2}, S. Williams^{1,2}, M. Ruggeri¹, A. Mohamed^{3,4}, N. Sravani³, B. Maceo Heilman^{1,2}, Y. Yao^{1,2}, A. Gonzalez¹, c. rowaan¹, A. Ho^{5,1}, J. A. Parel^{1,4}. ¹Ophthalmic Biophysics Center, Bascom Palmer Eye Institute, University of Miami Miller School of Medicine, Miami, FL; ²Department of Biomedical Engineering, University of Miami College of Engineering, Coral Gables, FL; ³Ophthalmic Biophysics, LV Prasad Eye Institute, Hyderabad, India; ⁴Vision Cooperative Research Centre, Sydney, New South Wales, Australia; ⁵Brien Holden Vision Institute, Sydney, New South Wales, Australia

2979 — 12:15 In Vivo Measurement of the Human Crystalline Lens Equivalent Refractive Index using Whole-eye OCT. Gabrielle Mesquita^{1,2}, Y. Chang^{1,2}, F. Cabot^{1,3}, S. Williams^{1,2}, G. Gregori⁵, A. Ho^{1,4}, M. Ruggeri¹, S. H. Yoo^{1,3}, J. A. Parel^{1,6}, F. Manns^{1,2}. ¹Ophthalmic Biophysics Center, Bascom Palmer Eye Institute, University of Miami Miller School of Medicine, Miami, FL; ²Department of Biomedical Engineering, University of Miami College of Engineering, Coral Gables, FL; ³Anne Bates Leach Eye Hospital, Bascom Palmer Eye Institute, University of Miami Miller School of Medicine, Miami, FL; ⁴Brien Holden Vision Institute, Sydney, New South Wales, Australia; ⁵Quantitative Imaging Center, Bascom Palmer Eye Institute, University of Miami Miller School of Medicine, Miami, FL; ⁶Vision Cooperative Research, Sydney, New South Wales, Australia *CR

2980 — 12:30 Optical Quality After In Vitro Intraocular Lens Power Adjustment Using a Femtosecond Laser. Jason Nguyen^{3,1}, L. Werner¹, J. Aliancy¹, J. Ludlow¹, B. Masino¹, L. Ha¹, S. Enright², R. Alley², R. Sahler², N. Mamalis¹. ¹John A. Moran Eye Center, Salt Lake City, UT; ²Perfectlens, Irvine, CA; ³University of Oklahoma Health Sciences Center, Oklahoma City, OK *CR

2981 — 12:45 In Vivo Intraocular Lens Power Adjustment Using a Femtosecond Laser in the Rabbit Model. Liliana Werner¹, J. Ludlow¹, J. Nguyen¹, J. Aliancy¹, N. Ellis¹, J. Heczeko¹, B. Jiang¹, T. Peterson¹, S. Enright², R. Alley², R. Sahler², N. Mamalis¹. ¹Ophthalmology and Visual Sciences, John A. Moran Eye Center, University of Utah, Salt Lake City, UT; ²Perfect Lens LLC, Irvine, CA*CR

Room 311

Tuesday, May 01, 2018 11:15 AM-1:00 PM

Retina

327 Retinal Gene Therapy and Stem Cell Transplantation

Moderators: Lyndon daCruz and M. Dominik Fischer

2982 — 11:15 First Gene Supplementation Therapy for CNGA3-linked Achromatopsia. M. Dominik Fischer^{1,3}, S. Michalakis², B. Wilhelm⁴, N. Kahle⁴, T. Peters⁴, K. Bartz-Schmidt¹, S. Kohl³, M. W. Seeliger³, N. Weisschuh³, D. Zobor³, E. Zrenner³, M. Ueffing³, M. Biel³, B. Wissinger³. ¹University Eye Hospital, Centre for Ophthalmology, University Hospital of Tübingen, Tübingen, Germany; ²Center for Integrated Protein Science Munich CiPSM at the Department of Pharmacy - Center for Drug Research, Ludwig-Maximilians-University of Munich, Munich, Germany; ³Institute for Ophthalmic Research, Centre for Ophthalmology, Eberhard Karls University of Tübingen, Tübingen, Germany; ⁴STZ eyetrial at the Centre for Ophthalmology, University Hospital Tübingen, Tübingen, Germany *CR,✗

2983 — 11:30 Mutation repair reverses ciliopathy and photoreceptor loss in iPSC-derived retinal organoids from retinitis pigmentosa patients. Wen-Li Deng¹, M. Gao¹, X. Lei¹, J. Lu¹, H. Zhao², K. He¹, X. Xia¹, L. Li², T. Xue², Z. Jin¹. ¹Lab for Stem Cell & Retinal Regeneration, Wenzhou Medical University, Wenzhou, Zhejiang, China; ²School of Life Sciences, University of Science and Technology of China, Hefei, Anhui, China

2984 — 11:45 Human Embryonic Stem Cell-derived Retinal Pigment Epithelium sheet transplantation in severe neovascular Age-Related Macular Degeneration: 18-month survival and structural outcomes. *Odysseas Georgiadis^{1,2}, K. Fynes², Y. Luo¹, B. Nommiste², J. Zhong¹, C. Ramsden^{1,2}, P. J. Coffey^{2,3}, L. daCruz^{1,2}.* ¹Moorfields Eye Hospital, NHS Foundation Trust, London, United Kingdom; ²The London Project to Cure Blindness, ORBIT, Institute of Ophthalmology, University College London (UCL), London, United Kingdom; ³Center for Stem Cell Biology and Engineering, Santa Barbara, CA; ⁴Institute of Ophthalmology, University College London, London, United Kingdom ✗

2985 — 12:00 Improvement and stabilization of vision for 18 months after Human Embryonic Stem-cell (hESC) derived, RPE-sheet transplantation on a synthetic basement membrane for treatment of severe, wet Age-Related Macular Degeneration. *Lyndon daCruz^{2,3}, K. Fynes², O. Georgiadis¹, B. Nommiste², A. F. Carr⁴, C. Ramsden², A. Vugler⁴, P. Whiting⁵, P. Loudon⁶, P. J. Coffey².* ¹Vitreous-retinal Surgery, Moorfields Eye Hospital, London, United Kingdom; ²ORBIT, Institute of Ophthalmology, University College London (UCL), The London Project to Cure Blindness, London, United Kingdom; ³VR surgery, NIHR Biomedical Research Centre at Moorfields Eye Hospital NHS Foundation Trust and UCL Institute of Ophthalmology, London, United Kingdom; ⁴Institute of Ophthalmology, University College London (UCL), London, United Kingdom; ⁵University College London, Institute of Neurology, Queen's Square, London, United Kingdom; ⁶Pfizer, Granta Park, Cambridge, United Kingdom *CR, ✗

2986 — 12:15 Transplantation of laboratory-grown human retinal tissue in the subretinal space of the cat eye. *Ratnesh K. Singh¹, L. Occelli², S. M. Petersen-Jones², F. Binette¹, O. Cuzzani¹, I. O. Nasonkin¹.* ¹Product development, BioTime, Alameda, CA; ²Michigan state University, East Lansing, MI

2987 — 12:30 Safety and Activity of a Single, Intravitreal Injection of Human Retinal Progenitor Cells (jCell) for Treatment of Retinitis Pigmentosa (RP). *Baruch D. Kuppermann¹, D. S. Boyer², B. Mills³, J. Yang^{1,3}, H. J. Klassen^{1,3}.* ¹Gavin Herbert Eye Institute, University of California Irvine, Irvine, CA; ²Retina-Vitreous Associates Medical Group, Beverly Hills, CA; ³jCyte, Inc, Newport Beach, CA *CR, ✗

Room 312

Tuesday, May 01, 2018 11:15 AM-1:00 PM

Cornea

328 Corneal epithelium

Moderators: Nick Di Girolamo and Vivien J. Coulson-Thomas

2988 — 11:15 The Hyaluronan Rich Limbal Stem Cell Niche regulates Limbal Stem Cell Differentiation. *Vivien J. Coulson-Thomas¹, T. Ferreira¹, M. Sun¹, V. Hascall².* ¹College of Optometry, University of Houston, Houston, TX; ²Cleveland Clinic, Cleveland, OH

2989 — 11:30 Synergistic corneal wound healing effects of human mesenchymal stem cell secreted factors and hyaluronic acid-based viscoelastic gel. *Gabriella F. Rogers¹, I. Putra², H. Lee¹, Y. Cheng¹, M. Esland², A. R. Djalilian², D. Myung¹.* ¹Byers Eye Institute at Stanford University, Palo Alto, CA; ²Ophthalmology and Visual Science, University of Chicago, Chicago, IL

2990 — 11:45 Accelerated deployment of K14-Confetti limbal epithelial progenitor-derived clones during corneal wound-healing visualized in real-time. *Mijeong Park¹, A. Richardson¹, E. Pandzic¹, R. Whan¹, E. Lobo², S. L. Watson², G. Lyons², D. Wakefield¹, N. Di Girolamo¹.* ¹University of NSW, Sydney, New South Wales, Australia; ²University of Sydney, Sydney, New South Wales, Australia

2991 — 12:00 Essential Role of miR-146a in Limbal Epithelial Stem Cell Maintenance via Notch Signaling. *Mehrnoosh Saghizadeh^{1,2}, M. Kulkarni¹, A. Leszczynska¹, J. Tang³, T. Barkhordari¹, N. Natanzi¹, A. V. Ljubimov^{1,2}, V. A. Funari³.* ¹Biomedical Sciences, Regenerative Medicine Institute Eye Program, Cedars-Sinai Medical Center, Los Angeles, CA; ²Medicine, David Geffen School of Medicine, University of California Los Angeles, Los Angeles, CA; ³Genomics Core, Cedars-Sinai Medical Center, Los Angeles, CA

2992 — 12:15 New diagnostic parameters in staging Limbal Stem Cell deficiency using in vivo laser scanning confocal microscopy. *Tulika Chauhan¹, Q. Le², E. O. Encampira³, F. Yu², S. X. Deng².* ¹Cornea & Refractive, Jules stein eye institute-UCLA, Los Angeles, CA; ²Cornea, Jules stein eye institute, Los Angeles, CA; ³Jules stein eye institute-UCLA, Los Angeles, CA

2993 — 12:30 KLF4-depleted-human corneal epithelial cells using CRISPR/Cas9 system lost the epithelial phenotype. *Koji Kitazawa^{1,2}, K. Masuda², R. Murakami², T. Nakamura¹, S. Kinoshita¹, C. Sotozono².* ¹of Frontier Medical Science and Technology for Ophthalmology, Kyoto Prefectural University of Medicine, Kyoto, KYOTO, Japan; ²Ophthalmology, Kyoto Prefectural University of Medicine, Kyoto, Japan

2994 — 12:45 Anti-inflammatory approaches to treat contact lens discomfort: a randomized, controlled trial. *Laura E. Downie¹, A. Gad¹, C. Wong², J. H. Gray², W. Zeng², D. C. Jackson², A. J. Vingrys¹.* ¹Department of Optometry and Vision Sciences, The University of Melbourne, Parkville, Victoria, Australia; ²Department of Microbiology and Immunology at the Peter Doherty Institute of Infection and Immunity, The University of Melbourne, Parkville, Victoria, Australia *CR, ✗

Room 314

Tuesday, May 01, 2018 11:15 AM-1:00 PM

Visual Neuroscience

329 Bipolar, Horizontal and Amacrine cells

Moderators: Teresa Puthussery and Thomas Euler

2995 — 11:15 An unique subtype of BCs provides excitatory input to both ON and OFF synaptic pathways from both rods and cones in the retina. *Ning Tian^{1,2}, B. Young^{1,2}, C. Ramakrishnan³, P. Wang¹, K. Deisseroth³, T. H. Ganjawala⁴, Z. Pan^{4,5}.* ¹Ophthalmology & Visual Science, University of Utah, Salt Lake City, UT; ²Interdepartmental Program in Neuroscience, University of Utah, Salt Lake City, UT; ³Department of Bioengineering, Psychiatry and behavioral sciences, Stanford University, Palo Alto, CA; ⁴Department of Anatomy and Cell Biology, Wayne State University School of Medicine, Detroit, MI; ⁵Department of Ophthalmology, Kresge Eye Institute, Wayne State University School of Medicine, Detroit, MI

2996 — 11:30 Cone loss in adult retina changes bipolar cell morphology and increases ganglion cell excitability. *Rachel Carel¹, I. De la Huerta², S. Pan^{3,4}, A. Khoche⁵, C. Gamlin⁶, C. Santo Tomas⁷, F. Dunn¹.* ¹Department of Ophthalmology, University of California, San Francisco, San Francisco, CA; ²Associated Retinal Consultants, William Beaumont Hospital, Royal Oak, MI; ³Medical Scientist Training Program, University of California, San Francisco, San Francisco, CA; ⁴Department of Neurology, University of California, San Francisco, San Francisco, CA; ⁵College of Bioengineering, University of California, Berkeley, Berkeley, CA; ⁶Department of Biological Structure, University of Washington, Seattle, WA; ⁷Department of Molecular, Cell, and Developmental Biology, University of California, Santa Cruz, Santa Cruz, CA

2997 — 11:45 Topography of cone bipolar cells in human retina. *Rania A. Masri^{1,2}, P. R. Martin^{1,2}, U. Grunert^{1,2}.* ¹Discipline of Ophthalmology and Save Sight Institute, University of Sydney, Sydney, New South Wales, Australia; ²Australian Research Council Centre of Excellence for Integrative Brain Function, University of Sydney, Sydney, New South Wales, Australia

2998 — 12:00 Prolonged light adaptation reduces the expression levels of RGS proteins at the dendritic tips of rod bipolar cells. Noga Vardi¹, S. R. Tummalala², M. E. Fina³, J. Wang³, S. S. Nikonov¹, A. Leu³, S. Sterling³, A. Kashina³, D. Dong^{1,3}. ¹Neuroscience, University of Pennsylvania, Philadelphia, PA; ²Bioengineering, University of Pennsylvania, Philadelphia, PA; ³Biomedical Sciences, University of Pennsylvania, Philadelphia, PA

2999 — 12:15 A Retinal Circuit for Local Suppression of Wide-field Inhibition. Yu Jia^{1,2}, S. Lee¹, Y. Zhuo², Z. Zhou¹. ¹Ophthalmology and Visual Science, Yale University, New Haven, CT; ²Zhongshan Ophthalmic Center, Guangzhou, Guangdong, China

3000 — 12:30 A self-regulating gap-junction network controls nitric oxide release in the retina. Gregory W. Schwartz¹, J. Jacoby¹, A. Nath^{1,2}, Z. Jessen^{1,3}. ¹Ophthalmology, Northwestern University, Chicago, IL; ²NUIN graduate program, Northwestern University, Chicago, IL; ³Medical Scientist Training Program, Northwestern University, Chicago, IL

3001 — 12:45 Circadian clock gene *Bmal1* governs kinetics of retinal neurogenesis, lamination and visual evoked responses. Onkar Sawant¹, O. F. Zucaro¹, R. D. Fuller¹, M. Yu¹, N. S. Peachey^{1,2}, S. Rao^{1,3}. ¹Ophthalmic Research, Cleveland Clinic, Cleveland, OH; ²Louis Stokes Cleveland Veterans Affairs Medical Center, Cleveland, OH; ³Cleveland Clinic Lerner College of Medicine of Case Western Reserve University, Cleveland, OH

Room 315

Tuesday, May 01, 2018 11:15 AM-1:00 PM

Retinal Cell Biology

330 Diabetic retinopathy: Molecular mechanisms and novel therapeutic targets

Moderators: Susanna S. Park and Elia J. Duh

3002 — 11:15 Very long chain ceramides production mediated by ELOVL4 stabilizes tight junctions and prevents diabetes-induced retinal vascular permeability. Julia V. Busik¹, N. Kady¹, X. Liu², T. Lydic¹, S. S. Seregin³, A. Amalfitano³, V. A. Chiodo⁴, S. L. Boye², W. W. Hauswirth¹, D. A. Antonetti². ¹Physiology, Michigan State University, East Lansing, MI; ²Ophthalmology and Visual Sciences, University of Michigan, Ann Arbor, MI; ³Microbiology and Molecular Genetics, Michigan State University, East Lansing, MI; ⁴Ophthalmology and Molecular Genetics and Retina Gene Therapy Group, University of Florida, Gainesville, FL

3003 — 11:30 Extracellular and intracellular miR-21 promotes oxidative stress and inflammation in the diabetic retinal microvasculature by activation of TLR-7. Manuela Bartoli¹, M. Thounaojam¹, F. L. Powell¹, R. Jadeja³, P. M. Martin², D. Gutsaeva¹. ¹Ophthalmology, Augusta University, Augusta, GA; ²Biochemistry and Molecular Biology, Augusta University, Augusta, GA; ³Biochemistry and Molecular Biology, Augusta University, Augusta, GA

3004 — 11:45 Visualization of homing of bone marrow derived human CD34+ stem cells in murine eyes with diabetic retinopathy following intravitreal injection using multimodal in vivo retinal imaging. Amirfarbod Yazdanyar¹, P. Zhang², Z. Smit-McBride³, s. oltjen³, R. J. Zawadzki², k. pollak⁴, j. Nolte⁴, S. S. Park¹. ¹Department of Ophthalmology, University of California, Davis, Sacramento, CA; ²Department of Cell Biology and Human Anatomy, University of California, Davis, Davis, CA; ³Vitreoretinal Research Laboratory, University of California, Davis, Davis, CA; ⁴Stem Cell Program, Institute for Regenerative Cures, University of California, Davis, Sacramento, CA

3005 — 12:00 Role of the hydroxycarboxylic acid receptor 2 in the interplay between intestinal microbiota and retinal immunity in diabetes. Folami L. Powell¹, M. A. Jones¹, R. Jadeja¹, M. Thounaojam², D. Gutsaeva², M. Bartoli², N. Singh¹, P. M. Martin^{1,2}. ¹Biochemistry and Molecular Biology, Medical College of Georgia at Augusta University, Augusta, GA; ²Ophthalmology, Medical College of Georgia at Augusta University, Augusta, GA

3006 — 12:15 TRPV2 heterozygous knockout rats display diabetic retinopathy-like lesions. Michael O'Hare, G. Esquivia, M. McGahon, J. Henry, R. Knell, D. Grieve, G. McGeown, T. Curtis. Queens University Belfast, Belfast, Northern Ireland, United Kingdom

3007 — 12:30 The small GTPase ARF6 controls protein trafficking and signaling in diabetic retinopathy (DR). Weiyan Zhu², D. Shi¹, B. E. Rich¹, Y. Huang¹. ¹U2M2, University of Utah, Salt Lake City, UT; ²Department of Medicine, Program in Molecular Medicine, Department of Internal Medicine, Division of Cardiovascular Medicine, Department of Pathology, University of Utah, Salt Lake City, UT

3008 — 12:45 Contribution of occludin S490 phosphorylation on blood retinal barrier integrity and visual function. Andreia Goncalves, J. Keil, S. Sheskey, C. Lin, D. Antonetti. Ophthalmology and Visual Sciences, Kellogg Eye Center-University of Michigan, Ann Arbor, MI

Room 316B

Tuesday, May 01, 2018 11:15 AM-1:00 PM

Clinical/Epidemiologic Research

331 Nutrition and Eye Disease

Moderators: Bamini Gopinath and Gabrielle H. Buitendijk

3009 — 11:15 Evaluating the associations between obesity and age-related cataract using *FTO* genotype. Ava G. Tan¹, A. Kifley¹, V. Flood^{2,3}, R. Cumming⁴, P. Mitchell¹, J. Wang^{1,5}. ¹Centre for Vision Research, The Westmead Institute for Medical Research, The University of Sydney, Sydney, New South Wales, Australia; ²Faculty of Health Sciences, The University of Sydney, Sydney, New South Wales, Australia; ³Westmead Hospital, Western Sydney Local Health District, Sydney, New South Wales, Australia; ⁴School of Public Health, The University of Sydney, Sydney, New South Wales, Australia; ⁵Duke-NUS Medical School, National University of Singapore, Singapore

3010 — 11:30 Mediterranean diet and incidence of advanced AMD: The EYE-RISK CONSORTIUM. Benedicte M. Merle¹, J. Colijn^{2,3}, A. Cougnard-Gregoire¹, A. P. de Koning-Baclus^{2,3}, M. Delyfer^{1,4}, J. C. Kiefte-de Jong³, J. R. Vingerling², C. Féart¹, T. Verzijden^{2,3}, C. Samieri¹, O. H. Franco³, J. Korobelnik^{1,4}, C. C. Klaver^{2,3}, C. DelCourt¹. ¹Bordeaux Population Health Research Center, team LEHA, UMR 1219, Univ. Bordeaux, Inserm, Bordeaux, France; ²Department of Ophthalmology, Erasmus University Medical Center, Rotterdam, The Netherlands, Rotterdam, Netherlands; ³Department of Epidemiology, Erasmus University Medical Center, Rotterdam, The Netherlands, Rotterdam, Netherlands; ⁴Service d'Ophtalmologie, Centre Hospitalier Universitaire Bordeaux, Bordeaux, France, Bordeaux, France *CR

3011 — 11:45 Dietary flavonoids and the prevalence and 15-year incidence of age-related macular degeneration. Bamini Gopinath, G. Liew, A. Kifley, V. Flood, P. Mitchell. University of Sydney, Sydney, New South Wales, Australia

3012 — 12:00 Vitamin D deficiency and association with age-related macular degeneration in the Rotterdam Study. Gabrielle H. Buitendijk¹, J. Colijn¹, S. P. Backus¹, J. R. Vingerling¹, C. C. Klaver^{1,2}. ¹Ophthalmic Epidemiology, Erasmus MC, Rotterdam, Netherlands; ²Ophthalmology, Radboud University Medical Center, Nijmegen, Netherlands *CR

Tuesday Papers/
Minisymposia
11:15 am – 1:00 pm

3013 — 12:15 Is ‘good’ cholesterol bad for Age-related Macular Degeneration? Evidence from the EYE-RISK and E3 Consortia. Johanna Maria Colijn¹, E. Kersten², A. Demirkan³, A. Coughard-Gregoire⁴, T. Verzijden¹, M. A. Meester¹, B. M. Merle⁵, J. R. Vingerling¹, A. I. Den Hollander², C. van Duijn³, C. DelCourt⁴, C. C. Klaver^{1,2}. ¹Ophthalmology Epidemiology, Erasmus MC, Den Haag, Netherlands; ²Ophthalmology, Radboud University Medical Center, Nijmegen, Netherlands; ³Epidemiology, Erasmus Medical Center, Rotterdam, Netherlands; ⁴Bordeaux Population Health Research Center, team LEHA, Inserm, Bordeaux, France *CR

3014 — 12:30 Oxidized LDL and the Incidence of Age-Related Macular Degeneration (AMD). Ronald Klein¹, K. E. Lee¹, S. M. Meuer¹, L. Danforth¹, R. Gangnon², M. Tsai³, B. E. Klein¹. ¹Ophthalmology and Visual Sciences, Univ of Wisconsin Sch of Med & Public Hlth, Madison, WI; ²Population Health Sciences, University of Wisconsin-Madison, Madison, WI; ³Laboratory Medicine and Pathology, University of Minnesota, Minneapolis, MN

3015 — 12:45 A Variant in Lipid Regulator FADS1 is Associated with the Risk of AMD in the Rotterdam Study. Sheila P. Backus^{1,2}, J. C. Kiefte-de Jong^{1,5}, J. Colijn^{1,2}, P. W. Bonnemaier^{1,2}, G. H. Buitendijk^{1,2}, J. R. Vingerling^{1,2}, O. H. Franco¹, M. A. Meester^{1,2}, C. C. Klaver^{3,4}. ¹Epidemiology, Erasmus MC, Rotterdam, Netherlands; ²Ophthalmology, Erasmus MC, Rotterdam, Netherlands; ³Ophthalmology, Epidemiology, Erasmus MC, Rotterdam, Netherlands; ⁴Ophthalmology, Radboud University, Nijmegen, Netherlands; ⁵Leiden University College, Rotterdam, Netherlands

Room 316C

Tuesday, May 01, 2018 11:15 AM-1:00 PM

Genetics Group

332 Functional Genomics and Epigenetics in Ocular Disease

Moderators: Anand Swaroop and Alison J. Hardcastle

3016 — 11:15 NF-κB-upregulated microRNA (miRNA) in age-related macular degeneration (AMD) and Alzheimer’s disease (AD) contribute interactively to altered innate-immunity, amyloidogenesis and inflammatory neurodegeneration. Walter J. Lukiw^{1,2}, Y. Zhao¹, V. Jaber¹. ¹Neurology, Neuroscience & Ophthalmology, Louisiana State Univ Hlth Sci Ctr, New Orleans, LA; ²Toronto, Alchem Biotek, Toronto, Ontario, Canada

3017 — 11:30 Genetic variants in microRNA genes and microRNA binding sites associated with diabetic retinopathy. Ebony Liu¹, G. Kaidonis¹, B. McComish², M. C. Gillies³, S. Abhary⁴, M. Daniell¹, N. Petrovsky⁵, J. Gleadle⁶, J. E. Craig¹, K. P. Burdon². ¹Department of Ophthalmology, Flinders University, Adelaide, South Australia, Australia; ²Menzies Institute for Medical Research, University of Tasmania, Hobart, Tasmania, Australia; ³Save Sight Institute, University of Sydney, Sydney, New South Wales, Australia; ⁴Centre for Eye Research Australia, Melbourne, Victoria, Australia; ⁵Department of Diabetes and Endocrinology, Flinders University, Adelaide, South Australia, Australia; ⁶Department of Medicine, Flinders University, Adelaide, South Australia, Australia

3018 — 11:45 Impact of glaucoma on retinal ganglion cell subtypes: A single-cell RNA-seq analysis of the DBA/2J mouse. Siamak Yousefi^{1,2}, H. Chen³, J. Ingels², S. R. Chintalapudi², M. Mulligan², B. W. Jones⁴, V. M. Morales-Tirado¹, P. Williams⁵, S. W. John⁵, F. Struebing⁶, E. E. Geisert⁴, M. Jablonski¹, L. Lu², R. Williams². ¹Ophthalmology, University of Tennessee Health Science Center, Memphis, TN; ²Genetics, Genomics, and Informatics, University of Tennessee Health Science Center, Memphis, TN; ³Pharmacology, University of Tennessee Health Science Center, Memphis, TN; ⁴Ophthalmology, University of Utah School of Medicine, Salt Lake City, UT; ⁵The Jackson Laboratory, Bar Harbor, ME; ⁶Ophthalmology, Emory University, Atlanta, GA

3019 — 12:00 RNA-seq and pathway analysis of ocular tissues in PEX patients and healthy subjects. Francesca Pasuto¹, M. Zenkel², D. Berner², S. Uebe¹, A. Ekici¹, F. E. Kruse², A. Reis¹, U. Schlotzer-Schrehardt². ¹Human Genetics, University of Erlangen-Nürnberg, Erlangen, Germany; ²Department of Ophthalmology, University of Erlangen-Nürnberg, Erlangen, Germany

3020 — 12:15 Pigment Dispersion Syndrome and Pigmentary Glaucoma Associated Variants in Premelanosome Protein (PMEL) Cause Protein Processing and Fibrillogenesis Defects. Adrian Lahola-Chomiak¹, B. Fan², T. Footz¹, D. S. Greenfield³, R. Ritch⁴, J. E. Craig⁵, J. L. Wiggins², O. J. Lehmann^{1,6}, M. A. Walter¹. ¹Medical Genetics, University of Alberta, Edmonton, Alberta, Canada; ²Massachusetts Eye and Ear Infirmary, Harvard Medical School, Boston, MA; ³Bascom Palmer Eye Institute, Miami, FL; ⁴Ophthalmology, New York Eye and Ear Infirmary of Mount Sinai, New York, NY; ⁵Department of Ophthalmology, Flinders University, Adelaide, South Australia, Australia; ⁶Department of Ophthalmology, University of Alberta Hospital, Edmonton, Alberta, Canada

3021 — 12:30 Atypical cadherin FAT1 is essential for vertebrate optic fissure closure. Aman George¹, N. Lahrouchi², I. Ratbi³, S. Bharti⁴, R. Sharma⁵, F. Onojafe⁶, H. McNeill⁷, K. Bharti¹, C. Bezzina⁶, A. Sefiani⁷, B. P. Brooks¹. ¹OGVFB, NEI, Bethesda, MD; ²Heart Centre, Department of Clinical and Experimental Cardiology, Academic Medical Center, Amsterdam, Netherlands; ³Université Mohammed V de Rabat, Rabat, Morocco; ⁴NCI, Bethesda, MD; ⁵Samuel Lunenfeld Research Institute, Toronto, Ontario, Canada; ⁶Heart Centre, Department of Clinical and Experimental Cardiology, Academic Medical Center, Amsterdam, Netherlands; ⁷Université Mohammed V de Rabat, Rabat, Morocco

3022 — 12:45 RNA toxicity induced by TCF4 CTG expansions is ameliorated by antisense therapeutics in a patient-derived cell model of Fuchs corneal endothelial dystrophy (FED). Alice E. Davidson¹, C. Zarouchlioti¹, B. Sanchez-Pintado¹, N. Hafford Tear¹, P. Klein³, P. Liskova⁴, K. Dulla³, K. Muthusamy², L. Dudakova⁴, P. Skalicka⁴, P. G. Hys⁵, M. E. Cheetham¹, S. J. Tuft², P. S. Adamson³, A. J. Hardcastle¹. ¹Institute of Ophthalmology, UCL, London, England, United Kingdom; ²Moorfields Eye Hospital, London, United Kingdom; ³ProQR therapeutics, Leiden, Netherlands; ⁴Charles University, Prague, Czechia; ⁵King’s College London, London, United Kingdom *CR

Ballroom A

Tuesday, May 01, 2018 11:15 AM-1:00 PM

Glaucoma

333 New Ideas

Moderators: M Francesca Cordeiro and Jonathan G. Crowston

3023 — 11:15 Intraocular Pressure and Intracranial Pressure Measurement with Continuous Wireless Telemetry to Quantify Translaminar Pressure Difference in Nonhuman Primates. Jessica V. Jasien, B. C. Samuels, J. M. Johnston, J. C. Downs. University of Alabama at Birmingham, Birmingham, AL

3024 — 11:30 Construction of a deep learning algorithm to automatically diagnose glaucoma using a fundus photograph. Ryo Asaoka¹, N. Shibata², H. Murata¹, M. Tanito³. ¹the University of Tokyo, Tokyo, Japan; ²Queue Inc., Tokyo, Japan; ³Matsue Red Cross Hospital, Tokyo, Japan *CR

3025 — 11:45 The Ocular Hypertension Treatment Study: Aging and Reliability of Visual Fields. Mae O. Gordon¹, J. Huecker¹, K. Plumb², L. Lemming², M. A. Kass¹, J. L. Keltner², M. Wall³, C. A. Johnson⁴. ¹Ophthal & Vis Sciences, Washington Univ Sch of Med, St Louis, MO; ²Ophthalmology, University of California, Davis, Sacramento, CA; ³Neurology & Ophthalmology, Univ of Iowa, Iowa City, IA; ⁴Ophthalmology, University of Iowa, Iowa City, IA ✗

3026 — 12:00 OCT Angiography Evaluation of the Optic Nerve Head Vasculature in Nonhuman Primate Experimental Glaucoma. Brad Fortune, J. Reynaud, C. Hardin, D. Jennings, G. Williams, C. F. Burgoyne. *Discoveries in Sight Research Labs, Devers Eye Institute, Legacy Health, Portland, OR*
*CR

3027 — 12:15 Microtubule deficit predisposes the retinal ganglion cell axons to atrophy in DBA/2J. Hyungsik Lim, D. Sharoukhov. *Physics and Astronomy, Hunter College, CUNY, New York, NY*

3028 — 12:30 An optimised protocol for the portable electroretinogram device to probe changes in glaucoma. Jessica Tang^{1,2}, F. Hui^{1,2}, X. Hadoux^{1,2}, B. Soares¹, M. Jamieson¹, J. G. Crowston^{1,2}. ¹Centre for Eye Research Australia, Royal Victorian Eye and Ear Hospital, Melbourne, Victoria, Australia; ²Ophthalmology, University of Melbourne, Department of Surgery, Melbourne, Victoria, Australia

3029 — 12:45 Identifying pseudoexfoliation glaucoma mechanisms by overproducing wild-type and n-terminus-deleted loxII in vitro and in vivo. Terete Borrás^{1,2}, R. Elliott¹, P. Asokan¹, L. Rodriguez Estevez¹. ¹Department of Ophthalmology, University of North Carolina, Chapel Hill, NC; ²Gene Therapy Center, University of North Carolina at Chapel Hill, Chapel Hill, NC

Exhibit Hall A0001-A0015

Tuesday, May 01, 2018 11:15 AM-1:00 PM

Lens

334 Lens Biochemistry, Physiology and Biomechanics**Moderator: Kulandaiappan Varadaraj**

3030 — A0001 Prediction of lens compliance and accommodative amplitude based on color index of the lens. Henk A. Weeber, B. Koopman, P. Piers. R & D, AMO Groningen BV, Groningen, Netherlands *CR

3031 — A0002 Assessing Mouse Lens Elasticity and Viscoelasticity Using Atomic Force Microscopy. Wyndham M. Batchelor¹, E. Arrieta², M. Ruggeri², J. A. Parell^{2,3}, F. Manns^{1,2}, M. Dibas⁴, N. M. Ziebarth¹. ¹Department of Biomedical Engineering, University of Miami, Coral Gables, FL; ²Ophthalmic Biophysics Center, Bascom Palmer Eye Institute, University of Miami Miller School of Medicine, Miami, FL; ³Brien Holden Vision Institute, University of New South Wales, Sydney, New South Wales, Australia; ⁴Allergan, Irvine, CA *CR

3032 — A0003 Lens Capsule Strain Modulates Lens Epithelial Cell Proliferation. Bharat Kumar¹, R. Dasari¹, M. A. Reilly^{1,2}. ¹Biomedical Engineering, The Ohio State University, Columbus, OH; ²Ophthalmology and Visual Science, The Ohio State University, Columbus, OH

3033 — A0004 Detection of cholesterol bilayer domains in intact membranes of eye lens fiber cells. Laxman Mainali¹, W. J. O'Brien², W. K. Subczynski¹. ¹Biophysics, Medical College of Wisconsin, Milwaukee, WI; ²Ophthalmology, Medical College of Wisconsin, Milwaukee, WI

3034 — A0005 Detection, quantification, and evaluation of the homogeneity of lipid domains in intact membranes of eye lens fiber cells. Witold K. Subczynski¹, N. Stein¹, L. Mainali¹, W. J. O'Brien². ¹Biophysics, Medical College on Wisconsin, Milwaukee, WI; ²Ophthalmology, Medical College of Wisconsin, Milwaukee, WI

3035 — A0006 DNA Hypermethylation Mediated Downregulation of Antioxidant Genes in Early Onset of Cataract in High Myopic Eyes. Xiang-Jia Zhu, Y. Lu. Eye and Ear, Nose, and Throat Hospital of Fudan University, Shanghai, China ✕

3036 — A0007 UVR-B-induced NKR-1 expression in ocular tissues is blocked by spantide I in exposed and partner eye. Janine Groß¹, A. R. Wegener¹, F. G. Holz¹, M. Kronschlaeger², C. Schoenfeld^{3,4}, L. Meyer^{1,3}. ¹Ophthalmology, University of Bonn, Bonn, Germany; ²Department of Ophthalmology, Hanusch Hospital, Vienna, Austria; ³Herzog Carl Theodor Eye Clinic, Munich, Germany; ⁴Ludwig-Maximilians-University Munich, Munich, Germany *CR

3037 — A0008 In Vivo Quasi-Elastic Light Scattering Eye Scanner Detects Molecular Aging in Humans. Olga Minaeva^{1,2}, S. Sarangi^{1,2}, D. M. Ledoux^{3,4}, J. A. Moncaster¹, C. A. Rook³, M. Ericsson⁵, Y. Tripodis⁶, J. I. Clark⁷, R. E. Tanzi^{8,9}, D. G. Hunter^{3,4}, L. E. Goldstein^{1,2}. ¹Boston University School of Medicine, Boston, MA; ²College of Engineering, Boston University, Boston, MA; ³Department of Ophthalmology, Boston Children's Hospital, Boston, MA; ⁴Department of Ophthalmology, Harvard Medical School, Boston, MA; ⁵Electron Microscopy Facility, Harvard Medical School, Boston, MA; ⁶Department of Biostatistics, Boston University School of Public Health, Boston, MA; ⁷Department of Biological Structure, University of Washington, Seattle, WA; ⁸Department of Neurology, Harvard Medical School, Boston, MA; ⁹Department of Neurology, Massachusetts General Hospital, Charlestown, MA

3038 — A0009 Phenotypic characterization of Hsp27 Knock-out of *Danio rerio*. Smriti Mishra, S. Mishra, A. Poff, A. W. Fuller, S. Wu, H. S. Mchaourab. Molecular Physiology and Biophysics, Vanderbilt University, Nashville, TN

3039 — A0010 Delivery of NADPH to the Lens Nucleus is Dependent on Gap Junctional Coupling Provided by Cx46. Miduturu Srinivas, N. Slavi. Biological Sciences, SUNY College of Optometry, New York, NY

3040 — A0011 Age effects on immunoproteasome and constitutive proteasome expression in the human lens. Anne Petersen, J. Adeloef, M. Zetterberg. Institute of Neuroscience and Physiology, University of Gothenburg, Gothenburg, Sweden

3041 — A0012 Prdx6 Delivery Increases Lens Epithelial Cell Survival during Oxidative Stress by Reactivating Sp1-Prdx6 Transcription. Bhavana Chhunchha¹, E. Kubo², D. P. Singh¹. ¹Ophthalmology & Visual Sciences, University of Nebraska Medical Center, Omaha, NE; ²Ophthalmology, Kanazawa Medical University, Kanazawa, Ishikawa, Japan

3042 — A0013 The Site-specific Impacts of Modifications of Aspartate Residues on Lens α A-Crystallin. Takumi Takata, R. Inoue, K. Morishima, N. Sato, M. Sugiyama, N. Fujii. Research Reactor Institute, Kyoto University, Kumatori-cho, Osaka, Japan

3043 — A0014 TEM analysis of α A66-80 peptide-induced protein aggregates and amyloid fibrils in human and guinea pig α A-crystallins. Sivakumar Jeyarajan¹, A. Kumarasamy^{1,2}, J. Cheon¹, A. Premceski¹, E. Seidel¹, V. A. Kimler¹, F. J. Giblin¹. ¹Eye Research Institute, Oakland University, Rochester, MI; ²Marine Biotechnology, Bharathidasan University, Tiruchirappalli, Tamilnadu, India

3044 — A0015 Deamidations, isomerizations, and cleavages at labile Asn residues in beta/gamma-crystallins associated with age-related cataracts. Kirsten J. Lampi. Integrative Biosciences, Oregon Health and Science University, Portland, OR

Exhibit Hall A0016-A0065

Tuesday, May 01, 2018 11:15 AM-1:00 PM

Biochemistry/Molecular Biology / Visual Neuroscience

335 Biochemistry and molecular biology of the retina/RPE**Moderators: Frank M. Dyka, Sheila Baker and Mark E. Kleinman**

3045 — A0016 Characterization of Stargardt iPSC-derived RPE cells. Nermin Kady^{1,2}, A. Matynia^{1,2}, S. Karumbayaram^{3,4}, J. Hu^{1,2}, M. Lloyd^{1,2}, D. Bok^{1,2}, M. B. Gorin^{1,2}, R. A. Radu^{1,2}. ¹Stein Eye Institute, David Geffen School of Medicine, University of California, Los Angeles, CA; ²Ophthalmology, David Geffen School of Medicine, University of California, Los Angeles, CA; ³Microbiology, Immunology and Molecular Genetics, David Geffen School of Medicine, University of California, Los Angeles, CA; ⁴Eli and Edythe Broad Stem Cell Research Center, University of California, Los Angeles, CA

3046 — A0017 Apolipoprotein M Inhibits Angiogenic and Inflammatory Response by Sphingosine 1-Phosphate on Retinal Pigment Epithelium Cells. Ryo Terao, M. HONJO, M. Aihara. University of Tokyo, Tokyo, Japan; University of Tokyo, Tokyo, Japan

3047 — A0018 RHO-tvrm4 mice lacking STAT2 are resistant to light induced retinal degeneration. Micah A. Chrenek¹, J. T. Sellers¹, P. Girardot^{1,2}, J. M. Nickerson¹, P. Nava³, J. H. Boatright^{1,2}. ¹Ophthalmology, Emory University, Atlanta, GA; ²Center for Visual and Neurocognitive Rehabilitation, Atlanta VA Medical Center, Decatur, GA; ³Departamento de Fisiología, Biofísica y Neurociencias, Cinvestav, Mexico City, Mexico

3048 — A0019 Progressive Retinal Degeneration is Accompanied by Translational Inhibition in Mouse Retinas. Marina S. Gorbatyuk, C. Starr, P. M. Pitale. Vision Sciences, University of Alabama at Birmingham, Birmingham, AL

3049 — A0020 Defining the Binding Interaction between Contactin3 and Amyloid Precursor Protein. Xi Peng¹, J. Nathans^{1,2}. ¹Molecular Biology and Genetics, Johns Hopkins University, Baltimore, MD; ²Howard Hughes Medical Institute, Chevy Chase, MD *CR

3050 — A0021 Wild Type and Mutant Retinoschisin Subunits Co-assemble When Expressed in the Same Cells. Duo Sun¹, Y. Liu¹, N. Zaccarino², J. Tao², J. Martin², W. Olson², J. Cao¹, C. Romano¹. ¹Ophthalmology, Regeneron Pharmaceuticals Inc, Ossining, NY; ²Therapeutic Proteins, Regeneron, Tarrytown, NY *CR

- 3051 — A0022 Elovanoïd profiling of iPSC-RPE derived from a family affected by Late-Onset Retinal Degeneration reveals attenuated neuroprotective signaling in patients.** Bokkyoo Jun¹, K. J. Miyagishima², R. Sharma², C. A. Cukras², P. Steving², S. S. Miller², K. Bharti², N. G. Bazan¹. ¹Neuroscience Center, LSU Health Sciences Center, New Orleans, LA; ²NEI, Laurel, MD *CR
- 3052 — A0023 Phenotypic consequences of amino acid substitutions at the S163 position in C1QTNF5 protein following expression in murine RPE.** Astra Dinculescu, S. Bolch, F. M. Dyka, M. Kulkarni, C. Simpson, W. Smith, W. W. Hauswirth. *Ophthalmology, University of Florida, Gainesville, FL* *CR
- 3053 — A0024 The expression pattern and pathological effects of CLRN1 mutant proteins in the mouse retina.** Susan Bolch, F. M. Dyka, M. Kulkarni, R. Stupay, C. Simpson, W. Smith, W. W. Hauswirth, A. Dinculescu. *Ophthalmology, University of Florida, Gainesville, FL* *CR
- 3054 — A0025 Assessment of cone outer segment defects and rescue in the Opn1mw/sw double knockout mouse.** Tiffanie M. Dahl¹, M. Reed¹, C. D. Gerstner¹, G. Ying¹, W. Deng², W. W. Hauswirth², W. Baehr¹. ¹Ophthalmology & Visual Sciences, University of Utah, Salt Lake City, UT; ²Ophthalmology, University of Florida, Gainesville, FL *CR
- 3055 — A0026 Characterization of Expression of Key Enzymes of Glycogen Metabolism in the Mouse Retina.** Tedi Begaj¹, Y. Chinchore², C. L. Cepko². ¹Medicine, Cambridge Health Alliance, Harvard Medical School, Cambridge, MA; ²Genetics, Harvard Medical School, Boston, MA
- 3056 — A0027 Heat Shock Protein-27 is an Element of the BBS5 Interactome in Photoreceptors.** Clay C. Smith, S. Bolch, D. Dugger, E. Livingston. *Ophthalmology, University of Florida, Gainesville, FL*
- 3057 — A0028 Pharmacological chaperone activity of a non-retinoid compound multiple different rhodopsin mutations associated with autosomal dominant retinitis pigmentosa.** Yuanyuan Chen, B. Feng, F. Chen. *Ophthalmology, University of Pittsburgh, Pittsburgh, PA*
- 3058 — A0029 Telomerase activity is targeted by Elovanoïds upon uncompensated oxidative stress in human retinal pigment epithelial cells.** Surjyadipta Bhattacharjee, N. G. Bazan. *Neuroscience Center of Excellence, Louisiana State University Health Sciences Center, New Orleans, LA* *CR
- 3059 — A0030 Accumulation of a calpain specific α -spectrin breakdown product in drusen from AMD patients: Possible calpain activation in RPE and photoreceptors.** Momoko Kobayashi¹, E. Nakajima¹, T. R. Shearer², M. Azuma^{1,2}. ¹Senju Pharmaceutical Co Ltd, Portland, OR; ²Oregon Health Science Univ, Portland, OR *CR
- 3060 — A0031 Gene therapy based tools to manipulate proteolytic capacity of retinal cells.** Ekaterina Lobanova. *Ophthalmology, Univeristy of Florida, Gainesville, FL*
- 3061 — A0032 Probing the function of Arl3 in CRISPR modified cell models.** Katarina Jovanovic¹, A. Lane¹, N. Schwarz^{1,2}, A. J. Hardcastle¹, M. E. Cheetham¹. ¹UCL Institute of Ophthalmology, London, United Kingdom; ²Evotec International GmbH, Göttingen, Germany
- 3062 — A0033 Molecular defects of the disease-causing human arrestin-1 C147F mutant.** Sergey Vishnivetskiy¹, L. S. Sullivan², S. J. Bowne², S. P. Daiger², E. Gurevich¹, V. V. Gurevich¹. ¹Pharmacology, Vanderbilt University, Nashville, TN; ²Human Genetics Center, The University of Texas Health Science Center, Houston, TX
- 3063 — A0034 High expression of monomeric arrestin-1 causes retinal degeneration.** Srimal A. Samaranyake, S. A. Vishnivetskiy, K. C. Thibeault, E. Gurevich, V. V. Gurevich. *Pharmacology, Vanderbilt University, Nashville, TN*
- 3064 — A0035 Serum Exposure of Human Retinal Pigment Epithelial (hRPE19) Cells Suggests Regulated Secretion of Various miRNAs via Exosomes.** Rajendra K. Gangalum¹, D. Mock¹, D. Kim¹, R. K. Kashyap¹, S. P. Bhat^{1,2}. ¹Ophthalmology, Stein Eye Institute, UCLA, Los Angeles, CA; ²Molecular Biology & Brain Research Institute at UCLA, Los Angeles, CA
- 3065 — A0036 Shared and divergent aspects of cis-regulatory architecture in photoreceptors and bipolar cells.** Joseph Corbo, D. Murphy, A. Hughes. *Pathology & Immunology, Washington University School of Medicine, St. Louis, MO*
- 3066 — A0037 Expression of RdCVF and RdCVL in non human primate retina: A credible animal model for the development of a clinical trial.** Najate Aïi-Ali¹, F. Delalande², A. Van Dorsselaer², T. D. Leveillard¹. ¹Institut De la Vision, Paris, France; ²Laboratoire de Spectrométrie de Masse, BioOrganique, Strasbourg, France
- 3067 — A0038 Structure and membrane binding of R9AP, a protein involved in phototransduction.** Sarah Bernier^{1,2}, M. Millette^{1,2}, L. Cantin^{1,2}, C. Saless^{1,2}. ¹CUO-recherche, Hôpital du Saint-Sacrement, Centre de recherche du CHU de Québec, Québec, Quebec, Canada; ²Département d'ophtalmologie, Faculté de médecine, PROTEO, Université Laval, Québec, Quebec, Canada
- 3068 — A0039 Understanding the molecular mechanisms underlying retina degeneration in INPP5E-Joubert Syndrome.** Ali S. Sharif, C. Hanke-Gogokhia, J. M. Frederick, W. Baehr. *Ophthalmology-Research, University of Utah, Salt Lake City, UT*
- 3069 — A0040 The effects of curcumin on Src activity in live ARPE-19 cells visualized by FRET.** Sang Hoon Jung^{1,2}, K. Kim^{1,2}, K. Kang³, S. Kim⁴, T. Kim⁵. ¹Natural Products Research Center, Korea Institute of Science and Technology (KIST), Gangneung, Korea (the Republic of); ²Division of Bio-Medical Science & Technology, Korea University of Science and Technology (KIST) School, Gangneung, Gangwon, Korea (the Republic of); ³Department of Ophthalmology, St. Mary's Hospital, The Catholic University of Korea, Incheon, Korea (the Republic of); ⁴Department of Ophthalmology, Sahmyook Medical Center, Seoul, Korea (the Republic of); ⁵Department of Biological Sciences, Pusan National University, Busan, Korea (the Republic of)
- 3070 — A0041 Overproduction β -amyloid peptides and overactivity of the amyloidogenic pathway in retina, optic nerve and visual cortex in healthy aging and Alzheimer's disease.** Luis F Hernandez, M. Perez, R. Gonzalez-Salinas, R. Gullias-Cañizo, L. Ochoa-de la Paz, H. Quiroz-Mercado, R. Zamora-Alvarado. *Research, Asociación Para Evitar la Ceguera en México, Mexico, Mexico, Mexico*
- 3071 — A0042 Interaction between underlying pathways in IRBP induced myopia.** Shanu Markand¹, P. Wong¹, J. H. Boatright^{1,2}, J. M. Nickerson¹. ¹Ophthalmology, Emory University, Decatur, GA; ²Atlanta VA Medical Center, Decatur, GA
- 3072 — A0043 Sulfamethazine impairs retinal function by interruption of microRNA activity.** Xue-Jiao Chen, K. Wu, C. Zhang, Z. Jin. *Wenzhou Medical University, Division of Ophthalmic Genetics, Lab for Stem Cell & Retinal Regeneration, Wenzhou, China*
- 3073 — A0044 LRGUK: a new candidate for retinal ciliopathies?** Sybille Boehm¹, E. Becirovic¹, A. Giessel². ¹Pharmacy, LMU Munich, Munich, Germany; ²Biology, FAU Erlangen, Erlangen, Germany
- 3074 — A0045 Experimental central retinal vein occlusion is associated with activation of inflammatory processes and compromised neurotransmitter regulation. A proteomic study.** Lasse J. Cehofski^{1,6}, S. Kirkeby², A. Kruse¹, A. Nørgård Alsing¹, S. Magnusdottir⁴, K. Kojima⁵, B. Honoré^{3,6}, H. Vorum^{1,6}. ¹Department of Ophthalmology, Aalborg University Hospital, Aalborg, Denmark; ²Department of Odontology, University of Copenhagen, Copenhagen, Denmark; ³Department of Biomedicine, Aarhus University, Aarhus, Denmark; ⁴Department of Biomedicine, Aalborg University Hospital, Aalborg, Denmark; ⁵Department of Ophthalmology, Kyoto Prefectural University of Medicine, Kyoto, Japan; ⁶Department of Clinical Medicine, Aalborg University, Aalborg, Denmark
- 3075 — A0046 Biochemical study of L-DOPA supplements on Retinal Pigment Epithelial Cells.** Katharine Denius, S. Yacout, E. R. Gaillard. *Chemistry and Biochemistry, Northern Illinois University, DeKalb, IL*

3076 — A0047 Characterization of RPE melanin using mass spectrometry and *in vitro* biochemical diagnostics. Sally Yacout¹, K. McIlwain¹, E. R. Gaillard^{1,2}. ¹Chemistry and Biochemistry, Northern Illinois University, DeKalb, IL; ²Biological Sciences, Northern Illinois University, DeKalb, IL

3077 — A0048 Comparison of the efficiency of photoreceptor outer segments to photogenerate singlet oxygen after their pre-irradiation with green or blue light. Mariusz Duda^{1,2}, O. Krzysztynska-Kuleta^{1,2}, M. Olchawa¹, T. J. Sarna¹. ¹Biophysics, Jagiellonian University, Krakow, Poland; ²Malopolska Centre of Biotechnology, Jagiellonian University, Krakow, Poland

3078 — A0049 Unraveling the role of NOX4, a NADPH oxidase, in RPE Epithelial to Mesenchymal Transition. Karla Y. Barbosa-Sabanero¹, J. R. Chang¹, G. Y. Liang¹, M. LaF², K. Bharti¹. ¹NEI, National Institutes of Health, Bethesda, MD; ²National Center for Advancing Translational Sciences, Rockville, MD

3079 — A0050 The Distribution and Quantification of Dopamine D1 Receptors in the Mouse Retina. Zhina Zhi, Q. Ruan, X. Pei, S. Chen, R. Chen, Y. Zhu, Y. Hu, F. Zhou, X. Zhou. Wenzhou Medical University, Wenzhou, China

3080 — A0051 Predicting peak spectral sensitivities of vertebrate cone visual pigments using atomistic molecular simulations. Deborah L. Stenkamp¹, J. S. Patel¹, C. J. Brown^{1,2}, F. Ytreberg^{3,2}. ¹Biological Sciences, University of Idaho, Moscow, ID; ²Center for Modeling Complex Interactions, University of Idaho, Moscow, ID; ³Physics, University of Idaho, Moscow, ID

3081 — A0052 Protein structural prediction of modified *Volvox* channelrhodopsin-1 and the verification by amino acid sequence. Eriko Sugano¹, K. Tabata¹, Y. Sakajiri¹, Y. Watanabe¹, M. Tamai², H. Tomita¹. ¹Chemistry and Biological Sciences, Iwate Univ., Morioka, Iwate, Japan; ²Tohoku Univ. Hospital, Sendai, Japan

3082 — A0053 The role of inositol phosphatase OCRL in microtubule nucleation: Implications for Oculocerebrorenal Syndrome of Lowe. Biao Wang¹, P. p. Prosseda¹, W. He¹, T. J. Kowal¹, J. A. Alvarado¹, K. Ning¹, Y. Sun^{1,2}. ¹Ophthalmology, Stanford University School of Medicine, Palo Alto, CA; ²Palo Alto VA Medical Center, Palo Alto, CA

3083 — A0054 Determination of *AIPL1* variations as disease causing in Leber Congenital Amaurosis patients. Hoang Mai LE, A. Sacristan Reviriego, J. Van Der Spuy. University College London Institute of Ophthalmology, London, United Kingdom

3084 — A0055 Prevention of peroxide-induced damage to the neural retina by caffeine. Kavita R. Hegde¹, D. Brown¹, S. D. Varma². ¹Natural Sciences, Coppin State University, Baltimore, MD; ²Ophthalmology & Visual Sciences, University of Maryland School of Medicine, Baltimore, MD

3085 — A0056 Quantitative research of VEGF-A, VEGF-B and PIGF in vitreous and serum in angiogenic ocular disorders. Joana Mesquita¹, J. Castro de Sousa^{2,3}, S. Vaz-Pereira^{4,5}, A. Neves³, L. Passarinha^{1,2}, C. Tomaz¹. ¹CICS-UBI-Centro de Investigação em Ciências da Saúde, Universidade da Beira Interior, Covilhã, Portugal; ²Faculty of Medical Sciences, Universidade da Beira Interior, Covilhã, Portugal; ³Department of Ophthalmology, Centro Hospitalar de Leiria, Leiria, Portugal; ⁴Department of Ophthalmology, Hospital de Santa Maria, Lisbon, Portugal; ⁵Department of Ophthalmology, Faculty of Medicine, Universidade de Lisboa, Lisbon, Portugal *CR

3086 — A0057 Absorption and Delivery of Synthetic VLC-PUFAs to Mouse Retina. Paul S. Bernstein¹, A. Gorusupudi¹, R. Rallabandi², J. Rainier². ¹Moran Eye Center, University of Utah, Salt Lake City, UT; ²Chemistry, University of Utah, Salt Lake City, UT

3087 — A0058 Enhanced Expression of NOGO-A Gene and its Receptors in Amniotic Fluid Treated Human RPE Cells. Hamid Ahmadi¹, F. Suri², B. Safdari¹, Z. Soheili³, M. Rezaeikanavi². ¹Ophthalmic Research Center, Shahid Beheshti University of Medical Sciences, Tehran, Iran (the Islamic Republic of); ²Ocular Tissue Engineering Research Center, Shahid Beheshti University of Medical Sciences, Tehran, Iran (the Islamic Republic of); ³National Institute of Genetic Engineering and Biotechnology, Tehran, Iran (the Islamic Republic of)

3088 — A0059 Quantitative proteomic analysis differs in patients with idiopathic epiretinal membrane compared with idiopathic macular hole. Sirpa Loukovaara¹, T. Öhman², F. Tamene², H. Göös², M. Varjosalo². ¹Ophthalmology, Helsinki University Central Hospital, Helsinki, Finland; ²Proteomics Unit, Institute of Biotechnology, FI-00014, University of Helsinki, Helsinki, Finland

3089 — A0060 LAMP2 expression profile is different in a tissue-dependent manner and it performs its function through autophagic pathway. Masaya Fukushima, T. Inoue, T. Miyai, R. Obata, M. Aihara. Ophthalmology, The University of Tokyo Hospital, Tokyo, Japan

3090 — A0061 Quantification of amyloid-beta in eye tissues of APPswe/PS1ΔE9 mice. Wangfei Wang, T. Nguyen, R. Mishra, O. Lazarov, D. R. Pepperberg. University of Illinois at Chicago, Chicago, IL

3091 — A0062 Resveratrol inhibits high glucose-induced metabolic memory of inflammation in HRMECs. Tingting Jiang, J. Gu, Q. Chang, G. Xu. EENT Hospital Fudan University, Shanghai, China

3092 — A0063 Acetylcholinesterase and Butyrylcholinesterase anchoring in murine ocular compartments, role of Colq and PRiMA. Marc M. Abitbol^{1,2}, M. Valensi³, J. Leroy³, L. I. Skandri¹, S. Addad¹, I. Kellout^{1,3}, L. Jone¹, M. Robert^{3,2}, D. Brémond-Gignac², F. F. Behar-Cohen^{1,4}, E. Krejci³. ¹UMRS INSERM 1138 EQUIPE 17, Université Paris Descartes, Paris, France; ²Ophthalmology, AP-HP, Hôpital Universitaire Necker-Enfants Malades, Paris, France; ³Neuroscience, Cognitive and Action Group, UMR CNRS 8257, Université Paris Descartes, Paris, France; ⁴Ophthalmology, AP-HP, Hôpital Universitaire Cochin-Hôtel Dieu, Paris, France; ⁵Pharmaceutical and Biological Sciences, Université Paris Descartes, Paris, France

3093 — A0064 A cell culture condition that induces the mesenchymal-epithelial transition of dedifferentiated porcine retinal pigment epithelial cells. Haibin Tian¹, J. Xu¹, C. Jin¹, F. Gao¹, J. Wang¹, J. Zhang¹, J. Zhang¹, W. Li², L. Lu¹, G. Xu¹. ¹School of Medicine, Tongji University, Shanghai, China; ²Department of Ophthalmology, Drexel University College of Medicine, Philadelphia, PA

3094 — A0065 The effect of blue or violet light on the activation of melanopsin in transfected HEK-293T cells. Olga Krzysztynska-Kuleta^{1,2}, M. Duda^{1,2}, M. Olchawa¹, T. J. Sarna¹. ¹Biophysics, Jagiellonian University, Krakow, Poland; ²Malopolska Centre of Biotechnology, Krakow, Poland

Exhibit Hall A0103-A0130

Tuesday, May 01, 2018 11:15 AM-1:00 PM

Retinal Cell Biology

336 Retinal Cell and Developmental Biology

Moderators: Tiffany M. Schmidt and James D. Lauderdale

3095 — A0103 Transcriptional landscape of porcine rod and cone photoreceptors. Nicola de Prisco¹, F. Curion¹, S. Botta¹, E. Marrocco¹, M. Sofia¹, S. Banfi^{1,2}, C. Gesualdo³, S. Rossi³, F. Simonelli³, E. Surace^{1,2}. ¹TIGEM, Pozzuoli, Italy; ²Università degli Studi di Napoli "Federico II", Napoli, Italy; ³Università Luigi Vanvitelli, Napoli, Italy

3096 — A0104 Cx36 coupling and structural plasticity is regulated by an association with the actin cytoskeleton. Jaya Aseervatham¹, H. Wang², C. Mitchell¹, B. Chen³, Y. Lin¹, E. Betzig⁴, J. O'Brien¹. ¹Ophthalmology and Visual Science, University of Texas health science center at houston, Houston, TX; ²Insightech, Dallas, TX; ³Research Center for Applied Science, Taipei, Taiwan; ⁴Howard Hughes Medical Institute Janelia Farm Research Campus, Ashburn, VA

- 3097 — A0105 Aak1 kinase, a novel player in retina ciliae trafficking.** *helene M. leger, F. Luca.* University of Pennsylvania School of Veterinary Medicine, Philadelphia, PA
- 3098 — A0106 Localization of Nectin-like-molecule 1 (Ncl-1/CADM3) in the Outer Plexiform Layer and Regulation of Synapse Structure in the Murine Retina.** *Rumi Kawashima¹, K. Matsushita¹, K. Mandai², T. Maruo², S. Wang³, A. Mizoguchi³, K. Nishida¹, Y. Taka².* ¹Ophthalmology, Osaka University Graduate School of Medicine, Suita, Japan; ²Biochemistry and Molecular Biology, Kobe University Graduate School of Medicine, Kobe, Japan; ³Neural Regeneration and Cell Communication, Mie University Graduate School of Medicine, Tsu, Japan
- 3099 — A0107 Rod input drives, and suppresses, dopamine release in the mouse retina.** *Morven A. Cameron¹, V. Perez Fernandez¹, N. Milosavljevic², J. W. Morley¹.* ¹School of Medicine, Western Sydney University, Penrith, New South Wales, Australia; ²Faculty of Biology, Medicine and Health, University of Manchester, Manchester, United Kingdom
- 3100 — A0108 CEP290 localization to the rod connecting cilium with fluorescence nanoscopy.** *Valencia Potter, M. A. Robichaux, T. G. Wensel.* Baylor College of Medicine, Houston, TX
- 3101 — A0109 Identification of novel factors to initiate retina regeneration in zebrafish.** *Matthew Kent, D. Didiano, J. Patton.* Biological Sciences, Vanderbilt University, Nashville, TN
- 3102 — A0110 Rhodopsin localization in the rod connecting cilium with STORM nanoscopy.** *Michael A. Robichaux, T. G. Wensel.* Biochemistry, Baylor College of Medicine, Houston, TX
- 3103 — A0111 Development of a human reporter stem cell line for mature cones in retinal organoids.** *Marta Zuzic¹, S. Wieneke², A. Kempe¹, V. Busskamp¹, M. Karf¹.* ¹TU Dresden, Center for Regenerative Therapies Dresden, Dresden, Germany; ²German Center for Neurodegenerative Diseases Dresden, Dresden, Germany
- 3104 — A0112 Ciliary neurotrophic factor (CNTF) in the retina: age and disease related expression in humans and mice.** *Thomas Ach¹, P. Stockinger¹, C. Schmitt¹, C. A. Curcio², M. Sendtner³, J. Hillenkamp¹.* ¹Dept of Ophthalmology, University Hospital Würzburg, Würzburg, Germany; ²Department of Ophthalmology, University of Alabama at Birmingham, Birmingham, AL; ³Department of Neurobiology, University Hospital Würzburg, Würzburg, Germany *CR
- 3105 — A0113 Single-cell transcriptomic analysis of human and murine NRL-null retinas.** *Alyssa Kallman¹, E. E. Capowski^{2,3}, A. M. Kaushik⁴, M. Liu⁵, B. S. Hansen⁵, L. Chen⁴, J. Cheng⁵, K. Wahlin^{5,6}, M. Hu⁵, L. A. Goff^{1,7}, J. Qian⁵, C. Berlinicke⁵, J. Wang^{4,8}, D. M. Gamm^{2,3}, D. J. Zack^{5,1}.* ¹Institute of Genetic Medicine, Johns Hopkins University School of Medicine, Baltimore, MD; ²Waisman Center, University of Wisconsin - Madison, Madison, WI; ³McPherson Eye Research Institute, University of Wisconsin - Madison, Madison, WI; ⁴Department of Mechanical Engineering, Johns Hopkins University, Baltimore, MD; ⁵Ophthalmology, Johns Hopkins University School of Medicine, Baltimore, MD; ⁶Shiley Eye Institute, University of California, San Diego, La Jolla, CA; ⁷Department of Neuroscience, Johns Hopkins University School of Medicine, Baltimore, MD; ⁸Department of Biomedical Engineering, Johns Hopkins University, Baltimore, MD
- 3106 — A0114 Lws opsin promoter analysis and phenotype plasticity of LWS cones in zebrafish retina in response to thyroid hormone.** *Robert Mackin, D. Mitchell, D. L. Stenkamp.* Biology, University of Idaho, Moscow, ID
- 3107 — A0115 Isolation of photoreceptors from mature, developing, and regenerating zebrafish retinae, and of microglia from regenerating zebrafish retinae.** *CHI SUN, D. L. Stenkamp.* Biological Sciences, University of Idaho, Moscow, ID
- 3108 — A0116 Maturation of photoreceptor cells during zebrafish retinal development.** *Catia Crespo.* MPI-CBG, Dresden, Germany
- 3109 — A0117 Development Of A Screening Platform To Identify Factors That Promote Retinal Regeneration In Mice.** *Sankarathi Balaiya¹, W. S. Lambert¹, B. A. Millis^{2,3}, D. J. Calkins¹, E. M. Levine^{1,3}.* ¹Vanderbilt Eye Institute, Vanderbilt University Medical center, Nashville, TN; ²Cell Imaging Shared Resource, Vanderbilt University, Nashville, TN; ³Cell and Developmental Biology, Vanderbilt University, Nashville, TN
- 3110 — A0118 Artificial extrauterine environment supports retinal development in preterm fetal lambs.** *Robert Carroll¹, A. Mejjaddam², H. Bashir¹, G. Binenbaum³, U. Nlebedum⁴, L. Teixeira⁴, G. Malik¹, A. Flake², V. Lee¹.* ¹Ophthalmology, Scheie Eye Institute, University of Pennsylvania, Philadelphia, PA; ²General, Thoracic, and Fetal Surgery, Children's Hospital of Philadelphia, Philadelphia, PA; ³Ophthalmology, Children's Hospital of Philadelphia, Philadelphia, PA; ⁴Wisconsin School of Veterinary Medicine University of Wisconsin-Madison, Madison, WI
- 3111 — A0119 Persistent fetal vasculature in Nrp2 knockout eye.** *Maryam Hejazi¹, J. Zagozewski², P. Baddam¹, D. Graf³, Y. Sauve⁴, D. Eisenstat⁵.* ¹Medical Genetics, University Of Alberta, Edmonton, Alberta, Canada; ²Department of Biochemistry & Medical Genetics, University of Manitoba, Winnipeg, Manitoba, Canada; ³School of Dentistry, University Of Alberta, Edmonton, Alberta, Canada; ⁴Departments Of Physiology & Ophthalmology And Visual Sciences, University Of Alberta, Edmonton, Alberta, Canada; ⁵Departments Of Pediatrics & Oncology, University Of Alberta, Edmonton, Alberta, Canada
- 3112 — A0120 Tmem30a deficiency leads to retinal rod bipolar cell degeneration.** *Yeming Yang, X. Zhu.* School of Medicine, University of Electronic Science and Technology of China, Chengdu, Sichuan, China
- 3113 — A0121 A role for the VE-cadherin complex in childhood blinding disorders.** *Michael H. Ngo¹, J. M. Robitaille², C. R. McMaster¹, s. steele¹, T. Fleishhacker¹, J. Berman¹.* ¹Pharmacology, Dalhousie University, Halifax, Nova Scotia, Canada; ²Ophthalmology and Visual Sciences, Dalhousie University, Halifax, Nova Scotia, Canada
- 3114 — A0122 Elucidating the effects of hyperglycemia on retinal development in Danio rerio.** *Kayla F. Titiali¹, H. Henson^{2,1}, K. Shady¹, A. C. Morris¹.* ¹Biology, University of Kentucky, Lexington, KY; ²Biology, Union University, Jackson, TN
- 3115 — A0123 The role of Meis genes in retina development.** *Zbynek Kozmik^{1,2}, N. Fujimura², B. Antosova².* ¹Institute of Molecular Genetics, Department of Transcriptional Regulation, Praha, Czechia; ²BIOCEV, Department of Eye Biology, Vestec, Czechia
- 3116 — A0124 The G-protein Coupled Receptor Oa1 Activates Creb Through Gα_s to Modulate Doublecortin Expression in Developing Mouse Eyes.** *Sonia Guha, K. Lee, M. Wang, D. B. Farber.* Ophthalmology, Stein Eye Institute, University of California at Los Angeles, Los Angeles, CA
- 3117 — A0125 Oxytocin Receptor Expression in the Retinal Pigment Epithelium Increases with Retinal Maturation.** *Nathaniel W. York¹, H. Labarge¹, A. Lutz¹, D. M. Pillers¹, N. Sheibani², B. R. Patnaik^{1,2}.* ¹Pediatrics, University of Wisconsin - Madison, Madison, WI; ²Ophthalmology and Visual Sciences, University of Wisconsin - Madison, Madison, WI
- 3118 — A0126 Blood flow dependent remodeling of the zebrafish hyaloidal vasculature.** *Daniel L. Chao¹, D. Van Fossan¹, F. Imam².* ¹Ophthalmology, UCSD Shiley Eye Institute, La Jolla, CA; ²Department of Pediatrics, UCSD, La Jolla, CA *CR

3119 — A0127 A New Ex Vivo System To Study RPE Transdifferentiation. *Christian Gutierrez^{1,2}, B. Haynes^{1,2}, P. Lam^{1,2}, G. Tsissios^{1,2}, M. L. Robinson^{1,2}, K. Del Rio-Tsonis^{1,2}.* ¹Biology, Miami University, Oxford, OH; ²Center for Visual Sciences at Miami University, Oxford, OH

3120 — A0128 Comprehensive Characterization of the Mouse Retinal Proteome. *Jarrod C. Harman^{1,2}, J. J. Guidry^{3,4}, N. A. Lanson¹, J. Giddy^{1,2}.* ¹Ophthalmology, Louisiana State University Health Science Center, New Orleans, LA; ²Physiology, Louisiana State University Health Science Center, New Orleans, LA; ³Pharmacology, Louisiana State University Health Science Center, New Orleans, LA; ⁴Proteomics Core Facility, Louisiana State University Health Science Center, New Orleans, LA

3121 — A0129 Quantitative Assessment of Retina Explant Viability in a Porcine Ex Vivo Neuroretina Model. *Christina L. Rettinger, H. H. Wang.* Ocular & Sensory Trauma Task Area, U.S. Army Institute of Surgical Research, Fort Sam Houston, TX

3122 — A0130 Mouse embryonic stem cell-derived extracellular vesicles reactivate in vivo Müller progenitor cells of NMDA-damaged retinas rescuing retinal function. *Alejandra Young¹, D. Katsman², D. B. Farber¹.* ¹Ophthalmology, Stein Eye Institute, Los Angeles, CA; ²Ophthalmology, Loma Linda University, Loma Linda, CA

Exhibit Hall A0240-A0282

Tuesday, May 01, 2018 11:15 AM-1:00 PM

Retina / Biochemistry/Molecular Biology / Genetics / Low Vision

337 Macular diseases excluding AMD

Moderators: Francine F. Behar-Cohen and Isabelle S. Audo

3123 — A0240 Vitrectomy for Idiopathic Macular Epiretinal Membrane Improves Choriocapillary Circulation and Retinal Vascular Oxygen Saturation. *Yuxin Yuan, J. Zhang, Z. Li, L. Lu, J. Hu.* State Key Laboratory of Ophthalmology, Zhongshan Ophthalmic Center, Guangzhou, China

3124 — A0241 Focal Laser Therapy in Symptomatic Central Serous Chorioretinopathy. *Musa Abdelaziz, M. M. Lai.* Retina Group of Washington, DC, WA

3125 — A0242 Natural course, intravitreal bevacizumab injection responsiveness and OCT angiography (OCTA) findings of central serous chorioretinopathy patients; flat pigment epithelium detachment (PED) Vs focal PED.

Dong Yoon Kim¹, J. Chae¹, Y. Park³, J. Kim¹, J. Kim². ¹Ophthalmology, Chungbuk National University Hospital, College of Medicine, Chungbuk National University, Cheongju, Korea, Cheongju, Korea (the Republic of); ²Department of Ophthalmology, Jeju National University Hospital, College of Medicine, Jeju National University, Jeju, Korea, Jeju, Korea (the Republic of); ³Department of Ophthalmology, ChangWon Gyeongsang National University Hospital, College of Medicine, Gyeongsang National University, ChangWon, Korea, ChangWon, Korea (the Republic of)

3126 — A0243 A Novel Contrast Sensitivity Test as a New Measure of Visual Function in Central Serous Chorioretinopathy. *Anna Marmalidou¹, E. L. Kim¹, R. Silverman¹, M. Thomas², I. Lains¹, A. Choi¹, A. K. Bittner³, L. A. Kim¹, L. A. Lesmes⁴, D. N. Zacks², J. B. Miller¹.* ¹Retina Service, Department of Ophthalmology, Massachusetts Eye and Ear Infirmary, Harvard Medical School, Boston, MA; ²Department of Ophthalmology and Visual Sciences, Kellogg Eye Center, University of Michigan, Ann Arbor, MI; ³Nova Southeastern University, College of Optometry, Fort Lauderdale, FL; ⁴Adaptive Sensory Technology, Inc., San Diego, CA *CR, x

3127 — A0244 Reduction of sub-retinal fluid associated with central serous chorioretinopathy after the use of topical non-steroidal anti-inflammatory medications. *Kyle MacLean¹, S. Bahadorani¹, N. Gresores², K. Wannamaker¹, M. Singer².* ¹Ophthalmology, UT Health San Antonio, San Antonio, TX; ²Medical Center Ophthalmology Associates, San Antonio, TX *CR

3128 — A0245 Salivary alpha amylase activity is increased in active central serous chorioretinopathy. *Lebriz Altay¹, P. Scholz¹, V. Sitnilska¹, E. H. Van Dijk², A. M. Pereira⁴, F. M. van Haalen⁴, I. Akhtar⁵, C. Boon², S. Fauser^{1,3}.* ¹Department of Ophthalmology, University Clinic of Cologne, Cologne, Germany; ²Department of Ophthalmology, Leiden University Medical Center, Leiden, Netherlands; ³F. Hoffmann-La Roche, Basel, Switzerland; ⁴Department of Medicine, Division of Endocrinology, and Center for Endocrine Tumors, Leiden University Medical Center, Leiden, Netherlands; ⁵Experimental Immunology of the Eye, Department of Ophthalmology, University of Cologne, Cologne, Germany *CR

3129 — A0246 Patients with Central Serous Chorioretinopathy have increased hair cortisol concentrations. *Janine Lenk, D. Sandner, L. E. Pillunat, E. Matthe.* Ophthalmology, University of Dresden, Dresden, Germany

3130 — A0247 Establishment of induced pluripotent stem cell line for Best vitelliform macular dystrophy and autosomal recessive bestrophinopathy. *Christopher S. Lee, J. Oh, E. Choi.* Ophthalmology, Yonsei University College of Medicine, Seoul, Korea (the Republic of)

3131 — A0248 Phenotypic risk factors for treatment outcome in patients with chronic central serous chorioretinopathy. *Vasilena Sitnilska¹, R. Hoerster², S. Fauser^{1,3}, L. Altay¹.* ¹Department of Ophthalmology, University Hospital of Cologne, Cologne, Germany; ²MVZ Ophthalmological Diagnostic and Therapy Center Mönchengladbach / Erkelenz, Erkelenz, Germany; ³F. Hoffmann - La Roche AG, Basel, Switzerland *CR

3132 — A0249 Untargeted large spot half-fluence photodynamic therapy for chronic central serous chorioretinopathy. *Aseel Hamoud H. Bedan, G. Almeida.* eye ear and mouth unit, Maidstone and Tunbridge Wells NHS trust, Maidstone, Kent, United Kingdom

3133 — A0250 Clinical features of central serous chorioretinopathy with type I choroidal neovascularization. *Chieko Shiragami, Y. Takasago, R. Osaka, M. Kobayashi, A. Ono, A. Yamashita, K. Hirooka.* Ophthalmology, Kagawa University Faculty of Medicine, Kagawa, Japan

3134 — A0251 Clinical characteristics of chronic central serous chorioretinopathy patients with insufficient response to reduced-settings photodynamic therapy. *Thomas J. van Rijssen¹, E. van Dijk¹, G. Dijkman¹, C. Boon^{1,2}.* ¹Ophthalmology, Leiden University Medical Center, Leiden, Zuid-Holland, Netherlands; ²Ophthalmology, Amsterdam Medical Center, Amsterdam, Netherlands

3135 — A0252 Changes in choroidal thickness after focal laser photocoagulation in the patients with acute central serous chorioretinopathy. *Kyu Young Shim, K. Kim.* Keimyung University School of Medicine, Dongsan Medical Center, Daegu, Korea (the Republic of)

3136 — A0253 Longitudinal changes in eyes with hydroxychloroquine retinal toxicity. *Ali M. Allahdina, K. G. Chen, J. Alvarez, W. T. Wong, E. Y. Chew, C. A. Cukras.* National Eye Institute, National Institutes of Health, Bethesda, MD

3137 — A0254 Clinical characteristics of the lamellar macular hole according to subtypes. *Se Young Kim, H. Chin, M. Yoon.* Inha University Hospital, Incheon, Korea (the Republic of)

3138 — A0255 Macular photoreceptor atrophy defines the end stage of macular telangiectasia type 2. *Tjebo F. Heeren^{1,2}, T. E. Clemons³, M. Fruttiger⁴, C. Egan¹, P. Charbel Issa^{5,6}.* ¹Moorfields Eye Hospital NHS Foundation Trust, London, England, United Kingdom; ²University Eye Hospital, Bonn, Germany; ³The Emmes Cooperation, Rockville, MD; ⁴Institute of Ophthalmology, University College London, London, United Kingdom; ⁵Oxford Eye Hospital, Oxford University Hospitals NHS Foundation Trust, Oxford, United Kingdom; ⁶Department of Clinical Neurosciences, University of Oxford, Nuffield Laboratory of Ophthalmology, Oxford, United Kingdom

- 3139 — A0256 Assessing photoreceptor degeneration in type 2 idiopathic macular telangiectasia.** Ferenc B. Sallo^{2,1}, A. M. Dubis^{1,2}, I. Leung⁴, T. E. Clemons³, D. Pauleikhoff⁵, E. Y. Chew⁵, A. C. Bird². ¹Visual Neuroscience, UCL Institute of Ophthalmology, London, England, United Kingdom; ²Moorfields Eye Hospital NHS Foundation Trust, London, United Kingdom; ³Emmes Corporation, Rockville, MD; ⁴St Franziskus Spital, Muenster, Germany; ⁵National Eye Institute, Bethesda, MD
- 3140 — A0257 Morphological changes of vascular structures in OCT angiography in MacTel type 2 and quantification of vascular density and flow areas in disease progression.** Frederic Gunnemann, H. Faatz, A. Lommatzsch, N. Suckert, M. Farecki, K. Rothaus, D. Pauleikhoff. Augenzentrum am St. Franziskus-Hospital Münster, Muenster, Germany
- 3141 — A0258 In silico functional analysis of genetic variants in chromosome 19 to identify disease-causing gene in a large Greek family with autosomal dominant macular dystrophy.** Jennifer B. Cordero¹, R. W. Williams¹, M. B. Petersen^{3,6}, H. Kokotas³, M. Grigoriadou³, G. Kitsos⁴, N. A. Manda², C. L. Simpson^{1,2}. ¹Genetics, Genomics and Informatics, University of Tennessee Health Science Center, Memphis, TN; ²Ophthalmology, University of Tennessee Health Science Center, Memphis, TN; ³Genetics, Institute of Child Health, Athens, Greece; ⁴Ophthalmology, Medical School, University of Ioannina, Ioannina, Greece; ⁵Clinical Genetics, Aalborg University Hospital, Aalborg, Denmark; ⁶Clinical Medicine, Aalborg University, Aalborg, Denmark
- 3142 — A0259 Mutations in RP1L1 are Associated with Stargardt Macular Degeneration.** Nicole C. Noel¹, J. Ma³, I. M. MacDonald^{2,1}. ¹Medical Genetics, University of Alberta, Edmonton, Alberta, Canada; ²Ophthalmology and Visual Sciences, University of Alberta, Edmonton, Alberta, Canada; ³University of Alberta, Edmonton, Alberta, Canada
- 3143 — A0260 Reproducibility of a Modified Dual Grading Model Applied to Fundus Autofluorescence Measurements in Macular Atrophy Secondary to Stargardt Disease.** Cynthia S. Chan¹, A. Ho¹, D. Jenkins¹, S. Pitetta¹, M. Li¹, J. Tassy¹, R. W. Strauss^{2,3}, H. P. Scholl^{4,5}, S. R. Sadda^{1,6}, M. S. Ip^{1,6}. ¹Doheny Eye Institute, Los Angeles, CA; ²Moorfields Eye Hospital National Health Service Foundation Trust, London, United Kingdom; ³Department of Ophthalmology, Medical University Graz and Johannes Kepler University Linz, Linz, Austria; ⁴Wilmer Eye Institute, Johns Hopkins University, Baltimore, MD; ⁵Department of Ophthalmology, University of Basel, Basel, Switzerland; ⁶David Geffen School of Medicine, UCLA, Los Angeles, CA *CR, ✗
- 3144 — A0261 Spatial Characteristics in Retinal Dysfunction of ABCA4-associated Retinal Disorder: East Asia Stargardt Disease West China Studies.** Xiao Liu^{1,2}. ¹Southwest Hospital, Chongqing, China; ²National Hospital Organization, Laboratory of Visual Physiology, Division of Vision Research, National Institute of Sensory Organs, Tokyo, Japan
- 3145 — A0262 Intravitreal Anti-VEGF Therapy for Choroidal Neovascularization-Associated with Best Vitelliform Macular Dystrophy.** Florin Grigorian, H. M. Vasconcelos, S. T. Bailey, B. J. Lujan, J. Campbell, P. Lin, R. G. Weleber, M. E. Pennesi, P. Yang. OHSU - Casey Eye Institute, Portland, OR *CR
- 3146 — A0263 The retinal phenotype associated with the frequent, synonymous c.783G>A mutation in CDHRI.** Imran H. Yusuf^{1,2}, M. Gliem^{2,3}, J. Birtel³, P. L. Muller³, E. Mangold⁴, H. Bolz^{5,6}, P. Charbel Issa^{1,2}. ¹Nuffield Department of Clinical Neurosciences, University of Oxford, Oxford, Oxfordshire, United Kingdom; ²Department of Ophthalmology, Oxford Eye Hospital, Oxford, Oxfordshire, United Kingdom; ³Department of Ophthalmology, University of Bonn, Bonn, Germany; ⁴Institute of Human Genetics, University of Bonn, Bonn, Germany; ⁵Bioscientia Centre for Human Genetics, Ingelheim, Germany; ⁶Institute of Human Genetics, University Hospital of Cologne, Cologne, Germany
- 3147 — A0264 CMV retinitis in hematologic malignancies.** Olga Passarin^{1,2}, J. Vaudaux¹, Y. Guex-Crosier^{1,2}. ¹Hopital Ophtalmique Jules Gonin - Lausanne, Switzerland, Lausanne, Switzerland; ²Université de Lausanne, Lausanne, Switzerland
- 3148 — A0265 Evidence of complement involvement in cancer-associated retinopathy (CAR).** John Demirs¹, V. Lee², T. P. Dryja^{3,1}. ¹Ophthalmology, Novartis, Cambridge, MA; ²Department of Ophthalmology, Scheie Eye Institute, Philadelphia, Philadelphia, PA; ³Department of Ophthalmology, Harvard Medical School, Boston, MA *CR
- 3149 — A0266 Long-term outcomes of epiretinal membranes with good visual acuity.** Kieu-Yen Luu¹, T. Koenigsacker¹, L. Mukkamala², A. Yazdanyar², L. S. Morse², A. Moshiri², S. S. Park², G. Yiu². ¹School of Medicine, UC Davis, Sacramento, CA; ²Ophthalmology, UC Davis, Sacramento, CA *CR
- 3150 — A0267 Acquired Vitelliform Maculopathy in Pachychoroid Pigment Epitheliopathy and Comparison to Acquired Vitelliform Maculopathy in Reticular Drusen.** Elisha Garg¹, J. Essilfie¹, R. Sacconi², G. Querques², D. Sarraf¹. ¹Ophthalmology, Jules Stein Eye Institute, Playa Vista, CA; ²University Vita Salute, Milan, Italy
- 3151 — A0268 Acute Fingolimod Associated Macular Edema 2 Days After Onset Of Treatment And Gradual Resolution Under Ketorolac Therapy Over 5 Months.** Simone Kellner^{1,2}, S. Slowik¹, M. Mokhtar Elhelbawi¹, S. Weinitz^{1,2}, G. Farmand¹, U. Kellner^{1,2}. ¹AugenZentrum Siegburg, MVZ ADTC Siegburg GmbH, Siegburg, Germany; ²RetinaScience, Bonn, Germany
- 3152 — A0269 Optic disc pit maculopathy: a retrospective natural history study of the characteristics and clinical course.** Edward Bloch^{1,2}, O. Georgiadis^{1,2}, M. Lukic¹, L. daCruz^{1,2}. ¹Vitreo-Retinal Department, Moorfields Eye Hospital, London, United Kingdom; ²Institute of Ophthalmology, University College London, London, United Kingdom
- 3153 — A0270 Full-thickness macular hole with lamellar macular hole associated epiretinal proliferation: a morphological analysis.** Matthew Farajzadeh, A. A. Francone, L. Yun, J. Hubschman. Retina, Stein Eye Institute at UCLA, Los Angeles, CA
- 3154 — A0271 Human Serum Metabolomics Study in Macular Telangiectasia Type 2.** Sasha Woods¹, M. Powner¹, S. Selvam¹, K. Khan², R. H. Guymmer³, J. Trombley⁴, C. Egan⁵, M. Friedlander⁴, M. Fruttiger¹. ¹UCL Institute of Ophthalmology, London, United Kingdom; ²University of Leeds, Leeds, United Kingdom; ³University of Melbourne, Melbourne, Victoria, Australia; ⁴Lowy Medical Research Institute, San Diego, CA; ⁵Moorfields Eye Hospital, London, United Kingdom
- 3155 — A0272 Subthreshold Micropulse Laser for Treatment of Primary Foveal Telangiectasis Type II.** John P. McLaughlin¹, B. Sgrignoli², M. S. Katz². ¹Krieger Eye Institute at Sinai Hospital of Baltimore, Baltimore, MD; ²National Retina Institute, Towson, MD
- 3156 — A0273 OCT Angiography in the diagnosis and follow-up of retinal arterial macroaneurysms.** Polina Astroz¹, A. Miere¹, F. Amoroso¹, A. Pedinielli¹, H. Oubraham¹, F. Gherdaoui¹, S. Y. Cohen^{2,1}, G. Querques^{3,1}, E. H. Souied¹. ¹Centre Hospitalier Intercommunal de Créteil, Créteil, France; ²Centre d'imagerie et de laser, Paris, France; ³University Vita-Salute, IRCCS Ospedale San Raffaele, Milan, Italy
- 3157 — A0274 Functional and Anatomical Outcomes of Intravitreal Antiangiogenic Therapy for Choroidal Neovascularization Due to Causes Other Than AMD and Myopia.** Roberto Gallego-Pinazo¹, I. Gama², P. Martínez López-Corell³, R. Dolz-Marco³, M. Andreu-Fenoll³, N. García-Marin³. ¹Ophthalmology, Oftalvist Clinic, Valencia, Spain; ²Department of Ophthalmology, University Hospital Santa Maria, Northern Lisbon Hospital Center, Lisbon, Portugal; ³Institute for Health Research La Fe, Valencia, Spain *CR

3158 — A0275 Evaluation of the visual outcome for patients treated for Inflammatory Choroidal Neovascularization in a Tertiary Referral Center in United Kingdom. Anastasia Tasiopoulou^{1,2}, M. Woronkiewicz^{1,2}, S. Lightman^{1,2}, O. Tomkins-Netzer^{1,2}. ¹Institute of Ophthalmology, UCL, London, England, United Kingdom; ²Moorfields Eye Hospital, London, United Kingdom

3159 — A0276 Factors Associated with the finding of choroidal neovascularization by Swept-Source Optical Coherence Tomography Angiography in Central Serous Choroidopathy. Juan E. Unigarro Martinez, S. Vidal, S. Arrascaue Limo, C. A. Abdala. Retina, Unidad Laser Del Atlantico Eye Clinic, Barranquilla, Atlantico, Colombia

3160 — A0277 Pediatric choroidal neovascularization: Hand-held spectral domain-optical coherence tomography findings and treatment response to intravitreal bevacizumab. Ramsudha Narala¹, T. C. Lee², A. Nagie². ¹Vitreoretinal surgery, Roski Eye Institute University of Southern California, Los Angeles, CA; ²Vitreoretinal surgery, The Vision Center, Children's Hospital Los Angeles (CHLA), Los Angeles, CA

3161 — A0278 Multimodal imaging including OCT-A and functional testing of North Carolina Macular Dystrophy (NCMD) provides new insights into the developmental nature of NCMD and the development of the human macula. Kent W. Small^{1,2}, F. Shay^{1,2}, N. Udar^{1,2}, L. Small^{1,2}, E. M. Stone³. ¹Molecular Insight Research Foundation, Los Angeles, CA; ²Macula & Retina Institute, Glendale and Los Angeles, CA; ³University of Iowa, Iowa City, IA

3162 — A0279 Long-term progression of hydroxychloroquine retinopathy off the drug. Brandon Pham, M. F. Marmor. Ophthalmology, Byers Eye Institute at Stanford, Stanford University School of Medicine, Stanford, CA

3163 — A0280 Phenotype variations caused by mutations in the RP11 gene in a large mainly German cohort. Gergely Zbor^{2,1}, S. Hipp², B. Baumann³, N. Weisschuh³, S. Biskup⁴, I. Sliessoraityte^{2,5}, E. Zrenner^{2,6}, S. Kohl³, D. Zbor². ¹Department of Ophthalmology and Optometry, Medical University of Vienna, Austria, Vienna, Austria; ²Institute for Ophthalmic Research, University of Tübingen, Tübingen, Germany; ³Molecular Genetics Laboratory, Institute for Ophthalmic Research, University of Tübingen, Tübingen, Germany; ⁴Praxis für Humangenetik Tübingen & CeGaT GmbH, Tübingen, Tübingen, Germany; ⁵Institut de La Vision, INSERM Paris, Paris, France; ⁶Werner Reichardt Center for Integrative Neuroscience, University of Tübingen, Tübingen, Germany

3164 — A0281 Macular hole detection and staging on optical coherence tomography images using convolutional neural network. Akira Ojima, T. Sekiryu, R. Tomita, Y. Sugano, Y. Kato. Ophthalmology, Fukushima Medical University, Fukushima, Japan *CR

3165 — A0282 Refractive Lens Exchange in 39 Special-Needs Children and Adolescents. Lawrence Tychsen, N. Faron, J. Hoekel. Ophthalm and Neurobio-Childrens Hosp, Washington Univ School of Medicine, St Louis, MO

Exhibit Hall A0309-A0331

Tuesday, May 01, 2018 11:15 AM-1:00 PM

Anatomy and Pathology/Oncology

338 Melanoma: Basic and Translational

Moderators: Solange Landreville and Emine Kilic

3166 — A0309 Heme oxygenase-1 promotes uveal melanoma growth and migration both in vitro and in vivo. Teresio Avitabile¹, C. Gagliano¹, M. Reibaldi¹, C. Castruccio Castracani², L. Longhitano², R. Caltabiano², D. Tibullo², G. Russo², G. Li Volti². ¹Ophthalmology, Catania University, Catania, Italy; ²Department of Biomedical and Biotechnological Sciences, UNiversity of Catania, Catania, Italy

3167 — A0310 ER stress Promotes initiation and Growth in Uveal Melanoma. Xiaoran Wang^{2,1}, Y. Liu¹, X. Chen². ¹zhongshan ophthalmic center; Guangzhou, China; ²Baylor College of Medicine, Houston, TX

3168 — A0311 Protein Kinase C- delta Regulates Cellular Attachment, Survival, and Metastases-Associated Genes in Uveal Melanoma. Anslay K. Ulmer^{2,1}, B. Gao¹, Z. K. Goldsmith¹, A. M. Walsh¹, S. E. Langsdon¹, K. Yuan¹, M. W. Wilson^{1,3}, V. M. Morales-Tirado^{1,4}. ¹Ophthalmology/ Hamilton Eye Institute, University of Tennessee Health Science Center, Memphis, TN; ²Biology, Furman University, Greenville, SC; ³Surgery, St. Jude Children's Research Hospital, Memphis, TN; ⁴Microbiology, Immunology, and Biochemistry, University of Tennessee Health Science Center, Memphis, TN

3169 — A0312 αB-crystallin is active in Signaling, Autophagy, and Apoptosis in Ocular Melanoma. Gregory Konar¹, P. Shang², S. Mishra¹, S. Ghosh², J. T. Handa¹, D. Sinha². ¹Ophthalmology, Johns Hopkins School of Medicine, Marlborough, MA; ²Ophthalmology, University of Pittsburgh School of Medicine, Pittsburgh, PA

3170 — A0313 MMP-8 Expression in Uveal melanocytes and Melanoma Cells. Dan-Ning Hu¹, R. B. Rosen². ¹Eye and Vision Institute, Icahn School of Medicine at Mount Sinai, New York, NY; ²Ophthalmology, New York Eye and Ear Infirmary of Mount Sinai, New York, NY

3171 — A0314 Analysis of the promoter and 5'-flanking region of the human serotonin receptor gene HTR2B and its expression in uveal melanoma. Manel BENHASSINE. Biologie cellulaire et moléculaire, Université Laval, Québec, Quebec, Canada

3172 — A0315 SOST knockdown promotes proliferation, migration, invasion, metastasis and reduces apoptosis of human uveal melanoma cells by activating Wnt/β-catenin signaling pathway. Xiaoming Huang¹, T. Wu², F. Sun². ¹School of Medicine, Nankai University, Tianjin, China; ²Tianjin orbital disease institute, Tianjin Medical University Eye hospital, Tianjin, China

3173 — A0316 RNA m⁶A Methylation Regulates Uveal Melanoma Cell Proliferation and Migration by Targeting c-Met. Dongsheng Yan¹, G. Luo¹, X. Chen¹, D. Hu². ¹School of Ophthalmology and Optometry, Wenzhou Medical University, Wenzhou, China; ²The New York Eye and Ear Infirmary, New York Medical College, New York, NY

3174 — A0317 Impaired p14^{ARF} and MDM2 Nucleocytoplasmic Shuttling in Uveal Melanoma. Vanessa M. Morales-Tirado^{1,2}, C. Awh¹, Z. K. Goldsmith¹, M. M. Jablonski¹, B. King¹, M. W. Wilson^{1,3}. ¹Ophthalmology, Hamilton Eye Institute, University of Tennessee Health Science Center, Memphis, TN; ²Microbiology, Immunology, and Biochemistry, University of Tennessee Health Science Center, Memphis, TN; ³Surgery, St. Jude Children's Research Hospital, Memphis, TN

3175 — A0318 The Sirtuin Inhibitor Tenovin-6 as a Novel Regulator of the TP53-MDM2 Signaling Pathway in Uveal Melanoma. Matthew W. Wilson^{1,2}, M. W. McEwen¹, Z. K. Goldsmith¹, K. Yuan¹, A. Irvine¹, B. King¹, H. Y. Yang³, H. Grossniklaus³, V. M. Morales-Tirado^{1,4}. ¹Ophthalmology, Hamilton Eye Institute, University of Tennessee Health Science Center, Memphis, TN; ²Surgery, St. Jude Children's Research Hospital, Memphis, TN; ³Ophthalmology, Emory University, Atlanta, GA; ⁴Microbiology, Immunology, and Biochemistry, University of Tennessee Health Science Center, Memphis, TN

3176 — A0319 Ceritinib is a more potent ALK inhibitor than crizotinib in uveal melanoma. Jade M. Lasiste, C. Mastro Monaco, P. R. Bustamante, J. Coblentz, L. Nuñez, P. T. Logan, M. N. Burnier. McGill University Health Centre, Montreal, Quebec, Canada

3177 — A0320 The development of pigmentation in new tissue arises from precursor and not migratory melanocytes in a transgenic GNAQ^{Q209L} zebrafish model of uveal melanoma. Andrea M. Henle, J. Muske, M. Poplawski, T. Perlmutter. Biology, Carthage College, Kenosha, WI

- 3178 — A0321 Cellular senescence in Uveal Melanoma.** Maria Santiago-Varela¹, N. Lago-Baameiro², M. Bande¹, P. Víaño³, S. Da Silva-Alvarez⁴, T. Garcia-Caballero³, M. Collado⁴, F. Ruiz-Oliva¹, B. Maria Jose¹, M. Pardo², A. Pineiro¹. ¹Unidad de Retina Quirúrgica y Tumores Intraoculares del Adulto. Servicio de Oftalmología, Hospital de Conxo. Xerencia de Xestión Integrada de Santiago de Compostela, Santiago de Compostela, Spain; ²Instituto de Investigación Sanitaria de Santiago de Compostela (IDIS), Santiago de Compostela., Santiago de Compostela, Spain; ³Servicio de Anatomía-Patológica, CHUS, Xerencia de Xestión Integrada de Santiago de Compostela, Santiago de Compostela, Spain; ⁴Laboratory of Stem Cells in Cancer and Aging. Instituto de Investigación Sanitaria de Santiago de Compostela (IDIS), Santiago de Compostela, Spain
- 3179 — A0322 Systematic analysis of immune profiles in uveal melanoma primary and metastatic tumors.** Yong Qin¹, M. Petaccia de Macedo², J. Roszik³, C. N. Spencer³, A. Reuben⁴, F. Carapeto², J. A. Wargo⁴, A. J. Lazar², S. P. Patel¹. ¹Melanoma Medical Oncology, The University of Texas MD Anderson Cancer Center, Houston, TX; ²Translational Molecular Pathology, The University of Texas MD Anderson Cancer Center, Houston, TX; ³Genomic Medicine, The University of Texas MD Anderson Cancer Center, Houston, TX; ⁴Surgical Oncology, The University of Texas MD Anderson Cancer Center, Houston, TX
- 3180 — A0323 The relationship between prognostic factors and CD109 expression in uveal melanoma.** Jacqueline Coblentz, S. Bergeron, A. T. Dias, T. Ferrier, J. Passos, F. Couvrette, J. J. Mansure, M. N. Burnier. Ocular Pathology, McGill University, Westmount, Quebec, Canada
- 3181 — A0324 Nestin in uveal melanoma: a novel biomarker.** Tadhg Ferrier¹, F. Couvrette¹, S. Bergeron¹, P. Garcia de Alba Graue², O. Zin¹, A. Albuquerque¹, M. N. Burnier¹. ¹MUHC - McGill University Ocular Pathology Laboratory, Montreal, Quebec, Canada; ²Universidad Nacional Autónoma de México, Mexico city, Mexico
- 3182 — A0325 Estrogen receptor expression in uveal melanoma.** Lynn Schoenfeld¹, C. Craven², M. Abdel-Rahman², C. M. Cebulla². ¹Anatomic Pathology, Ohio State University Wexner Medical Center, Columbus, OH; ²Department of Ophthalmology, Ohio State University Wexner Medical Center, Columbus, OH
- 3183 — A0326 Host Survival Mechanisms in Metastatic Uveal Melanoma.** Kelley Yuan¹, B. King¹, Z. K. Goldsmith¹, W. Coppess¹, M. K. Ritter^{3,1}, M. M. Jablonski¹, M. W. Wilson^{1,4}, V. M. Morales-Tirado^{1,2}. ¹Ophthalmology/Hamilton Eye Institute, University of Tennessee Health Science Center, Memphis, TN; ²Microbiology, Immunology, and Biochemistry, University of Tennessee Health Science Center, Memphis, TN; ³Biology, Furman University, Greenville, SC; ⁴Surgery, St. Jude Children's Research Hospital, Memphis, TN
- 3184 — A0327 The interaction of uveal melanoma (UM) with Hepatic Stellate Cells (HSC).** Ibrar Ahmed, S. Prendergast, H. Kalirai, S. E. Coupland. Department of Molecular and Clinical Cancer Medicine, Institute of Translational Medicine, Liverpool, United Kingdom
- 3185 — A0328 Recruitment and activation of hepatic stellate cells by uveal melanoma cells in a xenograft mouse model.** Léo PIQUET^{1,2}, P. Gerges¹, W. Pelletier¹, J. Bérubé¹, F. Mouriaux^{3,2}, A. de la Fouchardière⁴, S. Landreville^{1,2}. ¹CUO-Recherche/Axe médecine régénératrice, Centre de recherche du CHU de Québec-Université Laval, Québec, Quebec, Canada; ²Département d'ophtalmologie, Université Laval, Québec, Quebec, Canada; ³UMR 1241 NUMECAN (Nutrition, Métabolisme et Cancer), Université Rennes 1, Rennes, France; ⁴Département de biopathologie, Centre Léon Bérard, Lyon, France
- 3186 — A0329 Serum exosome analysis as a predictive biomarker for metastatic uveal melanoma.** Shahar Frenkel¹, S. Luski¹, P. Gaur¹, J. Pe'er¹, S. Tabak², E. Beit-Yannai². ¹Ophthalmology, Hadassah-Hebrew Univ Med Ctr, Mevaseret Zion, Israel; ²Clinical Pharmacology & School of Pharmacy, Ben-Gurion University, Beer-Sheva, Israel
- 3187 — A0330 GNAQ R183Q Mutation Identified in a Young Patient with Uveal Melanoma, Ocular Surface Melanosis, and Nevus of Ota.** Christopher B. Toomey^{1,2}, K. Fraser², C. DiLoreto², W. Edwards², J. A. Thorson², D. Kikkawa¹, M. H. Goldbaum¹, J. H. Lin^{1,2}. ¹UC, San Diego, Department of Ophthalmology, Shiley Eye Institute, San Diego, CA; ²VA San Diego Healthcare System, San Diego, CA
- 3188 — A0331 MiRNA expression in conjunctival melanoma and their pair-matched metastasis.** Lauge H. Mikkelsen^{1,2}, A. Larsen^{1,2}, P. Toft², K. Wadt³, M. Andersen³, S. Heegaard^{1,2}. ¹Department of Pathology, Rigshospitalet, Copenhagen, Denmark; ²Dept. Ophthalmology, Rigshospitalet, Copenhagen, 2100, Denmark; ³Clinical Genetics, Rigshospitalet, Copenhagen, 2100, Denmark
-
- Exhibit Hall B0189-B0206
Tuesday, May 01, 2018 11:15 AM-1:00 PM
Physiology/Pharmacology
- 339 Blood flow, ischemia**
-
- 3189 — B0189 The Taiwa Study: Association between optical coherence tomography angiography measurements of the retinal peripapillary capillaries and macular capillary plexus in normal subjects.** Hiroshi Kunikata¹, T. Asano¹, N. Aizawa¹, R. Sato¹, N. Kiyota¹, Y. shiga¹, K. Kato², T. Nakazawa¹. ¹Tohoku University, Sendai, Miyagi, Japan; ²Kato Eye Center, Taiwa, Japan
- 3190 — B0190 The central retinal venous pressure at a fixed airway pressure of 40mmHg.** Richard P. Stodmeister, H. Stroehla, E. Spoerl, L. E. Pillunat. Ophthalmology, TU Dresden, Dresden, Germany
- 3191 — B0191 Effect of Changes in Arterial Blood Pressure on Optic Nerve Head Blood Flow Regulation in Patients with Primary Open Angle Glaucoma.** Doreen Schmidl^{1,2}, A. M. Bata¹, K. Fondi¹, K. J. Witkowska¹, R. M. Werkmeister², A. B. Hommer^{1,3}, C. Vass⁴, A. Popa Cherecheanu³, G. Garhofer¹, L. Schmetterer^{1,6}. ¹Department of Clinical Pharmacology, Medical University of Vienna, Vienna, Austria; ²Center for Medical Physics and Biomedical Engineering, Medical University of Vienna, Vienna, Austria; ³Department of Ophthalmology, Sanatorium Hera, Vienna, Austria; ⁴Department of Ophthalmology, Medical University of Vienna, Vienna, Austria; ⁵Department of Ophthalmology, Carol Davila University of Medicine and Pharmacy, Bucharest, Romania; ⁶Singapore Eye Research Institute, Singapore, Singapore ✕
- 3192 — B0192 Correlation between polyp size and presence of blood flow signals in polyps by optical coherence tomography angiography for polypoidal choroidal vasculopathy.** Tianwei Qian¹, X. Chen¹, L. Cheng¹, S. Weng², L. Mao³, Q. Cen³, S. Yu¹, X. Xu¹. ¹Shanghai General Hospital, Shanghai, China; ²Huadong Hospital Affiliated to Fudan University, Shanghai, China; ³Shanghai Jiaotong University School of Medicine, Shanghai, China
- 3193 — B0193 Effect of Cataract Surgery on Retinal Vessel Diameter and Oxygen Saturation.** Gabriele Fuchsjaeger-Mayr¹, D. Schmid², U. W. Scheschy², K. Fondi², S. Rezar¹, G. Garhofer², S. Sacu¹. ¹Department of Ophthalmology, Medical University of Vienna, Vienna, Austria; ²Department of Clinical Pharmacology, Medical University of Vienna, Vienna, Austria ✕
- 3194 — B0194 Changes in choroidal blood flow and morphology after panretinal photocoagulation in eyes with severe nonproliferative diabetic retinopathy.** Yoshitaka Ueno, Y. Mikoshiba, K. Yamamoto, T. Iwase, H. Terasaki. Ophthalmology, Nagoya university, Nagoya, Japan
- 3195 — B0195 Changes in retinochoroidal blood flow and morphology on the macula and around optic nerve head after vitrectomy for epi-retinal membrane.** Norifumi Hirata, T. Iwase, m. kobayashi, K. Yamamoto, E. Ra, H. Terasaki. nagoya university, Nagoya, Japan
- 3196 — B0196 Effect of Flicker Stimulation on Optic Nerve Head Blood Flow Assessed by Laser Speckle Flowgraphy.** Takayuki Kamiya, S. Nakabayashi, t. yoshioka, Y. Song, M. Kawai, A. Yoshida. Asahikawa Medical University, Asahikawa, Hokkaido, Japan *CR, ✕

3197 — B0197 Hemifield visual field defect severity: relationship with OCT-A peripapillary and macular vessel density. Teresa Rolle, L. Dallorto, C. Lavia, S. Mellano, R. Nuzzi. Department of Surgical Sciences, Eye Clinic, Torino, Torino, Italy *CR

3198 — B0198 Retinal vessel diameter variations and their correlation to arterial blood pressure. Steffen Rieger¹, L. Lüken¹, D. Link¹, S. Dutz¹, S. Klee¹, D. Baumgarten^{2,1}. ¹Technische Universität Ilmenau, Ilmenau, Germany; ²University for Health Sciences, Medical Informatics and Technology, Hall in Tirol, Austria

3199 — B0199 Retinal vessel diameter measurement in multimodal imaging. Gerald Seidel¹, C. Singer¹, S. A. Herzog¹, G. Garhofer², L. Schmetterer^{2,3}. ¹Ophthalmology, Medical University of Graz, Graz, Austria; ²Medical University of Vienna, Vienna, Austria; ³Singapore Eye Center, Singapore, Singapore; ⁴Medical University of Graz, Graz, Austria

3200 — B0200 Variability of Vessel Caliber Measurement in En Face Optical Coherence Tomography Angiography Images. Joby Tsai, X. Zhang, B. Tracey, O. Saeedi. Department of Ophthalmology and Visual Sciences, University of Maryland School of Medicine, Baltimore, MD *CR

3201 — B0201 Oxytocin-induced Effects on Intraocular Pressure and Ocular Blood Flow. Barbara Bogner¹, C. Runge¹, A. Trost¹, F. Schrödl^{1,2}, A. Kaser-Eichberger^{1,2}, D. Bruckner¹, C. Strohmaier¹, H. A. Reitsamer¹. ¹Ophthalmology/Optomety, Paracelsus Medical University, Salzburg, Austria; ²Anatomy, Paracelsus Medical University, Salzburg, Austria

3202 — B0202 Timeline of retinal degeneration in a model of retinal ischemia. Marina Palmhof, V. Frank, E. Kortenhorn, J. Demuth, G. Stute, H. Dick, S. C. Joachim. Experimental Eye Research Institute, Ruhr-University Bochum, Bochum, Germany

3203 — B0203 Evaluation of a new pharmacologic strategy for Nrf2 activation for retinal ischemia-reperfusion injury. Elia J. Duh¹, M. Karlstetter², Z. Xu¹, J. Gong¹, H. Cho¹, J. Yang¹, H. Schirok², L. Schneider², M. Lobell², M. Schaefer², C. Terjung², K. Nassar². ¹Ophthalmology, Johns Hopkins Wilmer Eye Inst, Baltimore, MD; ²Bayer AG, Wuppertal, Germany

3204 — B0204 Neuroprotection of retinal ganglion cells via NMDA-dependent mechanism in the mouse non-arteritic anterior ischemic optic neuropathy (NAION) model. Symantas Ragauskas¹, A. Ziniauskaitė¹, S. Kaja^{1,2}, G. Kalesnykas¹. ¹Experimentica Ltd, Kuopio, Finland; ²Department of Ophthalmology, Loyola University Chicago, Maywood, IL *CR

3205 — B0205 A Novel Animal Model of Hypoxic-Ischemic Retinal Injury. Yu Chun Chen^{1,2}, A. Galstyan^{1,2}, J. Martinez^{1,2}, L. Luo¹, A. H. Kashani^{1,2}. ¹Department of Ophthalmology, University of Southern California Roski Eye Institute, Los Angeles, CA; ²University of Southern California Institution of Biomedical Therapeutics, Los Angeles, CA *CR

3206 — B0206 Effects of Dexamethasone on Hypoxia-Induced Retinal Edema. Makoto Inada¹, M. Itou², M. Takeuchi¹. ¹Ophthalmology, National Defense Medical College, Saitama-ken, Japan; ²anatomy, National Defense Medical College, Saitama, Japan

Exhibit Hall B0306-B0355

Tuesday, May 01, 2018 11:15 AM-1:00 PM

Retina

340 AMD imaging

Moderators: Nadia K. Waheed and Deeba Husain

3207 — B0306 How are fluorescence lifetimes of chorioretinal tissue in human donor eyes affected by fixation? Rowena Schultz¹, L. Sauer², C. A. Curcio³, D. Meller¹, M. Hammer¹. ¹Experimental Ophthalmology, Jena University Hospital, Jena, Germany; ²John A. Moran Eye Center, Salt Lake City, UT; ³University of Alabama at Birmingham, Birmingham, AL

3208 — B0307 Choroidal Vascularity Index in Geographic Atrophy secondary to dry Age Related Macular Degeneration. Jyotsna Maram¹, M. G. Nittala¹, S. Balasubramanian¹, S. Velaga¹, J. Chhablani², J. L. Haines^{4,5}, M. A. Pericak-Vance⁴, D. Stambolian⁶, S. R. Sadda^{1,2}. ¹Ophthalmology, Doheny Eye Institute, Alhambra, CA; ²Ophthalmology, David Geffen School of Medicine at UCLA, Los Angeles, CA; ³Ophthalmology, L.V.Prasad Eye Institute, Hyderabad, Telangana, India; ⁴Population and Quantitative health sciences, Case Western Reserve University, Cleveland, OH; ⁵Institute for human genomics, University of Miami Miller school of medicine, Miami, FL; ⁶Ophthalmology, John P Hussman Institute for Human Genomics, Miami, FL *CR

3209 — B0308 Intravitreal Bevacizumab Affects Retinal Oximetry in Patients with Exudative Age-related Macular Degeneration. Valgerdur D. Traustadottir¹, O. B. Olafsdottir^{1,2}, S. H. Hardarson², E. Stefansson^{1,2}. ¹Ophthalmology, Landspítali University Hospital of Iceland, Reykjavik, Iceland; ²University of Iceland, Reykjavik, Iceland *CR

3210 — B0309 Comparing Fundus Autofluorescence and Outer Retinal Thickness on Optical Coherence Tomography in Geographic Atrophy (GA). Diane Wang¹, J. Agee¹, S. Ayoub¹, R. Sacconi³, G. Querques³, R. Smith². ¹New York University School of Medicine, New York, NY; ²Ophthalmology, Mount Sinai School of Medicine, New York, NY; ³University Vita-Salute, Milan, Italy

3211 — B0310 High Resolution Imaging Mass Spectrometry of Human Donor Eyes with and without Age-Related Macular Degeneration (AMD). David Anderson², J. Messinger¹, N. H. Patterson², J. M. Spraggins², C. A. Curcio¹, K. L. Schey². ¹Department of Ophthalmology, University of Alabama, Birmingham, AL; ²Department of Biochemistry, Vanderbilt University, Nashville, TN *CR

3212 — B0311 Functional and structural findings measured by microperimetry and autofluorescence between wet and dry macular age related. Dalila Rodriguez¹, A. Ramirez². ¹Oftalmologia, Instituto Nacional De Rehabilitacion, Mexico City, Mexico City, Mexico; ²Retina Y Vitreo, Fundacion Hospital Nuestra Señora De La Luz, Mexico City, Mexico City, Mexico

3213 — B0312 Increased intraretinal radial reflectance (“retinal flare”) as an optical coherence tomographic biomarker for the diagnosis of retinal angiomatous proliferation. Rukiye Aydin^{1,2}, C. Durmaz Engin³, T. H. Tezel¹. ¹Ophthalmology, Columbia University, New York, NY; ²Ophthalmology, Medipol University, Istanbul, Turkey; ³Ophthalmology, Dokuz Eylul University, Izmir, Turkey

3214 — B0313 A Prediction Model for Risk of Progression to Late Age-related Macular Degeneration (AMD). Alauddin Bhuiyan¹, A. Govindaiah¹, R. Smith². ¹iHealthScreen Incorporation, New York, NY; ²Icahn School of Medicine at Mount Sinai, New York, NY *CR

3215 — B0314 Multimodal adaptive optics SLO/OCT imaging in eyes with geographic atrophy reveals the cellular status of the photoreceptor – retinal pigment epithelium complex. Tao Liu¹, Z. Liu², H. Jung¹, J. Liu¹, M. Droettboom³, C. A. Cukras¹, E. Y. Chew¹, W. T. Wong¹, D. Hammer², J. Tam¹. ¹National Eye Institute, National Institutes of Health, Bethesda, MD; ²Center for Devices and Radiological Health, U.S. Food and Drug Administration, Silver Spring, MD; ³Medical Science & Computing, Rockville, MD

3216 — B0315 Ten Years of Optical Coherence Tomography in Ophthalmology: Current and Future Use. Nikolas Pontikos^{1,2}, K. Basheer¹, K. U. Kortuem¹, K. Fasler¹, R. Chopra¹, S. K. Wagner¹, P. Patel¹, A. M. Dubis², K. Balaskas¹, P. A. Keane^{1,2}. ¹Moorfields Eye Hospital, London, United Kingdom; ²University College London, London, United Kingdom *CR

- 3217 — B0316 Choroidal Thickness Influences Green Emission Autofluorescence Component Intensity in Eyes with Geographic Atrophy Due to Age-Related Macular degeneration: A Color Fundus Autofluorescence Study.** ANA Pajtler Fonder^{1,2}, M. Cozzi¹, E. Borrelli³, V. Sarao⁴, P. Lanzetta⁴, S. R. Sadda³, G. Staurenghi¹. ¹Luigi Sacco Hospital, University of Milan, Department of Biomedical and Clinical Science, Milan, Italy; ²Eye Hospital, University Medical Center Ljubljana, Ljubljana, Slovenia, Ljubljana, Slovenia; ³Doheny Eye Institute, Doheny Image Reading Center, University of California, Los Angeles, CA; ⁴Department of Ophthalmology, University of Udine, Udine, Italy *CR
- 3218 — B0317 OCT angiography of type 1 and 2 CNV in exudative AMD under anti-VEGF therapy: Evaluation of a new quantitative method.** Henrik Faatz¹, M. Farecki¹, K. Rothaus¹, F. Gunnemann¹, M. Gutfleisch¹, A. Lommatzsch^{1,2}, D. Pauleikhoff^{1,2}. ¹Augenärzte am St. Franziskus Hospital Münster, Muenster, Germany; ²Dep. of Ophthalmology, University of Essen-Duisburg, Essen, Germany
- 3219 — B0318 Systemic Classification of Neovascular Age-related Macular Degeneration using Indocyanine Green Angiography: a Clinical Significance.** Kunho Bae^{2,1}, S. Noh², J. Kim², K. Kim², E. Kim², S. Yu². ¹Samsung Medical Center, Seoul, Korea (the Democratic People's Republic of); ²Ophthalmology, Kyung Hee University Hospital, Seoul, Korea (the Republic of)
- 3220 — B0319 Mature versus Immature Choroidal Neovascularisation on Optical Coherence Tomography Angiography: Associations with chronicity and treatment history.** Konstantinos Balaskas^{2,3}, T. M. Aslam^{1,3}, Z. Ali¹. ¹Medical Retina, Manchester Royal Eye Hospital, Manchester, England, United Kingdom; ²NIHR Biomedical Research Centre at Moorfields Eye Hospital and UCL Institute of Ophthalmology, London, United Kingdom; ³University of Manchester, Manchester, United Kingdom *CR
- 3221 — B0320 Multimodal retinal image analysis of de novo geographic atrophy development secondary to age-related macular degeneration.** Sarah Thiele¹, M. Pfaw¹, J. Nada², M. Fleckenstein¹, M. Schmid², F. G. Holz¹, S. Schmitz-Valckenberg¹. ¹Department of Ophthalmology, University of Bonn, Bonn, Germany; ²Institute for Medical Biometry, Informatics and Epidemiology, University of Bonn, Bonn, Germany *CR
- 3222 — B0321 Changes of OCTA Findings after treatment in Polypoidal Choroidal Vasculopathy.** Seung-Young Yu, J. Kim, S. Noh, K. Kim, K. Bae, E. Kim. Ophthalmology, Kyung Hee University, Seoul, Korea (the Democratic People's Republic of)
- 3223 — B0322 Impact of Choriocapillaris Perfusion on Multifocal Electroretinography in Intermediate Age-related Macular Degeneration Eyes.** Enrico Borrelli, A. Senatore, M. Palmieri, L. Mastropasqua. University G. D'Annunzio, Chieti, Italy
- 3224 — B0323 Geographic Atrophy Measurements in Fundus Autofluorescence versus Infrared Reflectance Imaging in Dry Age-related Macular Degeneration.** Nizar S. Abdelfattah¹, J. Sadda², Z. Wang², J. Hu², S. R. Sadda¹. ¹Ophthalmology, Doheny Eye Institute, Los Angeles, CA; ²Doheny Image Analysis Laboratory, Doheny Eye Institute, Los Angeles, CA *CR
- 3225 — B0324 Automated geographic atrophy detection in OCT volumes.** Qi Yang¹, Y. Dong¹, K. Tokuda³, T. Aimi³, M. Akiba³, J. Ruiz-Moreno², C. Reisman¹. ¹Research and Development, Topcon Healthcare Solutions, Oakland, NJ; ²Department of Ophthalmology, Castilla La Mancha University, Ciudad Real, Spain; ³Research and Development, Topcon Corporation, Tokyo, Japan *CR
- 3226 — B0325 Hyperspectral fundus imaging and automated dimensionality reduction in eyes with age-related macular degeneration.** Peter L. Nesper¹, M. Etemadi^{2,3}, J. A. Heller^{2,3}, A. Fawzi¹. ¹Ophthalmology, Northwestern University, Chicago, IL; ²Anesthesiology, Feinberg School of Medicine, Northwestern University, Chicago, IL; ³Biomedical Engineering, McCormick School of Engineering, Northwestern University, Evanston, IL
- 3227 — B0326 Cross-Sectional Study to Identify Prevalence of Subclinical Choroidal Neovascularization in Patients with Unilateral Exudative Age-Related Macular Degeneration at a Tertiary Retina Clinic.** Alison Treister, P. L. Nesper, A. Fayed, R. Mirza, M. Gill, A. Fawzi. Ophthalmology, Feinberg School of Medicine, Northwestern University, Chicago, IL *CR
- 3228 — B0327 Evaluating Retinal Angiomatous Proliferation With Optical Coherence Tomography Angiography.** LJUN SHEN, J. Mao. Wenzhou Medical University, Hangzhou, China
- 3229 — B0328 Incidence of Vascularized Drusen in Non-Exudative Age-related Macular Degeneration using Spectral Domain Optical Coherence Tomography (OCT) Angiography.** Chris Or¹, J. S. Heier², N. Saroj³, A. Alibhai¹, N. K. Waheed¹. ¹Ophthalmology, New England Eye Center/Tufts Medical Center, Boston, MA; ²Ophthalmic Consultants of Boston, Boston, MA; ³Regeneron, Tarrytown, NY
- 3230 — B0329 Functional imaging of the retinal pigment epithelium using high fidelity retinal densitometry.** Tom Margrain¹, S. Todd², A. M. Binns³, A. Gaffney¹, J. Fergusson¹, D. Henry², C. Jones¹, D. Melotte², C. Miller², D. Atkinson², A. Wood¹. ¹Cardiff University, Cardiff, United Kingdom; ²UK Astronomy Technology Centre, Edinburgh, United Kingdom; ³City, University of London, London, United Kingdom
- 3231 — B0330 Relevance and Validation of Optical Coherence Tomography based on Volumetric Measures in Age-Related Macular Degeneration.** Ali Lamin^{1,2}, J. D. Oakley³, A. M. Dubis^{1,2}, S. Lightman^{1,2}, S. Sivaprasad^{1,2}. ¹UCL Institute of Ophthalmology, London, United Kingdom; ²Moorfields Eye Hospital, London, United Kingdom; ³Voxeleron LLC, Pleasanton, CA *CR
- 3232 — B0331 Dynamics of hyperreflective foci shortly after anti-VEGF treatment in neovascular age-related macular degeneration.** Manuel Hermann, V. Stinilska, P. Enders, S. Fauser, L. Altay. Center of Ophthalmology, University of Cologne, Cologne, Germany *CR, ✎
- 3233 — B0332 Investigation of Outer Retinal Structure as Predictive Indicators of Age Related Macular Degeneration Progression.** Meriam Islam¹, A. Lamin^{1,2}, S. Houston^{1,3}, S. Sivaprasad^{1,3}, A. M. Dubis^{1,3}. ¹UCL Institute of Ophthalmology, London, United Kingdom; ²Moorfields Eye Hospital, London, United Kingdom; ³NIHR Moorfields Biomedical Research Centre, London, United Kingdom *CR
- 3234 — B0333 Multimodal imaging of hyperreflective retinal foci (HRF) in eyes with age-related macular degeneration (AMD) during progression to advanced stages.** Magdalena Baratsits^{1,2}, S. Sacu^{1,2}, U. Schmidt-Erfurth¹, A. Pollreisz^{1,2}. ¹Department of Ophthalmology, Medical University of Vienna, Vienna, Austria; ²Vienna Clinical Trial Center, Medical University of Vienna, Vienna, Austria
- 3235 — B0334 Lamellar Macular Holes in the Presence of Age-Related Macular Degeneration.** Lisa Yun^{1,2}, M. Farajzadeh², A. A. Francone², J. Hubschman². ¹David Geffen School of Medicine at UCLA, Los Angeles, CA; ²Retina Division, Stein Eye Institute, University of California Los Angeles, Los Angeles, CA *CR
- 3236 — B0335 Choriocapillaris Perfusion and Retinal Sensitivity in Areas Bordering Geographic Atrophy.** Nicholas Rinella¹, Q. Zhang², R. K. Wang², M. Deiner¹, D. M. Schwartz¹, T. Porco^{1,3}, J. L. Duncan¹. ¹Department of Ophthalmology, University of California San Francisco, San Francisco, CA; ²Department of Bioengineering, University of Washington, Seattle, WA; ³Francis I. Proctor Foundation, University of California San Francisco, San Francisco, CA *CR

3237 — B0336 Optimized human ocular tissue recovery and ex vivo multimodal imaging (MMI) for research in age-related macular degeneration (AMD). Jeffrey D. Messinger¹, J. KImble¹, A. Blake², K. Freund^{3,6}, T. Smith⁴, T. Ach³, C. A. Curcio¹. ¹Ophthalmology, Univ of Alabama at Birmingham, Birmingham, AL; ²Alabama Eye Bank, Birmingham, AL; ³Ophthalmology, University Hospital Würzburg, Würzburg, Germany; ⁴Mount Sinai School of Medicine, New York, NY; ⁵Vitreous Retina Macula Consultants of New York, New York, NY; ⁶Ophthalmology, LuEster T. Mertz Retinal Research Center, Manhattan Eye, Ear, and Throat Hospital, New York, NY *CR

3238 — B0337 Evaluation of the choriocapillaris in the fellow eyes of age related macular degeneration on the images of swept source OCT angiography. Yukinori Sugano, A. Ojima, R. Tomita, Y. Kato, T. Sekiryu. Ophthalmology, Fukushima Medical University, Fukushima city, Fukushima pref, Japan

3239 — B0338 Optical Coherence Tomography Angiographic Changes before Development of Exudative Age-related Macular Degeneration in Eyes with Non-exudative Neovascularization. Aditi Mohla^{1,2}, Y. Yanagi^{1,2}, S. Lee^{1,2}, R. Mathur^{1,2}, C. Chan^{1,2}, I. Yeol^{1,2}, T. Wong^{1,2}, C. Cheung^{1,2}. ¹Ophthalmology, Singapore National Eye Centre, Singapore, Singapore; ²Ophthalmology, Singapore Eye Research Institute, Singapore, Singapore

3240 — B0339 Quantitative Fundus Autofluorescence of the Junctional Zone in Geographic Atrophy due to Reticular Macular Disease (RMD). Jorge Orellana-Rios^{1,2}, S. Yokoyama^{1,3}, J. M. Agee⁴, Y. Tong¹, Y. Sakurada^{2,5}, K. Freund^{2,4}, R. Smith¹. ¹Ophthalmology, New York Eye and Ear Infirmary of Mount Sinai, New York, NY; ²Vitreous-Retina-Macula Consultants of New York, New York, NY; ³Ophthalmology, Japan Community Healthcare Organization Chukyo Hospital, Nagoya, Aichi, Japan; ⁴Ophthalmology, New York University School of Medicine, New York, NY; ⁵Ophthalmology, University of Yamanashi, Yamanashi, Japan *CR

3241 — B0340 The initial growth rate of geographic atrophy lesions appears to strongly predict future growth rate. Simon S. Gao¹, M. Friesenhahn², M. Chang², A. Coimbra¹, A. de Crespigny¹, J. Elstrott², J. Gow², P. Lai², E. C. Strauss². ¹Clinical Imaging, Genentech, Inc., South San Francisco, CA; ²Genentech, Inc., South San Francisco, CA *CR

3242 — B0341 Comparison of Geographic Atrophy lesion size measurements using RegionFinder and PAREXEL's Alice image analysis platform. Russell Burns, J. Carpenter. Parexel, Billerica, MA *CR

3243 — B0342 Spectral and lifetime characteristics of drusen autofluorescence in age-related macular degeneration. Martin Hammer, L. Zweifel, L. Kreilkamp, L. Sauer, R. Schultz, R. Augsten, D. Meller. Dept of Ophthalmology, University of Jena, Jena, Germany

3244 — B0343 Prevalence and Progression of Retinal Pigment Epithelium and Outer Retinal Atrophy in Patients With Neovascular Age-Related Macular Degeneration in the Fellow Eye. Maria Eleftheriadou¹, M. K. Gemenetzil¹, R. H. Guymer², P. Patel¹. ¹NIHR Biomedical Research Centre at Moorfields Eye Hospital NHS Foundation Trust and UCL Institute of Ophthalmology, London, United Kingdom; ²Department of surgery (Ophthalmology), Centre for Eye Research Australia, Royal Victorian Eye and Ear Hospital, University of Australia, Melbourne, Victoria, Australia *CR

3245 — B0344 Inter-Grader Repeatability of Geographic Atrophy Measurements from Infrared Reflectance Images. Jaya Satta¹, N. S. Abdelfattah², S. R. Satta^{2,3}, Z. Hu¹. ¹Doheny Image Analysis Laboratory, Doheny Eye Institute, Los Angeles, CA; ²Doheny Eye Institute, Los Angeles, CA; ³Ophthalmology, University of California - Los Angeles, Los Angeles, CA *CR

3246 — B0345 The association of choroidal thickness with response to intravitreal aflibercept injection in wet age related macular degeneration. Sung Jae Yang^{1,2}, S. Joe¹, C. LEE¹. ¹Ophthalmology, Gangneung Asan Hospital, Gangneung, Korea (the Republic of); ²Ulsan University, Ulsan, Korea (the Republic of)

3247 — B0346 Quantitative assessment of intraretinal hyperreflective foci in patients with intermediate age-related macular degeneration. Marco Nassisi, Y. Shi, M. S. Ip, S. R. Satta. Doheny Eye Institute, Los Angeles, CA *CR

3248 — B0347 Superficial retinal plexus reaction to intravitreal ocular medication in patients with nAMD assessed by SD- and SS-OCTA. Reinhard Told, A. Pollreis, G. S. Reiter, L. Wassermann, T. Mittermueller, G. Weigert, S. Sacu, U. Schmidt-Erfurth. Department of Ophthalmology and Optometr, Medical University of Vienna, Vienna, Austria *CR, ✕

3249 — B0348 Macular analysis by multi-contrast segmentation of retinal pigment epithelium and choroid by Jones-matrix OCT. Shinnosuke Azuma^{1,2}, S. Makita^{1,2}, Y. Ikuno^{3,2}, M. Miura^{4,2}, Y. Yasuno^{1,2}. ¹University of Tsukuba, Tsukuba, IBARAKI, Japan; ²Computational Optics and Ophthalmology Group, Tsukuba, Japan; ³Ikuno Eye Center, Osaka, Japan; ⁴Tokyo Medical University Ibaraki Medical Center, Ami, Japan *CR

3250 — B0349 Sensitivity and Specificity of Clinically Relevant Features on Fundus Photography, Optical Coherence Tomography, and Fluorescein Angiography to Diagnose Polypoidal Choroidal Vasculopathy. Voraporn Chaikitmongkol¹, P. Khunsongkiet¹, D. Patikulsila¹, M. Sachdeva², J. Kong², P. Chavengsakongkram¹, P. Winaikosol¹, C. Dejkriengkraikul¹, J. Choovuthayakorn¹, N. Watanachai¹, P. Kunavisarut¹, N. M. Bressler². ¹Department of Ophthalmology, Faculty of Medicine, Chiang Mai University, Amphur Muang Chiang Mai, Chiang Mai, Thailand; ²Wilmer Eye Institute, Johns Hopkins University School of Medicine, Baltimore, MD

3251 — B0350 New insights of polypoidal choroidal vasculopathy by direct intraoperative subretinal visualization using an ophthalmic endoscope. Sho Yokoyama^{2,1}, T. Kaga², J. Orellana-Rios^{3,1}, R. Smith¹, K. Ichikawa⁴. ¹Ophthalmology, New York Eye & Ear Infirmary of Mount Sinai, New York, NY; ²Ophthalmology, Japan Community Health Care Organization Chukyo Hospital, Nagoya, Aichi, Japan; ³Ophthalmology, University of Antofagasta, Antofagasta, Antofagasta, Chile; ⁴Chukyo Eye Clinic, Nagoya, Aichi, Japan

3252 — B0351 Long term Follow up of non-fibrotic scars in the Comparison of Age-related Macular Degeneration Treatments Trials (CATT). Ebenezer Daniel¹, B. J. Kim¹, W. Pan¹, J. E. Grunwald¹, G. Ying¹, C. A. Toth², G. J. Jaffe², D. F. Martin³, M. G. Maguire¹. ¹Ophthalmology, University of Pennsylvania, Philadelphia, PA; ²Duke University, Durham, NC; ³Cole Eye Institute, Cleveland, OH *CR, ✕

3253 — B0352 Choroidal changes may predict neovascular activity in exudative age related macular degeneration. Alessandro Invernizzi^{1,2}, E. Benatti³, M. Cozzi¹, S. Erba¹, S. Vaishnavi⁴, K. Vupparaboina⁴, G. Staurenghi¹, J. Chhablani⁴, M. C. Gillies², F. Viola³. ¹Eye Clinic, University of Milan, North Sydney, New South Wales, Australia; ²University of Sydney, Sydney, New South Wales, Australia; ³Department of Clinical Sciences and Community Health, Ophthalmological Unit, IRCCS-Cà Granda Foundation – Ospedale Maggiore Policlinico, University of Milan, Milan, Italy; ⁴L V Prasad eye Institute, Hyderabad, India *CR

3254 — B0353 Early Detection of Silent Choroidal Neovascular Membrane in Age-Related Macular Degeneration By Optical Coherence Tomography Angiography. Ching J. Chen, J. Burnham. Univ of Mississippi Med Center, Jackson, MS

3255 — B0354 Retinal vascular structure independently predicts initial treatment-response in neovascular age-related macular degeneration. Kathrine Leth-Møller¹, D. B. Jakobsen¹, A. Stage Vergmann¹, T. Lee Torp¹, E. Stefansson², T. Peto³, J. Grauslund¹. ¹Odense University Hospital, Odense C, Denmark; ²Department of Ophthalmology, National Hospital Reykjavik, Reykjavik, Iceland; ³School of Medicine, Dentistry and Biomedical Sciences, Queens University Belfast, Belfast, Ireland *CR, ✕

3256 — B0355 Evaluation of focal damage of retinal pigment epithelium layer in retinal pigment epithelium detachment by polarization sensitive optical coherence tomography. Masahiro Miura¹, S. Makita², Y. Yasuno², R. Mihara¹, T. Mino³, T. Yamaguchi³, S. Sugiyama⁴, T. Iwasaki¹, H. Goto⁵. ¹Dept of Ophthalmology, Tokyo Med Univ, Ibaraki Med Ctr, Inashiki, IBARAKI, Japan; ²Computational Optics Group, University of Tsukuba, Tsukuba, Ibaraki, Japan; ³Topcon, Tokyo, Japan; ⁴Tomey, Nagoya, Japan; ⁵Ophthalmology, Tokyo Medical University, Tokyo, Japan *CR

Exhibit Hall B0356-B0371

Tuesday, May 01, 2018 11:15 AM-1:00 PM

Retina

341 AMD basic research

Moderator: Michelle Grunin

3257 — B0356 Characterization & evaluation of ocular bisretinoids in age matched human retina. Ankita Kotnala¹, S. Senthilkumari², N. Halder¹, A. Kumar³, T. Velpandian¹. ¹Ocular Pharmacology, Aii India Institute Of Medical Sciences, Delhi, New Delhi, India; ²Ocular Pharmacology, Aravind Medical Research Foundation, Dr. G. Venkataswamy Eye Research Institute,, India., Madurai, Madurai, India; ³Ophthalmology, Aii India Institute Of Medical Sciences, Delhi, New Delhi, India

3258 — B0357 Identification and Characterization of Spontaneous Age-Related Macular Degeneration in a Colony of Aged Non-Human Primates by Optical Coherence Tomography. Chi-Wai Wong¹, L. Teng¹, W. Liu¹, X. Zhao², Y. Li², J. Luo¹. ¹HZ-Biosciences, Guangzhou, Guangdong, China; ²Zhongshan Ophthalmic Center, Guangzhou, China *CR

3259 — B0358 Transcriptome and morphological analysis of endothelial cells co-cultured with retinal pigment epithelial cells. Victoria Tovell, B. Nommiste, A. F. Carr, L. daCruz, P. J. Coffey. University College London, London, United Kingdom

3260 — B0359 Rapid-aging Xpg^{-/-} mice model age-related retinal inflammation. Faye M. Drawnel¹, O. O'Leary¹, T. Grossenbacher¹, L. Schwander¹, C. Willburger¹, W. Riboulet², W. Vermeij³, J. H. Hoeijmakers^{4,5}, R. H. Foxton¹, A. Jayagopal¹, U. F. Luhmann¹. ¹Pharma Research and Early Development, F. Hoffmann-LaRoche Ltd., Basel, Switzerland; ²F. Hoffmann LaRoche AG, Basel, Switzerland; ³Prinses Maxima Center for Pediatric Oncology, Utrecht, Netherlands; ⁴Erasmus MC, Rotterdam, Netherlands *CR

3261 — B0360 Co-transplantation of RPE and photoreceptors rescues vision in a mouse model of advanced retinal degeneration. Nikolaos Mitrousis¹, S. Hacibekiroglu^{2,3}, K. Mamia¹, Z. Zhu¹, B. Ballarin³, P. Poon⁴, V. A. Wallace⁵, Y. Sauve⁶, A. Nagy², D. van der Kooy^{7,3}, M. S. Shoicher^{4,1}. ¹Institute of Biomaterials and Biomedical Engineering, University of Toronto, Toronto, Ontario, Canada; ²Lunenfeld-Tanenbaum Research Institute, University of Toronto, Toronto, Ontario, Canada; ³Institute of Medical Science, University of Toronto, Toronto, Ontario, Canada; ⁴Chemical Engineering and Applied Chemistry, University of Toronto, Toronto, Ontario, Canada; ⁵Ophthalmology and Vision Science, Krembil Research Institute, University of Toronto, Toronto, Ontario, Canada; ⁶Department of Ophthalmology, University of Alberta, Edmonton, Alberta, Canada; ⁷Molecular Genetics, University of Toronto, Toronto, Ontario, Canada

3262 — B0361 Efficacy of a Biodegradable Affibercept-loaded Microsphere-Hydrogel Drug Delivery System in a Laser-induced Choroidal Neovascularization Rat Model. Wenqiang Liu¹, A. Puskar¹, W. F. Mieler², J. J. Kang-Mieler¹. ¹Biomedical Engineering, Illinois Institute of Technology, Chicago, IL; ²Ophthalmology and Visual Sciences, University of Illinois at Chicago, Chicago, IL *CR

3263 — B0362 Mathematical Model of Fluid and Ion Transport across the Retinal Pigment Epithelium. Mariia Dvoriashyna¹, A. J. Foss², E. A. Gaffney³, O. E. Jensen⁴, R. Repetto¹. ¹Department of Civil, Chemical and Environmental Engineering, University of Genoa, Genoa, Italy; ²Department of Ophthalmology, Nottingham University Hospitals NHS Trust, Nottingham, United Kingdom; ³Wolfson Centre for Mathematical Biology, Mathematical Institute, University of Oxford, Oxford, United Kingdom; ⁴School of Mathematics, University of Manchester, Manchester, United Kingdom

3264 — B0363 An essential role for angiopoietin-Tie2 signaling in wet age-related macular degeneration (AMD). Jaeryung Kim^{1,2}, J. Park³, H. G. Augustin⁴, Y. Kubota⁵, T. Chung^{1,6}, W. Oh³, G. Koh^{2,7}. ¹Department of Ophthalmology, Samsung Medical Center, Seoul, Korea (the Republic of); ²Graduate School of Medical Science and Engineering, Korea Advanced Institute of Science and Technology, Daejeon, Korea (the Republic of); ³Mechanical Engineering, Korea Advanced Institute of Science and Technology, Daejeon, Korea (the Republic of); ⁴Division of Vascular Oncology and Metastasis, German Cancer Research Center, DKFZ-ZMBH Alliance, Heidelberg, Germany; ⁵The Laboratory of Vascular Biology, School of Medicine, Keio University, Tokyo, Japan; ⁶School of Medicine, Sungkyunkwan University, Seoul, Korea (the Republic of); ⁷Center for Vascular Research, Institute for Basic Science (IBS), Daejeon, Korea (the Republic of)

3265 — B0364 Affibercept-loaded Microsphere-hydrogel Drug Delivery System in a Nonhuman Primate Model. Jennifer J. Kang-Mieler¹, S. Kim², Z. Wang³, W. Liu¹, G. Yiu³, W. F. Mieler⁴, S. M. Thomasy^{2,3}. ¹Dept of Biomedical Engineering, Illinois Institute of Technology, Chicago, IL; ²Dept of Surgical & Radiological Sciences, University of California-Davis, Davis, CA; ³Dept of Ophthalmology & Vision Science, University of California-Davis, Davis, CA; ⁴Dept of Ophthalmology & Visual Sciences, University of Illinois at Chicago, Chicago, IL *CR

3266 — B0365 Secretogranin III as a novel target for anti-angiogenic therapy of choroidal neovascularization. Wei Li¹, M. LeBlanc¹, W. Wang¹, Y. Ji¹, D. Liu², X. Zhang², H. Tian³. ¹Ophthalmology, Univ of Miami Miller Sch of Med, Miami, FL; ²Ophthalmology, Xuanwu Hospital, Beijing, China; ³Everglades Biopharma, LLC, Miami, FL

3267 — B0366 Modeling outer blood-retinal barrier and choroidal neovascularization in vitro. Noo Li Jeon¹, M. Chung¹, S. Lee¹, B. Lee², J. Kim². ¹Mechanical Engineering, Seoul National University, Seoul, Korea (the Republic of); ²Department of Ophthalmology, Seoul National University College of Medicine, Seoul, Korea (the Republic of)

3268 — B0367 PU-91, a mitochondria-stabilizing drug, rescues AMD ARPE-19 cybrid cells; implications for macular degeneration therapeutics. Sonali Nashine¹, M. Chwa¹, S. Atilano¹, S. Subramaniam², H. Federoff³, A. B. Nesburn^{1,4}, B. D. Kuppermann¹, C. M. Kenney^{1,5}. ¹Ophthalmology, Gavin Herbert Eye Institute, University of California Irvine, Irvine, CA; ²Neurology, University of California Irvine, Irvine, CA; ³Vice Chancellor, Health Affairs, University of California Irvine, Irvine, CA; ⁴Cedars-Sinai Medical Center, Los Angeles, CA; ⁵Pathology and Laboratory Medicine, University of California Irvine, Irvine, CA *CR

3269 — B0368 A small biomimetic collagen IV derived peptide reduces leakage and suppresses ocular neovascularization in mouse models. Raquel Formica², V. E. Lorenc², N. B. Pandey¹, J. Shen², J. Kim¹, A. S. Popel¹, J. Green^{1,2}, P. A. Campochiaro². ¹Biomedical Engineering and Ophthalmology, Johns Hopkins University School of Medicine, Baltimore, MD; ²Wilmer Eye Institute, Johns Hopkins University School of Medicine, Baltimore, MD *CR

3270 — B0369 Expression of Interferon-γ Inducible Chemokines, IP-10 and MIG, by CD163+/CD68+ Monocytes in Clinical Age-related Macular Degeneration. Tyyteli Turunen, M. Shatos, G. C. Teague, F. Absar, K. Lashkari. Schepens Eye Research Institute, Boston, MA

3271 — B0370 Relationship between VEGF and the Kallikrein-Kinin system in a rat model of laser-induced choroidal neovascularization. Olivier Fontaine¹, S. Hachana², R. Couture², E. Vaucher³, M. R. Lesk¹. ¹Médecine, Université de Montréal, Montréal, Québec, Canada; ²Pharmacology, Université de Montréal, Montréal, Québec, Canada; ³École d'optométrie, Université de Montréal, Davis, CA

3272 — B0371 Hypoxia of Retina Pigment Epithelium Induces Type 1 CNV-like Morphology within 3D Engineered iPSC-RPE/*Choroid* Tissues. Christopher Hampton, M. Song, R. Dejene, D. Bose, R. Quinn, K. Bharti. National Eye Institute, Bethesda, MD

Exhibit Hall C0067-C0100

Tuesday, May 01, 2018 11:15 AM-1:00 PM

Cornea

342 Dry eye non-clinical I

Moderators: Uk Jegal and Jia Yin

3273 — C0067 Peripheral Latent Sensitization Masks Chronic Ocular Pain. Romulo Albuquerque¹, J. Cho¹, N. Bell¹, G. Botzet¹, P. Vora¹, T. Brad². ¹Ophthalmology, University of Kentucky, Lexington, KY; ²Physiology, University of Kentucky, Lexington, KY *CR

3274 — C0068 A New Transillumination Meibography System for Mice as an Animal Model of Meibomian Gland Dysfunction (MGD). Ho Sik Hwang^{1,2}, E. R. Mikula², X. Yile², S. Bradford², D. Brown², J. V. Jester². ¹Chuncheon Sacred Hospital, Chuncheon, Korea (the Republic of); ²Gavin Herbert Eye Institute, Irvine, CA

3275 — C0069 An Elastin-like Polypeptide-based carrier for Cyclosporine A. Hao Guo¹, M. Shah¹, S. F. Hamm-Alvarez^{2,1}, J. MacKay^{1,3}. ¹Department of Pharmacology and Pharmaceutical Sciences, University of Southern California, Los Angeles, CA; ²Department of Ophthalmology, University of Southern California, Los Angeles, CA; ³Department of Biomedical Engineering, University of Southern California, Los Angeles, CA *CR

3276 — C0070 Evaluation of Sex Hormone and Cholesterol Sterols in Human Tears by Mass Spectroscopy. Kenneth G. Ooi¹, M. Rahimi-Oztañ¹, N. Proschogo², P. Khoo¹, S. L. Watson¹. ¹Save Sight Institute, Sydney, New South Wales, Australia; ²School of Chemistry, University of Sydney, Sydney, New South Wales, Australia

3277 — C0071 Trehalose Protects Human Corneal Epithelial Cells from Inflammation by Promoting Autophagic Flux via TFEB Activation. Ning Gao^{1,2}, Z. Liu^{1,2}, X. Chen^{1,3}, D. Chen^{1,3}, S. C. Pflugfelder¹, D. Li¹. ¹Ocular Surface Center, Department of Ophthalmology, Baylor College of Medicine, Houston, TX; ²Ophthalmology, First Affiliated Hospital, Xi'an Jiaotong University, Xi'an, Shaanxi, China; ³Optometry and Ophthalmology, Wenzhou Medical University, Wenzhou, China *CR

3278 — C0072 Estimation of visual acuity from dynamic wavefront tear film measurement. Daniel R. Neal¹, T. D. Raymond¹, W. Xiong¹, K. Dhamdhere². ¹Research and Development, AMO WaveFront Sciences, LLC, Albuquerque, NM; ²Clinical Research, AMO Development Inc, Milpitas, CA *CR

3279 — C0073 Influence of benzylalkonium chloride on Tear Film Lipid Layer stability: a molecular level view by employing in silico modeling. Lukasz Cwiklik¹, K. Riedlova¹, A. Melcrova¹, A. Olzynska¹, P. Daull¹, J. Garrigue². ¹Institute of Physical Chemistry, Czech Academy of Sciences, Prague, Czechia; ²Novagali Innovation Center, Santen SAS, Evry, France *CR

3280 — C0074 Evaluation of the protective effect of sodium thiosulfate (STS) on a Dry Eye Disease experimental model on C57BL/6J mice. Roberto Gonzalez-Salinas¹, L. F. Hernández-Zimbrón¹, R. Gullias-Cañizo¹, L. Ochoa-de-la-Paz¹, R. Zamora-Alvarado¹, F. Rubio-Tijerina², H. Quiroz-Mercado¹. ¹Research Department, Asociación para Evitar la Ceguera en México, Mexico City, Mexico; ²Anterior Segment Surgery Department, Asociación para Evitar la Ceguera en México, Mexico City, Mexico *CR

3281 — C0075 Role of ion channels in the response of conjunctival goblet cells to dry eye. Donald G. Puro. Ophthalmology, Univ of Michigan-Kellogg Eye Ctr, Ann Arbor, MI

3282 — C0076 Evaluating the lubricating effect of semifluorinated alkanes on the ocular surface. Priyanka Agarwal¹, D. Khun¹, S. Kroesser², K. Fischer², F. S. Wells³, G. Willmott³, J. P. Craig⁴, I. D. Ruppenthal¹. ¹Buchanan Ocular Therapeutics Unit, Department of Ophthalmology, New Zealand National Eye Centre, The University of Auckland, Auckland, New Zealand; ²Novaliq GmbH, Heidelberg, Germany; ³Department of Physics, Faculty of Sciences, The University of Auckland, Auckland, New Zealand; ⁴Department of Ophthalmology, New Zealand National Eye Centre, Faculty of Medical and Health Sciences, The University of Auckland, Auckland, New Zealand *CR

3283 — C0077 High-fat diet induces dry eye-like ocular surface damages by promoting CD4⁺ T cells-mediated inflammation. Yang Wu, J. Bu, W. Li, X. Zhang, Z. Liu. Eye Institute of Xiamen University, Xiamen, China

3284 — C0078 Thirty-minute ocular application of benzalkonium chloride (BAK) leads to a disappearance of neuronal spikes associated with a marked fragmentation of tight junctions and corneal nerves in rodents: implications for dry eye disease. Evgenia Ivakhnitskaia¹, K. Mizerska², V. Dallacasagrande², V. H. Guaiquil¹, M. Rosenblatt¹, H. Hirata². ¹Ophthalmology and Visual Sciences, University of Illinois-Chicago, Chicago, IL; ²Ophthalmology, Weill Cornell Medical College, New York City, NY

3285 — C0079 Untargeted Mass Spectrometry Analysis of Lipids in Human Tears. Jianzhong CHEN, K. K. Nichols, J. J. Nichols. University of Alabama at Birmingham, Birmingham, AL

3286 — C0080 Severe dry eye disease in aged mice is associated with an expanded memory Th17 cell response and higher frequencies of IFN- γ -expressing Th17 Cells. William Foulsham^{1,2}, Y. Chen¹, T. Nakao¹, M. Yu¹, S. Chauhan¹, R. Dana¹. ¹Mass. Eye & Ear Infirmary / Harvard Medical School, Cambridge, MA; ²Institute of Ophthalmology, University College London, London, United Kingdom

3287 — C0081 Pre-clinical efficacy of OCU300 nanoemulsion for the treatment of ocular graft versus host disease (oGVHD). Rasappa Arumugham¹, G. Somasekhar¹, A. K. Upadhyay¹, G. Kalesnykas², S. Kaja^{2,3}, S. Jain⁴. ¹Research & Development, Ocugen, Malvern, PA; ²Research and Development, Experimentica Ltd, Kuopio, Finland; ³Department of Ophthalmology, Loyola University Chicago, Maywood, IL; ⁴Department of Ophthalmology & Visual Sciences, University of Illinois at Chicago, Chicago, IL *CR

3288 — C0082 The Efficiency of Cyclosporin A-delivery Contact Lens using Supercritical Fluid Penetration Technique in Dry Eye. Jung-Han Choi¹, Y. Li¹, J. Choi¹, M. Moon², H. Ju³, W. Choi¹, K. Yoon¹. ¹Department of Ophthalmology, Chonnam National University Medical School and Hospital, Gwangju, Korea (the Republic of); ²Nano Bio Research Center, Gwangju, Korea (the Republic of); ³Winis Co, Gwangju, Korea (the Republic of)

3289 — C0083 A standardized extract of *Rhynchosia volubilis* ameliorates ovariectomy (OVX)-induced dry eye in mice. Kyung-A Kim^{1,2}, C. LEE³, T. Kang^{1,4}, G. Yoo¹, S. Yang³, S. Jung^{1,2}. ¹Natural Products Research Center, Korea Institute of Science and Technology, Gangneung, Gangwon, Korea (the Republic of); ²Division of Bio-Medical Science & Technology, Korea University of Science and Technology (KIST) School, Seoul, Korea (the Republic of); ³Department of Ophthalmology, University of Ulsan, Gangneung Asan Hospital, Gangneung, Gangwon, Korea (the Republic of); ⁴Department of Marine bio-technology, Gangnung-Wonju National University, Gangneung, Gangwon, Korea (the Republic of)

- 3290 — C0084 Unilateral corneal nerve cutting induces bilateral dry eye disease in a murine model.** Jin Suk Ryu^{2,1}, H. Lee^{2,1}, H. Jeong^{2,1}, C. Yoon^{2,1}, M. Kim^{2,1}. ¹Laboratory of Ocular Regenerative Medicine and Immunology, Biomedical Research Institute, Seoul National University Hospital, Seoul, Korea (the Republic of); ²Department of Ophthalmology, Seoul National University Hospital, Seoul, Korea (the Republic of)
- 3291 — C0085 Loss of RXR α signaling leads to increased antigen presenting cells and reduced goblet cells in conjunctiva.** Rodrigo G. de Souza, Y. Xiao, C. S. De Paiva, S. C. Pflugfelder. Baylor College of Medicine, Houston, TX *CR
- 3292 — C0086 Oncostatin M (OSM) Contributes to Corneal Epitheliopathy in Tear Deficient Dry Eye Disease due to Chronic ocular Graft-Vs-Host Disease (oGVHD).** Christine Mun, S. An, I. Raju, B. Surenkhuu, S. Sinha, P. Wu, A. Pradeep, A. Ahn, J. Kwon, A. Lopez, S. Jain. Ophthalmology & Visual Sciences, University of Illinois at Chicago, Chicago, IL *CR
- 3293 — C0087 Sub-Anticoagulant Dose Heparin is a Potential Therapy for Tear Deficient Dry Eye Disease in patients with ocular Graft-Vs-Host Disease (oGVHD).** SEUNGWON AN, I. Raju, B. Surenkhuu, S. Sinha, P. Wu, A. Ahn, A. Pradeep, J. Kwon, A. Lopez, C. Mun, S. Jain. Ophthalmology & Visual Sciences, University of Illinois at Chicago, Chicago, IL *CR
- 3294 — C0088 MUC16 Regional Conjunctival Expression on the Ocular Surface.** Anna F. Ablamowicz, J. J. Nichols. School of Optometry, University of Alabama at Birmingham, Irondale, AL
- 3295 — C0089 Comparison of 0.1%, 0.18%, and 0.3% Hyaluronic Acid Eye Drops in the Treatment of Experimental Dry Eye.** In-Cheon You¹, Y. Li², Y. Song¹, J. Choi², K. Yoon². ¹Department of Ophthalmology, Chonbuk National University Hospital, Jeonju, Jeonbuk, Korea (the Republic of); ²Chonnam National University Hospital, Gwangju, Korea (the Republic of)
- 3296 — C0090 Effects of topical mucolytic agents on the Tear and Ocular Surface: a mucin-deficient dry eye model.** Jong Suk Song, X. Li, B. Kang, Y. Eom, H. Kim. Ophthalmology, Korea University College of Medicine, Seoul, Korea (the Democratic People's Republic of)
- 3297 — C0091 Exosomes Derived from Mesenchymal Stem/stromal Cells Protect the Ocular Surface in the mouse model of Sjögren's Syndrome.** Min Joung Lee¹, J. Ryu², R. Lee⁴, J. Oh². ¹Ophthalmology, Hallym University Sacred Heart Hospital, Anyang, Gyeonggi-do, Korea (the Republic of); ²Laboratory of Ocular Regenerative Medicine and Immunology, Biomedical Research Institute, Seoul National University Hospital, Seoul, Korea (the Republic of); ³Ophthalmology, Seoul National University Hospital, Seoul, Korea (the Republic of); ⁴Institute for Regenerative Medicine, Texas A&M Health Science Center College of Medicine at Scott and White, Temple, TX
- 3298 — C0092 Interleukin-6 is Responsible for Regulatory T cell Dysfunction in Dry Eye Disease.** Yukako Taketani¹, M. Yu^{2,1}, Y. Chen¹, R. Dana¹. ¹Schepens Eye Research Institute, Boston, MA; ²Department of Ophthalmology, Sichuan Academy of Medical Sciences & Sichuan Provincial People's Hospital, Chengdu, Sichuan, China
- 3299 — C0093 Sleep deprivation induces dry eye through inhibition of PPAR α expression in corneal epithelium.** Liying Tang, Z. Liu, Y. Chen. Eye Institut of Xiamen University, Xiamen, China
- 3300 — C0094 PPAR- α agonist Fenofibrate Suppressed the formation of ocular surface squamous metaplasia induced by topical benzalkonium chloride.** Huan He, r. zong, H. He, T. Zhou, y. zhou, L. Zhirong, Z. Liu. Eye Institute & Affiliated Xiamen Eye Center of Xiamen University, Xiamen, Fujian, China
- 3301 — C0095 Effect of diabetes mellitus on corneal crystallins.** Judy Weng, A. Barbarino, A. Sharma. Chapman University School of Pharmacy, Irvine, CA
- 3302 — C0096 Artificial tear with *in situ* gelling properties for the treatment of dry eye disease.** Duygu Acar¹, I. T. Molina-Martínez^{1,2}, J. J. López-Cano¹, J. M. Benítez Del Castillo^{2,3}, R. Herrero-Vanrell^{1,2}. ¹Innovation, Therapy and Pharmaceutical Development in Ophthalmology Research Group (InnOftal), Department of Pharmacy and Pharmaceutical Technology, Faculty of Pharmacy, Complutense University of Madrid, Madrid, Spain; ²Sanitary Research Institute of the San Carlos Clinical Hospital (IdISSC) and the Ocular Pathology National Net (OFTARED) of the Institute of Health Carlos III, Madrid, Spain; ³Ocular Surface and Inflammation Unit, San Carlos Clinical Hospital, Madrid, Spain
- 3303 — C0097 Development of an ex-vivo animal model to evaluate novel pharmaceutical approaches to Dry Eye Disease management.** Francesco Menduni^{1,2}, T. Ipek^{1,2}, L. N. Davies¹, A. Fratini¹, J. S. Wolffsohn¹. ¹School of Life and Health Science, Aston University, Birmingham, United Kingdom; ²Optics and Optometry, Complutense University of Madrid, Madrid, Spain
- 3304 — C0098 Surfactant protein H is part of the tear film, lowers surface tension, is increased in dry eye disease and accelerates corneal wound healing.** Friedrich P. Paulsen¹, N. Hartjen¹, S. Beilicke¹, F. Garreis¹, C. Jacobi^{3,5}, A. Sahin⁴, D. Holland², L. Bräuer¹, M. Schicht¹. ¹Anatomy II, Friedrich Alexander Univ, Erlangen, Germany; ²Eye Clinic Bellevue, Kiel, Germany; ³Ophthalmology, Friedrich Alexander University Erlangen-Nürnberg, Erlangen, Germany; ⁴Ophthalmology, Koc University, Istanbul, Turkey; ⁵Augenärzte am Tibarg, Hamburg, Germany
- 3305 — C0099 Comparison of NOD versus NOR Mice as Mouse Models of Autoimmune Dacryoadenitis.** Yaping Ju¹, S. R. Janga², W. Klinngam¹, M. C. Edman², S. F. Hamm-Alvarez². ¹Department of Pharmacology and Pharmaceutical Sciences, School of Pharmacy, University of Southern California, Los Angeles, CA; ²Department of Ophthalmology, Roski Eye Institute, Keck School of Medicine, University of Southern California, Los Angeles, CA
- 3306 — C0100 Metagenomics approach to the human conjunctival microbiome.** Louis Tong^{1,2}, A. Hou^{2,3}, F. Constancias⁴, L. Yang⁴, S. Kjelleberg^{4,5}. ¹Cornea and External Eye Disease Service, Singapore National Eye Ctr, Singapore, Singapore; ²Singapore Eye Research Institute, Singapore, Singapore; ³Duke-NUS Medical School, Singapore, Singapore; ⁴Singapore Center for Environmental Life Sciences Engineering, Nanyang Technological University, Singapore, Singapore; ⁵University of New South Wales, Sydney, New South Wales, Australia

Exhibit Hall C0149-C0184

Tuesday, May 01, 2018 11:15 AM-1:00 PM

Cornea

343 Corneal Neovascularization and Immunology

Moderators: Sunil Chauhan and Daniel R. Saban

- 3307 — C0149 The effect of Anti-CD80/86 antibody on regulatory T cells in murine corneal transplantation.** Keiichi Fujimoto¹, T. Inomata¹, K. Uchida², Y. Okumura¹, A. Murakami¹. ¹Ophthalmology, Juntendo University School of Medicine, Tokyo, Japan; ²Atopy Research Center, Tokyo, Japan
- 3308 — C0150 Rho-Kinase Inhibitor Ripasudil suppresses dendritic cell maturation in murine corneal transplantation.** maria miura¹, T. Inomata¹, M. Okano¹, K. Fujimoto¹, Y. Okumura¹, T. Shiang², T. Funaki¹, A. Murakami¹. ¹Juntendo University, Tokyo, Japan; ²Orange Park Medical Center, Jacksonville, FL *CR
- 3309 — C0151 Role of Resident Dendritic Cells on Corneal Cold Thermoreceptor Function.** Yashar Seyed-Razavi¹, L. Rincon Frutos², C. Luna Garcia², A. Inigo-Portugues², M. Acosta², C. Belmonte², J. Gallar², P. Hamrah¹. ¹Ophthalmology, Tufts Medical Center, Boston, MA; ²Instituto de Neurociencias, Alicante, Spain
- 3310 — C0152 Exosomes from corneal mesenchymal stem cells modulate the immunophenotype of macrophages.** Ali R. Djalilian¹, J. Kink², M. Eslani¹, R. Dana³, P. Hematti². ¹Ophthalmology, Illinois Eye and Ear Infirmary, Chicago, IL; ²University of Wisconsin, Madison, WI; ³Schepens Eye Research Institute, Harvard University, Boston, MA

3311 — C0153 Use of Post-Transplant Cyclophosphamide Therapy in High Risk Corneal Graft Transplantation: A New Strategy to Prolong Corneal Allograft Survival. Robert Levy^{2,1}, C. Lightbourn², Y. Wang¹, C. Bader², S. Cospel², B. Pfeiffer², V. L. Perez¹. ¹Ophthalmology, University of Miami Miller School of Medicine, Miami, FL; ²Microbiology and Immunology, University of Miami School of Medicine, Miami, FL; ³Pediatrics, University of Miami School of Medicine, Miami, FL *CR

3312 — C0154 Effects of a Topical Vitamin D Analog on Experimental Dry Eye. Rose Y. Reins¹, A. M. McDermott², R. L. Redfern¹. ¹College of Optometry, Univ of Houston, Houston, TX; ²Department of Applied Sciences, Northumbria University, Newcastle upon Tyne, United Kingdom

3313 — C0155 Tear leukocyte phenotyping in meibomian gland dysfunction by large parameter flow cytometry. Daniel R. Saban, N. Reyes, R. Mathew, C. Yu, J. Kalnitsky, V. L. Perez, P. Gupta. Ophthalmology, Immunology, Duke University School of Medicine, Durham, NC *CR

3314 — C0156 Suppressed Interleukin-27 Signaling Aggravates Pollen-induced Allergic Inflammation via T Cell Dysregulation by Imbalanced STAT1/STAT6 Activation. De-Quan Li¹, X. Chen^{1,2}, S. C. Pflugfelder¹, R. Deng^{1,2}, X. Hua¹, W. Qin¹, N. Gao¹. ¹Ocular Surface Center, Department of Ophthalmology, Baylor College of Medicine, Houston, TX; ²School of Optometry and Ophthalmology, Wenzhou Medical University, Wenzhou, China

3315 — C0157 Mechanisms of Action of the Leukocyte Function-Associated Antigen-1 (LFA-1) Antagonist Lifitegrast in Dry Eye Disease (DED). Gustavo Ortiz¹, V. G. Sendra¹, A. Jamali¹, P. Hamrah^{1,2}. ¹Center for Translational Ocular Immunology, Department of Ophthalmology, Tufts Medical Center, BOSTON, MA; ²Department of Ophthalmology, Cornea Service, New England Eye Center, BOSTON, MA *CR

3316 — C0158 Mast cells initiate early recruitment of neutrophils following corneal injury. Sharad Mittal, S. Sahu, M. Li, A. Amouzegar, W. Foulsham, S. Chauhan. Schepens Eye Research Institute, Massachusetts Eye and Ear Infirmary, Department of Ophthalmology, Harvard Medical School, Boston, MA

3317 — C0159 AAV vector-mediated HLA-G expression to prevent corneal transplant rejection. Brian C. Gilger¹, L. Conatser^{2,3}, J. H. Salmon¹, R. Davis², M. Hirsch^{2,3}. ¹Clinical Sciences, North Carolina State University, Raleigh, NC; ²Ophthalmology, University of North Carolina, Chapel Hill, NC; ³Gene Therapy Center, University of North Carolina, Chapel Hill, NC *CR

3318 — C0160 PolySia avDP20 modulates macrophage-associated corneal hem- and lymphangiogenesis. Felix Bock¹, A. Schneider¹, A. Aslanidis¹, M. Karlstetter¹, H. Neumann², T. Langmann¹, C. Cursiefen¹. ¹Ophthalmology, University of Cologne, Cologne, Germany; ²Institute of Reconstructive Neurobiology, University of Bonn, Bonn, Germany

3319 — C0161 Macrophage polarization in bacterial keratitis: A link with NLRP3 inflammasome. Praveen Yerramotheu, A. Vijay, M. Willcox. School of Optometry and Vision Science, University of New South Wales, Sydney, New South Wales, Australia

3320 — C0162 Morphological changes to murine corneal dendritic cells after local and systemic inflammation. Holly R. Chinnery¹, S. Dando², P. G. McMenamin², C. Naranjo Golborne². ¹Optometry and Vision Sciences, University of Melbourne, Parkville, Victoria, Australia; ²Monash University, Clayton, Victoria, Australia

3321 — C0163 A Murine Model of Alzheimer's Disease Shows Gender-Specific Ocular Surface Findings. Arsia Jamali¹, T. Blanco¹, M. J. Lopez¹, H. Moein¹, D. L. Harris¹, V. G. Sendra¹, B. M. Kenyon¹, Y. Seyed-Razavi¹, S. Lomoio², R. Willen³, G. Tesco³, P. Hamrah^{1,2}. ¹Center for Translational Ocular Immunology, Department of Ophthalmology, Tufts Medical Center, Boston, MA; ²Cornea Service, New England Eye Center, Department of Ophthalmology, Tufts Medical Center, Boston, MA; ³Alzheimer's Disease Research Laboratory, Department of Neuroscience, Tufts University School of Medicine, Boston, MA

3322 — C0164 Ultrasound-assisted gatifloxacin delivery in mouse cornea, in vivo. Uk Jegal, K. Kim. Biomedical Optics Laboratory at Postech, Korea, Pohang, Korea (the Republic of)

3323 — C0165 Immunomodulatory Activity of Tear Protein Lacritin. Afsaneh Amouzegar¹, S. Mittal¹, M. Li¹, R. L. McKown², G. W. Laurie³, S. Chauhan¹. ¹Department of Ophthalmology/Harvard Medical School, Schepens Eye Research Institute, Massachusetts Eye and Ear Infirmary, Boston, MA; ²Department of Integrated Science and Technology, James Madison University, Harrisonburg, VA; ³Departments of Cell Biology, Ophthalmology and Biomedical Engineering, University of Virginia, Charlottesville, VA *CR

3324 — C0166 Effects of Asian dust particles in a reconstructed cultured human corneal epithelial model. Ryota Ko¹, M. Hayashi², M. Tanaka³, E. Uchio¹. ¹Ophthalmology, Fukuoka University, Fukuoka-shi, Fukuoka, Japan; ²Earth System Science, Fukuoka University, Fukuoka-shi, Japan; ³Kobayashi Pharmaceutical Co., Ltd., Osaka-shi, Osaka, Japan *CR

3325 — C0167 Secreted Ly-6/uPAR Related Protein-1 (SLURP1) modulates inflammation by influencing both neutrophils and endothelial cells. Sudha Swamynathan¹, A. Tiwari¹, C. Loughner¹, N. Alexander¹, J. Gnalian¹, S. K. Swamynathan^{1,2}. ¹Ophthalmology, University of Pittsburgh, Pittsburgh, PA; ²Fox Center for Vision Restoration, University of Pittsburgh, Pittsburgh, PA *CR

3326 — C0168 Higher Corneal Allograft Rejection Rates in the Very Young Are Associated with a Heightened NK cell Response in the Setting of Regulatory T cell Dysfunction. Takeshi Nakao^{1,2}, T. Inomata³, M. Tahvildari^{1,4}, A. Amouzegar^{1,2}, R. Dana^{1,2}. ¹Schepens Eye Research Institute, Massachusetts Eye and Ear Infirmary, Boston, MA; ²Ophthalmology, Harvard Medical School, Boston, MA; ³Ophthalmology, Juntendo University Faculty of Medicine, Tokyo, Japan; ⁴Kresge Eye Institute, Detroit, MI

3327 — C0169 Plasmacytoid Dendritic Cells Are Essential for Nerve Repair in a Mouse Model of Corneal Injury. Tomas Blanco, A. Jamali, M. J. Lopez, H. Moein, P. Hamrah. Ophthalmology, Tufts Medical Center, Tufts University, Boston, MA

3328 — C0170 Scaling Laws In Corneal Neovascularization Due To Corneal Infection. Argyrios Tzamalidis¹, V. Romano¹, M. Brunner¹, B. Steger², D. Borroni¹, Y. Zheng³, S. B. Kaye^{1,3}. ¹St. Paul's Eye Unit, Royal Liverpool University Hospital, Liverpool, Merseyside, United Kingdom; ²Department of Ophthalmology, Medical University of Innsbruck, Innsbruck, Austria; ³Department of Eye and Vision Science, University of Liverpool, Liverpool, United Kingdom

3329 — C0171 The Efficacy of Topical Bevacizumab and Sunitinib on Corneal Neovascularization in patients with Stevens-Johnson. Tais H. Wakamatsu¹, A. Y. Takiishi¹, F. Hirai¹, A. S. Lima², J. A. Gomes¹. ¹Ophthalmology, Federal University of São Paulo, São Paulo, SP, Brazil; ²Pharmacology, Federal University of São Paulo, São Paulo, Brazil

3330 — C0172 Tyrosinase downregulates Fibromodulin-induced lymphangiogenesis. Thomas Clahsen¹, B. Regenfuss¹, C. Büttner², T. Gabriel¹, F. Bock¹, A. Reis², C. Cursiefen¹. ¹Department of Ophthalmology University Cologne, Cologne, Germany; ²Institute of Human Genetics, Erlangen, Germany

3331 — C0173 Proangiogenic role of MMP14 on vascular endothelial cells: selective degradation of VEGFR1 during angiogenesis. Kyuyeon Han, J. Chang, D. T. Azar. Ophthalmology and Visual Sciences, University of Illinois at Chicago, Chicago, IL

- 3332 — C0174 Treatment with a highly selective Galectin-3 Inhibitor, GAL-200-10, reduces both pathological corneal neovascularization and fibrosis.** Zhiyi Cao¹, W. Chen², H. Leffer³, U. Nilsson⁵, H. Schambye⁴, a. pedersen⁴, F. Zetterberg⁴, N. A. Panjwani¹. ¹Ophthalmology, Tufts University School of Medicine, Boston, MA; ²National Institute of Allergy and infectious diseases, National Institute of Health, Bethesda, MD; ³Laboratory Medicine, Lund University, Lund, Sweden; ⁴Galecto Biotech, Gothenburg, Sweden; ⁵Chemistry, Lund University, Lund, Sweden *CR
- 3333 — C0175 Vessel depth measurement in corneal neovascularization using OCT angiography.** Yan Li¹, A. Nanji¹, W. Chamberlain¹, J. Schallhorn², Y. Jia¹, D. Huang¹. ¹Ophthalmology, Oregon Health and Science University, Portland, OR; ²Ophthalmology, University of California, San Francisco, San Francisco, CA *CR
- 3334 — C0176 miR27a/b inhibits angiogenesis in early corneal-vascularization-stages by activation of the signalling pathways ERK1/2 and AKT.** Anna Bajor¹, M. Haar¹, M. Börgel³, C. Framme¹, R. Blasczyk², C. Figueiredo². ¹University Eye Hospital Hannover, Hannover, Germany; ²Institute for Transfusion Medicine, Hannover, Germany; ³German Society for Tissue Transplantation, Hannover, Germany
- 3335 — C0177 Phase-specific functions of macrophages in inflammatory corneal angiogenesis.** Anne Bukowiecki¹, C. Cursiefen^{1,3}, S. A. Eming^{2,3}, D. Hos^{1,3}. ¹Department of Ophthalmology, University Hospital Cologne, Cologne, Germany; ²Department of Dermatology, University Hospital Cologne, Cologne, Germany; ³Center for Molecular Medicine Cologne (CMC), University of Cologne, Cologne, Germany
- 3336 — C0178 Substance P Modulation of Human and Murine Corneal Neovascularization.** Giulio Ferrari, M. Barbariga, P. Fonteyne, F. Bignami, P. Rama. Ophthalmology -Cornea Unit-Eye Repair, Ospedale San Raffaele, Milan, Italy *CR
- 3337 — C0179 Roles of TRPA1 cation channel receptor signal in development of stromal neovascularization in a mouse cornea (The second report).** Keiko Kusumoto-Usui, Y. Okada, H. Iwanishi, K. Ichikawa, T. Sumioka, M. Miyajima, S. Saika. Ophthalmology, Wakayama Medical University, Wakayama, Wakayama, Japan
- 3338 — C0180 Suppression of corneal neovascularization by sphingosine-1-phosphate receptor 3 gene deletion in mice.** Shingo Yasuda, T. Sumioka, Y. Okada, M. Miyajima, K. Ichikawa, S. Saika. Wakayama medical university, Wakayama, Japan
- 3339 — C0181 MicroRNA-184 Downregulation Contributes to Corneal Neovascularization.** rongrong zong, Z. Liu, y. zhou. Eye Institute of Xiamen University, Xiamen, China
- 3340 — C0182 Plasmacytoid Dendritic Cells and Their Role in Vascular Endothelial Cell Proliferation and Differentiation *In Vitro*.** Deshea L. Harris¹, A. Jamali¹, A. Abdou-Slaybi¹, P. Hamrah^{1,2}. ¹Center for Translational Ocular Immunology and Department of Ophthalmology, Tufts Medical Center and Tufts University School of Medicine, Boston, MA; ²Cornea Service, New England Eye Center, Boston, MA *CR
- 3341 — C0183 Differential Contribution of Regulatory T cells Derived from Low-risk vs. High-risk Transplants to Corneal Angiogenesis.** Jia Yin, C. Shao, M. Tahvildari, R. Dana. Massachusetts Eye and Ear Infirmary, Harvard Medical School, Boston, MA
- 3342 — C0184 Promotion of high-risk corneal graft survival via corneal UV-light crosslinking.** Yanhong Hou¹, V. Le¹, G. Tóth², S. Siebelmann¹, J. Horstmann¹, T. Gabriel¹, F. Bock¹, C. Cursiefen¹. ¹Ophthalmology, University of Cologne, Cologne, Germany; ²University of Pecs, Pecs, Hungary

Exhibit Hall C0225-C0249

Tuesday, May 01, 2018 11:15 AM-1:00 PM

Eye Movements/Strabismus/Amblyopia/Neuro-Ophthalmology

344 Neuro-ophthalmology: Optic neuropathy excepting glaucoma

Moderator: Deepta A. Ghatge

3343 — C0225 Therapeutic effects of Idebenone in Japanese patients with Leber hereditary optic neuropathy: A multicenter prospective study. Hiroto Ishikawa¹, Y. Masuda², F. Gomi¹, K. Shikishima², T. Goseki³, H. Ishikawa³, T. Kezuka⁴, M. Terao⁵, A. Miyazaki⁶, K. Matsumoto⁶, H. Nishikawa⁷, R. Okamoto⁷, O. Mimura¹. ¹Ophthalmology, Hyogo College of Medicine, Nishinomiya, Hyogo, Japan; ²Ophthalmology, The Jikei University School of Medicine, Minato-ku, Tokyo, Jersey; ³Ophthalmology, Kitasato University School of Medicine, Sagami-hara, Kanagawa, Japan; ⁴Ophthalmology, Tokyo Medical University, Shinjuku-ku, Tokyo, Japan; ⁵Research Institute for Time Studies, Yamaguchi University, Yamaguchi, Japan; ⁶Tamagawa University Brain Science Institute, Tokyo, Japan; ⁷Center for Clinical Research and Education, Hyogo College of Medicine, Nishinomiya, Hyogo, Japan

3344 — C0226 Risk Factors for Fellow Eye Involvement in Non-Arteritic Anterior Ischemic Optic Neuropathy (NAION): Optic Disc Drusen (ODD) and Continuous Positive Airway Pressure (CPAP) Non-compliance. Melinda Chang, J. L. Keltner. Ophthalmology, UC Davis Eye Center, Sacramento, CA

3345 — C0227 In vivo vessel volume quantification in Leber's hereditary optic neuropathy (LHON) during the disease conversion and progression. Neringa Jurkute¹, A. Tufail^{2,3}, P. A. Keane^{2,3}, A. Webster^{2,3}, P. Yu-Wai-Man^{1,4}, P. Maloca^{2,5}. ¹NHR Biomedical Research Centre at Moorfields Eye Hospital and UCL Institute of Ophthalmology, London, United Kingdom; ²Moorfields Eye Hospital NHS Foundation Trust, London, United Kingdom; ³Institute of Ophthalmology, University College London, London, United Kingdom; ⁴Department of Clinical Neurosciences, University of Cambridge, Cambridge, United Kingdom; ⁵OCTlab, University of Basel, Basel, Switzerland *CR

3346 — C0228 Correlation of Blood-Optic Nerve Barrier and Optical Coherence Tomography Findings in Experimental Anterior Ischemic Optic Neuropathy. Kishan Kapupara¹, Y. Wen¹, R. Tsai^{1,2}. ¹Institute Of Eye Research, Hualien, Taiwan; ²Institute Of Medical Sciences, Hualien, Taiwan

3347 — C0229 Evaluation of OCTA peripapillary vascular density in eyes with temporal hemianopia from chiasmal compression. Correlation with retinal nerve fiber layer and visual field loss. Ana F. Suzuki¹, L. P. Cunha^{1,2}, L. C. Zacharias¹, R. C. Preti¹, M. L. Monteiro¹. ¹Division of Ophthalmology and the Laboratory of Investigation in Ophthalmology (LIM 33), University of São Paulo Medical School, Sao Paulo, Sao Paulo, Brazil; ²Department of Ophthalmology, School of Medicine, Federal University of Juiz de Fora, Juiz de Fora, Minas Gerais, Brazil

3348 — C0230 Dock10 deficiency reduces neuroinflammation in optic neuritis. Xiaoli Guo, K. Namekata, Y. Azuchi, A. Kimura, T. Noro, C. Harada, T. Harada. Visual Research Project, Tokyo Metropolitan Institute of Medical Science, Tokyo, Japan

3349 — C0231 The therapeutic effects of Pegylated granulocyte-colony-stimulating factor (PEG-G-CSF) in a rat model of anterior ischemic optic neuropathy (rAION). Rong-Kung Tsai^{1,2}, Y. Wen¹. ¹Institute of Eye Research, Tzu-Chi Medical Center, Hualien, Taiwan; ²Institute of Medical Sciences, Tzu Chi University, Hualien, Taiwan

3350 — C0232 Effect of regulatory B cells (Bregs) in the pathogenesis of idiopathic optic neuritis. Libin Jiang. Beijing Tongren Hospital, Beijing, China

3351 — C0233 Effects of Different Treatment Regimens in ST266-Mediated RGC Neuroprotection. Reas Sulaimankutty¹, K. Dine¹, L. Brown², K. S. Shindler¹. ¹Univ of Pennsylvania, Scheie Eye Inst, Philadelphia, PA; ²Noveome Biotherapeutics, Inc., Pittsburgh, PA *CR

3352 — C0234 A forward lamina cribrosa position is a risk factor for anterior ischemic optic neuropathy. Gema Rebolleda^{1,2}, A. Perez Sarriegui¹, L. Diez-Alvarez¹, V. De Juan¹, S. Ortiz-Toquero¹, F. J. Munoz Negrete^{1,2}. ¹Ophthalmology, IRYCIS, Hospital Ramon y Cajal, Madrid, Spain; ²Cirugía, Ciencias Médicas y Sociales, Universidad Alcalá, Alcalá de Henares, Spain *CR

3353 — C0235 Peripapillary vessel density decreases from the acute to the chronic stage of non-arteritic ischemic optic neuropathy. Francisco J. Munoz Negrete^{1,2}, G. Rebolleda^{1,2}, J. Marín García³, L. Diez-Alvarez¹, V. De Juan¹. ¹IRYCIS, Hospital Ramón y Cajal, Madrid, Spain; ²Cirugía, Ciencias Médicas y Sociales, Universidad Alcalá, Alcalá de Henares, Spain; ³Universidad Carlos III, Madrid, Spain *CR

3354 — C0236 BDNF Val66Met polymorphism is associated with greater damage in eyes with optic neuritis in multiple sclerosis. TING SHEN^{1,2}, Y. You^{2,1}, Y. Gupta¹, A. Klistorner^{2,1}, S. L. Graham^{1,2}. ¹Clinical Medicine, Macquarie University, Macquarie University, New South Wales, Australia; ²Save Sight Institute, SYDNEY, New South Wales, Australia

3355 — C0237 Genetic Survey of the Primary Mitochondrial Mutations along with Clinical Correlation in suspected Leber Hereditary Optic Neuropathy (LHON) patients from an Indian Cohort. Srilekha Sundaramurthy¹, J. Mani¹, V. Dharani², S. Nagasamy³, S. Sarangapani¹, M. Sinnakaruppan¹, A. SelvaKumar². ¹SN ONGC Department of Genetics & Molecular Biology, Vision Research Foundation, Sankara Nethralaya, Chennai, Tamil Nadu, India; ²Department of Neuro Ophthalmology, Medical Research Foundation, Sankara Nethralaya, Chennai, Tamil Nadu, India; ³Formerly at SN ONGC Department of Genetics & Molecular Biology, Vision Research Foundation, Chennai, Tamil Nadu, India

3356 — C0238 Understanding the onset of Leber's Hereditary Optic Neuropathy. Rustum Karanjia^{1,2}, H. Liu¹, C. La Morgia³, S. Nazarali¹, M. Moraes Filho⁴, M. Carbonell⁶, A. Berezovsky⁷, L. Di Vito⁶, A. De Negri³, C. Ramos⁴, A. Liam¹, R. Belfort Jr⁷, S. Salomao⁷, P. Yu-Wai-Man⁵, A. A. Sadun², V. Carelli⁸. ¹Ophthalmology, University of Ottawa, Ottawa, Ontario, Canada; ²Ophthalmology, UCLA, Los Angeles, CA; ³S. Camillo-Forlanini Hospital, Rome, Italy; ⁴Hospital Federal da Lagoa, Rio de Janeiro, Brazil; ⁵University of Cambridge, Cambridge, United Kingdom; ⁶IRCCS Institute of Neurological Sciences of Bologna, Bologna, Italy; ⁷Departamento de Oftalmologia e Ciências Visuais, Escola Paulista de Medicina, Universidade Federal de São Paulo (UNIFESP), Sao Paulo, Brazil; ⁸Instituto de Olhos de Colatina, Colatina, Brazil

3357 — C0239 Changes in visual acuity in patients with chronic Leber hereditary optic neuropathy (LHON) during treatment with idebenone. Berthold Pemp, K. Kircher, A. Reitner. Department of Ophthalmology, Medical University of Vienna, Vienna, Austria *CR

3358 — C0240 Efficacy and Safety of Long-Term Treatment with Low-Dose Rituximab for Neuromyelitis Optica Spectrum Disorder. Junqing Wang, S. Zhao, S. Wei. Ophthalmology, Chinese Plagh, Beijing, Beijing, China *X

3359 — C0241 Histopathological, structural and visual functional changes in a rat model of neuromyelitis optica spectrum disease related optic neuritis. Yuxin Zhang¹, Y. Bao², W. Qiu³, Y. Xu², H. Yang¹. ¹State Key Laboratory of Ophthalmology, Zhongshan Ophthalmic Center, Sun Yat-sen University, Guangzhou, China; ²Guangdong-Hongkong-Macau Institute of CNS Regeneration, Joint International Research Laboratory of CNS Regeneration, Ministry of Education of PRC, Jinan University, Guangzhou, China; ³The Third Affiliated Hospital of Sun Yat-sen University, Guangzhou, China

3360 — C0242 Suppression of lyve-1 expression in retinal ganglion cell alleviates neutrophil infiltration and axonal damage in the mouse model of demyelinating optic neuropathy. Byung Joo Lee¹, J. Kim², H. Jun², J. Kim^{1,2}. ¹Biomedical Science, Seoul National University, Seoul, Korea (the Republic of); ²Ophthalmology, Seoul National University Hospital, Seoul, Korea (the Republic of)

3361 — C0243 Maintenance of Idebenone Treatment after an Initial Visual Recovery Results in Continued Improvement in LHON Patients. Xavier Lloria¹, M. Silva¹, G. Rudolph², F. Lob², B. von Livonius², C. Catarino³, T. Klopstock³. ¹Santhera Pharmaceuticals Ltd, Liestal, Switzerland; ²University of the Ludwig-Maximilians-Universität, Munich, Germany; ³Friedrich-Baur-Institute, Munich, Germany

3362 — C0244 Natural History Data (NHD) In A Cohort Of 383 Patients with Leber's Hereditary Optic Neuropathy (LHON). Results From An International Retrospective Case Record Survey (CRS). Magda Silva¹, X. Lloria¹, C. Catarino², T. Klopstock², J. A. Sahel^{3,4}. ¹Santhera Pharmaceuticals, Liestal, Switzerland; ²Friedrich-Baur-Institute, Munich, Germany; ³European Vision Institute Clinical Research Network (EVICR), Paris, France; ⁴Institut de la Vision, Paris, France

3363 — C0245 In LHON Patients, Idebenone Caused Recovery of Vision Loss up to 2 Years after Therapy Initiation. Thomas Klopstock¹, M. Silva², C. Catarino¹, G. Rudolph³, F. Lob³, B. von Livonius³, X. Lloria². ¹Friedrich-Baur-Institute, Munich, Germany; ²Santhera Pharmaceuticals Ltd, Liestal, Switzerland; ³University Hospital of the Ludwig-Maximilians-Universität, Munich, Germany

3364 — C0246 Photopic Negative Response as a Marker for Optic Neuropathy using a Handheld Electroretinogram Device. Megh D. Patel¹, F. Khushzad¹, H. E. Moss^{1,2}. ¹Department of Ophthalmology, Stanford University, School of Medicine, Fremont, CA; ²Department of Neurology and Neurosciences, Stanford University, School of Medicine, Palo Alto, CA

3365 — C0247 Optical Coherence Tomography Angiography (OCTA) reveals microvasculature loss in Non Arteritic Anterior Ischemic Optic Neuropathy (NAION). Sarah Sunshine, A. Song, E. Griebenow, E. Simjanoski, A. Fawzi, N. J. Volpe. Northwestern University, Chicago, IL *CR

3366 — C0248 Cardiovascular comorbidity in Leber's hereditary optic neuropathy mtDNA 11778. Starleen Frousiakis^{1,2}, J. Tran², R. Karanjia^{3,2}, S. Asanad², J. Gale^{4,2}, J. Tian², A. E. Pouw⁵, G. Conrad¹, M. Moraes Filho⁹, S. Salomao⁶, R. Belfort Jr⁶, P. A. Quiros^{2,8}, S. Christianakis¹, V. Carelli⁷, A. A. Sadun^{2,8}. ¹Internal Medicine, Huntington Memorial Hospital, Pasadena, CA; ²Ophthalmology, Doheny Eye Institute, Los Angeles, CA; ³Ophthalmology, University of Ottawa, Ottawa, Ontario, Canada; ⁴Surgery and Anaesthesia, University of Otago, Otago, Wellington, New Zealand; ⁵Ophthalmology and Visual Science, Yale University, New Haven, CT; ⁶Ophthalmology, Federal University of Sao Paulo, Sao Paulo, Brazil; ⁷Scienze Neurologiche, Università di Bologna, Bologna, Italy; ⁸Ophthalmology, Doheny Eye Center, UCLA, Los Angeles, CA; ⁹Instituto de Olhos de Colatina, Colatina, Espírito Santo, Brazil

3367 — C0249 Visual field characteristic comparison between MS-ON and NMO-ON: Six months follow-up after acute onset. Hui Yang. Fundus disease/neuro-ophthalmology, Zhongshan ophthalmic center, Guangzhou, Guangdong, China *X

Exhibit Hall C0292-C0331

Tuesday, May 01, 2018 11:15 AM-1:00 PM

Clinical/Epidemiologic Research

345 Refractive error epidemiology and management

Moderators: Nathan G. Congdon and Cathleen Fedtke

3368 — C0292 Predominance of hyperopia in patients with molecularly confirmed Best disease. Sam Abbassi^{1,2}, E. Binkley^{1,2}, I. C. Han^{1,2}, S. M. Christiansen^{1,2}, M. Luse^{1,2}, L. M. Affatigato^{1,2}, J. Andorf^{1,2}, L. Yannuzzi³, E. M. Stone^{1,2}. ¹Ophthalmology, University of Iowa Hospitals and Clinics, Iowa City, IA; ²Stephen A. Wynn Institute for Vision Research, Iowa City, IA; ³Ophthalmology, Columbia University, New York, NY

3369 — C0293 Refractive status during pregnancy in the United States: NHANES 2005-2008. Frances Wu, J. M. Schallhorn, E. Lowry. Ophthalmology, UCSF, San Francisco, CA

- 3370 — C0294 Low serum 25-hydroxyvitamin D is not associated with myopic refractive error in Western Australian older adults.** Gareth Lingham^{1,2}, R. M. Lucas³, S. Yazar^{1,2}, J. P. Walsh⁴, K. Zhu⁵, E. Lim⁶, B. Cooke⁷, M. Hunter⁸, D. Mackey^{1,2}. ¹Centre for Ophthalmology and Vision Science, University of Western Australia, Perth, Western Australia, Australia; ²Lions Eye Institute, Perth, Western Australia, Australia; ³National Centre for Epidemiology and Public Health, Australian National University, Canberra, Australian Capital Territory, Australia; ⁴School of Medicine and Pharmacology, University of Western Australia, Perth, Western Australia, Australia; ⁵Endocrinology and Diabetes, Sir Charles Gairdner Hospital, Perth, Western Australia, Australia; ⁶School of Pathology and Laboratory Medicine, University of Western Australia, Perth, Western Australia, Australia; ⁷Pathwest Laboratory Medicine, Fiona Stanley Hospital, Perth, Western Australia, Australia; ⁸Busselton Population Medical Research Institute, Busselton, Western Australia, Australia
- 3371 — C0295 A Novel Classification of High Myopia into Anterior and Posterior Pathologic Subtypes.** Cassie A. Ludwig, R. A. Shields, T. A. Chen, M. A. Powers, D. M. Moshfeghi. Byers Eye Institute, Stanford University, Palo Alto, CA
- 3372 — C0296 Correlation between Refractive State, Corneal Thickness and Keratometry in Ametropic Patients.** Amir Rosenblatt^{1,2}, M. Mimouni^{3,4}, O. Trivizki^{1,2}, D. Varssano^{1,2}, G. Munzer⁵, T. Sela³, N. Sorokin^{1,2}. ¹Ophthalmology, Tel Aviv medical center, Tel Aviv, Israel; ²Sackler School of Medicine, Tel Aviv University, Tel Aviv, Israel; ³Department of Ophthalmology, Rambam Health Care Campus, Haifa, Israel; ⁴Technion-Israel Institute of Technology, Haifa, Israel; ⁵Care Vision Refractive Surgery Facility, Tel Aviv, Israel
- 3373 — C0297 Axial length and its associations in a Russian population: The Ural Eye and Medical Study.** Gyulli Kazakbaeva¹, G. Bikbova², R. Fayzrakhmanov¹, Y. Uzyanbaeva¹, R. Zainullin¹, J. B. Jonas³. ¹Ufa Eye Research Institute, Ufa, Russian Federation; ²Department of Ophthalmology and Visual Science, Chiba University Graduate School of Medicine, Chiba, Japan; ³Department of Ophthalmology, Medical Faculty Mannheim, Mannheim, Germany
- 3374 — C0298 Axial Elongation with no Evident Changes in the Macular Choroidal Thickness in 3 to 6 Years Old Chinese Preschool Children.** Xiangui He, J. Deng, H. Zou, X. Xu. Preventative Ophthalmology, Shanghai Eye Disease Prevention and Treatment Center, Shanghai, China
- 3375 — C0299 Refraction and Ocular Biometry of Preschool Children in Shanghai, China.** Luoli Zhang¹, X. Qu¹, X. He², B. Wang¹, X. You³, H. Shi³, H. Zou², H. Tan³, J. Zhu². ¹Eye & ENT Hospital, Fudan University, Shanghai, China, Shanghai, China; ²Department of Preventative Ophthalmology, Shanghai Eye Disease Prevention and Treatment Center, Shanghai Eye Hospital, Shanghai, China; ³Department of Maternal and Child Health, School of Public Health, Key Laboratory of Public Health Safety, Ministry of Education, Fudan University, Shanghai, China
- 3376 — C0300 Change in Refraction and Biometry of Children with Hyperopia.** Mythili Ilango, A. French, K. A. Rose. University of Technology Sydney, Cherrybrook, New South Wales, Australia
- 3377 — C0301 Foveal electrophysiological input has a stronger contribution to early juvenile myopia development than peripheral defocus.** Zhe Chuang Li, W. Yu, K. Choi, H. H. Chan. School of Optometry, The Hong Kong Polytechnic University, Hong Kong, Hong Kong
- 3378 — C0302 Prevalence of refractive errors in children of rural zone of Londrina City, Brazil.** Tiago V. Sakumoto¹, M. B. Silva¹, E. Hoyama^{1,2}, M. T. Soares³, T. Matsuo¹, N. Hasegawa¹. ¹Hofalon, Londrina, Brazil; ²PUC, Londrina, Brazil
- 3379 — C0303 Prevalence of myopia in German kids and teenagers over a period of 30 years.** Andreas Hartwig^{1,2}, P. De Gracia³. ¹Hartwig Research Center, Heikendorf, Germany; ²LHS, Aston University, Birmingham, United Kingdom; ³Chicago College of Optometry, Midwestern University, Chicago, IL
- 3380 — C0304 Prevalence and associations of myopia among primary school students in Hong Kong.** Ian Wong¹, Q. You^{2,1}, A. L. Ng¹, J. Chan¹, B. N. Choy¹, D. Zhu³, J. S. Lai¹. ¹Ophthalmology, University of Hong Kong, Pokfulam, Hong Kong, China; ²Ophthalmology, Capital Medical University, Beijing, China; ³Ophthalmology, Inner Mongolia Medical University, Huhehaote, China
- 3381 — C0305 Myopia Rates and Risk Factors in Pediatric Patients.** Donald S. Fong^{2,1}, C. Theophanous², C. Hsu¹, T. Luong¹, J. Jimenez¹, J. Lin¹, B. Modjtahedi². ¹Research & Evaluation, Kaiser Permanente Southern California, Pasadena, CA; ²Ophthalmology, Kaiser Permanente Southern California, Baldwin Park, CA
- 3382 — C0306 Risk factors of myopia boom in young generation in China —The Guangzhou Twin Eye Study.** Xiaohu Ding¹, M. He². ¹Preventive Ophthalmology, Zhongshan Ophthalmic Center, Guangzhou, China; ²Department of Surgery, 4. Centre for Eye Research Australia; Ophthalmology, Melbourne, Victoria, Australia
- 3383 — C0307 Ten year refractive change and increase in proportion of myopes in UK children.** Fiona E. Cruickshank, B. Gilmartin, N. S. Logan. School of Optometry, Aston University, Birmingham, United Kingdom
- 3384 — C0308 Change in myopia prevalence over 24 months in a school population from 6 to 13 years of age in Portugal.** Jose Manuel Gonzalez-Mejome, R. J. Macedo-de-Araújo, A. I. Amorim-de-Sousa, P. Fernandes, A. Queiros. Physics - Optometry and Vision Science, University of Minho, Braga, Portugal
- 3385 — C0309 Peripheral optical anisotropy is associated with axial length to corneal curvature ratio.** Kai Yip Choi¹, T. Leung¹, S. Li^{1,2}, W. Yu², C. Do¹, P. Lee³, H. H. Chan^{1,2}. ¹The Centre for Myopia Research, School of Optometry, The Hong Kong Polytechnic University, Hong Kong, Hong Kong; ²Laboratory of Experimental Optometry (Neuroscience), School of Optometry, The Hong Kong Polytechnic University, Hong Kong, Hong Kong; ³School of Nursing, The Hong Kong Polytechnic University, Hong Kong, Hong Kong
- 3386 — C0310 Growth curves of myopia related parameters to clinically monitor the refractive development in Chinese schoolchildren.** Pablo Sanz Diez^{1,2}, L. Yang³, W. Xu⁴, Y. Xiong³, M. Lu^{5,6}, A. Ohlendorf^{1,2}, S. Wahl^{1,2}. ¹Technology & Innovation, Carl Zeiss Vision International GmbH, Aalen, Germany; ²Ophthalmic Research Institute, University Tuebingen, Tuebingen, Germany; ³Wuhan Center for Adolescent Poor Vision Prevention & Control, Wuhan, China; ⁴Wuhan Luminous Health Technology Co., Wuhan, China; ⁵Wuhan Commission of Experts for the Prevention & Control of Adolescent Poor Vision, Wuhan, China; ⁶Department of Epidemiology and Statistics, School of Public Health, Tongji Medical College, Huazhong University of Science and Technology, Wuhan, China *CR
- 3387 — C0311 Contribution of peripheral refraction features to myopia progression.** Fabian Conrad^{1,2}, T. J. Naduvilath¹, X. Chen³, D. Falk¹, P. Sankaridurg^{1,2}. ¹Brien Holden Vision Institute, Sydney, New South Wales, Australia; ²SOVS, UNSW, Sydney, New South Wales, Australia; ³Zhongshan Ophthalmic Center, Sun Yat-sen University, Guangzhou, China *CR
- 3388 — C0312 Analysis of CLEERE data to test the feasibility of identifying future fast myopic progressors.** Jaclyn Hernandez¹, L. T. Sinnott², N. A. Brennan¹, X. Cheng¹, K. Zadnik², D. O. Mutti². ¹Johnson & Johnson Vision, Jacksonville, FL; ²The Ohio State University College of Optometry, Columbus, OH
- 3389 — C0313 Age of onset of high myopia and associated factors in Singapore children in the SCORM cohort.** Seang-Mei Saw^{2,1}, B. Zhang³, D. Tan^{2,4}, J. Wang^{3,2}, J. Allen³, Y. Cheung³. ¹Saw Swee Hock School of Public Health, National Univ of Singapore, Singapore, Singapore; ²Singapore Eye Research Institute, Singapore, Singapore; ³Duke-NUS Medical School, Singapore, Singapore; ⁴Singapore National Eye Center, Singapore, Singapore

3390 — C0314 A Risk Score System Approach for Myopia among Primary and Middle School Students in China. hexin wang², D. Du¹, L. Yang³, W. Xu³, B. Lu³, T. Xu³, M. Lu¹. ¹Department of Epidemiology and Statistics, School of Public Health, Huazhong University of Science and Technology, Wuhan, China; ²China Innovation and R&D Center, Carl Zeiss (Shanghai) Co., Ltd., Shanghai, China; ³Wuhan Center for Adolescent Poor Vision Prevention&Control., Wuhan, China

3391 — C0315 Daily Light exposure in Myopic and Non-Myopic UK Children. Katherine J. Franklin, N. S. Logan. Aston University, Birmingham, United Kingdom

3392 — C0316 Childhood age, time outdoors, and the risk of juvenile-onset myopia. Donald O. Mutti⁴, L. T. Sinnott⁴, S. A. Cotter¹, L. A. Jones-Jordan⁴, R. N. Kleinstein², R. E. Manny³, J. D. Twelker⁵, K. Zadnik⁴. ¹The Southern California College of Optometry at Marshall B. Ketchum University, Fullerton, CA; ²School of Optometry, University of Alabama, Birmingham, Birmingham, AL; ³College of Optometry, University of Houston, Houston, TX; ⁴College of Optometry, The Ohio State University, Columbus, OH; ⁵Department of Ophthalmology and Vision Science, University of Arizona, Tucson, AZ *CR

3393 — C0317 The correlation between an objective index summarizing individual environmental risk factors and the change of refractive error. Weizhong Lan¹, L. Wen¹, L. Li³, X. Li², H. Zhu³, Z. Yang¹. ¹Aier School of Ophthalmology, Central South University, Changsha, China; ²Glasson Technology Co. Ltd, Hangzhou, China; ³Beihang University, Beijing, China *CR

3394 — C0318 An objective environmental risk factor index related to the development of myopia. Lei Li¹, H. Zhu^{1,2}, L. Wen^{3,4}, W. Lan^{3,4}. ¹State Key Laboratory of Software Development Environment, Beihang University, Beijing, China; ²NIHR Biomedical Research Centre for Ophthalmology, Moorfields Eye Hospital NHS Foundation Trust and UCL Institute of Ophthalmology, London, United Kingdom; ³Aier School of Ophthalmology, Central South University, Hunan, China; ⁴Aier Institute of Optometry & Vision Science, Hunan, China

3395 — C0319 A Large Retrospective Study of Premium Lens Implantation Patterns in Refractive Lens Exchange Patients. Matthew Wade¹, D. Knight¹, C. Shah¹, B. Cormier¹, J. Tucker¹, S. Hannan², S. Schallhorn³, M. C. Mehta¹. ¹Ophthalmology, University of California, Irvine, Irvine, CA; ²Optical Express, Glasgow, United Kingdom; ³Carl Zeiss Meditec, Dublin, CA *CR

3396 — C0320 Comparison of refractive outcomes and optical quality after implantable collamer lens with a central hole implantation and femto-second laser small incision lenticule extraction for low to moderate myopia. Huamao Miao, X. Chen, X. Wang, X. Zhou. Department of Ophthalmology, Myopia Key Laboratory of the Health Ministry, Eye and ENT Hospital of Fudan University, Shanghai, China ✕

3397 — C0321 Characteristics of Pseudomyopia and Spectacles wearing in Chinese Children. Meng Tian Kang¹, S. Li¹, N. G. Congdon², C. Jan¹, N. Wang¹. ¹ophthalmology, Beijing Tongren Hospital, Beijing, China; ²Queen's University Belfast, UK, United Kingdom

3398 — C0322 Myths and Misconceptions of Chinese Eye Exercises Among School Age Children: A Population-based, Prospective Study. Catherine Jan^{1,2}, N. G. Congdon⁴, S. Li², I. Morgan³, N. Wang². ¹School of Psychological and Cognitive Sciences, Peking University, Beijing, China; ²Beijing Tongren Eye Research Center, Beijing Tongren Hospital, Beijing, China; ³Australian National University, Canberra, Australian Capital Territory, Australia; ⁴Queen's University Belfast, Belfast, United Kingdom

3399 — C0323 Investigation of the Influence of Proximity Alert on near-work Behavior in Chinese Myopic Children. Yuwen Wang^{1,3}, Z. Zhuo^{1,3}, X. Yang^{1,3}, J. Bao^{1,3}, Y. Toh², A. Gabriel², A. Le Cain², D. Paille^{2,3}, Y. Wu⁴, Y. Huang⁴, X. Li⁵, H. Chen¹. ¹The Affiliated Eye Hospital of Wenzhou Medical University, Wenzhou, China; ²R&D Vision Sciences AMERA, Essilor International, Singapore, Singapore; ³WEIRC, WMU-Essilor International Research Centre, Wenzhou, China; ⁴Glasson Technology Co. Ptd, Hangzhou, China; ⁵California NanoSystems Institute, Los Angeles, CA *CR

3400 — C0324

Impact of adoption of e-learning with portable electronic devices on myopia development and progression in primary schoolchildren. Carly S. Lam, W. C. Tang. Centre for Myopia Research, School of Optometry, The Hong Kong Polytechnic University, Kowloon, Hong Kong

3401 — C0325 Investigation of Time Duration Spent on Near Work and Outdoor Activities in Children: Perception versus Real-time Measurements. Zuopao Zhuo^{1,3}, Y. Wang^{1,3}, X. Yang^{1,3}, J. Bao^{1,3}, Y. Toh², A. Gabriel², A. Le Cain², D. Paille^{2,3}, Y. Wu⁵, Y. Huang⁵, X. Li⁴, H. Chen^{1,3}. ¹Optometry, The Eye Hospital of Wenzhou Medical University, Wenzhou, Zhejiang, China; ²R&D Vision Sciences AMERA, Essilor International, Singapore, Singapore; ³WEIRC, WMU-Essilor International Research Centre, Wenzhou, China; ⁴California NanoSystems Institute, Los Angeles, CA; ⁵Glasson Technology Co. Ptd, Hangzhou, China *CR

3402 — C0326 Relation between subjective responses to contact lens wear and compliance in children. Rebecca Weng¹, R. Bakaraju^{1,2}, X. Chen³, W. Li¹, T. Naduvilath¹, P. Sankaridurg^{1,2}. ¹Brien Holden Vision Institute, Sydney, New South Wales, Australia; ²School of Optometry and Vision Science, University of New South Wales, Sydney, New South Wales, Australia; ³State Key Laboratory of Ophthalmology, Zhongshan Ophthalmic Centre, Guangzhou, China ✕

3403 — C0327 Effect of 0.01% atropine and soft bifocal contact lens on vision and vision-related outcomes over two weeks. Juan Huang, J. J. Walline, D. O. Mutti, L. A. Jones-Jordan. College of Optometry, The Ohio State University, Columbus, OH ✕

3404 — C0328 The aim of this study was to evaluate the clinical outcome of children treated with atropine 0.01% in a clinical setting. Audrey Chia. Singapore National Eye Center, Singapore, Singapore

3405 — C0329 Low concentration of atropine for the treatment of children myopia: The efficacy of 0.01% versus 0.05% atropine eye drops. Pei-Chang Wu. Ophthalmology, Kaohsiung Chang Gung Memorial Hospital, Taiwan, Kaohsiung, Taiwan ✕

3406 — C0330 A study on the system of self-evaluation of the visual acuity based on WeChat platform. Lele Cui¹, M. Li¹, W. Zhou¹, J. Zheng¹, Y. Wu², C. Lu¹, S. Lin¹, Z. Ge¹, L. Li¹, Y. Deng¹, C. Tu¹, Y. Liang¹, J. Qu¹. ¹Eye Hospital and School of Ophthalmology and Optometry, Wenzhou Medical University, Wenzhou, China; ²The First Affiliated Hospital of Wenzhou Medical University, Wenzhou, Zhejiang, China

3407 — C0331 Comparison of Automated Self-Refractometry Using NETRA with Table-Mounted Autorefractor and Subjective Refractometry in an Academic Optometry Clinic. Zhongqiu Li¹, C. M. Leibold², S. W. Binder¹, J. Beyer¹, K. A. Warner¹, R. Chang¹. ¹Department of Ophthalmology, Stanford University School of Medicine, Palo Alto, CA; ²Stanford Medicine, PANS (Pediatric Acute-onset Neuropsychiatric Syndrome) Program, Palo Alto, CA *CR

Exhibit Hall C0332-C0353

Tuesday, May 01, 2018 11:15 AM-1:00 PM

Low Vision Group / Visual Psychophysics/ Physiological Optics

346 Functional Impacts of Vision Impairment

Moderator: Joanne M. Wood

3408 — C0332 Testing novel scales for the NEI Visual Function Questionnaire (VFQ) in age-related macular degeneration (AMD). Claire S. Barnes. Independent Research Scholar, Palo Alto, CA

- 3409 — C0333 Effects of item filtering on estimates of patient reported outcome measures for low vision rehabilitation.** Robert W. Massof¹, K. Fujiwara¹, T. M. Smith². ¹Ophthalmology, Johns Hopkins Wilmer Eye Inst, Baltimore, MD; ²Occupational Therapy, Texas Women's University, Houston, TX *CR
- 3410 — C0334 Anxiety, Depression and Vision-Related Quality of Life in Patients with Retinitis Pigmentosa.** Mayumi Sainohira^{1,2}, T. Yamashita¹, H. Terasaki¹, K. Miyata², Y. Murakami³, Y. Ikeda³, S. Sonoda⁴, T. Morimoto⁴, T. Endo⁵, J. Kamo⁵, T. Fujikado⁴, T. Sakamoto¹. ¹Kagoshima University, Kagoshima, Japan; ²Miyata Eye Hospital, Miyakonojo, Japan; ³Kyushu University, Fukuoka, Japan; ⁴Osaka University, Osaka, Japan; ⁵Kofu Kyoritsu Hospital, Kofu, Japan ✕
- 3411 — C0335 Visual and psychological outcomes in patients with and without low vision diagnosed with similar eye diseases - initial results.** Laura Hernández Moreno¹, N. Moreno Perdomo⁵, P. Lima Ramos^{2,1}, P. Lewis², J. Linhares¹, H. Senra⁴, R. Santana³, A. F. Macedo^{2,1}. ¹Centre/ Department of Physics and Optometry, University of Minho, Braga, Portugal; ²Department of Medicine and Optometry, Linnaeus University, Kalmar, Sweden; ³Centro de Investigação em Saúde Pública, Escola Nacional de Saúde Pública, Universidade NOVA de Lisboa, Lisboa, Portugal; ⁴Department of Vision & Hearing Sciences, Anglia Ruskin, Cambridge, United Kingdom; ⁵Ophthalmology, Hospital Santa Maria Maior E.P.E, Barcelos, Portugal
- 3412 — C0336 Association Between Task Performance and Structure-Function in Glaucoma.** Heather Livengood¹, G. Wollstein¹, H. Ishikawa¹, M. Wu^{1,2}, J. S. Schuman¹. ¹NYU Langone Eye Center, NYU School of Medicine, New York, NY; ²Division of Biostatistics, Departments of Population Health and Environmental Medicine, NYU School of Medicine, New York, NY *CR
- 3413 — C0337 Quantitative evaluation of glare perception using steady state visual evoked potentials.** Hideaki Hirose¹, Y. Tanaka², R. Horai², T. Mori³, T. Kojima⁴, K. Ichikawa⁴. ¹Aisin cosmos R&D Co., Ltd., Kariya, Japan; ²Chukyo Eye Clinic, Nagoya, Japan; ³Iida Municipal Hospital, Iida, Japan; ⁴Keio University School of Medicine, Tokyo, Japan ✕
- 3414 — C0338 Vision-related activities and functioning under visually challenging conditions in age-related macular degeneration.** Robert P. Finger. University of Bonn, Bonn, Germany *CR
- 3415 — C0339 West Virginia Bioptic Driving Program for First Time Drivers.** Bethany Rommel¹, R. Coakley¹, P. Lang¹, C. Huss², J. Odom¹, M. J. Leys¹. ¹Ophthalmology, WVU Eye Institute, Morgantown, WV; ²WV Bioptic Driving Program, Nitro, WV *CR
- 3416 — C0340 Provider perceptions on the importance of visual field attributes when making driving eligibility decisions.** Elli Kollbaum, D. Meyer, M. Rickert, A. Bradley, P. S. Kollbaum. School of Optometry, Indiana University, Bloomington, IN
- 3417 — C0341 Association between glaucoma severity and driving cessation in subjects with primary open-angle glaucoma.** Kenya Yuki, S. Tanabe-Awano, T. Ono, A. Takahashi, D. Shiba, K. Tsubota. Ophthalmology, Keio University School of Medicine, Shinjyukuku, TOKYO, Japan ✕
- 3418 — C0342 Driving habits and glaucomatous visual field loss in Japanese population.** Akiko Hanyuda, K. Yuki, S. Tanabe-Awano, T. Ono, D. Shiba, K. Tsubota. Ophthalmology, Keio University School of Medicine, Shinjuku, Tokyo, Japan
- 3419 — C0343 Do scotomas in glaucoma affect eye movements? A between eye study in people with asymmetric visual field loss.** Daniel Sileshi Asfaw, P. Jones, D. Crabb. Division of Optometry and Visual Sciences, School of Health Sciences, City, University of London, London, United Kingdom *CR
- 3420 — C0344 Target Detection and Gaze Control with Reduced Acuity.** Andrew C. Freedman¹, J. Achtemeier², Y. Baek¹, G. E. Legge¹. ¹Psychology, University of Minnesota, Minneapolis, MN; ²HumanFIRST Lab, University of Minnesota, Minneapolis, MN
- 3421 — C0345 Visibility of Steps and Ramps in Natural Lighting: Effects of Simulated Loss of Acuity and Contrast Sensitivity.** Quan Lei, B. Carpenter, D. Kersten, G. E. Legge. Department of Psychology, University of Minnesota Twin Cities, Minneapolis, MN
- 3422 — C0346 Role of optic flow on postural control in subjects with retinopathy.** Celeste Limoli¹, M. Perazzolo², A. Piras², M. Raffi², S. Scalinci³, P. Limoli¹, L. Scorolli⁴. ¹Low Vision research Center, Milan, Italy; ²Biomedical and Neuromotor Sciences, University of Bologna, Bologna, Italy; ³Medical and Surgical Sciences, University of Bologna, Bologna, Italy; ⁴EYE Clinic, S. Lucia Hospital, Bologna, Italy
- 3423 — C0347 Dark Adaptation Symptoms Survey as a Predictive Tool for Primary Open Angle Glaucoma Severity.** David J. Ramsey, A. Alwreikat, P. Cotran, S. Roh, M. Cooper, M. Bhardwaj, A. Kent-Gastorowski, D. Weintraub, K. Szulborski. Ophthalmology, Lahey Hospital and Medical Center, Peabody, MA
- 3424 — C0348 Low Luminance Deficits in Retinal Disease.** Zachary Bodnar, R. A. Shields, S. Dobrota, D. V. Do. Ophthalmology, Stanford University, Los Altos, CA
- 3425 — C0349 Dark adaptation measurement using a smartphone.** Shrinivas Pundlik^{1,2}, G. Luo^{1,2}. ¹Schepens Eye Research Institute, Mass Eye and Ear, Boston, MA; ²Ophthalmology, Harvard Medical School, Boston, MA
- 3426 — C0350 Reading in noise with simultaneous near infrared retinal imaging.** Matthew S. Muller¹, A. E. Elsner^{2,1}, S. E. Hassan², B. P. Haggerty², C. A. Clark². ¹Aeon Imaging, LLC, Bloomington, IN; ²School of Optometry, Indiana University, Bloomington, IN *CR
- 3427 — C0351 Comparison of Reading Performance in Patients with and without Glaucoma.** André H. Bando, K. U. Hamada, O. Lago, T. S. Prata, A. Paranhos, C. P. Gracitelli. Department of Ophthalmology and Visual Sciences, Federal University of São Paulo, São Paulo, SP, Brazil
- 3428 — C0352 Lower Reading Rates in Intermediate AMD Patients Compared to Early AMD and Age-Matched Normal Controls.** Rima Khankan, W. H. Ridder, C. Oquindo, P. Yoshinaga, G. Comer, D. Duan. Basic Visual Sciences, Marshall B. Ketchum University, Fullerton, CA
- 3429 — C0353 Comparison of Sentence Reading Between Printed Charts and the Salzburg Reading Desk.** William H. Seiple^{1,2}, A. R. Morse¹, E. Newill³. ¹Lighthouse Guild, New York, NY; ²Ophthalmology, New York University, New York, NY; ³SRD Vision, Philadelphia, PA *CR

Room 301AB

Tuesday, May 01, 2018 1:30 PM-3:00 PM

Immunology/Microbiology / Clinical/ Epidemiologic Research / Multidisciplinary Ophthalmic Imaging / Retina

347 Objective Quantification of Intraocular Inflammation: Using Newer Technologies to Overcome an Old Challenge - SIG

To objectively grade intraocular inflammation is a complex task of utmost importance both in the everyday practice and in clinical trials. The panel will discuss the topic and the potential use of new technologies to overcome the present limitations

Moderator: Quan Dong Nguyen

Organizer. *Alessandro Invernizzi.* ¹Eye Clinic, University of Milan, North Sydney, New South Wales, Australia; ²Save Sight Institute, University of Sydney, Sydney, New South Wales, Australia *CR

Panelist. *Sunil Srivastava.* Cleveland Clinic, Cleveland, OH *CR

Panelist. *Alastair K. Denniston.* Ophthalmology, University Hospitals Birmingham NHSFT, Birmingham, United Kingdom

Panelist. *Rupesh Agrawal.* Tan Tock Seng Hospital, Singapore, Singapore

Panelist. *Aniruddha Agarwal.* Advanced Eye Center, Postgraduate institute of Medical Education and REsearch, Chandigarh, India

Room 306AB

Tuesday, May 01, 2018 1:30 PM-3:00 PM

Retinal Cell Biology / Biochemistry/Molecular Biology / Multidisciplinary Ophthalmic Imaging / Retina

348 Next-Gen autofluorescence imaging - let's get ready - SIG

Fundus autofluorescence, a metabolic marker for RPE health, informs diagnosis and management of outer retinal disease especially AMD. New data from clinical imaging and human eye pathology prompt new ideas about old and new fluorophores in AMD.

Moderator: Christine A. Curcio

Macular neurobiology and autofluorescence. *Christine A. Curcio.* Univ of Alabama at Birmingham, Mountain Brook, AL *CR

Hyperspectral autofluorescence fundus imaging in health and disease. *R Theodore Smith.* Ophthalmology, Mount Sinai School of Medicine, New York, NY

High-dimensional recovery of macular autofluorescence spectra using unsupervised machine learning. *Neel Dey.* New York University Tandon School of Engineering, New York, NY

Fluorescence lifetime ophthalmoscopy (FLIO) for molecular imaging. *Martin Hammer.* AG experimentelle Ophthalmologie, Universitätsklinikum Jena, Jena, Germany

From blue to red - different wavelengths, different fluorophores. *Thomas Ach.* Department of Ophthalmology, University Hospital Würzburg, Würzburg, Germany

Molecular basis of autofluorescence from photoreceptors to RPE. *Kevin L. Schey.* Biochemistry, Vanderbilt University, Nashville, TN

Room 310

Tuesday, May 01, 2018 1:30 PM-3:00 PM

Cornea / Immunology/Microbiology

349 Immune tolerance in steady state and ocular surface/corneal diseases - SIG

The ocular surface is exposed to irritants, allergens, and pathogens, thus immune tolerance is crucial for maintaining a clear, non-inflamed state. This SIG is focused on mechanisms of tolerance induction and disruption in the context of eye disease.

Moderators: Cintia S. De Paiva and Jeremias G. Galletti

Immune tolerance in dry eye. *Jeremias G. Galletti.* Institute of Experimental Medicine, Buenos Aires, Buenos Aires, Argentina

Age-related loss of tolerance- lacrimal gland and ocular surface manifestations. *Cintia S. De Paiva.* Ophthalmology, Baylor College of Medicine, Houston, TX *CR

Role of MHC II in scleroderma model. *Shigeto Shimmura.* Ophthalmology, Keio University School of Medicine, Tokyo, Japan *CR

Immune tolerance and corneal transplants after nerve ablation. *Jerry Y. Niederkorn.* Ophthalmology, UT Southwestern, Dallas, TX

Goblet cells associated passages and immune tolerance. *Stephen C. Pflugfelder.* Ophthalmology, Baylor College of Medicine, Houston, TX *CR

Room 311

Tuesday, May 01, 2018 1:30 PM-3:00 PM

Retina / Anatomy and Pathology/Oncology / Biochemistry/Molecular Biology / Immunology/ Microbiology / Multidisciplinary Ophthalmic Imaging / Physiology/Pharmacology / Retinal Cell Biology / Visual Neuroscience / Visual Psychophysics/Physiological Optics

350 Molecular Imaging of the Retina in Health and Disease - SIG

This session will focus on recent advances toward cellular and molecular imaging of the retina in health and disease, with emphasis on development and translation of optical imaging instrumentation and targeted imaging contrast agents.

Moderator: Ashwath Jayagopal

Organizer. *Ashwath Jayagopal.* Pharma Research and Early Development, Ophthalmology Discovery and Biomarkers, Roche Innovation Center Basel, F. Hoffmann-La-Roche, Ltd., Basel, Switzerland *CR

Panelist. *Mahnaz Shahidi.* Ophthalmology, University of Southern California, Los Angeles, CA

Panelist. *Jesse B. Schallek.* Flaum Eye Institute, Center for Visual Science, Rochester, NY

Panelist. *Grazyna Palczewska.* Polgenix, Inc., Cleveland, OH *CR

Panelist. *Yoshihiko Katayama.* Heidelberg Engineering GmbH, Heidelberg, Germany *CR

Panelist. *Nora Denk.* F. Hoffmann-La Roche Ltd., Pharma Research and Early Development, Pharmaceutical Sciences, Roche Innovation Center Basel, Basel, Switzerland *CR

Room 312

Tuesday, May 01, 2018 1:30 PM-3:00 PM

Multidisciplinary Ophthalmic Imaging Group / Anatomy and Pathology/Oncology / Glaucoma / Retina

351 Optical Coherence Tomography Angiography of the Eye - SIG

OCT angiography is a rapidly developing technology to non-invasively image and measure retinal, choroidal, and optic nerve blood flow. This forum discusses technological approaches, disease applications, and clinical interpretation.

Moderators: Amani Fawzi and Yali Jia

Organizer. *David Huang.* Casey Eye Institute, Oregon Health & Science Univ, Portland, OR *CR

Organizer. *Philip J. Rosenfeld.* Bascom Palmer Eye Institute, University of Miami, Miami, FL *CR

Panelist. *James G. Fujimoto.* Research Laboratory of Electronics, Massachusetts Institute of Technology, Cambridge, MA *CR

Tuesday Workshops/SIGs
1:30 pm – 3:00 pm

Panelist. *Stephen A. Burns.* School of Optometry, Indiana University, Bloomington, IN *CR

Panelist. *Linda M. Zangwill.* Shiley Eye Institute, University of California-San Diego, La Jolla, CA *CR

Room 313A

Tuesday, May 01, 2018 1:30 PM-3:00 PM

Genetics Group

352 GEN Group - Making good on the promise of genetics for eye diseases: The successes and challenges along the translational pathway

The application of genetic knowledge to benefit human health has never looked more promising. Next-generation sequencing technologies are helping to reveal genetic variants underlying both simple and complex traits and some gene-based therapies are achieving clinical success. This session covers topics that demonstrate the many ways in which genetic knowledge is changing management of hereditary eye diseases. Successful gene identification and application of screening tests are informing diagnoses. Increasing therapeutic opportunities are available through gene therapy and perhaps before long, personalized risk assessments may be possible for some complex disease, with tailored treatments possible through application of pharmacogenomics. This session also highlights the challenges of genomic medicine and how we may overcome them in the future to bring the full promise of genetics to fruition.

Moderators: *Eranga N. Vithana, Zi-Bing Jin and Yutao Liu*

— 1:30 **Introductions and Remarks**

— 1:32 **Gene discovery for genetic eye diseases: from unknown to known.** *Rui Chen. Molecular and Human Genetics, Baylor College of Medicine, Houston, TX*

— 1:49 **Genetic testing for Glaucoma – Successes, challenges & future potential.** *Jamie E. Craig. Department of Ophthalmology, Flinders University, Walkerville, South Australia, Australia*

— 2:06 **Genome surgery and genetic medicine trials.** *Stephen H. Tsang^{1,2}. ¹Columbia Coll Phys Surg, Columbia Univ-Harkness Eye Inst, New York, NY; ²Edward Harkness Eye Inst, New York, NY*

— 2:23 **The Application of Pharmacogenomics in AMD.** *Paul N. Baird. Ctr for Eye Res-Australia, University of Melbourne, East Melbourne, Victoria, Australia*

— 2:40 **Predictive testing for genetic eye diseases - where are we now?** *Alex W. Hewitt^{1,2}. ¹Department of Ophthalmology, Centre for Eye Research Australia, Sandy Bay, Tasmania, Australia; ²Menzies Institute for Medical Research, University of Tasmania, Hobart, Tasmania, Australia*

— 2:55 **Panel Discussion**

Room 314

Tuesday, May 01, 2018 1:30 PM-3:00 PM

353 Bridging and bootstrapping in today's risk averse environment

The Ophthalmology drug and device market are growing at a rapid pace fueled by a constant stream of novel therapeutics and devices entering the field. Securing early funding is one of the most critical steps for translating innovations into commercially viable products. This workshop will feature leading ophthalmic entrepreneurs with broad experience in academics, private practice, and industry. Drawing from their diverse backgrounds and experiences, these speakers will discuss bootstrapping to bridge the funding gap that must be overcome in order to get an idea off the ground and into a clinical trial.

Moderators: *Cagri G. Besirli and Margot L. Goodkin*

— 1:30 **Introductions and Remarks**

— 1:35 **A clinician's practical guide to innovation, early stage device development, and strategic planning.** *Tushar Ranchod. Ophthalmology, Bay Area Retina Associates, Walnut Creek, CA*CR*

— 1:47 **Negotiating the university to start-up translation terrain.** *Joseph A. Izatt. Biomedical Engineering/Ophthalmology, Duke University, Durham, NC *CR*

— 1:59 **Financing a start-up when you work at a university.** *David N. Zacks. Univ of Michigan-Kellogg Eye Ctr, Ann Arbor, MI *CR*

— 2:11 **First money in: SBIR grants, foundations, and economic development funds.** *Gregory Jackson. MacuLogix, Middletown, PA *CR*

— 2:23 **Creating value by retiring risk - how to convince yourself (and investors) to take the plunge.** *Thomas W. Chalberg. iRenix Medical, Inc., Menlo Park, CA *CR*

— 2:35 **Lessons Learned by a Start-Up CEO.** *Quinton Oswald. Notal Vision, Manassas, VA *CR*

— 2:47 **Panel Discussion**

Room 315

Tuesday, May 01, 2018 1:30 PM-3:00 PM

Glaucoma354 Gene therapy of glaucoma - SIG

With the advent of efficient genome editing tools, crispr-cas9 for example, it is reasonable to target glaucoma-causing genes for therapeutic purpose. Our SIG meeting will focus on the current development and feasibility in glaucoma gene therapy.

Moderator: *Ningli Wang*

C3 gene therapy in glaucoma degeneration of Mer-/- mice. *Ningli Wang.* Ophthalmology, Beijing Tongren Eye Center, Beijing, China

Genome editing as an approach to glaucoma treatment. *Val C. Sheffield.* University of Iowa, Iowa City, IA

Applications of CRISPR genome editing for treatment of retinal degeneration. *Zhijian Wu.* National Eye Institute, NIH, Bethesda, MD

rebuild TM tissue by transplanting iPSC-TM in glaucoma model. *Markus H. Kuehn.* University of Iowa, Iowa City, IA

Strategies for using stem cells in treating retinal degenerative diseases. *Ting Xie.* Stowers Institute of Medical Research, Kansas, MO

Room 316A

Tuesday, May 01, 2018 1:30 PM-3:00 PM

355 Clinician-Scientist Forum: How to become a successful clinician-scientist

Internationally renowned clinician-scientists at various stages in their careers will share their experiences and provide valuable advice on how to become a successful clinician-scientist. An NEI extramural representative will be available to discuss clinician-scientist specific funding mechanisms.

Moderators: *Jennifer R. Chao and Eszter Szalai*

— 1:30 **Introductions and Remarks**

— 1:31 **The role of clinician-scientists in vision research.** *Paul Sieving. National Eye Institute, Bethesda, MD*

— 1:41 **Practical tips on how to identify a mentor and get help writing your first K grant.** *Kathryn Pepple. University of Washington, Seattle, WA*

— 1:51 **Tips for establishing a productive clinical-research work balance and how to get help writing your first R01 grant.** *Ula V. Jurkunas. Ophthalmology/Harvard Med Sch, MA Eye & Ear Infirm Schepens Eye Res, Boston, MA*

— 2:01 **AP Experiences, Obstacles and Rewards of an Academic Career.** *Hans Grossniklaus. Dept of Ophthal, School of Med, Emory University, Atlanta, GA *CR*

— 2:11 **What to look for in your first academic job.** *Russell Van Gelder. Ophthalmology, University of Washington, Seattle, WA*

— 2:21 **Research and career development opportunities and loan repayment program for early career clinician scientists.** *Neeraj Agarwal. Division of Extramural Research, National Eye Institute/NIH, Bethesda, MD*

— 2:31 **Q & A and Discussion**

Tuesday Workshops/SIGs
1:30 pm – 3:00 pm

↗ Refer to the Program Number in the Clinical Trial (CT) Registration Index. *CR Refer to the Program Number in the Commercial Relationships (CR) Index for Disclosures.

Room 316B

Tuesday, May 01, 2018 1:30 PM-3:00 PM

356 Addressing global blindness and eye diseases through international research collaborations

As much as 90 percent of the global burden of eye disease is shouldered by developing countries, where many treatable diseases often go undiagnosed. About 39 million people around the world are blind and a further 246 million are not able to see properly, according to the WHO. Eighty percent of blindness is considered preventable, however a comprehensive research strategy and international research collaborations between the developed and developing world need to increase. A few collaborative programs have been successful in bringing international colleagues to make significant contributions to vision research. However, a wider participation of researchers is needed to advance the high-quality science in many areas of vision research. A coordinated strategy for basic science and health services research will help in reducing the global burden of eye diseases and implementation of research findings. The ARVO session will focus on a few successful international research collaborative studies and discuss the strategies and challenges in building international collaborations for the NIH programs. The ARVO session will stimulate discussion on forming new research partnerships and address the current issues and challenges in international research collaborations.

Moderator: Gyan Prakash

— 1:30 **Ebola Virus related Ocular Complications and International Research Collaboration in a “crisis situation”.** Rachel Bishop. Consult service NEI NIH, Rockville, MD ✕

— 1:40 **Developing International Research Collaborations and New Program Areas of Interest.** Gyan Prakash. National Eye Institute, NIH, Bethesda, MD

— 1:50 **Managing a US-India collaboration: Studying neuroplasticity and visual learning in Project Prakash.** Pawan Sinha. Brain & Cognitive Sci, Massachusetts Inst of Technology, Cambridge, MA

— 2:00 **Building a successful research team for US-Indo Genetic Study of Ocular Quantitative Traits related to Glaucoma.** Ronnie J. George. Glaucoma, Sankara Nethralaya Eye Hospital, Chennai, Tamil Nadu, India

— 2:10 **Building a successful research team for US-INDO Genetic Study of Ocular Quantitative Traits related to Glaucoma.** Janey L. Wiggs. Ophthalmology-Harvard Med Sch, Mass Eye & Ear Infirmary, Boston, MA

— 2:15 **What is it like to be an international grantee of NEI outside the US and building research programs to support the advancement of vision research?** Judith A. West-Mays. Dept of Path/Molec Med, McMaster University, Hamilton, Ontario, Canada

— 2:20 **Zika Virus related Ocular complications and Global Health.** Rubens Belfort Jr^{1,2}. ¹Ophthalmology, Universidade Federal de Sao Paulo, Sao Paulo, Brazil; ²IPEPO Vision Institute, Sao Paulo, Brazil *CR

Room 316C

Tuesday, May 01, 2018 1:30 PM-3:00 PM

357 How to promote vision research to patients and policymakers in different regions of the world

Communicating the importance of our vision research to society is important. How should we work with patients, patient advocacy group, policy/law makers and funding agencies to effectively promote the importance of vision research and funding? During this workshop, we will explore how science advocacy works, including engagement of patients and patient advocacy groups and how this may differ depending on the region in the world.

Moderators: Juliet A. Moncaster and Juliana M. Sallum

— 1:30 **Vision research advocacy in the United States.** James F. Jorkasky. NAEVR/AEVR, Rockville, MD

— 1:45 **Vision research advocacy in France and European Union.** Jose A. Sahel^{1,2}. ¹Institut de la Vision, Sorbonne Universités, UPMC Univ Paris 06, INSERM, CNRS, Paris, France; ²Department of Ophthalmology, The Eye and Ear Institute, Pittsburgh, PA *CR

— 2:00 **Application of iPS-derived retinal cells.** Masayo Takahashi. Laboratory for Retinal Regeneration, Ctr for Developmental Biology RIKEN, Kobe, Japan *CR, ✕

— 2:15 **Vision research advocacy in India.** Dorairajan Balasubramanian. Hyderabad Eye Research Foundation, LV Prasad Eye Institute, Hyderabad, India

— 2:30 **European Reference Networks for Rare Eye Disease – ERN-EYE: A Multistakeholder Approach to Advocating for Health Policy in Vision.** Avril Daly. Retina International, Dublin 2, Ireland

— 2:45 **Q & A and Discussion**

Room 320

Tuesday, May 01, 2018 1:30 PM-3:00 PM

Biochemistry/Molecular Biology / Cornea / Eye Movements/Strabismus/Amblyopia/Neuro-Ophthalmology / Physiology/Pharmacology / Retina / Retinal Cell Biology

358 Lipid and Lipid Targeted Therapies for Eye Diseases- past, present and future - SIG

Lipid molecules have been identified as novel therapies, therapeutic targets, nutraceuticals and disease biomarkers. This SIG will gather a panel of world experts of lipids and discuss the past present and future of lipid science in eye diseases.

Moderator: Nawajes A. Mandal

Sphingolipid pathway as target for retinal neurodegeneration therapy. Nawajes A. Mandal. Ophthalmology, Univ of Tennessee, Health Science Center, Memphis, TN

Elovanoids as therapeutics. Nicolas G. Bazan. LSUHSC, New Orleans, LA *CR

VLC lipids for AMD, Stargardt, and other retinal diseases. Paul S. Bernstein. University of Utah School of Medicine, Salt Lake City, UT

Lipid therapy for ocular surface diseases from the lipidomic and metabolomic point of view. Igor A. Butovich. Univ of Texas Southwestern Med Center, Dallas, TX

VLC-PUFA or Inositide pathways as target for therapy. Robert E. Anderson. Univ of Oklahoma Hlth Sci Ctr, Oklahoma City, OK

Ballrooms BC

Tuesday, May 01, 2018 1:30 PM-3:00 PM

Glaucoma / Retinal Cell Biology / Visual Neuroscience

359 The Lasker/IRRF Initiative for Innovation in Vision Science: Restoring Vision to the Blind and Amblyopia - SIG

The Lasker/IRRF Initiative for Innovation in Vision Science aims to accelerate understanding and treatments of diseases of the retina and visual system. This SIG will highlight programs on restoring vision to the blind and amblyopia.

Moderator: John E. Dowling

“Gene therapy and optogenetics”. Botond Roska. Friedrich Miescher Institute for Biomedical Research, Basel, Switzerland

“Prostheses; retinal to cortical”. Eberhart Zrenner. Institute for Ophthalmic Research, University of Tübingen, Tübingen,, Germany

“Stem cells, transplantation and endogenous repair”. Jane Sowden. UCL Institute of Child Health, London, United Kingdom

Tuesday Workshops/SIGs
1:00 pm – 2:30 pm

Room 306AB

Tuesday, May 01, 2018 3:30 PM-5:15 PM

Eye Movements/Strabismus/Amblyopia/Neuro-Ophthalmology**360 Vergence eye movements and strabismus - Minisymposium**

Recent findings on the development of vergence eye movements and the dynamic sensory inputs controlling these eye movements will be discussed. Also, recent findings on the neural behaviors underlying vergence eye movements and strabismus will be presented.

Moderators: Linda K. McLoon and Paul D. Gamlin

— 3:30 **Introductions and Remarks**

3430 — 3:35 Disparity and motion-in-depth sensory processing. Alexander Huk. *University of Texas Austin, Austin, TX*

3431 — 3:55 The development of vergence eye movements in infancy and early childhood. T Rowan Candy. *Optometry & Vision Science, Indiana University, Bloomington, IN*

3432 — 4:15 Neural control of vergence eye movements. Julie Quinet. *Ophthalmology, The University of Alabama at Birmingham, Birmingham, AL*

3433 — 4:35 Neural mechanisms of oculomotor abnormalities in strabismus. Mark Walton. *Research Scientist, University of Washington, Seattle, WA*

3434 — 4:55 Neural mechanisms underlying strabismus. Vallabh Das. *College of Optometry, University of Houston, Houston, TX*

Room 310

Tuesday, May 01, 2018 3:30 PM-5:15 PM

Cornea**361 Corneal Imaging and Topography**

Moderators: Pedram Hamrah and Patrice Tankam

3435 — 3:30 Early structural changes in keratoconic eyes after corneal crosslinking detected by polarization sensitive optical coherence tomography. Jan Lammer^{2,1}, F. Beer^{2,3}, N. Pircher^{2,1}, S. Holzer^{2,1}, M. Pircher^{2,3}, C. K. Hitzenberger^{2,3}, G. Schmider^{2,1}. ¹Dpt of Ophthalmology and Optometry, Medical University of Vienna, Vienna, Austria; ²Medical University of Vienna, Vienna, Austria; ³Center for Med Phys & Biomed Eng, Medical University of Vienna, Vienna, Austria ✕

3436 — 3:45 Repeatability of Scheimpflug imaging and anterior segment optical coherence tomography parameters in keratoconus is decreasing with increasing severity. Berthold Seitz¹, B. Elzer¹, C. Spira-Eppig¹, A. Langenbacher², E. Zemova¹, N. Szentmáryi^{1,3}, T. Eppig². ¹Department of Ophthalmology, Saarland University Medical Center, Homburg/Saar, Germany; ²Experimental Ophthalmology, Saarland University, Homburg/Saar, Germany; ³Department of Ophthalmology, Semmelweis University, Budapest, Hungary

3437 — 4:00 A novel non-contact instrument for en face cellular resolution imaging of in vivo human cornea based on full-field OCT. Viacheslav Mazlin¹, P. XIAO¹, K. Grieve^{2,3}, J. A. Sahe^{2,4}, M. Fink¹, C. Boccaro^{1,5}. ¹Institut Langevin, ESPCI Paris, PSL research University, Paris, France; ²Institut de la Vision, Paris, France; ³Quinze-Vingts National Eye Hospital, Paris, France; ⁴Department of Ophthalmology, University of Pittsburgh School of Medicine, Pittsburgh, PA; ⁵LLTech SAS, Paris, France

3438 — 4:15 Optical coherence tomography distal-sensor integrated big bubble needle for DALK. Jin Kang¹, S. Lee¹, S. Guo¹, T. Schroeder², N. Sarfaraz², A. Krieger², W. Gensheimer³. ¹Johns Hopkins University, Baltimore, MD; ²Mechanical Engineering, University of Maryland, College Park, MD; ³Warfighter Eye Center, Andrews Air Force Base, Joint Base Andrews, MD

3439 — 4:30 Slit lamp microscopy on a cellular level using in vivo confocal laser scanning microscopy. Sebastian Bohn¹, K. Sperlich¹, R. Prakasam¹, S. Allgeier², K. Reichert², A. Bartschat², H. Stolz², R. F. Guthoff¹, B. Köhler², R. Mikut², O. Stachs¹. ¹Department of Ophthalmology, University Medical Center Rostock, Rostock, Germany; ²Institute for Applied Computer Science, Karlsruhe Institute of Technology, Karlsruhe, Germany; ³Institute of Physics, University of Rostock, Rostock, Germany

3440 — 4:45 The Utilization of Artificial Intelligence for Corneal Nerve Analyses of In Vivo Confocal Microscopy Images for the Diagnosis of Neuropathic Corneal Pain. Neslihan Dilruba Koseoglu¹, A. Beam², P. Hamrah¹. ¹Ophthalmology, Tufts Medical Center, Boston, MA; ²Biomedical Informatics, Harvard University, Boston, MA *CR

3441 — 5:00 Analysis of the Corneal Collagen Organization After Chemical Burn Using Second Harmonic Generation Microscopy. Juan M. Bueno¹, F. J. Avila¹, D. Párraga¹, E. Lorenzo², P. Gallego-Muñoz², M. Martínez-García². ¹Laboratorio de Óptica, Universidad de Murcia, Murcia, Spain; ²Facultad de Medicina, Universidad de Valladolid, Valladolid, Spain

Room 311

Tuesday, May 01, 2018 3:30 PM-5:15 PM

Retina**362 Diabetic Retinopathy Imaging**

Moderators: Adnan Tufail and Pearse Keane

3442 — 3:30 Association of Visual Function (VF) with Central Subfield Thickness (CSFT) and Photoreceptor Outer Segment Length (CSFOS) in 3-Month Treatment of Diabetic Macular Edema (DME). Yi-Zhong Wang^{1,2}, Y. He², P. Mejia¹, M. B. Bartlett³, S. Zhang¹, K. G. Csaky^{1,5}. ¹Retina Foundation of the Southwest, Dallas, TX; ²Ophthalmology, UT Southwestern Medical Center, Dallas, TX; ³Vital Art and Science, LLC, Richardson, TX; ⁴Clinical Sciences, UT Southwestern Medical Center, Dallas, TX; ⁵Texas Retina Associates, Dallas, TX *CR, ✕

3443 — 3:45 Optical coherence tomography Biomarkers for Treatment Response to dexamethasone implant in Patients with Diabetic Macular Edema. Dinah Zur^{1,2}, M. Iglicki³, C. Busch⁴, A. Invernizzi², M. Mariuzzi⁶, A. Loewenstein^{1,2}. ¹Division of Ophthalmology, Tel Aviv Sourasky Medical Center, Tel Aviv, Israel; ²Sackler Faculty of Medicine, Tel Aviv University, Tel Aviv, Israel; ³University of Buenos Aires, Buenos Aires, Argentina; ⁴Department of Ophthalmology, University of Leipzig, Leipzig, Germany; ⁵Eye Clinic - Department of Biomedical and Clinical Science "L. Sacco", Luigi Sacco Hospital, University of Milan, Milan, Italy; ⁶Favaloro University Hospital, Buenos Aires, Argentina

3444 — 4:00 Diabetic Maculopathy: Multicolor and SD-OCT versus Fundus Photography. Obaid Kousha¹, M. Delle Fave⁵, M. Cozzi³, E. Carini⁴, S. Pagliarini². ¹Ophthalmology, Ninewells Hospital Tayside NHS Trust, London, England, United Kingdom; ²Ophthalmology, University Hospitals Coventry and Warwickshire, Coventry, United Kingdom; ³Department of Biomedical and Clinical Science "Luigi Sacco", University of Milan, Milan, Italy; ⁴Eye Clinic, Fatebenefratelli Hospital, Milan, Italy; ⁵Hopital Erasme, Université Libre de Bruxelles, Brussels, Belgium *CR

3445 — 4:15 Telemedicine screening with Optical coherence tomography can improve the detection of diabetic macular edema in a primary care cohort with diabetes. Gavin S. Tan^{1,3}, C. Y. Cheung², T. Y. Wong^{1,3}, E. L. Lamoureux^{1,3}. ¹Singapore Eye Research Institute, Singapore National Eye Centre, Singapore, Singapore; ²Department of Ophthalmology and Visual Sciences, Chinese University of Hong Kong, Hong Kong, Hong Kong; ³Duke-NUS Medical School, Singapore, Singapore

3446 — 4:30 Assessment of perfused parafoveal capillary density in patients with preclinical diabetic retinopathy using optical coherence tomography angiography. Alexander Pinhas^{1,2}, J. S. Andrade¹, B. D. Krawitz¹, S. Mo¹, R. E. Linderman³, J. Carroll^{3,4}, R. B. Rosen^{1,5}, T. Y. Chui^{1,3}. ¹Ophthalmology, New York Eye and Ear Infirmary of Mount Sinai, New York, NY; ²Ophthalmology, State University of New York Downstate Medical Center, Brooklyn, NY; ³Cell Biology, Neurobiology & Anatomy, Medical College of Wisconsin, Milwaukee, WI; ⁴Ophthalmology & Visual Sciences, Medical College of Wisconsin, Milwaukee, WI; ⁵Icahn School of Medicine at Mount Sinai, New York, NY *CR

3447 — 4:45 Capillary Perfusion Deviation Mapping in Diabetic Retinopathy using Optical Coherence Tomography Angiography (OCTA) - A Novel Single-Scan Approach. Richard B. Rosen^{1,2}, J. Andrade Romo^{1,2}, B. D. Krawitz^{1,2}, S. Mo^{1,2}, G. Lynch^{1,2}, R. E. Linderman³, R. Weitz¹, J. Carroll³, Y. P. Chui^{1,2}. ¹Ophthalmology, New York Eye & Ear Infirmary, New York, NY; ²Ophthalmology, Icahn School of Medicine, New York, NY; ³Ophthalmology, Medical College of Wisconsin, Milwaukee, WI *CR

3448 — 5:00 Regional Vessel Caliber, Retinal Oximetry and Predominantly Peripheral Diabetic Retinal Lesions as Surrogate Markers of Nonperfusion on Ultrawide Field Angiography in Diabetic Eyes. Alex U. Pisig¹, K. Sampani¹, M. A. Elmasry¹, Y. Aldairy¹, G. Robertson³, A. Fleming², C. Pitoč³, J. Rhee¹, J. K. Sun^{1,4}, P. S. Silva^{1,4}, L. P. Aiello^{1,4}. ¹Beetham Eye Institute, Joslin Diabetes Center, Boston, MA; ²Optos plc, Dunfermline, Scotland, United Kingdom; ³Philippine Eye Research Institute, University of The Philippines, Manila, Philippines; ⁴Ophthalmology, Harvard Medical School, Boston, MA *CR

Room 312

Tuesday, May 01, 2018 3:30 PM-5:15 PM

Cornea

363 Corneal Development and Regenerative Medicine

Moderators: Friedrich E. Kruse and Nick Di Girolamo

3449 — 3:30 Disruption of primary cilium in neural crest cells leads to Anterior Segment Dysgenesis (ASD). Céline Portal¹, Q. Liu¹, P. Y. Lwigale², C. Iomini^{1,3}. ¹Ophthalmology, Icahn School of Medicine at Mount Sinai, New York, NY; ²BioSciences, Rice University, Houston, TX; ³Development and Regenerative Biology, Icahn School of Medicine at Mount Sinai, New York, NY

3450 — 3:45 Mitochondria as platforms for dictating differentiation/maturation of human corneal endothelial cells with distinct energy metabolism and metabolomic signatures. Kohsaku Numa¹, M. Ueno², M. Toda², A. Mukai², K. Asada², A. Uehara², C. Sotozono¹, S. Kinoshita², J. Hamuro¹. ¹Department of Ophthalmology, Kyoto Prefectural University of Medicine, Kyoto, Japan; ²Department of Frontier Medical Science and Technology for Ophthalmology, Kyoto Prefectural University of Medicine, Kyoto, Japan

3451 — 4:00 3D laser-assisted bioprinting of tissue engineered cornea using human stem cells. Heli Skottman¹, A. Sorkio¹, L. Koch², L. Koivusalo¹, A. Deiwick², S. Miettinen¹, B. Chichkov^{3,2}. ¹Faculty of Medicine and Life Sciences, BioMediTech Institute, University of Tampere, Tampere, Finland; ²Laser Zentrum Hannover E.v., Hannover, Germany; ³Institute Of Quantum Optics, Leibniz Universität Hannover, Hannover, Germany

3452 — 4:15 Collagen-like-peptide nano-implants as stem cell loaded substitutes to human cornea transplantation. Michel Haagdoorens^{1,2}, J. Jangamreddy³, M. Islam³, E. Melsbach^{2,4}, P. Fagerholm³, V. Cepla⁵, R. Valiokas^{5,9}, S. Thys⁷, M. Kozak Ljunggren³, i. pintelon⁷, M. Tassignon^{1,2}, N. Zakaria^{1,4}, m. griffith^{3,6}. ¹Ophthalmology and Visual Sciences, University of Antwerp, Edegem, Antwerp, Belgium; ²Department of Ophthalmology, Antwerp University Hospital, Edegem, Antwerp, Belgium; ³Dept. of Clinical and Experimental Medicine, Linköping University, Linköping, Sweden; ⁴Center for Cell Therapy and Regenerative Medicine, Antwerp University Hospital, Edegem, -- select one --, Belgium; ⁵Dept. of Nanoengineering, Center for Physical Sciences and Technology, Vilnius, Lithuania; ⁶Laboratoires Antoine Turmel Room 305 Polyclinique de l'Hopital Maisonneuve-Rosemont, Montréal, Quebec, Canada; ⁷Laboratory of Cell Biology and Histology, University of Antwerp, Wilrijk, Belgium; ⁸L V Prasad Eye Institute, Hyderabad, India; ⁹Ferentis UAB, Vilnius, Lithuania *CR

3453 — 4:30 Melanocytes as an emerging key player in niche regulation of limbal stem cells. Ursula Schlotzer-Schrehard¹, N. Poliseti¹, M. Zenkel¹, E. Naschberger², L. Heger³, D. Dudziak³, M. Stuerzl², F. E. Kruse¹. ¹Department of Ophthalmology, University of Erlangen-Nuernberg, Erlangen, Germany; ²Department of Surgery, Division of Molecular and Experimental Surgery, University of Erlangen-Nuernberg, Erlangen, Germany; ³Department of Dermatology, Laboratory of Dendritic Cell Biology, University of Erlangen-Nuernberg, Erlangen, Germany

3454 — 4:45 Role of Human Corneal Mesenchymal Stromal Cell-derived Exosomes in Corneal Epithelial Wound Healing. Ravand Samaeekia¹, M. Eslani¹, I. Putra¹, B. Rabiee¹, X. Shen¹, Y. Park², P. Hematti³, A. R. Djalilian¹. ¹Ophthalmology, University of Illinois at Chicago, Chicago, IL; ²Cornell University, New York, NY; ³Medicine, University of Wisconsin Madison, Madison, WI

3455 — 5:00 Limbal Stromal Stem Cell Therapy for Acute and Chronic Superficial Corneal Pathologies: One-Year Outcomes. James Funderburgh¹, S. Basu², M. Damala², F. Tavakkoli², V. Sangwan², V. Singh². ¹Ophthalmology, Univ of Pittsburgh School of Medicine, Pittsburgh, PA; ²Tej Kohli Cornea Institute, L V Prasad Eye Institute, Hyderabad, Telangana, India ✕

Room 313A

Tuesday, May 01, 2018 3:30 PM-5:15 PM

Glaucoma

364 Surgery and Wound Healing

Moderators: Christine Nguyen and Harry A. Quigley

3456 — 3:30 Development of targeted siRNA nanotherapeutics to prevent fibrosis in experimental glaucoma filtration surgery. Cynthia Yu-Wai-Man^{1,3}, O. Fernando², A. D. Tagalakis^{2,4}, S. L. Hart², P. T. Khaw^{1,3}. ¹UCL Institute of Ophthalmology, London, United Kingdom; ²UCL Great Ormond Street Institute of Child Health, London, United Kingdom; ³National Institute for Health Research (NIHR) Biomedical Research Centre at Moorfields Eye Hospital NHS Foundation Trust and UCL Institute of Ophthalmology, London, United Kingdom; ⁴Edge Hill University, Ormskirk, United Kingdom

3457 — 3:45 12-month interim results of a multicentre open-label study of the InnFocus MicroShunt® Glaucoma Drainage System in patients with primary open-angle glaucoma. Tarek M. Shaarawy¹, F. Aptel², H. J. Beckers³, C. A. Webers³, E. Bluwol⁴, J. M. Martínez-de-la-Casa⁵, J. Garcia-Feijó⁵, Y. Lachkar⁶, C. D. Méndez-Hernández⁵, I. Riss⁶. ¹Hôpitaux Universitaires de Genève, Geneva, Switzerland; ²CHU de Grenoble, Grenoble, France; ³Maastricht University Clinic for Ophthalmology, Maastricht, Netherlands; ⁴Hôpital Paris Saint Joseph, Paris, France; ⁵Hospital Universitario Clinico San Carlos, Madrid, Spain; ⁶Pôle Ophthalmologique de la Clinique Mutualiste, Bordeaux, France *CR, ✕

3458 — 4:00 Efficacy of Repeat Selective Laser Trabeculoplasty in Afro-Caribbeans with Primary Open-Angle Glaucoma. Tony Realini¹, H. Shillingford-Ricketts², D. Burt³, G. K. Balasubramani⁴. ¹Ophthalmology, WVU Eye Institute, Morgantown, WV; ²Harlsbro Medical Center, Roseau, Dominica; ³St. Lucia Blind Welfare Association, Castries, Saint Lucia; ⁴Epidemiology Data Center, Department of Epidemiology, Graduate School of Public Health, University of Pittsburgh, Pittsburgh, PA *CR, ✕

3459 — 4:15 Low power selective laser trabeculoplasty (SLT) repeated yearly As primary treatment in open angle glaucoma(s): long term comparison with conventional SLT and ALT. Stefano A. Gandolfi¹, N. Ungaro¹, I. Varano¹, S. Saccà². ¹Ophthalmology, University of Parma, Parma, Italy; ²Ophthalmology, University of Genova, Genova, Italy

3460 — 4:30 Efficacy and safety of MicroPulse transscleral diode laser cyclophotocoagulation in the treatment of refractory glaucoma. Christine Nguyen, P. Huang, B. Mcknight, A. Huang, B. Francis. Glaucoma, Doheny Eye Center - UCLA, Fountain Valley, CA *CR

3461 — 4:45 A Randomized Clinical Trial of SLT vs ALT in Patients Who Have Already Received 360 Degrees of SLT-The Canadian Laser Study Trial Network. William Hodge¹, C. M. Hutnik¹, A. C. Crichton⁶, B. Ford⁶, C. M. Birt⁷, M. T. Nicoletta², L. Shuba², K. F. Damji³, M. Dorey³, E. Sogbesan⁴, H. Saheb⁵, H. Guo¹, N. Klar¹. ¹Ophthalmology, Western University, London, Ontario, Canada; ²Ophthalmology, Dalhousie University, Halifax, Nova Scotia, Canada; ³Ophthalmology, University of Alberta, Edmonton, Alberta, Canada; ⁴Ophthalmology, McMaster University, Hamilton, Ontario, Canada; ⁵Ophthalmology, McGill University, Montreal, Quebec, Canada; ⁶Ophthalmology, University of Calgary, Calgary, Alberta, Canada; ⁷Ophthalmology, University of Toronto, Toronto, Ontario, Canada ✂

3462 — 5:00 Success in diode ciliodestruction is greater with personalized energy delivery

Review of 236 treated eyes. Harry A. Quigley. Ophthalmology, Johns Hopkins Wilmer Eye Inst, Baltimore, MD

Room 314

Tuesday, May 01, 2018 3:30 PM-5:15 PM

Retina

365 Neovascularization and Vascular Permeability

Moderators: James T. Handa and Ilva D. Rupenthal

3463 — 3:30 Vascular endothelial growth factor (VEGF) mediates electroretinogram (ERG) dysfunction in mice through plasma kallikrein and nitric oxide. Allen C. Clermont¹, F. Simao², N. Murugesan², P. Huang³, L. P. Aiello⁴, E. P. Feener². ¹Beetham Eye Institute, Joslin Diabetes Center, Stoughton, MA; ²Vascular Complications, Joslin Diabetes Center, Boston, MA; ³Massachusetts General Hospital, Boston, MA *CR

3464 — 3:45 A novel oral plasma kallikrein (PKal) inhibitor KV123833 blocks VEGF-mediated retinal vascular hyperpermeability in a murine model of retinal edema. Nivetha Murugesan¹, A. C. Clermont², L. J. Rushbrooke¹, P. A. Robson¹, R. Thoonen¹, S. J. Pethen¹, S. L. Hampton¹, E. P. Feener¹. ¹KalVista Pharmaceuticals, Cambridge, MA; ²Beetham Eye Institute, Joslin Diabetes Center, Boston, MA *CR

3465 — 4:00 Efficacy & Tolerability of OTX-TKI, a Sustained Hydrogel Delivery System for a Tyrosine Kinase Inhibitor, in a VEGF Induced Retinal Leakage Model Through 12 Months. Peter K. Jarrett, R. F. Elhayek, T. Jarrett, Z. Lattrell, E. Kahn, S. Takach, J. Metzinger, M. H. Goldstein, A. Sawhney. Ocular Therapeutix, Lexington, MA *CR

3466 — 4:15 The therapeutic potential of XG19 in a mouse model of choroidal neovascularization. Frazer P. Coutinho¹, C. R. Green¹, M. Acosta², S. Bould¹, D. Squirrel¹, I. D. Rupenthal¹. ¹Ophthalmology, University of Auckland, Auckland, New Zealand; ²Molecular and Vision Science, University of Auckland, Auckland, New Zealand *CR

3467 — 4:30 SF0166, a topically administered α_2 integrin antagonist, is safe and efficacious in ocular neovascularization models. Ben Askew, S. Edwards, T. Furuya. SciFluor Life Sciences, Cambridge, MA *CR

3468 — 4:45 A novel subtype of retinal angiomatous proliferation (RAP): Cilioretinal RAP. Bilal Haj Najeeb, B. Gerendas, G. G. Deak, U. Schmidt-Erfurth. Vienna Reading Center. Eye Department, Medical University of Vienna, Vienna, Austria *CR

Room 315

Tuesday, May 01, 2018 3:30 PM-5:15 PM

Retinal Cell Biology

366 AMD pathogenesis and preclinical studies

Moderators: Shusheng Wang and Debasish Sinha

3469 — 3:30 Aberrant BMAL1 dependent claudin-5 cycling induces geographic atrophy. Natalie Hudson¹, L. Celkova¹, S. Doyle^{2,3}, M. Campbell¹. ¹Smurfit Institute of Genetics, Trinity College Dublin, Dublin, Ireland; ²School of Clinical Medicine, Trinity College Dublin, Dublin 2, Ireland; ³National Children's Research Centre (NCRC), Our Lady's Children's Hospital, Dublin, Ireland *CR

3470 — 3:45 A Model for Mast Cell Involvement in Geographic Atrophy. Imran A. Bhutto^{1,2}, R. Baldeosingh¹, S. Ogura¹, S. Kambampati¹, M. Gedam¹, S. McLeod¹, M. M. Edwards¹, J. Esteve-Rudd³, D. Bierer³, W. Schubert³, G. A. Lutty¹. ¹Ophthalmology, Johns Hopkins Hosp Wilmer Eye Inst, Baltimore, MD; ²Ophthalmology, University of Pittsburgh, Pittsburgh, PA; ³Bayer AG Pharmaceutical, Berlin, Germany *CR

3471 — 4:00 In vitro and ex vivo models for evaluating drugs that quiesce mast cells, models for mast cell degranulation in geographic atrophy choroid. Shuntaro Ogura, R. Baldeosingh, M. Gedam, M. M. Edwards, G. A. Lutty. Department of Ophthalmology, Johns Hopkins University, Baltimore, MD

3472 — 4:15 Targeting neutrophils as a novel approach for AMD therapy. Sayan Ghosh¹, P. Shang¹, M. Yazdankhah¹, I. A. Bhutto¹, S. L. Hose¹, G. A. Lutty², J. Zigler², D. Sinha^{1,2}. ¹Ophthalmology, University of Pittsburgh, Pittsburgh, PA; ²Ophthalmology, Johns Hopkins University, Baltimore, MD

3473 — 4:30 Hemodynamic shear stress in the inner choroid primes endothelium for complement damage. Bradley Gelfand¹, J. Ambati¹, S. An^{2,3}, R. Chen², W. H. Yu², J. Yao³. ¹Ophthalmology, University of Virginia, Charlottesville, VA; ²Mechanical Engineering, Indiana-University-Purdue University Indianapolis, Indianapolis, IN; ³Science and Technology Department, China University of Petroleum (Huadong), Qingdao, China *CR

3474 — 4:45 Role of Endothelial Cell Stiffening in Choriocapillary Atrophy Associated with Dry AMD. Andrea Cabrera¹, J. Stoddard², M. Neuringer², T. J. McGill¹, K. Ghosh¹. ¹Bioengineering, University of California, Riverside, Riverside, CA; ²Oregon National Primate Research Center, Oregon Health Sciences University, Beaverton, OR

3475 — 5:00 TLR2 bridges oxidative damage and complement-associated pathology and is a therapeutic target for age-related macular degeneration. Sarah Doyle¹, K. Mulfaul¹, N. Fernando³, K. Chirco⁴, E. Connolly⁴, T. Ryan¹, E. Ozaki¹, K. Brennan¹, A. Maminishkis⁵, R. Salomon⁶, R. Natoli³, R. F. Mullins⁴, M. Campbell¹. ¹Clinical Medicine, Trinity College Dublin, Dublin, Ireland; ²Genetics, Trinity College Dublin, Dublin, Ireland; ³ANU, Canberra, Australian Capital Territory, Australia; ⁴University of Iowa, Iowa City, IA; ⁵NEI, Bethesda, MD; ⁶Case Western Reserve University, Ohio, OH

Room 316A

Tuesday, May 01, 2018 3:30 PM-5:15 PM

Physiology/Pharmacology

367 Anterior segment, ion channels, IOP

Moderators: W Daniel Stamer and Carol B. Toris

3476 — 3:30 Reduced Effective Filtration Area in the Trabecular Meshwork of Steroid-induced Ocular Hypertensive Mouse Eyes. Ruiyi Ren^{1,2}, D. Swain^{1,2}, J. Lai¹, H. Gong^{1,2}. ¹Ophthalmology, Boston University School of Medicine, Boston, MA; ²Anatomy and Neurobiology, Boston University School of Medicine, Boston, MA

3477 — 3:45 Role of caveolae as mechanosensors in schlemm's canal. Michael H. Elliott^{1,2}, M. E. McClellan^{1,2}, W. M. Freeman^{3,4}, W. Stamer^{5,6}. ¹Ophthalmology, OUHSC, Oklahoma City, OK; ²Dean McGee Eye Institute, Oklahoma City, OK; ³Physiology, OUHSC, Oklahoma City, OK; ⁴Reynolds OK Ctr on Aging/Nathan Shock Ctr on Aging, OUHSC, Oklahoma City, OK; ⁵Ophthalmology/Duke Eye Center, Duke University, Durham, NC; ⁶Biomedical Engineering, Duke University, Durham, NC

3478 — 4:00 Investigation of Pores in the Inner Wall of Schlemm's Canal in High- and Non-flow Areas Using 3D Serial Block-Face Scanning Electron Microscopy. Julia Lai¹, T. D. Le¹, C. Lam^{1,2}, I. Garza¹, M. Villanueva¹, H. Gong¹. ¹Boston University School of Medicine, Brookline, MA; ²Bryn Mawr College, Bryn Mawr, PA

3479 — 4:15 Effect of intracranial pressure on conventional outflow facility in rats. Kayla Ficarrota. Biomedical Engineering, University of South Florida, Tampa, FL

3480 — 4:30 Effect of melatonin on aqueous humor secretion in porcine eyes. Ka Lok K. Li¹, F. Lin^{1,2}, W. Han², S. S. SHAN¹, M. M. Civan³, C. To¹, C. Do¹. ¹School of Optometry, The Hong Kong Polytechnic University, Hong Kong, Hong Kong; ²Department of Ophthalmology, Zhejiang University, Hangzhou, China; ³Department of Physiology, Perelman School of Medicine, University of Pennsylvania, Philadelphia, PA

3481 — 4:45 In vivo Investigation of an Interferometric Pressure Measurement System for Glaucoma Management. Alex Phan¹, P. Truong¹, A. Camp², R. N. Weinreb², F. Talke¹. ¹MAE, UC San Diego, Los Angeles, CA; ²Shiley Eye Institute, UC San Diego, San Diego, CA

3482 — 5:00 ERK1/2 and p38 activation linked to TRPV1 ion channels in the lens. Nicholas Delamere^{1,2}, A. Mandal¹, M. Shahidullah^{1,2}. ¹Physiology, University of Arizona, Tucson, AZ; ²Ophthalmology, University of Arizona, Tucson, AZ

Room 316C

Tuesday, May 01, 2018 3:30 PM-5:15 PM

Lens

368 Lens Biochemistry

Moderators: Kirsten J. Lampi and Paul J. Donaldson

3483 — 3:30 Imaging Mass Spectrometry of Age-Related Molecular Changes in the Ocular Lens. Kevin L. Schey^{1,2}, D. M. Anderson¹, D. Sakrikar², J. L. Wenke¹, M. A. Hossen¹, J. M. Spraggins¹. ¹Biochemistry, Vanderbilt University, Nashville, TN; ²The Binding Site, Inc., Rochester, MN

3484 — 3:45 Molecular Diffusion in the Human Lens Capsule Assessed using Fluorescent Recovery after Photobleaching. Noel M. Ziebarth¹, V. M. Sueiras¹, N. Likht², V. Moy³. ¹Biomedical Engineering, University of Miami, Miami, FL; ²Florida Lions Eye Bank, Bascom Palmer Eye Institute, University of Miami Miller School of Medicine, Miami, FL; ³Physiology and Biophysics, University of Miami Miller School of Medicine, Miami, FL

3485 — 4:00 Mapping glucose metabolism pathways in the bovine lens using imaging mass spectrometry. Paul J. Donaldson^{3,1}, R. Perwick³, I. Li³, N. J. Demarais², J. C. Lim^{3,1}, A. Grey^{3,1}. ¹New Zealand National Eye Centre, University of Auckland, Auckland, New Zealand; ²School of Biological Sciences, University of Auckland, Auckland, New Zealand; ³Department of Physiology, School of Medical Sciences, University of Auckland, Auckland, New Zealand

3486 — 4:15 Lens Aquaporin 0 (AQP0) interacts with negatively charged lipids in the fiber cell membrane to promote cell-to-cell adhesion. Kulandaippan Varadaraj^{1,2}, S. S. Kumari¹. ¹Physiology and Biophysics, State University of New York, Stony Brook, NY; ²SUNY Eye Institute, Syracuse, NY

3487 — 4:30 The functional nonequivalence of α -crystallins in the lens proteostasis network. Shu-Yu Wu, H. S. Mchaourab. Molecular Physiology and Biophysics, Vanderbilt University, Nashville, TN

3488 — 4:45 Calponin-3 Regulated Lens Epithelial Contractile Activity Induces Fibrogenic Activity via Yap/Taz Transcriptional Activation. Vasanth Rao¹, K. Buddin², R. Maddala². ¹Ophthal & Pharmacology, Duke University, Durham, NC; ²Ophthalmology, Duke University, Durham, NC

Room 320

Tuesday, May 01, 2018 3:30 PM-5:15 PM

Biochemistry/Molecular Biology

369 Regulation of Ocular Gene Expression and Epigenetics

Moderators: Yvan Arsenijevic, Dimitrios Karamichos and Irina Golovleva

3489 — 3:30 Building Blocks of an Ophthalmic Genetics Center: from Clinical Diagnosis to Future Gene Therapy. Irene H. Maumenee. Ophthalmology, Columbia University, New York, NY; Ophthalmology, Columbia University, New York, NY

3490 — 3:45 Epigenomic reconfiguration during aging of rod photoreceptors. Ximena Corso Diaz, R. Rebernick, C. Jaeger, F. Van Asten, M. Brooks, T. Cogliati, V. Chaitankar, A. Swaroop. National Eye Institute, National Institutes of Health, N Bethesda, MD

3491 — 4:00 EZH2 is associated with photoreceptor degeneration and potentially targets miRNAs controlling cell cycle and apoptosis. Yvan Arsenijevic¹, A. Prunotto², C. Rivolta^{2,3}, M. K. Mbefo¹. ¹Unit of Gene Therapy & Stem Cell Biology, Jules-Gonin Eye Hospital, Univ Lausanne, Lausanne, Switzerland; ²Dept of Computational Biology, University of Lausanne, Lausanne, Switzerland; ³Department of Genetics and Genome Biology, University of Leicester, Leicester, United Kingdom

3492 — 4:15 An amino acid motif in HLA-DR β 1 distinguishes patients with uveitis in juvenile idiopathic arthritis. Anne-Mieke Haasnoot¹, M. Schilham², S. Kamphuis³, P. Hissink-muller², A. Heiligenhaus⁴, D. Foell⁵, K. Minden⁶, R. Ophoff^{7,8}, T. Radstake⁹, A. I. Den Hollander¹⁰, T. Reinards², S. Hiddingh¹, N. Schalijs-Delofs¹¹, J. de Boer¹, S. Pulit¹², J. Kuiper¹. ¹Ophthalmology and Laboratory of Translational Immunology, UMC Utrecht, Utrecht, Netherlands; ²Paediatric Rheumatology, UMC Leiden, Leiden, Netherlands; ³Pediatric Rheumatology, Erasmus University Medical Center, Rotterdam, Netherlands; ⁴Ophthalmology, Ophtha Lab at St. Franziskus-Hospital, Muenster, Germany; ⁵Pediatric Rheumatology and Immunology, University of Muenster, Muenster, Germany; ⁶Rheumatology and Clinical Immunology, German Rheumatism Research Center Berlin-Leibniz Institute, and Charité University Medicine, Berlin, Germany; ⁷Psychiatry, Brain Center Rudolf Magnus, University Medical Center Utrecht, Utrecht, Netherlands; ⁸Human Genetics and Neuroscience and Human Behavior, University of California, California, CA; ⁹Rheumatology and Clinical Immunology, UMC Utrecht, Utrecht, Netherlands; ¹⁰Ophthalmology and Human Genetics, Donders Institute of Brain, Cognition, and Behaviour, Donders Institute of Brain, Cognition, and Behaviour, Radboud University Medical Center, Nijmegen, Netherlands; ¹¹Ophthalmology, Leiden University Medical Center, Leiden, Netherlands; ¹²Department of Genetics, Center for Molecular Medicine, University Medical Center Utrecht, Utrecht, Netherlands

3493 — 4:30 Pathological donor splice site mutations beyond the dinucleotide canonical sequence in choroideremia. Lewis Fry¹, M. I. Patricio^{1,2}, J. Williams³, P. Clouston³, K. Xue^{1,2}, A. R. Barnard^{1,2}, R. E. MacLaren^{1,2}. ¹Nuffield Laboratory of Ophthalmology, Nuffield Department of Clinical Neurosciences & NIHR Oxford Biomedical Research Centre, University of Oxford, Oxford, United Kingdom; ²Oxford Eye Hospital, Oxford University Hospitals NHS Foundation Trust, Oxford, United Kingdom; ³Oxford Medical Genetics Laboratories, The Churchill Hospital, Oxford University Hospitals NHS Foundation Trust, Oxford, United Kingdom *CR

3494 — 4:45 Carrier Frequency Analysis of Mutations Causing Recessive Inherited Retinal Diseases in the Israeli Population. Dror Sharon¹, G. Allon^{2,3}, A. Kimchi¹, A. Blumenfeld¹, H. Newman^{4,5}, E. Pras⁶, L. Gradstein⁷, E. Banin¹, T. Ben-Yosef¹, M. Hanany¹. ¹Department of Ophthalmology, Hadassah-Hebrew Univ Medical Ctr, Jerusalem, Israel; ²Rappaport Faculty of Medicine, Technion, Haifa, Israel; ³Ophthalmology, Rambam Health Care Campus, Haifa, Israel; ⁴Ophthalmology, Tel-Aviv Medical Center, Tel-Aviv, Israel; ⁵Sackler Faculty of Medicine, Tel-Aviv University, Tel-Aviv, Israel; ⁶Ophthalmology, Assaf Harofeh Medical Center, Zerifin, Israel; ⁷Ophthalmology, Soroka Medical Center and Clalit Health Services, Faculty of Health Sciences, Ben Gurion University, Beer-Sheva, Israel

3495 — 5:00 Linking the 3D Genome Structure to Gene Expression in The Mammalian Retina. Issam Al Diri¹, M. Valentine², Y. Shao⁴, B. Xu³, A. Shirinifard¹, J. Easton³, X. Chen³, M. Dyer^{1,5}. ¹Developmental Neurobiology, St. Jude Children's Research Hospital, Memphis, TN; ²Cytogenetics Cell and Tissue Imaging Shared Resource, St. Jude Children's Research Hospital, Memphis, TN; ³Computational Biology, St. Jude Children's Research Hospital, Memphis, TN; ⁴Computational Biology, St. Jude Children's Research Hospital, Memphis, TN; ⁵Howard Hughes Medical Institute, Chevy Chase, MD

Ballroom A

Tuesday, May 01, 2018 3:30 PM-5:15 PM

Glaucoma

370 Imaging Posterior Segment and Progression

Moderators: M Francesca Cordeiro and Christopher K. Leung

3496 — 3:30 Optical Coherence Tomography (OCT) Neural Canal Direction, Obliqueness and Minimum Cross-sectional Area in a Normal Population. Seung Woo Hong^{1,11}, H. Yang¹, S. K. Gardiner², H. Luo¹, C. Hardin¹, G. Sharpe³, J. Caprioli⁴, S. Demirel², C. A. Girkin⁵, J. M. Liebmann⁶, C. Y. Mardin⁷, H. A. Quigley⁸, A. Scheuerle⁹, B. Fortune², B. C. Chauhan¹⁰, C. F. Burgoyne¹. ¹Optic nerve head research lab, Devers Eye Institute, Portland, OR; ²Discoveries in Sight Research Labs, Devers Eye Institute, Portland, OR; ³Department of Ophthalmology and Visual Sciences, Dalhousie University, Halifax, Nova Scotia, Canada; ⁴Ophthalmology, UCLA David Geffen School of Medicine, Los Angeles, CA; ⁵Ophthalmology, University of Alabama at Birmingham, Birmingham, AL; ⁶Ophthalmology, Columbia University Medical Center, New York City, NY; ⁷Ophthalmology, Friedrich-Alexander University Erlangen-Nuremberg, Nuremberg, Germany; ⁸Ophthalmology, Johns Hopkins Wilmer Eye Institute, Baltimore, MD; ⁹University Eye Hospital Mannheim, Medical Faculty Mannheim of the University of Heidelberg, Mannheim, Germany; ¹⁰Department of Ophthalmology and Visual Sciences, Dalhousie University, Halifax, Nova Scotia, Canada; ¹¹Department of Ophthalmology and Visual Sciences, Medical College, the Catholic university of Korea, Seoul, Korea (the Republic of) *CR

3497 — 3:45 Retinal Nerve Fiber Layer (RNFL) Optical Texture Analysis (ROTA) for Evaluation of RNFL Abnormalities in Glaucoma. Christopher K. Leung. 3/F, University Eye Center, The Chinese University of Hong Kong, Hong Kong, Hong Kong *CR

3498 — 4:00 Macular and Optic Nerve Head Vessel Density and Progressive Retinal Nerve Fiber Layer Loss in Glaucoma. Sasan Moghimi², L. M. Zangwill¹, R. Penteado¹, K. Hasenstab¹, E. Ghahari¹, H. Hou¹, M. Christopher¹, P. C. Manalastas¹, C. Bowd¹, R. N. Weinreb¹. ¹Shiley Eye Institute, UCSD, San Diego, CA; ²Ophthalmology, Shiley Eye Institute, UCSD, San Diego, CA *CR, ✗

3499 — 4:15 The retinal nerve fiber layer thickness in Chinese school children. The Gobi Desert Children Eye Study. Qisheng You¹, D. Zhu², I. Wong³, Y. Tao⁴, J. B. Jonas^{1,5}. ¹Beijing Institute of Ophthalmology, Beijing, China; ²(1) The Affiliated Hospital of Inner Mongolia Medical University, Hohhot, Inner Mongolia, China, Hohhot, China; ³University of Hong Kong, Hong Kong, Hong Kong; ⁴Beijing Chao Yang Hospital, Beijing, China; ⁵Heidelberg University, Mannheim, Germany

3500 — 4:30 A Device-Independent Deep Learning Approach to Digitally Stain Optical Coherence Tomography Images of the Optic Nerve Head. Sripad Krishna Devalla¹, J. Mari², T. A. Tun³, k. chin⁷, N. Strouthidis^{4,5}, T. Aung^{3,6}, A. H. Thiéry⁷, M. J. Girard^{1,3}. ¹biomedical engineering, national university of singapore, Singapore, Singapore; ²GePaSud, Université de la Polynésie française, Tahiti, French Polynesia; ³Singapore Eye Research Institute, Singapore National Eye Centre, Singapore, Singapore; ⁴Singapore Eye Research Institute, Singapore National Eye Centre, Singapore, Singapore; ⁵NIHR Biomedical Research Centre at Moorfields Eye Hospital NHS Foundation Trust and UCL Institute of Ophthalmology, London, United Kingdom; ⁶Yong Loo Lin School of Medicine, National University of Singapore, Singapore, Singapore; ⁷Department of Statistics and Applied Probability, national university of singapore, Singapore, Singapore

3501 — 4:45 Disease Severity Threshold (Tipping Point) at which RNFL and GCIPL Glaucoma Progression Rates Fall. Maria de Los Angeles Ramos Cadena¹, G. Wollstein¹, K. Lucy¹, M. Wu^{1,2}, M. Liu², F. Lavinsky¹, J. Fallon², I. Conner³, H. Ishikawa¹, J. S. Schuman¹. ¹NYU Langone Eye Center, NYU School of Medicine, New York, NY; ²Division of Biostatistics, Departments of Population Health and Environmental Medicine, New York University School of Medicine, New York, NY; ³Department of Ophthalmology, University of Pittsburgh School of Medicine, UPMC Eye Center, Eye and Ear Institute, Ophthalmology and Visual Science Research Center, Pittsburgh, PA *CR

3502 — 5:00 Evaluation of volumetric and diffusional brain changes and their associations with retinal structures and visual field function in glaucoma using MRI, OCT and perimetry. Vivek Trivedi¹, Y. Chen², C. Parra¹, A. Arshad^{1,3}, J. Bang¹, M. Wu^{1,4}, I. Conner⁵, G. Wollstein¹, J. S. Schuman¹, K. C. Chan^{1,6}. ¹Department of Ophthalmology, NYU Langone Eye Center, New York, NY; ²Department of Biomedical Engineering, Tsinghua University, Beijing, China; ³Touro College of Osteopathic Medicine, Middletown, NY; ⁴Department of Population Health, NYU School of Medicine, New York, NY; ⁵Department of Ophthalmology, University of Pittsburgh, Pittsburgh, PA; ⁶Department of Radiology, NYU School of Medicine, New York, NY *CR

Exhibit Hall A0066-A0102

Tuesday, May 01, 2018 3:30 PM-5:15 PM

Biochemistry/Molecular Biology

371 Biochemical processes and disease mechanisms involved in glaucoma

Moderators: Mary J. Kelley and Makoto Aihara

3503 — A0066 Melatonin levels in patients with primary open angle glaucoma with high or low intraocular pressure. Na Rae Kim, H. Chin, J. Kim. Inha University Hospital, Incheon, Korea (the Republic of)

3504 — A0067 GDF-15 Levels increase in Aqueous Humor Following Hypertonic Saline Injection into the Episcleral Vein in a Rat Glaucoma Model. Douglas E. Decker¹, D. Skutnik², J. Burr², C. Pattison³, C. Cooley-Themm³, D. M. Linn⁴, C. L. Linn³. ¹Biochemistry, PharmOptima, Portage, MI; ²Invivo Services, PharmOptima, Portage, MI; ³Biological Sciences, Western Michigan University, Kalamazoo, MI; ⁴Biomedical Sciences, Grand Valley State University, Allendale, MI *CR

3505 — A0068 Inducible MMP-3 expression in a steroid-induced murine model of glaucoma. Jeffrey O'Callaghan¹, P. S. Cassidy¹, E. Reina-Torres², J. Sherwood², M. M. Humphries¹, M. Campbell¹, C. J. O'Brien³, E. Lütjen-Drecoll⁵, W. Stamer⁴, D. R. Overby², P. Humphries¹. ¹Smurfit Institute of Genetics, Trinity College Dublin, Dublin, Ireland; ²Department of Bioengineering, Imperial College London, London, United Kingdom; ³Department of Ophthalmology, Mater Misericordiae University Hospital, Dublin, Ireland; ⁴Departments of Ophthalmology and Biomedical Engineering, Duke University, Durham, NC; ⁵Department of Anatomy II, University of Erlangen-Nurnberg, Erlangen, Germany

3506 — A0069 Measurement of fingertip skin autofluorescence as a marker of advanced glycation endproducts accumulation in subjects with open angle glaucoma. Masaki Tanito^{1,2}, J. Fujihara¹, Y. Ikeda¹, E. Fujihara¹, M. Yamanaka³, Y. Gohto⁴, A. Obana⁴. ¹Ophthalmology, Matsue Red Cross Hospital, Matsue, Japan; ²Shimane University Faculty of Medicine, Izumo, Japan; ³SHARP Life Science Corporation, Tenri, Japan; ⁴Seirei Hamamatsu General Hospital, Hamamatsu, Japan *CR

3507 — A0070 Functional changes in the optic nerve sheath of rabbit eyes exposed to elevated intraocular pressure. Xiaorong Xin. Ophthalmology, Qinghai Red Cross Hospital, Xining, China

3508 — A0071 Exosomes Dose Response Effects on non-Pigmented ciliary Epithelium & Trabecular Meshwork Communication. Saray Tabak, E. Beit-Yannai, S. Schreiber-Avissar. Clinical Biochemistry and Pharmacology, Ben Gurion University, Gadera, Israel

3509 — A0072 Exosomes derived from human primary non-pigmented ciliary epithelium have the same tendency as cell line derived exosomes, but different potency to attenuate trabecular meshwork canonical Wnt signaling pathway. Elie Beit-Yannai, S. Schreiber-Avissar, N. Lerner. Clinical Biochemistry and Pharmacology, Ben-Gurion University of the Negev, Beer Sheva, - Select a State -, Israel

3510 — A0073 MicroRNA Profiling in Glaucoma Eyes with Varying Degrees of Optic Neuropathy Using Next-Generation Sequencing. Yaoming Liu, S. Chen, Y. Chen, Y. Wang, X. Zhang. State Key Laboratory of Ophthalmology, Zhongshan Ophthalmic Center, Sun Yat-sen University, Guangzhou, China

3511 — A0074 microRNA-1 regulates fibronectin expression in human trabecular meshwork cells under oxidative stress. Jiantao Wang. Shenzhen Eye Hospital, Shenzhen, Guangzhou, China

3512 — A0075 Ultrastable gold nanoparticles as a new drug vector for glaucoma therapy. Florence Masse^{2,3}, M. Ouellette^{1,3}, E. Boisselier^{1,3}. ¹Ophthalmology, Laval University, Quebec, Quebec, Canada; ²Ophthalmology, Laval University, Quebec, Quebec, Canada; ³CUO-Recherche, St-Sacrement hospital, Quebec, Quebec, Canada *CR

3513 — A0076 Nutritional and hormonal regulation of lysyl oxidase-like 1 and elastic proteins involved in pseudoexfoliation syndrome/ glaucoma. Matthias Zenkel¹, D. Berner¹, U. Hoja¹, F. Pasutto², F. E. Kruse¹, U. Schlotzer-Schrehard¹. ¹Department of Ophthalmology, University Erlangen Nuernberg, Erlangen, Germany; ²Institute of Human Genetics, University Erlangen Nuernberg, Erlangen, Germany

3514 — A0077 Alterations in Optic Nerve Head (ONH) Endoplasmic Reticulum (ER) Stress Response Proteins in Non-Human Primate (NHP) Early Experimental Glaucoma (EG). Cheri Stowell¹, G. Jang^{2,3}, L. Zhang^{2,3}, J. Crabb^{2,3}, J. Reynaud⁴, S. K. Gardiner¹, b. Willard³, N. Marsh-Armstrong⁴, J. W. Crabb^{2,3}, C. F. Burgoyne¹. ¹Discoveries in Sight, Devers Eye Institute, Beaverton, OR; ²Cole Eye Institute, Cleveland Clinic, Cleveland, OH; ³Lerner Research Institute, Cleveland Clinic, Cleveland, OH; ⁴Department of Ophthalmology, University of California, Davis, CA

3515 — A0078 Pseudoexfoliation associated protective variant, rs7173049, reveals a novel regulatory region downstream of LOXL1. Daniel Berner¹, F. Pasutto², U. Hoja¹, M. Zenkel¹, M. Ozaki⁷, S. Williams³, M. Ramsay⁴, T. R. Carmichael³, F. E. Kruse¹, T. Aung⁵, C. Khor⁶, A. Reis², U. Schlotzer-Schrehard¹. ¹Department of Ophthalmology, University of Erlangen-Nuernberg, Erlangen, Bavaria, Germany; ²Institute of Human Genetics, University of Erlangen-Nuernberg, Erlangen, Bavaria, Germany; ³Division of Ophthalmology, University of the Witwatersrand, Johannesburg, South Africa; ⁴Sydney Brenner Institute for Molecular Bioscience, University of the Witwatersrand, Johannesburg, South Africa; ⁵Singapore Eye Research Institute, Singapore, Singapore; ⁶Genome Institute of Singapore, Singapore, Singapore; ⁷Ozaki Eye Hospital, Hyuga, Japan

3516 — A0079 Interocular Comparisons of Aqueous Humor Cytokine Levels in Subjects with Clinically Unilateral Pseudoexfoliation Syndrome using Multiplex Cytokine Assay. Yasuyuki Takai, S. Kaizdu, M. Tanito. Ophthalmology, Shimane university, Izumo, Shimane, Japan

3517 — A0080 Changes in Aqueous Humor Levels of TGFβ2 and SFRP1 in Open-Angle and Angle-Closure Glaucomas. tao guo. Department of Ophthalmology, Shanghai Ninth People's Hospital, Shanghai JiaoTong University School of Medicine, Shanghai, China

3518 — A0081 Complement Factor 3 Profile in Aqueous Humour of Patients Across Primary Angle Closure Disease Spectrum. Monisha Nongpiur^{1,2}, L. Zhou¹, S. K. Koh¹, R. W. Beuerman¹, E. Vithana¹, T. Aung^{1,2}, T. Wong^{1,2}. ¹Singapore Eye Research Institute, Singapore, Singapore; ²Singapore National Eye Centre, Singapore, Singapore

3519 — A0082 Effect of uteroglobin on trabecular meshwork cell contraction. Esther Ashworth Briggs¹, S. Myers¹, A. W. Hewitt^{1,2}, A. Cook^{1,3}. ¹School of Health Sciences, University of Tasmania, Launceston, Tasmania, Australia; ²Centre for Eye Research Australia, University of Melbourne, Melbourne, Victoria, Australia; ³Wicking Dementia Research and Education Centre, University of Tasmania, Hobart, Tasmania, Australia

3520 — A0083 Differentially Expressed MicroRNAs Associated with Primary Open-angle Glaucoma Based on Bioinformatics analysis of MicroRNA Microarray Data. Ruyi Zhai, H. Xu, X. Kong, J. Wang. Eye and ENT Hospital, Fudan University, Shanghai, Shanghai, China

3521 — A0084 Some minimal number of intact functional ipRGCs were essential to regulate non-image-forming visual function in rd Mouse. jingxue zhang, N. Wang. Beijing Tongren Eye Center, Beijing Institute of Ophthalmology, BEIJING, China

- 3522 — A0085 Inflammatory Cytokine Profiles in Eyes with Primary Angle-Closure Glaucoma.** Yayi Wang, S. Chen, Y. Liu, H. Li, Y. Chen, X. Zhang. Zhongshan Ophthalmic Center, Guangzhou, China
- 3523 — A0086 Visualizing Periocular Mesenchyme Subpopulation Migratory Behaviors During Zebrafish Ocular Anterior Segment Development.** Kristyn VanDerMeulen, J. Famulski. Biology, University of Kentucky, Lexington, KY
- 3524 — A0087 TGF β 2 regulates the expression of ECM and associated proteins by modulating miRNAs in human optic nerve head astrocytes and lamina cribrosa cells.** Navita N. Lopez, T. Tovar-Vidales, A. F. Clark. Pharmacology and Neuroscience/ NTERI, UNTHSC, Fort Worth, TX
- 3525 — A0088 Association between aqueous humor (AH) Transforming Growth Factor (TGF)- β and intraocular pressure (IOP) in a spontaneous glaucoma model.** Kazuya Oikawa^{1,2}, D. Sun¹, J. A. Kiland¹, E. Hennes-Beean¹, R. Trane¹, G. J. McLellan^{1,2}. ¹Ophthalmology and Visual Sciences, University of Wisconsin-Madison, Madison, WI; ²McPherson Eye Research Institute, Madison, WI
- 3526 — A0089 Loxl1 knockdown precipitates phenotypes of reactive astrocytosis and elastinopathy in optic nerve head astrocytes.** Sasha Rosen¹, A. Ghosh², E. B. Stubbs^{1,3}, V. R. Rao^{3,4}, S. Kaja^{3,3}. ¹Department of Ophthalmology, Loyola University Chicago, Maywood, IL; ²Graduate Program in Neuroscience, Loyola University Chicago, Maywood, IL; ³Research Service, Edward Hines Jr. VA Hospital, Hines, IL; ⁴Department of Molecular Pharmacology & Therapeutics, Loyola University Chicago, Maywood, IL; ⁵Departments of Ophthalmology and Molecular Pharmacology & Therapeutics, Loyola University Chicago, Maywood, IL *CR
- 3527 — A0090 Differential ECM Related Gene Expression in The Human Lamina Cribrosa in Populations at Increased Risk for Primary Open Angle Glaucoma.** Amy Hill¹, J. Shoemaker², C. Ardila¹, J. P. Vande Geest¹. ¹Bioengineering, University of Pittsburgh, Pittsburgh, PA; ²Chemical and Petroleum Engineering, University of Pittsburgh, Pittsburgh, PA
- 3528 — A0091 Selective upregulation of proteolytic enzymes and altered protein biosynthesis in the retina of Alzheimer's disease mouse model.** Vivek Kumar Gupta², M. Mirzaei¹, Y. Wu¹, L. Deng¹, N. Chitranshi², S. L. Graham². ¹Department of Chemistry and Biomolecular Sciences, Macquarie University, Sydney, New South Wales, Australia; ²Faculty of Medicine and Health Sciences, Macquarie university, Sydney, New South Wales, Australia
- 3529 — A0092 TGF- β 2 upregulates the extracellular proteins through SPARC and Integrin-Linked Kinase in Human Trabecular Meshwork.** Jaeyoung Heo, E. Ahadzadeh, M. Kang, Y. Zheng, D. J. Rhee. Case Western Reserve University, Cleveland, OH
- 3530 — A0093 Connexin43 is a key element for differentiation of iPSCs to trabecular meshwork like cells.** Xinbo Li, Y. Wang, D. Li, T. S. Acott, M. J. Kelley. Casey Eye Institute, Portland, OR
- 3531 — A0094 Molecular similarities and differences between human and rat retinas in glaucoma.** Mehdi Mirzaei^{1,2}, V. Gupta¹, N. Chitranshi¹, Y. Wu¹, S. L. Graham¹. ¹Clinical Medicine, Macquarie University, Sydney, New South Wales, Australia; ²Molecular Sciences, Macquarie University, Sydney, New South Wales, Australia
- 3532 — A0095 The Dynamic expression characteristics of serine racemase in the rat retinal ganglion cell in the model of chronic ocular hypertension.** Xuejin Zhang. Eye & ENT Hospital, Shanghai, China
- 3533 — A0096 Interrogating new targets for glaucoma gene therapy.** Timothy D. Colgan^{1,2}, V. Chrysostomou^{1,2}, J. Paul^{1,2}, S. Ng¹, E. Chan^{1,2}, P. van Wijngaarden^{1,2}, J. G. Crowston^{1,2}. ¹Glaucoma Research, Centre for Eye Research Australia, Melbourne, Victoria, Australia; ²Ophthalmology, Department of Surgery, The University of Melbourne, Melbourne, Victoria, Australia
- 3534 — A0097 Altered expression of aquaporins in glaucomatous trabecular meshwork correlates to fibrotic genes and is regulated by Wnt signalling.** Shaika Shanbagh¹, R. Kumar², S. Tejwani³, P. Machiraju¹, R. Shetty⁴, A. Ghosh¹. ¹Grow Lab, Narayana Nethralaya Foundation, Bangalore, Karnataka, India; ²Glaucoma, Narayana Nethralaya, Bangalore, Karnataka, India; ³Glaucoma, Narayana Nethralaya Eye Hospital, Bangalore, Karnataka, India; ⁴Cornea, Narayana Nethralaya, Bangalore, Karnataka, India
- 3535 — A0098 LOXL1 protein aggregation in Exfoliation Glaucoma.** Audrey M. Bernstein¹, Z. Wang², M. Ridilla¹, R. Ritch³, J. Wolosin². ¹SUNY Upstate Medical University, Syracuse, NY; ²Icahn School of Medicine at Mount Sinai, New York, NY; ³New York Eye and Ear Infirmary of Mount Sinai, New York, NY
- 3536 — A0099 Role of microRNA in pseudoexfoliating glaucoma.** Alka Khera¹, S. Pandav¹, M. Khullar², J. Ram¹, F. TT¹. ¹Advanced Eye Center, Pgimer, Chandigarh, India; ²Experimental Medicine and Biotechnology, Pgimer, Chandigarh, India
- 3537 — A0100 Heteromeric assembly of TRPV subunits in the retina and superior colliculus.** Nolan McGrady, W. S. Lambert, D. J. Calkins. Ophthalmology and Visual Sciences, Vanderbilt University Medical Center, Nashville, TN
- 3538 — A0101 Stem Cell-Derived Schlemm's Canal-like Cells for *in vitro* Glaucoma Drug Screening.** Yangzi I. Tian¹, K. Torrejon², J. Daniais³, Y. Du⁴, Y. Xie¹. ¹SUNY Polytechnic Institute, Albany, NY; ²Glauconix Biosciences, Albany, NY; ³SUNY Downstate Medical, New York City, NY; ⁴University of Pittsburgh, Pittsburgh, PA
- 3539 — A0102 Mechanical Strain Induces Distinct Human Scleral Fibroblast Lineages: Differential Roles in Cell Proliferation, Apoptosis, Migration and Differentiation.** Chen Qiu, S. Qian, X. Sun. Ophthalmology, Eye and ENT Hospital of Fudan University, Shanghai, Shanghai, China

Exhibit Hall A0157-A0189

Tuesday, May 01, 2018 3:30 PM-5:15 PM

Retinal Cell Biology

372 Diabetic retinopathy - Cell Biology**Moderators: Jena J. Steinle and Wenbo Zhang**

3540 — A0157 miRNA15 Regulates Insulin Signal Transduction in the Retinal Vasculature. Youde Jiang, L. Liu, J. J. Steinle. Wayne State University, Madison Heights, MI

3541 — A0158 Loss of TLR4 in Mouse Müller cells inhibits both MyD88-dependent

and –independent signaling. Li Liu, Y. Jiang, J. J. Steinle. Anatomy and Cell Biology, Wayne State University, Detroit, MI

3542 — A0159 Link between Epigenetics and Poor Mitochondrial DNA Quality Control in the Development of Diabetic Retinopathy. Renu A. Kowluru, M. Mishra, L. Singh. Wayne State Univ, Detroit, MI

3543 — A0160 A novel regulator of oxidative stress in the development of diabetic retinopathy. Manish Mishra, R. A. Kowluru. Ophthalmology, Kresge Eye Institute, Detroit, MI ✂

3544 — A0161 Inflammatory cytokines combined with hyperglycemia induces retinopathy phenotypes in Ins2^{K^{kin}} mice. Melissa Prentiss, J. Vrovljanis, A. Cunha, X. Wu, T. McGee, T. Drew, R. Cepeda, Q. Huang, V. Kansara. Novartis Institute for BioMedical Research Inc (NIBRI), Cambridge, MA *CR

3545 — A0162 Effects of High Glucose on Lysyl Oxidase Like-2 Expression and Apoptosis in Retinal Pericytes: Implications for Diabetic Retinopathy. Isabella W. Hou, D. Kim, S. Roy. Medicine and Ophthalmology, Boston University School of Medicine, Boston, MA

3546 — A0163 An *in vitro* co-culture model of the human retinal vasculature for use in development of regenerative medicine strategies for diabetic retinopathy. Jessica J. Eyre, R. Williams, H. J. Levis. Department of Eye and Vision Science, University of Liverpool, Liverpool, Merseyside, United Kingdom

3547 — A0164 miR15a Regulates NLRP3 Inflammasome Actions in the Retinal Vasculature. Elizabeth Curtiss¹, L. Liu¹, Y. Jiang¹, J. J. Steinle^{1,2}. ¹Anatomy and Cell Biology, Wayne State University School of Medicine, Detroit, MI; ²Ophthalmology, Wayne State University School of Medicine, Detroit, MI

3548 — A0165 Arterial and Venous Density during Early NPDR by Fractal Dimension: Association with Loss of Protective RAS.

Patricia A. Parsons-Wingenter¹, K. Radhakrishnan^{2,3}, M. C. Murray⁴, S. Ramesh^{1,4}, H. Valizadegan^{1,5}, E. Ma⁶, S. Sekaran⁷, Y. Duan^{8,9}, K. Chalam¹⁰, M. Grant¹¹.
¹NASA, Moffett Field, CA; ²U.S. Department of Veterans Affairs, Clinical Epidemiology Research Center, West Haven, CT; ³Department of Internal Medicine, College of Medicine University of Kentucky, Lexington, KY; ⁴Blue Marble Space Institute of Science (BMSIS), Moffett Field, CA; ⁵Universities Space Research Association (USRA), Mountain View, CA; ⁶Massachusetts Institute of Technology, Cambridge, MA; ⁷Georgia Institute of Technology, Atlanta, GA; ⁸Indiana University School of Medicine, Indianapolis, IN; ⁹Department of Integrative and Cellular Physiology, Indiana University School of Medicine, Indianapolis, IN; ¹⁰Department of Ophthalmology, University of Florida, Jacksonville, FL; ¹¹Department of Ophthalmology, University of Alabama, Birmingham, AL

3549 — A0166 High glucose impairs optic nerve head astrocyte phagocytosis prior to retinal ganglion cell degeneration.

Yang Liu¹, J. Wu², L. Yan², A. F. Clark¹.
¹Department of Pharmacology and Neuroscience, North Texas Eye Research Institute, University of North Texas Health Science Center, Fort Worth, TX; ²Department of Pharmaceutical Sciences, University of North Texas Health Science Center, Fort Worth, TX

3550 — A0167 Up-regulation of thioredoxin inhibits neurodegeneration induced by advanced glycation end products.

Ni n. Wang, X. Ren, H. Qi, L. Kong. Dalian Medical University, Dalian, China

3551 — A0168 Gliovascular alterations in the retina from a diabetic patient without diabetic retinopathy.

Qian Yang¹, M. V. Yasvoina¹, M. Zhu², M. Fruttiger¹.
¹UCL Institute of Ophthalmology, London, United Kingdom; ²Lions New South Wales Eye Bank, Sydney and Sydney Eye Hospital, Sydney, New South Wales, Australia

3552 — A0169 Txnip Mediates Mitophagic Flux and Lysosomal Destabilization in Human Retinal Pigment Epithelial cells under Diabetic Conditions.

Lalit P. Singh, T. Yumnamcha, F. Yao, M. Somayajulu, T. S. Devi. Wayne State Univ Sch of Med, West Bloomfield, MI *CR

3553 — A0170 MicroRNA-21 potentiates hyperglycemia-induced TGF- β signaling in retinal vascular cells.

Diana Gutsaeva¹, M. Thounaojam¹, W. Jahng², M. Bartoli¹.
¹Ophthalmology, Medical College of Georgia, Augusta, GA; ²Petroleum Chemistry, American University of Nigeria, Yola, Nigeria

3554 — A0171 Endothelial Cellular Senescence in the Pathogenesis of Diabetic Retinopathy.

Pietro Maria Bertelli, E. Peixoto, C. O'Neill, J. Guduric-Fuchs, L. Allen, A. W. Stitt, R. Medina. School of Medicine, Dentistry and Biomedical Sciences, Queen's University Belfast, Belfast, United Kingdom

3555 — A0172 Clock Gene *Bmal1* Mediates Insulin Receptor Signaling and Kir4.1 Channels in Retinal Müller Cells.

Ashay D. Bhatwadekar¹, Y. Xiao², T. Cummins², Q. Luo¹.
¹Ophthalmology, Eugene and Marilyn Glick Eye Institute, Indianapolis, IN; ²Department of Biology, Indiana University-Purdue University, Indianapolis, IN

3556 — A0173 Activation of Liver X Receptor Reverses Decrease in Cholesterol Efflux in Diabetic Retinal Endothelial Cells.

Mercedes E. Serratos¹, S. S. Hammer¹, D. M. McFarland¹, E. Crockett¹, M. Grant², J. V. Busik¹.
¹Michigan State University, East Lansing, MI; ²Indiana University School of Medicine, Indianapolis, IN

3557 — A0174 Effects of Interleukin-6 Signaling on Human Müller Versus Human Retinal Endothelial Cells Under Hyperglycemic Conditions.

Brandon Coughlin, S. Mohr. Physiology, Michigan State University, East Lansing, MI

3558 — A0175 Immunoglobulin Laden Exosomes Induce Complement Activation and Membrane Attack Complex (MAC) Formation in Retinal Endothelial Cells in Diabetes.

Chao Huang, K. Fisher, S. S. Hammer, G. J. Blanchard, J. V. Busik. Michigan State University, East Lansing, MI

3559 — A0176 Assessment of Endoplasmic Reticulum Stress Response after Diabetic Ischemic Optic Neuropathy.

Varun Kumar; A. Shariati, K. Heng, A. Oh, L. A. Louro, Y. J. Liao. Ophthalmology, Stanford University, Santa Clara, CA

3560 — A0177 Role of PIM3 kinase/Runx1 modulation in aberrant retinal neovascularization.

Joseph F. Arboleda-Velasquez¹, D. Leyton^{1,2}, S. Delgado-Tirado¹, L. A. Kim¹.
¹Schepens Eye Research Institute of Mass Eye and Ear, Boston, MA; ²Escuela de Ingeniería de Antioquia, Medellin, Colombia *CR

3561 — A0178 IL-17 exacerbates diabetic retinopathy through a novel mechanism of M1 microglia polarization.

Chang He. Sun Yat-sen University, Guangzhou, China

3562 — A0179 Innovative Flow-Based Co-Culture System to Investigate REC:PMN Interactions Under High Glucose Conditions.

Elizabeth A. Berger^{1,2}, E. Strand¹, L. A. Young¹, H. Shi¹, D. J. Kracht¹, T. W. Carion¹.
¹Anatomy & Cell Biology, Wayne State Univ Sch of Med, Detroit, MI; ²Ophthalmology, Kresge Eye Institute, Detroit, MI

3563 — A0180 Differential Transcriptome Profile of human retinal endothelial cells in response to Inflammation and Glycation.

Finnny Monickaraj, P. Kempaiah, P. McGuiire, A. Das. University of New Mexico, Albuquerque, NM

3564 — A0181 Assessing cognition and neurochemical changes in hyperglycemic zebrafish.

Victoria P. Connaughton^{1,2}, S. Jones^{3,2}, K. DeCicco-Skinner^{1,2}, T. Davidson^{3,2}, C. Gould^{1,2}.
¹Biology, American University, Washington, District of Columbia; ²Center for Behavioral Neuroscience, American University, Washington, District of Columbia; ³Department of Psychology, American University, Washington, District of Columbia

3565 — A0182 Western diet-enhanced diabetic retinopathy is not lipid mediated.

Ali Hafezi-Moghadam¹, A. Barakat¹, S. Nakao¹, S. Zandi¹, D. Sun¹, K. Hayes².
¹Harvard Medical School, Boston, MA; ²Brandeis University, Waltham, MA

3566 — A0183 PGF-VEGFR1 signaling mediates the crosstalk of retinal endothelial cells and pericytes in diabetic retinopathy.

Hu Huang^{1,2}, Y. Liu^{2,3}, A. Lennikov¹, L. Fan¹, H. Xu^{2,3}, J. Chen^{2,3}, S. Tang^{2,3}.
¹Wilmer Eye Institute, Johns Hopkins University, Baltimore, MD; ²Central South University, Aier School of Ophthalmology, Changsha, Hunan, China; ³Aier Eye Institute, Changsha, Hunan, China

3567 — A0184 Cytokine-induced ECM alterations in DR pathogenesis.

Meredith Giblin^{1,2}, J. S. Penn^{2,1}.
¹Cell and Developmental Biology, Vanderbilt University, Nashville, TN; ²Ophthalmology and Visual Sciences, Vanderbilt University, Nashville, TN

3568 — A0185 Expression levels of Nrf2 at early streptozotocin-induced diabetes in the rat retina.

Jesús S. Albert, G. Sánchez-Chávez, R. Salceda. Instituto de Fisiología Celular, Universidad Nacional Autónoma de México, México, Ciudad de México, México

3569 — A0186 Biomimetic electrochemical assessment of mitochondrial dysfunction in diabetic retinopathy.

Denis Proshlyakov¹, N. Frantz¹, Y. Levitsky^{1,2}, J. V. Busik².
¹Chemistry, Michigan State University, East Lansing, MI; ²Physiology, Michigan State University, East Lansing, MI

3570 — A0187 FGF21 restores photoreceptor function in type 1 diabetic mice.

Ricky Cui^{1,2}, Z. Fu², Z. Wang², C. Liu², Y. Gong², B. Cakir², R. Liegf, Y. Sun², R. Duran², A. Poblete², S. S. Cho^{2,3}, S. Talukdar³, J. D. Akula², A. Hellstrom¹, L. E. Smith².
¹School of Medicine, Mayo Clinic, Rochester, MN; ²Department of Ophthalmology, Boston Children's Hospital, Harvard Medical School, Boston, MA; ³Merck Research Laboratories, Boston, MA; ⁴Section for Ophthalmology, Department of Clinical Neuroscience and rehabilitation, Institute of Neuroscience and Physiology, Sahlgrenska Academy, University of Gothenburg, Göteborg, Sweden

3571 — A0188 Characterization of Pericyte Loss in Cadaveric Human Retinas in Diabetes Mellitus.

Timothy Nguyen¹, H. Patolia¹, M. Rikard³, J. Walpole², S. Peirce-Cotter², J. Chappell².
¹Virginia Tech Carilion School of Medicine, Roanoke, VA; ²Virginia Tech Carilion Research Institute, Roanoke, VA; ³Biomedical Engineering, University of Virginia, Charlottesville, VA

3572 — A0189 Intravitreal COMP-Ang1 reduces vascular area in advanced diabetic retinopathy. Susie Choi¹, L. Carroll¹, H. Uehara¹, M. Singh², B. K. Ambati¹. ¹Ophthalmology and Vision Sciences, University of Utah, Salt Lake City, UT; ²Department of Ophthalmology, University of Texas Medical Branch, Galveston, TX

Exhibit Hall A0190-A0208

Tuesday, May 01, 2018 3:30 PM-5:15 PM

Retinal Cell Biology

373 Diabetic retinopathy - preclinical studies

Moderators: Alan W. Stitt and Susanne Mohr

3573 — A0190 The Uni-Nephrectomized SDT Fatty Rat, a novel Type 2 diabetic model of Diabetic Nephropathy, develops features of diabetic retinopathy over 10 weeks. Francois Briand¹, S. Antonelli², V. Mauro³, N. Cimbolini², M. Shinohara³, E. Brousseau¹, T. Ohta⁴, Y. Kageyama³, L. Feraille², T. Sulpice¹. ¹Physiogenex, Labège, France; ²Iris Pharma, La Gaude, France; ³CLEA Japan Inc., Tokyo, Japan; ⁴Biological/Pharmacological Research Laboratories, Japan Tobacco Inc, Osaka, Japan *CR

3574 — A0191 Pathological Features of Diabetic Retinopathy in Spontaneously Diabetic Torii Fatty Rats. Yoshiaki Tanaka¹, M. Kobayashi¹, R. Takagi¹, S. Uehara¹, F. Toyoda¹, M. Shimmura-Tomita¹, N. Kinoshita¹, H. Takano¹, T. Ohta², T. Sasase², A. Kakehashi¹. ¹Ophthalmology, Jichi Medical University, Saitama Medical Center, Saitama, Saitama, Japan; ²Central Pharmaceutical Research Institute, Japan Tobacco Inc., Osaka, Japan *CR

3575 — A0192 Studies on Intraocular Transplantation of Pancreatic Cells in a Large-eyed Preclinical Animal Model. Yesenia O. Melin^{3,1}, P. Van Krieken², M. Aronsson^{3,1}, A. Dicker², E. Lardner^{3,1}, P. Berggren², A. P. Kvant^{3,1}, H. Andre^{3,1}. ¹Clinical Neuroscience, Karolinska Institutet, Stockholm, Sweden; ²The Rolf Luft Research Center for Diabetes and Endocrinology, Karolinska Institutet, Stockholm, Sweden; ³Retina, St. Erik Eye Hospital, Stockholm, Sweden *CR

3576 — A0193 An orally dosed plasma kallikrein inhibitor decreases retinal vascular permeability in a rat model of diabetic retinopathy. Melissa A. Calton, J. A. Ma, E. Chang, J. Litt, S. S. Chang, M. Estiarte, T. P. Shiau, A. Datta, D. B. Kita. Verseon Co., Fremont, CA *CR

3577 — A0194 Predictability of Progression of Diabetic Retinopathy by the Assessment of Foveal Avascular Zone with Optical Coherence Tomography Angiography. Katsuya Suzuki¹, M. Nozaki¹, N. Takase¹, A. Kato¹, H. Morita¹, H. Ozeki^{1,2}, M. Yoshida¹, Y. Ogura¹. ¹Department of Ophthalmology and Visual Science, Nagoya City University Graduate School of Medical Sciences, Nagoya, Aichi, Japan; ²Ozeki Eye Clinic, Kanie, Japan

3578 — A0195 The anterior chamber of the eye as a clinical transplantation site of pancreatic islets for the treatment of diabetes: a study in a rat model of diabetes. Choun-Ki Joo^{1,2}, J. Lee^{1,2}, J. Mok¹, A. SHAWL¹, D. Paik¹. ¹Catholic Institutes of Visual Science, Catholic Univ Korea Coll of Med, Seoul, Korea (the Democratic People's Republic of); ²Seoul St. Mary's Hospital, Seoul, Korea (the Republic of)

3579 — A0196 Mechanisms underlying early-stage changes in retina function after experimental induction of sustained dyslipidemia. Peter Koulen^{1,2}, C. Montgomery¹, H. Johnson¹, T. Johnston^{1,3}. ¹Ophthalmology/Vision Research Ctr, University of Missouri-Kansas City, Kansas City, MO; ²Biomedical Sciences, University of Missouri – Kansas City, School of Medicine, Kansas City, MO; ³Pharmaceutical Sciences, School of Pharmacy, University of Missouri-Kansas City, Kansas City, MO

3580 — A0197 Daily low dose L-DOPA treatment delays the onset of retinal function deficits and improves retinal vascular function in STZ-induced diabetic rats. Kyle C. Chesler¹, C. Motz², R. S. Allen^{1,2}, P. Iuvone³, M. T. Pardue^{1,2}. ¹Biomedical Engineering, Georgia Institute of Technology, Atlanta, GA; ²Center for Visual and Neurocognitive Rehabilitation, Veterans Affairs Medical Center, Atlanta, GA; ³Department of Ophthalmology, Emory University, Atlanta, GA

3581 — A0198 Assessment of macular thickening in spontaneously diabetic rhesus monkeys. Timothy S. Kern^{1,2}, J. Tang¹, I. Pan³, Z. Li³, Y. Shen³, W. Zeng³, L. Gong³. ¹Department of Pharmacology, Case Western Reserve Univ, Cleveland, OH; ²Stokes VA Medical Center, Cleveland, OH; ³Sichuan Primed Shines Bio-tech Co., Ltd, Chengdu, Sichuan, China *CR

3582 — A0199 Trapping all trans retinal is protective to vascular damage in ischemia reperfusion. David A. Antonetti¹, C. Lin¹, T. S. Kern², S. F. Abcouwer¹. ¹Ophthalmology & Visual Sciences, Kellogg Eye Center Univ of Michigan, Ann Arbor, MI; ²Case Western, Cleveland, OH

3583 — A0200 The inhibition of Nogo-A promotes vascular and neuronal recovery in a mouse model of proliferative retinopathy. Sandrine Joly¹, A. Dejda², L. Rodriguez¹, M. Sapieha², V. Pernet¹. ¹Ophthalmology, Centre de recherche du CHUQ/University Laval, Quebec City, Quebec, Canada; ²Ophthalmology, Maisonneuve-Rosemont Hospital Research Centre, Montreal, Quebec, Canada

3584 — A0201 Inhibition of Cx43 phosphorylation in astrocytes restores neuronal function in oxygen-induced retinopathy. Nefeli Slavi, M. Srinivas, S. Viswanathan. Biological and Vision Sciences, SUNY College of Optometry, New York, NY

3585 — A0202 Pemaflibrate prevents retinal pathological neovascularization via systemic metabolic cascades in mice. Yohei Tomita^{2,1}, Y. Miwa^{2,1}, m. miyauchi^{2,1}, A. Ishida^{2,1}, H. Kunimi^{2,1}, Y. Katada^{2,1}, K. Tsubota², T. Kurihara^{2,1}. ¹Laboratory of Photobiology, Keio University School of Medicine, Tokyo, Japan; ²Department of Ophthalmology, Keio University School of Medicine, Tokyo, Japan *CR

3586 — A0203 Functional Analysis of Retinal Cells in Mouse Models of Type I and II Diabetes Using Ex Vivo Electroretinography. Silke Becker¹, R. Rajagopal², B. A. Berkowitz³, F. Vinberg¹. ¹John A. Moran Eye Center, University of Utah, Salt Lake City, UT; ²Washington University in St. Louis, St. Louis, MO; ³School of Medicine, Wayne State University, Detroit, MI

3587 — A0204 A Novel Miniature Porcine Model for the Early-Onset of Diabetic Retinopathy. Shyam S. Chaurasia¹, R. Lim¹, D. Olver², J. Padilla³, R. R. Mohan¹, E. Walters⁴, D. P. Hainsworth⁵. ¹Veterinary Medicine and Surgery, University of Missouri, Columbia, MO; ²Biomedical Sciences, University of Missouri, Columbia, MO; ³Nutrition and Exercise Physiology, University of Missouri, Columbia, MO; ⁴National Swine Resource and Research Center, University of Missouri, Columbia, MO; ⁵Mason Eye Institute, University of Missouri, Columbia, MO

3588 — A0205 Increased EphrinB2 expression in pericytes contributes to retinal vascular death in diabetes. Mohammed Abdelsaid¹, A. Barrett¹, M. Coucha². ¹Biomedical Sciences, Mercer University School of Medicine, Savannah, GA; ²Pharmaceutical Sciences, South University, Savannah, GA

3589 — A0206 Evidence of Diabetic Retinopathy in a Western (high fat) diet-Induced Non-human Primate Model of Type 2 diabetes (T2D). Ping Hu¹, M. N. Uddin¹, M. Neuringer², L. Renner², J. Stoddard², M. E. Boulton³, T. J. McGill², T. Chan-Ling¹, M. Grant². ¹Anatomy, The University of Sydney, Sydney, New South Wales, Australia; ²Casey Eye Institute, Oregon Health & Science University, Portland, OR; ³University of Alabama at Birmingham, Birmingham, AL

3590 — A0207 The anti-inflammatory effect of substance P on diabetic complication with diabetic rat model. Sung Rae Noh¹, J. Kim¹, K. Kim¹, E. Kim¹, H. Hong², S. Yu¹. ¹Ophthalmology, Kyung Hee University Medical Center, Seoul, Korea (the Republic of); ²Regenerative medicine, Kyunghee university medical center, Seoul, Korea (the Republic of)

3591 — A0208 Metformin improves retinal capillary perfusion in diabetic mice. Xiaoxi Qiao, Y. Li, T. Zhou, P. A. Edwards, H. Gao. Ophthalmology, Henry Ford Health System, Detroit, MI

Exhibit Hall A0210-A0239

Tuesday, May 01, 2018 3:30 PM-5:15 PM

Retina

374 Diabetic Macular Edema Anti-VEGF

Moderators: Michael Singer and Jennifer K. Sun

3592 — A0210 Baseline factors associated with \geq 2-step diabetic retinopathy (DR) severity improvement with ranibizumab (RBZ). Dilsher Dhoot¹, L. Hill¹, K. Tarnowski², I. Stoilov². ¹California Retina Consultants, Santa Barbara, CA; ²Genentech, Inc, South San Francisco, CA *CR, ∇

3593 — A0211 A pilot study identifying tear miRNA as biomarkers to stratify Diabetic Macular Edema Patients According to Their Response to Anti-VEGF Treatments. Hwei Wuen Chan¹, I. Seah¹, W. Wong¹, H. Lin¹, Y. Yuen¹, E. Mangunkusumo¹, C. Chee¹, P. Zhao¹, C. Lee², W. Hunziker², X. Su¹. ¹Department of Ophthalmology, National University Hospital, Singapore, Singapore; ²Institute of Molecular and Cell Biology, Singapore, Singapore

3594 — A0212 Baseline Systemic Demographic Characteristics of Patients With Diabetic Macular Edema Undergoing Initiation of Anti-VEGF Therapy. Siraj U. Haq, M. M. Han, W. Ansari, F. Conti, F. Q. Silva, R. P. Singh. Cole Eye Institute, Cleveland Clinic, CLEVELAND HEIGHTS, OH *CR

3595 — A0213 Association between hyperreflective foci in the outer retinal layers and functional efficacy of ranibizumab for diabetic macular edema. Tomoaki Murakami, K. Suzuma, T. Yoshitake, H. Nakanishi, M. Fujimoto, M. Oishi, A. Tsujikawa. Ophthalmology & Visual Sciences, Kyoto Univ Grad Sch of Med, Kyoto, Kyoto, Japan *CR

3596 — A0214 Anatomic Feature Dynamics and Perfusion Density Following Aflibercept Therapy in Retinal Vascular Disease in the PERMEATE Study. Natalia A. Figueiredo, S. Srivastava, R. P. Singh, A. V. Rachitskaya, M. Hu, J. Reese, L. Stiegel, N. Dukles, J. Hach, L. Lunasco, C. Calabrise, E. Zhou, J. Ehlers. Cole Eye Institute, Cleveland Clinic, Cleveland, OH *CR, ∇

3597 — A0215 Baseline Ocular Characteristics of Patients With Diabetic Macular Edema Undergoing Initiation of Anti-VEGF Therapy. Waseem Ansari¹, S. U. Haq², M. M. Han², F. Conti¹, F. Q. Silva¹, R. P. Singh¹. ¹Ophthalmology, Cleveland Clinic, Cleveland, OH; ²Case Western Reserve University, Cleveland, OH *CR

3598 — A0216 Intravitreal Aflibercept Injection (IAI) for Persistent Diabetic Macular Edema (DME) after Treatment

with Bevacizumab and/or Ranibizumab: 6-Month ROTATED Trial Results. Dennis M. Marcus, H. Frazier, P. Rex, W. Marcus, D. Starnes, H. Walia, H. Singh, R. Lalane. Southeast Retina Center, Augusta, GA *CR, ∇

3599 — A0217 Endothelial vascular growth factor polymorphism -634 C/G association with the bevacizumab intravitreal therapy response in latin population with diabetic macular edema. Geovanni J. Rios, R. Abel. Retina, Hospital de La Luz, Mexico, Mexico, Mexico

3600 — A0218 Twelve Months Outcomes in Switched Patients Treated with Intravitreal Aflibercept for Diabetic Macular Oedema. Marko Lukic^{1,2}, Z. Shalchi^{1,2}, G. Williams^{1,2}, P. Patel^{1,2}, R. Hamilton^{1,2}, R. Rajendram^{1,2}. ¹Medical Retina, Moorfields Eye Hospital, London, United Kingdom; ²Institute of Ophthalmology, University College London, London, United Kingdom *CR

3601 — A0219 Real-world outcomes of Aflibercept treatment for chronic diabetic macular edema in Bevacizumab non-responders in a Canadian setting. Ali Salimi¹, N. Vila^{1,2}, M. Kapusta^{1,2}. ¹Medicine, McGill University, Montreal, Quebec, Canada; ²Ophthalmology, Montreal Jewish General Hospital, Montreal, Quebec, Canada *CR

3602 — A0220 Early improvement of central retinal thickness as a predictor for anatomical outcome and response in the treatment of diabetic macular edema with intravitreal injections of anti-VEGF. Johannes Schiefelbein¹, M. Müller¹, C. Kern¹, T. Herold¹, R. Liegl¹, D. A. Sim², M. Weiß¹, S. Priglinger¹, K. U. Kortuem^{1,2}. ¹Ludwig-Maximilians-University, Department of Ophthalmology, Munich, Germany; ²Moorfields Eye Hospital, London, United Kingdom *CR

3603 — A0221 Changes in Retinal Perfusion in Patients Treated with 12-month Scheduled Aflibercept Therapy for Diabetic Macular Edema. Kevin Card, G. M. Gordon, D. J. Pieramici. Research, California Retina Consultants, Santa Barbara, CA *CR, ∇

3604 — A0222 Trends in the use of anti-VEGF intravitreal injections for the treatment of diabetic macular edema (DME) across the United States from 2013-2017. Ferhina Ali, A. Obeid, D. S. Borkar, S. Garg, a. ho, J. Vander, J. Hsu. Wills Eye Hospital/Mid Atlantic Retina, Philadelphia, PA

3605 — A0223

Optical Coherence Tomography Angiography in Patients with Diabetic Macular Edema treated with anti-VEGF intravitreal injections in Mexican Population. Alejandro Olguin, A. Solis, V. Gonzalez, D. RODRIGUEZ. Instituto Nacional de Rehabilitacion, Mexico City, Mexico

3606 — A0224 Efficacy of Aflibercept for the treatment of diabetic macular oedema in patients refractory to Ranibizumab. Holly Clarke, A. Sepetis, C. Rennie, A. Lotery, D. Sahu, D. Inzerillo, B. Gupta. University Hospital Southampton, Southampton, United Kingdom

3607 — A0225 Audit of anti-VEGF injections for diabetic macula edema in 21 UK hospitals. Peter H. Scanlon^{1,2}, I. Stratton¹, C. Bailey⁴, H. Eleftheriadis³, N. Dhingra⁵, J. S. Talks⁷, T. Peto⁶. ¹Ophthalmology, Gloucestershire Hospitals NHS Foundation Trust, Cheltenham, United Kingdom; ²Harris Manchester College, University of Oxford, Oxford, United Kingdom; ³Kings College, London, United Kingdom; ⁴Bristol Eye Hospital, Bristol, United Kingdom; ⁵Mid Yorkshire NHS Trust, Wakefield, United Kingdom; ⁶Queen's University, Belfast, United Kingdom; ⁷Newcastle upon Tyne Hospital, Newcastle, United Kingdom *CR

3608 — A0226 Different patterns of anti-VEGF loading phase for diabetic macular edema (DME) treatment: data analysis from the UK Aflibercept Users Group. Hussein Almuhtaseb^{1,2}, I. Stratton³, P. H. Scanlon³, A. Lotery^{2,1}. ¹Eye Unit, University Hospital Southampton NHS Foundation Trust, Southampton, United Kingdom; ²Clinical and Experimental Sciences, University of Southampton, Southampton, United Kingdom; ³Ophthalmology, Gloucestershire Hospitals NHS Foundation Trust, Cheltenham, United Kingdom *CR

3609 — A0227 Outcomes with Intravitreal Anti-Vascular Endothelial Growth Factor (VEGF) Therapy for Neovascular Age-Related Macular Degeneration (AMD) and Diabetic Macular Edema (DME) in Routine Clinical Practice. John D. Pitcher^{1,2}, A. A. Moshfeghi³, G. Lucas⁴, N. Boucher⁴, N. Saroj⁵. ¹Vision Research Center, Eye Associates of New Mexico, Albuquerque, NM; ²Department of Surgery, Division of Ophthalmology, University of New Mexico, Albuquerque, NM; ³Roski Eye Institute, Department of Ophthalmology, Keck School of Medicine, University of Southern California, Los Angeles, CA; ⁴Vestrum Health, Ottawa, Ontario, Canada; ⁵Regeneron Pharmaceuticals, Inc., Tarrytown, NY *CR

3610 — A0228 Twelve-month Outcomes of Ellipsoid Zone and External Limiting Membrane Status after Intravitreal Aflibercept in Diabetic Macular Edema. Noriko Miyamoto^{1,2}, S. Yamamoto^{1,2}, S. Yoshimizu^{1,2}, S. Yoshitake^{1,2}, K. Ishida^{1,2}, Y. Kurimoto^{1,2}. ¹Dept of Ophthalmology, Kobe City Eye Hospital, Kobe, Japan; ²Dept of Ophthalmology, Kobe City Med Ctr Gen Hosp, Kobe, Japan

3611 — A0229 Plateau-effect of intravitreal bevacizumab after six injections in diabetic macular edema. Sandeep Grover, K. Sambhav. Ophthalmology, University of Florida College of Medicine, Jacksonville, FL

- 3612 — A0230 Interim results of the German diabetic macula edema (DME) population within the PACIFIC study.** Kristina Markova¹, C. Haritoglou¹, M. Iwersen², U. Miche³, F. Diwischek², M. Grüb³, F. Ziemssen⁴. ¹Augenkl. Herzkopf Carl Theodor, München, Germany; ²Novartis Pharma GmbH, Nürnberg, Germany; ³Praxis Prof. Dr. med. Matthias Grüb & Kollegen, Breisach am Rhein, Germany; ⁴Universitäts-Augenkl. Tübingen, Tübingen, Germany *CR
- 3613 — A0231 Long-term Changes in Diabetic Retinopathy Severity when Treating Diabetic Macula Edema with Ranibizumab: DRCR. net Protocol I 5-year Report.** Susan B. Bressler. *Ophthalmol - Maumenee 706, Johns Hopkins Wilmer Eye Inst, Baltimore, MD* *CR, ✕
- 3614 — A0232 Differences in visual acuity and OCT parameters in patients under intravitreal aflibercept therapy due to diabetic macular edema depending on baseline visual acuity.** Maximilian Weiß¹, M. Müller², T. Herold², R. Liegl², C. Kern², J. Schiefelbein², D. A. Sim³, S. Priglinger¹, K. U. Kortuem^{1,3}. ¹Department of Ophthalmology, Munich, Germany; ²Department of ophthalmology, Ludwig-Maximilians-University, Munich, Bavaria, Germany; ³Moorfields Eye Hospital, London, United Kingdom *CR
- 3615 — A0233 Development and validation of a risk-prediction nomogram for poor functional response one year after treatment with anti-VEGF in naive-diabetic macular edema.** Pierre-Henry Gabrielle^{1,2}, J. Bouche-Pillon¹, E. Maupin¹, S. Aho-Glele¹, R. Tadayoni¹, L. Kodjikian³, A. M. Bron^{1,2}, P. Massin⁴, C. P. Creuzot Garcher^{1,2}. ¹Ophthalmology, DIJON University Hospital, Dijon, France; ²Eye and Nutrition Research Group, CSGA, UMR1324, INRA, Dijon, Bourgogne-Franche-Comté, France; ³Ophthalmology, Lyon Croix-Rousse University Hospital, Lyon, Rhône-Alpes, France; ⁴Ophthalmology, Paris Lariboisière hospital, Paris, France
- 3616 — A0234 Real-world visual outcomes at 24 weeks in patients with diabetic macular edema receiving aflibercept intravitreal injections as per UK license.** Charles Hennings¹, M. Deshmukh¹, V. Nguyen², M. Harris¹, R. Asaria¹, D. Barthelmes^{3,2}, M. C. Gillies², H. Mehta^{1,2}. ¹Ophthalmology, Royal Free London NHS Foundation Trust, London, United Kingdom; ²Macula Research Group, Save Sight and Eye Health Institute, Sydney Medical School, University of Sydney, Sydney, New South Wales, Australia; ³Department of Ophthalmology, University Hospital Zurich, Zurich, Switzerland *CR
- 3617 — A0235 Effectiveness of ranibizumab for the treatment of patients with diabetic macular edema in a real-world setting: 1- and 2-year results from the LUMINOUS™ study.** Paul Mitchell¹, S. Parikh², W. Macfadden². ¹Centre for Vision Research, Department of Ophthalmology and Westmead Institute for Medical Research, University of Sydney, North Sydney, New South Wales, Australia; ²Novartis Pharma AG, Basel, Switzerland *CR, ✕
- 3618 — A0236 Comparative study of intravitreal ranibizumab and aflibercept for diabetic macular edema with ‘Treat and Extend’ algorithm.** Shinichiro Chujo^{1,2}, M. Sugimoto², T. Sasaki², A. Ichio², R. Miyata², H. Matsubara², M. Kondo². ¹Ophthalmology, Suzuka General Hospital, Suzuka, Mie, Japan; ²Ophthalmology, Mie university Graduate school of Medicine, Tsu, Mie, Japan *CR, ✕
- 3619 — A0237 Value of a dry retina during DME treatment by ranibizumab: sub-Analysis of RESTORE, REVEAL, RESPOND and RETAIN studies.** Franck Fajnkuchen^{2,1}, P. Margaron³, J. Wright³, A. Giocanti Auregan¹. ¹Hopital Avicenne, Paris, France; ²Centre d’Imagerie et de Laser, Paris, France; ³Novartis AG, Basel, Switzerland *CR
- 3620 — A0238 Intravitreal Nesvacumab+Aflibercept in Diabetic Macular Edema: The Phase 2 RUBY Trial.** David S. Boyer. *Ophthalmology, Retina Vitreous Assoc Med Group, Los Angeles, CA* *CR, ✕
- 3621 — A0239 Impact of Systemic Dipeptidyl Peptidase-4(DPP-4) Inhibitors on Treatment Outcomes for Diabetic Macular Edema (DME) in the VISTA and VIVID trials.** Ehsan Rahimy¹, K. Baker², D. Thompson², N. Saroj². ¹Palo Alto Medical Foundation, Palo Alto, CA; ²Regeneron Pharmaceuticals, Inc., Tarrytown, CA *CR, ✕
-
- Exhibit Hall A0283-A0308
Tuesday, May 01, 2018 3:30 PM-5:15 PM
Anatomy and Pathology/Oncology
- 375 Melanoma: Clinical Innovations**
-
- Moderators: Bertil Damato and Tara McCannel**
- 3622 — A0283 Safety, efficacy and biology of the gp100 TCR-based bispecific T cell redirector IMCgp100 in advanced uveal melanoma.** Richard D. Carvajal¹, J. Sacco², P. Nathan³, M. Orloff⁴, N. Little⁵, C. McAlpine⁶, D. Krige⁶, N. Hassan⁶, A. Hulstine⁶, C. Coughlin⁶, T. Sato¹. ¹Medicine, Columbia University Medical Center, New York, NY; ²Clatterbridge Cancer Center, Liverpool, United Kingdom; ³Mount Vernon, Mt Vernon, United Kingdom; ⁴Thomas Jefferson Medical Center, Philadelphia, PA; ⁵Aptus Research, London, United Kingdom; ⁶Immunocore, Ltd, Oxford, United Arab Emirates *CR, ✕
- 3623 — A0284 Trends in radiation practices for female ocular oncologists in North America.** Sona Shah¹, Z. M. Correa², A. C. Scheffler³, K. Kogachi¹, M. E. Aronow⁵, S. Callejo², S. Day¹², K. Paton¹¹, I. Phan¹⁰, C. L. Shields⁹, A. Skaler⁸, R. Jennelle⁷, J. L. Berry^{1,6}. ¹USC Roski Eye Institute, University of Southern California, Los Angeles, CA; ²Montreal University, Montreal, Quebec, Canada; ³University of Cincinnati, Cincinnati, OH; ⁴Retina Consultants of Houston, Houston, TX; ⁵Massachusetts Eye and Ear Infirmary, Harvard Medical School, Boston, CA; ⁶Children’s Hospital Los Angeles, Los Angeles, CA; ⁷Department of Radiation Oncology, Los Angeles, CA; ⁸Casey Eye Institute, Oregon Health & Science University, Portland, OR; ⁹Ocular Oncology Service, Wills Eye Hospital, Philadelphia, PA; ¹⁰Kaiser Permanente, San Francisco, CA; ¹¹University of British Columbia, Vancouver, British Columbia, Canada; ¹²Austin Retina Associates, Austin, TX
- 3624 — A0285 Real-world plaque brachytherapy clinical practices among Ocular Oncology Study Consortium treatment centers.** Prithvi Mruthyunjaya³, C. Binder¹, A. C. Scheffler^{2,6}, M. Seider⁴, A. Skaler². ¹Radiation Oncology, Oregon Health Sciences, Portland, OR; ²Retina Consultants of Houston, Houston, TX; ³Casey Eye Institute, Portland, OR; ⁴Permanent Group, San Francisco, CA; ⁵Byers Eye Institute, Palo Alto, CA; ⁶Houston Methodist Hospital, Blanton Eye Institute, Houston, TX
- 3625 — A0286 Outcomes of Choroidal Melanomas Treated with Eye Physics: A 25-Year Review.** Bao han A. Le^{1,2}, J. W. Kim^{1,3}, H. Deng¹, N. Rayess⁴, R. Jennelle⁴, J. L. Berry^{1,3}. ¹USC Roski Eye Institute, Laguna Beach, CA; ²John A. Burns School of Medicine, Honolulu, HI; ³The Vision Center at Children’s Hospital Los Angeles, Los Angeles, CA; ⁴Radiation Oncology, Keck School of Medicine of University of Southern California, Los Angeles, CA
- 3626 — A0287 A comparison of treatment outcomes in patients receiving standard dose vs. reduced dose proton radiation for uveal melanoma.** Monica Oxenreiter, A. M. Lane, I. Kim, E. S. Gragoudas. *Ocular Melanoma Center, Massachusetts Eye and Ear Infirmary, Boston, MA*
- 3627 — A0288 Adjuvant brachytherapy with strontium-90 or ruthenium-106 in conjunctival melanoma.** Niels J. Brouwer¹, M. Marinkovic¹, F. P. Peters², M. C. Hulshof³, B. R. Pieters⁴, R. J. de Keizer¹, N. Horeweg², M. S. Laman², J. C. Bleeker¹, S. G. van Duinen³, M. J. Jager¹, C. L. Creutzberg², G. P. Luyten¹. ¹Ophthalmology, Leiden University Medical Center, Leiden, Netherlands; ²Radiation Oncology, Leiden University Medical Center, Leiden, Netherlands; ³Pathology, Leiden University Medical Center, Leiden, Netherlands; ⁴Radiation Oncology, Amsterdam Medical Center / University of Amsterdam, Amsterdam, Netherlands

3628 — A0289 **Plaque radiotherapy induced uveal melanoma regression rates based on gene expression profile.** Kisha Piggott¹, C. Montana¹, K. Trinkaus², K. Rao¹. ¹Ophthalmology, Washington University School of Medicine, St. Louis, MO; ²Surgery, Washington University School of Medicine, St. Louis, MO *CR

3629 — A0290 **Synchronous uveal melanomas responding to immune checkpoint blockade.** Sapna Patel¹, R. Kenner Chapman¹, Y. Qin¹, D. Gombos². ¹Dept of Melanoma Medical Oncology, MD Anderson Cancer Center, Houston, TX; ²Head and Neck Surgery, MD Anderson Cancer Center, Houston, TX

3630 — A0291 **Health-economics modelling of screening for liver metastases using the Liverpool Uveal Melanoma Prognosticator Online (LUMPO).** Azzam F. Taktak¹, A. Eleuteri¹, A. Fisher¹, H. Kalirai², H. Heimann³, B. Damato⁴, S. E. Coupland⁵. ¹Medical Physics and Clinical Engineering, Royal Liverpool University Hospital, Liverpool, United Kingdom; ²Molecular and Clinical Cancer Medicine, University of Liverpool, Liverpool, United Kingdom; ³Ocular Oncology Service, Royal Liverpool University Hospital, Liverpool, United Kingdom; ⁴University of California San Francisco, San Francisco, CA

3631 — A0292 **Quality of Life Outcomes Following Eye Physics Brachytherapy Plaques for the Treatment of Choroidal Melanoma.** Arezu Haghighi¹, B. A. Le¹, D. Yadegari², J. W. Kim^{1,3}, J. L. Berry^{1,3}. ¹ophthalmology, University of Southern California Roski Eye Institute, Los Angeles, CA; ²University of Miami Miller School of Medicine, Miami, FL; ³Ophthalmology, Children's Hospital Los Angeles, Los Angeles, CA

3632 — A0293 **Variability of “Bad Prognosis” in Uveal Melanoma.** Yusra F. Shao, N. Singh, A. D. Singh. Ophthalmic Oncology, Cole Eye Institute, Cleveland, OH

3633 — A0294 **Uveal Melanoma Metastatic Rate is Relative to Stochastic Mutation Rate and Type of Mutation.** Eszter Szalai^{1,2}, Y. Jiang³, N. M. van Poppelen^{5,6}, M. J. Jager⁴, A. de Klein⁵, E. Kilic⁵, H. Grossniklaus^{2,7}. ¹Department of Ophthalmology, University of Debrecen, Faculty of Medicine, Debrecen, Hungary; ²Department of Ophthalmology, Emory University School of Medicine, Atlanta, GA; ³Department of Mathematics and Statistics, Georgia State University, Atlanta, GA; ⁴Department of Ophthalmology, Leiden University Medical Centre, Leiden, Netherlands; ⁵Department of Ophthalmology, Erasmus University Medical Center, Rotterdam, Netherlands; ⁶Department of Clinical Genetics, Erasmus University Medical Center, Rotterdam, Netherlands; ⁷Department of Pathology, Emory University School of Medicine, Atlanta, GA

3634 — A0295 **Prognostic relevance of elevated intra-ocular pressure in ocular melanoma.** Enoch Kassa, Y. Sun. Ophthalmology, Indiana school of Medicine, Indianapolis, IN

3635 — A0296 **Long-term outcome measures for eyelid melanoma.** John C. Bladen, F. Lawson, A. Litwin, R. Malhotra. Corneoplastic Department, Queen Victoria Hospital, East Grinstead, Sussex, United Kingdom

3636 — A0297 **The epidemiology and clinical features of patients with both ocular and cutaneous melanomas.** Myriam MacDonald¹, D. Miyamoto¹, E. Moriarty¹, C. Zeitouni¹, E. Esposito¹, B. Arthurs², B. Wang³, M. N. Burnier¹. ¹MUHC - McGill Ocular Pathology Laboratory, Montreal, Quebec, Canada; ²MUHC - McGill Ophthalmology Department, Montreal, Quebec, Canada; ³MUHC - McGill Dermatology Department, Montreal, Quebec, Canada

3637 — A0298 **How to Measure the Largest Basal Diameter of the Choroidal Melanoma: A Mathematical Study.** Bernadete Ayres, M. Martins, E. Parrish, H. Demirci. Ophthalmology and Visual Sciences, University of Michigan, Ann Arbor, MI

3638 — A0299 **Clinical Features and Multimodal Imaging Characteristics of Choroidal Nevi in Pediatric Patients.** Michael D. Yu¹, L. A. Dalvin^{1,2}, C. L. Shields¹. ¹Ocular Oncology Service, Wills Eye Hospital, Philadelphia, PA; ²Department of Ophthalmology, Mayo Clinic, Rochester, MN

3639 — A0300 **Diagnostic evaluation of optical coherence tomography angiography and fundus autofluorescence in bilateral diffuse uveal melanocytic proliferation.** Noriyasu Hashida¹, A. Shiraki¹, A. Winegarner¹, O. Nishi², Y. Nishi², K. Maruyama¹, H. Sakaguchi¹, K. Nishida¹. ¹Dept of Ophthalmology, Osaka University Graduate School of Medicine, Suita, OSAKA, Japan; ²Jinshikai Medical Foundation, Nishi Eye Hospital, Suita, Japan

3640 — A0301 **OCT Angiography: Characteristics of Choroidal Tumors before and after Photodynamic Therapy.** Irene A. Barbazetto^{1,2}. ¹Vitreous-Retina-Macula-Consultants of NY, New York, NY; ²Ophthalmology, NYU, New York, NY *CR

3641 — A0302 **Choroidal melanoma in the young a reason for misdiagnosis a large case series of a rare condition from a rare population.** Vikas Khetan¹, K. Sreelakshmi¹, R. Lakra², K. Subramanian³, G. Lingam¹. ¹Ocular Oncology & Vitreoretina, Sankara Nethralaya, Chennai, TAMIL NADU, India; ²Resident, Sankara Nethralaya, Chennai, Tamil Nadu, India; ³Ocular Pathology, Sankara Nethralaya, Chennai, Tamil Nadu, India

3642 — A0303 **Massive Hemorrhagic Peripheral Polypoidal Choroidal Vasculopathy Mimic Choroidal Melanoma.** Atchara Amphornphruet^{1,2}. ¹Ophthalmology, College of Medicine, Bangkok, Thailand; ²Ophthalmology, Rangsit University, Bangkok, Thailand

3643 — A0304 **TransVitreous-RetinoChoroidal Biopsy outcomes during 8 years.** Jens F. Kiilgaard, i. Smidt-Nielsen, H. Kiilgaard, R. Ejstrup, K. Klemp, M. Bagger. Dept of Ophthalmology, Rigshospitalet, Copenhagen, Denmark

3644 — A0305 **Iris Biopsy Under Air: A Novel Technique for Biopsy of Suspicious Iris Lesions.** Wei Gui, Y. Wang, T. McCannel. Stein Eye Institute, Los Angeles, CA

3645 — A0306 **Clinical characteristics and outcomes of conjunctival melanoma.** Nicole Morrow, M. Benage, M. A. Greiner. University of Iowa, Iowa City, IA

3646 — A0307 **Uveal Melanoma-Associated Pain: Clinical Features and Pain Characteristics.** Wan Thamhwan Surakiatchanukul^{1,2}, A. Srinivasan¹, C. L. Shields¹. ¹Oncology Service, Wills Eye Hospital, Philadelphia, PA; ²University of Virginia School of Medicine, Charlottesville, VA

3647 — A0308 **Liver fibrosis and metastatic uveal melanoma (mUM).** Sarah E. Coupland¹, S. Prendergast¹, I. Ahmed¹, T. Saka², H. Kalirai¹. ¹Molecular and Clinical Cancer Medicine, Univ of Liverpool, Liverpool, England, United Kingdom; ²Department of Molecular and Clinical Pharmacology, University of Liverpool, Liverpool, United Kingdom

Exhibit Hall A0332-A0378

Tuesday, May 01, 2018 3:30 PM-5:15 PM

Immunology/Microbiology

376 Epidemiology, Treatments, and Outcomes of Infection

Moderators: Andrew W. Taylor and Derek J. Royer

3648 — A0332 **Alpha herpesvirus type and viral load in intraocular fluids in patients with Acute Retinal Necrosis.** Joanna von Hofsten¹, T. Bergström², M. Zetterberg¹. ¹Sahlgrenska academy, Institute of neuroscience and physiology, Halmstad, Sweden; ²Sahlgrenska academy, Institute of Biomedicine, Göteborg, Sweden

3649 — A0333 **Chronic Hypertrophic Herpes Simplex Virus Infection of the Eye Masquerading as IgG4-related Disease.** Jay Arora, D. R. Lazzaro, R. Shinder, A. E. Rizzuti. Ophthalmology, SUNY Downstate Medical Center, New York, NY

3650 — A0334 **Outcomes of anti-viral therapy in herpes simplex keratitis.** Maria Cabrera-Aguas^{1,2}, D. Robaei^{1,3}, S. L. Watson^{1,2}. ¹Save Sight Institute-University of Sydney, Sydney, New South Wales, Australia; ²Sydney Eye Hospital, Sydney, New South Wales, Australia; ³Westmead Hospital, Westmead, New South Wales, Australia

3651 — A0335 **Reactivation of herpes zoster ophthalmicus following live varicella zoster virus vaccination.** Dana Darwish, J. de la Cruz, J. Sugar, A. Lobo. Department of Ophthalmology, Illinois Eye and Ear Infirmary, Chicago, IL

3652 — A0336 **The Presentations of Posterior Involvement for Diagnosis in Herpetic Posterior Uveitis.** Feng Hu, X. Peng. Beijing Institute of Ophthalmology, Beijing, China

- 3653 — A0337 Efficacy of Topical Ophthalmic Agent VBP-100 Against Multi-Drug Resistant Biofilms of *Staphylococcus aureus*, *Klebsiella pneumoniae*, *Pseudomonas aeruginosa* and *Candida albicans*.** Joseph Capriotti MD, J. Pelletier MD FACS, K. Capriotti, S. Barone MD. Veloce BioPharma LLC, Fort Lauderdale, FL *CR
- 3654 — A0338 In vitro antimicrobial analysis of bacterial liquid broth submitted to ozone transfer via bubble diffusion.** Obidulho S. Naves¹, A. Sumitomo¹, D. B. Massarollo⁴, A. Navarini², L. Mimiça², R. A. Silva², i. C. Teixeira¹, R. Y. Hida¹. ¹Ophthalmology, Santa Casa de São Paulo, Sao Paulo, Sao Paulo, Brazil; ²Microbiology, Faculdade de Ciências Médicas da Santa Casa de São Paulo, Sao Paulo, Brazil; ³Surgery, Santa Casa de São Paulo, Sao Paulo, Brazil; ⁴Faculdade de Ciências Médicas da Santa Casa de São Paulo, Sao Paulo, Brazil
- 3655 — A0339 Antimicrobial blue light therapy for MRSA-induced keratitis: in vitro and ex vivo studies.** Hong Zhu¹, Q. Yan¹, X. Sun¹, T. Dai². ¹Department of Ophthalmology, Shanghai General Hospital (Shanghai First People's Hospital), Shanghai Jiao Tong University School of Medicine, Shanghai, China; ²Wellman Center for Photomedicine, Massachusetts General Hospital, Harvard Medical School, Boston, MA
- 3656 — A0340 Photochemical antimicrobial therapy for keratitis with an improved riboflavin conjugate (BPerox) for highly resistant bacteria in vitro.** Lorena Zendejas Reyes¹, A. Tarff¹, R. Yee², Y. Zhang³, A. Behrens². ¹Asociacion Para Evitar La Ceguera En Mexico, Ciudad de Mexico, DF, Mexico; ²Ophthalmology, The Wilmer Ophthalmological Institute, JHU, Baltimore, MD; ³Molecular Microbiology & Immunology, Johns Hopkins University, Baltimore, MD
- 3657 — A0341 Diode Laser Phototherapy for Unresponsive Bacterial and Fungal Keratitis.** Leilani J. Joy, I. Acevedo, L. Rivera, C. Santos, L. Santiago. Ophthalmology, University of Puerto Rico, San Juan, Puerto Rico
- 3658 — A0342 The Successful Treatment of Experimental Methicillin-Resistant *Staphylococcus aureus* (MRSA) Keratitis with a Topical β -Lactam Antibiotic.** John E. Romanowski, E. G. Romanowski, K. A. Yates, R. P. Kowalski. The Charles T. Campbell Ophthalmic Microbiology Laboratory, UPMC Eye Center, Ophthalmology and Visual Sciences Research Center, University of Pittsburgh School of Medicine, Pittsburgh, PA
- 3659 — A0343 Besifloxacin Ophthalmic Suspension in Patients With Bacterial Keratitis: A Prospective, Randomized Clinical Study.** Fatma Zaguia, M. Ross, M. Darvish, J. Deschenes. McGill University, Montreal, Quebec, Canada
- 3660 — A0344 Clinical and Histopathologic Evaluation of the Efficacy of Photodynamic Antimicrobial Chemotherapy for Experimental Keratitis.** Taiichiro Chikama¹, K. Sueoka¹, J. Ko¹, T. Sakaguchi², Y. Kiuchi¹. ¹Ophthalmology and Visual Science, Hiroshima University Graduate School of Biomedical Sciences, Hiroshima, Japan; ²Virology, Hiroshima University Graduate School of Biomedical Sciences, Hiroshima, Japan
- 3661 — A0345 Antimicrobial blue light inactivation of *Candida albicans* in an ex vivo model of keratitis.** Quan Yan^{1,2}, H. Zhu¹, X. Sun¹, T. Dai². ¹Department of Ophthalmology, Shanghai General Hospital (Shanghai First People's Hospital), Shanghai Jiao Tong University School of Medicine, Shanghai, China; ²Wellman Center for Photomedicine, Massachusetts General Hospital, Harvard Medical School, Boston, MA
- 3662 — A0346 Potential treatment for fungal keratitis by photochemical therapy using BPerox as a new UVA light-sensitive molecule in vitro.** Ashley Behrens¹, A. Tarff¹, R. Yee², Y. Zhang². ¹Ophthalmology, Johns Hopkins Wilmer Eye Inst, Baltimore, MD; ²Molecular Microbiology & Immunology, Johns Hopkins University, Baltimore, MD
- 3663 — A0347 The search for antifungal prophylaxis after artificial cornea surgery.** Sarah Kim^{3,3}, P. Bispo^{2,3}, M. S. Gilmore^{2,3}, I. Behlau¹, J. Chodosh^{1,3}, C. H. Dohlman^{1,3}. ¹Ophthalmology, Massachusetts Eye and Ear Infirmary, Boston, MA; ²Ophthalmology, Microbiology and Immunology, Massachusetts Eye and Ear Infirmary, Boston, MA; ³Harvard Medical School, Boston, MA; ⁴Molecular Biology and Microbiology and Ophthalmology, Tufts University School of Medicine, Boston, MA; ⁵Ophthalmology, Schepens Eye Research Institute-Massachusetts Eye and Ear Infirmary, Boston, MA *CR
- 3664 — A0348 Amphotericin B Supplementation of Cold Storage Media to Treat Fungal Contamination of Donor Cornea Transplant Tissue.** Stephen C. Kaufman¹, M. Rhee², C. Hamula³, E. Roberts⁴, P. Dahl⁴. ¹Ophthalmology, State University of New York - Downstate, New York, NY; ²Ophthalmology, Mt. Sinai, New York, NY; ³Microbiology, Mt Sinai, New York, NY; ⁴Eye Bank for Sight Restoration, New York, NY
- 3665 — A0349 Effect of Nitric Oxide on *Acanthamoeba castellanii*.** Choul Yong Park¹, B. Yim¹, J. Park¹, M. Kim¹, R. S. Chuck². ¹Ophthalmology, Dongguk University Hospital, Goyang, Korea (the Democratic People's Republic of); ²ophthalmology, Albert Einstein college of medicine, Bronx, NY
- 3666 — A0350 Amoebicidal activity of oxygenized riboflavin photoactivation: BPerox-UVA as a novel combination therapy for keratitis.** Andreina Tarff¹, R. Yee², B. Pfrommer³, P. Simmer³, Y. Zhang², A. Behrens¹. ¹The Wilmer Ophthalmological Institute, JHU, Baltimore, MD; ²Molecular Microbiology & Immunology, Johns Hopkins University, Baltimore, MD; ³Medical Microbiology, Department of Pathology, Johns Hopkins University, Baltimore, MD
- 3667 — A0351 Acanthamoeba keratitis treatment with Rose Bengal Photodynamic Antimicrobial Therapy, an in vitro study.** Ibrahim O. Sayed-Ahmed^{1,2}, H. A. Durkee¹, A. Arboleda¹, M. C. Aguilar¹, J. Maestre-Mesa², D. Miller², G. Amescua¹, E. C. Alfonso^{1,2}, J. A. Pare¹. ¹Ophthalmic Biophysics Center, Department of Ophthalmology, Bascom Palmer Eye Institute, University of Miami, Miami, FL; ²Ocular Microbiology Laboratory, Department of Ophthalmology, Bascom Palmer Eye Institute, University of Miami Miller School of Medicine, Miami, FL
- 3668 — A0352 In Vitro Effectiveness of Photodynamic Antimicrobial Chemotherapy with TONS504 for Eradication of *Acanthamoeba*.** Yunialthy D. Pertiwi^{1,2}, T. Chikama¹, K. Sueoka¹, J. Ko¹, Y. Kiuchi¹, H. Onodera³, T. Sakaguchi⁴. ¹Department of Ophthalmology and Visual Science, Graduate School of Biomedical and Health Science, Hiroshima University, Hiroshima City, Hiroshima, Japan; ²Department of Microbiology, Faculty of Medicine, Hasanuddin University, Makassar, South Sulawesi, Indonesia; ³Department of Clinical Laboratory, Hiroshima University Hospital, Hiroshima City, Hiroshima, Japan; ⁴Department of Virology, Graduate School of Biomedical and Health Science, Hiroshima University, Hiroshima City, Hiroshima, Japan
- 3669 — A0353 Long term follow up of alcohol-assisted epithelial debridement in *Acanthamoeba* keratitis.** Yi-Hsun Huang. Ophthalmology, National Cheng Kung University Hospital, Tainan, Taiwan ✕
- 3670 — A0354 Prevalence and Diversity of Antibiotic Resistant Determinants (Genes) in *Acanthamoeba* Hosts and Contact Lens Associated Microbial Communities.** Shendando Toote, J. Maestre-Mesa, D. Miller. University of Miami, Miami, FL
- 3671 — A0355 Abiotrophia defectiva ulcerative keratitis: a case series.** Kevin Pham¹, A. J. Rong², N. F. Callaway², G. Amescua², D. Miller². ¹University of Miami Miller School of Medicine, Miami, FL; ²Bascom Palmer Eye Institute, Miami, FL
- 3672 — A0356 ESwab Verse Scalpel Blade Scraping for the Corneal Ulcer.** Riley Bylund, C. Ellingson, D. Katz. Ophthalmology, University of Kentucky, Lexington, KY
- 3673 — A0357 Obtaining Vitreous Samples in Acute Endophthalmitis: Comparing the Rate of Dry Taps Using a Needle vs Trocar Cannula.** Jerome V. Giovinazzo, M. Jansen, C. Iacob, R. B. Rosen, A. Deobhaktia. New York Eye and Ear of Mount Sinai, New York, NY *CR

3674 — A0358 Efficacy of Topical 0.01% Hypochlorous Acid in Reducing Bacterial Flora on Lid Margins Compared To Topical 5% Povidone-Iodine. Luis A. Gonzalez, R. P. Kowalski, D. K. Dhaliwal. *Ophthalmology, University of Pittsburgh Medical Center, Pittsburgh, PA*

3675 — A0359 Use of intravitreal chlorhexidine for sterilizing the vitreous cavity in bacterial endophthalmitis. Ahmet Hondur^{2,1}, Q. Zeng¹, Y. Ucgul², G. Duman², I. Uyan³, K. Caglar², A. B. Tekinay³, N. Akyurek², T. H. Tezel¹. ¹*Ophthalmology, Columbia University, Ankara, Turkey;* ²*Ophthalmology, Gazi University, Ankara, Turkey;* ³*Institute of Materials Science and Nanotechnology, Bilkent University, Ankara, Turkey*

3676 — A0360 Antibiotic Resistance Trends Among Staphylococci in the ARMOR Study: 2009-2017. Penny A. Asbell¹, C. M. Sanfilippo², M. E. Cave², H. DeCory². ¹*Ophthalmology, Icahn School of Medicine at Mount Sinai, New York, NY;* ²*Medical Affairs, Bausch + Lomb, Rochester, NY* *CR

3677 — A0361 Evaluation of Moraxella keratitis at a tertiary referral centre. Stuart Guthrie, F. Shams, P. Flavahan, K. Ramaesh, S. Mantry, D. Anijeet. *Tennent institute of Ophthalmology, Gartnavel Hospital, Glasgow, United Kingdom*

3678 — A0362 Infectious keratitis: isolated microbes and their antibiotic susceptibility pattern during 11 years in Region Örebro County, Sweden. Susanna Sagerfors¹, B. Ejdervik Lindblad¹, B. Söderquist². ¹*Ophthalmology, Örebro University Hospital, Örebro, Sweden;* ²*Department of Laboratory Medicine, Örebro University Hospital, Örebro, Sweden*

3679 — A0363 Profile and antibiotic susceptibility of bacterial isolates from infectious keratitis: 9-year experience in Japan. Koji Ueda^{1,2}, R. Nejima¹, T. Ono¹, Y. Noguchi¹, A. Yagi¹, T. Iwasaki¹, M. Aihara², K. Miyata¹. ¹*Miyata Eye Hospital, Miyakonojo, Miyazaki, Japan;* ²*University of Tokyo, Bunkyo, Tokyo, Japan*

3680 — A0364 Evaluating the microbial profile of infectious keratitis and conjunctivitis at a public tertiary care hospital. Jennifer Lopez, E. Tsui, L. V. Raju. *NYU School of Medicine, San Jose, CA*

3681 — A0365 Causative organisms and antibiotic resistance for microbial keratitis in a quaternary referral eye hospital, Sydney Australia over 5 years. Stephanie L. Watson¹, M. Lahra², P. Khoo¹, M. Cabrera-Aguas¹. ¹*Ophthalmology, Save Sight Institute, University of Sydney, Bondi Junction, New South Wales, Australia;* ²*The Division of Bacteriology, Department Microbiology, South Eastern Area Laboratory Services, Randwick, New South Wales, Australia*

3682 — A0366 Incidences of post-keratoplasty infections reported with the use of eye bank prepared and non-prepared corneas from a single eye bank. Khoa D. Tran¹, K. Mathes², Z. Mayko², C. Stoeger², M. A. Terry³. ¹*Research and Development, Lions VisionGift, Portland, OR;* ²*Lions VisionGift, Portland, OR;* ³*Corneal Services, Devers Eye Institute, Portland, OR* *CR

3683 — A0367 Better detection of Demodex mites by Löffler's alkaline methylene blue staining in patients with blepharitis. Katsuji Kiuchi. *Ophthalmology, Kiuchi eye clinic, Osaka, Japan*

3684 — A0368 NGS analysis of corneal pathogens: can we use it in a clinical setting?. Ilya Sluch¹, V. I. Shestopalov¹, A. Tuzhikov¹, D. Miller¹, R. Colwell², n. hasan², M. Dadlani², J. Maestre-Mesa¹, T. O'Brien¹. ¹*Ophthalmology, Bascom Palmer Eye Institute, Palm Beach Gardens, FL;* ²*Cosmos ID, Rockville, MD* *CR

3685 — A0369 Metagenomic analysis of cases of canaliculitis with lacrimal canaliculitis. Yukinobu Okajima¹, t. kobayashi¹, T. Itokawa¹, y. suzuki¹, T. Suzuki¹, c. miyazaki², Y. Hori¹. ¹*Toho University, Tokyo, Japan;* ²*Prefectural Amagasaki General Medical Center, Osaka, Japan*

3686 — A0370 Metagenome techniques for detection of pathogens causing ocular infection. Tatsuhiro Kobayashi, T. Suzuki, Y. Okajima, Y. Hori. *Ophthalmology, Toho University, Tokyo, Japan*

3687 — A0371 The Normal Human Ocular Microbiome Derived From Meta-analysis Methodology. Jane Gilmore¹, C. Ray¹, D. Kirk¹, K. Luth², P. Tran¹, D. McCartney¹, K. Mitchell¹, T. W. Reid¹. ¹*Department of Ophthalmology and Visual Sciences, Texas Tech University Health Science Center, Lubbock, TX;* ²*Texas Tech University Health Science Center, Lubbock, TX*

3688 — A0372 Investigation of the perioperative disturbances in the ocular surface microbiome using next-generation sequencing analysis. Hiroshi Eguchi¹, F. Hotta¹, T. Kuwahara², H. Imaohji², S. Kusaka¹, Y. Shimomura³. ¹*Ophthalmology, Kindai University Sakai Hospital, Sakai, Osaka, Japan;* ²*Molecular Microbiology, Kagawa University, Kida-gun, Kagawa, Japan;* ³*Ophthalmology, Kindai University, Osakasayama, Osaka, Japan* *CR

3689 — A0373 Contact lens wear significantly alters the disease patterns in microbial keratitis in an Asian population. David Chen, W. Tong, C. Chai, A. Tan, M. Ray. *Ophthalmology, National University Hospital, Singapore, Singapore*

3690 — A0374 Cellular morphological changes associated with clinical outcome in bacterial and fungal keratitis as detected with HRT3 in vivo confocal microscopy. Jaya D. Chidambaram¹, N. V. Prajna^{2,3}, S. Palepu², L. Shruti², M. Shah^{2,3}, S. Elakkiya^{3,2}, P. Lalitha^{4,3}, D. Macleod⁵, M. J. Burton^{1,6}. ¹*International Centre for Eye Health, London School of Hygiene & Tropical Medicine, London, England, United Kingdom;* ²*Cornea, Aravind Eye Hospital, Madurai, India;* ³*Aravind Medical Research Foundation, Madurai, India;* ⁴*Microbiology, Aravind Eye Hospital, Madurai, India;* ⁵*London School of Hygiene & Tropical Medicine, London, United Kingdom;* ⁶*Cornea, Moorfields Eye Hospital, London, United Kingdom*

3691 — A0375 Clinical Features of Microbial Keratitis Associated with Reduced Final Visual Acuity. Karim Mohamed-Noriega¹, A. Olvera-Barrios¹, F. Morales-Wong¹, B. Campos-Casas¹, M. Mohamed-Garza¹, N. Casillas-Vega², G. Villarreal M?ndez¹, A. Martinez-Lopez-Portillo¹, J. Mohamed-Hamsho¹, J. Llaca-Diaz². ¹*Universidad Autonoma de Nuevo Leon, Faculty Of Medicine, University Hospital, Ophthalmology Department, Monterrey, Mexico;* ²*Universidad Autonoma de Nuevo Leon, Faculty Of Medicine, Department of Clinical Pathology, Monterrey, Mexico*

3692 — A0376 Clinical features, causative organisms, and visual outcomes of endophthalmitis secondary to upper urinary calculi surgery. Bingsheng Lou, Z. Yuan, X. Lin. *Ocular Trauma, Zhongshan Ophthalmic Center, Sun Yat-sen University, Guangzhou, Guangdong, China*

3693 — A0377 Initial clinical assessment of the effect of prior timolol use on penetrating keratoplasty outcome in Acanthamoeba Keratitis. Priscilla Q. Vu, T. A. Vo, D. S. Minckler. *Ophthalmology, UC Irvine, Irvine, CA*

3694 — A0378 Comparing Vitreous Samples in Patients with Endophthalmitis Before and After Vitrectomy. Neesurg S. Mehta, J. V. Giovinazzo, M. Jansen, C. Jacob, R. B. Rosen, A. Deobhakta. *Ophthalmology, New York Eye & Ear Infirmary at Mount Sinai, NY, NY* *CR

Exhibit Hall B0042-B0099

Tuesday, May 01, 2018 3:30 PM-5:15 PM

Glaucoma

377 Neurodegeneration

Moderators: Anna M. Demetriades and Katharina Bell

3695 — B0042 Effect of single IOP elevation on visual pathway. Viet Anh Nguyen Huu, L. Rocha Jimenez, R. Dvorak, M. Jabari, R. N. Weinreb, D. Skowronska-Krawczyk. *Ophthalmology, University of California, San Diego, La Jolla, CA*

- 3696 — B0043 Reversibility of retinal ganglion cell dysfunction due to chronic IOP elevation.** Da Zhao¹, V. H. Wong¹, Z. He¹, C. T. Nguyen¹, A. I. Jobling², E. Fletcher², H. Chinnery¹, P. Jusuf², J. K. Lim¹, A. J. Vingrys¹, B. V. Bui¹. ¹Optometry and Vision Sciences, University of Melbourne, Melbourne, Victoria, Australia; ²Anatomy & Neuroscience, University of Melbourne, Melbourne, Victoria, Australia; ³BioSciences, University of Melbourne, Melbourne, Victoria, Australia
- 3697 — B0044 Controlled Elevation of Intraocular Pressure (CEI): Physiologic and Ocular Responses in the Mouse.** John C. Morrison², D. Simons², T. Choe², K. Delf¹, W. Cepurna², D. C. Lozano², H. Jayaram^{2,1}, S. Tehrani², E. C. Johnson². ¹Ophthalmology, NIHR Moorfields Biomedical Research Centre, London, United Kingdom; ²Casey Eye Institute, Oregon Health and Science University, Portland, OR
- 3698 — B0045 Axonal Injury Following A Controlled Elevation of Intraocular Pressure (IOP) is Greater in Elderly than in Adult Rat Optic Nerves.** Tiffany Choe², D. C. Lozano², W. Cepurna², H. Jayaram^{2,1}, L. Davis², S. Tehrani², E. C. Johnson², J. C. Morrison². ¹NIHR Moorfields Biomedical Research Centre, London, United Kingdom; ²Ophthalmology, Oregon Health & Science University, Portland, OR
- 3699 — B0046 Chronic ocular hypertension in rabbits induced by limbal buckling.** Qilin Wang. Sun Yat-sen University Zhongshan Ophthalmic Center, Guangzhou, Guangdong, China
- 3700 — B0047 Characterization of circumlimbal suture induced chronic ocular hypertension in albino rats anaesthetised under Ketamine-Xylazine or Isoflurane.** Yamunadevi Lakshmanan¹, F. Wong¹, W. Yu¹, B. Zuo³, S. Li^{1,3}, K. Choi^{1,3}, B. V. Bui², H. H. Chan^{1,3}. ¹Laboratory of Experimental Optometry (Neuroscience), School of Optometry, The Hong Kong Polytechnic University, Kowloon, Hong Kong; ²Department of Optometry & Vision Sciences, University of Melbourne, Melbourne, Victoria, Australia; ³Laboratory of Experimental Optometry, Centre for Myopia Research, School of Optometry, The Hong Kong Polytechnic University, Kowloon, Hong Kong
- 3701 — B0048 Correlation between the estimated intracranial pressure and glaucomatous optic neuropathy severity.** Katia Santos, N. Cruz, M. Matuoka, N. Kasahara. ophthalmology, ISCMSP, Sao Paulo, Sao Paulo, Brazil ✕
- 3702 — B0049 Brain ischemia induced glaucoma.** LIU RAN¹, J. Xu², W. Chen¹, Z. Tang¹. ¹ZhongShan Ophthalmic Center, Sun Yat-sen University, Guangzhou, China; ²Department of Human anatomy, Zunyi Medical College, Zunyi, Guizhou, China
- 3703 — B0050 Brain changes in open-angle glaucoma beyond functional deprivation and transsynaptic degeneration.** Doety Prins^{1,2}, N. M. Jansonius^{1,2}, F. Cornelissen^{1,2}. ¹Department of Ophthalmology, University Medical Center Groningen, University of Groningen, Groningen, Netherlands; ²Laboratory for Experimental Ophthalmology, University Medical Center Groningen, University of Groningen, Groningen, Netherlands
- 3704 — B0051 Glucocorticoid-induced ocular hypertension leads to progressive retinal ganglion cell loss, impaired axonal transport and optic nerve degeneration in mice.** prabhavathi maddineni, R. Kasetti, P. Patel, A. Sope, G. Zode. NTERI, University of North Texas Health Science Center, Fort Worth, TX
- 3705 — B0052 Increased susceptibility to glaucomatous optic nerve damage in microfibril deficient mice.** Hangjing Wu, A. Nashabi, F. Clark, S. Reddy, J. Kuchtey, R. W. Kuchtey. Vanderbilt Eye Institute, Nashville, TN
- 3706 — B0053 Retinal ganglion cell loss in Alcadein α knockout mice.** Yuki Nakano, A. Ono, M. Kobayashi, Y. Takasago, T. Yamamoto, K. Hirooka. Kagawa University, Kagawa, Japan
- 3707 — B0054 Systemic Rho Kinase Inhibition Reduces Optic Nerve Axon Injury in Response to Controlled Elevation of Intraocular Pressure in a Rat Model.** Katherine Delf, W. Cepurna, T. E. Choe, D. C. Lozano, E. C. Johnson, J. C. Morrison, S. Tehrani. Casey Eye Institute, Oregon Health & Science University, Portland, OR
- 3708 — B0055 Retinal Ganglion Cell Numbers In Early Post-Natal AP-2 β Neural Crest Cell Knockout Mice.** Anthony Saraco¹, A. K. Ball¹, T. Williams², J. A. West-Mays¹. ¹McMaster University, Hamilton, Ontario, Canada; ²UC Denver, Aurora, CO
- 3709 — B0056 In a new genetic β b1-CTGF mouse model for primary open-angle glaucoma elevated intraocular pressure is accompanied by apoptotic retinal ganglion cell loss.** Sabrina Reinehr¹, D. Koch¹, H. Dick¹, R. Fuchshofer², S. C. Joachim¹. ¹Experimental Eye Research Institute, Ruhr-University Bochum, Bochum, Germany; ²Institute of human anatomy and embryology, University Regensburg, Regensburg, Germany
- 3710 — B0057 Shp2 knockdown reduces ocular specific endoplasmic reticulum stress in experimental glaucoma.** Nitin Chitranshi², Y. Dheer², M. Mirzaei³, A. S. Mangani², C. Joseph², M. Abbasi², S. L. Graham^{2,1}, V. Gupta². ¹Save Sight Institute, Sydney University, Sydney, New South Wales, Australia; ²Department of Clinical Medicine, Macquarie University, Sydney, New South Wales, Australia; ³Department of Chemistry and Biomolecular Sciences, Macquarie University, Sydney, New South Wales, Australia
- 3711 — B0058 Mechanisms of Endothelin-Induced Retinal Ganglion Cell Death.** Olivia J. Marola^{1,2}, S. B. Syc-Mazurek², G. R. Howell³, R. T. Libby^{2,4}. ¹Cell Biology of Disease Graduate Program, University of Rochester, Rochester, NY; ²Flaum Eye Institute, University of Rochester, Rochester, NY; ³The Jackson Laboratory, Bar Harbor, ME; ⁴Center for Visual Science, University of Rochester, Rochester, NY
- 3712 — B0059 Early Changes in PACAP and Its Receptors Expression in Retina of Rat Models of Optic Nerve Crush.** yue xu, Y. Hu, X. Lu, J. Huang, X. Liang. State Key Laboratory of Ophthalmology, Zhongshan Ophthalmic Center, Guangzhou, Guangdong, China
- 3713 — B0060 Mechanical strain regulates apoptotic pathways in retinal ganglion cells through activation of the polymodal TRPV4 channel.** Monika Lakk, G. Hoffmann, D. Young, S. Redmon, D. Krizaj. Department of Ophthalmology & Visual Sciences, John A. Moran Eye Institute, University of Utah School of Medicine, Salt Lake City, UT
- 3714 — B0061 Relationship between somatodendritic and axonal degeneration in a mouse model of ocular hypertension.** Silvia Pasini, M. Risner, M. Cooper, W. S. Lambert, D. J. Calkins. Ophthalmology and Visual Sciences, Vanderbilt University Medical Center, Nashville, TN
- 3715 — B0062 Age-dependent decrease in retinal ganglion cells and mitophagy associated with loss of optineurin.** Henry Tseng¹, Z. Johnson¹, K. Kruszewski¹, M. Caron². ¹Ophthalmology, Duke Eye Center, Durham, NC; ²Cell Biology, Duke University Medical Center, Durham, NC
- 3716 — B0063 Tau dysfunction in glaucoma: modulation of optic nerve axonal transport via gene therapy.** Tasneem Khatib^{1,2}, A. Osborne^{1,3}, P. S. Widdowson³, K. R. Martin^{1,2}. ¹Department of Clinical Neurosciences, University of Cambridge, Cambridge, England, United Kingdom; ²Eye Department, Cambridge University Hospitals NHS Foundation Trust, Cambridge, United Kingdom; ³Quethera Ltd, Cambridge, United Kingdom *CR
- 3717 — B0064 Differential modulation of GABA_A and NMDA receptors by an α 7-nicotinic acetylcholine receptor agonist in chronic glaucoma.** xujiao zhou. Eye & ENT Hospital, Shanghai, China
- 3718 — B0065 NMDA caused rod bipolar cell dysfunction before ganglion cell loss in a mouse model of experimental glaucoma.** Yin Shen¹, Y. Shen¹, X. Luo¹, S. Liu^{1,2}. ¹Eye Center, Wuhan University, Wuhan, China; ²Department of Ophthalmology, Tongji Hospital, Huazhong University of Science and Technology, Wuhan, Hubei, China

3719 — B0066 Stop and stabilize β -amyloid: a novel bimodal approach for prevention of β -amyloid aggregation and toxicity. *Indre Bielskus¹, N. Pfahler¹, T. Cronin¹, J. Haney¹, P. A. Knepper^{1,2}.* ¹University of Illinois at Chicago, Chicago, IL; ²Department of Ophthalmology, Northwestern University, Chicago, IL

3720 — B0067 Retinal amyloid pathology requires CD36 receptors. *Emily Plyler^{1,2}, M. A. Smith¹, J. R. Richardson¹, C. M. Dengler-Crish¹, S. D. Crish¹.* ¹Pharmaceutical Sciences, Northeast Ohio Medical University, Rootstown, OH; ²Biomedical Sciences, Kent State University, Kent, OH

3721 — B0068 CD36 Ligand Beta-Amyloid Promotes Coagulation and Inflammation Through Toll-Like Receptor 4. *Nicholas Pfahler¹, I. Bielskus¹, T. Cronin¹, J. Haney¹, J. Hill¹, M. Giovingo², T. Patrianakos², N. J. Volpe³, P. A. Knepper^{1,3}.* ¹University of Illinois at Chicago, Chicago, IL; ²Ophthalmology, John H. Stroger, Jr. Hospital of Cook County, Chicago, IL; ³Ophthalmology, Northwestern University, Chicago, IL

3722 — B0069 The role of uric acid in the pathogenesis of primary open angle glaucoma. *Rita Serra¹, I. Zucca¹, P. Marcella¹, E. Giancipoli², M. Fosci¹, V. Sanna¹, M. Fossarello¹.* ¹Ophthalmology, Eye Clinic, University of Cagliari, Cagliari, Italy; ²Ophthalmology, Department of Surgical, Microsurgical, and Medical Sciences, Section of Ophthalmology, University of Sassari, Sassari, Italy. Viale San Pietro 43, 07100 Sassari, Sassari, Italy

3723 — B0070 Arylsulfatase B modifies chondroitin sulfation and enhances retinal ganglion cell axon regeneration. *Craig Pearson^{1,2}, K. R. Martin¹, H. M. Geller².* ¹Clinical Neurosciences, University of Cambridge, Bethesda, MD; ²National Heart, Lung and Blood Institute, Bethesda, MD

3724 — B0071 Advanced glycation end-products as a marker of accelerated ageing in primary open angle glaucoma. *Leanne Smewing¹, D. White², P. Artes¹, A. Booth³, S. Mroczkowska¹.* ¹Eye and Vision Research Group, Plymouth University, Plymouth, United Kingdom; ²Dietetics Research, Plymouth University, Plymouth, United Kingdom; ³Royal Eye Infirmary, Plymouth NHS Trust, Plymouth, United Kingdom ✕

3725 — B0072 The association between oxidative stress and circumpapillary retinal nerve fiber layer thickness in patients with normal-tension glaucoma. *Noriko Himori, T. Kokubun, Y. Shiga, K. Omodaka, H. Kunikata, T. Nakazawa.* Ophthalmology, Tohoku University, Sendai, Japan *CR

3726 — B0073 Receptor for advanced glycation end product (RAGE) mediates retinal ganglion cell loss in experimental glaucoma. *Nafiseh Alsadat Seyed Hosseini Fin¹, M. Sukkar², M. Golzan¹.* ¹Department of Orthoptics, University of Technology, Sydney, Sydney, New South Wales, Australia; ²Graduate School of Health, University of Technology, Sydney, Sydney, New South Wales, Australia

3727 — B0074 Loss of the extracellular matrix protein Tenascin-C in an autoimmune glaucoma mouse model causes a diminished microglial response. *Susanne Wiemann¹, J. Reinhard¹, S. Reinehr², S. C. Joachim², A. Faissner¹.* ¹Department of Cell Morphology and Molecular Neurobiology, Ruhr-University Bochum, Bochum, Germany; ²Experimental Eye Research Institute, University Eye Hospital, Ruhr-University Bochum, Bochum, Germany

3728 — B0075 ATP Level in the Aqueous Humor of Primary Open-Angle Glaucoma. *Shida Chen, Y. Liu, y. wang, Y. Chen, X. Zhang.* zhongshan ophthalmic center, Guangzhou, Guangdong, China

3729 — B0076 IL-1 β is released by retinal microglial cells in response to ATP and can damage retinal ganglion cells. *Wenlan Lu¹, K. Campagno¹, F. Albalawi¹, C. H. Mitchell^{1,2}.* ¹Anatomy & Cell Biology, University of Pennsylvania, Philadelphia, PA; ²Ophthalmology, University of Pennsylvania, Philadelphia, PA

3730 — B0077 Association of interferon beta and erythropoietin levels with disease severity in glaucoma. *Swaminathan Sethu¹, A. P. Nair¹, P. Machiraju¹, M. Ponnalagu¹, A. Ghosh¹, S. Tejwani², A. Ghosh¹.* ¹GROW Research Laboratory, Narayana Nethralaya Foundation, Bangalore, Karnataka, India; ²Glaucoma services, Narayana Nethralaya Eye Hospital, Bangalore, India

3731 — B0078 Transfer of peripheral blood mononuclear cells from human glaucoma patients to NOD/scid gamma mice elicits loss of retinal ganglion cells in recipients. *Markus H. Kuehn, O. W. Gramlich, J. H. Fingert, Y. H. Kwon, W. L. Alward.* Ophthalmology and Visual Sciences, University of Iowa, Iowa City, IA

3732 — B0079 Pericytes promote capillary constriction leading to impaired retinal blood flow and microvascular dysfunction during ischemic damage. *Deborah Villafranca-Baughman, L. Alarcon-Martinez, A. Di Polo.* Neuroscience, University of Montreal Hospital Research Center (CRCHUM), Montreal, Quebec, Canada

3733 — B0080 T cell subset distribution and reactivity in glaucoma patients. *Xiangjun Yang, Q. Zeng, K. Gopal, L. A. Al-Aswad, J. D. Auran, D. Blumberg, G. A. Cioffi, J. M. Liebmann, G. Tezel.* Department of Ophthalmology, Columbia University, New York, NY

3734 — B0081 Nerve Fiber Break and Neuronal Leakage as Primary Lesion in Acute Angle-Closure Glaucoma. *Lan Zhou, W. Hu, W. Chen, Z. Tang.* State Key Laboratory of Ophthalmology, Zhongshan Ophthalmic Center, Sun Yat-sen University, Guangzhou, Guangdong, China

3735 — B0082 Optic nerve head astrocytes sense injury to ganglion cell axons at a distance. *Mingui Zhang^{2,1}, S. Gao³, T. C. Jakobs¹.* ¹Ophthalmology, Schepens eye research institute, Boston, MA; ²Shanghai Jiaotong University, Shanghai, China; ³Ophthalmology, Xi'an Jiaotong University Medical College, Xi'an, China *CR

3736 — B0083 The role of SRGAP2 in glaucomatous optic neuropathy. *Zai-Long Chi.* Laboratory of Neurovascular Biology, The Eye Hospital of Wenzhou Medical University, Wenzhou, China

3737 — B0084 STAT3-mediated astrocyte reactivity within the optic nerve head preserves visual function. *Daniel Sun, S. Moore, T. C. Jakobs.* Ophthalmology, Massachusetts Eye & Ear Infirmary/Schepens Eye Research Institute, Boston, MA *CR

3738 — B0085 Dynamic Changes in Optic Nerve Head (ONH) MicroRNA (miR) Expression Following a Controlled Elevation of Intraocular Pressure (IOP). *Hari Jayaram^{1,2}, D. C. Lozano², T. Choe², W. Cepurna², S. Tehrani², E. C. Johnson², J. C. Morrison².* ¹Glaucoma Service, NIHR Moorfields Biomedical Research Centre, UK, London, United Kingdom; ²Casey Eye Institute, Oregon Health & Science University, Portland, OR *CR

3739 — B0086 Canonical Wnt signaling in optic nerve head. *Elliott Allums, Y. Liu, A. F. Clark.* University of North Texas Health Science Center, Fort Worth, TX

3740 — B0087 Biphasic Response in Optic Nerve Head (ONH) Gene Expression with Sustained Downregulation in Axonal Messages Following 8-hours' Controlled Elevation of Intraocular Pressure (CEI). *Diana C. Lozano¹, H. Jayaram^{1,2}, T. E. Choe¹, W. Cepurna¹, D. Choi^{1,3}, S. S. Fei¹, L. Gao^{4,5}, B. Sivyer¹, S. Tehrani¹, E. C. Johnson¹, J. C. Morrison¹.* ¹Ophthalmology, Oregon Health & Science University, Portland, OR; ²NIHR Moorfields Biomedical Research Centre, London, United Kingdom; ³School of Public Health, Oregon Health & Science University, Portland, Oregon, OR; ⁴Oregon National Primate Research Center, Biostatistics & Bioinformatics Core, Oregon Health & Science University, Portland, OR; ⁵Knight Cancer Institute, Biostatistics Shared Resources, Oregon Health & Science University, Portland, OR

3741 — B0088 Effects of the Location of Optic Nerve Transection on the Retinal Nerve Fiber Layer Reflectance. *Xiang-Run Huang, Y. Z. Spector, J. Qiao.* Bascom Palmer Eye Institute, University of Miami, Miami, FL

- 3742 — B0089 Transmission Electron Microscopy Study of the Retinal Nerve Fiber Layer (RNFL) in Nonhuman Primate Experimental Glaucoma.** Laura J. Wilsey¹, C. F. Burgoyne^{2,1}, B. Fortune¹. ¹Discoveries in Sight Laboratories, Devers Eye Institute, Legacy Research Institute, Legacy Health, Portland, OR; ²Optic Nerve Head Research Laboratory, Devers Eye Institute, Legacy Research Institute, Legacy Health, Portland, OR *CR
- 3743 — B0090 Node of Ranvier pathology in two mouse models of glaucoma.** Matthew A. Smith¹, E. Plyler^{1,2}, C. M. Dengler-Crish¹, S. D. Crish¹. ¹Pharmaceutical Sciences, Northeast Ohio Medical University, Rootstown, OH; ²Biomedical Sciences, Kent State University, Kent, OH
- 3744 — B0091 Debris Accumulation Precedes Axonal Degeneration and Myeloid Cell Influx after Optic Nerve Crush in *Xenopus Laevis*.** Lindsay Fague, N. Marsh-Armstrong. University of California, Davis, Davis, CA
- 3745 — B0092 Expression of Lipocalin-2 in the Injured Optic Nerve.** Nemahun H. Vincent, H. Choi, T. C. Jakobs, D. Sun. Ophthalmology, Schepens Eye Research Institute/Mass Eye & Ear Infirmary, Boston, MA *CR
- 3746 — B0093 Refining retinal ganglion cell (RGC) differentiation from human pluripotent stem cells (hPSCs).** Maciej Daniszewski^{1,2}, D. Crombie^{1,2}, L. Rooney^{1,2}, A. Conquest^{1,2}, A. W. Hewitt^{2,3}, A. Pebay^{1,2}. ¹Surgery, Ophthalmology, The University of Melbourne, Melbourne, Victoria, Australia; ²Centre for Eye Research Australia, Melbourne, Victoria, Australia; ³Menzies Institute of Medical Research, The University of Tasmania, Hobart, Tasmania, Australia
- 3747 — B0094 Utilising a 3D Matrigel stem cell culture leads to a significantly shorter time-span for generating retinal ganglion cells.** Philip Wagstaff¹, A. ten Asbroek¹, V. Lo Faro^{2,1}, S. Micheal¹, N. M. Jansontius², A. A. Bergen¹. ¹Department of Clinical Genetics, Academic Medical Center (AMC), Amsterdam, Netherlands; ²Department of Ophthalmology, University Medical Center Groningen (UMCG), Groningen, Netherlands
- 3748 — B0095 miR-124 promotes the growth of retinal ganglion cells derived from Müller cells.** Ye He, H. Li, X. Li, Y. Zhou, X. Xia, W. Song. Department of Ophthalmology, Xiangya Hospital, Central South University, Changsha, Hunan, China
- 3749 — B0096 Characterization of retinal ganglion cell subtypes derived from human pluripotent stem cells for modeling glaucomatous degeneration & regenerative repair.** Iqbal Ahmad, p. teotia. Ophthalmology & Visual Sciences, Univ of Nebraska Medical Ctr, Omaha, NE
- 3750 — B0097 Effects of C2-ceramide on Human iPSC-derived Retinal Ganglion Cells and Optic Nerve Astrocytes.** Jie Fan, J. Liu, J. Liu, C. E. Crosson. Ophthalmology-Storm Eye Inst, Medical Univ of South Carolina, Charleston, SC
- 3751 — B0098 The oligodendrocyte derived from familial glaucoma patients-iPSCs decreases neuroprotective action for retinal ganglion cells.** Satoshi Inagaki^{1,2}, K. Kawase³, M. Funato², K. Ohuchi^{1,2}, S. Ando^{1,2}, A. Sato^{1,2}, W. Morozumi¹, M. Shimazawa¹, D. Iejima¹, T. Iwata¹, T. Yamamoto³, H. Kaneko², H. Hara¹. ¹Molecular Pharmacology, Department of Biofunctional Evaluation, Gifu Pharmaceutical University, Gifu, Japan, Gifu, Japan; ²Department of Clinical Research, National Hospital Organization, Nagara Medical Center, Gifu, Japan; ³Department of Ophthalmology, Gifu University Graduate School of Medicine, Gifu, Japan; ⁴Division of Molecular and Cellular Biology, National Institute of Sensory Organs, National Hospital Organization Tokyo Medical Center, Tokyo, Japan
- 3752 — B0099 Electrical Fields Direct Retina Ganglion Cell Neurite Growth.** Kimberly K. Gokoffski¹, X. Jia², M. Zhao². ¹Ophthalmology, University of Southern California, Los Angeles, CA; ²Dermatology and Ophthalmology, University of California Davis, Sacramento, CA
-
- Exhibit Hall B0168-B0188
Tuesday, May 01, 2018 3:30 PM-5:15 PM
Retina
- 378 ROP 2**
-
- Moderator: J. Peter Campbell**
- 3753 — B0168 Evaluation of refractive outcomes and ophthalmic parameters after laser treatment for retinopathy of prematurity.** Yurika Aoyama, k. kure, S. Tsuneyoshi, R. Yamamoto, A. Sugiura, R. Asaoka, R. Obata, T. Inoue, M. Aihara. Ophthalmology, The University of Tokyo, Hongo, Bunkyo-ku, Tokyo, Japan
- 3754 — B0169 Prevalence and Risk Factors of Retinal Detachment from Retinopathy of Prematurity.** Sila Bal^{2,1}, L. Tomlinson², Y. Yu², G. Ying³, G. Binenbaum^{2,1}. ¹Perelman School of Medicine, University of Pennsylvania, Philadelphia, PA; ²Children's Hospital of Philadelphia, Philadelphia, PA; ³Scheie Eye Institute, University of Pennsylvania, Philadelphia, PA *CR
- 3755 — B0170 Laser versus Bevacizumab for Type-1 Retinopathy of Prematurity: FA vs OCT-A at 4 years of age.** Domenico Lepore¹, L. Orazi², M. H. Ji¹, G. Amorelli¹, F. Molle¹, G. E. Quinn³. ¹Dept of Ophthalmology, Catholic University, Rome, Italy; ²IAPB ITALIA onlus, Italian National Center of services and Research for Prevention of Blindness and Rehabilitation of the Visually impaired, Rome, Italy; ³Division of Pediatric Ophthalmology, The Children's Hospital of Philadelphia, University of Pennsylvania Perelman School of Medicine, Philadelphia, PA ✂
- 3756 — B0171 Long term follow-up of laser-treated severe Retinopathy of Prematurity: structural and functional findings.** Marco H. Ji¹, D. Lepore¹, L. Orazi², F. Molle¹, G. Amorelli¹. ¹Ophthalmology, Catholic University of Sacred Heart, Rome, Italy, Rome, RM, Italy; ²Italian National Center of Services and Research for Prevention of Blindness and Rehabilitation of the Visually Impaired, Rome, Italy, Rome, RM, Italy
- 3757 — B0172 Acute retinal detachment in retinopathy of prematurity: UK national outcomes of endoscopic vitrectomy in 51 consecutive cases.** Sui Chien Wong^{1,2}, D. Yeo¹, R. Henderson¹, C. Patel¹. ¹Ophthalmology, Great Ormond Street Hospital for Children, London, United Kingdom; ²Moorfields Eye Hospital, London, United Kingdom *CR
- 3758 — B0173 Early Diagnosis and Management of Aggressive Posterior Neonatal Vitreoretinopathy Presenting in Premature Neonates.** Samir N. Patel¹, M. Gupta², I. Rusa³, Y. Yonekawa⁴, K. Jonas², E. Oltra³, A. Orlin³, J. S. Chang⁵, J. Horowitz⁶, A. Capone⁷, R. V. Chan². ¹Wills Eye Hospital, Philadelphia, PA; ²Department of Ophthalmology and Visual Sciences, Illinois Eye and Ear Infirmary, University of Illinois at Chicago, Chicago, IL; ³Department of Ophthalmology, Weill Cornell Medical College, New York, NY; ⁴Department of Ophthalmology, Massachusetts Eye and Ear Infirmary, Harvard Medical School, Boston, MA; ⁵Department of Ophthalmology, University of Wisconsin, Madison, WI; ⁶Department of Ophthalmology, Columbia University, New York, NY; ⁷Associated Retinal Consultants, Oakland University William Beaumont School of Medicine, Royal Oak, MI *CR
- 3759 — B0174 Title antiVEGF in treatment of ROP.** Dr Ajay Ambade¹, D. A. Ambade². ¹Ambade Eye Hospital, Nagpur, Maharashtra, India; ²physiology, NKPSIMS&RC, Nagpur, Maharashtra, India
- 3760 — B0175 Fluorescein Angiographic Findings In the Late Period of Intravitreal bevacizumab monotherapy to treat Aggressive Posterior Retinopathy of Prematurity.** Irfan Perente¹, A. Vural², E. Eris¹, Z. Seymen², I. U. Onur², F. U. Yigit², G. O. Hergunsel². ¹ophthalmology, Beyoglu Eye Education and Research Hospital, Istanbul, Turkey; ²Bakirkoy Sadi Konuk Education and Research Hospital, Istanbul, Turkey
- 3761 — B0176 Intravitreal delivery of VEGF-A₁₆₅-loaded PLGA microparticles reduces retinal vaso-obliteration in an *in vivo* mouse model of Retinopathy of Prematurity.** Olachi J. Mezu-Ndubuisi^{1,2}, Y. Wang³, J. Schoephoerster⁴, S. Gong^{3,4}. ¹Pediatrics, University of Wisconsin, Madison, Chicago, IL; ²Ophthalmology, University of Wisconsin, Madison, WI; ³Material Science and Engineering and Wisconsin Institute of Discovery, University of Wisconsin, Madison, WI; ⁴Biomedical Engineering, University of Wisconsin, Madison, WI

3762 — B0177 Neurodevelopmental Outcomes in Infants Treated for Retinopathy of Prematurity: bevacizumab versus laser. Maram Isaac¹, K. Raghuram⁴, A. Alali², K. Mireskandari^{1,2}, P. Shah³, N. N. Tehrani^{1,2}. ¹Ophthalmology and Vision sciences, The Hospital for Sick Children, Toronto, Ontario, Canada; ²Ophthalmology and Vision sciences, University of Toronto, Toronto, Ontario, Canada; ³Departments of Paediatrics and Institute of HPME, University of Toronto, Toronto, Ontario, Canada; ⁴Paediatrics, University of Toronto, Toronto, Ontario, Canada

3763 — B0178 A novel interaction of human Bestrophin1 and mesencephalic astrocyte-derived neurotrophic factor in the retinal pigment epithelium. Elena Segal^{1,2}, R. Heinrich², S. Safuri^{3,2}, A. Aronheim⁴, N. Shehadeh⁵, I. Perlman². ¹Neonatology, Rambam Health Care Campus, Haifa, Israel; ²Physiology and Biophysics, Technion - Israel Institute of Technology, Haifa, Israel; ³Ophthalmology, Rambam Health Care Campus, Haifa, Israel; ⁴Molecular Genetics, Technion - Israel Institute of Technology, Haifa, Israel; ⁵Endocrinology, Rambam Health Care Campus, Haifa, Israel

3764 — B0179 Long-Term Growth and Systemic Outcomes in Laser and Bevacizumab-Treated Infants with Retinopathy of Prematurity. Margaret Littlejohn¹, L. Kong³, A. Demney², R. G. Voigt², S. A. Monteiro². ¹School of Medicine, Texas Tech University Health Sciences Center, Lubbock, TX; ²Pediatrics, Texas Children's Hospital, Houston, TX; ³Ophthalmology, Texas Tech University Health Sciences Center, Lubbock, TX ✕

3765 — B0180 Anatomic Success with Lens-Sparing Vitrectomy for Stage 4a Retinopathy of Prematurity. Carlos A. Abdala, J. E. Unigarro Martinez, S. Arrascue, S. VIDAL. Retina, Unidad Laser del Atlantico Eye Clinic, Barranquilla, Atlantico, Colombia

3766 — B0181 Monitoring response to treatment in severe retinopathy of prematurity using a deep learning based quantitative severity scale. Kishan Gupta¹, J. Campbell¹, S. Taylor¹, J. M. Brown², S. Ostmo¹, R. P. Chan³, J. Dy⁴, D. Erdogmus⁴, S. Ioannidis⁴, J. Kalpathy-Cramer^{2,5}, S. J. Kim⁶, M. F. Chiang^{1,6}. ¹Department of Ophthalmology, Casey Eye Institute, Oregon Health and Science University, Portland, OR; ²Athinoula A. Martinos Center for Biomedical Imaging, Department of Radiology, Massachusetts General Hospital, Charlestown, MA; ³Department of Ophthalmology and Visual Sciences, Illinois Eye and Ear Infirmary, University of Illinois at Chicago, Chicago, IL; ⁴Department of Electrical and Computer Engineering, Northeastern University, Boston, MA; ⁵Massachusetts General Hospital & Brigham and Women's Hospital Center for Clinical Data Science, Boston, MA; ⁶Department of Medical Informatics and Clinical Epidemiology, Oregon Health and Science University, Portland, OR *CR

3767 — B0182 Risk of Requiring Laser Treatment for Retinopathy of Prematurity (ROP) and ROP Outcomes Among Micopremies (<25 Weeks) in a Colorado Cohort. Jasleen K. Singh¹, B. D. Wagner³, E. A. McCourt¹, C. N. Jennifer¹, S. Oliver¹, M. T. Mathias¹, E. Wymore², J. L. Patnaik¹, L. C. Mehner¹, J. L. Jung¹, R. S. Braverman¹, M. Ahmad¹, R. Enzenauer¹, A. G. Palestine¹, A. M. Lynch¹. ¹Ophthalmology, University of Colorado-Denver, Aurora, CO; ²Neonatology, University of Colorado-Denver, Aurora, CO; ³Department of Biostatistics and Informatics, Colorado School of Public Health, Aurora, CO *CR

3768 — B0183 Statistical analysis for development of myopia in 1-year-old patients treated with laser photocoagulation for retinopathy of prematurity (ROP). Shinichiro Kawai, A. Marubayashi, H. Obata. Dept. of Ophthalmology, Saitama Medical Center, Saitama Medical University, Saitama, Japan

3769 — B0184 FEVR-like Phenotype of Zone 1 Type 1 Infants Treated with anti-VEGF Therapy. Christine Sonnie, J. E. Sears. Cole Eye Institute, Cleveland Clinic, Cleveland, OH

3770 — B0185 Brain white-matter analysis using diffusion tensor imaging in retinopathy of prematurity. Seong Joon Ahn¹, K. Kim², H. Lee³, B. Lee¹. ¹Ophthalmology, Hanyang University Hospital, Seoul, Korea (the Republic of); ²Eulji Hospital, Seoul, Korea (the Republic of); ³Pediatrics, Seoul, Korea (the Republic of)

3771 — B0186 Rhegmatogenous Retinal Detachments and Retinal Tears in Adult Retinopathy of Prematurity. Mikel Mikhail^{1,2}, S. Bakhsh^{2,3}, A. Thanos⁴, O. Moinuddin³, M. Stem^{1,2}, G. A. Williams^{1,2}, K. A. Drenser^{1,2}, A. Capone^{1,2}, M. T. Trese^{1,2}. ¹Associated Retinal Consultants, Royal Oak, MI; ²William Beaumont Hospital/Oakland University, Royal Oak, MI; ³Oakland University School of Medicine, Royal Oak, MI; ⁴Legacy Devers Eye Institute, Portland, OR

3772 — B0187 Staged lensectomy and posterior vitrectomy in stage 5 retinopathy of prematurity with advanced complications. Ping Fei, P. Zhao, H. Jin. Ophthalmology, Xinhua Hospital, School of Medicine, Shanghai Jiao Tong University, Shanghai, China

3773 — B0188 Short-term outcomes after intravitreal injections of Conbercept versus Ranibizumab for the treatment of retinopathy of prematurity. Enzhong Jin, H. Yin, M. Zhao, X. Li. Department of Ophthalmology, Peking University People's Hospital, Beijing, China

Exhibit Hall C0001-C0032

Tuesday, May 01, 2018 3:30 PM-5:15 PM

Clinical/Epidemiologic Research

379 Cataract, cornea and ocular surface disease

Moderator: Fiona Stapleton

3774 — C0001 Prevalence of Fuchs' endothelial corneal dystrophy by age and sex. Sangita P. Patel^{1,2}, P. A. Gianfagna¹, T. E. Ruster¹, A. E. Millen³. ¹Ophthalmology, University at Buffalo, Buffalo, NY; ²Ophthalmology and Research Service, VA Western NY Healthcare System, Buffalo, NY; ³Epidemiology and Environmental Health, University at Buffalo, Buffalo, NY

3775 — C0002 The characteristics of acute corneal hydrops in keratoconus with atopic dermatitis. Motohiro Itoi, T. Inatomi, C. Sotozono. Ophthalmology, Kyoto Prefectural University of Medicine, Kyoto, Japan

3776 — C0003 5-years longitudinal assessment of ocular manifestations in Fabry patients. Langis Michaud. Optometry, Ecole d'Optom de l'Univ de Montreal, Montreal, Quebec, Canada *CR

3777 — C0004 Trends of Infectious Keratitis in the West of Scotland: A 4-year Analysis. Fatemeh Shams. Tennent Institute of Ophthalmology Glasgow, Glasgow, United Kingdom

3778 — C0005 Microbiological and clinical profile of patients with ocular surface disease and microbial keratitis. Pauline Khoo^{1,2}, M. Cabrera-Aguas^{1,2}, K. Ooi¹, S. L. Watson^{1,2}. ¹University of Sydney, Save Sight Institute, Sydney, New South Wales, Australia; ²Sydney Eye Hospital, Sydney, New South Wales, Australia

3779 — C0006 Prevalence of Pneumococci in Conjunctival Flora among Vietnamese children. Yasser H. Mohamed. Ophthalmology, Nagasaki University, Nagasaki, Japan

3780 — C0007 Epidemiology of Conjunctivitis in the Emergency Department of a Reference Hospital in Goiânia. Anna Victoria Porfirio Ramos Caiado¹, R. M. Morato¹, P. H. De Lima Abreu¹, C. D. Nardelli Silva¹, G. Gallerani Pacheco¹, M. Neves De Melo Carneiro¹, J. J. Nassaralla^{1,2}. ¹Instituto De Olhos De Goiânia, Goiânia, Goiás, Brazil; ²UnB, Brasília, DF, Brazil ✕

3781 — C0008 Meibomian Gland Dysfunction in Brazil. Leidiane A. Adriano Pereira, A. T. Pelinson, E. Persona, I. Persona, R. Pontelli, E. M. Rocha. FMRP-USP, Ribeirão Preto, Brazil; FMRP-USP, Ribeirão Preto, Brazil

- 3782 — C0009 Analysis of Corneal Sub-Basal Nerve Plexus in Patients with Limbal Stem Cell Deficiency.** Daniel W. Cordova¹, Q. Le^{1,3}, T. Chauhan¹, E. Baclagon¹, R. Malik², S. X. Deng¹. ¹UCLA Stein Eye Institute, Los Angeles, CA; ²Weill Cornell Medicine Qatar, Doha, Qatar; ³Eye, Ear, Nose and Throat Hospital of Fudan University, Shanghai, China *CR
- 3783 — C0010 Epidemiology of persistent post-surgical pain manifesting as dry eye symptoms after cataract surgery.** Ravin Sajjani¹, S. Raia¹, A. Gibbons¹, V. Chang¹, C. Karp¹, K. sarantopoulos^{1,2}, R. Levitt^{1,2}, A. Galor¹. ¹Bascom Palmer Eye Institute, University of Miami Miller School of Medicine, Miami, FL; ²Department of Anesthesiology, Perioperative Medicine and Pain Management, University of Miami Miller School of Medicine, Miami, FL
- 3784 — C0011 Seasonal and Geographic Trends in Ophthalmology-Related Internet Search Queries.** Isdin Oke¹, A. S. Shah². ¹Boston Medical Center, Boston, MA; ²Boston Children's Hospital, Boston, MA
- 3785 — C0012 Correlation of clinical and keratographic assessments of tear stability and tear production at baseline in the DRY Eye Assessment and Management (DREAM®) Study.** Yinxi Yu¹, E. Schmucker¹, M. G. Maguire¹, J. E. Supphin², P. A. Asbell². ¹Department of Ophthalmology, University of Pennsylvania, Philadelphia, PA; ²Department of Ophthalmology, Icahn School of Medicine at Mt. Sinai, New York, NY; ³Department of Ophthalmology, University of Kansas Medical Center, Kansas city, KS *CR, ✗
- 3786 — C0013 Polymerase Chain Reaction (PCR) for Varicella Zoster Virus (VZV) in VZV Keratitis.** Gordon Crabtree, T. Vrabec, V. D. Baldassano. Ophthalmology, Geisinger Eye Institute, Danville, PA
- 3787 — C0014 Herpes Zoster Vaccine and Risk of Anterior Segment Complications.** Mahyar Etminan, T. Liu, S. Yeung. Ophthalmology and Visual Sciences, University of British Columbia, Vancouver, British Columbia, Canada
- 3788 — C0015 Reducing Adenoviral Patient Infected Days (RAPID) Study: Success in Masking Subjects and Clinicians From Identifying Treatment with Ophthalmic Povidone-Iodine 5% (PVP-I).** Meredith Whiteside¹, E. Shorter², M. Migneco³, A. Hartwick⁶, T. Than⁴, J. S. Harthan⁵, C. Morettin⁵, S. Johnson⁷, M. Margolis³, J. Huecker³, K. Olsen⁸, C. Rosemann⁸, T. van Zyl⁹, T. Bossie¹⁰, M. Gordon³. ¹School of Optometry, UC Berkeley, Berkeley, CA; ²University of Illinois, Chicago, IL; ³Ophthalmology, Washington University, St. Louis, MO; ⁴Carl Vinson Veterans Medical Center, Dublin, GA; ⁵Illinois College of Optometry, Chicago, IL; ⁶Optometry, Ohio State University, Columbus, OH; ⁷College of Optometry, Northeastern State University, Tahlequah, OK; ⁸US Army Ft. Sam Houston, San Antonio, TX; ⁹Ophthalmology, Harvard Medical School, Boston, MA; ¹⁰New England College of Optometry, Boston, MA ✗
- 3789 — C0016 Effect of a simple intervention in reducing rates of corneal ulceration due to exposure keratopathy in the ICU.** Sahar Kohanim, J. Ling, S. Tanaka. Ophthalmology and Visual Sciences, Vanderbilt University Medical Center, Nashville, TN
- 3790 — C0017 Accuracy of axial length measurement using enhanced retina visualization mode by swept source optical coherence tomography biometer in dense cataract.** Akeno Tamaoki^{1,3}, T. Kojima², A. Hasegawa¹, M. Yamamoto¹, T. Kaga¹, K. Tanaka^{3,4}, K. Ichikawa^{3,1}. ¹Ophthalmology, Chukyo Hospital, Nagoya, Japan; ²Ophthalmology, Keio University, Tokyo, Japan; ³Shinshu University Interdisciplinary Graduate School of Science and Technology, Nagano, Japan; ⁴Faculty of Engineering, Shinshu University, Nagano, Japan; ⁵Chukyo eye clinic, Nagoya, Japan *CR
- 3791 — C0018 Systemic Tamsulosin Use and Anterior Chamber Depth by Partial Coherence Interferometry.** Joy Carroll¹, J. Lindsey^{2,1}, A. Chomsky^{2,1}. ¹Ophthalmology, Vanderbilt University Medical Center, Nashville, TN; ²Ophthalmology, VA Tennessee Valley Healthcare System, Nashville, TN
- 3792 — C0019 Pseudophakia and lens opacities in Swedish 70-year-olds; gender differences and impact on self-reported visual function.** Madeleine Zetterberg. Institute of Neuroscience and Physiology, University of Gothenburg, Molndal, Sweden
- 3793 — C0020 Relationship between smoking and ocular diseases: a case-control study in a specialized hospital in Mexico City.** Jesus Guerrero², M. Vazquez-Duran¹, E. O. Graue-Hernandez¹, A. Jimenez-Corona¹. ¹Oftalmologia Integral, Instituto de Oftalmologia Fundacion Conde de Valenciana, Mexico City, Mexico City, Mexico; ²Instituto de Oftalmologia Fundacion Conde de Valenciana, Mexico City, Mexico City, Mexico
- 3794 — C0021 Outcomes of Presenile Cataract Surgery in a Hispanic population.** Nallely R. Morales-Mancillas, J. A. Nava, D. E. Gomez-Elizondo, J. E. Valdez. Instituto de Oftalmologia. Escuela de Medicina. Tecnológico de Monterrey, Monterrey, Nuevo León, Mexico
- 3795 — C0022 Risk factors for early-onset cataracts treated surgically in Australian adults.** Wei Wang¹, X. Shang², L. Zhang³, L. Li³, M. He^{3,1}. ¹Zhongshan ophthalmic center, Sun Yat-sen University, Guangzhou, China; ²Faculty of Medicine, Dentistry and Health Sciences, University of Melbourne, Melbourne, Victoria, Australia; ³Ophthalmology, Department of Surgery, Centre for Eye Research Australia, Melbourne, Victoria, Australia; ⁴Monash University, Melbourne, Victoria, Australia
- 3796 — C0023 Ten-year follow-up of eyes with waterclefts in Monzen Eye Study.** Eri Shibuya, M. Kita, T. Shibata, H. Miyashita, N. Tanimura, N. Hatsusaka, N. Mita, E. Kubo, H. Sasaki. Department of Ophthalmology, Kanazawa Medical University, Kahoku, Ishikawa, Japan
- 3797 — C0024 Risk factors for waterclefts in human crystalline lens.** Hisanori Miyashita, N. Hatsusaka, H. Osada, T. Shibata, N. Tanimura, H. Ishida, Y. Kawakami, N. Mita, E. Kubo, H. Sasaki. Department of Ophthalmology, Kanazawa Medical University, Kahoku, Ishikawa, Japan
- 3798 — C0025 Socioeconomic Factors Regarding Cataract Surgery in a Developing Country.** Daniela Alanis Cabrera, E. Chávez Mondragón, K. Zuniga Posselt, F. Solorio Martinez, M. Garzón. Instituto de Oftalmología Conde de Valenciana, Mexico City, Mexico
- 3799 — C0026 How many cataract surgeries are needed in a given population?** Ashok Vardhan¹, A. Fletcher³, S. Kumar², V. Kumar², T. Ravilla². ¹Cataract, Aravind Eye Hospital, Madurai, Tamil Nadu, India; ²LAICO, Aravind Eye Hospital, Madurai, India; ³Epidemiology, LSHTM, London, United Kingdom
- 3800 — C0027 A Cross-Sectional Study on Outcomes of Cataract Surgery in Kampala, Uganda Using VFQ-25.** Eunyoo Kim¹, D. Kim², J. Kim³, L. Park⁴. ¹Cornell University, Ithaca, NY; ²Vision Care USA, New York, NY; ³Vision Care, Seoul, Korea (the Republic of); ⁴Ophthalmology, Columbia University Medical Center, New York, NY
- 3801 — C0028 Repercussion of cataract surgery in the quality of life of the patients and correlation with visual acuity.** maria de Los Angeles d. ochoa hidalgo¹, J. Soria Viteri². ¹UEES, Guayaquil, Ecuador; ²CIVE, Guayaquil, Ecuador
- 3802 — C0029 Early onset of mature cataracts and end-stage Primary Open Angle Glaucoma in the region of Logone Oriental (Southern Chad, Africa).** Alejandro Saint-Jean. Fundacion Iluminafrica, Tarragona, Spain
- 3803 — C0030 Assessment of intraocular pressure at the end of cataract surgery: comparison between estimated and measured values.** Gustavo R. Gameiro², J. F. Heringer¹, M. Abalem¹, M. R. Alves¹, P. C. Carricondo¹. ¹Ophthalmology, Hospital das Clinicas HCFMUSP, Faculdade de Medicina, Universidade de Sao Paulo, Sao Paulo, Brazil; ²Faculdade de Medicina FMUSP, Universidade de Sao Paulo, Sao Paulo, SP, Brazil *CR
- 3804 — C0031 Incidence of Post-Cataract Cystoid Macular Edema.** Garred Greenberg¹, I. Chocron², J. Lee². ¹Albert Einstein College of Medicine, Bronx, NY; ²Ophthalmology and Visual Sciences, Montefiore Medical Center, Bronx, NY
- 3805 — C0032 Infection Control Modification to Include Keyboards in Eye Care Settings.** Andie Strang¹, E. Wyles¹, E. J.K. Wyles². ¹Illinois College of Optometry, Chicago, IL; ²Saint Louise De Marillac School, LaGrange Park, IL

Exhibit Hall C0033-C0066

Tuesday, May 01, 2018 3:30 PM-5:15 PM

Cornea

380 Dry eye non-clinical II**Moderators: Tania Schaefer and Dimitra Makrynioti**

3806 — C0033 Protein Markers in Human Meibomian Glands: Implications on Pathogenic Mechanisms of Meibomian Gland Dysfunction (MGD). Lixing W. Reneker¹, R. T. Irlmeier¹, Y. Shui², Y. Liu², A. J. Huang². ¹Ophthalmology, University of Missouri-Columbia, Columbia, MO; ²Ophthalmology and Vision Science, Washington University School of Medicine, St. Louis, MO

3807 — C0034 Efficacy of RGN-259 (thymosin β 4) relative to approved prescription therapeutics in a dry eye mouse model. Chae Eun Kim⁵, H. Kleinman¹, G. Sosne², G. W. Ousler⁷, K. Kim^{4,3}, S. Kang³, J. Yang^{5,6}. ¹Department of Biochemistry and Molecular Biology, The George Washington University School of Medicine, Washington, D.C., WA; ²Departments of Ophthalmology and Anatomy/Cell Biology, Kresge Eye Institute, Wayne State University School of Medicine, Detroit, MI; ³ReGenTree, LLC, Princeton, NJ; ⁴Department of Pharmaceutical Engineering, Inje University, Gimhae, Korea (the Republic of); ⁵Department of Ophthalmology, Inje University College of Medicine, Inje University Busan Paik Hospital, Busan, Korea (the Republic of); ⁶T2B infrastructure Center for Ocular Disease, Inje University Busan Paik Hospital, Busan, Korea (the Republic of); ⁷Ora, Inc., Andover, MA *CR

3808 — C0035 Alkali burn injury promotes the imbalanced activation of NLRP3/NLRP6 dependent on the TLR4-MyD88 pathway. Wei Chi, H. Chen. State Key Laboratory of Ophthalmology, Zhongshan Ophthalmic Center, Sun Yat-sen University, Guangzhou, Guangdong, China

3809 — C0036 NLRC4 magnifies inflammatory cascades via maturation of IL-1 β , which in turn promotes caspase-8-dependent NLRs activation in dry eye. Hui Chen, W. Chi. State Key Laboratory of Ophthalmology, Zhongshan Ophthalmic Center, Sun Yat-sen University, Guangzhou, Guangdong, China

3810 — C0037 The effects of omega-6:omega-3 fatty acid ratios on the lipidome from human meibomian gland epithelial cells treated with and without 13-cis retinoic acid. Jillian F. Ziemanski, J. Chen, K. K. Nichols. The School of Optometry, The University of Alabama at Birmingham, Homewood, AL

3811 — C0038 Comparison of subjective grading and objective assessment in meibography between two computational programs and evaluation of inter and intraobserver reproducibility. Manuel A. Garza Leon^{1,2}, L. Gonzalez², N. Ramos Betancourt², E. Hernandez-Quintela². ¹Health Sciences Division, Universidad de Monterrey, Monterrey, Mexico; ²Departamento de Cornea, Asociación para Evitar la Ceguera en México, Mexico, Ciudad de México, Mexico

3812 — C0039 Conformational and thermodynamic features of meibum in adolescents and adults with graft-versus-host disease. Samiyah Sledge¹, R. Blackburn¹, A. Ramasubramanian¹, D. Borchman¹, M. C. Yapper². ¹Ophthalmology, University of Louisville, Louisville, KY; ²Chemistry, University of Louisville, Louisville, KY

3813 — C0040 ENaC inhibitory peptides as regulators of fluid hydration on the eye. David Scott. Spyrax Biosciences, Durham, NC

3814 — C0041 Changes in tear lipid layer thickness with Omega-3 eye drop. Jennifer S. Fogt, N. Fogt, P. E. King-Smith, J. Barr. The Ohio State University College of Optometry, Columbus, OH*CR

3815 — C0042 Effect of duration and severity of hyperglycemia on tear secretion and osmolarity in Type I and Type II diabetes mellitus. Ajay Sharma, A. Barbarino, J. Taniguchi. School of Pharmacy, Chapman University, Irvine, CA

3816 — C0043 CD30 expression in lacrimal gland and conjunctival tissues in patients with Sjögren's syndrome. Akiko Ogawa, Y. Ogawa, K. Tsubota. Keio University school of medicine, Tokyo, Japan

3817 — C0044 The influence of tear supply and drainage on tear film dynamics during a realistic blink. Kara Maki¹, A. McManus¹, W. Henshaw², R. J. Braun³. ¹School of Mathematical Sciences, Rochester Institute of Technology, Rochester, NY; ²Department of Mathematical Sciences, Rensselaer Polytechnic Institute, Troy, NY; ³Department of Mathematical Sciences, University of Delaware, Newark, DE

3818 — C0045 NKT (CD1d-Restricted T) Cells in Potential Precursors to Autoimmune- and Chronic, Immune-Mediated Lacrimal Gland Infiltrates. Austin K. Mircheff¹, Y. Wang¹, C. J. Lane². ¹Physiology & Neuroscience, University of Southern California, Los Angeles, CA; ²Preventive Medicine, University of Southern California, Los Angeles, CA

3819 — C0046 Effect of light exposure on conjunctival fibroblasts using an in-vitro model of dry eye. Tugce Ipek^{1,2}, A. Hartwig², J. S. Wolffsohn¹, C. O'Donnell^{2,1}. ¹School of Life and Health Sciences, Aston University, Birmingham, United Kingdom; ²Optegra Eye Sciences, Manchester, United Kingdom

3820 — C0047 Complete Dacryoadenectomy in Rabbits: A Novel Approach to Create Dry Eye Disease. Jie Gao², L. Huang¹, S. B. Weissbart², D. Montalto², P. Kung³, K. Elaahi³, K. Kaplowitz², W. Huang¹, Z. Wen¹, B. Rigas¹, R. A. Honkanen². ¹Medicine, Stony Brook University Hospital, Stony Brook, NY; ²Ophthalmology, Stony Brook University Hospital, Stony Brook, NY; ³School of Medicine, Stony Brook University, Stony Brook, NY *CR

3821 — C0048 Effect of probiotics treatment on dry eyes in a mouse model of Sjögren's Syndrome. Mee Kum Kim^{1,2}, S. Choi^{1,2}, H. Jeong², J. Ryu², S. Im^{3,4}. ¹Ophthalmology, Seoul National University College of Medicine, Seoul, Korea (the Democratic People's Republic of); ²Laboratory of Ocular Regenerative Medicine and Immunology, Seoul Artificial Eye Center, Seoul National University Hospital Biomedical Research Institute, Seoul, Korea (the Republic of); ³Division of Integrative Biosciences and Biotechnology, Pohang University of Science and Technology, Pohang, Korea (the Republic of); ⁴Academy of Immunology and Microbiology, Institute for Basic Science, Pohang, Korea (the Republic of)

3822 — C0049 Analysis of composition of meibum according to dry eye type classified by tear film interferometer. Ikhyn Jun¹, S. Kim², H. Kim³, T. Lee², K. Kim³, H. Lee¹, T. Kim¹, E. Kim¹, K. Seo¹. ¹Ophthalmology, Yonsei University College of Medicine, Seoul, Korea (the Republic of); ²Chemistry, Yonsei University, Seoul, Korea (the Republic of); ³Applied Chemistry, Kyung Hee University, Seoul, Korea (the Republic of) *CR

3823 — C0050 Anti-Inflammatory Action of a Novel Tetrapeptide in a Corneal Epithelial Cell Culture Model. Frank Gambino¹, h. liu^{2,3}, C. Walsh¹, C. S. Bouchard², P. Bu², B. I. Gaynes^{2,4}, L. Qiao^{1,4}. ¹Microbiology & Immunology, Loyola University Chicago, Maywood, IL; ²Ophthalmology, Loyola University Chicago, Maywood, IL; ³Refractive Surgery & Corneal Disease, Tianjin Medical University Eye Hospital, Tianjin, China; ⁴Co-Corresponding Author, Loyola University Chicago, Maywood, IL *CR

3824 — C0051 Effects of twice per day KN-A01, a modified hyaluronic acid based hydrogel, for the treatment of dry eye syndrome in dog patients. Yu Yu^{1,2}, D. Chow³, W. Back², J. Xu², Y. Chau². ¹Pteryon Therapeutics, Kowloon, Hong Kong; ²Chemical and Biological Engineering, Hong Kong University of Science and Technology, Hong Kong, China; ³Veterinary Specialty Hospital, Hong Kong, China *CR

3825 — C0052 Can OTC artificial tears ophthalmic solutions stabilize tear film? An in vitro study. Meng C. Lin^{1,2}, T. F. Svitova^{1,2}. ¹School of Optometry, University of California, Berkeley, Berkeley, CA; ²CRC, School of Optometry, UC Berkeley, Berkeley, CA

3826 — C0053 Effect of Age and Gender on Dry Eye according to Tests and Symptoms. J Peter Gierow, L. Kacz. Department of Medicine and Optometry, Linnaeus University, Kalmar, Sweden

3827 — C0054 Quantification of proteoglycan 4 (PRG4) / lubricin in normal and Sjögren Syndrome human tears.

Tannin A. Schmidt¹, S. Srinivasan², M. Heynen³, G. Jay⁷, B. D. Sullivan^{3, 4}, L. Subbaraman², B. Caffery⁵, L. Jones², S. Regmi⁶.
¹Biomedical Engineering, University of Connecticut Health Center, Farmington, CT; ²Centre for Ocular Research and Education, School of Optometry & Vision Science, University of Waterloo, Waterloo, Ontario, Canada; ³TearLab Corp, San Diego, CA; ⁴Lubris BioPharma, Framingham, MA; ⁵Toronto Eye Care, Toronto, Ontario, Canada; ⁶Faculty of Kinesiology, University of Calgary, Calgary, Alberta, Canada; ⁷Emergency Medicine, Brown University, Providence, RI *CR

3828 — C0055 Relative Deficiency of Active Lacritin, the Shed Form of Lacritin Co-Receptor Syndecan-1 and the Pro-Form of Syndecan-Activating Enzyme Heparanase in Dry Eye Tears, and Development of a Tear Interactome.

Gordon W. Laurie¹, J. Romano¹, L. Mao¹, K. Dias Teixeira¹, R. L. McKown², D. Ryan³, B. Rivers³.
¹Cell Biology, University of Virginia, Charlottesville, VA; ²Integrated Science and Technology, James Madison University, Harrisonburg, VA; ³Warfighter Refractive Eye Surgery Program and Research Center, Fort Belvoir, Fort Belvoir, VA *CR

3829 — C0056 Efficacy of Meibomian Gland Intraocular Probing for the Treatment of Meibomian Gland Dysfunction.

Scott J. Bowman¹, V. Y. Bunya^{1, 2}, K. Fernandez¹, I. Macchi^{1, 3}, S. E. Orlin¹, M. E. Sulewski¹, G. Ying¹, M. Massaro-Giordano^{1, 2}.
¹Scheie Eye Institute, Philadelphia, PA; ²Research To Prevent Blindness, Philadelphia, PA; ³Casa di cura Fabia Mater, Philadelphia, PA *CR

3830 — C0057 Modulation of ocular epithelial cell mucins expression by proinflammatory cytokines.

Priya Mistry, A. Barbarino, A. Sharma. School of Pharmacy, Chapman University, Irvine, CA

3831 — C0058 PPAR γ Signaling Regulates Meibocyte Differentiation of Cultured Human Meibomian Gland Epithelial Cells (hMGEC).

Sun Woong Kim^{1, 2}, X. Yile², D. Brown², J. V. Jester².
¹Ophthalmology, Yonsei University Wonju College of Medicine, Wonju, Korea (the Republic of); ²Ophthalmology, Gavin Herbert Eye Institute, University of California, Irvine, Irvine, CA

3832 — C0059 A new ophthalmic pharmaceutical formulation, topical sulglycotide enhances the ocular mucin secretion in the desiccation stress-mediated dry eye disease.

Hyesook Lee², S. Jeon¹, C. Kim^{2, 3}, Y. Lee², Y. Park¹, J. Yang^{2, 3}.
¹College of Pharmacy, Ajou University, Suwon City, Korea (the Republic of); ²T2B infrastructure center for ocular diseases, Inje University Busan Paik Hospital, Busan, Korea (the Republic of); ³Department of Ophthalmology, Inje University College of Medicine, Busan, Korea (the Republic of)

3833 — C0060 Alterations of Murine Subbasal Corneal Nerves after Environmental Dry Eye Stress.

Cem Simsek, T. Kojima, M. Dogru, K. Tsubota. Ophthalmology, Keio University, Tokyo, Japan

3834 — C0061 Anti inflammatory activity of hyaluronic acid, liponic acid and trehalose, alone or in combination, tested on corneal epithelial cells under hyperosmolar conditions.

Caroline Chatard-Baptiste¹, M. Claret², M. Dubald², A. Garnier², C. Claret².
¹Ophthalmis, Monaco, Monaco; ²Horus Pharma, Saint Laurent du Var, France

3835 — C0062 Osmoprotective, antioxidant and antiapoptotic effect of four eye lubricants assessed through hyperosmolar stress induction on corneal epithelial cells.

guerin camille, M. Dubald, A. Garnier, C. Claret, M. Claret. Horus Pharma, Saint Laurent du Var, France

3836 — C0063 Anti-Inflammatory Effect of a Mixture of Cyclosporine A and Cell Penetrating Peptides in Corneal Epithelium Cells and Experimental Dry Eye: in vivo and in vitro Study.

HYEON-JEONG YOON¹, Y. Li¹, R. Jin¹, J. Choi¹, J. Yu², K. Yoon¹.
¹Ophthalmology, Chonnam National University Medical School and Hospital, Gwangju, Korea (the Republic of); ²Department of Chemistry and Education, Seoul National University, Gwangju, Korea (the Republic of)

3837 — C0064 Treatment of Concanavalin A induced Dry Eye Disease in Rabbits using the novel agent Phospho-sulindac.

Robert A. Honkanen¹, L. Huang², G. Xie², B. Rigas².
¹Ophthalmology, SUNY at Stony Brook, Sound Beach, NY; ²Medicine, Stony Brook University, Stony Brook, NY; ³Medicon Pharmaceuticals, Setauket, NY *CR

3838 — C0065 Therapeutic Efficacy of Topical Adiponectin-Derived Short Peptides and Globular Adiponectin after alkali burn.

Ying Li¹, R. J. Jin¹, J. Choi¹, H. Hsu², L. Otvos³, E. Surmacz⁴, K. Yoon¹.
¹Department of ophthalmology, Chonnam National University Medical School & Hosp., Gwangju, Korea (the Democratic People's Republic of); ²Allysta Pharmaceuticals, Belmont, Virgin Islands (U.S.); ³Olpe LLC, Audubon, Virgin Islands (U.S.); ⁴Temple University, Philadelphia, Virgin Islands (U.S.)

3839 — C0066 Air pollutant particulate matter 2.5 induces dry eye syndrome in mice.

Yi Shao. The First Affiliated Hospital of Nanchang University, Nanchang, China

Exhibit Hall C0101-C0148

Tuesday, May 01, 2018 3:30 PM-5:15 PM

Cornea

381 Corneal epithelium

Moderators: Carlo Iomini and Ursula Schlotzer-Schrehardt

3840 — C0101 Corneal subepithelial changes and prognosis after chemotherapy using Epidermal or Fibroblast growth factor receptor inhibitor. Eunhae Shin, T. Chung, J. Han, D. Lim. Ophthalmology, Samsung Medical Center, Seoul, Korea (the Republic of)

3841 — C0102 Genetic analysis and in vivo histology of Meesmann epithelial corneal dystrophy. Tsubasa Nishino¹, A. Kobayashi¹, N. Mori¹, H. Yokogawa¹, T. Masaki¹, K. Fujiki¹, A. Yanagawa², A. Murakami², K. Sugiyama¹.
¹Kanazawa Univ Sch of Medicine, Kanazawa, Japan; ²Juntendo Univ Sch of Medicine, Tokyo, Japan

3842 — C0103 Nucleic acid stimulation increases galectin-3 expression in immortalized corneal and conjunctival epithelium. Yuriko Ban^{1, 2}, N. Miyagi³, C. Sotozono², S. Kinoshita⁴.

¹Ophthalmology, Kyoto Chubu Medical Center, Nantan, Kyoto, Japan; ²Ophthalmology, Kyoto Prefectural University of Medicine, Kyoto, Japan; ³Faculty of Life and Medical Sciences, Doshisha University, Kyotanabe, Japan; ⁴Frontier Medical Science and Technology for Ophthalmology, Kyoto Prefectural University of Medicine, Kyoto, Japan

3843 — C0104 Effects of Rho kinase inhibitor for corneal epithelial cell movement. Yukihisa Takada, O. Yamanaka, T. Sumioka, S. Saika. Ophthalmology, Wakayama Medical University, Wakayama, Wakayama, Japan

3844 — C0105 The effect of Cornea epithelial debriment with Diamond Burr in Patients with Recurrent Corneal Erosion. Jae Woong Koh. Ophthalmology, Chosun University Hospital, Gwanju, Korea (the Republic of) ✕

3845 — C0106 Proliferation of corneal epithelial cells is regulated by p63/ATF3 related pathway. Yi-Jen Hsueh, H. Chen, T. Wang, K. Chien, D. Ma. Chang Gung Memorial Hospital, Taoyuan, Taiwan

3846 — C0107 Inflammatory stress impairs the N-glycan branching pathway in human ocular surface epithelia. Pablo Argueso¹, A. M. Woodward¹, S. Lehoux³, F. Mantelli², S. Bonini⁴.
¹Schepens Eye Rsrch Inst, MEE, HMS, Boston, MA; ²Dompè farmaceutici S.p.A., Milan, Italy; ³Harvard Medical School, Boston, MA; ⁴University Campus Bio-Medico, Rome, Italy *CR

Tuesday Posters
3:30 pm – 5:15 pm

3847 — C0108 Evaluation of Corneal Epithelial Thickness in Healthy Eyes using Spectral-Domain OCT. Elmira Baghdasaryan^{2,1}, K. Marion², T. Tepelus²⁻¹, S. R. Sadda²⁻¹, H. Y. Hsu²⁻¹. ¹Ophthalmology, University of California-Los Angeles, Los Angeles, CA; ²Doheny Eye Institute, Los Angeles, CA *CR

3848 — C0109 A high fat diet induces changes in expression and localization of the ion channel protein, Pannexin 1, and modifies cell-cell communication. Vickery E. Trinkaus-Randall^{1,2}, Y. Lee³, A. Londregan², C. Rich². ¹Ophthalmology L904, Boston University Sch of Med, Boston, MA; ²Boston University, Boston, MA; ³Pharmacology, Boston University, Boston, MA

3849 — C0110 Krüppel-like factor 4 (KLF4) Controls Corneal Epithelial Stratification by Regulating Cell Polarity and Plane of Cell Division. Anil Tiwari¹, S. Swamynathan¹, N. Alexander¹, J. Gnalian², S. K. Swamynathan^{1,3}. ¹Ophthalmology, University of Pittsburgh, Pittsburgh, PA; ²Biological Sciences, University of Pittsburgh, Pittsburgh, PA; ³McGowan Institute of Regenerative Medicine, University of Pittsburgh, Pittsburgh, PA

3850 — C0111 Light-induced cytotoxic effects in human corneal and conjunctival epithelial cells in basal and hyperosmolar culture conditions. Veronika Marek^{1,2}, S. Mélik-Parsadaniantz², T. Villette¹, C. Baudouin^{2,3}, F. Brignole-Baudouin^{2,3}, A. Denoyer^{2,4}. ¹Essilor International, Paris, France; ²Paris Vision Institute (UMR S 968 Inserm, UMR 7210, CNRS, Paris-Sorbonne University), Paris, France; ³Quinze-Vingts National Ophthalmology Hospital, Paris, France; ⁴Robert Debré University Hospital, URCA, Reims, France

3851 — C0112 LEDs Modulate Tight-Junction Formation in Human Corneal Epithelial Cells via Intracellular cAMP Level. Shu-Wen Chang^{1,2}, T. Chen¹. ¹Department of Ophthalmology, Far Eastern Memorial Hospital, New Taipei City, Taiwan; ²Department of Ophthalmology, National Taiwan University Hospital, Taipei, Taiwan

3852 — C0113 Expression of Folate Receptor (FR-alpha) and Proton Coupled Folate Transporter (PCFT) on RPCEC and HCEC Cell Line. Jwala Renukuntla¹, R. Kalhapure¹, P. Bolla¹, S. Boddur², A. M. Tawfik³. ¹School of Pharmacy, University of Texas El Paso, El Paso, TX; ²Department of Pharmacy Practice, University of Toledo, Toledo, OH; ³Department of Biology, Augusta University, Augusta, GA

3853 — C0114 Oral Guafenesin for Treatment of Filamentary Keratitis. Jimena T. Carreno-Galeano, G. Coco, F. Amparo, R. Dana. *Ophthalmology, Massachusetts Eye and Ear Infirmary, Department of Ophthalmology, Harvard Medical School, Boston, MA, USA., Boston, MA* ✕

3854 — C0115 Effects of silver nanoparticles on corneal epithelial wound healing. Sara M. Thomas^{1,2}, S. Kim¹, L. Van Winkle³, K. Pinkerton³. ¹Surgical & Radiological Sciences, School of Veterinary Medicine, University of California, Davis, Davis, CA; ²Ophthalmology & Vision Science, School of Medicine, University of California, Davis, Davis, CA; ³Center for Health and the Environment, University of California, Davis, Davis, CA

3855 — C0116 Targeting of Dynamin, an Essential Regulator of Endocytosis, Protects the Ocular Surface against Oxidative Stress. Andrew Webster¹, S. K. Chintala¹, J. Barr⁵, N. A. Panjwani², P. Argueso³, S. Jeong⁴, M. Fini¹. ¹Keck School of Medicine, University of Southern California, Los Angeles, CA; ²Ophthalmology, Tufts University School of Medicine, Boston, MA; ³Schepens Eye Research Institute, Boston, MA; ⁴Roski Eye Institute, Ophthalmology, Keck School of Medicine, University of Southern California, Los Angeles, CA; ⁵Optometry, Ohio State University, Columbus, OH *CR

3856 — C0117 Oxidative Stress Induces Autophagy through Inhibition of mTOR in Corneal Epithelial Cells. Bowen Wang, J. Zhong, J. Yuan. *Zhongshan Ophthalmic Center, Guangzhou, Guangdong, China*

3857 — C0118 The potential of using different forms of topical human platelet lysate eye drops to treat ocular surface diseases. Lily W. Chen¹, C. Huang^{1,2}, H. Chu¹, W. Chen¹. ¹Department of Ophthalmology, National Taiwan University Hospital, Taipei, Taiwan; ²Department of Ophthalmology, Taipei Tzu Chi General Hospital, Hua-Lian, Taiwan

3858 — C0119 Localising potential regulators of the corneal limbal stem cell niche. Greg M. Hammond¹, R. D. Young¹, B. Caterson², A. J. Quantock¹. ¹School of Optometry and Vision Sciences, Cardiff University, Cardiff, United Kingdom; ²School of Biosciences, Cardiff University, Cardiff, United Kingdom *CR

3859 — C0120 Influence of the Quality of Donor Human Corneas on the Limbal Stem Cell Culture. Sheyla Gonzalez, H. Mei, J. Rodriguez, E. Baclagon, R. Gentry, S. X. Deng. *Ophthalmology, Stein Eye Institute UCLA, Los Angeles, CA* *CR

3860 — C0121 Analysis of Basal Epithelial Cell Density and Cell Morphology in Eyes with Limbal Stem Cell Deficiency. Erick O. Encampira, S. X. Deng, T. Chauhan, Q. Le, F. Yu. *Stein Eye Institute - UCLA, Los Angeles, CA*

3861 — C0122 Phenotypic changes during differentiation of human pluripotent stem cells towards limbal epithelial stem cells. Meri Vattulainen, T. Ilmarinen, H. Skottman. *University of Tampere, Tampere, Finland*

3862 — C0123 Towards identification of novel limbal stem cell surface markers. Sanja Bojic^{1,2}, D. Hallam¹, P. Sagoo⁷, N. Alcada^{1,6}, H. Buck⁷, G. Figueiredo³, A. Amitai Lange⁴, B. Ljujic², R. Shalom-Feuerstein⁴, A. J. Short⁷, F. Figueiredo^{1,5}, M. Lako¹. ¹Institute of Genetic Medicine, Newcastle University, Newcastle upon Tyne, United Kingdom; ²Department of Genetics, Faculty of Medical Sciences, University of Kragujevac, Kragujevac, Serbia; ³Department of Ophthalmology, Royal Liverpool and Broadgreen University Hospitals NHS Trust - RLUH, Liverpool, United Kingdom; ⁴Department of Genetics and Developmental Biology, The Ruth and Bruce Rappaport Faculty of Medicine, Technion - Israel Institute of Technology, Haifa, Israel; ⁵Department of Ophthalmology, Royal Victoria Infirmary, Newcastle upon Tyne, United Kingdom; ⁶Department of Biology, University of Aveiro, Aveiro, Portugal; ⁷Institute of Immunity & Transplantation, University College London, London, United Kingdom

3863 — C0124 Cultured limbal epithelial stem cells demonstrate stability after 48 hours of storage at a controlled temperature. Jonathan Rodriguez, S. Gonzalez, E. Baclagon, R. Gentry, S. X. Deng. *Ophthalmology, Cornea Biology lab, UCLA, Los Angeles, CA* *CR

3864 — C0125 Reconstruction of the corneal epithelium with induced marrow mesenchymal stem cells by 3D bioprinting. Tingshuai Jiang^{1,2}, L. Cai¹, J. Zhu², Y. Hui¹, W. Ji¹. ¹Xijing Hospital, The Fourth Military Medical University, Xi'an, China; ²University of California, San Diego, La Jolla, CA

3865 — C0126 Factorial design in regenerative medicine – high throughput screening of additives to promote survival of stored undifferentiated epidermal cells. Sjur Reppe¹, C. J. Jackson^{1,2}, H. Ringstad¹, K. A. Tønseth², H. G. Bakke¹, J. R. Eide³, T. P. Utheim^{1,4}. ¹Department of Medical Biochemistry, Oslo University Hospital, Oslo, Norway; ²Department of Plastic and Reconstructive Surgery, Oslo, Norway; ³Department of Ophthalmology, Oslo University Hospital, Oslo, Norway; ⁴Institute of Oral Biology, University of Oslo, Oslo, Norway

3866 — C0127 Evaluation of the Protective Role of Melatonin on H2O2-induced Injury in Human Corneal Epithelial Cells. Mengliang Wu, Y. Wang, J. Han, T. Shao. *Ophthalmology, Eye and ENT hospital, Fudan University, Shanghai, China*

3867 — C0128 Ex vivo engineered human corneo-limbal epithelium express DNA damage-repair enzymes. Yolanda Lorenzo Corrales², G. Nguyen¹, M. C. Moe²⁻¹, G. Petrovski²⁻¹, B. Nicolaisen²⁻¹. ¹University of Oslo, Oslo, Norway; ²Center for Eye Research, Department of Ophthalmology, Oslo University Hospital, Oslo, Norway

- 3868 — C0129 The Effect of Cultured Autologous Oral Mucosal Epithelial Cell Sheet (CAOMECS) Graft on Corneas with Limbal Stem Cell Deficiency and Neovascularization.** Fawzia Bardag-Gorce¹, R. Hofi², D. Pan¹, K. Narwani¹, M. Di Lorenzo¹, D. Cortez¹, J. Oliva¹, Y. Niihara¹. ¹Hematology, LA BioMed at Harbor UCLA Medical Center, Torrance, CA; ²Ophthalmology at Harbor-UCLA medical Center, LA BioMed, Torrance, CA *CR
- 3869 — C0130 Contribution of the feeder layer type to the preservation of stem cells in cultured human corneal epithelial cells.** Gaëtan Le-Bell^{1,2}, F. Bisson³, S. Guérin¹, L. Germain^{1,2}. ¹Département d'ophtalmologie, Université Laval, CUO-recherche/LOEX, Centre de recherche du CHU de Québec - Université Laval, Québec, Québec, Canada; ²Département de chirurgie, Université Laval, Centre de recherche en organogénèse expérimentale de l'Université Laval/LOEX, Centre de recherche du CHU de Québec - Université Laval, Québec, Québec, Canada
- 3870 — C0131 The limbal epithelial stem cell niche in aniridia-related keratopathy.** Friedrich E. Kruse¹, L. Latta², L. Holbach¹, B. Käsmann-Kellner², B. Seitz², U. Schlotzer-Schrehardt¹. ¹Department of Ophthalmology, University of Erlangen-Nuernberg, Erlangen, Germany; ²Department of Ophthalmology, Saarland University Medical Center, Homburg/Saar, Germany
- 3871 — C0132 Limbal Stem Cells Promote Corneal Epithelial Regeneration by GDNF/Survivin/CRM1 Signaling Pathway.** Wenjuan Qin, Y. Qu, S. C. Pflugfelder, D. Li. Ocular Surface Center, Department of Ophthalmology, Baylor College of Medicine, Houston, TX
- 3872 — C0133 Optimization of nanoconjugate delivery into human diabetic limbal epithelial cells and organ-cultured diabetic corneas for gene therapy.** Andrei A. Kramerov^{1,2}, L. Israel³, H. Ding³, M. Saghizadeh^{2,4}, J. Y. Ljubimov³, A. Ljubimov^{2,4}. ¹Ophthalmology Research, Cedars-Sinai Medical Center, Culver City, CA; ²Department of Biomedical Sciences, Cedars-Sinai Medical Center, Los Angeles, CA; ³Department of Neurosurgery, Cedars-Sinai Medical Center, Los Angeles, CA; ⁴School of Medicine, UCLA, Los Angeles, CA *CR
- 3873 — C0134 SPARC Promotes Self-Renewal of Limbal Stem Cell through the phosphorylation of p38-MAPK signal pathway.** Jing Zhu, X. Wu, L. DU. Department of Ophthalmology, QiLu Hospital, Shandong University, Jinan, Shandong Province, China
- 3874 — C0135 Keratocyte exosomes: Important players in limbal epithelial stem cell function in healthy and diabetic cornea.** Aleksandra Leszczynska¹, M. Kulkarni¹, K. Pate², M. Saghizadeh^{1,2}. ¹Biomedical Sciences, Regenerative Medicine Institute, Cedars-Sinai Medical Center, Los Angeles, CA; ²David Geffen School of Medicine, University of California Los Angeles, Los Angeles, CA
- 3875 — C0136 Reduced intraepithelial corneal nerve density and sensitivity accompany acute and chronic dry eye in C57BL/6 mice.** Mary Ann Stepp¹, S. Pal-Ghosh¹, G. Tadvalkar¹, A. Williams¹, S. C. Pflugfelder², C. S. De Paiva². ¹Anatomy & Regenerative Biology, George Washington University, Washington, District of Columbia; ²Dept of Ophthalmology, Baylor College of Medicine, Houston, TX *CR
- 3876 — C0137 Variability of Epithelial Thickness Measurements by iVue SD-OCT in Dry Eye Patients and its Correlation with Disease Severity.** Ruti Sella¹, L. M. Zangwill¹, R. N. Weinreb¹, K. A. Soules², Y. Wolfson², B. K. Jang², Q. Zhou², N. A. Afshari¹. ¹Shiley Eye Institute, University of California, San Diego, San Diego, CA; ²Optovue inc., Fremont, CA *CR
- 3877 — C0138 Effects of Vitamin D Receptor Knockout on Corneal Epithelial Cell Adherens Junctions.** Xiaowen Lu, M. A. Watsky. Cellular Biology and Anatomy, Medical College of Georgia at Augusta University, Augusta, GA
- 3878 — C0139 Pertussis Toxin Sensitive Wound Healing Effects of Histatin Peptides in Corneal Epithelia.** Dhara Shah¹, K. Son¹, S. Kalmodia¹, M. Ali¹, A. Balasubramaniam¹, B. Layden², V. K. Aakalu¹. ¹Ophthalmology and Visual sciences, University of Illinois at Chicago, Chicago, IL; ²Department of Internal Medicine, University of Illinois at Chiacago, Chicago, IL
- 3879 — C0140 Finger-prick Autologous Blood (FAB) to treat Persistent Epithelial Defect.** Rynda Nitiahpapand¹, S. Bala², J. Than², C. Gizzi², J. Masood², M. Byrne¹, A. Sharma². ¹Bedford Hospital, Bedford, United Kingdom; ²Moorfield's Eye Unit, Bedford, United Kingdom ✕
- 3880 — C0141 Automated epithelial thickness measurements on CIRRUS™ HD-OCT vs manual measurements.** Patricia Sha, H. Bagherinia, A. Fard, T. Perez, K. Makedonsky, M. Gagnon, M. K. Durbin. Carl Zeiss Meditec, Inc., Dublin, CA *CR
- 3881 — C0142 Histatins abrogate corneal epithelial toxicity.** Vinay K. Aakalu, M. Ali, D. Shah, S. Kalmodia, A. Balasubramaniam, K. Son. Ophthalmology and Visual Sciences, Illinois Eye and Ear Infirmary, Chicago, IL
- 3882 — C0143 Histatin peptide localization and effects on immune signaling in human corneal epithelium.** Sushma Kalmodia, D. Shah, K. Son, A. Balasubramaniam, M. Ali, V. K. Aakalu. Ophthalmology, University of Illinois at Chicago, Chicago, IL
- 3883 — C0144 Nerve growth factor inhibits TLR3-induced inflammation and oxidative injury in human corneal epithelial cells.** Huiyu Chen. Department of Ophthalmology and Visual Science, Eye, and ENT Hospital, 83 Fenyang Road, Shanghai, China, Shanghai, China
- 3884 — C0145 Proteomic Analysis Indicates Activation of Cell Protective and Energy Conservation Mechanisms in Cultured Sheets Stored at 12°C.** Catherine J. Jackson^{1,2}, M. Yazdani², S. Reppe², K. A. Tønseth^{1,3}, B. Thiede⁴, T. P. Utheim^{1,2}. ¹Plastic and Reconstructive Surgery and Institute for Surgical Research, Oslo University Hospital, Oslo, Oslo, Norway; ²Medical Biochemistry, Oslo University Hospital, Oslo, Norway; ³Inst. Clinical Medicine, University of Oslo, Oslo, Norway; ⁴Biosciences, Mathematics and Natural Sciences, University of Oslo, Oslo, Norway
- 3885 — C0146 miR-146a regulates inflammation in the cornea.** Mangesh Kulkarni¹, A. Leszczynska¹, J. Tang², V. A. Fumari², N. Natanzi³, T. Barkhordari³, K. Patel³, A. V. Ljubimov^{1,3}, M. Saghizadeh^{1,3}. ¹Biomedical Sciences, Regenerative Medicine Institute, Cedars Sinai Medical Center, Los Angeles, CA; ²Genomics Core, Cedars-Sinai Medical Center, Los Angeles, CA; ³David Geffen School of Medicine, University of California Los Angeles, Los Angeles, CA
- 3886 — C0147 IFN-γ regulates the expression of MICA in human corneal epithelium through the miRNA-4448.** Jiaxu Hong, D. Wu, J. Xu, T. Qian. EENT Hospital, Shanghai, China
- 3887 — C0148 Mechanical ventilation in eye bank donors is associated with poorer corneal transplant suitability.** Patrick Gore¹, G. M. Rand², I. M. Chocron², L. Forest-Smith¹, T. Livesay¹, S. Akella², R. S. Chuck². ¹Saving Sight, Kansas City, MO; ²Department of Ophthalmology and Visual Sciences, Albert Einstein College of Medicine, Bronx, NY

Exhibit Hall C0354-C0368

Tuesday, May 01, 2018 3:30 PM-5:15 PM

Low Vision Group / Visual Psychophysics/
Physiological Optics**382 Profound Low Vision and Low-vision Clinical Trials**

Moderator: Jae-Hyun Jung

3888 — C0354 Psychosocial Assessment of Potential Retinal Prosthesis Recipients. Lauren N. Ayton^{1,2}, F. O'Hare^{3,1}, G. C. Murphy⁴, R. P. Finger⁵, C. D. Luu¹, J. Keefe⁶, C. J. Abbott¹, R. H. Guymer⁴, S. A. Bentley⁷. ¹Centre for Eye Research Australia, The University of Melbourne, East Melbourne, Victoria, Australia; ²Bionic Eye Technologies, Inc., Ithaca, NY; ³School of Public Health and Preventive Medicine, Monash University, Melbourne, Victoria, Australia; ⁴School of Public Health and Human Biosciences, Latrobe University, Bundoora, Victoria, Australia; ⁵Department of Ophthalmology, University of Bonn, Bonn, Germany; ⁶L V Prasad Eye Institute, Hyderabad, India; ⁷Australian College of Optometry, The University of Melbourne, National Vision Research Institute, Carlton, Victoria, Australia *CR

3889 — C0355 Sign Location by Profoundly Blind Persons Using a BrainPort Vision Pro Mobile App. Patricia Grant¹, M. Maeng^{2,1}, T. Arango³, J. P. Szlyk², R. Hogle¹, D. Woods¹, W. H. Seiple⁴. ¹Wicab, Inc., Middleton, WI; ²The Chicago Lighthouse for People Who Are Blind or Visually Impaired, Chicago, IL; ³Northeastern University, Boston, MA; ⁴Lighthouse Guild, New York, NY *CR, ✕

3890 — C0356 Trade-off between field-of-view and resolution in the thermal-integrated Argus II system. Natalie Huang¹, Y. He², A. Caspi^{3,4}, A. Roy⁴, D. D. Koozekanani¹, E. J. Van Kujik¹, S. R. Montezuma¹. ¹Department of Ophthalmology and Visual Neurosciences, University of Minnesota, Minneapolis, MN; ²Department of Psychology, University of Minnesota, Minneapolis, MN; ³Department of Electrical and Electronic Engineering, Jerusalem College of Technology, Jerusalem, Israel; ⁴Second Sight Medical Products, Inc., Sylmar, CA *CR

3891 — C0357 Improvement of shape recognition by visual learning associated with tactile sensation using retinal prosthesis simulator. Kenta Hozumi¹, T. Fujikado², M. Hirota², H. Kanda², T. Morimoto², S. Kitazawa², K. Nishida¹. ¹Ophthalmology, Osaka University, Osaka, Japan; ²Applied Visual Science, Osaka University, Osaka, Japan; ³Frontier Bioscience, Osaka University, Osaka, Japan ✕

3892 — C0358 Eye orientation trends match pointing errors in simultaneous eye tracking and target localization with retinal prostheses. Michael P. Barry^{1,2}, A. Roy³, V. Wuyyuru³, P. E. Rosendall⁴, J. Harper⁴, K. D. Katyal⁴, A. Caspi^{5,3}, G. Dagnelie², R. J. Greenberg³. ¹Biomedical Engineering, Johns Hopkins University, Baltimore, MD; ²Ophthal-Lions Vision Cntr, Johns Hopkins University, Baltimore, MD; ³Second Sight Medical Products, Inc., Sylmar, CA; ⁴Applied Physics Laboratory, Johns Hopkins University, Laurel, MD; ⁵Jerusalem College of Technology, Jerusalem, Israel *CR

3893 — C0359 Motion parallax improves recognition of fixated object with cluttered background in simulated prosthetic vision. Cassandra R. Lee¹, C. Qiu², J. Jung^{2,1}, E. Peli^{2,1}. ¹Ophthalmology, Schepens Eye Research Institute, Boston, MA; ²Ophthalmology, Harvard Medical School, Boston, MA; ³Psychology, University of Pennsylvania, Philadelphia, PA *CR

3894 — C0360 Assessing quality of life of severely visually impaired individuals after using the Aira system. Brian J. Nguyen^{1,2}, Y. Kim^{1,2}, S. Chen^{1,2}, D. Van Fossan^{1,2}, D. Chao^{1,2}. ¹Shiley Eye Institute, La Jolla, CA; ²School of Medicine, University of California, San Diego, La Jolla, CA

3895 — C0361 First data of a prospective, comparative study evaluating visual function and quality of life in patients with Usher Syndrome 1B caused by MYO7A mutations and non-syndromic Retinitis Pigmentosa patients. Karine Becker¹, E. Bochin¹, G. Houot¹, E. Gutman¹, C. Ségaut-Prevost², F. Joly², I. S. Audo³, S. Mohand-Said⁴, J. A. Sahel⁵. ¹Streetlab, Paris, France; ²Sanofi, Chilly-Mazarin, France; ³Department of Genetics, Inst de la Vision/INSERM/UPMC/CNRS/CHNO, Paris, France; ⁴CHNO Quinze-Vingts / CIC Inserm, Paris, France; ⁵UMR-S 968, Institut de la Vision, Paris, France *CR

3896 — C0362 Test-Retest Variability of Functional and Structural Parameters in patients with Usher Syndrome Type-1B (USH1B). Maria A. Parker¹, A. Lauer¹, T. Stout², M. E. Pennesi¹, P. Yang¹, D. J. Wilson¹, D. Choi^{1,3}, L. R. Erker¹, B. J. Lujan¹, O. Tan¹, P. Barale⁴, C. Cohen⁵, S. Mohand-Said⁴, I. S. Audo⁴, J. A. Sahel^{4,6}, R. G. Weleber¹. ¹Casey Eye Institute, Oregon Health & Sciences University, Portland, OR; ²Cullen Eye Center, Baylor College of Medicine, Houston, TX; ³OHSU-PSU School of Public Health, Oregon Health & Science University, Portland, OR; ⁴Institut de la Vision, Sorbonne Universités, Paris, France; ⁵Sanofi, Paris, France; ⁶Department of Ophthalmology, University of Pittsburgh School of Medicine, Pittsburgh, PA *CR, ✕

3897 — C0363 A dual variable Markov model to assess the potential benefits of choroideremia gene therapy on quality adjusted life years (QALYs). Celine-Lea Halioua-Haubold, J. Jolly, R. Pinedo Villanueva, D. Brindley, R. E. MacLaren. University of Oxford, Oxford, United Kingdom *CR

3898 — C0364 The Natural History of the Progression of Choroideremia (NIGHT) Study: Longitudinal Changes in Visual Acuity over 12 Months. Mark E. Pennesi¹, B. L. Lam², M. Fischer³, E. K. Sankila⁴, F. G. Holz¹², R. E. MacLaren⁵, D. G. Birch⁶, I. M. MacDonald⁷, G. Black¹³, C. C. Hoyng⁸, N. M. Bressler⁹, S. H. Tsang¹⁰, K. E. Stepien¹¹, M. S. Ip¹⁴, V. Pavlovic¹⁵, A. Girach¹⁵. ¹Ophthalmology, Casey Eye Institute - OHSU, Portland, OR; ²Bascom Palmer Eye Institute, University of Miami Health System, Pinecrest, FL; ³Centre for Ophthalmology, University of Tübingen, Tübingen, Germany; ⁴Department of Ophthalmology, Helsinki University, Helsinki, Finland; ⁵Nuffield Laboratory of Ophthalmology, University of Oxford, Oxford, United Kingdom; ⁶Retina Foundation of the Southwest, Dallas, TX; ⁷Department of Ophthalmology and Visual Sciences, University of Alberta, Edmonton, Alberta, Canada; ⁸Department of Ophthalmology, Radboud University Medical Center, Nijmegen, Netherlands; ⁹Wilmer Eye Institute, Johns Hopkins University School of Medicine, Baltimore, MD; ¹⁰Department of Ophthalmology and of Pathology and Cell Biology, Columbia University, New York, NY; ¹¹Department of Ophthalmology & Visual Sciences, University of WI-Madison, Madison, WI; ¹²Ophthalmology, University of Bonn, Bonn, Germany; ¹³Central Manchester University Hospitals Trust, Manchester Centre for Genomic Medicine, Manchester, United Kingdom; ¹⁴Doheny Eye Institute, Doheny Image Reading Center, Los Angeles, CA; ¹⁵Nightstar Therapeutics, London, United Kingdom *CR, ✕

3899 — C0365 Natural History of Progression of Choroideremia (NIGHT) Study: Cross-Sectional Analysis of Baseline Characteristics.

Byron L. Lam¹, M. Fischer², M. E. Pennes³, E. K. Sankila⁴, F. G. Holz⁵, R. E. MacLaren⁶, D. G. Birch⁷, I. M. MacDonald⁸, C. C. Hoyng⁹, G. Black¹⁰, N. M. Bressler¹¹, S. H. Tsang¹², K. E. Stepien¹³, M. S. Ip¹⁴, V. Pavlovic¹⁵, A. Girach¹⁶. ¹Bascom Palmer Eye Institute, University of Miami, Miami, FL; ²Centre for Ophthalmology, University of Tübingen, Tübingen, Germany; ³Casey Eye Institute, Oregon Health & Science University, Portland, OR; ⁴Department of Ophthalmology, Helsinki University Eye Hospital, Helsinki, Finland; ⁵Department of Ophthalmology, University of Bonn, Bonn, Germany; ⁶Nuffield Laboratory of Ophthalmology, University of Oxford, Oxford, United Kingdom; ⁷Retina Foundation of the Southwest, Dallas, TX; ⁸Department of Ophthalmology and Visual Sciences, University of Alberta, Edmonton, Alberta, Canada; ⁹Department of Ophthalmology, Radboud University Medical Center, Nijmegen, Netherlands; ¹⁰Manchester Centre for Genomic Medicine, Central Manchester University Hospitals NHS Foundation Trust, Manchester, United Kingdom; ¹¹Wilmer Eye Institute, Johns Hopkins University School of Medicine, Baltimore, MD; ¹²Department of Ophthalmology and of Pathology and Cell Biology, Columbia University, New York, NY; ¹³Department of Ophthalmology & Visual Sciences, University of WI-Madison, Madison, WI; ¹⁴Doheny Eye Institute, David Geffen School of Medicine of the University of California-Los Angeles, Los Angeles, CA; ¹⁵Nightstar Therapeutics, London, United Kingdom; ¹⁶Nightstar Therapeutics, London, United Kingdom *CR, ✗

3900 — C0366 Three-year update for the phase 3 voretigene neparvovec study in biallelic RPE65 mutation-associated inherited retinal disease.

Stephen R. Russell^{1,2}, J. Bennett^{3,4}, J. Wellman⁵, D. C. Chung⁵, K. High⁵, Z. Yu⁶, A. Tillman⁶, A. M. Maguire^{3,4}. ¹Ophthalmology, Univ of Iowa Hospitals & Clinics, Iowa City, IA; ²Wynn Institute for Vision Research, University of Iowa, Iowa City, IA; ³Perelman School of Medicine, University of Pennsylvania, Philadelphia, PA; ⁴Children's Hospital of Philadelphia, Pennsylvania, PA; ⁵Spark Therapeutics, Philadelphia, PA; ⁶Statistics Collaborative, Inc., Washington, District of Columbia *CR, ✗

3901 — C0367 Baseline Structural and Psychophysical Profiles of Subjects Enrolled in Phase 3 Trials with rAAV2/2-ND4, an Investigational Gene Therapy for ND4 LHON.

Robert C. Sergott¹, M. Scannell Bryan², L. Blouin², B. Katz². ¹Neuro-Ophthalmology, Wills Eye Hospital, Thomas Jefferson University Optic Nerve Research Center, Philadelphia, PA; ²GenSight Biologics, Paris, France; ³Biostatistics, University of Illinois Chicago, Chicago, IL *CR, ✗

3902 — C0368 Baseline characteristics of the 30,000 patients enrolled in LUMINOUS™, a real-world study with ranibizumab.

Christopher Brand¹, S. Parikh², W. Macfadden². ¹Royal Hallamshire Hospital, Sheffield, United Kingdom; ²Novartis Pharma AG, Basel, Switzerland *CR, ✗

Tuesday – ARVO/Champalimaud Lecture

Ballrooms BC

Tuesday, May 01, 2018 5:30 PM-6:30 PM

**383 ARVO/Champalimaud Award
Lecture**

- 5:30 Babar Qureshi; CBM - Awardee
- 5:50 Amanda Jordan; Sightsavers - Awardee
- 6:10 Sunday Isiyaku; Sightsavers - Awardee

Tuesday, Lecture
5:30 pm – 6:30 pm

Exhibit Hall

Tuesday, May 01, 2018 5:30 PM-7:00 PM

***384 MIT Outstanding Poster Award
Competition***

Poster Awards
5:30 pm – 7:00 pm

Ballroom A

Tuesday, May 01, 2018 7:00 PM-8:30 PM

385 Bringing regenerative medicine therapies to the clinic

The goal of this session is to highlight clinical efforts funded by the National Eye Institute that will evaluate stem cell therapies in patients in early phase trials.

Moderator: Paul Sieving

3903 — 7:00 NEI regenerative medicine program updates on AGI & 3DROC. *Paul Sieving. National Eye Institute, Bethesda, MD*

3904 — 7:10 Cultivated Autologous Limbal Epithelial Cell (CALEC) Transplantation: New Frontier in the Treatment of Limbal Stem Cell Deficiency. *Ula V. Jurkunas. Ophthalmology/Harvard Med Sch, MA Eye & Ear Infirm Schepens Eye Res, Boston, MA *CR ✕*

3905 — 7:28 Intravitreal Autologous Bone Marrow CD34+ Cell Therapy for Retinal Vein Occlusion: phase I/II clinical trial. *Susanna S. Park. Ophthalmology & Vision Science, Univ of California Davis Eye Ctr, Sacramento, CA *CR, ✕*

3906 — 7:46 Autologous iPSC-derived RPE transplantation for dry AMD. *Kapil Bharti. National Eye Institute, Bethesda, MD*

3907 — 8:04 The NIH Regenerative Medicine Innovation Project. *Steven Becker. National Eye Institute, Bethesda, MD*

— 8:14 Q&A

Tuesday, Special Session
7:00 pm – 8:30 pm

Wednesday

May 2, 2018

ARVO Annual Meeting
Registration
Main Lobby
7am – 6pm

Exhibit hours
8:15am – 5:15pm

ARVO Classical Concert
8 – 10pm
Hilton Hawaiian Village
2005 Kalia Rd.

ARVO Karaoke Night
9pm – 12midnight
Sheraton Princess Kaiulani
120 Kaiulani Ave.
(tickets required)

ARVO
2018

April 29 – May 3 | Honolulu

Stand strong for science
Stand for strong vision science

Wednesday, May 2 – Minisymposia, papers, workshops and SIGs

Time	Session	Title	Location
6:45 – 8:15am	401	Breakfast with the Experts*	313BC
8:15 – 10am	402	Vision Rehabilitation [LV] #3908-3913	306AB
	403	Treatment on the horizon for Fuchs endothelial corneal dystrophy — Minisymposium [CO] #3914-3919	310
	404	OCT Angiography Update [MOI] #3920-3926	311
	405	Contact Lens [CO] #3927-3933	312
	406	Retinopathy of Prematurity [RE] #3934-3938	313A
	407	Retinal glial and immune responses [RC] #3939-3945	315
	408	Retina II [PH] #3946-3952	316A
	409	Myopia prevalence, progression and risk factors [CL] #3953-3959	316B
	410	Gene Therapies [BI] #3960-3966	320
	411	Trabecular Meshwork [GL] #3967-3972	Ballroom A
	412	Retinal Prostheses [RE, LV] #3973-3978	Ballrooms BC
10:15 – 11am	428	Cogan Award and Lecture #4405	Ballrooms BC
11:15am – 1pm	429	Why cancer inflames the eye — Minisymposium [AP, IM] #4406-4410	301AB
	430	Eye Movements and Nystagmus [EY] #4411-4417	306AB
	431	Corneal wound healing [CO] #4418-4424	310
	432	Vitreoretinal Surgery and Endophthalmitis [RE] #4425-4431	311
	433	Corneal Endothelium and Fuchs Corneal Dystrophy [CO] #4432-4438	312
	434	ERG: Advances, Disease and Injury [VN] #4439-4445	314
	435	Gene function and neural protection [RC, LV] #4446-4452	315
	436	Drug delivery [PH] #4453-4459	316A
	437	Impact of vision impairment [CL] #4460-4465	316B
	438	Novel genes found through methods old and new [GEN] #4466-4472	316C
	439	Capillaries, Blood Flow, OCT Angiography [GL] #4473-4479	Ballroom A
	440	AMD Imaging II [RE] #4480-4485	Ballrooms BC
1:30 – 3pm	455	Animal Models of Ocular Trauma — SIG [EY, RC, RE]	301AB
	456	LV Group — Implementing low vision service [LV]	306AB
	457	Biobanking with a Purpose: Advancing Research in Ophthalmology — SIG [AP, BI, CO, GL, IM, LE, RE, RC, VN, GEN]	310
	458	Regenerative Medicine Wnt Signaling and Retinal vascular Disease — SIG [RE]	311
	459	Optical Coherence Tomography and Ophthalmic Surgery: New Visualizations, Functional Analysis, and Enabling Robotic Assistance — SIG [CO, GL, RE, MOI]	312
	460	Patient report outcome measures (PROMs) in clinical glaucoma research: refining current tools, exploring new opportunities and improving means of data capture and analysis. — SIG [GL]	313A
	461	Understanding the NEI Granting Process (NEI Extramural Roundtable)	313BC
	462	Data sharing: Clinical science in the era of artificial intelligence	314
	463	Ontology and Common Data Elements for Collaborative Research in Ophthalmology — SIG [CO, CL, EY, GL, LE, RE, RC, VI, GEN, LV]	316A
	464	Making ARVO more accessible: Experience from countries with emerging vision-oriented research agenda	316B
	465	The path from bench to bedside: Professional development and entrepreneurship	316C
	466	Phagocytosis in the outflow pathway: what we can learn from other ocular tissues — SIG [PH, GL]	320
	467	Mechanisms and Therapies for Corneal Endothelial Dysfunction — SIG [CO]	Ballroom A

Symposia and minisymposia highlighted in **boldface**

* Registration required

Wednesday, May 2 – Papers (continued)

Time	Session	Title	Location
3:30 – 5:15pm	468	Mechanisms and Therapy for Viral Infection [IM] #4931-4936	301AB
	469	Refractive Error and Visual Function [VI] #4937-4943	310
	470	AMD Clinical Research [RE] #4944-4950	311
	471	Dry Eye Non-clinical [CO] #4951-4957	312
	472	Basic Innovations in Oncology [AP] #4958-4963	313A
	473	Signaling in retinal degeneration [RC] #4964-4970	315
	474	Accommodation and cataractogenesis [LE] #4071-4976	316C
	475	Biochemistry and Molecular Biology of the Retina [BI] #4977-4983	320
	476	Structure-Function Relationships [GL] #4984-4990	Ballroom A
	477	Clinical Posterior Segment Imaging [RE] #4991-4997	Ballrooms BC
5:30 –7pm	490	Special Session: Clinical Trial Design and Endpoints for Choroideremia Clinical Trials	Ballroom A

Symposia and minisymposia highlighted in **boldface**

Wednesday, May 2 – Posters

Time	Session	Title	Program No.	Board No.	
8:15 – 10am	413	RPE [RC, LE]	3979 - 4007	A0104 - A0132	
	414	RPE: metabolism [RC]	4008 - 4038	A0133 - A0163	
	415	Color vision and photoreceptors [VI]	4039 - 4052	A0246 - A0259	
	416	Imaging: Posterior Segment II [GL]	4053 - 4090	B0048 - B0085	
	417	Prevalence of vision impairment [CL]	4091 - 4109	B0216 - B0234	
	418	Amyopia [EY]	4110 - 4131	B0273 - B0294	
	419	Neuro-ophthalmology: Pediatrics and Pupillometry [EY, AP]	4132 - 4142	B0295 - B0305	
	420	Patient reported outcomes, methods and reporting of research [CL, LV]	4143 - 4158	B0366 - B0381	
	421	Clinical Uveitis and Scleritis: Epidemiology, Diagnosis and Outcomes [IM]	4159 - 4217	C0001 - C0059	
	422	Retinal Detachment: Basic and Clinical Science [RE, LV]	4218 - 4256	C0060 - C0098	
	423	Retinal vascular diseases I (excluding diabetes) [RE, LV]	4257 - 4296	C0128 - C0167	
	424	Ocular complications of therapy: trends, imaging, treatment [AP, PH]	4297 - 4313	C0271 - C0287	
	425	Pathology and Omics [AP, GEN, BI]	4314 - 4327	C0288 - C0301	
	426	Corneal wound repair and healing [CO]	4328 - 4377	C0376 - C0425	
	427	Keratoconus and Collagen Crosslinking [CO]	4378 - 4404	C0426 - C0452	
	11:15am – 1pm	441	Molecular mechanisms of retinal function and retinal disease [BI]	4486 - 4521	A0001 - A0036
		442	Ocular gene therapies and chemical therapeutics [BI]	4522 - 4553	A0037 - A0068
443		Retinal prostheses [RE]	4554 - 4574	A0083 - A0103	
444		Stem Cells: New Approaches and Disease Modelling [RC]	4575 - 4591	A0164 - A0180	
445		Inflammatory/immune responses in retinal diseases [RC]	4592 - 4617	A0181 - A0206	
446		Imaging Technologies and Applications I [MOI, AP]	4618 - 4664	A0260 - A0306	
447		Imaging Technologies and Applications II [MOI]	4665 - 4699	A0307 - A0341	
448		Trabecular Meshwork [GL]	4700 - 4733	B0124 - B0157	
449		High and pathological myopia: characteristics and treatment [AP]	4734 - 4747	B0235 - B0248	
450		Refractive Error — Myopia and Astigmatism [VI]	4748 - 4771	B0249 - B0272	
451		Cataract Surgery Outcomes and Epidemiology [LE]	4772 - 4809	B0382 - B0419	
452		Diabetic Macular Edema Clinical Research [RE]	4810 - 4856	C0168 - C0214	
453		Dry Eye Clinical II [CO]	4857 - 4905	C0302 - C0350	
454		Tear Film, Lacrimal gland, Meibomian Gland [CO]	4906 - 4930	C0351 - C0375	
3:30 – 5:15pm		478	Retina/RPE transplantation (clinical) [RE]	4998 - 5011	A0069 - A0082
		479	Human electrophysiology [VN]	5012 - 5034	A0208 - A0230
		480	ipRGCs and Circadian Rhythms [VN]	5035 - 5049	A0231 - A0245
	481	Capillaries, Blood Flow, OCT Angiography [GL]	5050 - 5096	B0001 - B0047	
	482	Electrophysiology and Visual Fields [GL]	5097 - 5134	B0086 - B0123	
	483	Genetics of Glaucoma [GEN]	5135 - 5161	B0158 - B0184	
	484	Consequences of and associations with vision impairment [CL]	5162 - 5192	B0185 - B0215	
	485	Pediatric Ophthalmology [EY]	5193 - 5214	B0306 - B0327	
	486	Healthcare delivery [CL]	5215 - 5252	B0328 - B0365	
	487	PVR and Vitreoretinal Interface [RE, BI, RC]	5253 - 5281	C0099 - C0127	
	488	Retina [PH]	5282 - 5309	C0215 - C0242	
489	Retina, drugs [PH]	5310 - 5337	C0243 - C0270		

Poster board numbers correspond to poster location in Exhibit Hall; A = Poster Area A , B = Poster Area B and C = Poster Area C.

Room 313BC

Wednesday, May 02, 2018 6:45 AM-8:15 AM

401 Breakfast with the experts

Advance registration required. Trainees, students and junior faculty will benefit from this unique opportunity to network and gain valuable information from those who have been in your shoes! This very popular program offers informal discussions over breakfast on a wide range of topics to provide personal guidance, insight and skills to help you advance your career! Topics will focus on professional development, career guidance, and best practices of interest to basic and clinical trainees and clinician-scientists. A number of the roundtable topics will be specifically tailored to the needs of clinician-scientists.

Room 306AB

Wednesday, May 02, 2018 8:15 AM-10:00 AM

Low Vision Group

402 Vision Rehabilitation**Moderators: Hilde P. van der Aa and Konrad Pesudovs**

3908 — 8:15 The audibility of low vision devices with speech output used by older adults with sensory impairment. *Lorie St-Amour, J. Jarry, W. Wittich. Optometry, University of Montreal, Montréal, Quebec, Canada*

3909 — 8:30 Mastery and self-esteem mediate the association between visual impairment and mental health: a population-based longitudinal cohort study. *Hilde P. van der Aa¹, I. M. Maaswinkel¹, G. H. van Rens^{1,2}, R. M. Van Nispen¹. ¹Ophthalmology, VU University Medical Center, Amsterdam, Netherlands; ²Ophthalmology, Elkerliek Hospital, Amsterdam, Netherlands*

3910 — 8:45 Relation of Personality Traits to Low Vision Rehabilitation Outcomes. *Rath Ithipanchpong^{1,2}, J. Goldstein¹, R. W. Massof¹, P. Y. Ramulu¹. ¹Ophthalmology, Johns Hopkins Wilmer Eye Institute, Baltimore, MD; ²Ophthalmology, Chulalongkorn University & King Chulalongkorn Memorial Hospital, Bangkok, Thailand*

3911 — 9:00 Glaucoma, Dementia and the Precipice of Care: Transitions between States of Medication Adherence. *Simon Read¹, H. Waterman¹, J. Morgan², R. Harper³, F. Spencer³, P. Stanford⁴, P. Shah⁵. ¹School of Healthcare Sciences, Cardiff University, Cardiff, United Kingdom; ²School of Optometry and Vision Sciences, Cardiff University, Cardiff, United Kingdom; ³Manchester Royal Eye Hospital, Central Manchester University Hospitals, Manchester, United Kingdom; ⁴School of Nursing, Midwifery and Social Work, University of Manchester, Manchester, United Kingdom; ⁵Royal Edinburgh Hospital, NHS Lothian, Edinburgh, United Kingdom*

3912 — 9:15 Developing a sophisticated instrument to measure the coping strategies of people with hereditary retinal diseases. *Mallika Prem Senthil¹, J. Khadka¹, E. Fenwick^{2,3}, E. L. Lamoureux^{2,3}, K. Pesudovs¹. ¹Optometry, Flinders University, Adelaide, South Australia, Australia; ²Ophthalmology and Visual Sciences, Singapore Eye Research Institute, Singapore, Singapore, Singapore; ³Centre for Eye Research Australia, University of Melbourne, Melbourne, Victoria, Australia*

3913 — 9:30 Calibration of the Impact of Vision Impairment Instrument (IVI) Questionnaire. *Judith Goldstein¹, E. Fenwick^{6,7}, R. P. Finger², V. Gothwal^{3,4}, M. Jackson⁵, E. L. Lamoureux^{6,7}, G. Rees^{8,9}, R. W. Massof¹. ¹Ophthalmology, Johns Hopkins University, Baltimore, MD; ²University of Bonn, Bonn, Germany; ³Patient Reported Outcomes Unit, L V Prasad Eye Institute-Brien Holden Eye Research Centre, Hyderabad, India; ⁴Centre for Sight Enhancement-Meera and L B Deshpande, L V Prasad Eye Institute, Hyderabad, India; ⁵Ophthalmology, Vancouver General Hospital/University of British Columbia, Vancouver, British Columbia, Canada; ⁶Population Health, Singapore Eye Research Institute, Singapore, Singapore; ⁷Duke-NUS Medical School, Singapore, Singapore; ⁸Centre for Eye Research Australia, Royal Victorian Eye and Ear Hospital, Melbourne, Victoria, Australia; ⁹Ophthalmology, Department of Surgery, University of Melbourne, Melbourne, Victoria, Australia*

Room 310

Wednesday, May 02, 2018 8:15 AM-10:00 AM

Cornea

403 Treatment on the horizon for Fuchs endothelial corneal dystrophy - Minisymposium

Front-line scientists will introduce new findings covering the genetic basis, pathophysiology, and possible therapeutic approaches (pharmacological, genomic, and cell-based) for Fuchs endothelial corneal dystrophy. Open questions and debate following the presentations of these cutting-edge topics will help to clarify and disseminate these up-to-date concepts and novel findings, with the ultimate goal of accelerating the “bench to bedside” development of new therapeutic modalities for blinding corneal disease.

Moderators: Noriko Koizumi, Keith H. Baratz and Albert Jun

— 8:15 Introduction

3914 — 8:20 The genetic basis of Fuchs endothelial corneal dystrophy and stem cell regeneration of corneal endothelium. *Natalie A. Afshari. Ophthalmology, University of California, San Diego, La Jolla, CA*

3915 — 8:35 Experimental models of FECD: Current state and future directions. *Michael P. Fautsch. Ophthalmology, Mayo Clinic, Rochester, MN*

3916 — 8:50 Future therapy: cell-based therapy and drug treatment. *Naoki Okumura. Biomedical Engineering, Doshisha University, Kyoto, Japan *CR, ✗*

3917 — 9:05 Future Therapies for Fuchs Endothelial Corneal Dystrophy. *Ula V. Jurkunas. Ophthalmology/Harvard Med Sch, MA Eye & Ear Infirm Schepens Eye Res, Boston, MA *CR*

3918 — 9:20 Future therapy: gene editing. *Albert Jun. Ophthal-Woods 376, Johns Hopkins Wilmer Eye Inst, Baltimore, MD *CR*

3919 — 9:35 Objective Evaluation of FECD: Towards Clinical Trials. *Sanjay V. Patel. Ophthalmology, Mayo Clinic, Rochester, MN*

— 9:50 Discussion

Room 311

Wednesday, May 02, 2018 8:15 AM-10:00 AM

Multidisciplinary Ophthalmic Imaging Group

404 OCT Angiography Update**Moderators: Marinko Sarunic, Brandon J. Lujan and Richard B. Rosen**

3920 — 8:15 Hand held OCT probe optimized for supine optical coherence tomography angiography. *Christian Viehland¹, D. Tran-Viet², M. Jackson-Atogi², X. Chen², L. Vajzovic³, C. A. Toth^{2,1}, J. A. Izatt^{1,2}. ¹Biomedical Engineering, Duke University, Durham, NC; ²Ophthalmology, Duke University, Durham, NC *CR*

3921 — 8:30 Evaluation of Automatically Quantified Foveal Avascular Zone Metrics in Diabetic Retinopathy Using OCTA. *Joseph M. Simonetti¹, Y. Lu^{1,2}, J. Wang¹, M. Zhang^{1,3}, A. M. Hagag¹, D. Huang¹, T. S. Hwang¹, Y. Jia¹. ¹Ophthalmology, Oregon Health and Science University, Casey Eye Institute, Portland, OR; ²Shandong Province Key Laboratory of Medical Physics and Image Processing Technology, Institute of Biomedical Sciences, School of Physics and Electronics, Shandong Normal University, Jinan, China; ³Optovue, Fremont, CA *CR*

3922 — 8:45 3-D OCT Motion Correction Efficiently Enhanced with OCT Angiography. *Stefan B. Ploner¹, M. F. Kraus¹, L. Husvogt^{1,2}, E. Moul^{2,3}, A. Alibhai⁴, J. Schottenhamml^{2,1}, T. Geimer¹, C. Rebhun⁴, B. Lee², C. R. Baumal⁴, N. K. Waheed⁴, J. S. Duker⁴, J. G. Fujimoto², A. K. Maier⁴. ¹Pattern Recognition Lab, Department of Computer Science, Friedrich-Alexander-Universität Erlangen-Nürnberg, Erlangen, Germany; ²Department of Electrical Engineering and Computer Science and Research Laboratory for Electronics, Massachusetts Institute of Technology, Cambridge, MA; ³Health Sciences and Technology, Harvard-MIT, Cambridge, MA; ⁴Ophthalmology, New England Eye Center, Tufts Medical Center, Boston, MA *CR*

3923 — 9:00 A novel strategy for quantifying choriocapillaris flow voids using swept source OCT angiography. Qinqin Zhang¹, F. Zheng², E. Motulsky², G. Gregori², Z. Chu¹, C. Chen¹, C. Li¹, L. De Sistiernes³, M. K. Durbin³, P. J. Rosenfeld², R. K. Wang^{1,4}. ¹Department of Bioengineering, University of Washington, Seattle, WA; ²Bascom Palmer Eye Institute, Miami, FL; ³Advanced Development, Carl Zeiss Meditec, Inc., Dublin, CA; ⁴Department of Ophthalmology, University of Washington, Seattle, WA *CR

3924 — 9:15 Quantitative analysis on the hyaloid, retinal, and choroidal vessel development and regression using optical coherence tomography angiography. Yongjoo Kim¹, H. Hong², J. Lee¹, J. Park¹, P. Kim¹, S. Woo², K. Park², W. Oh¹. ¹KAIST, Daejeon, Korea (the Democratic People's Republic of); ²Ophthalmology, Seoul National University Bundang Hospital, Seongnam, Korea (the Republic of)

3925 — 9:30 Real-time cross-sectional and en face OCT Angiography in Graphics Processing Unit. Xiang Wei, A. Camino, S. Pi, W. Cepurna, D. Huang, J. C. Morrison, Y. Jia. Casey Eye Institute, OHSU, Portland, OR

3926 — 9:45 Physical explanation and experimental demonstration of suspended scattering particles in motion creating non-vascular signal in OCT angiography. Ruikang K. Wang^{1,2}, Z. Chu¹, Q. Zhang¹, W. Wei¹. ¹Bioengineering, University of Washington, Seattle, WA; ²Ophthalmology, University of Washington, Seattle, WA *CR

Room 312

Wednesday, May 02, 2018 8:15 AM-10:00 AM
Cornea

405 Contact Lens

Moderators: Penny A. Asbell and Meng C. Lin

3927 — 8:15 Evaluation of simulated orthokeratology in a soft contact for myopia control. Xu Cheng, J. Xu, N. A. Brennan. Johnson & Johnson Vision, Jacksonville, FL *CR, ✎

3928 — 8:30 Lipid mediators of inflammation in contact lens discomfort. Shyam Panthi, J. J. Nichols. Vision Science, University of Alabama at Birmingham, Birmingham, AL

3929 — 8:45 Performance of Conventional and Wavefront-Guided Scleral Lens Corrections for Highly Aberrated Eyes after Adaptation. Gareth D. Hastings, L. Nguyen, R. A. Applegate, M. J. Kauffman, R. T. Hemmati, J. D. Marsack. College of Optometry, University of Houston, Houston, TX *CR

3930 — 9:00 Comparative Analysis of Tear Collection from Ocular Surface and Post-Lens Tear Film for Keratoconic Scleral Lens Wearers. Debby Yeung, P. J. Murphy, L. Sorbara. School of Optometry and Vision Science, University of Waterloo, MARKHAM, Ontario, Canada ✎

3931 — 9:15 Assessment of contact lens wettability using the WAVE (Wettability Analysis in an *in Vitro* Environment) system. Michael L. Read¹, C. Coles-Brennan², C. Maldonado-Codina¹, P. Morgan¹. ¹Pharmacy and Optometry, The University of Manchester, Manchester, Greater Manchester, United Kingdom; ²Johnson and Johnson Vision, Jacksonville, FL *CR

3932 — 9:30 Influence of tear-film component integration on contact lens wettability. Noelle I. Rabiah¹, C. W. Scales², G. G. Fuller¹. ¹Chemical Engineering, Stanford University, Stanford, CA; ²Research & Development, Johnson & Johnson Vision, Inc., Jacksonville, FL *CR

3933 — 9:45 Is Compliance and Ocular Surface Factors Associated with Contact Lens Dropout? Andrew D. Pucker¹, L. Jordan², S. Srinivasan³, D. R. Powell⁴, J. Kwan⁵, S. Marx⁶, W. Sickenberger⁶, L. W. Jones³. ¹Optometry, University of Alabama at Birmingham, Birmingham, AL; ²Optometry, The Ohio State University, Columbus, OH; ³University of Waterloo, Waterloo, Ontario, Canada; ⁴University of Houston, Houston, TX; ⁵Marshall B. Ketchum University, Fullerton, CA; ⁶University of Jena, Jena, Germany *CR

Room 313A

Wednesday, May 02, 2018 8:15 AM-10:00 AM

Retina

406 Retinopathy of Prematurity

Moderators: Cynthia A. Toth and Michael F. Chiang

3934 — 8:15 Optic Nerve Head Morphology In Premature Infants 30-42 Weeks Post Menstrual Age By Retinopathy Of Prematurity Status Using Hand-Held Ultra-High Resolution Spectral Domain Optical Coherence Tomography. Aarti Patel¹, B. Manktelow³, J. Fawke², F. A. Proudlock¹, I. Gottlob¹. ¹Ophthalmology Group, University of Leicester, Leicester, England, United Kingdom; ²University Hospitals of Leicester, Neonatology Department, Leicester, United Kingdom; ³University of Leicester, Department of Health Sciences, Leicester, United Kingdom

3935 — 8:30 Differentiating retinal detachment and retinoschisis using handheld optical coherence tomography in stage 4 retinopathy of prematurity. Xi Chen, D. Tran-Viet, A. Dandridge, S. Freedman, L. Vajzovic, C. A. Toth. Ophthalmology, Duke University, Durham, NC *CR

3936 — 8:45 Artificial intelligence in retinopathy of prematurity: clinical validation of a fully automated deep learning system (i-ROP DL) for plus disease diagnosis. J. Peter Campbell¹, J. M. Brown², S. Ostmo¹, R. P. Chan³, J. Dy⁴, D. Erdogmus⁴, S. Ioannidis⁴, J. Kalpathy-Cramer², M. F. Chiang¹. ¹Casey Eye Institute, Oregon Health & Science University, Portland, OR; ²Massachusetts General Hospital, Boston, MA; ³University of Illinois, Chicago, Chicago, IL; ⁴Northeastern University, Boston, MA *CR

3937 — 9:00 Automated Computer-Based Image Analysis in Monitoring Disease Progression for Retinopathy of Prematurity. Stanford Taylor¹, K. Gupta¹, J. Campbell¹, J. M. Brown², S. Ostmo¹, R. V. Chan³, J. Dy⁴, S. Ioannidis⁴, J. Kalpathy-Cramer^{2,3}, S. J. Kim¹, M. F. Chiang^{1,4}. ¹Casey Eye Institute, Oregon Health & Science University, Portland, OR; ²Athinoula A. Martinos Center for Biomedical Imaging, Massachusetts General Hospital, Charlestown, MA; ³Massachusetts General Hospital & Brigham and Women's Hospital Center for Clinical Data Science, Boston, MA; ⁴Department of Medical Informatics and Clinical Epidemiology, Oregon Health & Science University, Portland, OR; ⁵Ophthalmology and Visual Sciences, Illinois Eye and Ear Infirmary, University of Illinois at Chicago, Chicago, IL; ⁶Electrical and Computer Engineering, Northeastern University, Boston, MA *CR

3938 — 9:15 Artificial intelligence in retinopathy of prematurity: development of a fully automated deep convolutional neural network (DeepROP) for plus disease diagnosis. James M. Brown¹, J. Campbell², S. Ostmo², P. Tian³, V. Yildiz³, S. J. Kim^{2,4}, R. V. Chan⁵, J. Dy³, D. Erdogmus³, S. Ioannidis³, M. F. Chiang⁶, J. Kalpathy-Cramer^{1,7}. ¹Athinoula A. Martinos Center for Biomedical Imaging, Massachusetts General Hospital, Charlestown, MA; ²Ophthalmology, Oregon Health & Science University, Portland, OR; ³Electrical and Computer Engineering, Northeastern University, Boston, MA; ⁴Ophthalmology, Samsung Medical Center, Seoul, Korea (the Republic of); ⁵Ophthalmology, University of Illinois at Chicago, Chicago, IL; ⁶Ophthalmology and Medical Informatics, Oregon Health & Science University, Portland, OR; ⁷Center for Clinical Data Science, Massachusetts General Hospital & Brigham and Women's Hospital, Boston, MA *CR

Room 315

Wednesday, May 02, 2018 8:15 AM-10:00 AM

Retinal Cell Biology**407 Retinal glial and immune responses****Moderators: Mark C. Gillies and William J. Brunken**

3939 — 8:15 Retinal glial cells respond differently to the activation of the mechanosensitive channel TRPV4. Sarah Redmon¹, O. Yarishkin¹, M. Lakk¹, D. Krizaj^{1,2}. ¹Ophthalmology and Visual Sciences, University of Utah, Salt Lake City, UT; ²Neurobiology and Anatomy, University of Utah, Salt Lake City, UT

3940 — 8:30 Complement Landscape of the Mouse Retina Based on Single-cell Transcriptomics. Divyansh Agarwal^{1,2}, M. Li⁴, N. Zhang^{2,1}, D. Stambolian^{3,5}. ¹Genomics and Computational Biology, University of Pennsylvania, Philadelphia, PA; ²Department of Statistics, The Wharton School, University of Pennsylvania, Philadelphia, PA; ³Ophthalmology, Perelman School of Medicine, University of Pennsylvania, Philadelphia, PA; ⁴Biostatistics, Epidemiology and Informatics, University of Pennsylvania, Philadelphia, PA; ⁵Penn Presbyterian Medical Center, Scheie Eye Institute, Philadelphia, PA

3941 — 8:45 Molecular profiling of immune cells during photoreceptor degeneration using single-cell RNA sequencing (scRNAseq). Kaitryn Ronning, S. J. Karlen, M. E. Burns. University of California Davis, Davis, CA

3942 — 9:00 Interleukin-33 deficiency resulted in severe neuroretinal degeneration in retinal detachment. Mei Chen¹, J. Augustine¹, S. Pavlou¹, I. Ali¹, S. Doyle², A. W. Stitt¹, M. Campbell¹, H. Xu¹. ¹Centre for Experimental Medicine, Queen's University Belfast, Belfast, Northern Ireland, United Kingdom; ²Trinity College Dublin, Dublin, Ireland

3943 — 9:15 Genetic Ablation of Cytokine Signaling Inhibitor SOCS3 Promotes Photoreceptor Survival in Mouse Models of Retinitis Pigmentosa. Yanjie Wang, K. Rhee, S. Nusinowitz, D. Bok, X. Yang. Stein Eye Institute, University of California, Los Angeles, CA

3944 — 9:30 C3 deficiency results in accelerated rod photoreceptor loss in a mouse model of retinitis pigmentosa. Sean Silverman, W. Ma, L. Zhao, W. T. Wong. Ungird, Nih/Nei, Bethesda, MD

3945 — 9:45 The Alternative Complement System Mediates cell death in retinal ischemia reperfusion injury. Kip M. Connor, S. Inafuku. Ophthalmology, Harvard Medical School, Boston, MA*CR

Room 316A

Wednesday, May 02, 2018 8:15 AM-10:00 AM

Physiology/Pharmacology**408 Retina II****Moderators: Antonio Longo and Thomas Yorio**

3946 — 8:15 Retinal vascular reactivity in a mouse model of Alzheimer's disease. Jeremiah K. Lim¹, Q. Li², H. R. Chinnery¹, Z. He¹, A. J. Vingrys¹, B. V. Bui¹, C. T. Nguyen¹. ¹Optometry and Vision Science, The University of Melbourne, Melbourne, Victoria, Australia; ²Florey Institute of Neuroscience and Mental Health, Melbourne, Victoria, Australia

3947 — 8:30 No Clear Benefit for Intravenous Tissue Plasminogen Activator in conjunction with Hyperbaric Oxygen in Acute Central Retinal Artery Occlusion. Brian Lee¹, S. R. Montezuma¹, K. Engel². ¹Ophthalmology, University of Minnesota, Minneapolis, MN; ²Hennepin County Medical Center, Minneapolis, MN

3948 — 8:45 The effect of valsalva maneuver on choroidal thickness in patients with Keratoconus. Antonio Longo¹, T. Avitabile¹, V. Bonfiglio¹, M. Franco², I. Macchi¹, D. Scollo¹, A. Russo¹, A. Pizzo¹, M. Fallico¹, M. Reibaldi¹. ¹Eye Clinic, University of Catania, Catania, Italy; ²Ophthalmology, Grande Ospedale Metropolitano, Reggio Calabria, Italy

3949 — 9:00 Red blood cell deformability in patients with diabetes and diabetic retinopathy. Rupesh Agrawal¹, J. Tan Kok Soon², N. Khandelwal¹, P. Agustinus Wong², S. Kim². ¹National Healthcare Group Eye Institute, Tan Tock Seng Hospital, Singapore, Singapore; ²Department of Biomedical Engineering, National University of Singapore, Singapore, Singapore

3950 — 9:15 Determination of absolute erythrocyte velocity and flow in the human retinal microvasculature by direct visualization of ICG-labelled erythrocytes. Osamah Saeedi¹, B. Tracey¹, C. Renner¹, J. Li¹, K. Shah², J. Tsai¹, L. Chang¹, M. Ou³. ¹Ophthalmology, University of Maryland - Baltimore, Baltimore, MD; ²Drexel University School of Medicine, Philadelphia, PA; ³Johns Hopkins University, Baltimore, MD *CR

3951 — 9:30 The eye at high altitude. Karel Van Keer^{1,2}, J. Barbosa-Breda^{1,3}, R. De Jongh⁵, I. Nijjs⁶, M. Wirix⁶, L. Abegão Pinto⁴, I. Stalmans^{1,2}, E. Vandewalle^{1,2}. ¹Research Group Ophthalmology, Neurosciences, KU Leuven, Leuven, Belgium; ²Ophthalmology Department, UZ Leuven, Leuven, Belgium; ³Surgery and Physiology (Ophthalmology Unit), Faculdade de Medicina da Universidade do Porto, Porto, Portugal; ⁴Visual Sciences Study Center, Faculdade de Medicina da Universidade de Lisboa, Lisbon, Portugal; ⁵Department of Anesthesiology, Ziekenhuis Oost Limburg, Genk, Belgium; ⁶Ophthalmology Department, Ziekenhuis Oost Limburg, Genk, Belgium

3952 — 9:45 Differential effect of remote ischemia on the reactivity of macular and peripheral retinal arterioles. Yasmin S. El Dabagh^{1,2}, L. Petersen¹, M. Pedersen², T. Bek¹. ¹Department of Ophthalmology, Aarhus University Hospital, Aarhus, Denmark; ²Comparative Medicine Laboratory, Aarhus University Hospital, Aarhus, Denmark ✕

Room 316B

Wednesday, May 02, 2018 8:15 AM-10:00 AM

Clinical/Epidemiologic Research**409 Myopia prevalence, progression and risk factors****Moderators: Amanda French and David Mackey**

3953 — 8:15 The progression of myopia before the age of 25 years: The DREAM Study. Jan Roelof Polling^{1,2}, C. C. Klaver^{3,4}, W. Tideman³. ¹Ophthalmology, Erasmus MC, Rotterdam, Zuid-Holland, Netherlands; ²Optometry & Orthoptics, Faculty of Health, University of Applied Sciences, Utrecht, Netherlands; ³Ophthalmology & Epidemiology, Erasmus MC, Rotterdam, Netherlands; ⁴Ophthalmology, Radboud University Medical Center, Nijmegen, Gelderland, Netherlands

3954 — 8:30 An update of the prevalence of myopia in an older Australian population. David Mackey^{1,2}, G. Lingham^{1,2}, S. Lee^{1,2}, M. Hunter^{3,4}, D. Wood⁵, A. W. Hewitt^{1,2}, P. Mitchell⁶, H. R. Taylor⁷, S. Yazar^{1,2}. ¹Centre for Ophthalmology and Visual Science, University of Western Australia, Perth, Western Australia, Australia; ²Lions Eye Institute, Perth, Western Australia, Australia; ³School of Population and Global Health, University of Western Australia, Perth, Western Australia, Australia; ⁴Busselton Population Medical Research Institute, Busselton, Western Australia, Australia; ⁵School of Population and Global Health, University of Western Australia, Perth, Western Australia, Australia; ⁶Department of Ophthalmology (Centre for Vision Research), Westmead Hospital and Westmead Millennium Institute, Westmead, New South Wales, Australia; ⁷Melbourne School of Population and Global Health, University of Melbourne, Melbourne, Victoria, Australia

3955 — 8:45 MRI imaging of eye shape and associations with myopia in Singapore adults. Saiko Matsumura¹, L. S. Lim², H. M. Htoon¹, S. Lim², J. Tian³, S. Sensaki⁴, C. L. Chen⁵, S. Hilal⁵, T. Wong^{1,2}, C. Cheng^{1,2}, A. N. Kuo³, S. Saw^{1,6}. ¹Singapore Eye Research Institute, Singapore, Singapore; ²Singapore National Eye Centre, Singapore, Singapore; ³Ophthalmology, Duke University, Durham, NC; ⁴Neonatology, National University Hospital, Singapore, Singapore; ⁵National University of Singapore, Singapore, Singapore; ⁶Saw Swee Hock School of Public Health, National University of Singapore, Singapore, Singapore ✕

3956 — 9:00 Is a large eye size a risk factor for myopia? A Mendelian randomization study.

Jeremy A. Guggenheim¹, C. Williams². ¹School of Optometry & Vision Sciences, Cardiff University, Cardiff, England, United Kingdom; ²School of Social and Community Medicine, University of Bristol, Bristol, United Kingdom

3957 — 9:15 Prevalence, Risk Factors and Impact of Myopic Macular Degeneration on Visual Impairment and Functioning Among Adults in Singapore.

Yee Ling Wong^{2,1}, C. Sabanayagam^{2,3}, Y. Ding^{4,2}, C. Wong^{2,3}, A. Yeo¹, Y. Cheung³, G. Cheung^{2,3}, A. Chia², K. Ohno-Matsui⁵, T. Y. Wong^{2,3}, J. Wang^{2,3}, C. Cheng^{2,3}, Q. V. Hoang^{2,3}, E. L. Lamoureux^{2,3}, S. Saw^{2,6}. ¹R&D Vision Sciences AMERA, Essilor International, Singapore, Singapore; ²Singapore Eye Research Institute, Singapore National Eye Centre, Singapore, Singapore; ³Duke-NUS Medical School, National University of Singapore, Singapore, Singapore; ⁴School of Optometry and Ophthalmology, Wenzhou Medical College, Wenzhou, China; ⁵Department of Ophthalmology and Visual Science, Tokyo Medical and Dental University, Tokyo, Japan; ⁶Saw Swee Hock School of Public Health, National University of Singapore, Singapore, Singapore *CR

3958 — 9:30 Axial Length and Myopic Macular Degeneration Prevalence among Chinese-Americans: The Chinese American Eye Study (CHES).

Farzana Choudhury^{1,2}, S. M. Meurer³, R. Klein³, M. Torres¹, R. McKean-Cowdin^{1,2}, R. Varma^{1,2}. ¹Ophthalmology, USC Roski Eye Institute, Keck School of Medicine, University of Southern California, Los Angeles, CA; ²Preventive Medicine, Keck School of Medicine, University of Southern California, Los Angeles, CA; ³Ophthalmology and Visual Sciences, University of Wisconsin School of Medicine and Public Health, Madison, WI

3959 — 9:45 The interaction between time outdoors, near work and refractive error.

Amanda French¹, K. A. Rose¹, I. Morgan^{2,3}. ¹Discipline of Orthoptics, University of Technology Sydney, Sydney, New South Wales, Australia; ²Research School of Biology, Australian National University, Canberra, Australian Capital Territory, Australia; ³State Key Laboratory of Ophthalmology and Division of Preventive Ophthalmology, Zhongshan Ophthalmic Center, Sun Yat-Sen University, Guangzhou, China

Room 320

Wednesday, May 02, 2018 8:15 AM-10:00 AM

Biochemistry/Molecular Biology

410 Gene Therapies

Moderators: Maureen A. McCall and Thierry D. Leveillard

3960 — 8:15 Selective expression of Nrf2 in the retinal pigment epithelium slows vision loss in rd1 mice.

David M. Wu^{1,2}, X. Ji^{1,2}, S. Zhao², P. Rana², M. Chung^{2,3}, Y. Xue², W. Xiong⁴, C. L. Cepko^{2,3}. ¹Retina Service, Massachusetts Eye and Ear Infirmary, Boston, MA; ²Genetics, Harvard Medical School, Boston, MA; ³HHMI, Chevy Chase, MD; ⁴Biomedical Sciences, City University of Hong Kong, Hong Kong, Hong Kong *CR

3961 — 8:30 Development of a drug-regulated, broad-spectrum neuroprotective gene therapy for retinal degeneration.

John D. Ash, C. Keuthan, A. Imam, S. L. Boye, S. E. Boye, C. Santiago.

Ophthalmology, University of Florida, Gainesville, FL

3962 — 8:45 Determination of the optimal time window for gene replacement therapies for blindness using an inducible rescue mouse model of Bardet-Biedl Syndrome.

Ying Hsu¹, J. Garrison¹, G. Kim¹, A. V. Drack^{2,1}, D. Nishimura¹, S. Seo², V. Sheffield¹. ¹Department of Pediatrics, University of Iowa, Iowa City, IA; ²Department of Ophthalmology and Visual Sciences, University of Iowa, Iowa City, IA

3963 — 9:00 The development of a therapy for retinitis pigmentosa based on the combined administration of the two products encoded by the nucleoredoxin like-1 gene.

Emmanuelle Clerin, Y. Yang, D. Pagan, S. Achiedo, J. Degardin, Q. Cesar, M. Simonutti, G. Millet-puel, F. Blond, N. Ait-Ali, J. Sahel, T. Leveillard. Institut de la Vision, Paris, France *CR

3964 — 9:15 Comparison of Allotopic and Mito targeted ND4 gene therapy for treating Leber Hereditary Optic Neuropathy (LHON) in mice.

Rajeshwari D. Koilkonda, H. Yu, V. Talla, J. Guy. Ophthalmology, Bascom Palmer Eye Institute, Miami, FL

3965 — 9:30 A Novel Hypoxia-Regulated And Cell -Specific Gene Therapy Elicits Reduced Choroidal Neovascularization.

Manas Ranjan Biswal^{1,2}, H. M. Prentice³, G. W. Smith², P. Zhu⁴, T. Yao¹, C. Dorey⁵, A. S. Lewin^{1,4}, J. C. Blanks^{2,6}. ¹Molecular Genetics and Microbiology, University of Florida, Gainesville, FL; ²Integrative Biology program, Department of Biology, Florida Atlantic University, Boca Raton, FL; ³Charles E. Schmidt College of Medicine, Florida Atlantic University, Boca Raton, FL; ⁴Department of Ophthalmology, University of Florida, Gainesville, FL; ⁵Department of Basic Science, Virginia Tech Carilion School of Medicine, Roanoke, VA; ⁶Center for Complex Systems and Brain Sciences, Florida Atlantic University, Boca Raton, FL *CR

3966 — 9:45 Modulating transcription factor spatial pattern to generate gene-targeted therapeutics.

Salvatore Botta¹, E. Marrocco¹, N. de Prisco¹, M. Sofia¹, M. Lupo¹, M. Bacci², C. Gesualdo³, S. Rossi¹, F. Simonelli³, E. Surace^{1,4}. ¹TIGEM, Pozzuoli, Italy; ²Università di Bologna, Bologna, Italy; ³Università Luigi Vanvitelli, Napoli, Italy; ⁴Università degli Studi di Napoli "Federico II", Napoli, Italy

Ballroom A

Wednesday, May 02, 2018 8:15 AM-10:00 AM

Glaucoma

411 Trabecular Meshwork

Moderators: Terete Borrás and David Krizaj

3967 — 8:15 Novel therapeutic strategies to rescue the developmental abnormalities in aniridic glaucoma.

Vahitha Shameem Nizamudheen, X. Shan, I. Viringiparampeper, E. Bashar, X. Wang, C. Gregory Evans. Ophthalmology, University Of Birtish Columbia, Vancouver, British Columbia, Canada

3968 — 8:30 Targeting of CD44 by hyaluronan coated-nanoparticles in outflow tissues – a new therapeutic approach for glaucoma.

Rudolf Fuchshofer¹, A. E. Dillinger¹, M. A. Guter², F. Scherl¹, K. M. Perkumas³, W. Stamer³, M. Breunig². ¹Human Anatomy and Embryology, University of Regensburg, Regensburg, Germany; ²Department of Pharmaceutical Technology, University Regensburg, Regensburg, Germany; ³Department of Ophthalmology, Duke University, Durham, NC

3969 — 8:45 Chronic activation of mechanosensitive channels in human trabecular meshwork cells involves dynamic interactions between TRPV4 and TRPM4-mediated signals.

David Krizaj^{1,2}, T. Phuong¹, J. M. Baumann², E. Hwang³, O. Yarishkin¹. ¹Ophthalmology & Visual Sciences, University of Utah School of Medicine, Salt Lake City, UT; ²Bioengineering, University of Utah, Salt Lake City, UT; ³Center of Functional Connectomics, Korea Institute of Science and Technology, Seoul, Korea (the Republic of)

3970 — 9:00 Trabecular meshwork stiffness and outflow resistance are related.

C. R. Ethier¹, K. Wang¹, G. Li², A. T. Read¹, I. Navarro², A. K. Mitra³, W. Stamer², T. Sulchek⁴. ¹Biomedical Engineering, Georgia Institute of Technology, Atlanta, GA; ²Duke University Eye Center, Durham, NC; ³School of Pharmacy, University of Missouri-Kansas City, Kansas City, MO; ⁴Mechanical Engineering, Georgia Institute of Technology, Atlanta, GA

3971 — 9:15 Modulation of outflow facility by the ocular pulse.

Darryl R. Overby¹, M. Madekurozwa¹, W. Stamer², J. Sherwood¹. ¹Bioengineering, Imperial College London, London, United Kingdom; ²Ophthalmology, Duke University, Durham, NC

3972 — 9:30 Clusterin Modulates Extracellular Matrix Homeostasis in the Trabecular

Meshwork. Padmanabhan P. Pattabiraman, C. B. Toris. *Ophthalmology, Case Western Reserve University, Cleveland, OH*

Ballrooms BC

Wednesday, May 02, 2018 8:15 AM-10:00 AM

Retina / Low Vision

412 Retinal Prostheses

Moderators: Jose A. Sahel and Daniel V. Palanker

3973 — 8:15 Retinoic acid mediates electrophysiological remodeling during retinal degeneration.

Zachary Helft¹, B. Denlinger², M. Telias², C. Thornton², R. H. Kramer^{2,1}. ¹Vision Science, UC Berkeley, Berkeley, CA; ²Molecular and Cell Biology, UC Berkeley, Berkeley, CA *CR

3974 — 8:30 Hybrid Retina: A Novel Concept for Sight Restoration.

Yossi Mandel^{1,2}, A. Markus¹, G. Shpun^{1,2}, R. Schick¹, Y. Chemla^{1,2}, I. Henn^{1,2}, N. Farah¹. ¹School of Optometry and Vision Science, Bar-Ilan University, Ramat Gan, Israel, Israel; ²Bar-Ilan Institute for Nanotechnology and Advanced material - BINA, Bar-Ilan University, Ramat Gan, Israel, Israel

3975 — 8:45 Vertical walls surrounding pixels in subretinal space reduce stimulation threshold and improve contrast.

Thomas Flores¹, T. W. Huang¹, H. Lorach¹, R. Dalal¹, X. Lei¹, T. Kamins¹, K. Mathieson², D. V. Palanker¹. ¹Stanford University, Stanford, CA; ²Institute of Photonics, University of Strathclyde, Glasgow, Scotland, United Kingdom *CR

3976 — 9:00 Activity of iridium pyridine-based nanophotoswitches in retina.

Lan Yue^{1,2}, M. Pribisko³, M. Lin⁴, R. H. Grubbs⁵, H. Gray⁵, R. H. Chow⁴, M. S. Humayun^{1,2}. ¹Ophthalmology, University of Southern California, Los Angeles, CA; ²Institute for Biomedical Therapeutics, University of Southern California, Los Angeles, CA; ³Chemistry, California State University Channel Islands, Camarillo, CA; ⁴Zilkha Neurogenetic Institute, University of Southern California, Los Angeles, CA; ⁵Division of Chemistry and Chemical Engineering, California Institute of Technology, Pasadena, CA *CR

3977 — 9:15 Grating Acuity of Prosthetic Vision in Blind Rats Matches the Pixel Pitch of Photovoltaic Subretinal Arrays Below 50µm.

Elton Ho¹, H. Lorach², T. W. Huang³, X. Lei³, T. Flores⁴, T. Kamins⁵, L. Galambos², K. Mathieson⁵, D. V. Palanker^{2,6}. ¹Department of Physics, Stanford University, Stanford, CA; ²Hansen Experimental Physics Laboratory, Stanford University, Stanford, CA; ³Department of Electrical Engineering, Stanford University, Stanford, CA; ⁴Department of Applied Physics, Stanford University, Stanford, CA; ⁵Institute of Photonics, University of Strathclyde, Glasgow, United Kingdom; ⁶Department of Ophthalmology, Stanford University, Stanford, CA *CR

3978 — 9:30 Complications and Their Management Following the Argus II Retinal Prosthesis Implantation.

Laura Cinelli, F. Santoro, S. Rizzo. *Ophthalmology, Azienda OspedalieroUniversitaria Careggi, Florence, Florence, Italy* ✕

Exhibit Hall A0104-A0132

Wednesday, May 02, 2018 8:15 AM-10:00 AM

Retinal Cell Biology / Lens

413 RPE

Moderators: Brian S. McKay and Vera L. Bonilha

- 3979 — A0104 Effect of Glia Maturation Factor beta (GMFB) on Retinal Pigment Epithelium in Diabetic Retinopathy.** Juan Wang, M. Awuti, X. Jiang, J. Zhang, Y. Lyu, L. Lu, G. Xu. Department of Regenerative Medicine, Tongji Eye Institute, Tongji University, Shanghai, China
- 3980 — A0105 A Rapid protocol for the differentiation of human ARPE-19 cells.** Roni A. Hazim, S. Volland, D. S. Williams. Jules Stein Eye Institute, UCLA, Los Angeles, CA
- 3981 — A0106 Topological distribution and potential role of age-related β -synuclein in the retinal pigment epithelium.** Karina Hadrian¹, H. Melkonyan², S. Schlatt³, J. Wistuba³, S. Wasmuth⁴, A. Heiligenhaus^{4,5}, S. Thanos², M. R. Böhm¹. ¹Department of Ophthalmology, Essen University Hospital, Essen, Germany; ²Institute for Experimental Ophthalmology, Westfalian-Wilhelms-University of Münster, Münster, Germany; ³Centre of Reproductive Medicine and Andrology, Westfalian-Wilhelms-University of Münster, Münster, Germany; ⁴Department of Ophthalmology, at St. Franziskus Hospital Münster, Münster, Germany; ⁵Faculty of Medicine, University of Duisburg-Essen, Essen, Germany *CR
- 3982 — A0107 Age-related topographic protein profiling of the retinal pigment epithelium of macular-bearing *Callithrix jacchus*.** Michael R. Böhm¹, K. Hadrian¹, S. Schlatt², J. Wistuba², S. Thanos³, S. König⁴. ¹Department of Ophthalmology, Essen University Hospital, Essen, Germany; ²Centre of Reproductive Medicine and Andrology, Westfalian Wilhelms-University of Münster, Münster, Germany; ³Institute for Experimental Ophthalmology, Westfalian Wilhelms-University of Münster, Münster, Germany; ⁴Interdisciplinary Centre for Clinical Research (IZKF) Core Unit Proteomics, Westfalian Wilhelms-University of Münster, Münster, Germany *CR
- 3983 — A0108 Profiling the regulatory networks controlling early steps of phagocytosis in the retinal pigmented epithelium.** Aleksander Tworak¹, C. Chiang², B. M. Kevany¹, B. Xu², J. Mayne², Z. Ning², D. Figeyis², K. Palczewski¹. ¹Department of Pharmacology, Case Western Reserve University, Houston, TX; ²Ottawa Institute of Systems Biology, University of Ottawa, Ottawa, Ontario, Canada

- 3984 — A0109 CSCR and the identification of new molecular mineralocorticoid targets in retinal pigment epithelium cells.** Jérémie Canonica¹, T. Favez², L. Kowalczyk¹, Y. Arsenijevic¹, F. F. Behar-Cohen³. ¹Ophthalmology, Fondation Assile des Aveugles, Hôpital Ophtalmique Jules-Gonin, Lausanne, Switzerland; ²ISREC, École Polytechnique Fédérale de Lausanne, Lausanne, Switzerland; ³Université Paris Descartes, Inserm, Assitance Publique Hôpitaux de Paris, Paris, France
- 3985 — A0110 Potential protective roles of the endocannabinoid receptor system on autophagy deficient RPE cells within exosomes environment.** Shimon Ben-Shabat¹, L. Shuster², E. Beit-Yannai¹, K. Ben-Yaakov², S. Tabak¹, A. Pollack². ¹Biochemistry and Pharmacology, Ben Gurion University, Beer-Sheva, Israel; ²Ophthalmology, Kaplan Medical Center, Rehovot, Israel
- 3986 — A0111 Bevacizumab can inhibit histone deacetylase (HDAC) activity in ARPE-19 cells.** Noor-Ul-Ain Shekoh¹, M. Mohamed^{1,2}, S. Nashine¹, B. D. Kuppermann¹, C. M. Kenney¹. ¹Ophthalmology, University of California Irvine, Irvine, CA; ²Department of Ophthalmology, Minia University, Minia, Egypt *CR
- 3987 — A0112 The antioxidative effects of long pentraxin 3 involve an increase in antioxidative enzymes, catalase and glucose-6-phosphate dehydrogenase, in human retinal pigment epithelial cells.** Je Moon Woo^{1,2}, N. Hwang³, S. Chung³. ¹Ulsan university hospital, Ulsan, Korea (the Republic of); ²University of Ulsan College of Medicine, Ulsan, Korea (the Republic of); ³College of Natural Sciences, University of Ulsan, Ulsan, Korea (the Republic of)
- 3988 — A0113 Lack of synergistic protection by elovanoids (ELVs) and neuroprotectin D1 (NPD1) against uncompensated oxidative-stress (UOS) in human retinal pigment epithelial cells (RPE).** Sebastian G. Barreiro¹, P. K. Mukherjee², N. G. Bazan². ¹Fundamed, Buenos Aires, CABA, Argentina; ²Neuroscience Center of Excellence, School of medicine LSU Health, New Orleans, LA *CR
- 3989 — A0114 Precision medicine using primary human foetal retinal pigment epithelial cells: effects of zinc supplementation.** Eszter Emri¹, S. Danmeier², F. Klose², L. Csincsik¹, M. Ueffing², I. Lengyel¹. ¹Centre for Experimental Medicine, Queens University, Belfast, Northern Ireland, Belfast, Northern Ireland, United Kingdom; ²Institute for Ophthalmic Research, Universitaetsklinikum Tuebingen, Tübingen, Germany
- 3990 — A0115 All-trans-retinaldehyde participates in complement activation in retinal pigment epithelium by downregulating complement regulatory proteins.** Yi Liao, Y. Wu. Fujian Provincial Key Laboratory of Ophthalmology & Visual Science, Eye Institute of Xiamen University, Xiamen University, Xiamen, Fujian, China

- 3991 — A0116 Endosome Trafficking and Matrix Degradation of MMP14 in RPE Cells.** Ching-Hwa Sung^{1,2}, K. Hsu¹, W. Otsu¹, J. Chuang¹. ¹Ophthalmology, Weill Cornell Medical College, New York, NY; ²Cell and Developmental Biology, Weill Cornell Medical College, New York, NY
- 3992 — A0117 Aberrant endosome dynamics in the retinal pigment epithelium promote complement C3 activation in models of macular degeneration.** Li Xuan Tan^{1,2}, G. Kaur^{1,3}, G. Rathnasamy¹, N. LaCunza^{1,2}, A. Lakkaraju^{1,2}. ¹Ophthalmology and Visual Sciences, University of Wisconsin-Madison, Madison, WI; ²Pharmaceutical Sciences, University of Wisconsin-Madison, Madison, WI; ³Graduate Program in Cellular and Molecular Biology, University of Wisconsin-Madison, Madison, WI
- 3993 — A0118 Exosome uptake is selective but not species or tissue-specific.** Anna Figueroa¹, N. R. Congrove¹, S. A. Sillik¹, D. T. Sadideen², T. Falk^{3,6}, C. Bowes Rickman^{4,5}, B. S. McKay¹. ¹Ophthalmology and Vision Science, University of Arizona, Tucson, AZ; ²Hematology Oncology, University of Arizona, Tucson, AZ; ³Neurology, University of Arizona, Tucson, AZ; ⁴Ophthalmology, Duke University Medical Center, Durham, NC; ⁵Cell Biology, Duke University Medical Center, Durham, NC; ⁶Pharmacology, University of Arizona, Tucson, AZ
- 3994 — A0119 β A3/A1-crystallin is necessary for intracellular protein trafficking in mature RPE cells.** Peng Shang¹, M. Yazdankhah¹, N. Stepicheva¹, S. L. Hose¹, S. Ghosh¹, I. A. Bhutto¹, J. S. Zigler², D. Sinha^{2,1}. ¹Ophthalmology, University of Pittsburgh, Pittsburgh, PA; ²Wilmer Eye Institute, The Johns Hopkins University, Baltimore, MD
- 3995 — A0120 Elucidating the mechanisms underlying zebrafish retinal pigment epithelium regeneration.** Lyndsay L. Leach¹, N. J. Hanovice¹, A. E. Gabriel¹, J. M. Gross^{1,2}. ¹Department of Ophthalmology, University of Pittsburgh School of Medicine, Pittsburgh, PA; ²Department of Developmental Biology, University of Pittsburgh School of Medicine, Pittsburgh, PA *CR
- 3996 — A0121 β A3/A1-crystallin affects circadian rhythm of the retinal pigmented epithelium through regulation of GSK3 β expression.** Nadezda Stepicheva¹, P. Shang¹, I. A. Bhutto¹, J. S. Zigler², S. L. Hose¹, D. Sinha^{1,2}. ¹School of Medicine, University of Pittsburgh, Pittsburgh, PA; ²ophthalmology, Wilmer Eye Institute, The Johns Hopkins University School of Medicine, Baltimore, MD
- 3997 — A0122 Melanin and melanolipofuscin granules from the aging human RPE mediate phototoxic reactions in ARPE-19 cells, reduce their specific phagocytic activity and induce peroxidation of cellular proteins.** Magdalena Olchawa¹, O. Krzysztynska-Kuleta^{1,2}, T. Sarna¹. ¹Biophysics, Jagiellonian University, Krakow, Poland; ²Malopolska Center for Biotechnology, Krakow, Poland

3998 — A0123 Amyloid- β , a sticky conundrum in POAG, AD, and AMD. Thomas Cronin¹, I. Bielskus¹, N. Pfahler¹, J. Haney¹, N. J. Volpe², P. A. Knepper^{1,2}. ¹University of Illinois at Chicago, Chicago, IL; ²Ophthalmology, Northwestern University, Chicago, IL

3999 — A0124 Prominin-1 interacts with vascular endothelial growth factor and regulates its secretion in human retinal pigment epithelial cells. Sujoy Bhattacharya, J. Yin, W. Huo, E. Chaum. Ophthalmology, Univ of Tennessee Health Science Ctr, Memphis, TN

4000 — A0125 Effects of anti-VEGF drugs on human retinal pigment epithelium under oxidative stress. Bobak Bahrami¹, L. Zhu¹, T. Zhang¹, A. Chang^{1,2}, M. C. Gillies¹, W. Shen¹. ¹Save Sight Institute, Chippendale, New South Wales, Australia; ²Sydney Institute of Vision Science, Sydney, New South Wales, Australia *CR

4001 — A0126 VEGFR2 and VEGF-C Suppress the Epithelial–Mesenchymal Transition via YAP in RPE Cells. yuxiang du, X. Yin, Q. Chen, L. Huang, S. Wang, L. Zhou, Z. Ye, X. Ren, H. Ouyang, X. Li, R. Ju. State Key Laboratory of Ophthalmology, Zhongshan Ophthalmic Center, Guangzhou, Guangdong, China

4002 — A0127 Epithelial to mesenchymal transition of human stem cell-derived retinal pigment epithelium cells modulates expression of axonal guidance molecules. Srinivas R. Sripathi¹, M. M. Liu¹, M. Hu¹, J. Wan², J. Cheng¹, J. L. Mertz¹, C. Berlinicke¹, J. Maruotti³, K. Wahlin⁴, J. Qian¹, D. J. Zack¹. ¹Ophthalmology, The Johns Hopkins University School of Medicine, Baltimore, MD; ²Medical and Molecular Genetics, Indiana University, Indianapolis, IN; ³Phenocell, Evry cedex, France; ⁴Shiley Eye Institute, University of California, La Jolla, CA

4003 — A0128 Inhibitional effect of TGF- β 2-induced EMT in RPE cells by an RAR- γ agonist. Yuka Kobayashi¹, T. Orita¹, C. Yamashiro¹, S. Uchi¹, M. Hatanō¹, M. Kobayashi¹, K. Tokuda¹, R. Yanai¹, A. Takeda², T. Ishibashi², K. Sonoda², K. Kimura¹. ¹Yamaguchi University School of Medicine, Ube, Yamaguchi, Japan; ²Kyushu University School of Medicine, Hukuoka, Japan

4004 — A0129 Influence of thermal laser irradiation on cell proliferation and wound healing of primary RPE cell cultures. Katharina Kern¹, R. P. Schaefer¹, C. L. Mertineit¹, R. Brinkmann^{1,2}, Y. Miura^{2,3}. ¹Medizinisches Laserzentrum Luebeck, Luebeck, Germany; ²Institute of Biomedical Optics, University Luebeck, Luebeck, Germany; ³Department of Ophthalmology, University of Luebeck, Luebeck, Germany

4005 — A0130 Epigenetic modifications in AMD ARPE-19 cybrids cells regulating CXCL genes. Paula Sakemi Fukuhara¹, D. H. Lee², S. Atilano², M. Chwa², K. Schneider², B. D. Kuppermann¹, C. M. Kenney¹. ¹Ophthalmology, University of California Irvine, Irvine, CA, Brazil; ²University of California Irvine, Irvine, CA

4006 — A0131 Identifying intracellular signaling disrupted by loss of MFRP in human iPSC derived RPE. Steven Henle¹, R. F. Collyer^{2,1}, A. Ludwig-Kubinski¹, J. Fogerty³, J. C. Besharse^{2,1}, B. A. Link¹. ¹Cell Biology, Neurobiology, and Anatomy, Medical College of Wisconsin, Milwaukee, WI; ²Department of Ophthalmology of Visual Sciences, Medical College of Wisconsin, Milwaukee, WI; ³Cleveland Clinic, Cleveland, OH

4007 — A0132 In vitro and in vivo immunologic characterization of human embryonic stem cell-derived retinal pigment epithelial cells. Sandra Petrus-Reurer^{1,2}, L. Gorchs³, M. Chrobok⁴, A. K. Wagner⁴, E. Lardner⁴, H. Bartuma¹, M. Aronsson¹, S. Westman¹, E. Alici¹, H. Kaipé^{3,5}, F. Lanner², A. P. Kvantá¹. ¹Department of Clinical Neuroscience, Section for Ophthalmology and Vision, St. Erik Eye Hospital, Karolinska Institutet, Stockholm, Sweden; ²Department of Clinical Sciences, Intervention and Technology, Karolinska Institutet, Stockholm, Sweden; ³Department of Laboratory Medicine, Karolinska Institutet, Stockholm, Sweden; ⁴Department of Medicine Huddinge, Center for Hematology and Regenerative Medicine, Karolinska Institutet, Stockholm, Sweden; ⁵Department of Clinical Immunology and Transfusion Medicine, Karolinska Institutet, Stockholm, Sweden

Exhibit Hall A0133-A0163

Wednesday, May 02, 2018 8:15 AM-10:00 AM

Retinal Cell Biology

414 RPE: metabolism

Moderators: Aparna Lakkaraju and Roxana A. Radu

4008 — A0133 Resonance Raman spectroscopy of Mitochondria Isolated from RPE cells. Michael L. Denton¹, C. Gonzalez¹, G. Noojin¹, V. Yakovlev^{2,3}. ¹Air Force Research Lab, JBSA-Fort Sam Houston, TX; ²Biomed. Engineering, Texas A&M University, College Station, TX; ³Physics and Astronomy, Texas A&M University, College Station, TX; ⁴Engility, Corp., JBSA-Fort Sam Houston, TX

4009 — A0134 Development of an ex vivo assay to measure mitochondrial metabolism of mouse posterior eye tissue. Steve Louie, B. Leehy, H. Li, J. Aranda, S. H. Poor, T. Walshe. Ophthalmology, Novartis, Cambridge, MA *CR

4010 — A0135 Study the essential roles of sodium/proton exchanger 8 (NHE8) in RPE. Chun-hong Xia, M. Li, I. Ferguson, X. Gong. School of Optometry, University of California, Berkeley, Berkeley, CA

4011 — A0136 MerTK Signaling is Important for Transport of Glucose from the RPE to Photoreceptors. Lei Jin^{1,2}, W. Wang¹, Y. Liu¹, H. J. Kaplan¹, D. C. Dean^{1,3}. ¹Ophthalmology, University of Louisville, Louisville, KY; ²Ophthalmology, The third people's hospital of Dalian, Dalian, Liaoning, China; ³Molecular Targets Program, James Graham Brown Cancer Center, Louisville, KY

4012 — A0137 Investigation of the timing of scavenger receptors implication during the daily phagocytosis of photoreceptor outer segments by RPE cells. Quentin Rieu¹, Y. Zagar², A. Hamieh¹, E. F. Nandrol¹. ¹Therapeutics Department, Institut de la Vision, Faculté des Sciences Sorbonne Université, INSERM U968, CNRS UMR 7210, Paris, France; ²Biochemistry Core Facility, Institut de la Vision, Faculté des Sciences Sorbonne Université, INSERM U968, CNRS UMR 7210, Paris, France

4013 — A0138 Phagocytosis of photoreceptor outer segments is an energy source of retinal pigment epithelium. Amanda M. Shaw¹, M. L. Orr³, Z. Zhao³, D. P. Jones³, Y. Go³, Y. Chen^{2,1}. ¹Neuroscience, Cell Biology & Anatomy, The University of Texas Medical Branch, Galveston, TX; ²Ophthalmology, The University of Texas Medical Branch, Galveston, TX; ³Department of Medicine, Emory University, Atlanta, GA

4014 — A0139 Removal of dopamine receptor 2 prevents age-related changes in retina and retinal pigment epithelium in the mouse. Varunika Goyal¹, C. DeVera¹, K. Baba¹, M. A. Chrenek², J. T. Sellers², P. Iuvone², G. Tosini¹. ¹Morehouse School of Medicine, Atlanta, GA; ²Emory University, Atlanta, GA

4015 — A0140 Analysis of retinal phenotype in retinal pigmented epithelium (RPE)-specific *Cfh* deleted mice. Dimitrios Stampoulis, J. A. Williams, S. E. Moss. Department of Cell Biology, UCL Institute of Ophthalmology, London, United Kingdom

4016 — A0141 Vps34 and PI(3)P are critical for autophagy, phagocytosis, and endosome processing in RPE cells. Feng He¹, M. A. Agosto¹, R. M. Nichols², L. Kailasam¹, T. G. Wensel^{1,2}. ¹Biochemistry, Baylor College of Medicine, Houston, TX; ²Ophthalmology, Baylor College of Medicine, Houston, TX

4017 — A0142 Loss of Lebercilin causes dysregulation of RPE maturation and ciliary function in cellular and animal models. Lanfranco Leo, J. Vasquez, I. Shpylychak, J. Pham, Z. wei, J. Bennett, J. Mills. Center for Advanced Retinal and Ocular Therapeutics, Scheie Eye Institute, University of Pennsylvania, Philadelphia, PA

4018 — A0143 Whole transcriptome analysis of induced pluripotent stem cell derived retinal pigment epithelial cells during phagocytosis. Conor Ramsden^{2,1}, B. Nommiste¹, A. F. Carr¹, M. J. Radeke³, L. daCruz^{2,1}, P. J. Coffey^{1,3}. ¹UCL, London, United Kingdom; ²Moorfields Eye Hospital, London, United Kingdom; ³UCSB, Santa Barbara, CA

4019 — A0144 Early events in oxLDL-induced transcriptome alteration in ARPE-19 cells. Francesco Giorgianni, D. Koirala, S. Beranova-Giorgianni. Pharmaceutical Sciences, University of Tennessee Health Science Center, Memphis, TN

- 4020 — A0145 Microphthalmia-associated transcription factor (*Mitf*) modulates autophagy in mouse primary RPE cells.** *Andrea García Llorca¹, F. Becker², M. H. Ogmundsdottir³, H. Andre⁴, E. Steingrimsón³, T. Eysteinnsson¹.* ¹Physiology, University of Iceland, Reykjavík, Iceland; ²Cognitive Science, Universität Osnabrück, Osnabrück, Germany; ³Biochemistry and Molecular Biology, University of Iceland, Reykjavík, Iceland; ⁴Clinical Neurosciences, St Erik Eye Hospital, Stockholm, Sweden
- 4021 — A0146 Long-term organotypic co-culture model of the adult human retina, RPE and choroid.** *Arnold Szabo¹, A. Kusnyerik², F. Kilin¹, A. Lukats¹, J. Nemeth², Z. Z. Nagy², A. Szel¹.* ¹Department of Anatomy, Histology and Embryology, Semmelweis University, Budapest, Hungary; ²Department of Ophthalmology, Semmelweis University, Budapest, Hungary
- 4022 — A0147 Improved cryopreservation of cultured RPE with addition of a silver iodide/ alginate mixture.** *Boris V. Stanzel^{1,2}, A. Schulz¹, I. Riemann¹, M. M. Gepp¹, J. Neubauer¹, P. Szurman², H. v. Briesen¹, H. Zimmermann^{1,3}, F. Stracke¹.* ¹Biomedical engineering (IBMT), Fraunhofer Institute, Sulzbach, Saarland, Germany; ²Macula Center Saar, Eye Clinic Sulzbach, Knappschaft Hospital Saar, Sulzbach, Saarland, Germany; ³Molecular and Cellular Biotechnology/Nanotechnology, Saarland University, Saarbrücken, Saarland, Germany
- 4023 — A0148 Effects of Chlorogenic acid on Lysosomal Function and Autophagy in Retinal Pigment Epithelial Cells.** *Mallika Valapala, H. Pan, K. Hatton.* Optometry, Indiana University, Bloomington, IN
- 4024 — A0149 T cell immunoglobulin and mucin domain family and galectin proteins: novel targets for RPE-mediated immune regulation.** *Malita A. Jones¹, F. L. Powell¹, R. Jadeja¹, A. Abdelrahman¹, M. Thounaojam², M. Bartoli², N. Singh¹, P. M. Martin¹.* ¹Biochemistry, Medical College of Georgia at Augusta University, Augusta, GA; ²Ophthalmology, Medical College of Georgia at Augusta University, Augusta, GA
- 4025 — A0150 Glucose and Pyruvate Toxicity for Human Retinal Pigment Epithelial Cells.** *Audrey Phone, J. Lo, A. H. Han, R. Lamy, J. M. Stewart.* University of California, San Francisco, San Francisco, CA
- 4026 — A0151 Quantitative detection of differences in retinal pigment epithelium morphology after Nrf2 rescue in the rd1 mouse.** *Michelle J. Chung^{1,2}, X. Ji^{3,1}, T. Boettcher⁴, C. L. Cepko^{1,2}, D. M. Wu^{3,1}.* ¹Genetics, Harvard Medical School, Boston, MA; ²Howard Hughes Medical Institute, Chevy Chase, MD; ³Massachusetts Eye and Ear Infirmary, Boston, MA; ⁴Laboratory for Nuclear Science, Massachusetts Institute of Technology, Cambridge, MA *CR
- 4027 — A0152 Enhanced COX-2 and ASC protein abundance in human retinal pigment epithelium (RPE) cells are attenuated by Elovanooids (ELV) under uncompensated stress (UOS).** *Pranab K. Mukherjee.* Neuroscience Cntr/ Ophthalmology, LSU Health Sciences Center, New Orleans, LA
- 4028 — A0153 Live-cell imaging of mitochondrial dynamics in the retinal pigment epithelium.** *Gurugirija Rathnasamy¹, L. Tan^{1,2}, A. Lakkaraju^{1,2}.* ¹Ophthalmology and Visual Sciences, University of Wisconsin-Madison, Madison, WI; ²Pharmaceutical Sciences, School of Pharmacy, University of Wisconsin-Madison, Madison, WI
- 4029 — A0154 Common and distinct circadian expression of clock and phagocytosis genes in ARPE-19 monolayers and dissociated cell cultures.** *Nemanja Milićević^{1,2}, I. de Bruin¹, E. Wils¹, J. ten Brink¹, A. ten Asbroek¹, M. Felder-Schmittbuhl¹, A. A. Bergen¹.* ¹Clinical Genetics, Academic Medical Center (AMC), Amsterdam, Netherlands; ²Institute of Cellular and integrative Neurosciences (INCI), University of Strasbourg, Strasbourg, France
- 4030 — A0155 Characterization of the effect of MERTK patient mutations on RPE cells in vitro.** *Solène Roux¹, I. S. Audo^{2,3}, A. Fakin⁴, A. Webster⁴, C. Zeitz², E. F. Nandrot¹.* ¹Therapeutics, Institut de la Vision, Faculté des Sciences Sorbonne Université, INSERM U968, CNRS UMR 7210, Paris, France; ²Genetics Department, Institut de la Vision, Faculté des Sciences Sorbonne Université, INSERM U968, CNRS UMR 7210, Paris, France; ³CHNO des Quinze-Vingts, DHU Sight Restore, INSERM-DHOS Clinical Investigation Center 1423, Paris, France; ⁴Moorfields Eye Hospital, London, United Kingdom
- 4031 — A0156 VEGFR2 regulates energy metabolism and cell survival in retinal pigment epithelium cells.** *Bohan Xu, Q. Chen, X. Yin, W. Chen, X. Li, R. Ju.* State Key Laboratory of Ophthalmology, Zhongshan Ophthalmic Center, Sun Yat-sen University, Guangzhou, China
- 4032 — A0157 Measuring and Modulating Lipid Handling Pathways in the RPE: Implications for Age-Related Macular Degeneration.** *Jason Miller, F. Presswala, Q. Zhang, D. N. Zacks, D. A. Thompson.* Ophthalmology and Visual Sciences, Kellogg Eye Center, University of Michigan, Ann Arbor, MI
- 4033 — A0158 Changes in RPE peroxisome lipid metabolism in response to light onset.** *Jennifer Caughey, L. L. Daniele, A. Dhingra, K. Boesze-Battaglia.* Biochemistry, University of Pennsylvania School of Dental Medicine, Philadelphia, PA
- 4034 — A0159 Effects of resveratrol and hydroquinone on the endoplasmic reticulum and mitochondria in human RPE cells.** *Kristen Buehne, P. Yang, G. Jaffe.* Ophthalmology, Duke University Eye Center, Durham, NC
- 4035 — A0160 Expression of Mitochondrial fission/fusion genes in RPE cells under oxidative stress.** *Yuan He, X. Liu.* Xi'an Medical University, Xi'an, Shanxi, China
- 4036 — A0161 Role of mitochondrial ROS in TGF-β-induced mitochondrial translocation of SMAD4 and its interaction with COXII.** *Ram Kannan¹, P. G. Sreekumar¹, K. Ishikawa⁴, D. R. Hinton^{2,3}.* ¹Ophthalmology, Doheny Eye Institute, Los Angeles, CA; ²Pathology, University of Southern California, Los Angeles, CA; ³USC Roski Eye Institute, Keck -University of Southern California, Los Angeles, CA; ⁴Ophthalmology, Kyushu University Graduate School of Medical Sciences, Fukuoka, Japan
- 4037 — A0162 The Visual Chromophore All-Trans-Retinaldehyde in Retinal Pigment Epithelial Cells: An Alternative Metabolic Pathway.** *Yalin Wu.* Ophthalmology, Xiamen University, Xiamen, Fujian, China
- 4038 — A0163 Real-time Monitoring of Mitochondria Depletion and Rescue by Platelet Fusion Cybrids in the RPE using FlowSight Cytometry and Confocal Microscopy.** *Edward Chaum, W. Huo, J. Yin.* Ophthalmology, Univ of Tennessee Health Sci Ctr, Memphis, TN *CR

Exhibit Hall A0246-A0259

Wednesday, May 02, 2018 8:15 AM-10:00 AM

Visual Psychophysics/Physiological Optics

415 Color vision and photoreceptors

Moderators: Hilde Rogeberg Pedersen and Jason Porter

4039 — A0246 Does the preferential wavelength selection of blue blocking lens affects visual and non-visual functions? *Maitreyee Roy, H. Alzahrani, S. Khuu.* School of Optometry and Vision Science, The University of New South Wales, Sydney, New South Wales, Australia

4040 — A0247 On the smartphone's light emission and its blue light contribution. *Emiliano Teran^{1,2}, P. De Gracia³, C. Yee-Rendon², J. Ortega-Salazar², J. Molina-Reyes⁴, E. Romo Garcia⁵.* ¹Optometry School, Autonomous University of Sinaloa, Culiacan, Sinaloa, Mexico; ²Department of Physics, Autonomous University of Sinaloa, Culiacan, Sinaloa, Mexico; ³Chicago College of Optometry, Midwestern University, Chicago, IL; ⁴Department of Electronic, National Institute of Astrophysics, Optics and Electronics, Tonantzinla, Mexico; ⁵Department of Ophthalmology, Autonomous University of Sinaloa, Culiacan, Sinaloa, Mexico *CR

4041 — A0248 On the Assessment of the Chromatic Contrast of Ecologically Valid Stimuli. *Derek Nankivil.* Research & Development, Johnson & Johnson Vision Care Inc., Jacksonville, FL *CR

Wednesday Posters
8:15 am – 10:00 am

4042 — A0249 Effects of Spectral Lenses on Color Detection in Subjects with Color Vision Deficiency. Hua Bi, D. S. Loshin. Health Professions Division, NOVA Southeastern University, Plantation, FL

4043 — A0250 New commercial display technologies enable threshold-based color vision screening with high cone-contrast resolution and excellent cone isolation. Jae Choi¹, A. Kolessov¹, G. Mikaelian^{1,3}, J. Gaska², L. Williams², M. Winterbottom², A. van Atta⁴. ¹Hedgehog Research Inc, San Pedro, CA; ²USAF, Dayton, OH; ³Nidek Co., Ltd., Gamagori, Japan; ⁴KBRWyle, Dayton, OH

4044 — A0251 Effect of the decrease of the luminance noise range on color discrimination of dichromats and trichromats. Ketan R. Brodeur¹, T. G. de Loureiro², G. Schade³, F. Andre Costa Brito², R. Cruz Salomao², L. Miqulini², D. Maria Oliveira Bonci⁴, P. Roney Kilpp Goulart², M. Izabel Tentes Cortes⁵, D. F. Ventura⁴, M. E. Fitzgerald⁶, G. Souza². ¹University of Michigan, Ann Arbor, MI; ²Universidade Federal do Pará, Belém, Brazil; ³Southern College of Optometry, Memphis, TN; ⁴Universidade de São Paulo, São Paulo, Brazil; ⁵Universidade Federal do Amapá, Belém, Brazil; ⁶Christian Brothers University, Memphis, TN

4045 — A0252 A simple, clinician-friendly perimetric approach to the differential diagnosis between blue cone monochromacy (BCM) and achromatopsia (ACHM): A pilot study. Cindy Skalak, W. Kheir, J. Berdia, A. Iannaccone. Ophthalmology, Duke Eye Center, Durham, NC

4046 — A0253 Test-retest variability on the Medmont dark-adapted chromatic (DAC) perimeter in controls and patients with inherited retinal disease (IRD). Lea D. Bennett, G. Metz, M. Klein, D. G. Birch. Retina Foundation of the Southwest, Dallas, TX

4047 — A0254 The Effect of Age on Parafoveal Chromatic Sensitivity. Maria Coward, F. A. Vera-Diaz, T. Panorgias. New England College of Optometry, Boston, MA

4048 — A0255 Absolute cone thresholds for detecting black holes. Larry Thibos¹, N. Lopez-Gil², A. Bradley¹, R. Xu¹. ¹School of Optometry, Indiana University, Bloomington, IN; ²Optometry, University of Murcia, Murcia, Spain

4049 — A0256 Two-photon visual sensitivity of human cones - a psychophysical study. Katarzyna P. Komar^{1,2}, D. Ruminski³, A. Zielinska¹, K. Kiluk², G. Palczewska⁵, K. Palczewski^{3,4}, M. Wojtkowski^{2,6}. ¹Institute of Physics, Faculty of Physics, Astronomy and Applied Informatics, Nicolaus Copernicus University, Torun, Kuyavian-Pomeranian, Poland; ²Baltic Institute of Technology, Gdynia, Pomeranian Region, Poland; ³Department of Pharmacology School of Medicine, Case Western Reserve University, Cleveland, OH; ⁴Cleveland Center for Membrane and Structural Biology, School of Medicine, Case Western Reserve University, Cleveland, OH; ⁵Department of Medical Devices, Polgenix, Inc., Cleveland, OH; ⁶Institute of Physical Chemistry, Polish Academy of Sciences, Warsaw, Poland*CR

4050 — A0257 Studying S-cone inputs to hue perception using a DLP based projector integrated with a spectrally tunable light source. James Kuchenbecker, S. Patterson, M. Neitz, J. Neitz. Ophthalmology, University of Washington, Seattle, WA

4051 — A0258 Investigating the feasibility of classifying the cone spectral topography via selective wavelength densitometry. Ramkumar Sabesan, X. Jiang. Ophthalmology, University of Washington, Seattle, WA

4052 — A0259 Characterizing the Stiles-Crawford effect of the first kind at foveal and parafoveal regions using a digital micromirror device. Alessandra Carmichael Martins, B. Vohnsen. School of Physics, University College Dublin, Dublin, Ireland

Exhibit Hall B0048-B0085

Wednesday, May 02, 2018 8:15 AM-10:00 AM

Glaucoma

416 Imaging: Posterior Segment II

Moderators: Alfredo Dubra and Madhusudhanan Balasubramanian

4053 — B0048 Increased optic nerve cupping as a marker for cognitive decline: the Women's Health Initiative (WHI). Thasarat S. Vajaranant¹, J. Hallak¹, P. M. Makt², M. A. Espeland³, L. R. Pasquale⁴, B. E. Klein⁵, S. M. Meuer⁵, S. R. Rapp⁶, M. N. Haan⁷. ¹Ophthalmology and Visual Sciences, University of Illinois at Chicago, Chicago, IL; ²Psychiatry, University of Illinois at Chicago, Chicago, IL; ³Biostatistical Sciences, Wake Forrest University Health Sciences, Winston-Salem, NC; ⁴Ophthalmology, Harvard Medical School, Boston, MA; ⁵Ophthalmology and Visual Sciences, University of Wisconsin, Madison, WI; ⁶Psychiatry and Behavioral Medicine, Wake Forrest University Health Sciences, Winston-Salem, NC; ⁷Department of Epidemiology and Biostatistics, University of California at San Francisco, San Francisco, CA *CR

4054 — B0049 Structure-function relationship in the aging process in normal subjects. Makoto Araie¹, M. Fujii², Y. Ohno², Y. Tanaka¹, T. Kikawa³, A. Iwase². ¹Ophthalmology, Kanto Central Hospital, Mutual Aid Association of Public School Teachers, Setagaya-Ku, TOKYO, Japan; ²Tajimi Iwase Eye Clinic, Tajimi, Japan; ³Topcon Corporation, Tokyo, Japan; ⁴Santen Pharmaceutical, Tokyo, Japan *CR, ✗

4055 — B0050 Effects of the Position of Ocular dominance on the Interocular Difference of Glaucomatous Damage in Primary Open Angle Glaucoma. Jin A Choi¹, C. Park². ¹Ophthalmology, St. Vincent's Hospital, Suwon, Korea (the Democratic People's Republic of); ²Catholic university of Korea, Seoul, Korea (the Republic of)

4056 — B0051 Determining the utility of structural and functional measurements for the detection of glaucomatous progression. Juleke E. Majoor¹, K. A. Vermeer¹, H. G. Lemij². ¹Rotterdam Ophthalmic Institute, Rotterdam, Zuid-Holland, Netherlands; ²Glaucoma services, The Rotterdam Eye Hospital, Rotterdam, Zuid-Holland, Netherlands

4057 — B0052 Structure, function and intraocular pressure in open angle glaucoma patients over a 5 year period. Mary Runkle¹, A. Harris¹, B. A. Siesky¹, D. Camp¹, N. J. Kim¹, S. Mathew¹, A. Verticchio Vercellin^{2,3}. ¹Ophthalmology, Indiana University School of Medicine, Indianapolis, IN; ²Glaucoma Unit, Istituto di Ricovero e Cura a Carattere Scientifico, Fondazione G.B. Bietti, Rome, Italy; ³University Eye Clinic, Dipartimento di Scienze Clinico-Chirurgiche, Diagnostiche e Pediatriche, Fondazione IRCCS Policlinico San Matteo, Pavia, Italy *CR

4058 — B0053 One-Year Longitudinal Changes in Choroidal Thickness and IOP Reduction after Glaucoma Surgery. Inhye Kim¹, A. Jeong¹, S. Lim², M. Sagong¹, S. Cha¹. ¹Ophthalmology, Yeungnam university medical center, Daegu, Korea (the Republic of); ²Ophthalmology, Daegu Veterans Health Service Medical Center, Daegu, Korea (the Republic of)

4059 — B0054 Risk factors for unilateral retinal nerve fiber layer defect progression in patients with bilateral primary open-angle glaucoma. Ko Eun Kim^{1,2}, H. Choi¹, S. Ahn³. ¹Ophthalmology, Nowon Eulji Medical Center, Eulji University, Seoul, Korea (the Republic of); ²Seoul National university College of Medicine, Seoul, Korea (the Republic of); ³Hanyang University Hospital, Seoul, Korea (the Republic of)

4060 — B0055 Changes in structural parameters predict functional progression of open angle glaucoma in overweight patients. Adrienne Ng¹, A. Harris¹, A. Verticchio Vercellin^{2,3}, A. Shah¹, R. M. Kawiecki¹, P. R. Patel¹, B. A. Siesky¹. ¹Ophthalmology, Indiana University School of Medicine, Indianapolis, IN; ²Glaucoma Unit, Istituto di Ricovero e Cura a Carattere Scientifico, Fondazione G.B. Bietti, Rome, Italy; ³University Eye Clinic, Dipartimento di Scienze Clinico-Chirurgiche, Diagnostiche e Pediatriche, Fondazione IRCCS, Policlinico San Matteo, Pavia, Italy *CR

4061 — B0056 Structural mapping error in non-fundus perimetry. Laura Ottobelli¹, L. M. Rossetti¹, A. Modarelli¹, P. Fogagnolo¹, D. P. Crabb², G. Montesano^{1,2}. ¹Eye Clinic, University of Milan, Milano, MI, Italy; ²Optometry and Visual Sciences, City, University of London, London, United Kingdom *CR

4062 — B0057 Why do Some Glaucomatous Eyes Lose a Lot More Nerve Tissue than Others by the Time of First Appearance of a Visual Field Defect? Courtney L. Ondeck, A. A. Jammal, N. Ogata, F. Medeiros. Ophthalmology, Duke University, Durham, NC *CR

- 4063 — B0058 The Relative Ability of Optical Coherence Tomography (OCT) Structural Parameters to Detect Structural Abnormality in Glaucoma Suspect and Glaucoma Eyes.** Hongli Yang¹, H. Luo^{1,2}, C. Hardin¹, C. Albert², D. Millay¹, J. R. Vianna⁴, G. Sharpe⁴, G. Williams¹, S. Demirel³, B. Fortune³, S. K. Gardiner³, B. C. Chauhan⁴, C. F. Burgoyne¹. ¹Optic Nerve Head Research Lab, Devers Eye Institute, Portland, OR; ²Department of Ophthalmology, The 2nd Xiangya Hospital of Central South University, Changsha, Hunan, China; ³Discoveries in Sight Research Labs, Devers Eye Institute, Portland, OR; ⁴Department of Ophthalmology and Visual Sciences, Dalhousie University, Halifax, Nova Scotia, Canada *CR
- 4064 — B0059 Optical coherence tomography (OCT) can be used to understand and follow advanced glaucoma.** Seung Lee¹, R. Rajshankar¹, E. Kim¹, C. G. Moraes², R. Ritch³, D. C. Hood^{1,2}. ¹Psychology, Columbia University, New York, NY; ²Ophthalmology, Columbia University Medical Center, New York, NY; ³The New York Eye and Ear Infirmary of Mount Sinai, New York, NY *CR
- 4065 — B0060 Investigation of various parameters acquired by PS-OCT of healthy subjects, glaucoma suspects and glaucoma patients.** Florian Schwarzthans^{1,2}, S. Holzer², H. Resch³, G. Fischer¹, M. Pircher³, C. K. Hitzenberger³, C. Vass². ¹CeMSIIS, Medical University of Vienna, Vienna, Austria; ²Department of Ophthalmology and Optometry, Medical University of Vienna, Vienna, Austria; ³Center for Medical Physics and Biomedical Engineering, Medical University of Vienna, Vienna, Austria *CR
- 4066 — B0061 Color-Code Normative Classification by Spectral Domain-Optical Coherence Tomography for Glaucoma Detection: Multicentric Italian Glaucoma Imaging Study (MIGIS).** Manuele Michelessi¹, I. Riva¹, E. Martini², M. Figus⁴, P. Frezzotti³, L. Agnifili⁵, G. Manni^{1,6}, L. Quaranta⁷, S. Miglior⁸, C. Posarelli¹, S. Fazio³, F. Oddone¹. ¹IRCCS - Fondazione GB Bietti, Rome, Italy; ²U.O. Ophthalmology, Sassuolo Hospital, Sassuolo, Italy; ³Department of Medicine, Surgery and Neuroscience, University of Siena, Siena, Italy; ⁴Ophthalmology, Department of Neurosciences, University of Pisa, Pisa, Italy; ⁵Ophthalmology Clinic, Department of Medicine and Aging Science, University G. d'Annunzio of Chieti-Pescara, Chieti, Italy; ⁶DSCMT, University of Rome, Tor Vergata, Rome, Italy; ⁷Department of Medical and Surgical Specialties, Radiological Sciences and Public Health, University of Brescia, Brescia, Italy; ⁸Department of Ophthalmology, University Bicocca of Milan, Milan, Italy
- 4067 — B0062 Comparative analysis of the screening efficacy of a non-medical grader utilizing the Glaucoma Score versus automated grading of fundus photographs to detect glaucomatous eyes.** Claire Le Roux², T. Peto³, W. E. Sponsel¹, S. Cook¹. ¹Ophthalmology, The Eye Centre, East London, East Cape, South Africa; ²Ophthalmology, The Eye Centre, East London, South Africa; ³Moorfield's Eye Hospital, London, United Kingdom; ⁴Glaucoma Service, WESMDPA/UIW/UTSA, San Antonio, TX
- 4068 — B0063 Methods for Reducing Artifacts in OCT Retinal Nerve Fiber Layer Probability/Deviation Maps.** Rashmi Rajshankar¹, C. Wang¹, E. Kim¹, D. C. Hood^{1,2}. ¹Psychology, Columbia University, New York, NY; ²Ophthalmology, Columbia University, New York, NY *CR
- 4069 — B0064 The detection of glaucoma progression with retinal nerve fiber layer thickness is not improved by mean sensitivity information.** Sampson Listowell Abu, I. Marin-Franch, L. Racette. University of Alabama at Birmingham, Birmingham, AL
- 4070 — B0065 Agreement between different levels of expertise for diagnosing angle closure with Swept-Source Optical Coherence Tomography.** Claudio I. Perez^{1,2}, A. Nguyen¹, S. Chansangpeich¹, M. Mora¹, M. Badr¹, T. Porco¹, S. C. Lin¹. ¹Ophthalmology, University of California, San Francisco, San Francisco, CA; ²Fundacion Oftalmologica los Andes, Universidad de los Andes, Santiago, Chile
- 4071 — B0066 Effectiveness of a Qualitative Approach for Detecting Glaucomatous Progression on Widefield Optical Coherence Tomography Scans.** Zhichao Wu^{1,2}, D. S. Weng¹, R. Rajshankar¹, A. Thenappan¹, R. Ritch³, D. C. Hood¹. ¹Department of Psychology, Columbia University, New York, NY; ²Ophthalmology, Department of Surgery, Centre for Eye Research Australia, Royal Victorian Eye & Ear Hospital, The University of Melbourne, East Melbourne, Victoria, Australia; ³Einhorn Clinical Research Center, New York Eye and Ear Infirmary of Mount Sinai, New York, NY *CR
- 4072 — B0067 Reference Standard Optic Disc Images Associated with Threshold Glaucomatous Visual Field Loss Determined with Archetypal Analysis.** Brian J. Song, E. Seo, T. Elze, L. R. Pasquale. Ophthalmology, Massachusetts Eye and Ear Infirmary, Boston, MA
- 4073 — B0068 Quantifying the proportion of normal eyes deviating from the "ISNT" rule using OCT measurement of peripapillary retinal nerve fibre layer thickness in a healthy cohort.** Zakariya Jarrar¹, K. Basheer², A. Garg², C. J. Hammond^{1,3}, O. A. Mahroo^{2,3}. ¹Ophthalmology, King's College London, St Thomas' Hospital Campus, London, United Kingdom; ²Moorfields Eye Hospital and the UCL Institute of Ophthalmology, London, United Kingdom; ³Twin Research and Genetic Epidemiology, King's College London, London, United Kingdom
- 4074 — B0069 Artificial Intelligence using Deep Learning System for Glaucoma Suspect Detection.** Haslina Hamzah³, G. Lim³, Q. Duc Nguyen¹, B. Mani^{1,2}, W. Hsu³, M. Lee³, C. Cheng^{1,2}, T. Y. Wong^{1,2}, D. Ting^{1,2}. ¹Singapore Eye Research Institute, Singapore National Eye Centre, Singapore, Singapore; ²Ophthalmology and Visual Sciences Academic Clinical Program, Duke-NUS Graduate Medical School, National University of Singapore, Singapore, Singapore; ³National University of Singapore, Singapore, Singapore
- 4075 — B0070 Convolutional Neural Network Using RNFL Thickness Maps for Diagnosis of Glaucoma.** Peiyu Wang¹, M. Moloney³, M. Torres², X. Jiang², D. C. Rodger^{2,1}, R. Varma², G. Richter². ¹Biomedical Engineering, University of Southern California, Los Angeles, CA; ²Roski Eye Institute, University of Southern California, Los Angeles, CA; ³Department of Neuroscience, University of Southern California, Los Angeles, CA
- 4076 — B0071 Prediction Performance of a Trained Two-Dimensional Continuous Time Hidden Markov Model for Glaucoma Progression.** Aushim Kokroo¹, H. Ishikawa¹, M. Wu^{1,2}, Y. Liu³, J. Rehg³, G. Wollstein¹, J. S. Schuman¹. ¹NYU Langone Eye Center, NYU School of Medicine, New York, NY; ²Division of Biostatistics, Department of Population Health and Environmental Medicine, NYU School of Medicine, New York, NY; ³Georgia College of Computing, Georgia Institute of Technology, Atlanta, GA *CR
- 4077 — B0072 The relationship between Bruch's membrane opening-minimum rim width and retinal nerve fiber layer thickness and their combinational index using artificial neural network.** Keunheung Park, J. Lee. Pusan National University Hospital, Busan, Korea (the Democratic People's Republic of)
- 4078 — B0073 Cluster analysis of computerized visual field(VF) and Optical Coherence Tomography-Ganglion Cell Complex(OCT-GCC) defects in high intraocular pressure patients.** Andrea Perdicchi^{1,2}, A. de Paula^{1,2}, E. Sordi^{1,2}, A. Rosati^{1,2}, G. Scuderi^{1,2}. ¹Azienda ospedaliera Sant'Andrea, Rome, Italy; ²NESMOS, Ophthalmology Unit, University of Rome "Sapienza, Rome, Italy
- 4079 — B0074 Increase the classification and expression ability and visualize the decision through a novel deep neural network model for the diagnosis of glaucoma.** Jicong Zhang^{1,2}, H. Wang^{1,2}, H. Zhu^{3,4}. ¹School of Biological Science and Medical Engineering, Beihang University, Beijing, China; ²Beijing Advanced Innovation Centre for Biomedical Engineering, Beihang University, Beijing, China; ³School of Computer Science and Engineering, Beihang University, Beijing, China; ⁴Beijing Advanced Innovation Centre for Big Data Based Precision Medicine, Beihang University, Beijing, China
- 4080 — B0075 Automated glaucoma detection based on deep convolutional neural network.** Yu-Chieh Ko^{1,2}, S. Wey³, C. Lee³, C. Liu^{1,2}. ¹Ophthalmology, Taipei Veterans General Hospital, Taipei, Taiwan; ²Faculty of Medicine, National Yang-Ming University, Taipei, Taiwan; ³Electronics Engineering, National Chiao Tung University, HsinChu, Taiwan

4081 — B0076 Deep Learning can Exploit 3D Structural Information of the Optic Nerve Head to Provide a Glaucoma Diagnostic Power Superior to that of Retinal Nerve Fibre Layer Thickness. Michael J. Girard^{1,2}, K. Chin¹, S. Devalla¹, T. Aung², J. B. Jonas^{3,4}, Y. Wang¹, A. Thiery¹. ¹National University of Singapore, Singapore, Singapore; ²Singapore Eye Research Institute, Singapore, Singapore; ³Ophthalmology, Medical Faculty Mannheim of the Ruprecht-Karls-University Heidelberg, Heidelberg, Germany; ⁴Beijing Tongren Hospital, Capital Medical University, Beijing, China *CR

4082 — B0077 Comparison between estimated central 10 degrees visual field from En-face imaging of Swept-Source optical coherence tomography and Humphrey 10-2 Visual Field. Ryu Iikawa, T. Togano, Y. Sakae, A. Suetake, R. Igarashi, T. Fukuchi. ophthalmology, Niigata Medical and Dental Hospital, Niigata, Japan

4083 — B0078 Hemifield asymmetry analysis within the central 20 degrees in open-angle glaucoma: diagnostic utility of 10-2 visual fields and macula optical coherence tomography. Michael Kalloniatis^{1,2}, J. Phu^{1,2}, A. Choi^{1,2}, S. Khui², N. Yoshioka^{1,2}, L. Nivison-Smith^{1,2}, B. Zangerl^{1,2}. ¹Centre for Eye Health, University of New South Wales, Kensington, New South Wales, Australia; ²Optometry and Vision Science, University of New South Wales, Sydney, New South Wales, Australia

4084 — B0079 Comparison between Heidelberg Spectralis OCT1 vs OCT2 measurements in glaucomatous eyes. Cindy Albert^{1,2}, B. Fortune^{1,2}, H. Yang^{1,2}, S. K. Gardiner^{1,2}. ¹Devers Eye Institute, Legacy Health, Portland, OR; ²Discoveries in Sight, Legacy Research Institute, Portland, OR *CR

4085 — B0080 Comparison of subfoveal choroidal thickness difference between right and left eye with retinal vessel caliber in POAG patients. Kojiro Imai^{1,4}, K. Mori¹, M. Zhou², Y. Ikeda^{3,1}, M. Ueno¹, Y. Yamamoto¹, S. Kinoshita⁵, C. Sotozono¹. ¹Ophthalmology, Kyoto Prefectural Univ of Med, Kyoto, Kyoto, Japan; ²Biomedical Engineering, Doshisha University, Kyoto, Japan; ³Oike-Ikeda Eye Clinic, Kyoto, Japan; ⁴Medical Innovation and Translational Medical Science, Graduate School of Medical Science, Kyoto Prefectural University of Medicine, Kyoto, Japan; ⁵Frontier Medical Science and Technology for Ophth, Kyoto Prefectural University of Medicine, Kyoto, Japan

4086 — B0081 Topographic correlation between thickness and vessel density in the macular ganglion cell-inner plexiform layer of glaucoma patients. Jin-Soo Kim¹, S. Baek^{1,2}, Y. Kim^{1,2}, J. Jeoung^{1,2}, K. Park^{1,2}. ¹Ophthalmology, Seoul National University Hospital, Seoul, Korea (the Republic of); ²Ophthalmology, Seoul National University College of Medicine, Seoul, Korea (the Republic of)

4087 — B0082 Longitudinal Rates of Structural Change Measured with Confocal Scanning Laser Ophthalmoscopy in Glaucoma. Jihyun Kim^{1,2}, N. Fatehi¹, E. Morales¹, F. Yu^{1,3}, A. Affifi³, K. Nouri-Mahdavi¹, J. Caprioli¹. ¹Glaucoma, Stein Eye Institute, UCLA, Los Angeles, CA; ²Siloam Eye Hospital, Seoul, Korea (the Republic of); ³Department of Biostatistics, Fielding School of Public Health, University of California at Los Angeles, Los Angeles, CA

4088 — B0083 High Resolution Imaging of Inner Retinal Microcystic Changes in Glaucoma. Moataz M. Razeen^{1,2}, S. Steven^{1,3}, N. Sredan¹, S. K. Cheong¹, J. Yarp¹, M. Nuñez¹, J. L. Goldberg¹, A. Dubra¹. ¹Byers Eye Institute, Stanford University, Palo Alto, CA; ²Alexandria Faculty of Medicine, Alexandria University, Alexandria, Egypt; ³Institute of Optics, University of Rochester, Rochester, NY *CR

4089 — B0084 Missing Link between VEP and OCT: OCT is an efficient method for glaucoma diagnosis. Chunzhi T. Dou¹, W. Chen², J. Chang³, S. Wu¹. ¹Health On A Wheel!, Suwanee, GA; ²Chen Eye Center, Norcross, GA; ³CDC, Atlanta, GA; ⁴ConMatrix, Lawrenceville, GA

4090 — B0085 Decreased Surface Area in Occipital Cortex is associated with Pupil Reflex in Glaucoma Patients. Carolina P. Gracitelli¹, G. L. Duque-Chica², L. Sanchez³, L. Moura², B. V. Nagy², S. Teixeira¹, E. Amaro³, D. F. Ventura², A. Paranhos, Jr.¹. ¹Ophthalmology and Visual Science, Federal University of São Paulo, Sao Paulo, Sao Paulo, Brazil; ²Psychology Institute, University of Sao Paulo, Sao Paulo, Brazil; ³Hospital Israelita Albert Einstein, Sao Paulo, Brazil

Exhibit Hall B0216-B0234

Wednesday, May 02, 2018 8:15 AM-10:00 AM

Clinical/Epidemiologic Research

417 Prevalence of vision impairment

Moderator: Debarun Dutta

4091 — B0216 Investigating the eye health of refugees in South-East Melbourne. Benjamin Crock, G. Russell, I. Cheng. Monash University, Kew, Victoria, Australia

4092 — B0217 Unmet Eye Care Needs Among a Syrian Pediatric Refugee Population. myrna lichter^{1,2}. ¹Ophthalmology, Saint Michael's Hospital, Toronto, Ontario, Canada; ²Ophthalmology, University of Toronto, Toronto, Ontario, Canada

4093 — B0218 Prevalence and causes of visual impairment in children of rural zone of Londrina City, Brazil. Erika Hoyama^{2,1}, T. V. Sakumoto¹, M. B. Silva¹, M. T. Soares², T. Matsuo¹, N. Hasegawa¹. ¹Ophthalmology, Hospital de Olhos de Londrina, Londrina, Paraná, Brazil; ²Ophthalmology, PUC, Londrina, Paraná, Brazil

4094 — B0219 Prevalence and Correction of Vision Impairment in Chinese Students: Outcomes from a School-Based Vision Screening Model in CHEER Program. Chimei Liao¹, L. Xie^{1,2}, J. Zhang¹, F. Chen¹, M. He^{1,3}. ¹State Key Laboratory of Ophthalmology, Zhongshan Ophthalmic Center, Guangzhou, China; ²Helen Keller International, Guangzhou, China; ³Centre for Eye Research Australia, University of Melbourne, Melbourne, Victoria, Australia

4095 — B0220 The shift in the causes of vision loss at China's largest blind school during a period of significant economic growth. Bethlehem Mekonnen¹, L. Huang², Y. Han¹, O. Nnamani¹, J. Hu³. ¹Ophthalmology, University of California San Francisco, San Francisco, CA; ²The second affiliated hospital of Fujian Medical University, Fujian Sheng, China; ³Sun Yat Sen University Zhongshan Ophthalmic center, Guangdong Sheng, China

4096 — B0221 Trends in the burden of disease due to trachoma among school children in a southern Brazilian state. Vinicius Lima¹, G. C. Cavalieri², E. Traeber³, F. Theodoro Gaspar da Silva⁴, J. Traeber³. ¹Hospital Santa Casa de Misericórdia de Curitiba - PR - BRAZIL, Tubarao, Santa Catarina, Brazil; ²Hospital de olhos de Londrina (HOFTALON), Londrina, Brazil; ³Universidade do Sul de Santa Catarina (UNISUL), Florianópolis, Brazil; ⁴Governador Celso Ramos Hospital, Florianópolis, Brazil

4097 — B0222 Association of Vision Impairment and Depressive Symptoms Among Midlife Women: Study of Woman's Health Across the Nation. Navasuja Kumar^{1,2}, C. Karvonen-Gutierrez², D. Musch^{1,2}, S. Harlow², S. Moroi¹. ¹Department of Ophthalmology, University of Michigan, Ann Arbor, MI; ²Department of Epidemiology, School of Public health, University of Michigan, Ann Arbor, MI *CR

4098 — B0223 Frequency and Causes of Visual Impairment in the Xingu Indigenous Park: Preliminary Findings From Projeto Olhos Do Xingu. Guilherme E. Takitani¹, A. Fernandes¹, M. Alves², R. C. Almeida³, R. A. Nascimento¹, N. Y. Valdrighi¹, C. Takashi¹. ¹Department of Ophthalmology and Visual Sciences, Federal University of São Paulo (UNIFESP), Sao Paulo, Sao Paulo, Brazil; ²UNICAMP, Campinas, SP, Brazil; ³Faculdade de Medicina do ABC, Santo Andre, SP, Brazil; ⁴Universidade de Sao Paulo, Sao Paulo, SP, Brazil

4099 — B0224 The prevalence and determinants of visual impairment in Canada: Cross-sectional data from the Canadian Longitudinal Study on Aging. Ellen E. Freeman^{4,1}, R. Aljied⁴, R. Buhrmann², S. Sabeti², M. Aubin³. ¹Ottawa Hospital Research Institute, Ottawa, Ontario, Canada; ²Ophthalmology, University of Ottawa, Ottawa, Ontario, Canada; ³Ophthalmology, Université de Montréal, Ottawa, Ontario, Canada; ⁴School of Epidemiology, University of Ottawa, Ottawa, Ontario, Canada

- 4100 — B0225 Global prevalence and years lived with disability (YLDs) due to vision loss in Mexico in 2016.** Aida Jimenez-Corona^{1,2}, E. O. Graue-Hernandez³, M. Rios-Blancas⁴, H. Gomez-Dantes⁴. ¹Ocular Epidemiology and Visual Health, Instituto de Oftalmologia Conde de Valenciana, Mexico City, Mexico; ²General Directorate of Epidemiology, Health Secretariat, Mexico City, Mexico; ³Cornea and Refractive Surgery, Instituto de Oftalmologia Conde de Valenciana, Mexico City, Mexico; ⁴National Institute of Public Health, Cuernavaca, Morelos, Mexico
- 4101 — B0226 Six-year Incidence and Progression of Visual Impairment in a Multi-ethnic Asian Population: The Singapore Epidemiology Eye Disease (SEED) Study.** Yih Chung Tham¹, M. Chee¹, N. Y. Tan¹, C. Wong¹, W. Dai¹, S. Majitha¹, C. Sabanayagam^{1,2}, E. Lamoureux^{1,2}, T. Y. Wong^{1,2}, C. Cheng^{1,2}. ¹Singapore Eye Research Institute, Singapore National Eye Centre, Singapore, Singapore; ²Duke-NUS Medical School, Singapore, Singapore
- 4102 — B0227 Prevalence of, and Factors Associated with, Blindness in California from a Population-Based Survey.** Wyatt Smith^{1,2}, D. Pan², F. Yu², A. L. Coleman², G. N. Holland². ¹Charles R. Drew University School of Medicine and Science, Los Angeles, CA; ²UCLA Stein Eye Institute, Department of Ophthalmology, David Geffen School of Medicine at UCLA, Los Angeles, CA *CR
- 4103 — B0228 Association between geographic distribution of eye care providers and rates of vision difficulties in California.** Xiongfei Liu¹, D. Pan¹, R. S. Baker², F. Yu¹, F. Lum³, A. L. Coleman¹. ¹Ophthalmology, Stein Eye Institute - UCLA, Los Angeles, CA; ²Ophthalmology, Wayne State School of Medicine, Detroit, MI; ³Ophthalmology, American Academy of Ophthalmology, San Francisco, CA *CR
- 4104 — B0229 Translating Population Based Research Data Into Actionable Steps.** Van C. Lansingh^{1,2}, E. M. Lopez - Star². ¹HelpMeSee, Weston, FL; ²International, Instituto Mexicano de Oftalmologia, Mexico, Queretaro, Mexico
- 4105 — B0230 Visual function and ocular pathology in an aging bi-racial population sample.** Alison Abraham^{1,2}, X. Kong¹, X. Guo¹, M. Lee¹, P. Y. Ramulu¹. ¹Ophthalmology, Johns Hopkins School of Medicine, Baltimore, MD; ²Epidemiology, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD
- 4106 — B0231 Characterizing ocular needs and distribution of corrective lenses in two Peruvian communities.** Lillian Sun^{1,2}, J. Arshad^{2,3}, L. Daboul^{1,2}, L. Young^{1,2}, H. Choi³. ¹Cleveland Clinic Lerner College of Medicine, Cleveland, OH; ²Case Western Reserve University, Cleveland, OH; ³Cleveland Clinic, Cleveland, OH
- 4107 — B0232 Association of Socioeconomic Status With Global and Regional Burden of Eye Diseases.** Fereshteh Azad, X. Zhou, N. Nassiri, A. Goyal, M. S. Juzych, M. Wilson. School of Medicine, Wayne State University, Detroit, MI
- 4108 — B0233 Assessment of visual impairment and eye diseases in HIV-infected people in the ART era in Rakai, Uganda.** Xiangrong Kong^{2,1}, S. Irwin¹, J. Ssekasanvu¹, B. E. Munoz¹, S. K. West¹, G. Nakigozi³. ¹Johns Hopkins University, Baltimore, MD; ²Dept of Biostatistics and Epidemiology, University of Massachusetts, Amherst, MA; ³Rakai Health Sciences Program, Kalisizo, Uganda
- 4109 — B0234 Multi-state Assessment of Vision Impairment and Arthritis as Co-morbid Conditions.** Dean A. VanNasdale, L. A. Jones-Jordan. Optometry, Ohio State Univ College of Optometry, Columbus, OH
-
- Exhibit Hall B0273-B0294
Wednesday, May 02, 2018 8:15 AM-10:00 AM
- Eye Movements/Strabismus/Amblyopia/ Neuro-Ophthalmology**
418 Ambylopia
-
- Moderator: Fatema F. Ghasia**
- 4110 — B0273 Near and Distance Stereopsis Restoration in amblyopia with 3D Computer Treatment.** Hongwei Deng. low vision Department, Shenzhen Eye Hospital, Sh, China
- 4111 — B0274 A new binocular approach for treatment of strabismic amblyopia using 3D video games.** Kenneth D. Tran¹, D. D. Chau¹, B. Z. Li¹, M. Antonucci¹, J. K. Bui¹, C. Ngo¹, D. M. Levi^{1,2}, R. Li^{1,2}. ¹School of Optometry, University of California, Berkeley, Berkeley, CA; ²Helen Wills Neuroscience Institute, University of California, Berkeley, Berkeley, CA
- 4112 — B0275 Standard amblyopia therapy in adults with longstanding amblyopia improves visual acuity.** Reena Patel¹, W. H. Ridder¹, A. Karsolia¹, D. Duan¹, N. Arthihirannorapat¹, U. Staubli², Y. Li². ¹Southern California College of Optometry at Marshall B Ketchum University, Fullerton, CA; ²Allergan Plc, Irvine, CA *CR, ✗
- 4113 — B0276 Differential effects of high-frequency transcranial random noise stimulation (hf-tRNS) on Contrast Sensitivity and Visual Acuity when combined with a short perceptual training in adults with anisometric amblyopia.** Giuseppe Lo Giudice¹, R. Camilleri², A. Galan¹, R. Rizzo¹, V. Crepaldi¹, G. Campana^{2,3}. ¹Ophthalmology, San Paolo Ophthalmic center-San Antonio Hospital, Padova, Italy; ²Department of General Psychology, University of Padova, Padova, Italy; ³Human Inspired Technology Research Centre, University of Padova, Padova, Italy
- 4114 — B0277 A Novel dichoptic Optokinetic Nystagmus paradigm to quantify interocular suppression in monocular amblyopia.** Wen Wen¹, S. Wu¹, S. Wang¹, H. Liu¹, S. He². ¹Ophthalmology, EENT Hospital, Fudan University, Shanghai, China; ²State Key Laboratory of Brain and Cognitive Science, Institute of Biophysics, Chinese Academy of Sciences, Beijing, China
- 4115 — B0278 Suppression rather than visual acuity loss limits threshold stereoacuity.** Ann L. Webber¹, K. L. Schmid¹, R. J. Dowdall¹, M. E. Finlay¹, R. L. Larner¹, E. Lee¹, B. Oh¹, K. A. Skokidis¹, A. Baldwin¹, A. Reynaud², R. Hess². ¹School of Optometry and Vision Science, Institute of Health and Biomedical Innovation, Faculty of Health, Queensland University of Technology, Brisbane, Queensland, Australia; ²Department of Ophthalmology, McGill University, Montreal, Quebec, Canada
- 4116 — B0279 Macular choroidal thickness before and after amblyopia treatment in anisometric amblyopia using swept-source optical coherence tomography.** Atsushi Miki¹, S. Araki¹, K. Goto¹, T. Yamashita¹, G. Takizawa¹, K. Haruishi¹, Y. Ieki¹, J. Kiyu¹, K. Yaoda². ¹Department of Ophthalmology, Kawasaki Medical School, Kurashiki, Okayama, Japan; ²Yaoda Eye Clinic, Nagaoka, Japan
- 4117 — B0280 Visual counting is further affected when shifting attention between the eyes in adult amblyopia.** Chuan Hou, X. Lai. Smith-Kettlewell Eye Research Institute, San Francisco, CA
- 4118 — B0281 Is there meridional anisotropy in children with normal visual acuity and different astigmatic refractive errors? An electrophysiology and psychophysical study.** Tiong Yap¹, C. D. Luu^{2,3}, C. Suttle⁵, a. chia^{4,3}, M. Boon¹. ¹School of Optometry and Vision Science, University of New South Wales, Sydney, New South Wales, Australia; ²Centre for Eye Research Australia, Department of Surgery (Ophthalmology), The University of Melbourne, Melbourne, Victoria, Australia; ³Visual Electrophysiology Laboratory, Singapore Eye Research Institute, Singapore, Singapore; ⁴Paediatric Ophthalmology and Adult Strabismus Department, Singapore National Eye Centre, Singapore, Singapore; ⁵Division of Optometry and Visual Sciences, City University London, London, United Kingdom
- 4119 — B0282 The Role of VEP in Determining Treatment Prognosis in Amblyopia.** Adriana Grigorian. Ophthalmology, UH Eye Institute, Shaker Heights, OH
- 4120 — B0283 Suprathreshold VEPs as an indicator of abnormal cortical processing in nonstrabismic amblyopes.** Mei Ying Boon¹, H. Leung⁴, C. Suttle^{2,1}, C. D. Luu³, T. Yap¹, S. Hing⁵. ¹School of Optometry and Vision Science, University of New South Wales (UNSW) Sydney, Sydney, New South Wales, Australia; ²Division of Optometry and Visual Sciences, City University, London, United Kingdom; ³Department of Surgery (Ophthalmology), Centre for Eye Research Australia, Melbourne, Victoria, Australia; ⁴Adult and Paediatric Ophthalmology, Southern Kogarah, Kogarah, New South Wales, Australia; ⁵Paediatric and Strabismic Ophthalmology, Park Road Eye, Hurstville, New South Wales, Australia

4121 — B0284 Brief Retinal Inactivation Promotes Recovery From Long-Term Monocular Deprivation. Kevin Duffy, D. E. Mitchell.

Psychology & Neuroscience, Dalhousie University, Halifax, Nova Scotia, Canada

4122 — B0285 The effects of amblyopia on children's reading performance after patching treatment. Arthur Fernandes, N. Nunes Cavascan. Universidade Federal de Sao Paulo, São Paulo, São Paulo, Brazil

4123 — B0286 Risk factors for visual acuity deterioration 15 years after occlusion therapy for amblyopia. Aveen Kadhum¹, B. Simonsz-Tóth², M. Joosse², H. J. Simonsz¹, S. E. Loudon¹. ¹Ophthalmology, Erasmus Medical Center, Rotterdam, Netherlands; ²Ophthalmology, Haaglanden Medical Center, Westeinde Hospital, The Hague, Netherlands

4124 — B0287 Adaptive electro-optic occluder with variable transmission and contrast. Guoqiang Li, Z. Li. Visual and Biomedical Optics Lab, Ohio State University, Upper Arlington, OH *CR

4125 — B0288 Compliance with Intermittent Occlusion Therapy Glasses for Amblyopia treatment in Children. Jingyun Wang¹, J. Jin², S. L. Davidson³, A. Malik³, R. Shoge¹, S. Meiyeppen¹, Y. Pang⁵, K. Yin³, M. Allen⁵, D. Neely⁴. ¹Pennsylvania College of Optometry, Salus University Pennsylvania College of Optometry, Elkins Park, PA; ²Nemours. Alfred I. duPont Hospital of Children, Wilmington, DE; ³Children's Hospital of Philadelphia, Philadelphia, PA; ⁴Glick Eye Institute, Indiana University School of Medicine, Indianapolis, IN; ⁵Illinois College of Optometry, Chicago, IL ✗

4126 — B0289 Evaluation of clinical factors related to amblyopia treatment that influence visual outcomes following cataract extraction in pediatric patients. Omar Hassan¹, M. C. Mocan¹, A. Traish². ¹Ophthalmology, University of Illinois at Chicago, Chicago, IL; ²Ophthalmology, John H. Stroger, Jr. Hospital of Cook County, Chicago, IL

4127 — B0290 Survey data from parental guardians at preschool vision screenings regarding pediatric eye diseases and corrective lenses in children. Hidenori Sasaki^{2,1}, A. Murakami¹. ¹Ophthalmology, Juntendo University, Bunkyo-ku, Tokyo, Japan; ²Ophthalmology, Asama general hospital, Saku, Nagano, Japan

4128 — B0291 Comparison of the SPOT and SW800 photoscreener in detecting amblyopia risk factors in Chinese children between 4 to 6 years of age. Xuehan Qian¹, J. Wang^{2,3}, Y. Li², G. Ding¹, N. Hua¹, N. Wei¹, Y. Ning¹. ¹Strabismus and Pediatric Ophthalmology, Tianjin Medical University Eye Hospital, Tianjin, China; ²Ophthalmology, Emory University, Atlanta, GA; ³Ophthalmology, Tianjin Medical University General Hospital, Tianjin, China

4129 — B0292 Agreement between non-cycloplegic refraction with Retinomax and cycloplegic refraction in pre-school children informs screening criteria. Jack B. Margines¹, F. Yu², S. Mehravaran², A. L. Coleman³. ¹David Geffen School of Medicine, UCLA, Los Angeles, CA; ²Stein Eye Institute, Los Angeles, CA

4130 — B0293 Expanded Early Childhood Vision Screening. Ari Z. Zivotofsky¹, L. Gantz², S. Sheik², A. Gordon Shaag², N. Zivotofsky^{3,4}. ¹Brain Science, Bar Ilan University, Ramat Gan, Israel; ²Optometry, Hadassah Academic College, Jerusalem, Israel; ³Jerusalem District Health Office, Ministry of Health, Jerusalem, Israel; ⁴Department of Medical Education, Tel Aviv University, Tel Aviv, Israel

4131 — B0294 Physician Effort in Pediatric Examination Under Anesthesia. Diana Kim, L. Khazaeni, J. Dunbar. Ophthalmology, Loma Linda University Eye Institute, Loma Linda, CA

Exhibit Hall B0295-B0305

Wednesday, May 02, 2018 8:15 AM-10:00 AM

Eye Movements/Strabismus/Amblyopia/
Neuro-Ophthalmology / Anatomy and
Pathology/Oncology

419 Neuro-ophthalmology: Pediatrics and Pupilometry

Moderator: Sachin Kedar

4132 — B0295 A Digital Prosthetic Eye Featuring Deep Neural Network Pupil Tracking. Emily S. Charlson¹, Z. Guo², I. Harris², J. Tao¹. ¹Gavin Herbert Eye Institute, University of California Irvine, Costa Mesa, CA; ²Donald Bren School of Information and Computer Scientists, University of California Irvine, Irvine, CA

4133 — B0296 Wearable High-Speed Pupilometer for Concurrent Binocular Recording and Associated Cloud-based Analysis. Wolfgang Fink^{1,2}, K. Garcia³, M. Tarbell^{1,2}. ¹Visual and Autonomous Exploration Systems Research Laboratory, University of Arizona, Tucson, AZ; ²Department of Biomedical Engineering, University of Arizona, Tucson, AZ; ³Breault Research Organization, Inc., Tucson, AZ *CR

4134 — B0297 Quantitative analysis of pupilometry in acquired isolated oculomotor nerve palsy. Hyeong Min Kim, H. Yang, J. Hwang. Ophthalmology, Seoul National University Hospital, Seoul, Korea (the Republic of)

4135 — B0298 Exploring Pupil Dynamics and Biometry In Eyes Undergoing Cataract Surgery. Imene Salah-Mabed^{1,2}, A. Saad¹, H. Rouger³, D. Gatine¹. ¹Cataract and Refractive Surgery, Fondation Rothschild, Paris, France; ²Paris Saclay University, Paris, France; ³Fondation Rothschild, Paris, France *CR

4136 — B0299 Assessing concussion with multifocal pupillographic objective perimetry. Ted Maddess¹, R. Jaros¹, F. Sabeti^{2,1}, E. Rohan¹, C. F. Carle¹. ¹Neuroscience, Australian National University, Canberra, Australian Capital Territory, Australia; ²Optometry, University of Canberra, Canberra, Australian Capital Territory, Australia *CR

4137 — B0300 Effects of Light- and Dark-adapted conditions on Pupil Light Response in mice. Corinne Kostic, S. V. Crippa, C. Martin, A. K. Kawasaki, N. E. Kircher. Dpt Ophthalmology, University Lausanne, Jules-Gonin Eye Hospital, Lausanne, Switzerland

4138 — B0301 Immature Retina, Immature Pupil Light Response. Noemie E. Kircher, S. V. Crippa, C. Martin, A. K. Kawasaki, C. Kostic. Dpt Ophthalmology, University Lausanne, Jules-Gonin Eye Hospital, Lausanne, Switzerland

4139 — B0302 Enhanced Depth Imaging Optical Coherence Tomography of Optic Nerve Head Drusen in Children. Foteini Faye Barampouti, H. Soomro, P. Sim, G. Ventura, M. Karampelas. Ophthalmology, West Hertfordshire Hospitals NHS Trust, Watford, United Kingdom

4140 — B0303 Novel NDUFV1 mutations with optic nerve atrophy. Zhike Zhang^{1,2}, H. Yuan², J. Guy². ¹Ophthalmology, China-Japan Friendship Hospital, Beijing, China; ²Bascom Palmer Eye Institute, Miller School of Medicine, University of Miami, Miami, FL

4141 — B0304 Optic Atrophy as an Early Manifestation of Ocular Disease in CLN2-Associated Batten Disease. David L. Rogers¹, H. E. Inger^{2,1}, E. C. De Los Reyes¹. ¹Ophthalmology, Nationwide Children's Hospital, Columbus, OH; ²Ophthalmology, The Ohio State University Wexner Medical Center, Columbus, OH *CR, ✗

4142 — B0305 Altered white matter structure within the visual pathway of children with early unilateral enucleation. Arijit Chakraborty^{1,2}, B. Thompson¹, M. Vandewouw², B. L. Gallie³, D. L. McCulloch¹, M. J. Taylor², B. Dunkley². ¹Optometry and Vision Science, University of Waterloo, Waterloo, Ontario, Canada; ²Diagnostic Imaging, Neurosciences and Mental Health, The Hospital for Sick Children, Toronto, Ontario, Canada; ³Ophthalmology and Vision Sciences, The Hospital for Sick Children, Toronto, Ontario, Canada

Exhibit Hall B0366-B0381

Wednesday, May 02, 2018 8:15 AM-10:00 AM

Clinical/Epidemiologic Research / Low Vision

420 Patient reported outcomes, methods and reporting of research

4143 — B0366 Objective, continuous measurement of near work, light exposure and activity. Rachel Williams¹, S. Bakshi¹, E. Ostrin², L. A. Ostrin¹. ¹Optometry, University of Houston, Houston, TX; ²Pulmonology, MD Anderson, Houston, TX

4144 — B0367 An improved method for estimating measures from visual function questionnaires. Chris Bradley, R. W. Massof. Ophthalmology, Johns Hopkins School of Medicine, Baltimore, MD *CR

4145 — B0368 Disease-specificity and internationalisation of ophthalmic quality of life item banks. Konrad Pesudovs¹, J. Khadka¹, M. Prem Senthil¹, H. Kandel¹, S. Kumaran¹, E. Fenwick², E. L. Lamoureux². ¹NHMRC Ctr Clin Eye Res/Optomety, Flinders University SA, Adelaide, South Australia, Australia; ²Singapore Eyr Research Institute, Singapore, Singapore

4146 — B0369 Amblyopia and strabismus-specific quality of life 'item banks' for adults living in Australia and India – item generation and comparison. Sheela Evangeline Kumaran¹, J. Khadka¹, R. Baker¹, A. Rakshit^{2,3}, J. R. Hussaindeen^{2,3}, M. Swaminathan³, E. Fenwick^{4,5}, E. Lamoureux^{4,5}, K. Pesudovs¹. ¹Optometry, Flinders University, Adelaide, South Australia, Australia; ²Elite School of Optometry, Chennai, India; ³Sankara Nethralaya, Medical Research Foundation, Chennai, India; ⁴Centre for Eye Research Australia, University of Melbourne; the Royal Victorian Eye and Ear Hospital, Melbourne, Victoria, Australia; ⁵Singapore Eye Research Institute, Singapore National Eye Centre; Duke-NUS, Singapore, National University of Singapore, Singapore, Singapore

4147 — B0370 Development and validation of a new measure of convenience in refractive error. Himel Kandel, J. Khadka, K. Pesudovs. Optometry, Flinders University, Adelaide, South Australia, Australia

4148 — B0371 The New Pediatric Vision Questionnaire (PVQ) for Assessing Health-Related Quality of Life and Functional Vision in Children with Eye Conditions. David A. Leske¹, S. R. Hatt¹, S. M. Wernimont¹, Y. S. Castañeda², L. Liebermann¹, C. S. Cheng-Patel², E. E. Birch^{2,3}, J. M. Holmes¹. ¹Ophthalmology, Mayo Clinic, Rochester, MN; ²Retina Foundation of the Southwest, Dallas, TX; ³Ophthalmology, University of Texas Southwestern Medical Center, Dallas, TX

4149 — B0372 Discovering drug and retinal disease association patterns from electronic medical records: a text mining approach. Shazia Dharsi^{1,2}, Y. Peng², R. Leaman², E. Y. Chew¹, Z. Lu². ¹NEI, National Institutes of Health, Bethesda, MD; ²NCBI, National Institutes of Health, Bethesda, MD

4150 — B0373 Analysis of Longitudinal Ophthalmologic Continuous Outcome Data Using the Eye as the Unit of Analysis. bernard rosner^{1,2}, R. Glynn¹, M. Maguire³, G. Ying³. ¹Medicine, Brigham and Women's Hospital, Boston, MA; ²Harvard Medical School, Boston, MA; ³University of Pennsylvania, Philadelphia, PA

4151 — B0374 A 'universal' calculator to link data across myopia epidemiology studies. Noel A. Brennan¹, X. Cheng¹, Y. Toubouti¹, M. A. Bullimore². ¹R&D, Johnson & Johnson Vision Care, Jacksonville, FL; ²Marshall B Ketchum University, Fullerton, CA *CR

4152 — B0375 Investigation of hearing loss as a modifier of visual field damage with regards to functional outcomes in glaucoma. Ayodeji E. Sotimohin, A. Mihailovic, D. S. Friedman, P. Y. Ramulu. Glaucoma Center of Excellence, Johns Hopkins University School of Medicine/Wilmer Eye Institute, Baltimore, MD

4153 — B0376 The Impact of International Classification of Diseases, 10th revision (ICD-10) after the Centers for Medicare and Medicaid Services (CMS) Grace Period. Justin Hellman, K. Leung, M. C. Lim, C. Blount, G. Yiu. Ophthalmology, UC Davis, Sacramento, CA

4154 — B0377 A Sophisticated Algorithm to Search Electronic Health Records to Identify Persons with Ocular Diseases. Joshua D. Stein^{1,2}, M. Rahman¹, S. Kamat¹, M. Shah¹, J. R. Ehrlich¹, E. Boese¹, J. Cowall¹, C. Andrews¹, D. Hanauer¹. ¹Kellogg Eye Center/Ophthal, University of Michigan, Ann Arbor, MI; ²Health Management & Policy, University of Michigan School of Public Health, Ann Arbor, MI

4155 — B0378 Electronic health records in ophthalmology: source and method of documentation. Bradley Henriksen, I. Goldstein, M. Hribar, M. F. Chiang. Ophthalmology, Casey Eye Institute, Oregon Health and Science University, Beaverton, OR *CR

4156 — B0379 Changes in Electronic Health Record use time over a decade of use. Isaac Goldstein, M. Hribar, M. F. Chiang. Oregon Health and Science University, Davis, CA *CR

4157 — B0380 Canadian Ophthalmic Practitioners Ergonomics (COPE) Study. Femida Kherani^{1,2}, A. Kherani¹, E. Sanders^{4,1}, L. Bellan³. ¹University of Calgary, Calgary, Alberta, Canada; ²University of British Columbia, Vancouver, British Columbia, Canada; ³University of Manitoba, Winnipeg, Manitoba, Canada; ⁴Alberta Health Services, Calgary, Alberta, Canada

4158 — B0381 Parental Decision-Making Processes in Pediatric Trial Enrollment: Recommendations for Informed Consent in Genetic Eye Disease Research for Cell Therapies. Stephanie Brooks¹, T. Bubela². ¹School of Public Health, University of Alberta, Edmonton, Alberta, Canada; ²Faculty of Health Sciences, Simon Fraser University, Vancouver, British Columbia, Canada

Exhibit Hall C0001-C0059

Wednesday, May 02, 2018 8:15 AM-10:00 AM

Immunology/Microbiology

421 Clinical Uveitis and Scleritis: Epidemiology, Diagnosis and Outcomes

Moderators: Bahram Bodaghi and Eric B. Suhler

4159 — C0001 Ocular Autoimmune Systemic Inflammatory Infectious Study (OASIS) - Report 2: Investigations, Complications And Treatment. Rebecca Low^{1,2}, E. Chen¹, H. Mi², M. Bin Ismail², S. H. su_ling_ho@ttsh.com.sg², W. Lim^{2,3}, S. Teoh^{2,3}, R. Agrawal^{2,1}. ¹Yong Loo Lin School of Medicine, Singapore, Singapore; ²Tan Tock Seng Hospital, Singapore, Singapore; ³Eagle Eye Centre, Singapore, Singapore

4160 — C0002 Etiology and longitudinal outcomes of panuveitis in an inner city underserved population. Mashal Akhter, X. Lin. Kresge Eye Institute, Detroit, MI

4161 — C0003 Causes And Epidemiologic Characteristics Of Uveitis In A Public Hospital Of Buenos Aires, Argentina. Maria Eugenia Inga, J. Cesari, P. Franco. Hospital Santa Lucía, Buenos Aires, Argentina

4162 — C0004 Changes in Etiologies of Uveitis in Japan. Keiko Fujii, Y. Usui, K. Tsubota, A. Umazume, R. Mitsuhashi, T. Kezuka, j. sakai, H. Goto. Tokyo Medical University Hospital, Shinjyuku, Japan

4163 — C0005 Clinical features and visual outcome of uveitis in children and adolescents. Marie Kitano¹, R. Tanaka¹, T. Kaburaki¹, H. Nakahara¹, H. Izawa^{1,2}, M. Takamoto^{1,3}, Y. Fujino^{1,4}. ¹The University of Tokyo, Tokyo, Japan; ²National Cancer Center Japan, Tokyo, Japan; ³Saitama Red Cross Hospital, Tokyo, Japan; ⁴JCHO Tokyo Shinjuku Medical Center, Tokyo, Japan

4164 — C0006 Frequencies of retinal arteritis and phlebitis in the patients with infectious and non-infectious uveitis. Hisako Ono, T. Kaburaki, R. Tanaka, H. Nakahara, J. Tanaka, M. Takamoto, Y. Fujino, M. Aihara. Ophthalmology, The University of Tokyo, Bunkyo, Tokyo, Japan

4165 — C0007 Reclassifying Idiopathic Uveitis: Lessons from a Tertiary Uveitis Center. Erick Rivera-Grana¹, R. Choi¹, J. T. Rosenbaum^{1,2}. ¹Casey Eye Institute, Oregon Health and Science University, Portland, OR; ²Legacy Devers Eye Institute, Portland, OR

Wednesday Posters
8:15 am – 10:00 am

4166 — C0008 Preeclampsia, the risk of noninfectious uveitis among postpartum females A 17-year retrospective matched-cohort study.

Wei-Dar Chen¹, Y. Yang^{2,3}, C. Lee⁴, L. Lai¹.

¹Ophthalmology, Chiayi Chang Gung Memorial Hospital, Tainan city, Taiwan; ²Traditional Chinese Medicine, Chiayi Chang Gung Memorial Hospital, Chiayi, Taiwan; ³Health Information and Epidemiology Laboratory, Chiayi Chang Gung Memorial Hospital, Chiayi, Taiwan; ⁴Obstetrics and Gynecology, Chiayi Chang Gung Memorial Hospital, Chiayi, Taiwan

4167 — C0009 Epidemiology of Anterior Uveitis in Metropolitan Melbourne. Jason Tan¹, E. Zhu¹, C. Hart¹, S. Rogers¹, L. L. Lim^{1,2}.

¹Centre for Eye Research Australia, University of Melbourne, East Melbourne, Victoria, Australia; ²The Royal Victorian Eye and Ear Hospital, East Melbourne, Victoria, Australia *CR

4168 — C0010 Incidence and Prevalence of Episcleritis and Scleritis in Metropolitan Melbourne. Louisa P. Thong^{1,2}, S. Rogers¹, C. Hart³, A. J. Hall³, L. L. Lim¹.

¹Centre for Eye Research Australia, The Royal Victorian Eye and Ear Hospital, University of Melbourne, Melbourne, Victoria, Australia; ²Monash University, Melbourne, Victoria, Australia; ³Department of Ophthalmology, Alfred Health, Melbourne, Victoria, Australia *CR

4169 — C0011 Infectious scleritis – Clinical features, diagnosis and treatment outcome in Indian population. Mamta Agarwal, J. Biswas, L. K. Therese. Medical Research Foundation, Chennai, India, Chennai, India

4170 — C0012 Evaluation of a multiplex Strip PCR examination for infectious uveitis and endophthalmitis: A prospective multi-center study. Satoko Nakano¹, Y. Tomaru², H. Takase³, T. Kubota⁴, M. Mochizuki³, N. Shimizu², S. Sugita⁴.

¹Ophthalmology, Oita University, Yufu-City, Oita, Japan; ²Center for Stem Cell and Regenerative Medicine, Tokyo Medical and Dental University, Tokyo, Japan; ³Department of Ophthalmology & Visual Science, Tokyo Medical and Dental University Graduate School of Medicine and Dental Sciences, Tokyo, Japan; ⁴Laboratory for Retinal Regeneration, Riken Center for Developmental Biology, Kobe, Japan

4171 — C0013 Ophthalmological findings in neuroborreliosis verified by cerebrospinal fluid analysis. Dragana Skiljic^{1,2}, M. Gustavsson³, L. Dotevall³, K. Norrse¹, M. Andersson Grönlund^{2,1}.

¹Department of Ophthalmology, Sahlgrenska University Hospital, Mölndal, Sweden; ²Department of Clinical Neuroscience, Institute of Neuroscience and Physiology, University of Gothenburg, Gothenburg, Sweden; ³Department of Infectious Diseases, Sahlgrenska University Hospital, Gothenburg, Sweden

4172 — C0014 Burden, timing, and outcomes of uveitis from a retrospective cohort of Ebola survivors in Sierra Leone. Matthew J. Vandy^{1,6}, J. Chang², J. Mattia⁴, B. Molle⁵, D. B. Charles², K. Dierberg², J. Shantha⁵, S. Yeh⁵, T. Sesay⁷, P. George⁸, A. K. Chan³, K. Hann², S. Mishra³.

¹Dept of Ophthalmology Connaught Hospital, Sierra Leone National Eye Health Programme, Freetown, Sierra Leone; ²Partners in Health, Freetown, Sierra Leone; ³Division of Infectious Diseases, University of Toronto, Toronto, Ontario, Canada; ⁴Lunsar Eye Hospital, Lunsar, Port Loko, Sierra Leone; ⁵Eye Center, Emory University, Atlanta, GA; ⁶Ministry of Health and Sanitation, Freetown, Sierra Leone; ⁷Port Loko District Health Management Team, Ministry of Health and Sanitation, Port Loko, Sierra Leone; ⁸Port Loko Government Hospital, Port Loko, Sierra Leone

4173 — C0015 Ebola-Associated Bilateral Non-Granulomatous Panuveitis with Tractional Retinal Detachment: A Case Report. Ian Y. Yeung^{3,1}, A. Wallace¹, A. O. Eghrari^{2,1}, J. Larbelee¹, E. Guizie¹, H. N. Sen³, R. Bishop^{3,1}.

¹John F. Kennedy Medical Center, Monrovia, Liberia; ²Wilmer Eye Institute, Johns Hopkins University Hospital, Baltimore, MD; ³National Eye Institute, National Institutes of Health, Bethesda, MD

4174 — C0016 Importance of Early Treatment of Acute Retina Necrosis - A Case Series. Katharina Blobner, M. Maier, C. P. Lohmann, C. Mayer.

Department of Ophthalmology, Technische Universität München, Munich, Germany

4175 — C0017 Characteristics and outcomes of a cohort of primary ocular toxoplasmosis. Rabia Bourkiza¹, B. Girling², A. Rees³, C. Pavestio³, M. Westcott³.

¹vitreo-retina, Moorfields Eye Hospital, London, United Kingdom; ²Queen Mary University of London, London, United Kingdom; ³Moorfields Eye Hospital, London, United Kingdom

4176 — C0018 Choroidal neovascularisation secondary to ocular toxoplasmosis. Thomas Ness, S. Heinzelmann, M. Reich, C. Evers. Eye Center, University of Freiburg, Freiburg, Germany *CR

4177 — C0019 Detection of Monoclonal Immunoglobulin Heavy Chain Gene Rearrangement in Fuchs' uveitis. Hisae Nakahara^{1,2}, T. Kaburaki¹, R. Tanaka¹, J. Matsuda³, M. Takamoto⁴, K. Ohtomo⁴, K. Okinaga⁴, K. Komae⁵, J. Numaga⁵, Y. Fujino⁵, M. Aihara¹.

¹Ophthalmology, University of Tokyo Graduate School of Medicine, Bunkyo-ku, Tokyo, Japan; ²Ophthalmology, Ozenji Park Clinic, Kawasaki-city, Kanagawa, Japan; ³Ophthalmology, Nerima Hikarigaoka Hospital, Nerima-ku, Tokyo, Japan; ⁴Ophthalmology, Tokyo Metropolitan Geriatric Hospital and Institute of Gerontology, Itabashi-ku, Tokyo, Japan; ⁵Ophthalmology, Japan Community Healthcare Organization Tokyo Shinjuku Medical Center, Shinjuku-ku, Tokyo, Japan

4178 — C0020 Supportive role of aqueous humor analysis in the diagnosis and accurate management of Cytomegalovirus anterior uveitis: our experience. Luca De Simone^{2,1}, L. Belloni³, A. Zerbini³, R. Aldigeri⁴, V. Mastrofilippo³, S. Croci³, S. Marchi^{2,5}, A. Sangiovanni², M. Parmeggiani³, L. Fontana⁴, L. Cimino².

¹Ophthalmology, Campus Biomedico, Rome, Italy; ²Ocular Immunology Unit, Azienda USL IRCCS, Reggio Emilia, Reggio Emilia, Italy; ³Clinical Immunology, Allergy, and Advanced Biotechnologies Unit, Diagnostic Imaging and Laboratory Medicine Department, Azienda USL IRCCS, Reggio Emilia, Reggio Emilia, Italy; ⁴Medicine and Surgery Department, University of Parma, Parma, Italy; ⁵Ophthalmology Department, Azienda USL IRCCS, Reggio Emilia, Reggio Emilia, Italy

4179 — C0021 Cytomegalovirus Anterior Uveitis: Characteristics and Outcomes in Caucasian Patients. Sara Touhami¹, L. Qu¹, M. Bozhanova², F. Rozenberg², P. Lehoang¹, B. Bodaghi¹.

¹Ophthalmology, Pitie Salpetriere Hospital, Paris, France; ²Pitie Salpetriere Hospital, Paris, France

4180 — C0022 Cytomegalovirus Anterior Uveitis: Description and Treatment Outcomes in a Tertiary Center in North America. Taniya Bhoopat^{1,2}, J. A. Gonzales¹.

¹Ophthalmology, Proctor foundation, UCSF, San Francisco, CA; ²Ophthalmology, Naresuan University, Muang, Phitsanulok, Thailand

4181 — C0023 Compromised optic nerve head blood flow in cytomegalovirus retinitis. Mayuko Tsuda, H. Keino, M. Nakayama, M. Ando, T. Watanabe, A. A. Okada.

Ophthalmology, Kyorin University, Mitaka, Tokyo, Japan

4182 — C0024 Rise in incidence of CMV retinitis in the HIV-negative population at a tertiary referral centre in Australia. Dean R. Cugley^{1,3}, S. Nowakowski¹, J. Druce², L. L. Lim^{3,1}.

¹Ophthalmology, Royal Victorian Eye & Ear Hospital, East Melbourne, Victoria, Australia; ²Doherty Institute, Victorian Infectious Disease Research Laboratory (VIDRL), Melbourne Health, Melbourne, Victoria, Australia; ³Centre for Eye Research Australia (CERA), University of Melbourne, East Melbourne, Victoria, Australia *CR

4183 — C0025 Clinical Features and Visual Prognosis in Dengue Uveitis in Singapore over 12 Years. Helen Mi¹, M. B. Ismail¹, S. C. Teoh^{2,1}, S. Ho¹, R. Agrawal¹.

¹Ophthalmology Department, National Healthcare Group Singapore, Tan Tock Seng Hospital, Singapore, Singapore; ²Eagle Eye Center, Mount Elizabeth Novena Hospital, Singapore, Singapore

- 4184 — C0026 Clinical characteristics of cytomegalovirus retinitis in human immunodeficiency virus infected patients for recent five years.** Shigeko Yashiro¹, T. Nishijima², Y. Kikuchi², Y. Yamamoto¹, H. Fukushima¹, S. Ichinohe¹, S. Oka². ¹Ophthalmology, National Center for Global Health and Medicine, Tokyo, Japan; ²AIDS Clinical Center, National Center for Global Health and Medicine, Tokyo, Japan
- 4185 — C0027 Testing for human immunodeficiency virus (HIV) in the eye clinic.** Michael Wallace, D. Sahni, E. Peterson, C. Leffler, V. Brar. Medical College of Virginia / Virginia Commonwealth University Department of Ophthalmology, Richmond, VA
- 4186 — C0028 Syphilitic Uveitis as the Presenting Manifestation of Syphilis at a Canadian Tertiary Care Centre.** Harrish Nithianandan³, J. Gao¹, M. Dollin^{1,2}, C. Gottlieb^{1,2}. ¹Ophthalmology, University of Ottawa Eye Institute, Markham, Ontario, Canada; ²Ophthalmology, Ottawa Hospital Research Institute, Ottawa, Ontario, Canada; ³Faculty of Medicine, University of Ottawa, Ottawa, Ontario, Canada
- 4187 — C0029 QuantiFERON-TB Gold Test Results and Clinical Manifestations In New Uveitis Patients at a Tertiary Non-endemic Center.** Shuk Kei Cheng, S. Caplash, I. Thompson, S. Gangaputra, H. N. Sen. Uveitis, National Institute of Health/NEI, DC, WA
- 4188 — C0030 OCT-Angiography Analysis of Macular Flow Density in Patients with non-occlusive Retinal Vasculitis with positive versus negative QuantiFERON®-TB Gold Test.** Nicole Stuebiger, R. Kromer, B. Fuisting, M. Schultheiss. Department of Ophthalmology, University Medical Centre Hamburg-Eppendorf, Hamburg, Hamburg, Germany *CR
- 4189 — C0031 Ocular Tuberculosis in West London (2012-2017): clinical phenotypes and the role of FDG-PET imaging in identifying subclinical tuberculosis.** Charanjit Sethi¹, M. Bhalla¹, L. Martin², G. Russell², O. Kon², M. Stanford¹. ¹Western Eye Hospital, Imperial College Healthcare NHS Trust, London, England, United Kingdom; ²St Mary's Hospital, Imperial College Healthcare NHS Trust, London, United Kingdom
- 4190 — C0032 The severity of ocular inflammation correlates with genomic bacterial load in ocular tuberculosis.** Lei Chi Wang^{1,2}, N. A. Rao^{1,2}. ¹Ophthalmology, USC Roski Eye Institute, Los Angeles, CA; ²Keck School of Medicine of the University of Southern California, Los Angeles, CA
- 4191 — C0033 Revised International Criteria for the Diagnosis of Ocular Sarcoidosis.** Manabu Mochizuki^{1,2}, J. R. Smith³, H. Takase¹, T. Kaburaki³, N. A. Rao⁴. ¹Ophthalmology, Tokyo Med Dental Univ Grad Sch, Bunkyo-Ku, Tokyo, Japan; ²Miyata Eye Hospital, Miyakonojo, Miyazaki, Japan; ³Department of Ophthalmology, Flinders University, Adelaide, South Australia, Australia; ⁴Department of Ophthalmology, USC-Roski Eye Institute, Los Angeles, CA; ⁵Ophthalmology, University of Tokyo School of Medicine, Hongo, Tokyo, Japan
- 4192 — C0034 Validation of Revised International Criteria for the Diagnosis of Ocular Sarcoidosis Proposed by International Workshop on Ocular Sarcoidosis.** Toshikatsu Kaburaki, R. Tanaka, H. Nakahara, J. Tanaka, M. Takamoto, H. Izawa, H. Ono, M. Aihara. Ophthalmology, Univ of Tokyo School of Medicine, Bunkyo-ku, Tokyo, Japan
- 4193 — C0035 Cross-sectional study of sarcoid uveitis diagnostic criteria, disease control and long-term visual outcome.** Xia Ni Wu^{1,2}, R. Niederer^{1,2}, L. Sharief^{1,2}, S. Lightman^{1,2}, O. Tomkins-Netzer^{1,2}. ¹Institute of Ophthalmology, UCL, London, United Kingdom; ²Moorfields Eye Hospital, London, United Kingdom
- 4194 — C0036 A validation study in a single Japanese institute for the revised international criteria for the diagnosis of ocular sarcoidosis proposed by the 6th International Workshops on Ocular Sarcoidosis.** Mari Miyauchi^{1,2}, H. Takase², M. Tanaka³, M. Mochizuki², K. Ohno-Matsui². ¹Ophthalmology, Tokyo Metropolitan Health and Medical Treatment Corporation, Tama-Hokubu Medical Center, Tokyo, Japan; ²Ophthalmology & Visual Science, Tokyo Medical and Dental University, Tokyo, Japan; ³Ophthalmology, Tokyo Metropolitan Cancer and Infectious Diseases Center, Komagome Hospital, Tokyo, Japan
- 4195 — C0037 Diagnostic value of serum soluble interleukin-2 receptor level in Japanese patients with ocular sarcoidosis.** Miyuki Tanaka^{1,2}, H. Takase², M. Miyauchi³, M. Mochizuki², K. Ohno-Matsui². ¹Ophthalmology, Tokyo Metropolitan Cancer and Infectious Diseases Center, Komagome Hospital, Tokyo, Japan; ²Ophthalmology & Visual Science, Tokyo Medical and Dental University, Tokyo, Japan; ³Ophthalmology, Tokyo Metropolitan Health and Medical Treatment Corporation, Tama-Hokubu Medical Center, Tokyo, Japan
- 4196 — C0038 Ocular manifestations of sarcoidosis in a South Florida population.** Diana Laura¹, K. Fan¹, R. Goldhardt¹, M. Farhangi¹, M. Mirsaedi², A. Galor¹. ¹Ophthalmology, Bascom Palmer Eye Institute, Miami, FL; ²Medicine, University of Miami, Miami, FL
- 4197 — C0039 Epidemiology and Long Term Outcomes of Intermediate Uveitis Treated with Systemic Immunomodulatory Therapy.** Elliot S. Crane², M. Shum², E. Kim², J. Kim², A. B. Crane², D. S. Chu^{2,1}. ¹Metropolitan Eye Research and Surgery Institute, Palisades Park, NJ; ²Institute of Ophthalmology and Visual Science, Rutgers New Jersey Medical School, Newark, NJ *CR
- 4198 — C0040 Treatment Modalities and Visual Outcomes in Retinal Vasculitis.** Joseph Christiansen, R. Prinzi, G. O'Keefe. Ophthalmology, Emory University, Atlanta, GA
- 4199 — C0041 Pars plana vitrectomy for the treatment of uveitis.** Christopher R. Henry^{1,2}, M. Becker³, Y. Yongsheng^{4,3}, J. L. Davis³. ¹Retina Consultants of Houston, Houston, TX; ²Blanton Eye Institute, Houston, TX; ³Bascom Palmer Eye Institute, Miami, FL; ⁴Eye Hospital of China Academy of Chinese Medical Sciences, Beijing, China; ⁵Department of Ophthalmology, Triemli Hospital, Zurich, Switzerland
- 4200 — C0042 Causes of vision loss and clinical outcomes over an 18 year period in patients with Vogt-Koyanagi-Harada Disease.** Sophia Zagora^{1,2}, Y. Chen^{1,3}, S. Lightman^{1,3}, O. Tomkins-Netzer^{1,3}. ¹Moorfields Eye Hospital, North Bondi, New South Wales, Australia; ²Ophthalmology, Sydney Eye Hospital, Sydney, New South Wales, Australia; ³Ophthalmology, University College London, London, United Kingdom
- 4201 — C0043 Risk factors for subretinal fibrosis in patients with Vogt-Koyanagi-Harada syndrome.** María F. Golzarri¹, R. Cheja-Kalb², L. E. Concha del Rio³, M. d. Arellanes Garcia². ¹Ophthalmology, Asociación para Evitar la Ceguera en México, Mexico City, Mexico City, Mexico; ²Inflammatory Eye Disease Clinic, Asociación para Evitar la Ceguera en México, Mexico City, Coyoacán, Mexico
- 4202 — C0044 Evaluating the utility of different non-invasive imaging modalities for the diagnosis and monitoring of Birdshot Chorioretinopathy.** Jonathan J. Tsang^{1,2}, R. Morjaria^{1,4}, H. Khan¹, R. Carmichael¹, P. I. Murray^{3,4}, P. A. Keane⁵, A. K. Denniston^{1,3}. ¹Department of Ophthalmology, University Hospitals Birmingham NHS Foundation Trust, Birmingham, United Kingdom; ²School of Optometry, Aston University, Birmingham, United Kingdom; ³Academic Unit of Ophthalmology, Institute of Inflammation & Ageing, University of Birmingham, Birmingham, United Kingdom; ⁴Sandwell & West Birmingham NHS Trust, Birmingham, United Kingdom; ⁵NIHR Biomedical Research Centre for Ophthalmology, Moorfields Eye Hospital NHS Foundation Trust and UCL Institute of Ophthalmology, Birmingham, United Kingdom
- 4203 — C0045 Macular and nasal vascular density in birdshot chorioretinopathy.** Florence Hoogewoud, M. Seminel, A. Morin, C. Bonnet, D. Monnet, A. P. Brezin, E. Bousquet. Ophthalmology, University Hospital Cochin, Paris, Paris, France
- 4204 — C0046 Quantitative Analysis of OCT Angiography findings in Birdshot Chorioretinopathy.** Alejandra Maiz¹, M. Alam¹, P. Doctor², A. Lobo¹, Y. Leiderman¹, J. I. Lim¹, X. Yao¹, P. Bhat¹. ¹Ophthalmology, University of Illinois at Chicago, Chicago, IL; ²Bay View Clinic, Mumbai, India
- 4205 — C0047 Clinical Features of Multiple Evanescent White dot Syndrome of Mexican Population in an Ophthalmological Reference Center.** Alejandro Lopez Garcia Tinajero, Y. Bobadilla Mayorquin, D. Rios Diarte. Instituto de Oftalmología Conde de Valenciana, Mexico City, Mexico

4206 — C0048 Visual acuity recovery following multiple evanescent white dot syndrome (MEWDS) and factors that influence this: results of a very large series. Francesca Bosello¹, M. Westcott¹, G. Casalino^{2,1}, G. Agorogiannis¹, A. Rees¹, C. Pavesio¹. ¹Medical Retina & Uveitis, Moorfields Eye Hospital, London, EC1V 2PD, United Kingdom; ²Ophthalmology, Kingston Hospital NHS Foundation Trust, Kingston upon Thames, KT2 7QB, United Kingdom

4207 — C0049 Evaluation of Subclinical Inflammation in Chronic Vogt-Koyanagi-Harada Disease by Multiple Testing. toshihiko murata, K. Takayama, K. Harimoto, K. Kanda, T. Sato, M. Takeuchi. National Defence Medical College, Namiki, Saitama, Japan

4208 — C0050 Predictive value of genetic testing for inherited retinal diseases in patients with suspected atypical autoimmune retinopathy. Lynn K. Stanwyck, E. Place, J. Comander, R. M. Huckfeldt, L. Sobrin. Ophthalmology, Massachusetts Eye and Ear Infirmary, Boston, MA

4209 — C0051 Correlation of anti-retinal antibodies with clinical outcome measures before and after immunosuppressive treatment in autoimmune retinopathy patients. Kareem Moussa, L. K. Stanwyck, L. Sobrin. Department of Ophthalmology, Harvard Medical School, Massachusetts Eye and Ear Infirmary, Boston, MA

4210 — C0052 Clinical course and characteristics of uveitis associated with metastatic melanoma chemotherapy with Ipilimumab and Nivolumab. Goncalo A. Almeida¹, R. Bernhardt¹, C. O'Hanlon Brown². ¹Eye Ear and Mouth Unit, Maidstone and Tunbridge Wells NHS Trust, Maidstone, Kent, United Kingdom; ²Kent Oncology Centre, Maidstone and Tunbridge Wells NHS Trust, Maidstone, Kent, United Kingdom

4211 — C0053 Effect of combined presence of epiretinal membrane and cystoid macular edema on visual acuity in uveitis. Debarshi Mustafi, B. Do, N. A. Rao. Ophthalmology, USC Roski Eye Institute, Los Angeles, CA

4212 — C0054 Full-field Electroretinographic Changes Among Uveitis Patients with Persistent Fluorescein Angiographic Retinal Vascular Leakage. Benjamin Chaon¹, I. Thompson¹, S. Gangaputra², S. Kodati³, C. Okeagu¹, H. N. Sen¹. ¹National Eye Institute, National Institutes of Health, Bethesda, MD; ²Department of Ophthalmology and Visual Sciences, Vanderbilt University Medical Center, Nashville, TN; ³Department of Ophthalmology, Baylor University College of Medicine, Houston, TX

4213 — C0055 Epivenous trafficking of inflammatory cells during retinal vasculitis: a new finding. Michel Paques, C. Faure, M. Errera. Clinical Investigation Center 1423, Quinze-Vingts Hospital, INSERM, Paris, France

4214 — C0056 A Cross-sectional Observational Study of Nailfold Capillary Morphology in Uveitis. Xuling Chen¹, Y. Chi¹, X. Yao¹, C. Guo¹, J. Zhang¹, J. Li¹, S. Zhang¹, X. Rong¹, L. Yang¹, L. R. Pasquale². ¹Ophthalmology, Peking University First Hospital, Beijing, China; ²Massachusetts Eye and Ear Infirmary, Boston, MA

4215 — C0057 Investigation of the correlation of anterior chamber cell quantification by OCT and corneal pseudoguttata in the setting of anterior uveitis. Doran Spencer, W. R. Freeman. Ophthalmology, Shiley Eye Institute, Univ. of Calif., San Diego, La Jolla, CA

4216 — C0058 Ocular spot fluorometer equipped with a lock-in amplifier for measurement of aqueous flare. Sudhir Rachapalle¹, S. Murugan¹, P. Padmanabhan¹, D. Murthy¹, U. B. Kompella³, S. P. Srinivas². ¹Sankara Nethralaya, Chennai, India; ²Optometry, Indiana University, Bloomington, IN; ³Pharmaceutical Sciences, University of Colorado, Denver, CO

4217 — C0059 Noninfectious Uveitis: Success of CME at Improving Physicians' Knowledge. Susan H. Gitzinger, K. Johnson, S. Smith. Medscape, LLC, Lexington, KY

Exhibit Hall C0060-C0098

Wednesday, May 02, 2018 8:15 AM-10:00 AM

Retina / Low Vision

422 Retinal Detachment: Basic and Clinical Science

Moderators: Ian Han and Amin Kherani

4218 — C0060 Correlations between hsa-miR-148a-3p expression and inflammatory cytokines from eyes with rhegmatogenous retinal detachment. Taichi Tsunekawa, H. Kaneko, H. Terasaki. Nagoya University Graduate School of Medicine, Nagoya, Aichi, Japan

4219 — C0061 An *in-vivo* model of proliferative vitreoretinopathy by intravitreal injection of cells from human-derived PVR membranes in rabbits. Santiago Delgado-Tirado, D. Amarnani, L. A. Kim, J. F. Arboleda-Velasquez. Ophthalmology, Harvard Medical School, Boston, MA

4220 — C0062 PEG-PPG-PCL thermogelling polymer as tamponading agent in non-human primate retinal detachment model. Gopal Lingam^{3,1}, Z. Liu³, B. H. Parikh³, K. Subramanian⁴, R. Lakshminarayanan⁵, V. A. Barathi⁵, P. Zhao², X. Loh⁶, X. Su^{3,5}. ¹Vitreoretinal, Medical Research Foundation, Chennai, India; ²Ophthalmology, National University Hospital, Singapore, Singapore; ³Ophthalmology, National University of Singapore, Singapore, Singapore; ⁴Pathology, vision research foundation, Chennai, India; ⁵Singapore eye research Institute, Singapore, Singapore; ⁶Institute of materials research and engineering, A*STAR, Singapore, Singapore

4221 — C0063 AR-13503, a ROCK inhibitor, reduces rod axon retraction during retinal detachment. Eva Halasz¹, M. A. Zarkin², I. Sugino², E. Townes-Anderson¹. ¹Pharmacology, Physiology, Neuroscience, Rutgers New Jersey Medical School, Newark, NJ; ²Institute of Ophthalmology and Visual Science, Rutgers New Jersey Medical School, Newark, NJ *CR

4222 — C0064 Role of autophagy activation on photoreceptor survival in retinal detachment. Jingyu Yao¹, J. Xiao², L. Jia¹, T. A. Ferguson³, D. N. Zacks¹. ¹Department of Ophthalmology and Visual Science, University of Michigan, Ann Arbor, MI; ²Department of Ophthalmology, Sun Yat-Sen Memorial Hospital, Guangzhou, China; ³Department of Ophthalmology and Visual Sciences, Washington University, St. Louis, MO

4223 — C0065 Ultrastructural analysis of macular reattachment with Optical Coherence Tomography in patients with macula-off retinal detachment. Juan I. Bianchi, U. de Dios Cuadras, R. Matsui. "Conde de Valenciana Foundation" Institute, Mexico City, Mexico

4224 — C0066 Inhibition of retinal injury-induced glial proliferation by intraocular administration of Palbociclib. Rachael E. Warrington, P. J. Coffey, M. J. Radeke, G. P. Lewis. Neuroscience Research Institute, University of California Santa Barbara, Santa Barbara, CA

4225 — C0067 Expression levels of Fibulin-2 (Fbln2) and Fibulin-5 (Fbln5) on subretinal fluid in human primary rhegmatogenous retinal detachment. Ned Davila, L. Hernandez, C. Corredor, J. F. Perez-Vazquez, S. Soberón, A. Enriquez, V. Soberon, D. Meizner, R. Gonzalez-Salinas, H. Quiroz-Mercado. Asociación para evitar la ceguera en México, México, Mexico

4226 — C0068 Toxicity of an endotamponade made by a mixture of perfluorooctane and perfluorohexyloctane evaluated by a new cytotoxicity method. Girish K. Srivastava^{1,2}, I. Fernandez-Bueno^{1,3}, M. L. Alonso-Alonso¹, M. Garcia-Gutierrez¹, R. M. Coco¹, J. Pastor^{1,4}. ¹Instituto Universitario de Oftalmobiología Aplicada (IOBA), Universidad de Valladolid, Valladolid, Spain; ²Centro en Red de Medicina Regenerativa y Terapia Celular, Valladolid, Junta de Castilla y León, Spain; ³Red Temática de Investigación Cooperativa Sanitaria (RETICS), Oftared, Instituto de Salud Carlos III, Ministerio de Economía y Competitividad, Madrid, Spain; ⁴Departamento de Oftalmología, Hospital Clínico Universitario, Valladolid, Spain

4227 — C0069 The relationship between retinal sensitivity and retinal structure in chronic central serous chorioretinopathy. satoru kanda, M. Aihara, R. Obata, A. Sugiura, S. Tsuneyoshi, T. Inoue. Ophthalmology, Tokyo Univ, Tokyo, Japan

4228 — C0070 Feasibility of using magnetic nanoparticle-bioadhesive compound to repair experimental retinal detachment. Yong-Sok Ji, J. Jang, K. Yoon, S. Park. Ophthalmology, Chonnam National University Medical School and Hospital, Gwangju, Korea (the Republic of)

- 4229 — C0071 Biomarkers in Swept-Source Optical Coherence Tomography for visual prognosis after primary rhegmatogenous retinal detachment repair.** Luis C. Escaf^{1,2}, J. D. Arias², A. T. Hoyos², J. Larrea Gonzalez², m. I. corrales², E. Viteri². ¹CIRVO, Clinica Oftalmologica del Caribe, Barranquilla, Atlantico, Colombia; ²Ophthalmology, FOSCAL Internacional, Floridablanca, Colombia
- 4230 — C0072 Visual Outcomes for Patients with Primary Macula-Off Rhegmatogenous Retinal Detachment in a Colorado Cohort.** Matthew D. Geiger, A. M. Lynch, J. L. Patnaik, M. V. Trinh, S. Oliver, M. T. Mathias, A. G. Palestine, T. J. Slingsby, E. R. Williams, J. S. Snitzer, N. Mandava. *Ophthalmology, The University of Colorado, Aurora, CO*
- 4231 — C0073 Evaluation of adjustable postoperative position after pars plana vitrectomy and gas tamponade for primary rhegmatogenous retinal detachment.** Kiichiro Kusaba, k. tsuboi, T. Handa, Y. Shiraki, T. Kataoka, M. Kamei. *Ophthalmology, Aichi medical university, Nagakute, Aichi, Japan*
- 4232 — C0074 Impact of Intraoperative OCT Parameters on Anatomic and Visual Outcomes in Primary Macula-Involving Retinal Detachments from the PIONEER Study.** Joseph R. Abraham^{1,2}, S. Srivastava², J. Reese², J. P. Ehlers². ¹Cleveland Clinic Lerner College of Medicine of Case Western Reserve University, Cleveland, OH; ²Ophthalmology, Cleveland Clinic Cole Eye Institute, Cleveland, OH *CR
- 4233 — C0075 Real-World Evidence Based on the Results of a Multicenter Study in Japan of Surgical Procedures for Young Japanese Patients with Rhegmatogenous Retinal Detachment.** Ingen Shu¹, H. Ishikawa¹, H. Nishikawa², S. Morikawa³, T. Sakamoto⁴, M. Kondo⁵, N. Iwasaki⁶, T. Toibana⁷, Y. Takamura⁸, M. Shimura⁹, Y. Sakurai¹⁰, F. Gomi¹. ¹Ophthalmology, Hyogo College of Medicine, Nishinomiya, Hyogo, Japan; ²Center for Clinical Research and Education, Hyogo College of Medicine, Nishinomiya, Japan; ³Ophthalmology, Tsukuba University, Tsukuba, Ibaraki, Japan; ⁴Ophthalmology, Kagoshima University, Kagoshima, Japan; ⁵Ophthalmology, Mie University, Tsu, Japan; ⁶Ophthalmology, Sapporo City General Hospital, Sapporo, Japan; ⁷Ophthalmology, Tokushima University, Tokushima, Japan; ⁸Ophthalmology, Fukui University, Fukui, Japan; ⁹Ophthalmology, Tokyo Medical University Hachioji Hospital, Hachioji, Japan; ¹⁰Ophthalmology, National Defense Medical College, Tokorozawa, Japan
- 4234 — C0076 Ultra-wide-field autofluorescence imaging of retinal detachment compared to retinoschisis.** Jennifer B. Nadelmann¹, M. Gupta², S. Kiss², D. J. D'Amico², A. Orlin². ¹Albert Einstein College of Medicine, Woodbridge, CT; ²Weill Cornell Medical College, New York, NY
- 4235 — C0077 Preoperative OCT images in macular-off rhegmatogenous retinal detachment.** Kazuhiko Umazume, Y. Usui, Y. Wakabayashi, M. Shimura, H. Goto. *Ophthalmology & Visual Sciences, Tokyo Medical University, Tokyo, Tokyo, Japan*
- 4236 — C0078 Laser retinopexy for retinal tears: clinical course and outcomes.** Robert Garoon, H. W. Flynn. *Ophthalmology, Bascom Palmer Eye Institute, Miami, FL*
- 4237 — C0079 Comparing the Outcomes for Repair of Rhegmatogenous Retinal Detachment in Patients with and without Posterior Vitreous Detachment.** Yao Wang¹, C. Ryan², O. Yasin³, W. Parke², E. Ryan². ¹Dept. of Ophthalmology and Visual Neurosciences, University of Minnesota, Minneapolis, MN; ²VitreoRetinal Surgery, PA, Minneapolis, MN; ³Dept. of Internal Medicine, Mayo Clinic, Rochester, MN
- 4238 — C0080 Short-term perfluoro-n-octane tamponade for complex retinal detachment.** Shunji Kusaka², D. Tsujioka², K. Kuniyoshi¹, K. Sugioka¹, Y. Shimomura¹. ¹Ophthalmology, Kindai University Faculty of Medicine, Osaka-Sayama, Osaka, Japan; ²Ophthalmology, Kindai University Sakai Hospital, Sakai, Osaka, Japan
- 4239 — C0081 Retrospective Comparison of 27-Gauge and 25-Gauge Microincision Vitrectomy Surgery for the Treatment of Primary Rhegmatogenous Retinal Detachment.** Jie Li^{1,2}, F. Li², S. Liu², J. Zhong². ¹University of Electronic Science and Technology of China, Chengdu, Sichuan, China; ²Ophthalmology, Hospital of University of Electronic Science and Technology of China and Sichuan Provincial People's Hospital, Chengdu, Sichuan, China
- 4240 — C0082 Choice of Primary Rhegmatogenous Retinal Detachment Repair Method among Commercially-insured Patients, 2003-2016.** Mary-Grace Reeves¹, S. Pershing^{2,3}, A. Afshar⁴. ¹Stanford University School of Medicine, Stanford, CA; ²Department of Ophthalmology, Stanford University School of Medicine, Byers Eye Institute, Stanford, CA; ³Veterans Affairs Palo Alto Health Care System, Palo Alto, CA; ⁴Department of Ophthalmology, University of California, San Francisco, San Francisco, CA
- 4241 — C0083 The mechanism study and biomarker screening of vitreous for rhegmatogenous retinal detachment associated with choroidal detachment.** zhiheng Wu. Wuxi No.2 People's Hospital, Wuxi, China
- 4242 — C0084 Changes in aniseikonia and influencing-factors following successful macula-off retinal detachment surgery.** Tomoya Murakami, F. Okamoto, Y. Sugiura, Y. Okamoto, T. Hiraoka, T. Oshika. *University of Tsukuba, Tsukuba, Ibaraki, Japan*
- 4243 — C0085 A primate model of sustained retinal detachment.** Chintan Patel¹, J. Attwood¹, D. G. Vavvas², M. S. Lawrence¹, D. N. Zacks³. ¹RxGen Inc., New Haven, CT; ²Massachusetts Eye and Ear Infirmary, Harvard Medical School, Boston, MA; ³Kellogg Eye Center, University of Michigan, Ann Arbor, MI
- 4244 — C0086 Impact of unrestricted postoperative head positioning on outcomes of pars plana vitrectomy for primary rhegmatogenous retinal detachment repair.** Mohamed K. Soliman^{1,2}, H. McDonald¹, H. Nithianandan¹, N. Chen¹, K. Esmail¹, R. Tuli¹. ¹Department of Ophthalmology, University of Ottawa, Ottawa, Ontario, Canada; ²Department of Ophthalmology, Faculty of Medicine, Assiut University, Assiut, Egypt
- 4245 — C0087 Use of a Drainage Retinotomy in Rhegmatogenous Retinal Detachment Surgery.** Rahul Komati, N. Farley, D. Brill, A. Sangave, N. Kumar, U. R. Desai. *Ophthalmology, Henry Ford Health System, Detroit, MI*
- 4246 — C0088 Ultra-widefield fundus autofluorescence imaging findings may aid in differential diagnosis of rhegmatogenous retinal detachment, retinoschisis and retinoschisis-related retinal detachment.** Jesintha Navaratnam, P. Salvanos, R. Bragadottir. *Department of Ophthalmology, Oslo University Hospital, Oslo, Norway*
- 4247 — C0089 Advantages of endoscopy-assisted vitrectomy for silicone oil removal in complex retinal detachments.** Natalia Vila¹, R. Ajan², A. Dirani², E. Rampakakis^{3,2}, F. Rezende². ¹Ophthalmology, McGill University, Montreal, Quebec, Canada; ²Université de Montréal, Montreal, Quebec, Canada; ³Statistics, JSS, Montreal, Quebec, Canada
- 4248 — C0090 Surgical Success and Functional Outcomes of Failed Pneumatic Retinopexy for Primary Rhegmatogenous Retinal Detachment.** Zaid Mammo¹, R. Martens², A. Merkur², A. Kirker², D. Albani², C. De Moraes¹, S. Chang¹, D. Maberley². ¹Ophthalmology, Columbia University, New York, NY; ²Ophthalmology and Visual Sciences, University of British Columbia, Vancouver, British Columbia, Canada
- 4249 — C0091 Optical Coherence Tomography Angiography findings in patients with Fabry's disease.** Joel Baur¹, M. Al-Sheikh¹, D. Barthelmes¹, A. Nowak², C. Böni¹, S. A. Zweifel¹. ¹Ophthalmology, University Hospital Zürich, Zürich, Schweiz, Switzerland; ²University Hospital Zürich, Zürich, Schweiz, Switzerland
- 4250 — C0092 Characterization of central serous chorioretinopathy associated with subretinal fibrin.** Agustina C. Palacio^{1,2}, S. Inchauste^{1,2}, e. dodds^{1,2}. ¹Consultores Oftalmologicos, CABA, Argentina; ²Hospital fernandez, CABA, Argentina
- 4251 — C0093 Comparison of Residual Subfoveal Fluid by Intraoperative Optical Coherence Tomography After Macula Involving Rhegmatogenous Retinal Detachment Repair Using Direct Drainage, Drainage Retinotomy, or Perfluoro-n-Octane.** Anthony Obeid, D. Ehmman, M. Adam, S. Kasi, M. Klufas, J. Hsu, S. Mehta, A. Chiang, S. Garg, O. Gupta. *Wills Eye Hospital, Philadelphia, PA*

4252 — C0094 Macular Hole After Rhegmatogenous Retinal Detachment Repair.

Rayan Alshareef¹, N. Nashki², G. Williams¹, A. Kherani¹. ¹Ophthalmology, University Of Calgary, Calgary, Alberta, Canada; ²Medical school, University of Calgary, Calgary, Alberta, Canada

4253 — C0095 Acute horseshoe retinal tears: patient characteristics and outcomes after laser treatment.

Lediana Goduni¹, E. Tsui¹, K. J. Wald^{1, 2}. ¹Ophthalmology, NYU Langone Health, New York, NY; ²Retina Associates of New York, New York, NY

4254 — C0096 Suprachoroidal Buckling Technique for Rhegmatogenous Retinal Detachment repair.

Nassim Abreu^{1, 2}. ¹Vitreous and Retina, Centro Cristiano de Servicios Medicos, Santo Domingo, Dominican Republic; ²Vitreous and Retina, Centro de Oftalmología y Glaucoma, Santo Domingo, Dominican Republic

4255 — C0097 Comparison of combined vitrectomy and retinectomy with and without endoscopy for rhegmatogenous retinal detachment with proliferative vitreoretinopathy.

John Campo¹, L. Campo¹, R. Tandias¹, P. Sun^{1, 2}, J. G. Arroyo¹. ¹Division of Ophthalmology, Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, MA; ²Department of Ophthalmology, First Hospital of China Medical University, Shenyang, China

4256 — C0098 Fundus Autofluorescence and Optical Coherence Tomography correlation in patients with macula-off retinal detachment and following surgical retinal reattachment.

Ursula I. Martínez, J. I. Bianchi, U. I. De Dios, R. Matsui. retina, Instituto de oftalmología Conde de Valenciana, Mexico City, Mexico City, Mexico

Exhibit Hall C0128-C0167

Wednesday, May 02, 2018 8:15 AM-10:00 AM

Retina / Low Vision

423 Retinal vascular diseases I (excluding diabetes)

Moderators: Michael S. Ip and Judy E. Kim

4257 — C0128 Investigation of the therapeutic effect of adrenomedullin on central retinal vein occlusion.

Kazutaka Hirabayashi^{1, 2}, T. Murata¹, Y. Iesato¹, A. Imai¹, Y. Toriyama¹, M. Tanaka^{1, 2}, T. Sakurai², A. Kamiyoshi², Y. Ichikawa-Shindo², H. Kawate², M. Tanaka², A. Yamauchi^{2, 3}, T. Shindo². ¹Ophthalmology, Shinshu univ., Matsumoto, Nagano, Japan; ²Cardiovascular research, Shinshu univ., Matsumoto, Nagano, Japan; ³Japan Bio Products Co., Kurume, Fukuoka, Japan

4258 — C0129 Short-term prospective study of intravitreal ranibizumab for macular edema secondary to central retinal vein occlusion.

Eiko Tsuiki¹, K. Suzuma², M. Matsumoto¹, T. Kitaoka¹. ¹Ophthalmology & Visual Sciences, Nagasaki University, Nagasaki, Japan; ²Department of Ophthalmology and Visual Sciences, Kyoto University Graduate School of Medicine, Kyoto, Japan *CR, ✗

4259 — C0130 A retrospective comparison of aflibercept and ranibizumab in the management of macular oedema secondary to retinal vein occlusion.

Sandro Di Simplicio, J. Hogg. Vitreoretinal Service, Royal Victoria Infirmary, Newcastle, England, United Kingdom

4260 — C0131 Retinal blood flow following treatment of ischemic central retinal vein occlusion with anti-VEGF therapy and pan-retinal photocoagulation.

Makiko Matsumoto¹, K. Suzuma², E. Tsuiki¹, T. Kitaoka¹. ¹Ophthalmology, Nagasaki Univ School of Medicine, Nagasaki, Nagasaki, Japan; ²Department of Ophthalmology and Visual Sciences, Kyoto University Graduate School of Medicine, Kyoto, Japan, Kyoto, Japan

4261 — C0132**The extent and visual acuity outcome in disorganization of the inner retinal layers following resolution of macular edema under different treatment modalities.**

Mahdi Rostamizadeh, H. Khalaf, V. H. Gonzalez. Valley Retina Institute, McAllen, TX *CR, ✗

4262 — C0133 Evaluate of retinal exudate of branch retinal vein occlusion with OCT angiography.

Shigehiro Iwabuchi¹, T. Kaneko², T. Kurioka¹, K. Yoshida¹, A. Hirano¹, Y. Asano¹, T. Sugita². ¹Ophthalmology, Showa university Kototoyosu Hospital, Koto-ku, Tokyo, Japan; ²Sugita Eye Clinic, Tokyo, Tokyo, Japan

4263 — C0134 Vasoactive factors and chorioretinal blood flow in spontaneous hypertensive rats.

Teruyo Kida, H. Oku, T. Horie, T. Ikeda. Ophthalmology, Osaka Medical College, Takatsuki, Osaka, Japan

4264 — C0135 Optical Coherence Tomography Angiography (OCTA) in Retinal Vein Occlusion following Anti-Vascular Endothelial Growth Factor (VEGF) Therapy for Retinal Edema.

Swetapadma Tripathy, H. T. Le, A. Fawzi, J. Liu, M. Gill. Northwestern University Feinberg School of Medicine, Chicago, IL

4265 — C0136 Macular fibrosis in unilateral Coats' Disease on Segmented Swept Source Optical Coherence Tomography Angiography-new information on morphology and pathophysiology.

Katarzyna M. Chwiejczak², S. Biswas^{2, 1}, E. Tsamis^{2, 3}, P. E. Stanga^{2, 1}. ¹Division of Evolution and Genomic Sciences, School of Biological Sciences, Faculty of Biology, Medicine and Health, The University of Manchester, Manchester Academic Health Science Centre,, Manchester, United Kingdom; ²Manchester Vision Regeneration (MVR) Lab at Manchester Royal Eye Hospital & NIHR/Wellcome Trust, Manchester, United Kingdom; ³Division of Pharmacy and Optometry, School of Health Sciences, Manchester, United Kingdom *CR

4266 — C0137 Do Static Retinal Vessel Diameters Compliment Cardiovascular Risk Calculations?

Christian French, R. Heitmar. Department of Optometry & Vision Science, Aston University, Birmingham, United Kingdom

4267 — C0138 Prognosis of eyes with supernormal flicker ERG amplitudes in eyes with CRVO.

Ryohei Miyata², K. Kato², H. Matsubara², M. Kozawa², Y. Matsui¹, M. Sugimoto², M. Kondo². ¹Okanami General Hospital, Iga, Mie, Japan; ²Mie Univ Graduate School of Med, Tsu, Mie, Japan *CR

4268 — C0139 Two year results of intravitreal ranibizumab injection using a treat and extend regimen to treat macular edema due to branch retinal vein occlusion.

Mika Hosogi, Y. Morizane, S. Kimura, M. Hosokawa, H. Masayuki, S. doi, S. Toshima, K. Takahashi, Y. Kanzaki, A. Fujiwara, F. Shiraga. Okayama University Hospital, Okayama city, Japan

4269 — C0140 Influence of intraretinal hemorrhage on visual outcome after the displacement of submacular hemorrhage due to ruptured retinal arterial macroaneurysm.

Shinichiro doi, S. Kimura, Y. Morizane, M. Hosokawa, H. Masayuki, S. Toshima, K. Takahashi, Y. Kanzaki, A. Fujiwara, M. Hosogi, F. Shiraga. Okayama University Graduate School of Medicine, Dentistry and Pharmaceutical Sciences, Okayama, Japan

4270 — C0141 Prevalence and Onset of Pediatric Sickle Cell Retinopathy.

Jonathan Li^{1, 2}, L. Bender², G. Ying², G. Binenbaum². ¹UCSF, San Francisco, CA; ²Scheie Eye Institute, Philadelphia, PA

4271 — C0142 Efficacy of combination therapy with arteriovenous sheathotomy without vitrectomy and anti-VEGF injections for BRVO.

Takatoshi Maeno, R. Hashimoto, K. Asou, M. Ubuka, K. Yata, H. Masahara. Ophthalmology, Toho University Sakura Medical Center, Sakura, Chiba, Japan

4272 — C0143 Effect of Bevacizumab vs. Ranibizumab for Macular Edema Due to Retinal Vein Occlusion in Real World Practice, Taiwan Experience.

Yu Ti Teng, P. Lin, Y. Chang, C. Lai, M. Shih, S. Wang. National Cheng Kung University Hospital, Tainan, Taiwan

- 4273 — C0144 Very early effects of intravitreal aflibercept and bevacizumab injections for retinal vein occlusion: comparison of 2 drugs.** Masaki Shibata, Y. Imamura, A. Takeyama, R. Kato, M. Ishida. *Ophthalmology, Teikyo University School of Medicine, University Hospital Mizonokuchi, Kawasaki, Japan*
- 4274 — C0145 Effect of image averaging on quantitative measurements from optical coherence tomography angiography in eyes with branch retinal vein occlusion.** Akihito Uji, Y. Muraoka, M. Ishikura, S. Ooto, A. Tsujikawa. *Ophthalmology, Kyoto University, Kyoto City, Kyoto, Japan *CR*
- 4275 — C0146 Contrast sensitivity in patients with branch retinal vein occlusion following intravitreal ranibizumab injection.** Yoshimi Sugiura, F. Okamoto, T. Murakami, S. Morikawa, T. Hiraoka, T. Oshika. *Department of Ophthalmology, Faculty of Medicine, University of Tsukuba, Tsukuba, Ibaraki, Japan*
- 4276 — C0147 Subclinical macular changes and disease laterality in pediatric Coats' disease determined by quantitative optical coherence tomography angiography.** Roy Schwartz¹, S. Sivaprasad¹, R. Macphhee², P. Ibanez², P. A. Keane¹, M. Michaelides¹, S. Wong². ¹Medical Retina, Moorfields Eye Hospital, London, England, United Kingdom; ²Moorfields Eye Hospital, London, United Kingdom *CR
- 4277 — C0148 Impact of Time to anti-VEGF Intervention on Visual Outcomes for Patients Diagnosed with Retinal Vein Occlusion.** Jessica Hsueh¹, K. Wai¹, F. Conti², R. P. Singh². ¹Case Western Reserve University School of Medicine, Cleveland Heights, OH; ²Cole Eye Institute, Cleveland Clinic, Cleveland, OH *CR
- 4278 — C0149 Retinal Artery Occlusions in Young Adults; a neuro-surgical complication.** Tian Xia, M. A. Zarbin, N. Bhagat. *Ophthalmology and Visual Science, Rutgers New Jersey Medical School, Livingston, NJ *CR*
- 4279 — C0150 Altered expression of G-protein coupled receptor 56 (GPR56) is associated with pathological neovascularization during oxygen-induced retinopathy.** Jose Carlos Rivera^{1,2}, B. Noueihed^{1,3}, S. Chemtob^{2,1}. ¹Ophthalmology, Maisonneuve-Rosemont Hospital, Montreal, Quebec, Canada; ²Pediatrics, Ophthalmology and Pharmacology, CHU Sainte-Justine Research Center, Montreal, Quebec, Canada; ³Pharmacology and Therapeutics, McGill University, Montreal, Quebec, Canada
- 4280 — C0151 Association Between Aqueous VEGF Levels and Clinical Parameters in Ranibizumab Treatment for Eyes with Branch Retinal Vein Occlusion.** Masahiro Miyake, Y. Muraoka, A. Takahashi, Y. Iida-Miwa, T. Murakami, S. Ooto, R. Ghashut, K. Suzuma, A. Tsujikawa, Y. Iida. *Ophthalmology, Kyoto University, Kyoto, Kyoto, Japan *CR*
- 4281 — C0152 Comparison of one injection to three monthly injections of anti-VEGF agent for macular edema associated with branch retinal vein occlusion.** Yu Nagino, T. Tatsumi, T. Oshitari, Y. Takatsuna, M. Arai, E. Sato, S. Yamamoto. *Chiba University Graduate School of Medicine, Chiba, Japan*
- 4282 — C0153 Six-month result of anti-VEGF therapy for macular edema secondary to branch retinal vein occlusion.** Yutaka Kato, A. Ojima, R. Tomita, T. Sekiryu. *Ophthalmology, Fukushima Medical University, Fukushima, Japan *CR, ✗*
- 4283 — C0154 Microcystoid macular changes in association with retinal vein occlusion in eyes with and without glaucoma.** Anibal A. Francone¹, M. Farajzadeh¹, L. Yun¹, K. Nouri-Mahdavi², J. Hubschman¹. ¹Retina Division, Stein Eye Institute, University of California Los Angeles, Los Angeles, CA; ²Glaucoma Division, Stein Eye Institute, University of California Los Angeles, Los Angeles, CA
- 4284 — C0155 Intravitreal Anti-VEGF Injections for Exudative Retinal Arterial Macroaneurysms: Results of an International Multicenter Study.** Julia Sein¹, A. Mansour^{2,4}, R. E. Foster⁶, R. Gallego-Pinazo³, M. M. Moschos⁵, R. Sisk⁶, J. Chhablani⁷, D. Rojanaporn⁸, T. Sujirakul⁸, L. Lima¹¹, L. Wu⁹, A. Charbaji¹⁰, H. Mansour², Y. Patel⁶, S. Gangakhedkar⁷, J. Arevalo¹. ¹Retina, Johns Hopkins University, Baltimore, MD; ²American University of Beirut, Beirut, Lebanon; ³Ophthalmology, University and Polytechnic Hospital La Fe, Valencia, Spain; ⁴Ophthalmology, Rafic Hariri University Hospital, Beirut, Lebanon; ⁵University of Athens, Athens, Greece; ⁶Ophthalmology, University of Cincinnati, Cincinnati, OH; ⁷Ophthalmology, LV Prasad Eye Institute, Hyderabad, India; ⁸Ophthalmology, Mahidol University Faculty of Medicine, Bangkok, Thailand; ⁹Asociados de Macula Vitreo y Retina de Costa Rica, San Jose, Costa Rica; ¹⁰Statistics and Research Methodology, Lebanese American University, Beirut, Lebanon; ¹¹Federal University of Sao Paulo, San Paulo, Brazil
- 4285 — C0156 Parafoveal retinal sensitivity in branch retinal vein occlusion after anti-VEGF therapy.** Ryutarō Tomita, A. Ojima, Y. Kato, T. Sekiryu. *Ophthalmology, Fukushima Medical University, Fukushima, Fukushima, Japan *CR, ✗*
- 4286 — C0157 Aflibercept versus ranibizumab for cystoid macular oedema secondary to central retinal vein occlusion.** Michael Karamelas, J. Waxman, F. Barampouti. *Ophthalmology, West Herts NHS Trust, London, United Kingdom *CR*
- 4287 — C0158 Aflibercept versus bevacizumab and/or ranibizumab for recurrent macular edema secondary to central retinal vein occlusion.** Vaidehi Dedania, C. Ozgonul, C. G. Besirli. *Ophthalmology and Visual Sciences, Kellogg Eye Center/University of Michigan, New York, NY*
- 4288 — C0159 Effect of Retinal Nonperfusion on Two-Year Outcomes of Ranibizumab Treatment for Eyes with Branch Retinal Vein Occlusion.** Akitaka Tsujikawa, Y. Muraoka, S. Ooto, Y. Iida, K. Suzuma, T. Murakami, M. Miyake, R. Ghashut, Y. Iida-Miwa. *Ophthalmology and Visual Sciences, Kyoto University Graduate School of Medicine, Kyoto, Kyoto, Japan *CR*
- 4289 — C0160 Disorganized Retinal Inner Layers in Predicting Visual Acuity in Patients with Retinal Vein Occlusion.** Michael M. Han¹, F. Conti², F. Q. Silva², R. P. Singh², A. S. Babiuch². ¹School of Medicine, Case Western Reserve University, Los Angeles, CA; ²Retina, Cole Eye Institute - Cleveland Clinic, Cleveland, OH *CR
- 4290 — C0161 Correlation between fibronectin, connective tissue growth factor and periostin in preretinal fibrovascular proliferation.** Yuki Kubo, S. Yoshida, Y. Fujii, Y. Kobayashi, T. Nakama, K. Ishikawa, S. Nakao, T. Hisatomi, Y. Ikeda, T. Ishibashi, K. Sonoda. *Ophthalmology, Kyushu University, Fukuoka, Fukuoka, Japan*
- 4291 — C0162 Baseline Choroidal Thickness as a Predictor for Treatment Outcomes in Branch Retinal Vein Occlusion.** Nadim Rayess¹, E. Rahimy², G. Ying³, M. Pefkianaki¹, C. Regillo⁴, a. ho⁴, J. Hsu¹. ¹USC Roski Eye Institute, Los Angeles, CA; ²Palo Alto Retina Group, Palo Alto, CA; ³Scheie Eye Institute, Philadelphia, PA; ⁴Wills Eye Institute, Philadelphia, PA *CR
- 4292 — C0163 Efficacy of Initial Versus Delayed vPDT Combination With Conbercept in Patients With Symptomatic PCV: A Randomized Clinical Trial.** Zuhua Sun, x. liu. *Retina Department, School of Ophthalmology & Optometry and Eye Hospital, Wenzhou Medical University, Wenzhou, Zhejiang, China ✗*
- 4293 — C0164 Longitudinal Study of Peripapillary and Temporal Macular Thinning in Sickle-Cell Hemoglobinopathies.** Alisa T. Thavikulwat, T. S. Vajaranant, J. I. Lim. *Ophthalmology and Visual Sciences, University of Illinois at Chicago, Chicago, IL *CR*
- 4294 — C0165 Efficacy of hyperbaric oxygen treatment for central retinal artery occlusion and factors associated with its visual outcome.** Masayuki Yasuda^{1,2}, H. Sato³, K. Hashimoto¹, N. Suzuki², T. Hariya², H. Nakayama⁴, T. Asano², M. Munakata¹, T. Nakazawa². ¹Tohoku Rosai Hospital, Sendai, Japan; ²Tohoku University Graduate School of Medicine, Sendai, Japan; ³Yaotome Sato Hajime Eye Clinic, Sendai, Japan; ⁴JR Sendai Hospital, Sendai, Japan
- 4295 — C0166 Corneal biochemical analysis and relationship between as needed intravitreal anti-VEGF injections in patients with Angioid Streaks.** Shotaro Asano, K. Nakajima, K. Kure, K. Azuma, K. Shimizu, H. Murata, T. Inoue, R. Obata, M. Aihara, R. Asaoka. *Ophthalmology, University of Tokyo, Tokyo, Tokyo, Japan*

4296 — C0167 Presumed Central Retinal Vein Occlusion with Cystoid Macular Edema in Patients with Advanced Glaucoma: A Case Series. *Intira Sukpen, X. Kong, J. M. Stewart. Ophthalmology, University of California, San Francisco, San Francisco, CA*

Exhibit Hall C0271-C0287

Wednesday, May 02, 2018 8:15 AM-10:00 AM

Anatomy and Pathology/Oncology /
Physiology/Pharmacology

424 Ocular complications of therapy: trends, imaging, treatment

Moderators: Anthony B. Daniels and Mary E. Aronow

4297 — C0271 Silicone oil for radiation attenuation in the treatment of small uveal melanoma. *Nicholas Iafe, D. Xu, D. Su, T. McCannel. Stein Eye Institute, Santa Monica, CA *CR*

4298 — C0272 Histologic Findings of Choroidal Vasculopathy in Eyes Enucleated Following Radiation Therapy for Uveal Melanoma. *Sean Platt, D. Salomao, J. Pulido. Mayo Clinic, Rochester, MN*

4299 — C0273 Optical Coherence Tomography Angiographic (OCTA) Changes in Retinal Vasculature after Episcleral Plaque Brachytherapy (EPB) for Choroidal Melanoma. *Brian Toy, D. Mustafi, K. M. Green, A. Shahidzadeh, A. H. Kashani, J. L. Berry. Roski Eye Institute, University of Southern California, Los Angeles, CA *CR*

4300 — C0274 The Effect of Radiation Modality on Retinal Thickness in the Treatment of Uveal Melanoma. *James Bolling. Ophthalmology, Mayo Clinic, Jacksonville, FL*

4301 — C0275 Macular perfusion status in eyes with choroidal melanoma treated with prophylactic ranibizumab after proton beam irradiation. *Mary E. Aronow, J. Wang, A. M. Lane, M. Oxenreiter, E. S. Gragoudas, I. Kim. Mass Eye and Ear, Boston, MA *CR, ✕*

4302 — C0276 Factors predictive of development of cystoid macular edema following plaque radiotherapy of uveal melanoma. *Maria Pefkianaki, A. Mashayekhi, D. Taylor, E. Isaacoff, J. A. Shields, C. L. Shields. Oncology Service, Wills Eye Hospital, Philadelphia, PA*

4303 — C0277 Vein Occlusion after Brachytherapy for Uveal Melanoma: Presentation and Management. *Jason Huang, T. McCannel. Retina, University of California Los Angeles, Los Angeles, CA *CR*

4304 — C0278 Intravitreal Affibercept for Radiation Retinopathy After Iodine-125 Brachytherapy for the Treatment of Choroidal Melanoma. *Nikisha Kothari, T. McCannel. Ophthalmology, University of California Los Angeles, Los Angeles, CA*

4305 — C0279 Secondary glaucoma after stereotactic radiosurgery with gamma-knife and brachytherapy for uveal melanoma. *Cinzia Mazzini, G. Pieretti, N. Santoro, S. Rizzo. Azienda Ospedaliero Universitaria Careggi, Florence, Italy*

4306 — C0280 Effects of orbital external beam radiation therapy on the eye. *Camila M Endo, I. Kusabara, J. Vital Filho. Santa Casa of São Paulo, Sao Paulo, SP, Brazil*

4307 — C0281 Ocular Complications Following Acoustic Neuroma Treatment: Resection versus Radiosurgery. *Neil Shah¹, F. Cocjin¹, W. Gange¹, D. Yoo¹, I. Kirchner^{2,1}. ¹Ophthalmology, Loyola University Medical Center, Forest Park, IL; ²Ophthalmology, Sinai Hospital, Baltimore, MD*

4308 — C0282 Assessment of immune checkpoint inhibitors expression in Uveal Melanoma. *Chen Liang, L. Tang, J. Zhang. Ophthalmology, Si Chuan University, Cheng Du, China*

4309 — C0283 Checkpoint inhibitor-induced ocular inflammation and adverse effects: an institutional case series. *Jenna M. Kim, R. P. Lim. Ophthalmology, Yale New Haven Hospital, New Haven, CT*

4310 — C0284 Ocular Toxicities in Setting of Immune Checkpoint Inhibitors. *Carl W. Noble¹, I. Thompson², B. Chaon², S. Gangaputra³, S. Kodati³, C. Okeagu², T. Magone⁴, H. N. Sen². ¹Ophthalmology, George Washington University, Washington, District of Columbia; ²National Eye Institute, National Institutes of Health, Bethesda, MD; ³Ophthalmology, Vanderbilt University Medical Center, Nashville, TN; ⁴Ophthalmology, Washington D.C. Veterans Hospital, Washington, District of Columbia*

4311 — C0285 Uveitis induced by biologic agents used in cancer therapy. *Iris Deitch Harel¹, E. Raskin³, Z. Habot-Wilner^{2,5}, R. Friling^{4,5}, M. Kramer^{1,5}. ¹Ophthalmology, Rabin Medical Center, Hod ha sharon, Israel; ²Department of Ophthalmology, Tel Aviv Sourasky Medical Center, Tel Aviv, Israel; ³Ophthalmology, Barzilai University Medical center, Ashkelon, Israel; ⁴Pediatric Ophthalmology Unit, Schneider Children's Medical Center of Israel, Petah Tikva, Israel; ⁵Sackler School of Medicine, Tel Aviv University, Tel Aviv, Israel*

4312 — C0286 Diagnosis and Management of Uveitis Associated with MEK Inhibitor Therapy. *Siya Huo, T. McCannel. Ophthalmology, UCLA, Los Angeles, OH*

4313 — C0287 Oral Anti-Vascular Endothelial Growth Factor (VEGF) Drugs and Ocular Side Effects. *Frederick W. Fraunfelder¹, F. T. Fraunfelder². ¹Ophthalmology, Mason Eye Institute, Columbia, MO; ²Ophthalmology, Casey Eye Institute, Portland, OR*

Exhibit Hall C0288-C0301

Wednesday, May 02, 2018 8:15 AM-10:00 AM

Anatomy and Pathology/Oncology /
Biochemistry/Molecular Biology / Genetics

425 Pathology and Omics

Moderators: Mohamed H. Abdel-Rahman and Jacob Pe'er

4314 — C0288 Comparison of cyst numbers and distribution in acanthamoeba keratitis by light and UV microscopy. *Thomas A. Vo, P. Q. Vu, I. Ifegwu, D. S. Minckler. Ophthalmology, Gavin Herbert Eye Institute at the University of California, Irvine, Irvine, CA*

4315 — C0289 Molecular expression of aldehyde dehydrogenase 3A1, peroxiredoxin 2 and keratin in fibroblasts of primary and recurrent pterygium. *Jorge L. Domene Hickman, J. Zavala, M. Montalvo, J. E. Valdez. Instituto Tecnológico de Monterrey, San Pedro, Nuevo Leon, Mexico*

4316 — C0290 Somatostatin Receptor 2 Expression in Squamous Cell Carcinoma of the Conjunctiva. *Pedro Monsalve^{1,2}, X. Zhou¹, A. V. Schally³, R. K. Lee¹, S. R. Dubovy¹. ¹Ophthalmology, Bascom Palmer, Miami, FL; ²Ocular Pathology, Florida Lions Eye Bank, Miami, FL; ³Anatomic Pathology, University of Miami, Miller School of Medicine, Miami, FL*

4317 — C0291 MACE RNA Sequencing Analysis of Conjunctival Squamous Cell Carcinoma Using Formalin-Fixed Paraffin-Embedded Tumor Tissue. *Stefaniya K. Boneva, A. Schlecht, P. Zhang, D. Böhringer, H. Mittelviehhaus, C. Auw-Haedrich, T. Reinhard, G. Schlunck, C. Lange. Eye Center, University of Freiburg, Freiburg, Germany*

4318 — C0292 Genotype-phenotype analysis of von Hippel-Lindau syndrome with retinal hemangioblastoma in Korean patients. *Bo Hee Kim, U. Park, H. Yu. Ophthalmology, Seoul National University Hospital, Seoul, Korea (the Republic of)*

4319 — C0293 Effects of Lafora disease on the retina of a transgenic mouse model. *Melanie C. Campbell¹, L. Emptage², F. Corapi². ¹Physics & Astronomy/Sch of Optom, University of Waterloo, Waterloo, Ontario, Canada; ²Physics and Astronomy, University of Waterloo, Waterloo, Ontario, Canada *CR*

4320 — C0294 Auto-fluorescence signals of pure amyloid- β and presumed retinal amyloid deposits. *Rachel Redekop¹, F. Corapi¹, L. Emptage¹, M. Kitor¹, M. C. Campbell¹. ¹Physics and Astronomy, University of Waterloo, Waterloo, Ontario, Canada; ²Physics and Astronomy/Sch of Optom, University of Waterloo, Waterloo, Ontario, Canada *CR*

- 4321 — C0295 Correlation of clinicopathological features and whole-genome sequencing analysis by array CGH for uveal melanoma.** Gabriela Grimaldi¹, A. Scupola¹, M. Sammarco¹, M. Blasi¹, M. M. Pagliara¹, M. Toro¹, M. Zollino², D. Orteschi². ¹Ophthalmology, Università Cattolica del Sacro Cuore, Roma, Italy; ²Genetics, Università Cattolica del Sacro Cuore, Rome, Italy
- 4322 — C0296 Developing Next Generation Sequencing (NGS) Panels for Uveal Melanoma to Detect Copy Number and Single Nucleotide Variants; comparing PCR and Hybrid Capture Target Enrichment.** Sophie Thornton¹, H. Kalirai¹, J. Sibbring², L. Olohan², J. Kenny², X. Lu², S. Haldenby², C. Hertz-Fowler¹, S. E. Coupland². ¹Molecular and Clinical Cancer Medicine, The University of Liverpool, Liverpool, Merseyside, United Kingdom; ²Centre for Genomic Research, The University of Liverpool, Liverpool, United Kingdom
- 4323 — C0297 DNA methylation patterns in Uveal Melanoma FFPE samples correlate with survival.** Charlotte Ness^{1,2}, K. Katta¹, C. Günther³, L. Meza-Zepeda^{4,5}, Ø. Garred⁶, T. Kumar⁶, G. Petrovski^{1,2}, M. C. Moe^{1,2}, A. Noer¹. ¹Department of Ophthalmology, Oslo University Hospital, Oslo, Norway; ²Institute of Clinical medicine, Faculty of Medicine, University of Oslo, Oslo, Norway; ³Norwegian Computing Center, Oslo, Norway; ⁴Department of Tumor Biology, Institute for Cancer Research, Oslo, Norway; ⁵Norwegian Cancer Genomics Consortium, Oslo, Norway; ⁶Department of Pathology, Oslo University Hospital, Oslo, Norway
- 4324 — C0298 Genetic analysis of IgG4-related ophthalmic disease using next-generation sequencing.** Marina Ogawa, Y. Usui, N. Yamakawa, K. Umazume, K. Tsubota, R. Nemoto, H. Goto. Ophthalmology, Tokyo Medical University Hospital, Shinjuku-ku, Tokyo, Japan
- 4325 — C0299 Genetic profiling of Rhabdomyosarcoma in a tertiary eye hospital with clinicopathological and radiological correlation.** eman albalawi¹, H. Alkatan², S. Elkhamary², A. Maktabi², L. Safieh². ¹Anterior segment, King Khalid Eye Specialist hospital, Riyadh, Saudi Arabia; ²King Khalid Eye Specialist hospital, Riyadh, Saudi Arabia; ³King Abdulaziz university hospital, Riyadh, Saudi Arabia
- 4326 — C0300 Histopathological study on the pathogenesis of intratarsal keratinous cyst.** Tina Tang^{1,3}, S. Brownstein^{1,3}, H. Chen^{1,3}, D. Jordan¹, C. Iacob², P. Blanco³, J. Farmer³. ¹Ophthalmology, The Ottawa Hospital, Ottawa, Ontario, Canada; ²Pathology, New York Eye & Ear Infirmary, New York, NY; ³Pathology, The Ottawa Hospital, Ottawa, Ontario, Canada
- 4327 — C0301 A series of unusual intraocular and orbital metastasis: the importance of immunohistochemistry for the final diagnosis.** Ana Beatriz T. Dias^{1,1}, A. T. Baccega², D. Miyamoto², J. Colbentz², Y. Althnayan², V. T. Bravo Filho², A. N. Odashiro², M. N. Burnier². ¹Ophthalmology, McGill/UNIFESP, Montreal, Quebec, Canada; ²MUHC - McGill University Ocular Pathology Laboratory, Montreal, Quebec, Canada
-
- Exhibit Hall C0376-C0425
Wednesday, May 02, 2018 8:15 AM-10:00 AM
Cornea
- 426 Corneal wound repair and healing**
-
- Moderators: Sonali Pal-Ghosh and Aurelie Dos Santos**
- 4328 — C0376 Sphingolipids and TGF-β signaling in corneal fibrosis: the continuing mission.** Sarah E. Nicholas¹, m. stiles¹, N. A. Mandala², D. Karamichos¹. ¹Ophthalmology, University of Oklahoma Health Science Center, Oklahoma City, OK; ²Ophthalmology and Anatomy and Neurobiology, University of Tennessee Health Science Center, Memphis, TN
- 4329 — C0377 Role of TGF-β Receptor 1 (Tgfr1/Alk5) on The Healing of Corneal Epithelium Debridement.** Winston W. Kao¹, F. Dong¹, J. Zhang¹, Y. Yuan¹, Y. HU². ¹Ophthalmology, University of Cincinnati, Cincinnati, OH; ²Developmental biology, Cincinnati Children's Hospital Medical Center, Cincinnati, OH
- 4330 — C0378 Corneal protein and lipid alterations in response to metallic impaction.** Ayman J. Aljohani^{1,2}, S. A. Seidman², N. A. Johnson², U. Arbelo², K. Aribindi², S. K. Bhattacharya². ¹Ophthalmology, McGill University, Montreal, Quebec, Canada; ²Ophthalmology, Bascom Palmer Eye Institute, University of Miami, Miami, FL
- 4331 — C0379 Role of lipid metabolites in the eye and comprehensive lipidomics analysis using liquid chromatography mass spectrometry.** Mamoru Igawa^{2,1}, Y. Isobe², T. Ishihara², Y. Uchino¹, K. Tsubota¹, M. Arita². ¹Keio University School of Medicine, Shinjuku-ku, Tokyo, Japan; ²RIKEN Center for Integrative Medical Sciences (IMS), Yokohama, Japan
- 4332 — C0380 Donor Cornea Quality Preserved in two different Media: Eusol-C® and Optisol-GS®.** Livia A. Freire, P. H. Chaves, F. A. Nogueira, D. Chen Wu, P. A. Poletto, A. L. Netto, J. M. Wong, E. Mackous, R. Y. Hida. Irmandade da Santa Casa de Misericórdia de Sao Paulo, Sao Paulo, SP, Brazil
- 4333 — C0381 Decreased TGFβ3 Expression Contributes to the Delay of Epithelial Wound Healing in Diabetic Corneas.** Nan Gao, F. X. Yu. Ophthalmology, Wayne State Univ/Kresge Eye Inst, Detroit, MI
- 4334 — C0382 Characterization and Role of KCa3.1 Ion Channel in Corneal Wound Healing and Fibrosis.** Lindsey McDaniel^{2,1}, S. Gupta^{2,3}, M. K. Fink^{2,3}, N. Hesemann^{2,1}, P. R. Sinha^{2,3}, S. Heil², H. B. Gafen^{2,3}, D. K. Bowles⁴, R. R. Mohan^{2,3}. ¹Mason Eye Institute, University of Missouri School of Medicine, Columbia, MO; ²Ophthalmology, Harry S. Truman Memorial Veteran Hospital, Columbia, MO; ³Veterinary Medicine and Surgery, Veterinary School, Columbia, MO; ⁴Biomedical Sciences, University of Missouri- College of Veterinary Medicine, Columbia, MO
- 4335 — C0383 BIOcular Dressings for Corneal Wound Healing.** Lauren Costella¹, K. Broderick¹, B. Janet¹, A. Eiseaman², R. Redmond³, C. Tison¹. ¹Biomedical Technologies Group, Luna Innovations, Charlottesville, VA; ²Storm Eye Institute, Medical University of South Carolina, Charleston, SC; ³Wellman Center for Photomedicine, Massachusetts General Hospital, Boston, MA *CR
- 4336 — C0384 Inhibition of CREB and its impact on corneal wound healing in vitro and in vivo.** Camille Couture^{1,2}, P. Desjardins^{1,2}, K. Zaniolo¹, R. Bazin¹, L. Germain^{2,1}, S. Guérin¹. ¹Departement d'ophtalmologie, Université Laval, CUO-recherche/LOEX, Centre de recherche du CHU de Quebec - Université Laval, Quebec, QC, Canada., Quebec, Quebec, Canada; ²Departement de chirurgie, Université Laval, Centre de recherche en organogenese experimentale de l'Université Laval/LOEX, Centre de recherche du CHU de Quebec - Université Laval, Quebec, QC, Canada., Quebec, Quebec, Canada
- 4337 — C0385 Establishment of optimal culture media in human corneal epithelial wound healing models.** Lakshman N. Subbaraman, E. Dare, C. Fung, D. J. McCanna, L. W. Jones. Centre for Ocular Research & Education, School of Optometry & Vision Science, University of Waterloo, Waterloo, Ontario, Canada
- 4338 — C0386 Characterization of Restorative Macrophages After Corneal Wounding in Wild Type and Mmp12^{-/-} Knockout Mice.** Ricardo Lamy, M. Wolf, S. M. Clay, S. Zheng, P. Pan, M. F. Chan. Ophthalmology, University of California, San Francisco, San Francisco, CA
- 4339 — C0387 Anterior-segment OCT analysis of corneal incisions in cataract surgery: a comparison of 2.2mm and 2.85mm incision architecture.** Stuti Misra, S. Li, H. Wallace, J. Mckelvie. Department of Ophthalmology, The University of Auckland, Auckland, New Zealand *CR, ✗
- 4340 — C0388 Cataract Surgery Wound Architecture with Manual vs. Femtosecond Laser Assisted Catalys Procedures.** Etienne Benard-Seguini¹, R. Fadous², A. Sylvestre-Bouchard², H. De Alwis², M. Beaudry², L. Mejdoub², P. Harasymowycz², I. Brunette². ¹Ophthalmology, Queen's University, Kingston, Ontario, Canada; ²Ophthalmology, Université de Montréal, Montréal, Quebec, Canada *CR, ✗

4341 — C0389 Watertight cataract incision closure using Mussel protein-based bioadhesive.

Jin Ah Lee¹, H. Won², S. Maeng², H. Kim¹, H. Cha², H. Tchah¹, M. Kim¹. ¹Ophthalmology, Asan medical center, Seoul, Korea (the Republic of); ²Department of Chemical Engineering, Pohang University of Science and Technology, Pohang, Korea (the Republic of); ³Namsan community health care branch, Seoul, Korea (the Republic of) *CR

4342 — C0390 The Use of an Ocular Wound Chamber for the Treatment of Exposure Keratopathy.

Gina L. Griffith², A. Holt¹, J. McDaniel¹, E. Eriksson¹, A. Johnson². ¹Harvard Medical School, Boston, MA; ²Sensory Trauma, United States Army Institute of Surgical Research, San Antonio, TX

4343 — C0391 Development of iFixPen™ – using 3D printing to treat corneal ulcers.

Gerard Sutton^{1,2}, J. You², S. Cooper¹, H. Frazer², C. Hodge^{1,3}, X. Liu⁴, A. Taylor⁴, E. McColl⁴, G. Wallace⁴. ¹Lions NSW Eye Bank, Sydney, New South Wales, Australia; ²Save Sight Institute, Sydney, New South Wales, Australia; ³Vision Eye Institute, Chatswood, New South Wales, Australia; ⁴Intelligent Polymer Research institute/AIIM, University of Wollongong, Wollongong, New South Wales, Australia *CR

4344 — C0392 The development of the iFixInk™ system to treat corneal injuries.

Hannah E. Frazer¹, J. You^{1,2}, S. Cooper³, C. Hodge^{4,5}, X. Liu⁶, Z. Chen⁶, A. Taylor⁶, E. McColl⁶, G. Wallace⁶, G. Sutton^{1,4}. ¹Save Sight Institute, University of Sydney, Sydney, New South Wales, Australia; ²School of Optometry and Vision Science, University of New South Wales, Sydney, New South Wales, Australia; ³NSW Statewide Biobank, NSW Health Pathology, Sydney, New South Wales, Australia; ⁴Lions NSW Eye Bank, Sydney, New South Wales, Australia; ⁵Vision Eye Institute, Sydney, New South Wales, Australia; ⁶Intelligent Polymer Research Institute/AIIM Faculty, University of Wollongong, Wollongong, New South Wales, Australia *CR

4345 — C0393 Sutureless, Minimally Invasive Sealing of Corneal Lacerations with a Novel Bioadhesive Material.

Rani Al Karmi¹, Z. SUN¹, A. Kheirkhah¹, E. Shirazaei Sani², N. Annabi², R. Dana¹. ¹Department of Ophthalmology /Harvard Medical School, Massachusetts Eye and Ear Infirmary, Boston, MA; ²Department of Chemical Engineering, Northeastern University, Boston, MA *CR

4346 — C0394 Molecular networks during wound healing after corneal alkali burn.

Elvira Lorenzo-Martín, P. Gallego-Muñoz, C. Herrero-Pérez, M. Martínez-García. Cell Biology, Histology and Pharmacology, University of Valladolid, Valladolid, Spain

4347 — C0395 Nidogen-2: location and mRNA expression during corneal wound healing.

Patricia Gallego-Muñoz, E. Lorenzo-Martín, C. Herrero-Pérez, M. Martínez-García. Cell Biology, Histology and Pharmacology, University of Valladolid, Valladolid, Valladolid, Spain

4348 — C0396 Role of Semaphorin 3C and its Receptor, Neuropilin-2, in Impaired Sensory Nerve Regeneration and Wound Healing in the Diabetic Mouse Cornea. Patrick S. Lee, N. Gao, F. X. Yu. Ophthalmology, Wayne State University School of Medicine, Detroit, MI

4349 — C0397 Outcomes of Cyanoacrylate Glue Application for Corneal Perforation.

Rohan B. Singh, R. Al Karmi, M. Yu, J. Yin, R. Dana. Ophthalmology, Massachusetts Eye and Ear Infirmary, Harvard Medical School, Boston, MA

4350 — C0398 Innovative radiofrequency electrotherapy significantly reduces cornea perforation in an alkali burn murine model.

Alfredo Ruggeri^{1,2}, T. Dyrain³, M. Barbariga³, P. Rama³, G. Ferrari³. ¹Dept of Information Engineering, University of Padua, Padua, Italy; ²Resono Ophthalmic, Trieste, Italy; ³Ospedale San Raffaele, Milano, Italy *CR

4351 — C0399 Comparison of five commercial available lubricants on the corneal healing process in the ex vivo eye irritation test (EVEIT) model.

Claudia Panfil, N. Schrage. ACTO e. V., Aachen, Germany *CR

4352 — C0400ࣆ**Long term studies in alkali burn corneal healing.**

Carmen M. Martínez-García¹, F. J. Avila², P. Gallego-Muñoz¹, E. Lorenzo-Martín¹, L. Ibañez-Frías¹, J. M. Bueno². ¹Cell Biology, University Of Valladolid, Valladolid, Spain; ²Laboratorio de óptica, Universidad de Murcia, Murcia, Spain

4353 — C0401 Impairment of cornea epithelial wound healing in a Tenasin X-deficient mouse.

Takayoshi Sumioka¹, Y. Okada¹, O. Yamanaka¹, M. Miyajima¹, K. Matsumoto², S. Saika¹, H. Iwanishi¹. ¹Ophthalmology, Wakayama Medical University, Wakayama, Japan; ²Biosignaling and Radioisotope Experiment, Shimane University, Interdisciplinary Center for Science Research, Shimane, Japan

4354 — C0402 Contribution of the WNK1 kinase to corneal wound healing using a human tissue-engineered cornea as a model.

Pascale Desjardins^{1,2}, C. Couture^{1,2}, K. Zaniolo¹, L. Germain^{1,2}, S. Guérin¹. ¹Département d'ophtalmologie, Université Laval, CUO-recherche/LOEX, Centre de recherche du CHU de Québec, Québec, Québec, Canada; ²Département de chirurgie, Université Laval, Centre de recherche en organogénèse expérimentale de l'Université Laval/LOEX, Centre de recherche du CHU de Québec, Québec, Québec, Canada

4355 — C0403 Antibiotic Loading of SCCO₂ Sterilized and Lyophilized Human Amniotic Membrane.

Jennifer McDaniel, A. Johnson, D. O. Zamora. USAISR, Helotes, TX

4356 — C0404 Effects of amniotic membrane mesenchymal stem cells for the corneal epithelial proliferation and differentiation. Kazunari Higa², J. Higuchi¹, Y. Satake¹, T. Yamaguchi¹, D. Tomida¹, J. Shimazaki^{1,2}. ¹Department of Ophthalmology, Tokyo Dental College, Ichikawa general hospital, Ichikawa, Chiba, Japan; ²Cornea Center Eye Bank, Tokyo Dental College, Ichikawa General Hospital, Ichikawa, Chiba, Japan

4357 — C0405 Effects of Vitamin D on Corneal Myofibroblast Differentiation. Mitchell A. Watsky, Z. Chen, X. Lu. Cellular Biology and Anatomy, Medical College of Georgia at Augusta University, Augusta, GA

4358 — C0406 Potential of immortalized corneal stromal stem cells for corneal repair.

Aurelie Dos Santos¹, A. Balayan¹, M. L. Funderburgh², I. Khandaker², E. Baclagon¹, J. Funderburgh², S. X. Deng¹. ¹Stein Eye Institute, Los Angeles, CA; ²University of Pittsburgh, Pittsburgh, PA

4359 — C0407 Corneal Wound Healing: Is Sex a Biological Variable?

Rajiv R. Mohan^{1,2}, R. Tripathi^{1,3}, S. Gupta^{1,3}, M. K. Fink^{1,3}, L. M. Martin^{1,3}, H. B. Gafen^{1,3}, N. R. Sinha³, J. T. Rodier^{1,2}, S. S. Chaurasia^{1,3}, N. Hesemann^{1,2}, E. A. Giuliano^{1,3}. ¹Harry S. Truman Memorial Veterans' Hospital, Columbia, MO; ²Mason Eye Institute and VMTH, University of Missouri, Columbia, MO; ³Ophthalmology, University of Missouri, Columbia, MO

4360 — C0408 The role of Staphylococcus aureus alpha-toxin on corneal epithelial wound healing.

Ilham Putra¹, K. N. Anwar¹, X. Shen¹, B. Rabiee¹, D. Missiakas², M. Eslani¹, A. R. Djalilian¹. ¹Ophthalmology and Vision Science, University of Illinois- Chicago, Chicago, IL; ²Department of Microbiology, University of Chicago, Chicago, IL

4361 — C0409 Optimization of decellularization and sterilization of porcine corneas for human corneal transplants.

Mohammad Mirazul Islam, R. Sharifi, S. Mamodaly, A. Yashar, E. I. Paschalis, J. Chodosh, C. H. Dohlman, M. Gonzalez-Andrades. Ophthalmology, Schepens Eye Research Institute, Harvard Medical School, Boston, MA

4362 — C0410 Advanced Glycation End Product and its Receptor RAGE promote the in-vitro wound healing of HCE corneal epithelial cells.

Christelle GROSS¹, C. Belville¹, A. Lamboule¹, M. Lavergne¹, R. Joubert^{2,1}, L. Blanchon¹, F. Chiambaretta^{2,1}, V. SAPIN^{3,1}, J. GrED, Université Clermont Auvergne, Clermont-Ferrand, AURA, France; ²Ophthalmology Department, CHU Clermont-Ferrand, Clermont-Ferrand, AURA, France; ³Biochemistry and Molecular Biology Department, CHU Clermont-Ferrand, Clermont-Ferrand, AURA, France

4363 — C0411 Supersaturated Oxygen Emulsion for Healing Chemical Ocular Injury.

David A. Ammar¹, D. Goswami², K. Pate³, M. Lake³, R. Kant³, S. Lake³, N. Tewari-Singh².
¹Ophthalmology, Univ of Colorado Denver, Aurora, CO; ²Pharmaceutical Sciences, Univ of Colorado, Aurora, CO; ³Roccor, LLC, Longmont, CO; ⁴OE Co, LLC, Lafayette, LA *CR

4364 — C0412 Role of impaired platelet function and PDGF expression in diabetic corneal epithelial regeneration. Yangyang Zhang^{1,2}, Q. Zhou², L. Xie². ¹School of Medicine and Life Sciences, University of Jinan-Shandong Academy of Medical Sciences, Jinan, Shandong, China; ²State Key Laboratory Cultivation Base, Shandong Provincial Key Laboratory of Ophthalmology, Shandong Eye Institute, Shandong Academy of Medical Sciences, Qingdao, Shandong, China

4365 — C0413 Effect of photobiomodulation on wound healing of corneal epithelium through Rho-GTPase. Kyong Jin Cho¹, C. Rho², B. Kang³. ¹Ophthalmology, College of Medicine, Dankook University, Cheonan, Chungnam, Korea (the Republic of); ²Ophthalmology and Visual Science, Daejeon St. Mary's Hospital, College of Medicine, The Catholic University of Korea, Seoul, Korea (the Republic of); ³Neurology, College of Medicine, Dankook University, Cheonan, Korea (the Republic of)

4366 — C0414 Keratocyte-derived canonical Wnt signaling modulates corneal wound healing. Yen-Chiao Wang¹, Y. Zhang¹, L. Zhang¹, Y. Okada², C. Liu¹. ¹School of Optometry, Indiana University, Bloomington, IN; ²School of Medicine, Wakayama Medical University, Wakayama, Japan

4367 — C0415 Administration of nitric oxide via novel copper-chitosan treatments in human corneal and limbal epithelial cell injury. Vasiliki Tellios^{1,2}, H. Liu², N. Tellios^{3,2}, C. M. Hutnik^{4,2}. ¹Neuroscience, University of Western Ontario, London, Ontario, Canada; ²Ophthalmology, Lawson Research Institute, University of Western Ontario, London, Ontario, Canada; ³Pathology and Laboratory Medicine, University of Western Ontario, London, Ontario, Canada; ⁴Ophthalmology, Ivey Eye Institution, St. Joseph's Health Care London, London, Ontario, Canada

4368 — C0416 Remodeling of Substance P sensory nerves and TRPM8 cold receptors after corneal experimental surgery. Haydee E. Bazan, J. He, T. L. PHAM, A. H. Kakazu. *Ophthal & Neuroscience, LSU Health Sciences Center, New Orleans, LA*

4369 — C0417 Biophysical properties of the corneal stroma influence apoptosis of fibroblasts. Iman Jalilian¹, A. Robinson¹, V. K. Raghunathan², J. Serneno¹, S. Muppala¹, S. M. Thomasy^{1,3}, C. J. Murphy^{1,3}. ¹Department of Surgical and Radiological Sciences, University of California Davis, Davis, CA; ²College of Optometry, University of Houston, Houston, TX; ³Department of Ophthalmology & Vision Science, University of California Davis, Davis, CA

4370 — C0418 Characterization of a quantitative model of corneal transplantation in the rabbit. David Culp¹, G. Spiga¹, J. Prater¹, B. C. Gilger². ¹Powered Research, LLC, Research Triangle Park, NC; ²Clinical Sciences, North Carolina State University, Raleigh, NC *CR

4371 — C0419 Melatonin receptors are present in the porcine ocular surface and are involved in ex vivo corneal wound healing. Mario Crespo-Moral¹, H. A. Alkozi², A. López-García¹, J. J. Pintor^{2,3}, Y. Diebold^{1,4}. ¹Ocular Surface Group - IOBA, University of Valladolid, Valladolid, Valladolid, Spain; ²Department of Biochemistry and Molecular Biology IV, Faculty of Optics and Optometry - University Complutense of Madrid, Madrid, Spain; ³OFTARED Spanish Network for Cooperative Research in Health, Instituto de Salud Carlos III, Madrid, Spain; ⁴Biomedical Research Networking Center on Bioengineering, Biomaterials and Nanomedicine (CIBER-BBN), Valladolid, Spain

4372 — C0420 The Use of a Full-Thickness Penetrating Ocular Injury Model to Evaluate the Temporary Treatment of Battlefield Ocular Trauma with Bio-Adhesive Materials. Gregory Hutcheson^{1,2}, J. Cleland^{1,2}, B. Lund², J. C. Rabin¹, D. O. Zamora². ¹UIW Rosenberg School of Optometry, San Antonio, TX; ²Sensory Trauma, U.S. Army Institute of Surgical Research, Fort Sam Houston, TX

4373 — C0421 Clinical and histologic phenotyping of mice deficient in a key cellular mechanotransducer, TAZ. Brian Leonard¹, S. Kim¹, L. B. Teixeira³, D. M. Imai², V. Raghunathan⁴, S. M. Thomasy^{1,5}, C. J. Murphy^{1,5}. ¹VM: Surgical and Radiological Sciences, University of California, Davis, Davis, CA; ²Comparative Pathology Laboratory, University of California, Davis, Davis, CA; ³Pathobiological Sciences, University of Wisconsin-Madison, Madison, WI; ⁴College of Optometry, University of Houston, Houston, TX; ⁵School of Medicine: Ophthalmology and Vision Sciences, University of California, Davis, Davis, CA

4374 — C0422 Cannabinoid CB₂ receptors regulate the sex-dependence of the lag phase in corneal wound healing. Natalia Murataeva¹, A. Dhopeswarkar¹, S. Miller¹, L. Daily¹, C. Hillard², A. Straiker¹. ¹Psychological and Brain Sciences, Indiana University, Bloomington, IN; ²Department of Pharmacology and Toxicology, Medical College of Wisconsin, Milwaukee, WI

4375 — C0423 Suppression of alkali burn-induced corneal injury by mesenchymal stem cells encapsulated within crosslinked collagen gels. Kyung-Sun Na¹, G. Fernandes Cunha¹, H. Lee¹, A. R. Djaliani², D. Myung¹. ¹Ophthalmology, Byer Eye Institute, Stanford University, Menlo Park, CA; ²Department of Ophthalmology and Visual Sciences, University of Illinois at Chicago, Chicago, IL

4376 — C0424 The role of neutral endopeptidase in ocular surface homeostasis and corneal wound healing. Rachel Genova¹, A. Pieper^{2,3}, M. Harper^{2,3}. ¹Medical Scientist Training Program, University of Iowa Carver College of Medicine, Iowa City, IA; ²Department of Ophthalmology and Visual Sciences, University of Iowa, Iowa City, IA; ³Center for the Prevention and Treatment of Visual Loss, Iowa City Department of Veterans Affairs, Iowa City, IA

4377 — C0425 Expression of Mucin 5AC in Corneas at 28 days after Ocular Sulfur Mustard Exposure. Marion K. Gordon, R. A. Hahn, P. Zhou. *Pharmacology & Toxicology, Rutgers University, Piscataway, NJ*

Exhibit Hall C0426-C0452

Wednesday, May 02, 2018 8:15 AM-10:00 AM

Cornea

427 Keratoconus and Collagen Crosslinking

Moderators: Dimitrios Karamichos and Mariam L. Khaled

4378 — C0426 Acute hydrops of recurrent keratoconus after penetrating keratoplasty may occur in a different way from that of naïve keratoconus. Asahi Fujita, J. Yoshida, T. Toyono, R. Shirakawa, T. Miyai, T. Usui. *ophthalmology, University of Tokyo, Bunkyo-ku, Tokyo, Japan*

4379 — C0427 Discriminative ability of corneal biomechanical parameters for detecting Keratoconus. Abbas Azimikhorsani^{2,1}, H. Ostadimoghaddam^{2,1}, M. Sedaghat³, A. Ehsaei^{2,1}, A. Yekta^{2,1}, J. Heravian Shandiz^{2,1}, H. Momeni Moghaddam^{2,1}. ¹Department of Optometry, Mashhad University of Medical Sciences, Mashhad, Iran (the Islamic Republic of); ²Refractive Errors Research Center, Mashhad University of Medical Sciences, Mashhad, Iran (the Islamic Republic of); ³Department of Ophthalmology, Mashhad University of Medical Sciences, Mashhad, Iran (the Islamic Republic of)

4380 — C0428 The outcomes of corneal cross-linking for Keratoconus from routine clinical practice across 3 sites in Australia: Results from the Save Sight Keratoconus Registry. Alex Ferdi¹, V. Nguyen¹, J. Tan¹, Y. Kerdraon^{1,2}, J. Males², N. Morlet³, P. Beckinsale⁴, R. A. Mills⁵, C. Go¹, M. Daniell^{6,7}, E. Chan^{6,7}, D. Barthelme⁸, A. Herrera-Bond¹, M. Garcia¹, M. C. Gillies^{1,2}, S. L. Watson^{1,2}. ¹Save Sight Institute, University of Sydney, Sydney, New South Wales, Australia; ²Sydney Eye Hospital, Sydney, New South Wales, Australia; ³University of Western Australia, Perth, Western Australia, Australia; ⁴University of Queensland, Brisbane, Queensland, Australia; ⁵Flinders University, Adelaide, South Australia, Australia; ⁶Centre for Eye Research Australia, Melbourne, Victoria, Australia; ⁷Royal Victorian Eye and Ear Hospital, Melbourne, Victoria, Australia; ⁸University of Zurich, Zurich, Switzerland

4381 — C0429 Keratoconus proteome: epithelial and stromal changes in cone and non-cone regions. Gary Hin-Fai Yam¹, M. Fuest^{1,2}, L. Zhou¹, M. Ang¹, J. S. Mehta¹. ¹Singapore Eye Research Institute, Singapore, Singapore; ²RWTH Aachen University, Aachen, Germany

4382 — C0430 Comparison of efficacy and safety of accelerated trans-epithelial crosslinking for keratoconus patients with corneas thicker and thinner than 380µm. Kentaro Abe¹, T. Miyai¹, T. Toyono¹, W. Aixinjueluo², T. Inoue¹, S. Asano¹, H. Ishii¹, J. Yoshida¹, R. Shirakawa¹, T. Usui¹. ¹Department of Ophthalmology, The University of Tokyo, Tokyo, Japan; ²Department of Ophthalmology, Tokyo Teishin Hospital, Tokyo, Japan ✕

4383 — C0431 The Detection of Keratoconus using Anterior Segment OCT. Isa Mohammed, S. Tran, W. Munir. Department of Ophthalmology and Visual Sciences, University of Maryland School of Medicine, Baltimore, MD

4384 — C0432 Comparison of corneal topographic characteristics between eyes with indication of transepithelial (Epi-on) and Epi-off Cross linking for treatment of keratoconus in a reference center in Mexico City. Jesusu Antonio Soto Munoz, E. Gonzalez Mendoza, A. J. Ramirez-Miranda, A. Navas, E. O. Graue-Hernandez. Instituto de Oftalmología Conde de Valenciana, Mexico City, Mexico

4385 — C0433 Straight Lines versus Conical Curves – The Corneal Subbasal Nerve Plexus in Keratoconus. Elias Flockerzi, L. Daas, B. Seitz. Department of Ophthalmology, Saarland University Medical Center, 66421 Homburg, Germany

4386 — C0434 Fluorophotometric determination of anterior chamber riboflavin concentrations. Katja C. Iselin², M. A. Thiel², P. B. Baenninger², L. M. Bachmann¹, C. Kaufmann². ¹Medignition Inc., Zuerich, Switzerland; ²Dept of Ophthalmology, Lucerne Cantonal Hospital, Lucerne, Switzerland

4387 — C0435 Tobacco smoking among Crosslinked-keratoconus patients: “A not so protective effect”. George Hayek^{1,2}, L. Lhuillier¹, M. Zaidi¹, F. Bloch¹, M. LUC¹, J. Vermion¹, C. Goetz², N. Ouamara², J. Perone¹. ¹Hôpital de Mercy - CHR Metz-Thionville, Metz, France; ²Ophthalmology, University of Pécs, Medical School, Pécs, Baranya, Hungary; ³Clinical research unit, Hopital Mercy- CHR Metz-Thionville, Metz, France

4388 — C0436 Do we have to cross-link all children with keratoconus? Juan Carlos C. Abad¹, J. C. Morales³, A. Correa³, R. Ambrosio⁴, M. W. Belin². ¹Private Practice, Medellín, Antioquia, Colombia; ²Ophthalmology and Visual Science, University of Arizona, Tucson, AZ; ³Servicio de Oftalmología, Universidad de Antioquia, Medellín, Antioquia, Colombia; ⁴Instituto de Olhos Renato Ambrósio, Riio de Janeiro, Brazil *CR

4389 — C0437 Prolonged Iontophoresis-assisted Transepithelial Corneal Cross-linking for Pediatric Keratoconus: Three Years Results. Lin Zhirong¹, S. Luo¹, N. Dong¹, X. Shang¹, F. Xie¹, Z. Xie¹, L. Yan¹, Z. Liu¹, Z. Liu^{1,2}, H. Wu¹. ¹Eye Institute & Affiliated Xiamen Eye Center of Xiamen University, Xiamen, Fujian, China; ²Fujian Provincial Key Laboratory of Ophthalmology and Visual Science, Xiamen, China

4390 — C0438 Outcomes of Corneal Collagen Crosslinking for Children under 14 years-old with Progressing Keratoconus. Naoko Kato¹, T. Sasaki¹, K. Negishi², I. Toda³, J. Shimazaki⁴, K. Tsubota². ¹Ophthalmology, Saitama Medical University, Iruma, SAITAMA, Japan; ²Ophthalmology, Keio University School of Medicine, Tokyo, Japan; ³Minamiaoyama Eye Clinic, Tokyo, Japan; ⁴Ophthalmology, Tokyo Dental College, Ichikawa General Hospital, Chiba, Japan *CR

4391 — C0439 Long Non-Coding RNAs in Keratoconus-affected Human Cornea. Yutao Liu^{1,2}, M. L. Khaled¹, Y. Bykhovskaya³, H. Li¹, W. Stamer⁴, H. Xu⁵, R. Allingham⁴, M. A. Hauser^{4,6}, Y. Rabinowitz³. ¹Department of Cellular Biology and Anatomy, Augusta University, Augusta, GA; ²James & Jean Culver Vision Discovery Institute, Augusta, GA; ³Department of Surgery, Cedars-Sinai Medical Center, Los Angeles, CA; ⁴Department of Ophthalmology, Duke University Medical Center, Durham, NC; ⁵Department of Population Health Sciences, Augusta University, Augusta, GA; ⁶Department of Medicine, Duke University Medical Center, Durham, NC

4392 — C0440 Effect of IVMED-80 on Human Cadaver Cornea Crosslinking. Santosh Kumar K. Muddana¹, B. K. Ambati^{1,2}, H. Uehara¹, M. Burr², S. Molokhia². ¹Ophthalmology, Moran Eye Center, University of Utah, Salt Lake City, UT; ²iVeena Delivery Systems, Salt Lake City, UT *CR

4393 — C0441 Early Outcomes of Pulsed, Accelerated, Epithelial-On Crosslinking for Keratoconus. Sneha Konda¹, B. K. Ambati². ¹Texas A&M College of Medicine, Round Rock, TX; ²Pacific Clear Vision Institute, Eugene, OR ✕

4394 — C0442 Feasibility of decellularized porcine corneal sheet implantation for a “stromal sandwich” for the treatment of keratoconus and keratectasia. Yuya Fukui¹, N. Okumura¹, D. Matsumoto¹, T. Shimada¹, M. Teramoto¹, H. Imai¹, T. Kurosawa¹, F. Tseng², D. Hsieh², N. Koizumi¹. ¹Biomedical Engineering, Doshisha University, Kyotanabe, Kyoto, Japan; ²ACRO Biomedical Co., Ltd., Kaohsiung, Taiwan *CR

4395 — C0443 Keratoconus Outcome Research Questionnaire – a validation study of the Danish version. Sashia Bak-Nielsen¹, T. K. Groenborg², A. Ivarsen¹, J. Hjortdal¹. ¹Department of Ophthalmology, Aarhus University Hospital, Aarhus, Denmark; ²Department of Public Health, Section of Biostatistics, Aarhus University, Aarhus, Denmark

4396 — C0444 Pediatric Keratoconus: Posterior surface curving associated with anterior surface flattening after Crosslinking with Dresden Protocol. Rosalia Maria S. Antunes-Foschini, S. J. Sousa. Ophthalmology, Hospital das Clínicas, Ribeirão Preto Medical School, Ribeirão Preto, Sao Paulo, Brazil

4397 — C0445 Comparative Analysis of Scheimpflug and SD-OCT Measurements in Patients With Highly Asymmetric Keratoconus. Eric S. Hwang^{2,1}, J. B. Randleman^{1,2}. ¹Ophthalmology, USC Roski Eye Institute, Los Angeles, CA; ²Keck School of Medicine of USC, Los Angeles, CA

4398 — C0446 Comparing Change in Anterior Curvature after Corneal Cross-Linking Using Placido and Scheimpflug Imaging. Paul Lang¹, P. Thulasi², S. Khandelwal³, J. B. Randleman¹. ¹USC Roski Eye Institute, Los Angeles, CA; ²Emory Eye Center, Atlanta, GA; ³Baylor College of Medicine, Houston, TX

4399 — C0447 Economic impact of Keratoconus – a patient’s perspective. Srujana Sahebjada^{1,2}, E. Chan^{1,2}, S. Vogrin^{3,2}, V. Sundararajan^{3,2}, M. Daniell^{1,2}, P. N. Baird^{1,2}. ¹Ophthalmology, Centre for Eye Research Australia, East Melbourne, Victoria, Australia; ²Surgery, The University of Melbourne, Melbourne, Victoria, Australia; ³St. Vincent’s Hospital, East Melbourne, Victoria, Australia

4400 — C0448 Comparison of Outcomes Between Standard and Accelerated Corneal Cross-linking Protocols in Patients with Progressive Keratoconus. Ravi Shah¹, P. Lang¹, N. L. Hafezi^{2,3}, E. A. Torres Netto², F. Hafezi^{1,2}, J. B. Randleman¹. ¹Ophthalmology, USC Roski Eye Institute, Los Angeles, CA; ²Elza Institute, Dietikon, Switzerland; ³Light for Sight Foundation, Zurich, Switzerland

4401 — C0449 Efficacy of the Dual Therapy of Corneal Cross-linking and Natamycin in the Management of Fusarium Keratitis. Hema Radhakrishnan^{1,2}, J. Alshehri^{1,2}, M. C. Hillarby^{1,2}, S. Shawcross³, A. Brahma^{4,2}, F. Carley^{4,2}. ¹Division of Pharmacy and Optometry, University of Manchester, Manchester, United Kingdom; ²Manchester Academic Health Science Centre, Manchester, United Kingdom; ³School of Biological Sciences, Manchester, United Kingdom; ⁴Manchester Royal Eye Hospital, Manchester, United Kingdom

4402 — C0450 Distinct tear molecular profile of keratoconus patients with progressive disease. Natasha Pahuja^{1,2}, P. Khamar¹, R. Shetty¹, A. P. Nair³, T. Vaidya³, V. Jhanji⁴, R. R. Mohan⁵, S. Sethu³, A. Ghosh³. ¹Cornea & Refractive, Narayana Nethralaya, Pimple Saudagar, Pune, India; ²Cornea Refractive services, Eyclight laser and eye care, Pune, Maharashtra, India; ³GROW laboratory, Narayana Nethralaya, Bengaluru, India; ⁴Cornea, Cataract and External Disease Services, University of Pittsburgh School of Medicine, Pittsburgh, PA; ⁵Ophthalmology, University of Missouri Health, Missouri, KS

4403 — C0451 Twenty-four months functional and anatomical corneal changes in pediatric and adult progressive keratoconus treated with the epithelium-off corneal collagen cross-linking. Chiara Bonzano, D. Musetti, R. Scotto, C. Cutolo, C. Traverso. *Clinica Oculistica, DiNogmi, University of Genoa, Genoa, Italy*

4404 — C0452 Correlation between Keratoconus and Dry Eye Disease in patients in Southwest Brazil. Leda das Neves Almeida Sandrin^{1,2}, R. M. Santo¹. ¹Oftalmologia, Faculdade de Medicina da Universidade de São Paulo, Chapecó, Santa Catarina, Brazil; ²Clínica médica, Curso de Medicina da Unochapecó, Chapecó, Santa Catarina, Brazil

Ballrooms BC

Wednesday, May 02, 2018 10:15 AM-11:00 AM

428 Cogan Award and Lecture

Technological advances have dramatically changed the glaucoma landscape. This lecture addresses some of the challenges in determining how these new technologies can result in meaningful improvements in patient outcomes, from structural imaging of glaucomatous damage to virtual-reality assessment of functional impairment.

— 10:15 **Introduction: Christopher Girkin, MD**

4405 — 10:15 From Micro Imaging to Macro Functioning in Glaucoma. *Felipe A. Medeiros. Ophthalmology, Univ of California-San Diego, La Jolla, CA*

Wednesday Award
Lecture
10:15 am – 11:00 am

Room 301AB

Wednesday, May 02, 2018 11:15 AM-1:00 PM

Immunology/Microbiology / Anatomy and Pathology/Oncology**429 Why cancer inflames the eye - Minisymposium**

Recent advances in non-ocular oncology treatments have included biologics such as pembrolizumab (a PD-1/checkpoint inhibitor) and vemurafenib (BRAF inhibitor) that are designed to incite the immune system against advanced, nonocular solid tissue tumours such as metastatic melanoma. These treatments have resulted in inadvertent (but not entirely unexpected) ocular side effects such as uveitis and other forms of ocular inflammatory diseases, such as scleritis and orbital inflammatory disease. This symposium aims to cover potential disease mechanisms in uveitis that can be drawn from studies and clinical presentations in ocular oncology, as well as newly recognized disease pathways revealed by the experience with the aforementioned biologics used in none ocular oncology that has resulted in significant ocular inflammatory disease.

Moderators: Richard W. Lee, Lyndell L. Lim and Sarah E. Coupland

4406 — 11:15 Neoplastic routes to autoimmunity: Disease vs therapy. Bahram Bodaghi. *Ophthalmology, Pitie - Salpetriere Hospital, Paris, France*

4407 — 11:35 Paraneoplastic autoimmune retinopathy. H Nida N. Sen. *National Eye Institute, National Institutes of Health, Bethesda, MD*

4409 — 11:55 Uveal consequences of CTLA-4 and PD-1 inhibition. Martine J. Jager. *Ophthalmology, Leiden University Med Center, Leiden, Netherlands*

4410 — 12:15 Uveal complications of MEK and BRAF inhibition. Tara McCannel. *Jules Stein Eye Institute UCLA, Los Angeles, CA *CR*

4408 — 12:35 Pathophysiology of chemotherapy induced retinopathy. Elon H. Van Dijk. *Ophthalmology, Leiden University Medical Center, Leiden, Netherlands*

— 12:45 **Panel Discussion**

Room 306AB

Wednesday, May 02, 2018 11:15 AM-1:00 PM

Eye Movements/Strabismus/Amblyopia/Neuro-Ophthalmology**430 Eye Movements and Nystagmus**

Moderators: Larry A. Abel and Fatema F. Ghasia

4411 — 11:15 Characterizing microsaccade behavior in a healthy control population using a tracking scanning laser ophthalmoscope (TSLO). Lakshmisahithi Rani¹, C. K. Sheehy¹, E. Bensing², M. Devereux¹, S. B. Stevenson⁴, A. Green^{1,3}.

¹Neurology, UCSF, San Francisco, CA; ²Optometry, University of California, Berkeley, Berkeley, CA; ³Ophthalmology, UCSF, San Francisco, CA; ⁴Optometry, University of Houston, Houston, TX *CR

4412 — 11:30 Interaction of Eye and Head Movements during Smooth Pursuit in Macular Degeneration. Natela Shanidze, E. Ullman, J. Badler, P. Verghese. *Smith-Kettlewell Eye Research Institute, San Francisco, CA*

4413 — 11:45 The effect of stimulus type and autism quotient score on visual scanning of faces. Guan N. Guo, L. A. Abel. *Optometry and Vision Sciences, University of Melbourne, Melbourne, Victoria, Australia*

4414 — 12:00 The cerebellar oculomotor vermis is involved in reflexive but not tonic vergence adaptation. Ian Erkelens¹, W. R. Bobier¹, A. MacMillan^{2,1}, N. Maione¹, C. Martin Calderon¹, H. Patterson¹, B. Thompson^{1,3}. ¹Optometry & Vision Science, University of Waterloo, Waterloo, Ontario, Canada; ²University of New Brunswick, Fredericton, New Brunswick, Canada; ³Optometry & Vision Science, University of Auckland, Auckland, New Zealand, Auckland, New Zealand

4415 — 12:15 The Effect Of Horizontal Gaze Direction On Vertical Fusional Vergence Amplitude. Samuel Adade, V. Das. *College of Optometry, University of Houston, Houston, TX*

4416 — 12:30 Word Reading in Infantile Nystagmus. Frank A. Proudlock¹, E. Prakash¹, S. White², K. Paterson², I. Gottlob¹, R. McLean¹. ¹Ulverschroft Eye Unit, Neuroscience, Psychology and Behaviour, University of Leicester, Leicester, Leicestershire, United Kingdom; ²Neuroscience, Psychology and Behaviour, University of Leicester, Leicester, Leics, United Kingdom

4417 — 12:45 Investigating the relationship between foveal hypoplasia and refractive error in infantile nystagmus. Viral Sheth, I. Gottlob, F. A. Proudlock. *Ophthalmology, University of Leicester, Leicester, United Kingdom*

Room 310

Wednesday, May 02, 2018 11:15 AM-1:00 PM

Cornea**431 Corneal wound healing**

Moderators: Alexander V. Ljubimov and Indumathi Mariappan

4418 — 11:15 Semaphorin3A induces nerve regeneration in the adult cornea—a switch from its repulsive role in development. Victor H. Guaiquil, Q. Zhou, Y. Luo, T. Nguyen, M. Rosenblatt. *University of Illinois-Chicago, Chicago, IL*

4419 — 11:30 Endogenous Sonic hedgehog involvement in corneal epithelial cell proliferation in response to injury in mice. Kana Ichikawa¹, Y. Okada¹, O. Yamanaka¹, C. Liu², W. W. Kao³, S. Saika¹. ¹Wakayama Medical University, Wakayama, Japan; ²Optometry, Indiana University, Bloomington, IN; ³Ophthalmology, University of Cincinnati, Cincinnati, OH

4420 — 11:45 Sex influences TRPV1 driven lacrimal functional unit inflammation and corneal wound healing. Eduardo M. Rocha¹, L. C. Dias¹, L. E. Silva¹, A. C. Dias¹, C. Modulo¹, A. A. Murashima¹, M. Z. Fantucci¹, C. S. De Paiva², P. S. Reinach³. ¹Ophthalmology, FMRP-USP, Ribeirao Preto, Sao Paulo, Brazil; ²Ophthalmology, Baylor College of Medicine, Houston, TX; ³Ophthalmology, Wenzhou Medical University, Wenzhou, China

4421 — 12:00 The Effect of Corneal-Derived Versus Bone Marrow-Derived Mesenchymal Stromal Cell Secretome on Corneal Epithelial Wound Healing. Medi Eslani¹, I. Putra¹, J. Hamouie¹, X. Shen¹, N. Afsharkhamseh¹, P. Hematti², A. R. Djalilian¹. ¹Ophthalmology and Visual Sciences, University of Illinois at Chicago, Chicago, IL; ²Division of Hematology/Oncology, Department of Medicine, University of Wisconsin School of Medicine and Public Health, Madison, WI

4422 — 12:15 Drug eluting dendrimer-hyaluronic acid nanogel sealants to minimize corneal sutures. Siva Pramodh Kambhampati¹, U. Soiberman¹, T. P. Wu^{2,1}, A. Al Towerki³, W. Stark¹, S. C. Yiu¹, K. Rangaramanujam¹. ¹Center for Nanomedicine at Wilmer Eye Institute, Johns Hopkins School of Medicine, Baltimore, MD; ²Department of Biomedical Engineering, Johns Hopkins School of Medicine, Baltimore, MD; ³Ophthalmology, King Khaled Eye Specialist Hospital, Riyadh, Saudi Arabia *CR

4423 — 12:30 Corneal neurotization protects the cornea from corneal ulceration and scarring in a rat model of neurotrophic keratopathy. Kira Antonyshyn^{1,4}, J. Catapano³, J. Zhang², G. Borsche^{1,3}. ¹Institute of Medical Science, University of Toronto, Toronto, Ontario, Canada; ²Department of Neuroscience and Mental Health, The Hospital for Sick Children, Toronto, Ontario, Canada; ³Division of Plastic Surgery, University of Toronto, Toronto, Ontario, Canada; ⁴Division of Plastic and Reconstructive Surgery, The Hospital for Sick Children, Toronto, Ontario, Canada

4424 — 12:45 Differential staining of nerves by neurofilaments (NF) and tubulin beta III (TUBB3) and their distribution in various compartments of the ocular surface. Zhiguo HE¹, D. Guindolet^{1,2}, F. Cognasse³, F. Bergandi⁴, p. Gain¹, G. Thuret¹. ¹BiiGC EA 2521, University Jean Monnet; Faculty of Medicine, Saint-Etienne, France; ²Cornea and external Diseases, Ophthalmological Foundation of Rothschild, Paris, France; ³Auvergne-Loire French Blood Establishment, Eye Bank, Saint Etienne, France; ⁴Department of Anatomy, Faculty of Medicine, Jean Monnet University, Saint Etienne, France

Room 311

Wednesday, May 02, 2018 11:15 AM-1:00 PM

Retina

432 Vitreoretinal Surgery and Endophthalmitis

Moderators: Peter L. Gehlbach and Judy E. Kim

4425 — 11:15 Endophthalmitis After Intravitreal Injection of Vascular Endothelial Growth Factor Inhibitors: Management & Visual Outcomes. Kunyong Xu¹, E. K. Chin², D. R. Almeida³. ¹Ophthalmology, Weill Cornell Medicine, New York City, NY; ²Retina Consultants of Southern California, Redlands, CA; ³Vitreoretinal Surgery PA, Minneapolis, MN

4426 — 11:30 Visual prognosis in infectious endophthalmitis based on rapid identification of etiologic agent by MALDI-TOF. Tatiana Tanaka², T. S. Barbosa², E. F. Oda², L. M. Oliveira², F. Rossi¹, K. d. Correa¹, M. Goldbaum², J. H. Yamamoto², J. N. Almeida Junior¹. ¹Central Laboratory Division, University of São Paulo, São Paulo, Brazil; ²Ophthalmology, University of São Paulo, São Paulo, Brazil

4427 — 11:45 Impact of 777 Pellet Gun Ocular Injuries in Kashmir. Sundaram Natarajan^{1,2}, M. Pathan¹. ¹Vitreous Retina, Aditya Jyot Research in Vision & Ophthalmology, Mumbai, Maharashtra, India; ²Vitreous Retina, aditya Jyot eye hospital, Mumbai, Maharashtra, India

4428 — 12:00 Prospective Retinal and Optic Nerve Vitrectomy Evaluation (PROVE) Study – Five-Year Findings. Thomas Mendel, K. M. Joos, J. Kammer, R. W. Kuchey, E. Cherney, S. J. Kim. Ophthalmology, Vanderbilt Eye Institute, Nashville, TN ✕

4429 — 12:15 Quality measures of macular surgery – can we characterize surgical skill? Mark Alberti, A. S. Thomsen, M. Hermann, U. Christensen, M. D. De La Cour. Dept. of Ophthalmology, Rigshospitalet - Glostrup, Glostrup, Denmark

4430 — 12:30 Postoperative complications following 23, 25, and 27-gauge pars plana vitrectomy and the utility of routine follow-up. Ryan A. Shields, M. A. Powers, C. A. Ludwig, D. M. Moshfeghi. Ophthalmology, Stanford, Palo Alto, CA

4431 — 12:45 The Efficacy and Safety of Flanged Needleless Sutureless Intracocular Lens Fixation. Christianne A. Wa¹, M. K. Walsh^{1,2}, M. Stem³, B. Todorich⁴, J. D. Wolfe³. ¹Department of Ophthalmology and Vision Science, University of Arizona, Tucson, AZ; ²Retina Associates, Tucson, AZ; ³Associated Retinal Consultants, Oakland University William Beaumont School of Medicine, Royal Oak, MI; ⁴Pennsylvania Retina Specialists, Camp Hill, PA

Room 312

Wednesday, May 02, 2018 11:15 AM-1:00 PM

Cornea

433 Corneal Endothelium and Fuchs Corneal Dystrophy

Moderators: Ula V. Jurkunas and Naoki Okumura

4432 — 11:15 Transcriptomic Profiling of SLC4A11 Null Murine Corneal Endothelial Cells. Vinay Swamy¹, W. Zhang¹, R. F. Frausto¹, J. A. Bonanno², A. J. Aldave¹. ¹Ophthalmology, Stein Eye Institute, Los Angeles, CA; ²Optometry, Indiana University, Bloomington, IN

4433 — 11:30 SLC4A11 extracellular Loop 3 in corneal endothelial cell adhesion, FECD pathology and therapeutics. Darpan Malhotra¹, M. Jung², S. Noskov³, R. Zimmermann², J. R. Casey¹. ¹Biochemistry, University of Alberta, Edmonton, Alberta, Canada; ²Medizinische Biochemie und Molekularbiologie, Universität des Saarlandes, Homburg, Saarland, Germany; ³Department of Biological Sciences, University of Calgary, Calgary, Alberta, Canada

4434 — 11:45 RNA splicing and gene expression in corneal endothelium in Fuchs dystrophy from patients with and without TCF4 trinucleotide repeat expansion. Keith H. Baratz¹, R. Aleff¹, X. Tang³, K. R. Kalari³, L. J. Maguire¹, S. V. Patel¹, M. P. Fautsch¹, E. Wieben². ¹Ophthalmology, Mayo Clinic, Rochester, MN; ²Biochemistry and Molecular Biology, Mayo Clinic, Rochester, MN; ³Biomedical Statistics and Informatics, Mayo Clinic, Rochester, MN

4435 — 12:00 The role of TCF4 in the pathophysiology of Fuchs endothelial corneal dystrophy. Masakazu Sato¹, N. Okumura¹, M. Nakahara¹, T. Sato², K. Kitazawa², U. Schlotzer-Schrehardt³, F. E. Kruse³, N. Koizumi¹. ¹Biomedical Engineering, Doshisha University, Kyoto, Japan; ²Ophthalmology, Kyoto Prefectural University of Medicine, Kyoto, Japan; ³Ophthalmology, University of Erlangen-Nürnberg, Erlangen, Germany *CR

4436 — 12:15 Endoplasmic reticulum stress decreases mitochondrial membrane potential and upregulates PARK2 expression in corneal endothelium. Takashi Miyai¹, T. Toyono¹, K. Kitamoto¹, M. Fukushima¹, J. Yoshida¹, R. Shirakawa¹, S. Nakagawa¹, U. V. Jurkunas², T. Usui¹. ¹Department of Ophthalmology, University of Tokyo, Bunkyo-ku, Tokyo, Japan; ²Department of Ophthalmology, Schepens Eye Research Institute/Harvard Medical School, Boston, MA *CR

4437 — 12:30 Role of Vasoactive Intestinal Peptide in Survival of Corneal Endothelial Cells after Corneal Transplantation. Hamid-Reza Moein, M. J. Lopez, A. Gupta, D. L. Harris, P. Hamrah. Ophthalmology/Immunology/neuroscience, Tufts Medical Center, Boston, MA *CR

4438 — 12:45 Corneal endothelium can be protected against cell death by anti-Bax and anti-Bak siRNA. Thomas A. Fuchsluger, D. Thieme, F. E. Kruse, S. Mahajan. Department of Ophthalmology, Friedrich-Alexander-University, Erlangen, Germany

Room 314

Wednesday, May 02, 2018 11:15 AM-1:00 PM

Visual Neuroscience

434 ERG: Advances, Disease and Injury

Moderators: Mabelle T. Pardue and Neal S. Peachey

4439 — 11:15 Quadruple knockout mice lacking four crucial extracellular matrix molecules display impaired synaptic integrity and visual motion processing. Jacqueline Reinhard¹, C. Müller-Bühl¹, S. Wiemann¹, V. Luft¹, M. Palmhof¹, S. C. Joachim², A. Faissner¹. ¹Cell Morphology & Mol. Neurobiology, Ruhr-University Bochum, Bochum, Germany; ²Experimental Eye Research Institute, University Eye Hospital, Ruhr-University Bochum, Bochum, Germany

4440 — 11:30 Hybrid rd7 rods expressing a subset of cone genes are resistant to light-induced damage. Alexander V. Kolesnikov, V. J. Kefalov. Ophthalmology and Visual Sciences, Washington University School of Medicine, Saint Louis, MO

4441 — 11:45 The dynamics of rod and cone driven ERG adaptation using the silent substitution stimulation technique.

Jan J. Kremers, A. Joachimsthaler. Dept of Ophthalmology, University of Erlangen, Neuenburg, Germany

4442 — 12:00 Multifocal Electroretinography: An Objective Functional Test for Detecting Chloroquine and Hydroxychloroquine Retinal Toxicity.

Adrian C. Tsang, S. Ahmadi, J. Hamilton, J. Gao, C. Gottlieb, S. G. Coupland. Ophthalmology, University of Ottawa, Ottawa, Ontario, Canada

4443 — 12:15 The effect of inter-stimulus frequency on the photopic negative response in glaucoma and healthy eyes.

Flora Hui^{1,2}, J. Tang^{1,2}, X. Hadoux^{1,2}, J. G. Crowston^{1,2}. ¹Centre for Eye Research Australia, Melbourne, Victoria, Australia; ²Ophthalmology, Department of Surgery, The University of Melbourne, Melbourne, Victoria, Australia

4444 — 12:30 Release of Cone-Rod Suppression as a Key Mechanism for Concussion-Induced Light Sensitivity.

Christopher Tyler, L. Likova. Brain Imaging Center, Smith-Kettlewell Eye Research Institute, San Francisco, CA

4445 — 12:45 Delay of oscillatory potentials links animal models to diabetes in the human eye.

Zsolt Ablonczy¹, C. Giancarlo¹, C. Schillo¹, K. Violette¹, D. Guberski², B. Yahalom², L. Belen¹, C. Gelfman³, A. Half¹, D. Hollander³, A. Whitlock¹. ¹Preclinical, Ora, Inc, Andover, MA; ²Biomere, Inc., Worcester, MA; ³Ora, Inc, Andover, MA *CR

Room 315

Wednesday, May 02, 2018 11:15 AM-1:00 PM

Retinal Cell Biology / Low Vision

435 Gene function and neural protection

Moderators: Ann C. Morris and John D. Ash

4446 — 11:15 Beyond PDZ binding: The USH2 complex in zebrafish photoreceptors requires interactions among multiple protein domains.

Jennifer B. Phillips, T. Howat, M. Westerfield. Inst of Neuroscience, University of Oregon, Eugene, OR

4447 — 11:30 HDAC inhibition protects degenerating cones in the *cpfl1* mouse by increasing H3K27 and H3K9 tri-methylation.

Dragana Trifunovic¹, K. Masarini¹, C. Grimm², M. Ueffing¹, M. Samardzija². ¹Institute for Ophthalmic Research, Department for Ophthalmology, University-Eye-Clinic Tuebingen, Tuebingen, Germany; ²Lab for Retinal Cell Biology, Department for Ophthalmology, University of Zurich, Zurich, Switzerland

4448 — 11:45 Photoreceptor metabolic reprogramming provides survival advantage in acute stress while causing chronic degeneration.

Thomas Wubben, M. Pawar, A. Smith, K. Toolan, H. Hager, C. G. Besirli. Ophthalmology and Visual Sciences, University of Michigan, Ann Arbor, MI *CR

4449 — 12:00 Evidence that Stat3 protects photoreceptors by increasing expression of photoreceptor editing genes and decreasing outer segment genes.

Casey Keuthan, C. Santiago, M. Hooper, L. Qian, J. D. Ash. Ophthalmology, University of Florida, Gainesville, FL

4450 — 12:15 Caspase-2 increases in RGC and its inhibition protects against optic nerve degeneration in a murine repeated blast ocular trauma model.

Chloe N. Thomas¹, T. S. Rex², A. Bernardo-Colon², R. J. Blanch¹, Z. Ahmed¹. ¹Neuroscience and Ophthalmology, University of Birmingham, Birmingham, England, United Kingdom; ²Vanderbilt University Medical Center, Vanderbilt Eye Institute, Nashville, TN

4451 — 12:30 Blocking retinal remodeling improves light sensitivity in vision-impaired mice.

Bristol Denlinger¹, Z. Helft², M. Telias¹, C. Thornton¹, R. H. Kramer^{1,2}. ¹Molecular and Cell Biology, UC Berkeley, Berkeley, CA; ²Vision Science, UC Berkeley, Berkeley, CA *CR

4452 — 12:45 The SNARE *syntaxin3* is essential for photoreceptor morphogenesis and survival in zebrafish.

James M. Fadool, D. M. Allen, M. Sotolongo-Lopez. Biological Science, Florida State University, Tallahassee, FL

Room 316A

Wednesday, May 02, 2018 11:15 AM-1:00 PM

Physiology/Pharmacology

436 Drug delivery

Moderators: Uday B. Kompella and Ashim K. Mitra

4453 — 11:15 An ex vivo corneal model to analyse the penetration of topical eye treatments.

Ghazala Begum, A. Logan, R. J. Blanch. Neuroscience and Ophthalmology, University of Birmingham, Birmingham, United Kingdom

4454 — 11:30 IVMED-80 Eye Drops for Treatment of Keratoconus.

Sarah Molokhia², S. K. Muddana¹, H. Uehara^{1,2}, M. Burr², H. Hauritz², J. McCulloch², B. K. Ambati^{1,2}. ¹Moran Eye Center, Sandy, UT; ²iVeena Delivery Systems, Salt Lake City, UT *CR

4455 — 11:45 Drug-loaded intraocular lenses: prediction of the in vivo therapeutic efficacy.

Helena Filipe^{1,2}, A. Topete³, B. Saramago³, A. Serro^{3,4}. ¹Ophthalmology, Hospital of the Armed Forces, Lisbon, Portugal; ²Ophthalmology, Hospital SAMS, Lisbon, Portugal; ³Instituto Superior Técnico, Lisbon, Portugal; ⁴Instituto Superior de Ciências da Saúde Egas Moniz, Lisbon, Lisbon, Portugal

4456 — 12:00 POEGMA Hydrogels as a Posterior Depot for Controlled Release of Protein-Based Therapeutics.

Ben B. Muirhead, H. Sheardown, E. Paron. Biomedical Engineering, McMaster University, Hamilton, Ontario, Canada

4457 — 12:15 Gadolinium-Immunoglobulin Study For Diffusion Coefficient Measurement Of Bovine Vitreous Humor For Drug Delivery Modeling.

Anita N. Penkova^{1,2}, K. Rattanakisuntorn², A. Khoobyar¹, R. Moats^{2,1}, S. Fraser¹, M. S. Humayun¹, S. S. Sadhal^{1,2}. ¹University of Southern California, Los Angeles, CA; ²Radiology, CHLA, Los Angeles, CA; ³Mechanical Engineering, Ubon Ratchathani University, Ubonratchathani, Thailand

4458 — 12:30 Luminescent porous silicon particles as a self-reporting intravitreal drug delivery system.

Kristyn Huffman¹, J. Wang², Y. Xiao¹, W. R. Freeman¹, M. J. Sailor², L. Cheng¹. ¹Ophthalmology, Jacobs Retina Center at Shiley Eye Institute, University of California San Diego, La Jolla, CA; ²Department of Chemistry and Biochemistry, University of California San Diego, La Jolla, CA

4459 — 12:45 The merits of double label pharmacokinetics in ocular PK's: evidence from a study of 3H-labeled drug and 14C-labeled vehicle.

Muhammad Abdulrazik. Innovative Therapeutic Algorithms, East Jerusalem Biomedical Institute, East Jerusalem, Palestine, State of

Room 316B

Wednesday, May 02, 2018 11:15 AM-1:00 PM

Clinical/Epidemiologic Research

437 Impact of vision impairment

Moderators: Lisa J. Keay and Bonnielin K. Swenor

4460 — 11:15 Visual Impairment, Multi-Morbidity and Their Association with Short Term Mortality.

David J. Lee¹, D. D. Zheng¹, S. L. Christ², B. L. Lam³, L. A. McClure¹. ¹Department of Public Health Sciences, University of Miami Miller School of Medicine, Miami, FL; ²Purdue University, West Lafayette, IN; ³Bascom Palmer Eye Institute, University of Miami Miller School of Medicine, Miami, FL

4461 — 11:30 Visual Impairment and Frailty: The Women's Health and Aging Study (WHAS).

Bonnielin K. Swenor^{1,2}, J. Tian^{3,2}, V. Varadaraj¹, K. Bandeen-Roche^{3,2}. ¹Ophthalmology, Johns Hopkins Wilmer Eye Institute, Baltimore, MD; ²Center on Aging and Health, Johns Hopkins University, Baltimore, MD; ³Biostatistics, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD

4462 — 11:45 High Prevalence of Falls, Fear of Falling and Impaired Balance in Older Adults with Vision Impairment. Joshua R. Ehrlich^{1,2}, A. Granger^{1,3}, K. Bissen^{1,3}, S. E. Hassan⁴, B. C. Stagg^{1,2}. ¹Ophthalmology and Visual Sciences, University of Michigan, Ann Arbor, MI; ²Institute for Healthcare Policy and Innovation, University of Michigan, Ann Arbor, MI; ³University of Michigan School of Public Health, Ann Arbor, MI; ⁴Indiana University School of Optometry, Bloomington, IN

4463 — 12:00 Rates of Progressive Visual Field Loss and Driving Performance in Glaucoma. Alberto Diniz-Filho^{1,2}, A. J. Tatham^{2,3}, E. R. Boer², C. P. Gracitelli², R. Y. Abe², F. Medeiros^{1,2}. ¹Duke Eye Center and Department of Ophthalmology, Duke University, Durham, NC; ²Department of Ophthalmology, University of California, San Diego, La Jolla, CA; ³Princess Alexandra Eye Pavilion and Department of Ophthalmology, University of Edinburgh, Edinburgh, Scotland, United Kingdom *CR

4464 — 12:15 Why do people drive when they can't see clearly? Fiona Fylan^{1,2}, A. Hughes³, D. B. Elliott³, J. M. Wood⁴. ¹Brainbox Research, Leeds, United Kingdom; ²Leeds Sustainability Institute, Leeds Beckett University, Leeds, Yorkshire, United Kingdom; ³School of Optometry and Vision Science, University of Bradford, Bradford, United Kingdom; ⁴School of Optometry and Vision Science, Queensland University of Technology, Brisbane, Queensland, Australia

4465 — 12:30 Rates of global and central visual field change and visual impairment from glaucoma in the US: The Glaucoma Research Network (GRN). C Gustavo De Moraes¹, J. M. Liebmann¹, M. V. Boland², J. S. Myers³, S. R. Wellik⁴, T. Elze⁵, R. Ritch⁶, D. C. Hood¹. ¹Ophthalmology, Columbia University Medical Center, New York, NY; ²Ophthalmology, Johns Hopkins, Baltimore, MD; ³Ophthalmology, Wills Eye Hospital, Philadelphia, PA; ⁴Ophthalmology, Bascom Palmer Eye Institute, Miami, FL; ⁵Ophthalmology, Schepens Eye Research Institute, Boston, MA; ⁶Ophthalmology, New York Eye and Ear Infirmary, New York, NY *CR

Room 316C

Wednesday, May 02, 2018 11:15 AM-1:00 PM

Genetics Group

438 Novel genes found through methods old and new

Moderators: Terri L. Young and William K. Scott

4466 — 11:15 Mutations in the novel gene IFT88 are involved in causing non-syndromic inherited retinal degeneration (IRD). Anil K. Chekuri¹, A. A. Guru¹, P. Biswas¹, K. Branham⁴, H. Matsui¹, A. Hermida¹, M. Hicks⁶, A. Alapati¹, A. Talenti⁶, J. Heckenlively⁴, K. Frazer^{2,3}, P. Sieving³, R. Ayyagari¹. ¹Shiley Eye Institute, University of California, San Diego, La Jolla, CA; ²University of California San Diego, Institute for Genomic Medicine, La Jolla, CA; ³Department of Pediatrics, Division of Genome Information Sciences, Rady Children's Hospital, San Diego, CA; ⁴Ophthalmology & Visual Science, University of Michigan Kellogg Eye Center, Ann Arbor, MI; ⁵National Institutes of Health, National Eye Institute, Bethesda, MD; ⁶Human Longevity, Inc., San Diego, CA

4467 — 11:30 Whole genome analysis of inherited retinal disease patients reveals mutations intractable to other detection strategies. Gavin Arno^{1,4}, K. J. Carrs^{2,3}, M. Niblock¹, N. Waseem¹, M. E. Cheetham¹, M. Michaelides^{1,4}, A. T. Moore^{1,5}, F. L. Raymond^{3,6}, A. Webster^{1,4}. ¹Institute of Ophthalmology, University College London, London, United Kingdom; ²Department of Haematology, University of Cambridge, NHS Blood and Transplant Centre, Cambridge, United Kingdom; ³NIHR BioResource - Rare Diseases, Cambridge University Hospitals NHS Foundation Trust, Cambridge, United Kingdom; ⁴Moorfields Eye Hospital, London, United Kingdom; ⁵Ophthalmology, UCSF School of Medicine, University of California San Francisco, San Francisco, CA; ⁶Department of Medical Genetics, Cambridge Institute for Medical Research, University of Cambridge, Cambridge, United Kingdom

4468 — 11:45 Deciphering the genetic architecture of IRD by integrated analysis of 425 whole genomes. Radha Ayyagari¹, P. Biswas¹, A. Hermida¹, K. E. Branham², H. Matsui³, A. L. Villanueva⁴, A. Talenti⁵, A. Alapati¹, A. A. Guru¹, B. Huang¹, S. Riazuddin^{6,7}, J. Heckenlively², P. Sieving⁸, J. L. Duncan⁹, S. Riazuddin¹⁰, K. Frazer¹¹. ¹Shiley Eye Institute, University of California San Diego, La Jolla, CA; ²Kellogg Eye Center, University of Michigan, Ann Arbor, MI; ³Institute for Genomic Medicine, University of California San Diego, San Diego, CA; ⁴Mejora Vision MD/Virtual Eye Care MD, Retina Genomics Institute, Merida, Yucatan, Mexico; ⁵Human Longevity Inc, San Diego, CA; ⁶National Centre of Excellence in Molecular Biology, University of the Punjab, Lahore, Pakistan; ⁷National Centre for Genetic Diseases, Shaheed Zulfiqar Ali Bhutto Medical University, Islamabad, Pakistan; ⁸National Eye Institute, NIH, Bethesda, MD; ⁹University of California San Francisco, San Francisco, CA; ¹⁰The Wilmer Eye Institute, Johns Hopkins University School of Medicine, Baltimore, MD; ¹¹Division of Genome Information Sciences, Department of Pediatrics and Rady Children's Hospital, La Jolla, CA

4469 — 12:00 Discovery of three novel risk loci for age-related macular degeneration by trans-ethnic genome-wide association analysis in the VA Million Veteran Program. Robert P. Igo^{1,2}, C. Halladay³, D. Crawford^{1,2}, T. Hadj⁴, P. B. Greenberg^{5,6}, J. M. Sullivan^{7,8}, M. D. Anger^{7,8}, S. Fliesler⁹, S. Damrauer^{10,11}, W. Wu^{12,13}, P. E. Konicki^{2,14}, N. Peachey^{2,15}, S. K. Iyengar^{2,16}. ¹Population and Quantitative Health Sciences, Case Western Reserve University, Cleveland, OH; ²Louis Stokes Cleveland VA Medical Center, Cleveland, OH; ³Center for Innovation in Long Term Services and Supports, Providence VA Medical Center, Providence, RI; ⁴Ophthalmology and Visual Sciences, University Hospitals Eye Institute, Case Western Reserve University, Cleveland, OH; ⁵Section of Ophthalmology, Providence VA Medical Center, Providence, RI; ⁶Division of Ophthalmology, Alpert Medical School, Brown University, Providence, RI; ⁷Research Service, VA Western NY Healthcare System, Buffalo, NY; ⁸Ophthalmology, SUNY-University at Buffalo, Buffalo, NY; ⁹Ophthalmology, Biochemistry and Neuroscience Program, SUNY-Buffalo / VA Med Ctr-Buffalo, Buffalo, NY; ¹⁰Division of Vascular and Endovascular Surgery, University of Pennsylvania, Philadelphia, PA; ¹¹Surgery, Corporal Michael Crescenz VA Medical Center, Philadelphia, PA; ¹²Section of Cardiology, Medical Service, Providence VA Medical Center, Providence, RI; ¹³Division of Cardiology, Alpert Medical School, Brown University, Providence, RI; ¹⁴Psychiatry, Case Western Reserve University, Cleveland, OH; ¹⁵Cole Eye Institute and Dept. of Ophthalmology, Lerner College of Medicine, Cleveland Clinic, Cleveland, OH; ¹⁶Population and Quantitative Health Sciences, Genetics and Genome Sciences, Case Western Reserve University, Cleveland, OH

4470 — 12:15 A genome-wide association study for keratoconus identifies novel risk loci.

Kathryn P. Burdon¹, B. McComish¹, P. N. Baird², Y. Bykhovskaya^{3,4}, A. Richardson-Wynd², C. E. Willoughby⁵, X. Li^{6,7}, S. Sahebjada², S. MacGregor⁸, S. Lucas¹, J. I. Rotter^{6,7}, R. A. Mills⁹, A. W. Hewitt^{1,2}, Y. Rabinowitz^{3,4}, J. E. Craig⁹. ¹Menzies Institute for Medical Research, University of Tasmania, Hobart, Tasmania, Australia; ²Centre for Eye Research Australia, Melbourne, Victoria, Australia; ³Department of Surgery and Board of the Governors Regenerative Medicine Institute, Cedars-Sinai Medical Center, Los Angeles, CA; ⁴Cornea Genetic Eye Institute, Beverly Hills, CA; ⁵Genomic Medicine, Biomedical Sciences Research Institute, Ulster University, Ulster, Northern Ireland, United Kingdom; ⁶Institute for Translational Genomics and Population Science, Los Angeles Biomedical Research Institute, Los Angeles, CA; ⁷Institute and Department of Pediatrics, Harbor-UCLA Medical Center, Torrance, CA; ⁸Statistical Genetics, Berghofer Queensland Institute of Medical Research, Herston, Queensland, Australia; ⁹Ophthalmology, Flinders University, Adelaide, South Australia, Australia

4471 — 12:30 Expanding genetic landscape and phenotypic spectrum of 540 Chinese patients with Non-syndromic High Myopia.

Xue-Bi Cai, Y. Zheng, Z. Jin. Lab for Stem Cell & Retinal Regeneration, Wenzhou Medical University, Wenzhou, China

4472 — 12:45 Genetic Testing Adds Research and Clinical Value to a Retinal Degeneration Registry. Kari E. Branham¹, J. Fisher², K. Trzuppek³, D. G. Birch⁴, J. L. Duncan⁵, S. P. Daiger⁶, B. C. Mansfield⁷. ¹Ophthalmology and Visual Sciences, University of Michigan, Ann Arbor, MI; ²Foundation Fighting Blindness, Columbia, MD; ³InformedDNA, St. Petersburg, FL; ⁴Retina Foundation of the Southwest, Dallas, TX; ⁵University of California, San Francisco, San Francisco, CA; ⁶University of Texas Health Sciences Center, Houston, TX

Ballroom A

Wednesday, May 02, 2018 11:15 AM-1:00 PM

Glaucoma

439 Capillaries, Blood Flow, OCT Angiography**Moderators: Bang V. Bui and Brad Fortune**

4473 — 11:15 Response of the trilaminar retinal vessel network to intraocular pressure elevation in rat eyes. Bang V. Bui¹, D. Zhao¹, L. Wang², B. Fortune², Z. He¹. ¹Optometry and Vision Sciences, University of Melbourne, Parkville, Victoria, Australia; ²Devers Eye Institute, Portland, OR

4474 — 11:30 Pericytes promote capillary constriction in ocular hypertension glaucoma that persists after lowering intraocular pressure.

Luis Alarcon-Martinez, J. Cueva Vargas, N. A. Belforte, D. villafranca-Baughman, A. Di Polo. University of Montreal Hospital Research Center, Montreal, Quebec, Canada

4475 — 11:45 Analysis of IOP and CSF alterations on ocular biomechanics and lamina cribrosa hemodynamics. Lorenzo Sala¹, C. Prud'homme¹, G. Guidoboni², M. Szopos¹, B. A. Siesky², A. Harris². ¹IRMA, Université de Strasbourg, Strasbourg, France; ²Ophthalmology, Indiana University School of Medicine, Indianapolis, IN; ³Department of Electrical Engineering and Computer Science, College of Engineering, University of Missouri, Columbia, MO *CR

4476 — 12:00 Comparison of Superficial versus Deep Macula Vessel Density Measurements in Normal, Glaucoma Suspect, and Glaucoma Eyes. Patricia Isabel C. Manalastas¹, S. Moghimi¹, L. M. Zangwill¹, M. Christopher¹, K. Hasenstab¹, R. Penteado¹, H. Hou¹, T. Shoji^{1,2}, E. Ghahari¹, A. J. Li^{1,3}, K. Nguyen^{1,4}, G. Villatoro¹, A. Yarmohammadi¹, R. N. Weinreb¹. ¹Ophthalmology, University of California, San Diego, San Diego, CA; ²Ophthalmology, Saitama Medical University, Iruma, Saitama, Japan; ³Dartmouth College, Hanover, NH; ⁴Northeast Ohio Medical University, Rootstown, OH *CR, ✗

4477 — 12:15 An Hourglass Pattern of Oxygen Distribution in the Lamina Cribrosa Predicted using a Computational Model. Thanadet Chuangsuwanich¹, L. H. Leo¹, L. Schmetterer^{2,3}, M. J. Girard^{1,2}. ¹Biomedical Engineering, National University of Singapore, Singapore, Singapore; ²Singapore Eye Research Institute, Singapore National Eye Center, Singapore, Singapore; ³Lee Kong Chian School of Medicine, Nanyang Technological University, Singapore, Singapore

4478 — 12:30 AngioOCT peripapillary microvascular density outperforms standard OCT parameters as a discriminant between different glaucoma severity levels – The Leuven Eye Study. Joao Barbosa-Breda^{1,2}, D. Andrade de Jesus¹, K. Van Keer^{1,6}, V. Nassiri², G. Molenberghs^{4,3}, L. Abegão Pinto⁵, A. A. Rocha-Sousa², E. Vandewalle^{1,6}, I. Stalmans^{1,6}. ¹Research Group Ophthalmology, Neurosciences, KU Leuven, Leuven, Belgium; ²Surgery and Physiology (Ophthalmology Unit), Faculdade de Medicina da Universidade do Porto, Porto, Portugal; ³I-BioStat, KU Leuven, Leuven, Belgium; ⁴I-BioStat, Hasselt University, Hasselt, Belgium; ⁵Visual Sciences Study Center, Faculdade de Medicina da Universidade de Lisboa, Lisbon, Portugal; ⁶Ophthalmology Department, UZ Leuven, Leuven, Belgium

4479 — 12:45 Acute Macular and Peripapillary OCT Angiography Changes with Intravitreal Injections in a Cohort of 40 Eyes. Alexander Barash, R. B. Rosen, P. Garcia. Ophthalmology, New York Eye & Ear Infirmary, New York, NY *CR

Ballrooms BC

Wednesday, May 02, 2018 11:15 AM-1:00 PM

Retina

440 AMD Imaging II**Moderators: Amani Fawzi and Srinivas R. Sadda**

4480 — 11:15 Evaluation of indocyanine green angiographic features in symptomatic macular polypoidal choroidal vasculopathy over 24 months: results from the EVEREST II study. Tock H. Lim¹, S. Parikh², C. S. Tan³. ¹Ophthalmology, Nat'l Hlthcare Group Eye Inst, Singapore, Singapore; ²Novartis Pharma AG, Basel, Switzerland; ³National Healthcare Group Eye Institute, Singapore, Singapore *CR, ✗

4481 — 11:30 A longitudinal SD-OCT analysis of macular atrophy in the HARBOR trial. Srinivas R. Sadda^{1,2}, E. Morgenthien³, S. Gune³. ¹Ophthalmology, University of California - Los Angeles, Los Angeles, CA; ²Doheny Eye Institute, Los Angeles, CA; ³Genentech, Inc., South San Francisco, CA *CR, ✗

4482 — 11:45 Histologically-guided metrics for atrophy progression in age-related macular degeneration (AMD) tested via clinicopathologic correlation. Rosa Dolz-Marco^{1,2}, C. Balaratnasingam^{1,3}, J. Messinger⁴, M. Li⁴, K. Freund^{1,2}, C. A. Curcio⁴. ¹Vitreous Retina Macula Consultants, New York, NY; ²LuEsther T Mertz Retinal Research Center, Manhattan Eye, Ear and Throat Hospital, New York, NY; ³Center for Ophthalmology and Visual Sciences, University of Western Australia, Perth, Australia, Perth, Western Australia, Australia; ⁴Department of Ophthalmology, School of Medicine, University of Alabama at Birmingham, Birmingham, AL *CR

4483 — 12:00 Drusen volume development and progression towards advanced AMD. Ferdinand G. Schlanitz, M. Baratsits, S. Sacu, H. Bogunovic, A. S. Weinhandl, A. Jakob, M. Karantonis, G. S. Reiter, R. Told, U. Schmidt-Erfurth. Ophthalmology, Medical University Vienna, Vienna, Austria *CR, ✗

4484 — 12:15 Low-Cost Home-Care OCT for AMD with Off-Axis Full-Field Time-Domain OCT – Analysis of Reliability and Feasibility in Disease Monitoring. Claus von der Burchard¹, J. Tode¹, S. O. Koizer¹, C. Ehlken¹, F. Treumer¹, P. Koch², H. Sudkamp², R. Birngruber², G. Hüttmann², J. Roeder¹. ¹Department of Ophthalmology, University of Kiel, Kiel, Germany; ²Medizinisches Laserzentrum Lübeck, Lübeck, Germany

4485 — 12:30 Longitudinal impact of drusen volume on quantitative fundus autofluorescence in patients with early and intermediate age-related macular degeneration. *Gregor S. Reiter^{1,2}, R. Told^{1,2}, A. Pollreisz^{1,2}, F. G. Schlanitz^{1,2}, H. Bogunovic^{2,3}, L. Baumann⁴, S. Sacu^{1,2}, U. Schmidt-Erfurth².* ¹Vienna Clinical Trial Center, Medical University of Vienna, Vienna, Austria; ²Department of Ophthalmology, Medical University of Vienna, Vienna, Austria; ³Christian Doppler Laboratory for Ophthalmic Image Analysis, Vienna Reading Center, Medical University of Vienna, Vienna, Austria; ⁴Center for Medical Statistics, Informatics and Intelligent Systems, Medical University of Vienna, Vienna, Austria

Exhibit Hall A0001-A0036

Wednesday, May 02, 2018 11:15 AM-1:00 PM

Biochemistry/Molecular Biology

441 Molecular mechanisms of retinal function and retinal disease

Moderators: G. Astrid Limb and James T. Handa

4486 — A0001 Functional Characterization of the Calcium Channel Subunit Cacna2d4 in the Zebrafish Retina. Domino Schlegel¹, S. Glasauer², S. C. Neuhauss¹. ¹Institute of Molecular Life Sciences, University of Zurich, Zürich, Switzerland; ²Department of Molecular Cellular Developmental Biology, University of California, Santa Barbara, Santa Barbara, CA

4487 — A0002 Lysosomal impairment in the Retinal Pigment Epithelium (RPE) - a pathway of damage in the ageing retina. Eloise Keeling¹, D. A. Johnston², D. S. Chatelet², D. Tumbarello³, A. Lotery^{1,4}, J. Ratnayaka¹. ¹Clinical & Experimental Sciences, Medicine, University of Southampton, Southampton, United Kingdom; ²Biomedical Imaging Unit, University of Southampton, Southampton, United Kingdom; ³Biological Sciences, Faculty of Natural & Environmental Sciences, University of Southampton, Southampton, United Kingdom; ⁴Eye Unit, University Hospital Southampton NHS Foundation Trust, Southampton, United Kingdom

4488 — A0003 A novel mutation, Gly86Arg, in a calcium-sensor protein GCAP1 (GUCAL1) alters regulation of the retinal guanylyl cyclase and causes dominant cone-rod degeneration. Igor V. Peshenko¹, A. V. Cideciyan², A. Sumaroka², E. V. Olshevskaya¹, A. Scholten³, M. Flick², K. Koch³, S. G. Jacobson², A. M. Dizhoor¹. ¹Pennsylvania College of Optometry, Salus University, Elkins Park, PA; ²Department of Ophthalmology, University of Pennsylvania, Philadelphia, PA; ³Department of Neuroscience, University of Oldenburg, Oldenburg, Germany

4489 — A0004 Suppression of GCAP-activated retinal guanylyl cyclase by RD3 protein is essential for preventing rd3 photoreceptor degeneration. Alexander M. Dizhoor, E. V. Olshevskaya, I. V. Peshenko. Pennsylvania College of Optometry, Salus University, Elkins Park, PA

4490 — A0005 Deregulation of calcium feedback via calcium sensor proteins, GCAPs, triggers photoreceptor death in dominant cone-rod dystrophy CORD6 mouse model. Elena V. Olshevskaya¹, S. Sato², I. V. Peshenko¹, A. M. Dizhoor¹, V. J. Kefalov². ¹Pennsylvania College of Optometry, Salus University, Elkins Park, PA; ²Department of Ophthalmology and Visual Sciences, Washington University in St. Louis, St. Louis, MO

4491 — A0006 Role of nucleotide polymorphisms in exon 3 of the L and M cone opsin genes in splicing and disease. Maureen Neitz, J. Neitz. Ophthalmology/Vision Science Center, University of Washington, Seattle, WA

4492 — A0007 Whole metabolomic profiling determines systemic dysfunction in Choroideremia. Mariya Moosajee^{1,2}, R. Richardson¹, A. Mitsios¹, A. Abbouda¹, A. Webster^{1,2}. ¹Development, Ageing and Disease, UCL Institute of Ophthalmology, London, United Kingdom; ²Genetics, Moorfields Eye Hospital, London, United Kingdom

4493 — A0008 High serum HGF and anti-69-kDa autoantibodies as potential etiology for bilateral diffuse uveal melanocytic proliferation masquerading as neovascular AMD. John Niffenegger¹, A. Soltero¹, J. Niffenegger², S. Yang³, G. Adamus³. ¹Retina Associates of Sarasota, Sarasota, FL; ²School of Engineering and Applied Sciences, Harvard College, Cambridge, MA; ³Casey Eye Institute, Oregon Health & Science Institute, Portland, OR

4494 — A0009 Mutation in Leber's congenital amaurosis-causing gene cct2 evokes retinal hypoplasia in zebrafish. Yuriko Minegishi^{1,2}, N. Nakaya², T. Iwata¹, S. I. Tomarev². ¹National Institute of Sensory Organs, Natl Hosp Org, Tokyo Medical Ctr, Meguro-ku, TOKYO, Japan; ²National Eye Institute, National Institutes of Health, Bethesda, MD

4495 — A0010 The efficiency of melanin to photogenerate potentially toxic singlet oxygen significantly increases after partial photobleaching of the pigment. Tadeusz J. Sarna, M. Olchawa, G. Szczyk, A. Zadło, M. Sarna. Biophysics, Jagiellonian University, Krakow, Malopolskie, Poland

4496 — A0011 Differential Disease Profiles of Two Retinitis Pigmentosa Point Mutations in Rhodopsin Correlate with the Mutant Effects on mRNA Splicing. Lisa M. Riedmayr^{1,2}, S. Boehm^{1,2}, M. Biel^{1,2}, E. Becirovic^{1,2}. ¹Pharmacology, Ludwig-Maximilians-Universitaet Muenchen, Munich, Germany; ²Center for Integrated Protein Science Munich CiPSM, Munich, Germany

4497 — A0012 AAV-mediated overexpression of nuclear SREBP1/2 induces buphthalmos and retinal degeneration in mice. Mai Shuyi¹, D. M. Wu^{1,2}, K. Kizhatil³, S. W. John³, C. L. Cepko⁴, W. Xiong^{1,5}. ¹Department of Biomedical Sciences, City University of Hong Kong, Hong Kong, Hong Kong; ²Massachusetts Eye and Ear Infirmary, Boston, MA; ³The Jackson Laboratory, Bar Harbor, ME; ⁴Department of Genetics, Harvard Medical School, Boston, MA; ⁵City University of Hong Kong Shenzhen Research Institute, Shenzhen, China

4498 — A0013 Inhibition of let-7 microRNA promotes axon regeneration in retinal ganglion cells. Heather K. Mak, X. Zhang, S. Ng, C. K. Leung. Ophthalmology and Visual Sciences, The Chinese University of Hong Kong, Hong Kong, Hong Kong

4499 — A0014 Clusterin Enhances Photoreceptor Survival by Suppressing Neuronal Nitric Oxide Synthase (nNOS) Expression Levels in Rhodopsin S334ter-line 3 Retinitis Pigmentosa. Cheryl M. Craft^{1,2}, A. J. Vargas¹, K. Yamamoto¹, J. Li¹, L. Luo¹, E. Lee^{1,3}. ¹USC Roski Eye Institute, Ophthalmology, Keck School of Medicine of the University of Southern California, Los Angeles, CA; ²Integrative Anatomical Sciences, Keck School of Medicine of the University of Southern California, Los Angeles, CA; ³Biomedical Engineering, USC Viterbi School of Engineering, Los Angeles, CA

4500 — A0015 Important role of microglia in a novel S100B based retina degeneration model. Sandra Kuehn, P. Grotegut, A. Smit, G. Stute, H. Dick, S. C. Joachim. Experimental Eye Research Institute, Ruhr-University Bochum, Bochum, Germany

4501 — A0016 MNK1 Inhibition Protects Retinal Ganglion Cells From ERK Mediated Injury. Alessandra Tuccitto^{1,2}, X. Guo², J. M. Siva^{3,2}. ¹Laboratory Medicine and Pathobiology, University of Toronto, Toronto, Ontario, Canada; ²Vision Science, Krembil Research Institute, Toronto, Ontario, Canada; ³Ophthalmology and Vision Sciences, University of Toronto, Toronto, Ontario, Canada

4502 — A0017 Localization of ABCA4 in the Retinal Pigment Epithelium and its implications for Stargardt Disease. Tamara L. Lenis^{1,2}, S. Ng^{1,2}, J. Hu^{1,2}, Z. Jiang^{1,2}, M. Lloyd^{1,2}, N. Esposito³, D. Bok^{1,2}, S. C. Finnemann³, G. H. Travis^{1,2}, R. A. Radu^{1,2}. ¹Stein Eye Institute, UCLA, Los Angeles, CA; ²Department of Ophthalmology, David Geffen School of Medicine at UCLA, Los Angeles, CA; ³Department of Biological Sciences, Fordham University, Los Angeles, CA

4503 — A0018 ABCA4 midigenes reveal the full splice spectrum of all reported and newly identified non-canonical splice site variants in Stargardt disease. Mubeen Khan^{1,2}, R. Sangermano^{1,2}, S. Cornelis^{1,2}, V. Richelle¹, D. Elmelik¹, S. Albert^{1,2}, A. Garanto^{1,2}, R. Qamar³, D. Lugtenberg¹, I. Born^{4,5}, R. W. Collin^{1,2}, F. P. Cremers^{1,2}. ¹Human genetics, Radboudumc, Nijmegen, Gelderland, Netherlands; ²Donders Institute of Brain, Cognition and Behaviour, Nijmegen, Gelderland, Netherlands; ³Comsats Institute of information technology, Islamabad, Pakistan; ⁴Rotterdam eye Hospital, Rotterdam, Netherlands; ⁵Rotterdam, ophthalmic institute, Rotterdam, Netherlands

4504 — A0019 Pharmacological stimulation of the cell stress responses as a therapy for rhodopsin RP. Dimitra Athanasiou¹, G. Pang¹, J. Bellingham¹, M. Aguila¹, C. A. Opeft¹, P. J. Reeves², M. E. Cheetham¹. ¹UCL, Institute of Ophthalmology, London, United Kingdom; ²School of Biological Sciences, University of Essex, Essex, United Kingdom

- 4505 — A0020 Crystals are not Present in Circulating Cells from CHM Patients.** Alina Radziwon¹, M. Suh², I. Dimopoulos², W. Cho¹, a. szkotak¹, I. M. MacDonald¹. ¹University of Alberta, Edmonton, Alberta, Canada; ²University of Ottawa, Ottawa, Ontario, Canada; ³University of Manitoba, Winnipeg, Manitoba, Canada
- 4506 — A0021 Gender analysis of the transcriptomes of AdipoR1 and MFRP deficient mice.** Marie-Audrey I. Kautzmann, K. Do, N. G. Bazan. Neuroscience, LSUHSC, New Orleans, LA
- 4507 — A0022 Sorsby Fundus Dystrophy patient-derived RPE form abnormal extracellular matrices and demonstrate large basal laminar drusen.** Abbi L. Engel¹, K. Knight¹, T. Khuu¹, E. Worrall¹, M. Manson¹, J. Du², J. Hurley³, J. R. Chao¹. ¹Ophthalmology, University of Washington, Seattle, WA; ²Eye Institute, West Virginia University, Morgantown, WV
- 4508 — A0023 Identification and Functional Characterization of RBP4 binding domains on the Vitamin A transporter Rbpr2 for Vision.** Glenn P. Lobo. Medicine, Medical University of South Carolina, Mount Pleasant, SC
- 4509 — A0024 Macular Pigment and Prevalent Inflammatory Disease Among Older Women in the Carotenoids in Age-Related Eye Disease Study (CAREDS), an ancillary study of the Women's Health Initiative.** Krista Christensen¹, Z. Liu¹, R. Wallace², Y. Liu¹, A. E. Millen³, B. A. Blodi¹, M. L. Klein⁴, J. A. Mares¹. ¹Department of Ophthalmology and Visual Sciences, University of Wisconsin-Madison, Madison, WI; ²College of Public Health, University of Iowa, Iowa City, IA; ³Department of Epidemiology and Environmental Health, University at Buffalo, Buffalo, NY; ⁴Ophthalmology, Casey Eye Institute-OHSU, Portland, OR
- 4510 — A0025 Formation of all-trans retinoid after bleaching in isolated human cone photoreceptors.** Cole Milliken¹, C. Chen¹, P. Goletz¹, F. Gonzalez-Fernandez^{2,3}, Y. Koutalos¹. ¹Ophthalmology, Medical University of South Carolina, Charleston, SC; ²Ophthalmology and Pathology, University of Mississippi, Jackson, MS; ³G.V. (Sonny) Montgomery Veterans Affairs Medical Centers, Jackson, MS
- 4511 — A0026 Fluorescence Lifetime Imaging Ophthalmoscopy (FLIO) of Macular Pigment.** Rebekah H. Gensure¹, L. Sauer^{1,2}, K. Andersen¹, B. Li¹, M. Hammer², P. S. Bernstein¹. ¹Moran Eye Center, University of Utah, Salt Lake City, UT; ²Ophthalmology, University of Jena, Jena, Germany
- 4512 — A0027 Interphotoreceptor retinoid binding protein (IRBP) reduces but does not fully prevent the formation of lipofuscin precursors from 11-cis retinal in human rod photoreceptor outer segments.** Leopold Adler¹, C. Chen¹, P. Goletz¹, F. Gonzalez-Fernandez^{2,3}, Y. Koutalos¹. ¹Ophthalmology, Medical University of South Carolina, Charleston, SC; ²Ophthalmology and Pathology, University of Mississippi, Jackson, MS; ³G.V. (Sonny) Montgomery Veterans Affairs Medical Centers, Jackson, MS
- 4513 — A0028 Grade of cataract and its influence on measurement of macular pigment optical density by autofluorescence imaging.** Akira Obana^{1,2}, Y. Gohto¹, W. Gellermann³, H. Sasano¹, M. Sharifzadeh³, T. Seto¹, P. S. Bernstein⁴. ¹Ophthalmology, Seirei Hamamatsu Gen Hosp, Hamamatsu, Shizuoka, Japan; ²Medical Spectroscopy, Institute for Medical Photonics Research, Preeminent Medical Photonics Education & Research Center, Hamamatsu University School of Medicine, Hamamatsu, Shizuoka, Japan; ³Image Technologies Corporation, Salt Lake City, UT; ⁴Ophthalmology and Visual Sciences, Moran Eye Center, University of Utah School of Medicine, Salt Lake City, UT
- 4514 — A0029 Spatial distribution of macular pigment estimated by autofluorescence imaging in an elderly Japanese population.** Yuko Gohto¹, A. Obana^{1,2}, W. Gellermann³, H. Sasano¹, M. Sharifzadeh³, T. Seto¹, P. S. Bernstein⁴. ¹Dept of Ophthalmology, Seirei Hamamatsu Gen Hosp, Hamamatsu, Shizuoka, Japan; ²Dept of Medical Spectroscopy, Institute for Medical Photonics Research, Preeminent Medical Photonics Education & Research Center, Hamamatsu University School of Medicine, Hamamatsu, Japan; ³Image Technologies Corporation, Salt Lake City, UT; ⁴Dept of Ophthalmology and Visual Sciences, Moran Eye Center, University of Utah School of Medicine, Salt Lake City, UT
- 4515 — A0030 In vivo measurement of the action spectrum of intrinsic fluorophores in the mouse retina with scanning laser ophthalmoscopy.** Suman Manna¹, P. Zhang¹, E. N. Pugh², R. J. Zawadzki³. ¹Cell Biology, University of California, Davis, Davis, CA; ²Physiology and Membrane Biology, University of California, Davis, Davis, CA; ³Ophthalmology & Vision Science, University of California, Davis, Davis, CA
- 4516 — A0031 Deletion of Fatty Acid Transport Protein 4 Rescues the Visual Cycle and Function of Rod Photoreceptors in the R91W Mouse Model of Leber Congenital Amaurosis.** Songhua Li, M. Jin. Neuroscience Center & Department of Ophthalmology, LSU Health Sciences Center, New Orleans, LA
- 4517 — A0032 Decline of macular pigment optical density with age in rhesus monkeys fed controlled diets.** Lauren Renner¹, M. Neuringer^{1,2}, T. J. McGill^{2,1}. ¹Oregon National Primate Research Center, Oregon Health & Sciences University, Beaverton, OR; ²Casey Eye Institute, Oregon Health & Sciences University, Portland, OR
- 4518 — A0033 Mapping and analysis of S-palmitoylation sites on RPE65.** T. Michael Redmond, S. Uppal, E. Poliakov, S. Gentleman. LRCMB, National Eye Inst/NIH, Bethesda, MD
- 4519 — A0034 Clinical features and genomic work in the first Latin American family affected with North Carolina Macular Dystrophy.** Clinical features and genomic work in the first Latin American family affected with North Carolina Macular Dystrophy. Scarlett Fest Parra, A. Zermeno, R. Matsui. Instituto de Oftalmologia Conde de valenciana, Mexico City, Mexico
- 4520 — A0035 Flavonoid effects on rod and cone opsins.** Masahiro Kono¹, P. Goletz², A. M. Hanneken². ¹Ophthalmology, Medical Univ of South Carolina, Charleston, SC; ²Scripps Research Institute, La Jolla, CA, CA
- 4521 — A0036 The Neuropilin-1 Interacting Region of VEGFA-165 Shifts the Activation of MAPK and AKT to a Pseudo-Binary Dose Response within Primary Human Retinal Endothelial Cells.** Kenneth P. Mitton¹, W. A. Dailey¹, A. Knapp², P. Chen², M. Moore¹, J. Felisky¹, A. Thomas¹, E. Guzman¹, M. Deshpande¹. ¹Eye Research Institute, Oakland University, Rochester, MI; ²Eye Research Institute & School of Medicine, Oakland University, Rochester, MI

Exhibit Hall A0037-A0068

Wednesday, May 02, 2018 11:15 AM-1:00 PM

Biochemistry/Molecular Biology

442 Ocular gene therapies and chemical therapeutics

Moderators: Frank J. Lovicu and Ekaterina Lobanova

4522 — A0037 BEST1 gene augmentation therapy corrects light-modulated retinal micro-detachments. Karina E. Guziewicz¹, A. V. Cideciyan², W. A. Beltran¹, A. M. Komaromy^{1,3}, V. Dufour¹, M. Swider², S. Iwabe¹, A. Sumaroka², B. T. Kendrick¹, G. Ruthel¹, V. A. Chiodo³, E. Heon⁶, W. W. Hauswirth⁵, S. G. Jacobson², G. D. Aguirre¹. ¹Clinical Sciences and Advanced Medicine, University of Pennsylvania, Philadelphia, PA; ²Department of Ophthalmology, University of Pennsylvania, Philadelphia, PA; ³Department of Small Animal Clinical Sciences, Michigan State University, East Lansing, MI; ⁴Department of Pathobiology, University of Pennsylvania, Philadelphia, PA; ⁵Department of Ophthalmology, University of Florida, Gainesville, FL; ⁶Department of Ophthalmology and Vision Sciences, University of Toronto, Toronto, Ontario, Canada *CR

4523 — A0038 Long-term rescue of vision with antisense oligonucleotides in a mouse model of Usher syndrome. Jennifer J. Lentz¹, R. Amato¹, R. Rosencrans¹, F. Jodelka², F. F. Depreux², B. V. Alapure¹, N. G. Bazan¹, F. Rigo³, M. Hastings². ¹Neuroscience Center, LSUHSC, New Orleans, LA; ²Cell Biology and Anatomy, Rosalind Franklin University, North Chicago, IL; ³Ionis Pharmaceuticals, Inc, Carlsbad, CA *CR

4524 — A0039 A gene therapy approach targeting central carbon metabolism as a broadly applicable treatment for retinitis pigmentosa. Yashodhan Chinchore, T. Begaj, C. L. Cepko. Genetics, Harvard Medical School, Boston, MA

4525 — A0040 Developing an AAV vector to target VEGF-Trap secretion from macular cones for the treatment of AMD via intravitreal injection. Anna-Lisa Doebley, A. Crain, M. Neitz, J. Neitz. University of Washington, Seattle, WA

- 4526 — A0041 Development of two gene therapy approaches for Complete Congenital Stationary Night Blindness (cCSNB).** Juliette Varin, M. Miranda de Sousa Dias, T. Pugliese, M. Neuillé, N. Bouzidi, C. Michiels, M. Desrosiers, J. Sahel, I. S. Audo, D. Dalkara, C. Zeitz. Institut de la Vision, Paris, France
- 4527 — A0042 AAV-mediated expression of X-linked Inhibitor of Apoptosis protects photoreceptors in two canine models of early onset RP.** William A. Beltran¹, A. V. Cideciyan², S. Iwabe¹, V. Dufour¹, J. Charnig², B. Lisi², J. Guzman¹, A. Badiei¹, C. Tsilfidis³, W. W. Hauswirth⁴, S. G. Jacobson², G. D. Aguirre¹. ¹Division of Experimental Retinal Therapies, Dept. of Clinical Sciences & Advanced Medicine, School of Veterinary Medicine, University of Pennsylvania, Philadelphia, PA; ²Dept. of Ophthalmology, Scheie Eye Institute, Perelman School of Medicine, Philadelphia, PA; ³Dept. of Ophthalmology, University of Ottawa, Ottawa, Ontario, Canada; ⁴Dept. of Ophthalmology, University of Florida, Gainesville, FL
- 4528 — A0043 Use of a novel Rprg-null mouse line allows rapid efficacy evaluation of gene augmentation therapy.** Zhijian Wu, M. Joe, W. Yu, S. Hiriyanna. NIH/NEI, Gaithersburg, MD
- 4529 — A0044 Gene augmentation therapy delays NMNAT1-associated retinal degeneration in a mouse model.** Scott H. Greenwald¹, R. Farmer¹, E. Hennessey¹, K. M. Bujakowska¹, R. Xiao^{1,2}, L. Vandenberghe^{1,2}, E. A. Pierce¹. ¹Ocular Genomics Institute, Department of Ophthalmology, Massachusetts Eye and Ear, Harvard Medical School, Boston, MA; ²Grousbeck Gene Therapy Center, Department of Ophthalmology, Mass Eye and Ear, Harvard Medical School, Boston, MA
- 4530 — A0045 Visual Acuity and Safety Outcomes 2.5 Years Post-Treatment with rAAV2/2-ND4, an Investigational Gene Therapy for ND4 LHON: Results of a Phase I/II Trial.** Jose A. Sahel^{1,2}, B. Katz³, C. Vignal-Clermont⁴, L. Blouin³. ¹UMR-S 968, Institut de la Vision, Paris, France; ²Ophthalmology, University of Pittsburgh School of Medicine, Pittsburgh, PA; ³GenSight Biologics, New York, NY; ⁴Fondation Ophtalmologique Adolphe de Rothschild, Paris, France *CR, ✗
- 4531 — A0046 Intravitreal injection of rAAV2/2-ND4 in LHON: absence of correlation between ocular inflammation and humoral or cellular immune responses to AAV2.** Barrett Katz¹, A. Galy¹, S. Fitoussi¹, C. Vignal Clermont², J. A. Sahel³, C. Cancian¹, N. Thomasson¹, C. Bouquet¹. ¹GenSight Biologics, Paris, France; ²Centre Hospitalier National d'Ophtalmologie des Quinze-Vingts, Paris, France *CR, ✗
- 4532 — A0047 Antisense oligonucleotide-based restoration of ABCA4 splicing defects caused by deep-intronic mutations associated with Stargardt disease.** Alex Garanto^{1,2}, R. Sangermano^{1,2}, S. Albert^{1,2}, M. Khan^{1,2}, M. Bauwens³, S. Naessens³, R. Allikmeets^{4,5}, I. Born⁶, C. C. Hoyng^{7,2}, E. De Baere³, F. P. Cremers^{1,2}, R. W. Collin^{1,2}. ¹Human Genetics, Radboudumc, Nijmegen, Netherlands; ²Donders Institute for Brain, Cognition and Behaviour, Radboudumc, Nijmegen, Netherlands; ³Center for Medical Genetics, Ghent University and Ghent University Hospital, Ghent, Belgium; ⁴Ophthalmology, Columbia University, New York, NY; ⁵Pathology and Cell Biology, Columbia University, New York, NY; ⁶The Rotterdam Eye Hospital, Rotterdam, Netherlands; ⁷Ophthalmology, Radboudumc, Nijmegen, Netherlands *CR
- 4533 — A0048 Dual Adeno-Associated Virus Vector Treatment of Autosomal Recessive Stargardt Disease.** Frank M. Dyka, W. W. Hauswirth. Ophthalmology, University of Florida, Gainesville, FL *CR
- 4534 — A0049 An optimized AAV vector for rod-specific gene expression.** Harry O. Orlans^{1,2}, M. McClements¹, M. I. Patricio¹, A. R. Barnard¹, R. E. MacLaren^{1,2}. ¹Nuffield Laboratory of Ophthalmology, University of Oxford, Oxford, England, United Kingdom; ²Moorfields Eye Hospital, London, United Kingdom *CR
- 4535 — A0050 Investigating tolerability of subretinally delivered dual AAV-MYO7A vectors in non-human primate (NHP).** Kaitlyn Calabro¹, S. L. Boye¹, K. McCullough¹, D. Fajardo¹, W. Smith¹, C. E. Strang², D. C. Witherspoon², D. Chakraborty², P. D. Gamlin², S. E. Boye¹. ¹Department of Ophthalmology, University of Florida, Gainesville, FL; ²Department of Ophthalmology, University of Alabama at Birmingham, Birmingham, AL *CR
- 4536 — A0051 AAV 44.9- a novel capsid that efficiently transduces photoreceptors and retinal pigment epithelium.** Shreyasi Choudhury¹, R. Mellen¹, K. McCullough¹, J. Peterson¹, D. Fajardo¹, J. Chiorini², S. L. Boye¹, S. E. Boye¹. ¹Ophthalmology, College of Medicine, University of Florida, Gainesville, FL; ²National Institutes of Health/Nidcr, Bethesda, MD
- 4537 — A0052 Impact of sequential bilateral intravitreal injection of rAAV2/2-ND4 on ocular and systemic humoral immune status in non-human primates.** Celine BOUQUET, A. Galy, C. Cancian, N. Thomasson. GenSight Biologics, Paris, France *CR
- 4538 — A0053 Mitochondrial transfer of the human ND6T14484C gene causes visual loss and optic neuropathy.** Hong Yu, J. Guy. Ophthalmology, Bascom Palmer Eye Inst, Univ of Miami, Miami, FL
- 4539 — A0054 Exploration of Mitochondrially Targeted Gene Therapies.** Daniel M. Maloney, M. Carrigan, N. Chadderton, S. Millington-Ward, A. Palfi, P. Humphries, J. G. Farrar. Smurfit Institute of Genetics, Trinity College Dublin, Dublin, Dublin, Ireland
- 4540 — A0055 Inner- and outer segments are required for efficient photoreceptor infection and expression in cultured human retina.** Thilo M. Buck¹, P. M. Quinn¹, C. Boon^{2,1}, C. H. Alves¹, J. Wijnholds¹. ¹Ophthalmology, Leiden University Medical Center, Leiden, Netherlands; ²Clinical Ophthalmogenetics, AMC-University of Amsterdam (UvA), Amsterdam, NH, Netherlands *CR
- 4541 — A0056 Biocompatibility and stability of an AAV vector for choroideremia gene therapy following passage through its surgical device.** Maria I. Patricio^{1,2}, C. Martinez-Fernandez Dela Camara¹, C. I. Cox³, C. Blue³, A. R. Barnard^{1,2}, R. E. MacLaren^{1,2}. ¹NDCN, University of Oxford, Oxford, England, United Kingdom; ²Oxford Eye Hospital, Oxford University Hospitals NHS Trust, Oxford, United Kingdom; ³Nightstar Therapeutics plc, London, United Kingdom *CR
- 4542 — A0057 The accurate quantification of AAV genomic titre depends on the conformation of the plasmid reference.** Cristina Martinez-Fernandez dela Camara¹, C. I. Cox², P. Whalley², C. Blue², R. E. MacLaren^{1,3}. ¹Nuffield Laboratory of Ophthalmology, University of Oxford, Oxford, Oxfordshire, United Kingdom; ²Nightstar Therapeutics plc, London, United Kingdom; ³Oxford Eye Hospital, Oxford University Hospitals NHS Trust, Oxford, Oxfordshire, United Kingdom *CR
- 4543 — A0058 Challenges in GTMP process validation for a non-viral gene therapy.** Martina Kropp^{1,2}, N. Harmening^{1,2}, M. Kecik^{1,2}, A. Chronopoulos¹, A. Conti^{1,2}, T. Bautzová^{1,2}, G. Thumann^{1,2}. ¹Experimental Ophthalmology, University of Geneva, Geneva, Geneva, Switzerland; ²Department of Ophthalmology, University Hospitals of Geneva, Geneva, Geneva, Switzerland
- 4544 — A0059 Comparison of Efficacy of Various shRNAs Targeting Human RHO mRNA in Cultured Cells as Model Therapeutics for Autosomal Dominant Retinitis Pigmentosa.** Zahra Fayazi^{1,2}, J. Myers^{1,2}, M. C. Butler^{1,2}, A. J. Trujillo^{1,2}, J. M. Sullivan^{1,2}. ¹Research Service, VA Western NY Healthcare System, Buffalo, NY; ²Ophthalmology, University at Buffalo-SUNY, Buffalo, NY*CR
- 4545 — A0060 Rhodopsin P23H mutation promote photoreceptor degeneration through GSDMD mediated pyroptosis.** Wei Du^{1,3}, X. Xie², X. Tang^{1,3}, X. Li^{1,3}. ¹Ophthalmology, Peking University People's Hospital, Beijing, China; ²Institute of Hepatology Peking University, Beijing, China; ³Beijing Key Laboratory of Diagnosis and Therapy of Retinal and Choroid Diseases, Beijing, China

4546 — A0061 Safety of subretinal delivery of RGX-314 (AAV8-anti-VEGF Fab) in the non-human primate as assessed by full-field ERG. Arkady Lyubarsky^{1,2}, E. Wielechowski³, T. S. Aleman⁴, A. M. Maguire^{1,4}, G. Ying⁴, E. Bote³, L. Makaron³, J. I. Morgan⁴, A. Tretiakova³, J. Wilson³, J. Bennett^{1,4}. ¹Center for Advanced Retinal and Ophthalmic Therapies (CAROT); FM Kirby Center for Mol Ophthal, SOM Univ. of Pennsylvania, Philadelphia, PA; ²Vision Research Center, University of Pennsylvania, Philadelphia, PA; ³Gene Therapy Program, University of Pennsylvania SOM, Philadelphia, PA; ⁴Scheie Eye Institute, University of Pennsylvania SOM, Philadelphia, PA *CR

4547 — A0062 A generalizable destabilized domain-based approach to quickly and reversibly control gene therapies in the eye. John D. Hulleman, S. Datta, F. Zhang, W. Feng. Ophthalmology and Pharmacology, Univ of Texas Southwestern Med Center, Dallas, TX

4548 — A0063 Neutralizing antibody titer against AAV post AAV-mediated intravitreal injection in cynomolgus monkeys. Masashi Yamazaki^{1,2}, T. Igarashi^{2,1}, K. Takahashi^{2,1}, K. Miyake¹, M. Kobayashi², C. Yaguchi², S. Kameya², H. Takahashi², T. Okada¹. ¹Biochemistry and Molecular Biology, Nippon Medical School Hospital, Bunkyo-ku, Tokyo, Japan; ²Ophthalmology, Nippon Medical School Hospital, Bunkyo-ku, Tokyo, Japan

4549 — A0064 Nitration reduces antibacterial activity of lactoferrin. Amani Alhalwani¹, N. Kaul², S. A. Barbee², J. A. Huffman¹. ¹Department of Chemistry and biochemistry, University of Denver, Englewood, CO; ²Department of Biological Science, University of Denver, Denver, CO

4550 — A0065 Characterization of magnetofection transfection reagent, a novel transfection method for gene therapy in a mouse model. Priyanka Priyadarshani, S. Ferdous, S. Markand, K. J. Donaldson, J. H. Boatright, J. M. Nickerson. Ophthalmology, Emory University, Atlanta, GA

4551 — A0066 Aptamer Mediated Protein Delivery to Retinal Cells. Bhanu Dasari, D. Talreja, S. Cashman, R. Kumar-Singh. Tufts University School of Medicine, Boston, MA

4552 — A0067 Modulation of Eph-receptor signaling: implications for neurodegenerative disease and neural regeneration. Daniel Pelaez^{2,3}, G. Dvorianchikova², R. Doddapaneni², G. S. Gaidosh², W. Tao², Z. Acosta Torres², J. P. Turner¹, S. Pappas¹, D. V. Ivanov², D. T. Tse¹. ¹University of Miami, Miami, FL; ²Ophthalmology, Bascom Palmer Eye Institute, University of Miami, Miami, FL; ³Biomedical Engineering, University of Miami, Coral Gables, FL

4553 — A0068 Targeted Gene Therapy of the Corneal Endothelium using Functionalized Nanoparticle Assisted Femtosecond Laser Technology. Rami Darwich^{1,2}, H. de Alwis Weerasekera^{1,3}, S. Patskovsky⁴, M. Piche¹, J. R. Casey^{5,1}, A. Wilson⁴, S. Costantino⁶, P. Sapiel^{1,6}, M. Meunier⁴, I. Brunette^{1,6}. ¹Department of Ophthalmology, Maisonneuve-Rosemont Hospital, Montreal, Quebec, Canada; ²Faculty of Medicine, McGill University, Montreal, Quebec, Canada; ³Chemistry and Biomolecular Sciences, University of Ottawa, Ottawa, Ontario, Canada; ⁴Department of Engineering Physics, Polytechnique, Montreal, Quebec, Canada; ⁵Department of Biochemistry, University of Alberta, Edmonton, Alberta, Canada; ⁶Department of Ophthalmology, Université de Montréal, Montreal, Quebec, Canada

Exhibit Hall A0083-A0103

Wednesday, May 02, 2018 11:15 AM-1:00 PM

Retina

443 Retinal prostheses

Moderator: Takashi Fujikado

4554 — A0083 Non-rectangular waveforms are more charge-efficient for network-mediated responses of ON type retinal ganglion cells. Jae-Ik Lee¹, M. Im^{1,2}. ¹Henry Ford Health System, Detroit, MI; ²Department of Anatomy and Cell Biology, Wayne State University School of Medicine, Detroit, MI

4555 — A0084 Survey of candidates of STS retinal prosthesis in RP patients with hand-motion or less vision. Takashi Fujikado², K. Hozumi¹, T. Endo¹, H. Kanda², T. Morimoto², M. Ozawa², K. Nishida¹. ¹Dept of Ophthalmology, Osaka Univ Medical School, Suita, Osaka, Japan; ²Applied Visual Science, Osaka University Grad Sch Med, Suita, Japan; ³Nidek Co., Gamagori, Japan *CR

4556 — A0085 Retinal Ganglion Cell Spike Response in Wild type and rd10 Mouse Retina Induced by Long-term Electrical Stimulation. SeongKwang Cha, J. Ahn, Y. Goo. Physiology, Chungbuk National University, Cheongju, Korea (the Democratic People's Republic of)

4557 — A0086 Interphase gaps can selectively contribute to enhance the response to cathodic-first electrical stimulation in retinal prosthesis. Yukari Nakano^{1,2}, Y. Terasawa^{1,2}, H. Kanda³, M. Ozawa⁴, T. Miyoshi⁵, J. Ohta², H. Sawai⁶, T. Fujikado³. ¹Artificial Vision Institute, R&D Div., Nidek Co., Ltd., Gamagori, Aichi, Japan; ²Materials Science, Nara Institute of Science & Technology, Icoma, Nara, Japan; ³Department of Applied Visual Science, Osaka University Graduate School of Medicine, Suita, Osaka, Japan; ⁴Nidek CO., LTD., Gamagori, Aichi, Japan; ⁵Department of Integrative Physiology, Osaka University Graduate School of Medicine, Suita, Osaka, Japan; ⁶Department of Health Sciences, School of Nursing, Osaka Prefecture University, Habikino, Osaka, Japan *CR

4558 — A0087 A potential alternative approach to epiretinal prosthesis fixation with foldable capsule vitreous body. Lixia Lin¹, B. Lou¹, X. Lin¹, Z. Chen². ¹State Key Laboratory of Ophthalmology (Zhongshan Ophthalmic Center; Sun Yat-Sen University), Guangzhou, China; ²Shenzhen Sibionics Co. LTD, Shenzhen, China *CR

4559 — A0088 Evaluation of the temporal patterns of LGN relay cell responses elicited by suprachoroidal transretinal stimulation. Hiroyuki Kanda, T. Miyoshi, T. Morimoto, T. Fujikado. Applied Visual Science, Osaka Univ Graduate Sch of Med, Suita, Osaka, Japan *CR

4560 — A0089 Acute animal model for subretinal prosthesis implantation. Ying Xiao¹, T. Lin¹, K. Huffman¹, B. Bosse², S. Thorogood², W. R. Freeman¹, L. Cheng¹. ¹Jacobs Retina Center, Shiley Eye Institute, San Diego, CA; ²Nanovision Biosciences, San Diego, CA *CR

4561 — A0090 Changes in Microchip Position after Implantation of a Subretinal Vision Prosthesis in Humans. Laura Kuehlewein¹, N. Troelenberg⁴, K. Stingl¹, S. Schleeauf¹, A. Kusnyerik⁶, H. Sachs⁶, J. Roeder⁷, T. L. Jackson⁸, R. E. MacLaren⁹, C. Chee¹⁰, B. Wilhelm³, F. Gekeler¹, K. Bartz-Schmidt¹, E. Zrenner^{1,2}, K. Stingl¹. ¹Department of Ophthalmology, University of Tuebingen, Tuebingen, Germany; ²Werner Reichardt Centre for Integrative Neuroscience, University of Tuebingen, Tuebingen, Germany; ³STZ eyetrial, Tuebingen, Germany; ⁴Retina Implant AG, Reutlingen, Germany; ⁵Ophthalmology, Semmelweis University, Budapest, Hungary; ⁶Staedtisches Klinikum Dresden-Friedrichstadt, Dresden, Germany; ⁷Ophthalmology, University of Kiel, Kiel, Germany; ⁸King's College Hospital, NHS Foundation Trust, London, United Kingdom; ⁹Oxford Eye Hospital at the Oxford University Hospitals NHS Foundation Trust and Nuffield Laboratory of Ophthalmology, University of Oxford, Oxford, United Kingdom; ¹⁰Department of Ophthalmology, National University Hospital Singapore, Singapore, Singapore *CR, x

4562 — A0091 Histopathological Criteria for Evaluation of Chronically Stimulated Retina. David A. Nayagam^{1,2}, R. A. Williams^{2,3}, C. Salinas La-Rosa^{2,3}, C. McGowan¹, C. J. Abbott^{4,5}, S. Epp¹, M. N. Shivdasani^{1,6}, C. D. Luu^{4,5}, J. Villalobos¹, P. Thien^{1,6}, O. Burns⁴, A. Brandli^{4,5}, C. Williams¹, P. J. Allen^{4,5}, R. Shepherd^{1,6}. ¹Bionics Institute, East Melbourne, Victoria, Australia; ²Pathology, University of Melbourne, Melbourne, Victoria, Australia; ³Anatomical Pathology, St Vincent's Hospital Melbourne, Melbourne, Victoria, Australia; ⁴Centre for Eye Research Australia, Melbourne, Victoria, Australia; ⁵Surgery (Ophthalmology), The University of Melbourne, Melbourne, Victoria, Australia; ⁶Medical Bionics, University of Melbourne, Melbourne, Victoria, Australia *CR

- 4563 — A0092 Safety evaluation of transcorneal electrical stimulation as an examination of patient selection for retinal prosthesis.** Toru Saito¹, H. Kanda², Y. Nakano³, Y. Terasawa³, K. Osawa¹. ¹Artificial Retina Development Office, Development Div., Nidek Co., Ltd., Gamagori, Aichi, Japan; ²Department of Applied Visual Science, Osaka university Graduate School of Medicine, Suita, Osaka, Japan; ³Artificial Vision Institute, R&D Div., Nidek Co., Ltd., Gamagori, Aichi, Japan *CR
- 4564 — A0093 Temporal integration of repeated electrical stimuli in the pulse number modulation of retinal prosthesis.** Chuan-Chin Chiao^{1,2}, Y. Tsai³, C. Wu^{3,4}. ¹Dept of Life Science, National Tsing Hua University, Hsinchu, Taiwan; ²Institute of Systems Neuroscience, National Tsing Hua University, Hsinchu, Taiwan; ³Department of Electronics Engineering, National Chiao Tung University, Hsinchu, Taiwan; ⁴Biomedical Electronics Translational Research Center, National Chiao Tung University, Hsinchu, Taiwan
- 4565 — A0094 Active sensing and reading performance in simulated prosthetic vision.** Nairouz Farah¹, C. Abraham², L. Gerbi², Z. Zalevsky², Y. Mandel¹. ¹Life Sciences, Bar Ilan University, Ramat Gan, Israel; ²Faculty of Engineering, Bar Ilan University, Ramat Gan, Israel
- 4566 — A0095 Design, Development and *in-vitro* Testing of a Bi-Directional Retinal Stimulator System – BIMEA.** Tibor K. Lohmann¹, K. Schaffrath¹, S. Lück², A. Erbslöh³, V. Rincón Montes⁴, R. Kokozinski^{3,5}, R. Viga³, W. Mokwa², A. Offenhäusser⁴, S. Johnen¹, P. Walter¹. ¹Department of Ophthalmology, RWTH Aachen University Hospital, Aachen, Germany; ²Institute of Materials in Electrical Engineering I, RWTH Aachen University, Aachen, Germany; ³University Duisburg Essen, Electronic Components and Circuits, Duisburg, Germany; ⁴Institute of Complex Systems, Bioelectronics, ICS-8, Forschungszentrum Jülich, Jülich, Germany; ⁵Fraunhofer Institute of Microelectronic Circuits and Systems, Duisburg, Germany
- 4567 — A0096 Efficacy of A Newly Developed Retinal Prosthesis System 60 in Cat.** Han Mingsong¹, Y. Bai¹, Z. Chen¹, Y. Chen², H. Miao³, J. Hu¹, Y. Zhao¹. ¹Shenzhen Sibiomics Co.Ltd, Shenzhen, China; ²Shanghai JiaoTong University, Shanghai, China; ³Peking University People's Hospital, Beijing, China *CR
- 4568 — A0097 Comparing thermal and visible light imaging for the Argus II retinal implant in real-world situations.** Gislín Dagnelie¹, M. P. Barry¹, A. Caspi², P. Gibson³, A. Roy³, A. Vinnett¹, R. Husseiny⁵, G. Seifert⁴. ¹Ophthal-Lions Vision Cntr, Johns Hopkins Univ, Baltimore, MD; ²Jerusalem College of Technology, Jerusalem, Israel; ³Second Sight Medical Products, Sylmar, CA; ⁴Advanced Medical Electronics Corp., Minneapolis, MN; ⁵School of Medicine, Cairo University, Cairo, Egypt *CR
- 4569 — A0098 Modulation of the retinal output signal by mechanical stimulation.** John B. Troy¹, C. M. Rountree², C. Meng¹, L. Saggere². ¹Biomedical Engineering, Northwestern University, Evanston, IL; ²Mechanical and Industrial Engineering, University of Illinois at Chicago, Chicago, IL
- 4570 — A0099 Biocompatibility of photodiode structures used for epiretinal prosthesis extended by an integrated epiretinal recording (OPTO-EPIRET).** Kim Schaffrath¹, T. K. Lohmann¹, P. Raffelberg², F. Waschkowski³, R. Viga², R. Kokozinski^{2,4}, W. Mokwa³, P. Walter¹, S. Johnen¹. ¹Eyeclinic, University Hospital RWTH Aachen, Aachen, Germany; ²Electronic Components and Circuits, University Duisburg-Essen, Duisburg, Germany; ³Institute of Materials in Electrical Engineering I, RWTH Aachen University, Aachen, Germany; ⁴Fraunhofer Institute of Microelectronic Circuits and Systems, Duisburg, Germany
- 4571 — A0100 tDCS-induced retinal excitability: implications for the performance improvement of retinal prostheses.** Yasuo Terasawa^{1,2}, Y. Nakano^{1,2}, M. Ozawa³. ¹Artificial Vision Institute, Nidek Co., Ltd., Gamagori, Aichi, Japan; ²Graduate School of Materials Science, Nara Institute of Science and Technology, Ikoma, Nara, Japan; ³Nidek Co., Ltd., Gamagori, Aichi, Japan *CR
- 4572 — A0101 Development of an electroencephalogram (EEG) protocol to map electrically-elicited visual responses in blind patients implanted with the Argus II retinal prosthesis.** Yingchen He^{1,2}, N. Huang², A. Caspi^{3,4}, A. Roy⁴, S. Engel¹, G. E. Legge¹, E. J. Van Kuijk², D. D. Koozekanani², S. R. Montezuma². ¹Department of Psychology, University of Minnesota, Minneapolis, MN; ²Department of Ophthalmology, University of Minnesota, Minneapolis, MN; ³Department of Electrical and Electronic Engineering, Jerusalem College of Technology, Jerusalem, Israel; ⁴Second Sight Medical Products, Inc., Sylmar, CA *CR
- 4573 — A0102 New rehabilitation strategies for patients with Argus II retinal implants.** Celine Chaumette, j. amaudruz. CHNO des 15-20, Paris, France
- 4574 — A0103 A High-Density Retinal Prosthesis System with Automatic Equalization.** Long-Sheng Fan^{1,3}, Y. Chen¹, M. Cheng¹, M. Sheu¹, T. Lai⁴, S. Wang¹, Y. Cheng¹, F. Hsu¹, C. Yang^{4,2}, C. Cheng⁵. ¹Iridium Medical Technology Company, Hsinchu, Taiwan; ²National Taiwan University, Taipei, Taiwan; ³National Tsing Hua University, Hsinchu, Taiwan; ⁴Ophthalmology, National Taiwan University Hospital, Taipei, Taiwan; ⁵Ophthalmology, Shin-Kong Hospital, Taipei, Taiwan *CR
- Exhibit Hall A0164-A0180
Wednesday, May 02, 2018 11:15 AM-1:00 PM
Retinal Cell Biology
444 Stem Cells: New Approaches and Disease Modelling
- Moderators: Christelle Monville and Daniel Pelaez**
- 4575 — A0164 The Role of Necroptosis Kinases in the Induction of iPSCs from Fibroblasts.** Ahmad Al Moujahed^{1,2}, B. Tian¹, E. Konstantinou¹, H. Lin^{3,1}, D. G. Vavvas¹. ¹Retina, Massachusetts Eye and Ear Infirmary, Boston, MA; ²Pathology, Boston University School of Medicine, Boston, MA; ³Ophthalmology, University of Massachusetts, Boston, MA
- 4576 — A0165 Generating and Maintaining Retinal Progenitor Cells from Adult Mouse Retina.** Caixia Jin, q. Ou, H. Tian, J. Wang, J. Xu, L. Lu, G. Xu. School of Medicine, Tongji University, Shanghai, China
- 4577 — A0166 Gradual expansion of RPE-like cells in chick Müller glial culture.** Run-Tao Yan, S. Wang. Ophthalmology, Univ of Alabama at Birmingham, Birmingham, AL
- 4578 — A0167 Using cell reprogramming technology to convert Müller glia into photoreceptors.** Raymond Ching Bong Wong^{1,2}, T. Nguyen^{1,2}, L. Fang¹, C. Lo³, J. Jabbari⁴, S. Hung¹, R. G. Liu^{1,5}, C. D. Luu^{1,2}, M. C. Gillies⁶, A. Hewitt^{1,5}. ¹Centre for Eye Research Australia, East Melbourne, Victoria, Australia; ²Ophthalmology, Surgery, University of Melbourne, Melbourne, Victoria, Australia; ³Monash University, Melbourne, Victoria, Australia; ⁴Australia Genome Research Facility, Melbourne, Victoria, Australia; ⁵University of Tasmania, Hobart, Tasmania, Australia; ⁶Save Sight Institute, Sydney, New South Wales, Australia
- 4579 — A0168 Influence of basement membrane components on the *in vitro* functionality of hESC-RPE.** Taina Viheriälä^{1,2}, S. Nymark², T. Ihalainen¹, P. Grönroos¹, H. Hongisto¹, A. Sorkio¹, H. Skottman¹, T. Ilmarinen¹. ¹BioMediTech, University of Tampere, Tampere, Finland; ²BioMediTech, Tampere University of Technology, Tampere, Finland
- 4580 — A0169 High throughput screen identifies drugs that rescue RPE atrophy in iPSC-derived 2D and 3D models of AMD.** Kapil Bharti, M. Song, R. Quinn, C. Hampton, R. Dejene, D. Bose, R. Sharma. NIH, NEI, Bethesda, MD
- 4581 — A0170 Minimal increase in protein production is sufficient to reverse abnormalities in iPSC eyecups derived from patients with inherited retinal disease.** Anat Yanai, V. Nizamudheen, C. Gregory Evans, K. Gregory-Evans. University of British Columbia, Vancouver, British Columbia, Canada

4582 — A0171 Induction of rod and cone photoreceptor-specific progenitors from retinal stem cells. Brian G. Ballios¹, S. Khalili², J. Belair-Hickey², K. Grise², L. Donaldson³, G. Bernier⁴, J. Liu², G. D. Bader², M. S. Shoicher⁵, V. Wallace¹, D. van der Kooy². ¹Department of Ophthalmology and Vision Sciences, University of Toronto, Toronto, Ontario, Canada; ²Molecular Genetics, University of Toronto, Toronto, Ontario, Canada; ³Division of Ophthalmology, McMaster University, Hamilton, Ontario, Canada; ⁴Centre de recherche, Maisonneuve-Rosemont Hospital, Montreal, Quebec, Canada; ⁵Chemical Engineering and Applied Chemistry, University of Toronto, Toronto, Ontario, Canada

4583 — A0172 Evaluation of iPSC-derived retinal pigment epithelium (iRPE) as a model for in vitro lentiviral-based gene therapy. Florian Udry¹, S. Decembrini², C. Kostic¹, D. M. Gamm², Y. Arsenijevic¹. ¹Jules Gonin Eye Hospital, Université de Lausanne, Lausanne, Vaud, Switzerland; ²Ophthalmology and Visual Science, University of Wisconsin-Madison, Madison, WI

4584 — A0173 Modeling the cell specific origins of MacTel using a large patient iPSC-RPE library. Kevin Eade^{1,2}, M. Gantner^{1,2}, s. Victor¹, R. Fallon¹, s. harkins-perry¹, A. Johnson¹, C. Metallo³, M. Friedlander^{1,2}. ¹the Lowy Research Institute, La Jolla, CA; ²the scripps research institute, La Jolla, CA; ³UCSD, La Jolla, CA

4585 — A0174 Delineating the role of local vs. systemic influences in AMD and related macular dystrophies: An hiPSC approach. Ruchira Singh^{3,4}, C. Galloway³, L. Macdonald³, C. Soto³, D. Benoit^{2,1}. ¹Center for Musculoskeletal Research, University of Rochester, Rochester, NY; ²Department of Biomedical Engineering, University of Rochester Medical Center, Rochester, NY; ³Department of Ophthalmology and Biomedical Genetics, University of Rochester, Rochester, NY; ⁴Center for Visual Science, University of Rochester, Rochester, NY

4586 — A0175 Comparative RNA-Seq analysis of iPSC-derived human RPE cells from normal and Smith-Lemli-Opitz Syndrome (SLOS) patients. Steven J. Fliesler^{1,2}, E. D. Au¹, L. A. Skelton¹, S. Ramachandra Rao^{1,2}, M. H. Farkas¹. ¹Ophthalmology, Biochemistry, and Neuroscience Program, SUNY-Buffalo / VA Med Ctr-Buffalo, Buffalo, NY; ²SUNY Eye Institute, Buffalo, NY

4587 — A0176 The Photoreceptor Dystrophy and Unfolded Protein Response Regulator Gene, ATF6, Promotes Mesodermal Differentiation in Human Stem Cells. Heike Kroeger¹, N. Grimsey², R. J. Paxman³, W. Chiang¹, L. Plate⁸, Y. Jones⁴, P. Shaw⁵, J. Trejo², S. Tsang⁶, E. Powers³, J. Kelly³, R. Wiseman³, J. H. Lin^{1,7}. ¹Pathology, University of California San Diego, La Jolla, CA; ²Pharmacology, University of California San Diego, La Jolla, CA; ³Molecular Medicine, SCRIPPS Research Institute, La Jolla, CA; ⁴Cellular and Molecular Medicine, University of California San Diego, La Jolla, CA; ⁵Ophthalmology, University of California San Diego, La Jolla, CA; ⁶Ophthalmology, Pathology and Cell Biology, Jonas Children's Vision Care and Bernard & Shirlee Brown Glaucoma Laboratory, Edward S. Harkness Eye Institute, New York Presbyterian Hospital, Columbia University, New York, NY; ⁷VA San Diego Healthcare System, San Diego, CA; ⁸Chemistry and Biological Sciences, Vanderbilt University, Nashville, TN *CR

4588 — A0177 Comparison of phagocytic activity in induced pluripotent Stem Cell (iPSC)-derived retinal pigment epithelial (RPE) cells from age-related macular degeneration (AMD) patients. Jie Gong, H. Cai, M. A. Fields, L. Del Priore. Department of Ophthalmology and Visual Science, Yale School of Medicine, New Haven, CT

4589 — A0178 Impaired Autophagy in Sialidosis iPSC Cells and induced Retinal Pigment Epithelium-like Cells. Takahiro Suzuki. Ophthalmology, Tokai Univ School of Medicine, Isehara, Japan

4590 — A0179 Human stem cell-derived cells and organoids are relevant in vitro systems to understand maculopathy pathogenesis. Han Qin¹, S. Kim¹, Z. Li², M. Jeanne¹. ¹Genentech, South San Francisco, CA; ²USC, Los Angeles, CA *CR

4591 — A0180 A Generally Applicable Twin System for Effective Derivation of Three-dimensional Retinal Tissue via Wnt Signaling Regulation. Ziming Luo, K. Li, B. Xie, Y. Liu, K. Li, X. Zhong, J. Ge. Zhongshan Ophthalmic Center, SYSU, Guangzhou, China

Exhibit Hall A0181-A0206

Wednesday, May 02, 2018 11:15 AM-1:00 PM

Retinal Cell Biology

445 Inflammatory/immune responses in retinal diseases

Moderator: Sean Silverman

4592 — A0181 Heterogeneous R28 retinal precursor cells predominantly express retinal ganglion cell and glial cell markers. Gail M. Seigel¹, K. Yuan², Z. K. Goldsmith², V. M. Morales-Tirado^{2,3}. ¹Center for Hearing and Deafness, University at Buffalo, Buffalo, NY; ²Hamilton Eye Institute, Dept. Ophthalmology, University of Tennessee Health Science Center, Memphis, TN; ³Microbiology, Immunology and Biochemistry, University of Tennessee Health Science Center, Memphis, TN *CR

4593 — A0182 In vitro model of the outer blood-retina barrier for testing of novel drugs and drug formulations. Michael Jochner^{1,2}, S. Reichl^{1,2}. ¹Pharmazeutische Technologie, Technische Universität Braunschweig, Braunschweig, Germany; ²Zentrum fuer Pharmaverfahrenstechnik (PVZ), Technische Universität Braunschweig, Braunschweig, Germany

4594 — A0183 Loss of functional β A3/A1-crystallin upregulates the expression of colony stimulating factor 1 receptor (CSF-1R) and activates inflammation in Nuc1 rat retina. Stacey L. Hose¹, S. Ghosh¹, M. Yazdankhah¹, I. A. Bhutto¹, J. Zigler, Jr.², D. Sinha^{1,2}. ¹Ophthalmology, University of Pittsburgh School of Medicine, Pittsburgh, PA; ²Wilmer Eye Institute, The Johns Hopkins University School of Medicine, Baltimore, MD

4595 — A0184 Inflammation and hyperglycemia mediate endothelial permeability through ER stress mediated posttranslational modifications. Raji Rajesh Lenin, P. G. Nagy, R. Gangaraju. Ophthalmology, University of Tennessee Health Science centre, Memphis, TN *CR

4596 — A0185 TrkB-signaling potentiates Müller glia proliferation in damaged and FGF2-treated retinas. Levi Todd, C. Quinn, A. J. Fischer. Neuroscience, Ohio State University, Columbus, OH

4597 — A0186 Neuroinflammation is critically required as a regenerative cue of the adult zebrafish retina. Oliver Bludau, V. Kuscha, A. Weber, M. Brand. CRTD, Technische Universität Dresden, Dresden, Germany

4598 — A0187 Inflammation triggers a potentially toxic iron sequestration response in the retina. Tomas Meijome, B. Baumann, J. Sterling, S. Guttha, P. Williams, Y. Song, J. L. Dunaief. F.M. Kirby Center for Molecular Ophthalmology, Scheie Eye Institute, Perelman School of Medicine, University of Pennsylvania, Philadelphia, PA

- 4599 — A0188 TRAF3 (TNF Receptor-Associated Factor 3), a Potential Regulator of Retinal Inflammation, is Highly Expressed in the Murine Retina.** Jami Gurley¹, D. J. Carr^{1,2}, M. H. Elliott¹. ¹Ophthalmology, Dean McGee Eye Institute, Oklahoma City, OK; ²Microbiology & Immunology, University of Oklahoma Health Sciences Center, Oklahoma City, OK
- 4600 — A0189 Optimization of an *in vitro* model for assessing the survival of post-mitotic photoreceptors and Müller glial cells.** Arantxa Bolinches-Amorós¹, T. Storm¹, A. J. Russell^{3,4}, S. G. Davies^{3,4}, A. R. Barnard^{1,2}, R. E. MacLaren^{1,2}. ¹Nuffield Laboratory of Ophthalmology, Nuffield Department of Clinical Neurosciences, University of Oxford, Oxford, United Kingdom; ²Oxford Eye Hospital, Oxford University Hospitals NHS Trust, Oxford, United Kingdom; ³Department of Chemistry, University of Oxford, Oxford, United Kingdom; ⁴Department of Pharmacology, University of Oxford, Oxford, United Kingdom *CR
- 4601 — A0190 Fighting inflammation to save cones: anti-inflammatory approaches to slow down cone death in a mouse model of Retinitis Pigmentosa.** Martina Biagioni^{1,2}, V. Guadagni³, E. Novelli¹, E. Strettoi¹. ¹National Research Council (CNR), Neuroscience Institute, Pisa, Italy; ²Regional Doctorate School of Neuroscience, University of Florence, Florence, Italy; ³Department of Biology, University of Pisa, Pisa, Italy
- 4602 — A0191 Hippo pathway regulates Müller glia proliferation in the damaged adult zebrafish retina.** meng jia^{1,2}, D. R. Hyde^{1,2}. ¹Biological Science, University of Notre Dame, Notre Dame, IN; ²Center for Stem Cells and Regenerative Medicine, University of Notre Dame, Notre Dame, IN
- 4603 — A0192 TNF- α up-regulation promote Müller cell proliferation in mice light damage retina.** Liangliang Niu¹, Y. Fang¹, D. F. Chen^{1,2}, X. Sun¹. ¹Department of Ophthalmology, Eye and ENT Hospital of Fudan University, Shanghai, China; ²Schepens Eye Research Institute, Boston, MA
- 4604 — A0193 MicroRNA-124 is redistributed from neurons to glia to reduce inflammation and slow progressive retinal degeneration.** Joshua A. Chu-Tan¹, M. Rutar¹, K. Saxena¹, R. Aggio-Bruce¹, R. W. Essex², K. Valter^{1,3}, H. Jiao¹, M. C. Madigan^{4,5}, J. Provis^{1,3}, R. Natoli^{1,3}. ¹Neuroscience, The John Curtin School of Medical Research, ANU, Canberra, Australian Capital Territory, Australia; ²Academic Unit of Ophthalmology, The Australian National University, Canberra, Australian Capital Territory, Australia; ³The Australian National University Medical School, Canberra, Australian Capital Territory, Australia; ⁴Save Sight Institute, The University of Sydney, Sydney, New South Wales, Australia; ⁵School of Optometry and Vision Science, The University of New South Wales, Canberra, New South Wales, Australia
- 4605 — A0194 Multimodal Longitudinal Imaging of Microglia dynamics in laser-induced acute inflammation and Choroidal Neovascularization (L-CNV).** Jonathan Luisi^{1,2}, W. Zhang³, G. Vargas², M. Motamed^{2,3}. ¹Pharmacology and Toxicology, University of Texas Medical Branch at Galveston, Galveston, TX; ²Center for Biomedical Engineering, University of Texas Medical Branch, Galveston, TX; ³Department of Ophthalmology and Visual Science, University of Texas Medical Branch, Galveston, TX
- 4606 — A0195 Obesity-induced metabolic disturbance drives complement activation by retinal microglia.** Matt Rutar¹, R. Natoli^{2,3}, N. Fernando², J. Provis^{2,3}. ¹Department of Anatomy and Neuroscience, The University of Melbourne, Melbourne, Victoria, Australia; ²The John Curtin School of Medical Research, The Australian National University, Canberra, Australian Capital Territory, Australia; ³ANU Medical School, Canberra, Australian Capital Territory, Australia
- 4607 — A0196 MicroRNAs regulate NLRP3 inflammasome activation by microglia and macrophages in retinal degeneration.** Nilisha Fernando¹, R. Aggio-Bruce¹, Y. Wooff¹, J. A. Chu-Tan¹, K. Chandra Babu¹, K. Valter^{1,2}, J. Provis^{1,2}, R. Natoli^{1,2}. ¹The John Curtin School of Medical Research, The Australian National University, Canberra, Australian Capital Territory, Australia; ²ANU Medical School, The Australian National University, Canberra, Australian Capital Territory, Australia
- 4608 — A0197 Changes in Müller glia microRNAs after light damage.** Stefanie G. Wohl, E. Bercaw, A. Baek, T. A. Reh. Biological Structure, University of Washington, Seattle, WA
- 4609 — A0198 role of NALP3 inflammasome associated in LPS stimulated Parkinsonian model of rats.** Won-Gil Cho, Y. Kang. Anatomy, Yonsei University College of Medicine, Wonju-si, Korea (the Republic of)
- 4610 — A0199 The role of NF- κ B signaling in Müller glia-derived progenitor cell proliferation after NMDA damage.** Isabella Palazzo, K. Deistler, A. J. Fischer. The Ohio State University, Columbus, OH
- 4611 — A0200 Microglia proliferation via the colony-stimulating factor 1 receptor (CSF1R) signalling pathway contributes to the expansion of retinal microglia in a mouse model of retinitis pigmentosa.** Tracy Ho, W. Yang, B. Lin. School of Optometry, The Hong Kong Polytechnic University, Kowloon, Hong Kong
- 4612 — A0201 Real-time imaging of leukocyte trafficking as a biomarker for retinal neuronal injury.** Wei Liu¹, Y. Ha², H. Liu^{2,3}, M. Motamed^{2,3}, M. Zhang¹, W. Zhang^{2,4}. ¹Department of Ophthalmology, Union Hospital, Tongji Medical College, Huazhong University of Science and Technology, Wuhan, Hubei province, China; ²Department of Ophthalmology and Visual Sciences, University of Texas Medical Branch, Galveston, TX; ³Center for Biomedical Engineering, University of Texas Medical Branch, Galveston, TX; ⁴Department of Neuroscience and Cell Biology, University of Texas Medical Branch, Galveston, TX
- 4613 — A0202 The senescence marker P16^{ink4a} is expressed in ocular astrocytes.** Tina Storm¹, H. O. Orlans¹, C. Martinez-Fernandez Dela Camara¹, A. Bolinches-Amorós¹, A. J. Russell^{3,4}, S. G. Davies³, A. R. Barnard^{1,2}, R. E. MacLaren^{1,2}. ¹Nuffield laboratory of ophthalmology, Oxford University, Oxford, England, United Kingdom; ²Oxford Eye Hospital, Oxford University Hospitals NHS Trust, John Radcliffe Hospital, Oxford University, Oxford, United Kingdom; ³Department of Chemistry, Chemistry Research Laboratory, Oxford University, Oxford, United Kingdom; ⁴Department of Pharmacology, Oxford University, Oxford, United Kingdom *CR
- 4614 — A0203 ER-stress and mesencephalic astrocyte-derived neurotrophic factor (MANF) in an *in vitro* model of photoreceptors.** Kevin Toolan, M. Pawar, T. Suzuki, C. G. Besirli. University of Michigan, Ann Arbor, MI
- 4615 — A0204 Autophagy Activated by SIRT6 Regulates Amyloid- β Induced Inflammatory Response in RPEs.** Xiaodong Sun, X. Luo, Y. Feng, J. Liang. Ophthalmology, Shanghai First Peoples Hospital, Shanghai, China
- 4616 — A0205 Necroptosis-associated RIP1 is Stimulated Intracellularly in Mice with Retrovirus-induced Immunosuppression (MAIDS) During Experimental Murine Cytomegalovirus (MCMV) Retinitis.** Lauren-Ashley Duncan¹, J. Carter¹, M. Welch¹, M. Housman¹, J. Nemen¹, R. D. Dix^{1,2}. ¹Georgia State University, Atlanta, GA; ²Ophthalmology, Emory University, Atlanta, GA
- 4617 — A0206 Disheveled localizes at tight junction sites and interacts with ZO1 in BREC.** Monica Diaz-Coranguéz, C. Lin, D. A. Antonetti. Ophthalmology and Visual Sciences, University of Michigan, Kellogg Eye Center, Ann Arbor, MI

Exhibit Hall A0260-A0306

Wednesday, May 02, 2018 11:15 AM-1:00 PM

Multidisciplinary Ophthalmic Imaging Group / Anatomy and Pathology/Oncology**446 Imaging Technologies and Applications I****Moderators: Brett King and Jesse B. Schallek****4618 — A0260 Feasibility of Bedside****Photography in Consult Patients.** Lucy Xu, F. Conti, R. Purgert, R. P. Singh. *Cole Eye Institute, Cleveland, OH *CR***4619 — A0261 Use Of A Remote Video System To Accurately Evaluate Ocular Ultrasound.**Santiago Soberón¹, R. Guliás-Cañizo¹, R. García-Santesteban¹, M. Mayorquín², H. Quiroz-Mercado¹. ¹Research, Asociación para evitar la ceguera en México (APEC), Mexico City, Mexico; ²Ultrasonography, Asociación para evitar la ceguera en México (APEC), Mexico City, Mexico *CR**4620 — A0262 Characterization of Murine Retinal Vasculature In Vivo Using an iPhone Camera and ImageJ Software.** Christopher K. Hwang, V. Lee. *Ophthalmology, Univ of Penn, Philadelphia, PA***4621 — A0263 Smartphone-based wide-field fundus photography for accurate diagnosis of pediatric retinal diseases.** Tapan P. Patel¹, T. Kim¹, G. Yu¹, V. S. Dedania², P. Lieu¹, C. G. Besirli¹, H. Demirci¹, Y. M. Paulus¹. ¹Ophthalmology and Visual Sciences, University of Michigan, Ann Arbor, MI; ²Department of Ophthalmology, New York University School of Medicine, New York, NY ✕**4622 — A0264 Comparison of a portable digital ophthalmoscope to the conventional direct ophthalmoscope as a teaching tool for medical students.** Ye Ji Kim¹, D. Chao^{1,2}. ¹UCSD, San Diego, CA; ²Allergan, Dublin, Ireland**4623 — A0265 Development of Teleophthalmology services in the United Kingdom using a cloud-based virtual referral clinic for retinal disease.** Dawn A. Sim¹, D. Barker², P. Keane³, T. McKinnon³, K. U. Kortuem¹. ¹Moorfields Eye Hospital, London, United Kingdom; ²Rawlings Opticians, London, United Kingdom; ³Big Picture Eye Health, Sydney, New South Wales, Australia**4624 — A0266 Measurement of Retinal Vessel Width in Tele-ophthalmology for Mobile Health Monitoring.** Chen Gong¹, J. P. Kelly², L. Trutoiu³, B. Schowengerdt³, S. Brunton¹, E. Seibel¹. ¹Mechanical Engineering, University of Washington, Seattle, WA; ²Department of Ophthalmology, University of Washington, Seattle, WA; ³Magic Leap, Plantation, FL *CR**4625 — A0267 Visualization of Four-layered Retinal Vasculature: High-Resolution Optical Coherence Tomography Angiography Versus Non-Confocal Adaptive Optics Scanning Light Ophthalmoscopy.** Masaharu Ishikura, A. Uji, Y. Muraoka, S. Ooto, A. Tsujikawa. *Ophthalmology, Kyoto University, Kyoto city, Japan *CR***4626 — A0268 Modifications of AOSLO to allow Imaging Human Ocular Angle Structures.** Thomas Gast¹, B. King¹, P. Harrington², K. Sapoznik¹, T. Luo¹, S. A. Burns¹. ¹Optometry, Indiana University, Bloomington, IN; ²Ocular Instrument Inc., Bellevue, WA**4627 — A0269 Adaptive optics scanning light ophthalmoscopy demonstrates fluorescence in the parafoveal annulus of retinitis pigmentosa patients localizes to photoreceptors.** Andrew Chen¹, H. Song², M. M. Chung¹. ¹Flaum Eye Institute, University of Rochester, Rochester, NY; ²Beijing Institute of Ophthalmology, Beijing Tongren Eye Center, Beijing Tongren Hospital, Capital Medical University, Beijing, China**4628 — A0270 Twelve-month longitudinal study of remnant cone structure in macular telangiectasia type 2.** Muli Okada^{1,2}, K. M. Litts³, T. F. Heeren¹, A. Kalitzeos^{1,4}, V. Rocco¹, R. Mastey³, N. Singh^{1,4}, T. Kane¹, M. Kasilian^{1,4}, M. Michaelides^{1,4}, M. Fruttiger⁴, J. Carroll^{3,5}, C. Egan^{1,4}. ¹Moorfields Eye Hospital, London, United Kingdom; ²Royal Victorian Eye and Ear Hospital, Melbourne, Victoria, Australia; ³Ophthalmology & Visual Sciences, Medical College of Wisconsin, Milwaukee, WI; ⁴Institute of Ophthalmology, University College London, London, United Kingdom; ⁵Cell Biology, Neurobiology and Anatomy, Medical College of Wisconsin, Milwaukee, WI**4629 — A0271 Quantitative Analysis of Retinal Cones in Subjects with Retinitis Pigmentosa Using Adaptive Optics Camera.** Rui Lin¹, D. Pan¹, F. Lu², Z. Jin¹. ¹Division Of Ophthalmic Genetics, Lab For Stem Cell & Retinal Regeneration, Wenzhou Medical University, Wenzhou, Zhejiang, China; ²Ocular Imaging Laboratory, Wenzhou Medical University, Wenzhou, Zhejiang, China**4630 — A0272 Characterization of Retinal Structure in CNGA3-associated Achromatopsia.** Michalis Georgiou^{1,2}, C. S. Langlo³, A. Kalitzeos^{1,2}, N. Hirji^{1,2}, N. Kumaran^{1,2}, A. Dubra⁴, J. Carroll³, M. Michaelides^{1,2}. ¹Institute of Ophthalmology, University College London, London, London, United Kingdom; ²Moorfields Eye Hospital NHS Foundation Trust, London, United Kingdom; ³Department of Ophthalmology & Visual Sciences, Medical College of Wisconsin, Milwaukee, WI; ⁴Department of Ophthalmology, Stanford University, Palo Alto, CA *CR**4631 — A0273 A model of cone photoreceptor reflectivity.** Alexander Meadway, L. Sincich. *Optometry & Vision Science, UAB, Birmingham, AL***4632 — A0274 Non-confocal quad-detection adaptive optics scanning light ophthalmoscopy of the photoreceptor mosaic.** Nripun Sredar, B. Kowalski, M. M. Razeen, S. Steven, A. Dubra. *Ophthalmology, Stanford University, Palo Alto, CA *CR***4633 — A0275 Multi-detection Scheme for Enhancing the Signal-to-Noise Ratio in Adaptive Optics Scanning Laser Ophthalmoscopy.** Sanam Mozaffari, V. Jaedicke, F. LaRocca, P. Tiruveedhula, A. Roorda. *School of Optometry and Vision Science Graduate Group, University of California Berkeley, Berkeley, CA *CR***4634 — A0276 High resolution imaging of Preferred Retinal Loci in macular diseases.** Olubayo U. Kolawole¹, N. Rinella¹, K. G. Foote², A. Roorda², J. L. Duncan¹. ¹Ophthalmology, University of California, San Francisco, San Francisco, CA; ²School of Optometry and Vision Science Graduate Group, University of California, Berkeley, Berkeley, CA *CR**4635 — A0277 Autofluorescence of the photoreceptors in Stargardt disease (SD) identified using fluorescence adaptive optics scanning light ophthalmoscopy (FAOSLO).** Hongxin Song^{1,2}, E. A. Rossi^{4,5}, L. Latchney³, M. M. Chung^{3,2}. ¹Beijing Tongren Eye Center, Beijing, China; ²Center for Visual Science, University of Rochester, Rochester, NY; ³Flaum Eye Institute, Rochester, NY; ⁴Department of Ophthalmology, University of Pittsburgh, Pittsburgh, PA; ⁵Department of Bioengineering, University of Pittsburgh, Pittsburgh, PA**4636 — A0278 In vivo measurement of retinal capillary blood flow in human eye with high-speed adaptive optics near-confocal imaging.** Boyu Gu, J. Lu, X. Wang, Y. Zhang. *Department of Ophthalmology, University of Alabama at Birmingham, Birmingham, AL *CR***4637 — A0279 In vivo characterization of erythrocyte flow dynamics in human retinal capillaries.** Yuhua Zhang¹, B. Gu¹, X. Wang¹, M. D. Twa², G. McGwin^{1,3}, J. Tam⁴, C. A. Girkin¹. ¹Ophthalmology, Univ of Alabama at Birmingham, Birmingham, AL; ²School of Optometry, University of Alabama at Birmingham, Birmingham, AL; ³Epidemiology, University of Alabama at Birmingham, Birmingham, AL; ⁴National Eye Institute, National Institute of Health, Bethesda, MD *CR**4638 — A0280 Adaptive optics assessment of choriocapillaris perfusion and its effect on the accumulation of indocyanine green dye in the overlying retinal pigment epithelium.** HaeWon Jung, T. Liu, J. Liu, J. Tam. *National Eye Institute, National Institutes of Health, Bethesda, MD***4639 — A0281 Adaptive optics visual simulator with dynamic control of chromatic aberrations.** Nikolai Suchkov^{2,1}, E. J. Fernandez¹, J. L. Martinez³, P. Artal¹. ¹Laboratorio de Optica, Universidad de Murcia, Murcia, Murcia, Spain; ²Optica S.L., Murcia, Murcia, Spain; ³Universidad Miguel Hernández, Elche, Alicante, Spain *CR

- 4640 — A0282 Multi-fiber simultaneous offset-aperture AOSLO imaging in the inner retina.** R. D. Ferguson, M. Mujat, G. Maguluri, Y. Lu, N. Ifimia. *Biomedical Optical Technologies, Physical Sciences Inc, Andover, MA* *CR
- 4641 — A0283 Manipulation of the illumination geometry on Adaptive Optics (AO) Flood Illumination Ophthalmoscope (FIO) for Dark Field imaging of the Retina.** Serge Meimon^{1,2}, E. Gofas Salas^{1,3}, P. Mécé^{1,4}, K. Grieve^{3,2}, J. A. Sahel^{3,5}, M. Paques^{3,2}. ¹ONERA, Chatillon Cedex, France; ²PARIS - Paris Adaptive optics for Retinal Imaging and Surgery, Paris, France; ³Vision Institute, Quinze-Vingts National Ophthalmology Hospital, Paris, France.; Paris, France; ⁴Quantel Medical, Cournon d'auvergne, France; ⁵The University of Pittsburgh School of Medicine, Pittsburgh, PA *CR
- 4642 — A0284 Adaptive optics scanning laser ophthalmoscopy of the human iridocorneal angle in vivo.** Brett King, T. Gast, K. Sapoznik, T. Luo, S. A. Burns. *School of Optometry, Indiana University, Bloomington, IN* *CR
- 4643 — A0285 Multimodal Imaging of the Eyelid Margin and Meibomian Glands Using Optical Coherence Tomography.** Julie Schallhorn¹, M. Durbin², A. R. Tumlinson², A. Covita². ¹Ophthalmology, University of California, San Francisco, San Francisco, CA; ²Zeiss, Dublin, CA *CR
- 4644 — A0286 Relatively delayed resolution of hyperautofluorescent lesions compared to central visual recovery in patients with acute syphilitic posterior placoid chorioretinitis.** Sirichai Pasadhika¹, J. T. Rosenbaum^{1,2}. ¹Devers Eye Institute, Portland, OR; ²Casey Eye Institute, Portland, OR
- 4645 — A0287 Pilot Project for the Detection of Retinal Arterial (micro-)Emboli after scheduled Transcatheter Aortic Valve Implantation (using Swept Source Optical Coherence Tomography Angiography and Fluorescence Angiography) and Comparison with the Incidence of Subclinical Ischemic Brain Lesions in Magnetic Resonance Imaging.** Sandrine A. Zweifel¹, J. Gunzinger¹, M. Al-Sheikh¹, J. Baur¹, F. Nietlispack². ¹Department of Ophthalmology, University Hospital Zurich, Zurich, Switzerland; ²University Hospital Zurich, University Heart Center, Zurich, Switzerland
- 4646 — A0288 A novel hypothesis of Multiple Evanescent White Dot Syndrome pathogenesis based on multimodal imaging.** Federico Zicarelli, C. Preziosa, G. Staurengi. *Department of Biomedical and Clinical Science "Luigi Sacco", University of Milan, Ancona, Italy* *CR
- 4647 — A0289 Effects of Vegetarian vs. Non-Vegetarian Diets on Lipofuscin levels in T1D Subjects.** Stacey Pan, S. Kommana, P. Padgaonkar, B. Szirth, A. S. Khouri. *Rutgers New Jersey Medical School, Whippany, NJ*
- 4648 — A0290 The influence of visual pathway integrity on primary and higher order visual dysfunction in synucleinopathies.** Ane Murueta-Goyena Larranaga¹, M. Galdos², O. Lucas³, B. Arana², M. Acera¹, R. Del Pino¹, N. Ibarretxe³, I. Diez⁴, A. Cabrera⁵, J. Gómez-Esteban¹, I. Gabilondo¹. ¹Neurodegenerative Diseases Group, BioCruces Health Research Institute, Barakaldo, Bizkaia, Spain; ²Ophthalmology, Cruces University Hospital, Barakaldo, Bizkaia, Spain; ³Psychology, Deusto University, Bilbao, Bizkaia, Spain; ⁴Computational Neuroimaging Group, BioCruces Health Research Institute, Barakaldo, Bizkaia, Spain; ⁵Neuroradiology, Osatek, Galdakao, Bizkaia, Spain
- 4649 — A0291 Associations between retinal thickness and cerebral (micro) structure in middle aged HIV-infected men on long term cART compared with controls.** Nazli Demirkaya¹, F. Wit¹, T. Su¹, M. Caan¹, M. D. Abramoff¹, P. Reiss¹, C. Majoie¹, F. D. Verbraak¹. ¹Academic Medical Center, Amsterdam, Netherlands; ²Ophthalmology, University of Iowa, Iowa City, IA *CR
- 4650 — A0292 Multimodal imaging in pediatric patients with sickle cell disease.** Adrienne Scott¹, T. Liu¹, I. C. Han^{2,1}, M. O. Linz¹. ¹Ophthalmology, Johns Hopkins University School of Medicine, Baltimore, MD; ²Department of Ophthalmology and Visual Sciences, Carver College of Medicine, University of Iowa, Iowa City, IA *CR
- 4651 — A0293 Relationship Between Retinal Vessel Tortuosity and Oxygenation in Normal Control and Sickle Cell Retinopathy Subjects.** Maziyar M Khansari^{1,2}, S. L. Garvey³, S. Farzad¹, M. Shahidi¹. ¹Ophthalmology, University of Southern California, Los Angeles, CA; ²Neurology, University of Southern California, Los Angeles, CA; ³Medicine, University of Illinois at Chicago, Chicago, IL
- 4652 — A0294 Association between Functional and Morphologic Recovery in a Woman with Severe Outer Retinitis after Tonsillitis.** Kenji Matsushita, R. Kawashima, T. Fujikado, K. Nishida. *Ophthalmology, Osaka University Graduate school of medicine, Suita, Osaka, Japan* *CR
- 4653 — A0295 Chromaticity analysis comparing a white light confocal imaging device versus a flash fundus camera.** Valentina Sarao^{1,2}, D. Veritti^{1,2}, E. Borrelli^{3,4}, S. R. Sadda^{3,5}, M. Cozzi⁶, A. Pajtler Rosar^{7,6}, G. Staurengi⁶, P. Lanzetta^{1,2}. ¹Istituto Europeo di Microchirurgia Oculare- IEMO, Udine, Italy; ²Department of Medicine- Ophthalmology, University of Udine, Udine, Italy; ³Doheny Image Reading Center, Doheny Eye Institute, Los Angeles, CA; ⁴Ophthalmology Clinic, Department of Medicine and Science of Ageing, University G. D'Annunzio Chieti-Pescara, Chieti, Italy; ⁵Department of Ophthalmology, David Geffen School of Medicine at UCLA, University of California, Los Angeles, CA; ⁶Department of Biomedical and Clinical Science, Eye Clinic Luigi Sacco Hospital, University of Milan, Milan, Italy; ⁷Eye Hospital, University Medical Center Ljubljana, Ljubljana, Slovenia *CR
- 4654 — A0296 Investigation of early choroidal hypofluorescence in indocyanine green angiography using multimodal imaging.** JAE Jung Lee, J. Ahn, H. Kwon, S. Park, J. E. Lee. *Ophthalmology, Pusan National University, Busan, Korea (the Republic of)*
- 4655 — A0297 Single-cell kinase activity measurements of the mouse retina by two-photon ex vivo imaging.** Shinya Sato, M. Matsuda. *Laboratory of Bioimaging and Cell Signaling, Graduate School of Biostudies, Kyoto University, Kyoto, Kyoto, Japan*
- 4656 — A0298 Sub-diffuse scanning laser oximetry in the retina using optimum wavelengths.** Mathi Damodaran¹, A. Amelink², J. De boer¹. ¹Biophotonics and Medical Imaging, Vrije Universiteit Amsterdam, Amsterdam, Netherlands; ²Department of optics, TNO, Delft, Netherlands *CR
- 4657 — A0299 Retinal oxygen levels are different in macula compared to the periphery of the retina.** Olof B. Olafsdottir^{1,2}, S. H. Hardarson¹, E. Stefansson^{1,2}. ¹Medical, University of Iceland, Reykjavik, Iceland; ²Department of Ophthalmology, Landspítali University Hospital, Reykjavik, Iceland *CR
- 4658 — A0300 Oximetry in Retinal Arterioles.** Sveinn H. Hardarson^{2,1}, O. B. Olafsdottir^{1,2}, T. S. Eliasdottir¹, R. A. Karlsson³, T. Eysteinnsson^{2,1}, E. Stefansson^{1,2}. ¹Ophthalmology, University of Iceland, Reykjavik, Iceland; ²Institute of Physiology, University of Iceland, Reykjavik, Iceland; ³Oxymap ehf., Reykjavik, Iceland *CR
- 4659 — A0301 Dye-free angiography of the eye using retinal oximetry.** Jason Dwight¹, C. Y. Weng², M. Pawlowski¹, T. Tkaczyk¹. ¹Bioengineering, Rice University, Houston, TX; ²Ophthalmology, Baylor College of Medicine, Houston, TX *CR
- 4660 — A0302 Dynamics of the retinal microvasculature and morphology in Type 2 diabetes.** Gabor M. Somfai^{1,2}, J. Tian^{3,4}, W. Lee³, A. E. Kuriyan³, W. Feuer³, W. Shi³, N. Gregori³, W. Smiddy³, D. Cabrera DeBuc³. ¹Retinology Unit, Pallas Kliniken, Olten, Switzerland; ²Department of Ophthalmology, Semmelweis University, Budapest, Hungary; ³Bascom Palmer Eye Institute, University of Miami, Miami, FL; ⁴Optovue Inc., Fremont, CA *CR
- 4661 — A0303 Dark-adapted versus bleached state in fluorescence lifetime imaging ophthalmoscopy.** Matthias Klemm¹, L. Sauer², S. Klee¹, D. Link¹, S. Peters², M. Hammer³, D. Schweitzer², J. Haueisen¹. ¹Biomedical Engineering & Informatics, Technische Universität Ilmenau, Ilmenau, Germany; ²Department of Ophthalmology, University Hospital Jena, Jena, Germany

4662 — A0304 Does lens influence green component in short 450 nm color autofluorescence? A cross-sectional study in healthy Caucasian population. Mariano Cozzi¹, A. Pajtler Rosar^{1,2}, E. Borrelli³, V. Sarao⁴, s. parrulli¹, F. zicarelli¹, P. Lanzetta¹, S. Satta³, G. Staurengi¹.
¹Department of Biomedical and Clinical Science “Luigi Sacco”, Eye Clinic Luigi Sacco Hospital, University of Milan, Milan, Italy; ²Eye Hospital, University Medical Center, Ljubljana, Slovenia; ³Doheny Eye Institute, Doheny Image Reading Center, University of California, Los Angeles, CA; ⁴Department of Ophthalmology, University of Udine, Udine, Italy *CR

4663 — A0305 Near infra-red auto-fluorescence imaging of melanin in retinal pigment epithelium derived from induced pluripotent stem cells of albinism patients. Tyler Pfister¹, A. George¹, R. Sharma¹, R. Villasmil¹, M. Smelkinson², M. B. Dolinska¹, K. Bharti¹, B. P. Brooks¹. ¹NEI, CHEVY CHASE, MD; ²NIAD, Bethesda, MD

4664 — A0306 Near-infrared Autofluorescence Imaging in Choroideremia. Maarjalais Paavo, W. Lee, J. Sengillo, S. H. Tsang, J. R. Sparrow. Ophthalmology, Columbia University Medical Center, New York, NY

Exhibit Hall A0307-A0341

Wednesday, May 02, 2018 11:15 AM-1:00 PM

Multidisciplinary Ophthalmic Imaging Group

447 Imaging Technologies and Applications II

Moderators: Michael Pircher and Kevin C. Chan

4665 — A0307 Structural and Functional Connectivity of the Optic Radiation in Ultra Low Vision Patients. Meghan J. Marino¹, A. Yuan¹, S. Jones², K. A. Koenig², J. Lin², W. Shin², A. V. Rachitskaya¹, M. Lowe². ¹Cole Eye Institute, Cleveland Clinic, Chardon, OH; ²Imaging Institute, Cleveland Clinic Foundation, Cleveland, OH *CR

4666 — A0308 A comparative study of lacrimal magnetic resonance hydrography and lacrimal endoscopy examination in diagnosis and treatment of lacrimal duct obstruction diseases. Rong Liu, N. Xiang. Ophthalmology, Tongji hospital, Wuhan, Hu bei, China

4667 — A0309 Change in human lens dimensions, lens refractive index distribution and ciliary body ring diameter with accommodation. David A. Atchison¹, A. Khan^{1,2}, J. M. Pope¹, P. Verkicharla^{1,3}, M. Suheimat¹. ¹Institute of Health and Biomedical Innov, Queensland University of Technology, Kelvin Grove, Queensland, Australia; ²Weill Cornell Medicine-Qatar, Qatar Foundation, Doha, Qatar; ³Brien Holden Institute of Optometry and Vision Sciences, L V Prasad Eye Institute, Hyderabad, India

4668 — A0310 Time-resolved angiography with stochastic trajectories magnetic resonance angiography in the evaluation and management of distensible vascular malformations of orbit. Raghavendra Rao Kolavali, U. Singh, V. Gupta, U. Saikia. Ophthalmology, Post Graduate Institute Of Medical Education And Research, Chandigarh, Chandigarh, India

4669 — A0311 Neural Responses of the Visual Word Form Area System in Dyslexia: Revising the Underactivation Hypothesis. Miguel Castelo-Branco^{1,2}, A. P. Rodrigues¹, J. P. Rebelo¹, M. Pereira², M. Van Asselen². ¹Coimbra Institute for Biomedical Imaging and Translational Research, University of Coimbra, Coimbra, Portugal; ²Faculty of Medicine, Coimbra, Portugal

4670 — A0312 When light hurts: Brain-morphometry in concussion photophobia. Lora Likova, C. W. Tyler. Smith-Kettlewell Eye Research Institute, San Francisco, CA

4671 — A0313 Point-of-Care-Ultrasound (POCUS) in the Diagnosis of Optic Neuropathies: A Retrospective Chart Review. Isaure Hostetter², S. Aggarwal², D. Knight¹, S. Lahham³, J. Fox³, M. C. Mehta¹. ¹Ophthalmology, University of California - Irvine, Orange, CA; ²School of Medicine, University of California - Irvine, Irvine, CA; ³Emergency Department, University of California - Irvine, Orange, CA

4672 — A0314 The Diagnostic Utility of Ultrasound in the Management of Severe Corneal Ulcers and Non-infectious Corneal Melt. Narine Viruni¹, T. Liu¹, S. Wang², A. Y. Zhang¹, J. T. Handa¹. Wilmer Eye Institute, Johns Hopkins Hospital, Baltimore, MD; ²Johns Hopkins School of Medicine, Baltimore, MD

4673 — A0315 Ultrasound Imaging and Measurement of Choroidal Flow. Ronald H. Silverman¹, R. Urs¹, H. O. Lloyd¹, J. Ketterling², B. Yü³, A. Yu³. ¹Columbia University Medical Center, New York, NY; ²FL Lizzi Center for Biomedical Imaging, Riverside Research, New York, NY; ³Electrical and Computer Engineering, University of Waterloo, Waterloo, Ontario, Canada

4674 — A0316 Predicting Anterior Segment Surgical Anatomy: Application of Ultrasound Biomicroscopy (UBM) in Surgical Intervention. Umiya Harley¹, W. Kincaid², S. Mantry¹, K. Ramaesh¹. ¹Ophthalmology, Tennet Institute of Ophthalmology, Glasgow, United Kingdom; ²Radiology, Gartnavel General Hospital, Glasgow, United Kingdom

4675 — A0317 Resistive Index of Ophthalmic Artery Assessed by Color Doppler as a Bioimaging Biomarker for the Severity of Diabetic Retinopathy. Levent Akduman¹, S. Saxena², M. Khatri², M. Kumar³, A. K. Chhabra², H. Pham⁴, E. I. Akduman⁵, S. K. Bhasker². ¹The Retina Center, St. Louis, MO; ²Ophthalmology, King George's Medical University, Lucknow, India; ³Radiology, King George's Medical University, Lucknow, India; ⁴Ophthalmology, Saint Louis University, St. Louis, MO; ⁵Radiology, Saint Louis University, St. Louis, MO *CR

4676 — A0318 Evaluation of Diabetic Retinopathy Using the ETDRS Severity Scale – Is There A Gold Standard? Amitha Domalpally, R. Trane, J. Reimers, B. A. Blodi. Ophthalmology, Fundus Photograph Reading Center, Madison, WI

4677 — A0319 Diabetic Retinopathy and Retinal Vessel Abnormalities as Risk Indicators for Diabetic Peripheral Neuropathy. Vinayak S. Joshi¹, M. Vahtel¹, Z. Jarry¹, J. Simon³, S. C. Nemeth¹, M. Burge², P. Soliz¹. ¹VisionQuest Biomedical LLC, Albuquerque, NM; ²University of New Mexico, Albuquerque, NM; ³Foot and Ankle Associates of New Mexico, Albuquerque, NM *CR

4678 — A0320 The influence of advanced glycation end-products on retinal vessel calibre. Stephanie Mroczkowska¹, D. White², P. Artes¹, A. Booth³, L. Smewing¹. ¹Eye and Vision Research Group, Plymouth University, Plymouth, United Kingdom; ²Dietetics Research, Plymouth University, Plymouth, United Kingdom; ³Plymouth Hospitals NHS Trust, Plymouth, United Kingdom

4679 — A0321 Relationships between axial length, retinal vessel calibres, density and oxygen saturation in otherwise healthy individuals. Rebekka Heitmar. Aston University, Birmingham, United Kingdom

4680 — A0322 The influence of household exposure of second-hand smoke on Retinal Vasculature in children: the Hong Kong Children Eye Study. Siu-hang Wong¹, C. Cheung¹, J. Yam¹, C. Ng¹, S. Cho¹, W. So¹, T. Wong². ¹Department of Ophthalmology and Visual Sciences, The Chinese University of Hong Kong, Hong Kong, Hong Kong; ²Singapore Eye Research Institute, Singapore, Singapore

4681 — A0323 Ethnic Variation in Diabetic Retinopathy Lesion Distribution. Connie M. Sears^{2,1}, T. Hirano², M. G. Nittala², N. S. Mehta^{3,4}, S. Sinha⁵, C. Jayadev⁵, G. Singh², M. Verhoeck⁶, A. Fleming⁶, j. van hemer⁶, I. Tsui³, P. Prasad³, S. R. Satta^{2,7}. ¹Harvard Medical School, Boston, MA; ²Doheny Eye Institute, Los Angeles, CA; ³Ophthalmology, Jules Stein Eye Institute, UCLA, Los Angeles, CA; ⁴Ophthalmology, New York Eye and Ear Infirmary of Mount Sinai, New York, NY; ⁵Narayana Nethralaya, Bengaluru, India; ⁶Optos Plc, Dunfermline, United Kingdom; ⁷Ophthalmology, David Geffen School of Medicine at UCLA, Los Angeles, CA *CR

4682 — A0324 Superiority of ultra-wide field retinal imaging on detection of fundus abnormalities in the general medical checkup (human dock). Takuma Maezawa, H. Usui, A. Kato, N. Takase, T. Yasukawa, Y. Hirano, M. Nozaki, M. Yoshida, Y. Ogura. Department of Ophthalmology and Visual Science, Nagoya City University Graduate School of Medical Sciences, Nagoya, Japan *CR, x²

- 4683 — A0325 Impact of Retinopathy of Prematurity Screening Examination on Cardiorespiratory Indices – A Comparison of Optos Ultra-Widefield Retinal Imaging and Binocular Indirect Ophthalmoscopy.** Timothy Fung, J. Abramson, S. Ojha, R. Holden. Royal Derby Hospital, Derby, United Kingdom
- 4684 — A0326 Miniaturized indirect ophthalmoscopy for nonmydriatic wide-field fundus photography.** devrim toslak¹, c. liu¹, M. Alam¹, X. Yao^{1,2}. ¹Department of Bioengineering, University of Illinois at Chicago, Chicago, IL; ²Ophthalmology and Visual Sciences, University of Illinois at Chicago, Chicago, IL *CR
- 4685 — A0327 In vivo confocal microscopy and trachomatous conjunctival scarring: predictors for clinical progression.** Jeremy J. Hoffman^{1,2}, P. Massae³, H. Weiss¹, W. Makupa³, M. J. Burton¹, V. H. Hu¹. ¹London School of Hygiene and Tropical Medicine, London, United Kingdom; ²UCL Institute of Ophthalmology, London, United Kingdom; ³Ophthalmology Department, Kilimanjaro Christian Medical Centre, Moshi, Tanzania, United Republic of
- 4686 — A0328 Reduction of Acanthamoeba Cysts Density associated with Treatment Detected by In Vivo Confocal Microscopy in Acanthamoeba Keratitis.** Ye Elaine Wang¹, T. C. Tepelus², W. Gui¹, J. Irvine², O. L. Lee^{1,2}, S. Sadda², H. Hsu¹. ¹Stein Eye Institute, Los Angeles, CA; ²Doheny Eye Institute, Pasadena, CA
- 4687 — A0329 In Vivo Confocal Microscopy of Corneal Nerves in Patients Receiving Intravitreal Anti-VEGF.** Raquel Goldhardt^{1,2}, H. I. Batawi¹, J. Park¹, A. Galor¹. ¹Ophthalmology, Bascom Palmer Eye Institute, Miami, FL; ²Ophthalmology, Miami Veterans Administration Medical Center, Miami, FL
- 4688 — A0330 In situ monitoring the redox dynamics of cytochrome c in glutamate-induced dying retinal cells by hybrid fluorescence-Raman imaging.** Takeshi Morimoto¹, L. Chiu², K. Fujita², H. Kanda¹, K. Hozumi³, K. Nishida², T. Fujikado¹. ¹Applied Visual Science, Osaka Univ Graduate Sch of Med, Suita, OSAKA, Japan; ²Applied physics, Osaka University Graduate School of Engineering, Suita, Japan; ³Ophthalmology, Osaka University Graduate School of Medicine, Suita, Japan
- 4689 — A0331 Motion artifact compensated retinal angiography using spectrally encoded coherence tomography and reflectometry (SECTR).** Joseph Malone, M. El-Haddad, I. Bozic, Y. Tao. Vanderbilt University, Nashville, TN
- 4690 — A0332 Heidelberg Spectralis Infrared Imaging and Measurement of eye medication nozzle size and flow.** Vy-Vy Ngo¹, G. Wu², L. Billard³, A. Doan⁴, B. Le⁶, E. Muro⁵. ¹Public Health Sciences, University of California, Irvine, Irvine, CA; ²Ophthalmology, University of California, San Francisco, San Francisco, CA; ³Biological Sciences, University of California, Santa Barbara, Santa Barbara, CA; ⁴Biological Sciences, University of California, Davis, Davis, CA; ⁵Medical Sciences, University of South Florida, Tampa, FL; ⁶Biological Sciences, University of California, San Diego, La Jolla, CA
- 4691 — A0333 Heidelberg Spectralis Infrared Imaging for Dry Eye in Retina Patients: A New Technique.** Gloria Wu¹, V. Ngo², A. Doan³, L. Billard⁴, E. Muro⁵, B. Le⁶. ¹Ophthalmology, UC San Francisco School of Medicine, San Jose, CA; ²Public Health Sciences, University of California, Irvine, Irvine, CA; ³Biological Sciences, University of California, Davis, Davis, CA; ⁴Biological Sciences, University of California, Santa Barbara, Santa Barbara, CA; ⁵Medical Sciences, University of South Florida, Tampa, FL; ⁶Biological Sciences, University of California, San Diego, La Jolla, CA
- 4692 — A0334 Quantifying the Biomechanical Properties of the Cornea and Lens as a function of IOP with Optical Coherence Elastography.** Kirill Larin¹, M. Singh¹, C. Wu¹, Z. Han², S. Aglyamov¹, M. D. Twa³. ¹University of Houston, Friendswood, TX; ²Shanghai Jiao Tong University, Shanghai, China; ³University of Alabama at Birmingham, Birmingham, AL
- 4693 — A0335 Inter-observer and Inter-device Agreement For the Assessment Of Anterior-Chamber Angle Photography with An Automated Gonioscope.** Riccardo Scotto, C. Cutolo, M. M. Iester, C. Traverso. Dinogmi, Eye Clinic, Genova, Italy *CR
- 4694 — A0336 Potential contribution of the retinal circulation to photoreceptor compromise in individuals with diabetes.** Delia Cabrera DeBuc¹, J. Tian^{1,3}, W. Lee¹, A. E. Kuriyan¹, G. M. Somfai², W. Feuer¹, W. Shi¹, N. Gregori¹, W. Smiddy¹. ¹Ophthalmology, University of Miami, USA, FL; ²Retinology Unit, Pallas Kliniken, Olten, Switzerland; ³Optovue Inc., Fremont, CA *CR
- 4695 — A0337 Dynamic Vessel Analysis using surface-mount device LEDs as light source.** Dietmar Link, S. Rieger, S. Klee. Biomedical Engineering & Informatics, Technische Universitaet Ilmenau, Ilmenau, Germany
- 4696 — A0338 The effect of different rest periods on the Dynamic Vessel Analysis.** Sascha Klee, D. Link. Biomedical Engineering & Informatics, Technische Universität Ilmenau, Ilmenau, Germany
- 4697 — A0339 Distribution of parafoveal and peripheral cones in emmetropic and myopic subjects.** Richard Legras, K. Woog. Optométrie, Laboratoire Aimé Cotton, Université Paris-Saclay, ENS Paris-Saclay, CNRS, Orsay, France
- 4698 — A0340 The lens paradox is due to an age-related shift in optical centre of the lens.** Alyssa L. Lie¹, X. Pan¹, P. J. Donaldson^{1,2}, T. W. White³, E. Vaghefi¹. ¹School of Optometry and Vision Science, The University of Auckland, Auckland, New Zealand; ²Department of Physiology, School of Medical Sciences, The University of Auckland, Auckland, New Zealand; ³Physiology and Biophysics, SUNY Stony Brook, Stony Brook, NY
- 4699 — A0341 3D visualization and analysis of vascular and perivascular networks in the eye using light sheet microscopy.** Marie Darche^{1,2}, M. Belle¹, A. Chedotal¹, J. Courty², M. Paques^{1,3}, I. Cascone². ¹Institut de la Vision, Paris, France; ²CRRET laboratory, Créteil, France; ³15-20 Hospital, Paris, France

Exhibit Hall B0124-B0157

Wednesday, May 02, 2018 11:15 AM-1:00 PM

Glaucoma

448 Trabecular Meshwork**Moderators: Carol B. Toris and Rudolf Fuchshofer**

4700 — B0124 Sympathetic Innervation of the Developing Aqueous Humor Drainage Structures. Krishnakumar Kizhatil¹, H. Gim¹, G. M. Clark¹, S. W. John^{1,2}. ¹The Jackson Laboratory, Bar Harbor, ME; ²Howard Hughes Medical Institute, Bar Harbor, ME

4701 — B0125 Optogenetic Regulation of Aqueous Outflow in Mouse Trabecular Meshwork. Jorge A. Alvarado¹, P. p. Prosseda¹, N. Luo², B. Wang¹, K. Ning¹, W. He¹, T. J. Kowal¹, Y. Sun^{1,3}. ¹Ophthalmology, Stanford University, Palo Alto, CA; ²Ophthalmology, Indiana University, Indianapolis, IN; ³Palo Alto VA Medical Center, Palo Alto, CA

4702 — B0126 Establishing Retinal Viability Following Constant Pressure Perfusion of Whole Globe Human and Porcine Eyes. Gah-Jone Won^{1,2}, D. Chan^{1,2}, J. M. Sivak^{1,2}. ¹Vision Sciences, Krembil Research Institute, Toronto, Ontario, Canada; ²Vision Science and Ophthalmology, University of Toronto, Toronto, Ontario, Canada *CR

4703 — B0127 Computational Modelling of Aqueous Humor Dynamics and Drug Delivery for Intraocular Pressure Control in Glaucoma. Jabia M. Chowdhury, M. Balasubramanian. Electrical and Computer Engineering, The University of Memphis, Memphis, TN; Electrical and Computer Engineering, The University of Memphis, Memphis, TN

4704 — B0128 The Effects of Prostaglandin Intra-Ocular Pressure Lowering Agents (Glaucoma Eye Drops) on Human Meibomian Gland Epithelial Cells. Ahmad Aref, M. Eslani, A. Pleet, A. R. Djalilian. Ophthalmology and Visual Sciences, University of Illinois at Chicago, Chicago, IL

4705 — B0129 Effects of an oral antioxidant formulation on ocular clinical parameters in dogs and trabecular meshwork cells in vitro. Marielle Mentek¹, G. Cazolot², P. Isard³, T. Dulaurent³, M. Lamrani¹. ¹R&D Innovation Center, Menicon Co., Ltd, Geneva, Switzerland; ²Ophthalmology, Veterinary clinic La Borde Rouge, Toulouse, France; ³Ophthalmology, Veterinary Hospital Center Saint-Martin, Saint-Martin Bellevue, France *CR

4706 — B0130 Effect of Hydrogen Sulfide Releasing Compounds on Aqueous Humor Outflow Facility Under Normal and Elevated Ocular Perfusion Pressure. Sunny E. Ohia¹, J. Robinson¹, L. Mitchell¹, C. A. Opere², Y. Njite-Mbye¹. ¹Department of Pharmaceutical Sciences, Texas Southern University, Pearland, TX; ²Department of Pharmacy Sciences, Creighton University, Omaha, NE

4707 — B0131 NCX 667, a novel nitric oxide (NO) donor lowers intraocular pressure (IOP) via stimulation of trabecular meshwork/Schlemm's canal outflow facility. Francesco Impagnatiello¹, E. Bastia¹, K. Torrejon², A. Unser², F. Ahmed², M. V. Bergamini¹. ¹Nicox Research Institute, Bresso (MI), Italy; ²Glauconix Biosciences, Inc., Albany, NY; ³Nicox Ophthalmics, Inc, Fort Worth, TX *CR

4708 — B0132 Nitric Oxide Induces Changes in the Cytoskeleton and ECM of TGFβ2-treated Trabecular Meshwork and Schlemm's canal cells. Karen Y. Torrejon¹, E. L. Papke¹, A. Unser¹, M. Kerr², W. Stamer³, F. Ahmed¹. ¹Glauconix Biosciences, Albany, NY; ²Nanoscale Engineering, State University of New York Polytechnic Institute, Albany, NY; ³Department of Ophthalmology, Duke University, Durham, NC *CR

4709 — B0133 TGF-beta Pathway Alternations in High and Low Flow Trabecular Meshwork Regions as Defined by Aqueous Angiography in Human Eyes. Sindhu Saraswathy¹, T. Bogarin¹, F. Brian^{1,3}, J. C. Tan^{1,3}, R. N. Weinreb², A. Huang^{1,3}. ¹Ophthalmology, Doheny Eye Institute, Los Angeles, CA; ²Hamilton Glaucoma Center, Shiley Eye Institute, San Diego, CA; ³Ophthalmology, University of Los Angeles, Los Angeles, CA *CR

4710 — B0134 Cross-talk between autophagy and TGF-β signaling in human trabecular meshwork cells. Paloma B. Liton, M. Sim, A. Nettesheim, A. Dixon. Ophthalmology, Duke University Eye Center, Durham, NC

4711 — B0135 Effect of TGF-β2 on outflow facility and gene expression in anterior segments of calf eyes. Enhua H. Zhou¹, M. Paolucci¹, C. Wilson¹, F. Merkur², T. Vollmer², K. Prosen¹, K. Thompson¹, B. Benton¹, B. Thibodeaux¹, Y. Wong¹, V. Sluch¹, T. Manley¹, D. S. Rice¹, A. Chen¹, G. Prasanna¹. ¹Novartis Institutes for BioMedical Research, Cambridge, MA; ²University of Massachusetts Lowell, Lowell, MA *CR

4712 — B0136 Crosstalk Between TGFβ2 and TLR4 in the Trabecular Meshwork. Amanda L. Roberts, C. M. McDowell. University of North Texas Health Science Center, Fort Worth, TX

4713 — B0137 TLR4 signaling in the human trabecular meshwork and optic nerve head. Colleen M. McDowell, T. P. Sharma. North Texas Eye Research Institute, Univ of North Texas Hlth Sci Ctr, Fort Worth, TX

4714 — B0138 WP-1303 (H-1129), a novel antiglaucoma agent, lowers intraocular pressure by increasing conventional outflow in rabbits and monkeys. Yuji Takahashi, T. Inoue, S. Imai, T. Otsuka, R. Arakawa, A. Naito. Sagami Research Laboratory, Wakamoto Pharmaceutical Co., Ltd., Ohi-machi, Ashigarakamigun, Kanagawa, Japan *CR

4715 — B0139 Dysregulation of the Autotaxin/LPA Signaling Axis in the Aqueous Humor of Human Glaucoma Patients. Leona Ho¹, A. Osterwald², S. Badillo², I. Ruf², P. Challa¹, R. Vann¹, V. Rao^{1,3}, C. Ullmer². ¹Ophthalmology, Duke University School of Medicine, Durham, NC; ²Roche Pharma Research & Early Development (pRED), F. Hoffmann-La Roche AG Ltd, Basel, Switzerland; ³Pharmacology and Cancer Biology, Duke University School of Medicine, Durham, NC *CR

4716 — B0140 Enhanced Aqueous Outflow Facility In Human Eyes By SB772077B, A New Rho Kinase Inhibitor. Srinivasan Senthilkumari¹, A. Soundararajan¹, G. Chidambaramathan², R. Krishnadas³, B. T. Gabel⁴, P. L. Kaufman⁴, V. Muthukkaruppan². ¹Department of Ocular Pharmacology, Aravind Medical Research Foundation, Madurai, Tamilnadu, India; ²Department of Immunology & Stem Cell Biology, Aravind Medical Research Foundation, Madurai, Tamilnadu, India; ³Glaucoma Clinic, Aravind Eye Hospital, Madurai, Tamilnadu, India; ⁴Department of Ophthalmology & Visual Sciences, University of Wisconsin, Madison, WI

4717 — B0141 The Effects of Nonporous Silica Nanoparticles on Human Trabecular Meshwork Cells. Martha Kim, C. Park. Department of Ophthalmology, Dongguk University Ilsan Hospital, Goyang, Kyunggido, Korea (the Republic of)

4718 — B0142 Mechanical stretch increases connexin43 expression and cell death in human trabecular meshwork cells. Mary M. Feng, H. Liu, C. M. Hutnik. Ophthalmology, Western University, London, Ontario, Canada

4719 — B0143 Increased Actin Stress Fiber Formation in Scleral Fibroblasts Exposed to Steroids. Thania Bogarin², S. Saraswathy¹, E. Barron¹, J. J. Zheng², A. Huang^{2,1}. ¹Ophthalmology, Doheny Eye Institute, Los Angeles, CA; ²Ophthalmology, University of California, Los Angeles, Los Angeles, CA *CR

4720 — B0144 The effect of substratum on trabecular meshwork cell morphology and cellular communication by tunneling nanotubes. Kate E. Keller¹, Y. Yang¹, J. Nguyen², Y. Sun¹. ¹Ophthalmology, Casey Eye Institute - OHSU, Portland, OR; ²Colorado College, Colorado Springs, CO

4721 — B0145 Primary Cilia and Extracellular Matrix Interactions in Trabecular Meshwork Cells. Ankur Jain¹, W. Zhu², Q. Zhang¹, M. H. Kuehn², A. F. Clark³, V. Sheffield^{1,2}. ¹Pediatrics, University of Iowa, Iowa City, IA; ²Ophthalmology, University of Iowa, Iowa City, IA; ³North Texas Eye Research Institute, Fort Worth, TX

4722 — B0146 Substrate stiffness triggers an extracellular matrix response in human trabecular meshwork cells and tissues. Janice A. Vranka, J. Staverosky, Y. Sun, Y. Yang, J. Bradley, K. E. Keller, T. S. Acott. Ophthalmology, Casey Eye Institute, Oregon Health & Science University, Portland, OR

4723 — B0147 ILB reduces trabecular meshwork scarring, IOP and retinal ganglion cell death in a rat model of primary open angle glaucoma. Lisa J. Hill¹, H. Botfield¹, L. Bruce², A. Logan¹. ¹Neurobiology, University of Birmingham, Edgbaston, England, United Kingdom; ²TikoMed AB, Viken, Sweden *CR

4724 — B0148 Homeostatic Role for GPR158 in Modulating Intraocular Pressure (IOP). Tatsuo Itakura¹, A. Webster¹, J. M. Gonzalez², J. C. Tan², M. Sibug-Saber¹, C. M. Craft³, J. A. Vranka⁴, T. S. Acott⁴, W. Stamer⁵, K. A. Martemyanov⁶, M. Fini¹. ¹Keck School of Medicine of USC, University of Southern California, Los Angeles, CA; ²Doheny Eye Institute, Los Angeles, CA; ³Ophthalmology & Cell & Neurobiology, Keck Med. Sch. of USC & USC Roski Eye Institute, Los Angeles, CA; ⁴Ophthalmology - CERES, Casey Eye Institute-OHSU, Portland, OR; ⁵Ophthalmology, Duke University, Durham, NC; ⁶Department of Neuroscience, Scripps Research Institute, Jupiter, FL

4725 — B0149 Integrin α7-β1 heterodimer as a mechanosensor in the trabecular meshwork. Julia A. Staverosky, T. S. Acott, J. A. Vranka. Ophthalmology, Oregon Health and Science University, Portland, OR

4726 — B0150 Intracellular uptake of Bevacizumab in human Tenon-Fibroblasts. Florian Hasan, C. van Oterendorp, C. Fischer, N. Felten, H. Hoerauf. University Medical Center Göttingen, Göttingen, Germany

4727 — B0151 Identification and Localization of Candidates of Mechanosensitive Channels in the Eye. Wenxu Zheng, F. Ziemssen, D. Suesskind, B. Voykov. Center for Ophthalmology, Eberhard Karl University of Tuebingen, Tuebingen, Germany

4728 — B0152 TRPV4-mediated regulation of intraocular pressure and outflow facility in mouse model of glucocorticoid-induced ocular hypertension. Pinkal Patel, J. Millar, R. Kasetti, p. maddineni, G. Zode. Pharmacology and Neuroscience, North Texas Eye Research Institute, Fort Worth, TX

4729 — B0153 Detection and Activation of Endogenous Trabecular Meshwork Stem Cells in Mice for TM Regeneration. *Yiqin Du^{1,2}, H. Yun¹. ¹Ophthalmology, University of Pittsburgh, Pittsburgh, PA; ²Fox Center for Vision Regeneration, University of Pittsburgh, Pittsburgh, PA*

4730 — B0154 Trabecular meshwork stem cells are functional in extracellular matrix turnover via matrix metalloproteinases. *Minwen Zhou^{2,3}, Y. Du^{1,4}. ¹Department of Ophthalmology, University of Pittsburgh, Pittsburgh, PA; ²Department of Ophthalmology, University of Pittsburgh, Pittsburgh, PA; ³Department of Ophthalmology, Shanghai First People's Hospital, School of Medicine, Shanghai JiaoTong University, Shanghai, Shanghai, China; ⁴Fox Center for Vision Regeneration, University of Pittsburgh, Pittsburgh, PA*

4731 — B0155 Age related cell loss in Human Trabecular Meshwork is associated with loss of Stem-like cells in the Schwalbe's line region. *Yogapriya Sundaresan¹, V. Muthukaruppan¹, K. S. R², G. Chidambaranathan¹. ¹Department of Immunology and Stem Cell Biology, Aravind Medical Research Foundation, Madurai, Tamil Nadu, India; ²Glaucoma Clinic, Aravind Eye Hospital, Madurai, Tamilnadu, India*

4732 — B0156 Stemness and regenerative effects of trabecular meshwork stem cells/secretome after long-term storage. *Ajay Kumar¹, Y. Du^{1,2}. ¹Ophthalmology, University of Pittsburgh, Pittsburgh, PA; ²McGown institute of Regenerative medicine, Pittsburgh, PA*

4733 — B0157 Possible Autologous Stem Cell Resources for Trabecular Meshwork Regeneration. *Enzhi Yang¹, A. KUMAR¹, Y. Du^{1,2}. ¹Ophthalmology, University of Pittsburgh, Pittsburgh, PA; ²McGowan Institute, University of Pittsburgh, Pittsburgh, PA*

Exhibit Hall B0235-B0248

Wednesday, May 02, 2018 11:15 AM-1:00 PM

Anatomy and Pathology/Oncology

449 High and pathological myopia: characteristics and treatment

Moderator: Xiaoying Zhu

4734 — B0235 Linking Anterior and Posterior Segment Biometry in High Myopia. *Nida M. Khan, M. Dimiskovski, W. Li. ¹Ophthalmology, Drexel, Fort Washington, PA*

4735 — B0236 Axial Length/Corneal Radius of Curvature Ratio Assessment of Posterior Sclera Reinforcement for Pathologic Myopia. *Huiling Hu, J. Wang, M. Fang, H. Zhong, H. Deng. Shenzhen Eye Hospital, Shenzhen, China*

4736 — B0237 Correlation of axial length and corneal curvature with diopter in eyes of adults with high myopia. *yan luo. peking union medical college, Beijing, China*

4737 — B0238 Observation of Vitreous Features Using Enhanced Vitreous Imaging Optical Coherence Tomography in Highly Myopic Retinoschisis. *Minlu Song¹, M. Shen¹, Y. Zhou⁴, K. Zheng¹, Y. Zhai^{1,3}, M. Xiao¹, X. Wang¹, F. Wang^{1,2}, X. Sun^{1,2}. ¹Ophthalmology, Shanghai General Hospital, Shanghai Jiao Tong University School of Medicine, Shanghai, China; ²Shanghai Engineering Center for Visual Science and Photomedicine, Shanghai, China; ³Shanghai Key Laboratory of Fundus Diseases, Shanghai, China; ⁴Ophthalmology, Zhongshan Hospital, Fudan University, Shanghai, China*

4738 — B0239 Label-free absolute quantification proteomic analysis of vitreous humor from patients with high myopia. *Fenghua Wang^{1,2}, M. Song¹, Y. Zhou¹, M. Xiao¹, X. Sun^{1,2}. ¹Ophthalmology, Shanghai General Hospital, Shanghai Jiao Tong University School of Medicine, Shanghai, China; ²Shanghai Engineering Center for Visual Science and Photomedicine, Shanghai, China; ³Ophthalmology, Zhongshan Hospital, Fudan University, Shanghai, China*

4739 — B0240 Characterization of the Shorter Eye in Highly Myopic Patients with more than 3 mm of Axial Anisometropia. *Quan V. Hoang^{1,3}, C. Wong^{1,2}, I. Yeo^{1,2}, G. S. Tan^{1,2}, S. Lee^{1,2}, G. Cheung^{1,2}. ¹Singapore Eye Research Institute, Singapore National Eye Centre, Singapore, Singapore; ²Eye ACP, Duke-NUS, Singapore, Singapore; ³Ophthalmology, Columbia University Medical Center, New York, NY*

4740 — B0241 Association between subfoveal choroidal thickness and Progression of Macular Schisis in highly myopic eyes. *Bingqian Liu, H. Ao, L. Sun, L. Lu. Zhongshan Ophthalmic Ctr, Sun Yat-sen University, Guangzhou, China*

4741 — B0242 Change of parapapillary atrophy during axial elongation - β -zone parapapillary atrophy induced by mechanical stretching: Boramae Myopia Cohort Study. *Kyoung Min Lee¹, H. Choung¹, M. Kim², S. Oh¹, S. Kim¹. ¹Ophthalmology, Seoul National University Boramae Medical Center, Seoul, Korea (the Republic of); ²Ophthalmology, Dongguk University Ilsan Hospital, Goyang, Gyeonggi, Korea (the Republic of)*

4742 — B0243 Association between Optic Nerve Head Deformation and Retinal Microvasculature in High Myopia. *Sang Woo Park¹, S. Kang². ¹Ophthalmology, Chonnam National University Medical School and Hospital, Gwangju, Korea (the Republic of); ²Ophthalmology, BORA eye clinic, Gwangju, Korea (the Republic of)*

4743 — B0244 Altered whole-brain gray matter volume in high myopia patients: a voxel-based morphometry study. *Xiaorong Wu. Ophthalmology, First Affiliated Hospital of Nanchang University, Nanchang City, Jiangxi Province, China*

4744 — B0245 Contralateral eye comparison of the long-term visual quality and stability between implantable collamer lens and laser refractive surgery for myopia. *Xiaoying Wang, X. Chen. Ophthalmology, Eye & ENT Hospital of Fudan University, Shanghai, China*

4745 — B0246 Comparison of anatomical and functional outcomes of treatment with bevacizumab and ranibizumab injections in eyes with myopic choroidal neovascularization (mCNV). *Malgorzata Woronkiewicz¹, S. Lightman^{1,2}, R. Hamilton¹, S. Zagora¹, O. Tomkins-Netzer^{1,2}. ¹Moorfields Eye Hospital, London, County (optional), United Kingdom; ²University College London, London, County (optional), United Kingdom*

4746 — B0247 Influence of the foveal curvature on myopic traction maculopathy and its surgical outcome. *Un-Chul Park, D. Ma, B. Oh, S. Park, B. Kim, H. Yu. Ophthalmology, Seoul National University Hospital, Seoul, Korea (the Republic of)*

4747 — B0248 Evaluation of Clinical Outcomes of Scleral Imbrication Combined with Vitrectomy for Myopic Traction Maculopathy. *Takuya Nakajima, M. Nagahara. Ophthalmology, Tokai University Hachioji Hospital, Shibuya-ku, Tokyo, Japan*

Exhibit Hall B0249-B0272

Wednesday, May 02, 2018 11:15 AM-1:00 PM

Visual Psychophysics/Physiological Optics

450 Refractive Error - Myopia and Astigmatism

Moderators: Kathryn Richdale and Samaneh Delshad

4748 — B0249 The influence of the soft contact lens wear on higher order aberrations and accommodation in eyes with myopia and hyperopia. *Sona Harutyunyan, E. Tarutta, A. Khandzhyan, N. Khodzhabekyan. Helmholtz Moscow research institute of eye disease, Moscow, Russian Federation*

4749 — B0250 Comparison of cone packing and foveal architecture between normal eyes with short and long axial lengths. *Hanieh Mirhajianmoghadam¹, S. Adhikari¹, A. W. Schill¹, G. Musial², H. M. Queener¹, N. B. Patel¹, J. Porter^{1,2}. ¹College of Optometry, University of Houston, Houston, TX; ²Department of Biomedical engineering, University of Houston, Houston, TX*

4750 — B0251 Cone density in the population-based CCC2000 cohort at age 16-17 years. Christina Eckmann-Hansen¹, M. H. Hansen¹, P. Laigaard¹, B. Sander¹, I. C. Munch², E. Olsen^{3,4}, A. Skovgaard^{3,5}, M. Larsen¹. ¹Department of Ophthalmology, Rigshospitalet - Glostrup, Vanløse, Denmark; ²Department of Ophthalmology, Zealand University Hospital, Roskilde, Denmark; ³Department of Public Health, University of Copenhagen, Copenhagen, Denmark; ⁴Research Center for Prevention and Health, The Capital Region, Denmark, Copenhagen, Denmark; ⁵National Institute of Public Health, University of Southern Denmark, Odense, Denmark

4751 — B0252 Is the gain of visual acuity measured in binocular vision linked to modifications of the refractive errors measured in monocular vision for subjects suffering from myopia? Francois M. Pelen, Y. Bentaleb, J. Legargasson. Point Vision, Paris, France

4752 — B0253 Changes in correlation between ocular biometry parameters as a function of age and environment. Jos J. Rozema^{1,2}. ¹Dept of Ophthalmology, Antwerp University Hospital, Edegem, Belgium; ²Faculty of Medicine and Healthy Science, University of Antwerp, Antwerp, Belgium

4753 — B0254 The Impact of Visual Cues on Accommodative Variability in Children with Emmetropia and Uncorrected Hyperopia. Tawna L. Roberts¹, R. E. Manny², H. A. Anderson². ¹Ophthalmology, Akron Children's Hospital, Hudson, OH; ²Optometry, University of Houston, Houston, TX

4754 — B0255 Neuronal influences on the sensitivity to defocus for contrast vision. Siegfried Wahl^{1,2}, D. Kern¹, A. Leube¹, A. Ohlendorf¹. ¹ZEISS Vision Science Lab, University Tuebingen, Tuebingen, Germany; ²Carl Zeiss Vision International GmbH, Tuebingen, Germany *CR

4755 — B0256 Is blur sensitivity altered in progressive myopic children? Vivek Labhishetty¹, A. Chakraborty², W. R. Bobier². ¹University of California Berkeley, Berkeley, CA; ²University of Waterloo, Waterloo, Ontario, Canada

4756 — B0257 The Shape of the Psychometric Function in Blur Discrimination Judgments. Glen L. McCormack¹, J. Ferrucci¹, A. Guarino¹, P. J. Bex². ¹Vision Science, New England Coll of Optometry, Boston, MA; ²Psychology, Northeastern University, Boston, MA

4757 — B0258 Day-to-day and diurnal variations of corneal refractive power and astigmatic axis measured with two different corneal shape analyzers. Shinichiro Nakano¹, F. Amano¹, S. Takagi², T. Hiraoka², T. Oshika². ¹ophthalmology, Ryugasaki Saiseikai Hospital, Ryugasaki, Ibaraki, Japan; ²ophthalmology, University of Tsukuba, Tsukuba, Japan

4758 — B0259 Meridional subjective refraction with spherical lenses and oriented targets. Thomas W. Raasch, J. C. Lehman. College of Optometry, Ohio State University, Columbus, OH

4759 — B0260 Geometrical optics model of the retina for improved refractive designs. Brian Vohnsen, A. Carmichael Martins, N. Sharmim, S. Qaysi, D. Valente. School of Physics, University College Dublin, Dublin, Ireland

4760 — B0261 Oblique astigmatism increases Subjective Visual Vertical errors. David B. Elliott¹, A. A. Black², J. M. Wood². ¹Optometry & Vision Science, University of Bradford, Bradford, United Kingdom; ²Optometry & Vision Sciences, Queensland University of Technology, Brisbane, Queensland, Australia

4761 — B0262 Diagnostic ability to distinguish high astigmatism from ectatic cornea using 2 different Scheimpflug devices. Maria Henriquez, L. Izquierdo, C. Maldonado, L. Cañola, M. Cerrate, M. G. Hadid. Research department, Instituto de Ojos Oftalmosalud, Lima, Lima, Peru

4762 — B0263 Astigmatism models for photoretinoscopy. Ying-Ling Chen¹, L. Shi², J. W. Lewis². ¹Univ of Tennessee Space Inst, Tullahoma, TN; ²E-Vision Technologies Inc., Tullahoma, TN

4763 — B0264 Astigmatism measurement in photorefractometry. Lei Shi¹, J. W. Lewis¹, Y. Chen². ¹E-Vision Technologies Inc., Tullahoma, TN; ²University of Tennessee Space Institute, Tullahoma, TN *CR

4764 — B0265 Validity and repeatability of SureSight and PowerRefractor peripheral autorefractometry. Ann M. Morrison, D. O. Mutti. Vision Science, The Ohio State University College of Optometry, Columbus, OH *CR

4765 — B0266 Maximum Visual Acuities are Located Outside the Circle of Least Confusion. Nitya Murthy, A. Hickenbotham. Kentucky College of Optometry, Pikeville, KY

4766 — B0267 Preferred Image Focus Location for Best Visual Acuity and Astigmatic Blur Adaptation. Marquavia Stinson, A. Hickenbotham. College of Optometry, University of Pikeville, Pikeville, KY

4767 — B0268 Efficacy and repeatability of aberrometry-based binocular refraction compared with subjective refraction. Gonzalo Carracedo, L. Batres, M. Serramito, A. Gonzalez, C. Carpena-Torres. Optica II (Optometria y Vision), Universidad Complutense de Madrid, Madrid, Spain

4768 — B0269 Comparing Image Gradations with Visual Acuity and Contrast Sensitivity as a Tool to Discriminate Blur. Vincent Marc, D. Rio, R. Legras. Laboratoire Aimé Cotton, Université Paris Saclay, ENS Paris Saclay, CNRS, Orsay, France

4769 — B0270 Correlations between age and ocular aberrations in school children. Yessa V. Rautha¹, R. Y. Hida^{1,3}, C. Nascimento¹, L. Hida², K. Tsubota², H. Torii², S. Tonomura², T. Shiraiishi², T. Shimizu², i. C. Teixeira¹. ¹Santa Casa de Misericórdia de São Paulo, SÃO PAULO, Brazil; ²Keio University, Tokyo, Japan; ³Universidade de São Paulo, São Paulo, Brazil

4770 — B0271 Myopia progression before and after fitting with the NaturalVue multifocal contact lens – a case series analysis. Thomas A. Aller^{1,2}. ¹School of Optometry, University of California, Berkeley, CA; ²College of Optometry, University of Houston, Houston, TX *CR, X

4771 — B0272 An innovative, pre-clinical learning module in Ophthalmology developed at McGill University. Soumaya Bouhout¹, A. N. Ali-Ridha², A. Rosen², M. Discepolo². ¹Faculty of Medicine, McGill University, Brossard, Quebec, Canada; ²Ophthalmology, McGill University, Montreal, Quebec, Canada

Exhibit Hall B0382-B0419

Wednesday, May 02, 2018 11:15 AM-1:00 PM

Lens

451 Cataract Surgery Outcomes and Epidemiology

Moderators: Salil A. Lachke and Jeffrey M. Gross

4772 — B0382 Cataract Extraction Outcomes in Patients with HIV and Hepatitis C. Amy Mehta, M. Mayers, S. F. Sandler, N. Nataneli. Ophthalmology, Bronx Lebanon Hospital Center, New York, NY

4773 — B0383 Radiation induced cataract surgical outcomes. Daniel Choi, G. Amescua. Ophthalmology, Bascom Palmer Eye Institute, Miami, FL

4774 — B0384 Persistent inflammation after complex cataract surgery. Ana Rubin Panvini, J. Busingye. Ophthalmology, Montefiore Medical Center, Mount Vernon, NY

4775 — B0385 Characteristics associated with receiving cataract surgery in the United States Medicare and Veterans Health Administration populations. Annie M. Wu^{1,3}, C. M. Wu^{1,3}, V. Tseng², P. B. Greenberg^{1,7}, J. Giaconis^{5,2}, F. Yu^{2,6}, F. Lum⁴, A. L. Coleman^{2,6}. ¹Brown University, Providence, RI; ²Stein Eye Institute, University of California, Los Angeles, Los Angeles, CA; ³Santa Clara Valley Medical Center, San Jose, CA; ⁴American Academy of Ophthalmology, San Francisco, CA; ⁵Ophthalmology Division, West Los Angeles Veterans Affairs Medical Center, Los Angeles, CA; ⁶Department of Biostatistics, Fielding School of Public Health, University of California, Los Angeles, Los Angeles, CA; ⁷Section of Ophthalmology, Veterans Affairs Medical Center, Providence, RI *CR

- 4776 — B0386 Clinical and Epidemiological Characteristics in patients with Capsular Block Syndrome diagnosed in “Instituto de Oftalmología Conde de Valenciana”.** Arellano Martínez Claudia Lorena MD, Navas Villar Carlos MD, Zamora Diego MD. Instituto de oftalmología F.A.P. Conde de Valenciana I.A.P Mexico City. Claudia Lorena Arellano Martínez¹, D. Zamora², C. Navas¹. ¹general ophthalmology, instituto de oftalmología conde de valenciana, Mexico City, Mexico; ²Lens and cataract Surgery, Instituto de Oftalmología Conde de Valenciana, Mexico City, Mexico
- 4777 — B0387 Practice patterns of urologists regarding use of pre-operative prophylactic alpha blockers at academic medical centers in the United States: a national survey.** Gaytri Gupta Elera, I. U. Scott. Ophthalmology, Penn State Eye Center, Hummelstown, PA
- 4778 — B0388 A Systematic Review and Meta-Analysis of Intravenous Sedation in Modern Cataract Surgery.** Efstathia Kiatos¹, J. J. Armstrong², C. M. Hutnik^{3,4}, S. Tsiros², M. Malvankar¹, W. Hodge^{5,3}. ¹Epidemiology and Biostatistics, Western University, London, Ontario, Canada; ²Medicine, Schulich School of Medicine and Dentistry, London, Ontario, Canada; ³Ophthalmology, Schulich School of Medicine and Dentistry, London, Ontario, Canada; ⁴Ophthalmology, Ivey Eye Institute, St Joseph's Health Care, London, Ontario, Canada
- 4779 — B0389 Radiation induced cataract: Surgical Outcomes.** Annapurna Singh, A. D. Singh, J. Echegaray, J. Davanzo. Cole Eye Institute, Cleveland Clinic Foundation, Cleveland, OH
- 4780 — B0390 Intraocular lens exchange surgery: Incidence, indications, risk factors, and visual outcomes.** Maram E. Abdalla-Elsayed¹, A. Al-Abdullah², R. Malik³, R. Khandekar², H. Martinez-Osorio², M. Mura², P. Schatz^{2,3}. ¹Jeddah Eye Hospital, Jeddah, Saudi Arabia; ²King Khaled Eye Specialist Hospital, Riyadh, Saudi Arabia; ³Ophthalmology, University of Lund, Lund, Sweden
- 4781 — B0391 Long-time outcome of cataract surgery – 20 years results from a prospective study.** Eva Monestam. Clinical Sci & Ophthalmology, UMEA University, Umea, Sweden
- 4782 — B0392 Characteristics of cataract surgery patients influencing Press Ganey patient satisfaction scores.** Michele D. Lee, S. Chen, T. A. Chen, A. C. Fisher, C. C. Lin, K. Singh, R. Chang. Ophthalmology, Stanford University, Palo Alto, CA
- 4783 — B0393 Cataract Surgery and Quality of Life with Correlation to Pre-Operative Potential Acuity in Patients with Age-Related Macular Degeneration.** Nimesh A. Patel, N. Gregori, B. Reinherz, A. Rodriguez, W. Feuer, R. Goldhardt. Ophthalmology, Bascom Palmer Eye Institute, Miami, FL
- 4784 — B0394 Preexisting Posterior Capsule Abnormalities Evaluation in Congenital Cataract.** Xixia Ding, p. chang, Y. Zhao, Z. Li, Y. Zhao. Eye Hospital of Wenzhou Medical University, Hangzhou, Zhejiang, China ✂
- 4785 — B0395 Effect of smart phone application on follow-up adherence improvement in pediatric cataract patients.** pingjun chang, l. lin, H. Zhang, Y. Zhao. School of Ophthalmology and Optometry, Eye Hospital, Wenzhou Medical University, Wenzhou, China
- 4786 — B0396 Investigation of corneal spherical aberration in a specific population of patients with and without prior refractive surgery as compared to preexisting normative data.** Eubee B. Koo, T. Nanda, D. Choi, V. Chang, A. Gibbons. Ophthalmology, Bascom Palmer Eye Institute, Miami, FL
- 4787 — B0397 In vitro antimicrobial activity of the aqueous humor after the instillation of two different quinolones.** Carolina A. Matsumo, B. T. Uehara, A. Sumitomo, R. M. Queiroz, C. B. da Silva, S. M. Sasagawa, L. Mimiça, i. C. Teixeira, R. Y. Hida. ISCMSP, S?o Paulo, S?o Paulo, Brazil
- 4788 — B0398 Predictive factors of Endothelial Cell Loss (ECL) after Phacoemulsification: Percepolis ancillary study number 2.** Marie-Soline Luc¹, M. Da Costa¹, F. Bloch¹, C. Dubroux¹, L. Lhuillier¹, M. Zaidi¹, C. Goetz², J. Vermion¹, J. Perone¹. ¹ophthalmology department, Regional Hospital Center of Metz-Thionville, Mercy Hospital, Metz, France; ²Research support unit, Regional Hospital Center of Metz-Thionville, Mercy Hospital, Metz, France ✂
- 4789 — B0399 Intra-individual comparison of proinflammatory cytokines (IL-1 β , IL-6) and total-prostaglandin (PG) following Femtosecond Laser-assisted Cataract Surgery using a Low-energy, High-frequency Femtosecond Laser-Device compared to Manual Cataract Surgery.** Luca Schwarzenbacher, D. Schartmueller, C. Leydolt, R. Menapace. Ophthalmology and Optometry, Medical University of Vienna, Vienna, Austria ✂
- 4790 — B0400 Predictors of subjective satisfaction after cataract surgery.** Esben Nielsen^{2,3}, M. Lundström¹, K. Pesudovs⁵, J. Hjortdal¹. ¹Ophthalmology, Aarhus University, Aalborg, Denmark; ²Ophthalmology, Aalborg Universityhospital, Aalborg, Denmark; ³Friklinikken, Silkeborg Regionshospital, Silkeborg, Denmark; ⁴Faculty of medicine, Lund University, Lund, Sweden; ⁵Flinders University, Adelaide, South Australia, Australia
- 4791 — B0401 Dysfunctional lens index serves as a novel surgery decision maker for age-related cataracts.** Zhangliang Li, Y. Zhao, P. Chang, Y. Zhao, X. Ding. Cataract, Eye Hospital of Wenzhou Medical University, Wenzhou, Zhejiang, China ✂
- 4792 — B0402 Physical activity and cataract treated surgically in diabetic patients: Findings from the 45 and up study.** Xiaotong Han^{1,2}, C. Wu³, X. Yan⁴, X. Shang², J. Zhang¹, L. Zhang^{5,6}, M. He^{1,2}. ¹Preventive medicine, Zhongshan Ophthalmic Center, Guangzhou, Guangdong, China; ²Centre for Eye Research Australia, Melbourne, Victoria, Australia; ³Yijishan Hospital of Wannan Medical College, Wuhu, China; ⁴Renmin Hospital of Wuhan University, Wuhan, China; ⁵Melbourne Sexual Health Centre, Melbourne, Victoria, Australia; ⁶Central Clinical School, Faculty of Medicine, Monash University, Melbourne, Victoria, Australia
- 4793 — B0403 Cataract-related Interventional Clinical Trials Analysis.** Brittny Stalter, T. Yilmaz, K. Miller, M. Migliori. Ophthalmology, Brown University/Rhode Island Hospital, Providence, RI
- 4794 — B0404 Outcomes after Intravitreal Antibiotic-Steroid Injection during Femtosecond-laser Assisted Cataract Surgery.** Zeeshan Haq¹, M. Zhang², M. Benjamin³, K. Riaz². ¹NorthShore University HealthSystem, Evanston, IL; ²University of Chicago, Chicago, IL; ³Benjamin Eye Care Center, La Grange, IL
- 4795 — B0405 Early outcome in cataract surgery comparing junior vs senior cataract surgeons.** Francesca Guidolin¹, M. Montali¹, G. Monterosso¹, A. Amisano², F. Militello¹, L. Menolascina¹, A. Toso², S. Morselli². ¹Ophthalmology, ULSS 7 Pedemontana Ospedale Santorso, Santorso (VI), Italy; ²Ophthalmology, ULSS 7 Pedemontana, Bassano del Grappa (VI), Italy, Italy
- 4796 — B0406 A Comparison Using Multiple Regression Analysis of Patient Satisfaction with Bilateral +3.25 vs. Bilateral +4.00 Diffractive Multifocal IOLs at the Time of Cataract Surgery.** Frank A. Bucci, B. Michalek, H. Fluet. Bucci Laser Vision Institute, Wilkes-Barre, PA *CR
- 4797 — B0407 Risk Factors Predisposing to Early Nd:YAG Capsulotomy in a Colorado Cohort.** Victoria J. Miller, J. L. Patnaik, A. M. Lynch, M. Taravella, A. G. Palestine, R. H. Nagaraj. Ophthalmology, University of Colorado, Aurora, CO *CR
- 4798 — B0408 The Necessity of a Dilated Fundus Exam in the Early Postoperative Period following Uncomplicated Cataract Surgery.** Jacquelyn Daubert¹, O. Dryjanski^{2,1}, S. Bang¹, R. Choi¹. ¹Ophthalmology, Medstar Georgetown University Hospital/ Washington Hospital Center, Washington, District of Columbia; ²Ophthalmology, Wilmer Eye Institute, Bethesda, MD
- 4799 — B0409 Visual Outcomes of presenile cataract surgery compared with Refractive Lens Exchange in Mexican population.** Jose A. Nava, M. C. López-Montero, J. E. Valdez. Instituto de Oftalmología. Escuela de Medicina. Tecnológico de Monterrey, Monterrey, Mexico
- 4800 — B0410 The utility of activity restrictions following cataract surgery.** Darren Hill, J. Conklin, E. Higgins. Ophthalmology, University of Kentucky, Lexington, KY

4801 — B0411 A Systematic Review of Educational Interventions for Cataract Surgery Patients. Ariel R. Choi^{1,2}, P. B. Greenberg^{1,3}.
¹Department of Ophthalmology, The Warren Alpert Medical School of Brown University, Providence, RI; ²Program in Liberal Medical Education, Brown University, Providence, RI; ³Section of Ophthalmology, Providence VA Medical Center, Providence, RI

4802 — B0412 Factors Associated with the Development and Progression of Posterior Capsule Opacification Requiring YAG Capsulotomy after Cataract Surgery. Hassan Tokko¹, F. Hussain¹, F. Mei¹, M. Thipparthi¹, N. Nassiri², C. Kim², J. Tannir², A. Goyal², A. Shukairy², M. S. Juzych^{1,2}, M. McDermott², B. Hughes². ¹Wayne State University School of Medicine, Dearborn Heights, MI; ²Kresge Eye Institute, Detroit, MI

4803 — B0413 Complications encountered in Resident performed Cataract Surgery; a 2 year series. Nehali Nanawati, T. Xia, S. Guo, A. S. Khouri, M. Dastjerdi, D. S. Chu, M. Zarbin, N. Bhagat. Rutgers New Jersey Medical School, Newark, NJ

4804 — B0414 The influence of the supervising surgeon's level of experience on phacoemulsification operative times performed by surgeons in training. Giovanni Campagna¹, E. Choudhury¹, K. Biggerstaff^{2,3}, S. Orengo-Nania^{2,3}, S. Khandelwal^{2,3}. ¹School of Medicine, Baylor College of Medicine, Houston, TX; ²Department of Ophthalmology, Cullen Eye Institute, Baylor College of Medicine, Houston, TX; ³Michael E. DeBakey Veterans Affairs Medical Center, Houston, TX

4805 — B0415 Outcomes in resident performed cataract surgeries with iris challenges: results from the PCIOL Study. Giannis A. Moustafa¹, D. S. Borkar^{1,2}, M. McKay¹, E. Eton¹, N. Koullisis¹, A. C. Lorch¹, C. E. Kloek¹. ¹Department of Ophthalmology, Massachusetts Eye and Ear Infirmary, Harvard Medical School, Boston, MA; ²Retina Service, Wills Eye Hospital, Philadelphia, PA

4806 — B0416 Safety of SubTenon's anaesthesia in cataract surgery: 10-year results. Gavin Walters. Harrogate NHS Foundation Trust, Harrogate, United Kingdom

4807 — B0417 In vitro antimicrobial activity of the aqueous humor after instillation of Tobramycin 0.3% or Chloramphenicol 0.4%. Rafael C. C. Arantes¹, C. Seto¹, C. B. da Silva², S. M. Sasagawa², A. Sumitomo¹, R. M. Queiroz¹, L. Mimiça², i. C. Teixeira¹, R. Y. Hida¹. ¹Ophthalmology, Santa Casa de Misericórdia de São Paulo, São Paulo, Brazil; ²Microbiology, Santa Casa de Misericórdia de São Paulo, São Paulo, Brazil

4808 — B0418 Clinical Course of Lens Capsule Fragment Adherent to Corneal Endothelium After Cataract Surgery. Hung Da Chou¹, C. Hou^{1,2}, C. Hsiao^{1,2}. ¹Ophthalmology, Chang-Gung Memorial Hospital, Taoyuan, Taiwan; ²Chang-Gung University, Taoyuan, Taiwan

4809 — B0419 Characteristics of and risk factors for intraocular lens pupillary capture in congenital ectopia lentis. JIN guangming¹, J. Lin¹, B. Xiao¹, Y. Charlotte², D. Zheng¹. ¹Zhongshan Ophthalmic Center, Sun Yat-sen University, Guangzhou, China; ²University of California, San Francisco, CA

Exhibit Hall C0168-C0214

Wednesday, May 02, 2018 11:15 AM-1:00 PM
Retina

452 Diabetic Macular Edema Clinical Research

Moderators: Milam A. Brantley and Sapna Gangaputra

4810 — C0168 Three-year outcome of fluocinolone acetonide intravitreal implant (ILUVIEN) in the treatment of chronic diabetic macular oedema: real-world results in the UK. Fadi alfaqawi, A. Sarmad, P. Lip, S. Elsherbiny, R. Chavan, A. Mitra, B. Mushtaq. Ophthalmology, Birmingham and Midland Eye Centre, Middlesbrough, United Kingdom

4811 — C0169 Treatment burden associated with intravitreal injections in the real world: PALADIN Phase 4 trial with fluocinolone acetonide 0.2 µg/day. Michael Singer. Med Ctr Ophthalmology Assoc, San Antonio, TX *CR, ⚡

4812 — C0170 Clinical effectiveness of the fluocinolone acetonide (FAC) implant in patients with diabetic macular oedema (DMO) – the Manchester experience. Andrew Walkden^{1,2}, J. Young¹, A. Stone¹, S. Mahmood^{1,2}. ¹Ophthalmology, Manchester Royal Eye Hospital, Manchester, United Kingdom; ²The University of Manchester, Manchester, United Kingdom *CR

4813 — C0171 Reduction in treatment burden and edema in patients with diabetic macula edema following 0.2mg/day fluocinolone acetonide implant. Clinton Ellingson^{1,2}, J. W. Kitchens¹, T. W. Stone¹. ¹Retina Associates of Kentucky, Lexington, KY; ²Ophthalmology, University of Kentucky, Lexington, KY *CR

4814 — C0172 Differentiating capillary non-perfusion from imaging artifacts in diabetic macular edema. Dominika Podkowinski, S. Beka, A. Mursch-Edlmayr, M. Bolz. Ophthalmology and Optometry, Kepler University Hospital, Linz, Upper Austria, Austria *CR

4815 — C0173 Real-life outcomes from the use of ILUVIEN in the treatment of refractory DMO. Eleni Karatsai, S. Taylor, K. Atkins. Ophthalmology, Royal Surrey County Hospital, London, United Kingdom

4816 — C0174 Fluocinolone acetonide (FAC) 0.2 mg intravitreal implant in the treatment of diabetic macular edema (DME). John Liu¹, J. Coney², J. Schartman², D. G. Miller², H. Zegarra², L. Rao². ¹Ophthalmology, Case Western Reserve University, Cleveland, OH; ²Retina Associates of Cleveland, Inc., Cleveland, OH *CR

4817 — C0175 Real world data on the efficacy of Fluocinolone Acetonide (ILUVIEN) in eyes with diabetic macular oedema. Haifa A. Madi, Y. Chen, D. Steel, J. Smith, T. Sandinha, M. S. Habib. Ophthalmology, Sunderland Eye Infirmary, Sunderland, United Kingdom *CR

4818 — C0176 Safety and efficacy of Dexamethasone intravitreal implant (Ozurdex®) for the treatment of diabetic macular oedema in pseudophakic patients. The Portsmouth experience. Anastasios Sepetis^{2,1}, G. Tsokolas², S. Mourtzoukos¹. ¹Portsmouth Hospitals NHS Trust, Portsmouth, England, United Kingdom; ²University Hospital Southampton NHS Foundation Trust, Southampton, United Kingdom

4819 — C0177 Fluocinolone acetonide for persisting diabetic macular edema in routine clinical practice in the US. Long-term follow up. Ana M. Suelves¹, D. Buzzacco^{1,2}, L. Chorich III^{1,2}, S. Patel¹. ¹Midwest Retina, Columbus, OH; ²Ohio State University, Columbus, OH

4820 — C0178 Fluocinolone Acetonide (0.19 mcg/day) Intravitreal Implant and Improved Treatment Burden for Patients with Diabetic Macular Edema (DME). Matthew Byun^{1,2}, C. D. Riemann^{2,1}, J. Osher^{2,1}, Y. Patel^{2,1}. ¹Ophthalmology, University of Cincinnati, Cincinnati, OH; ²Vitreoretinal Disease, Cincinnati Eye Institute, Cincinnati, OH *CR

4821 — C0179 Aflibercept for diabetic macular oedema (DMO): How effective with foveal intraretinal cysts? Meera Radia^{1,2}, C. Dinah². ¹Moorfields Eye Hospital, Middlesex, United Kingdom; ²Central Middlesex Hospital, London, London, United Kingdom

4822 — C0180 Efficacy and safety of aflibercept in diabetic macular edema: real life study. Linda Hrarat, A. Giocanti Auregan, S. Buffet, F. Fajnkuchen. Bobigny, Hopital Avicenne, Nogent Sur Marne, France

4823 — C0181 Management of Diabetic macular oedema with Intravitreal Ranibizumab -Outcome after three years. Hemalatha Kolli, M. Chakrabarti, D. Aralikatti, M. El Gammal, R. Chavan, S. Elsherbiny, A. Mitra, P. Lip, B. Mushtaq. Ophthalmology, BMEC, Birmingham, United Kingdom

4824 — C0182 Association of Early Response to Anti-VEGF Injections for Diabetic Macular Edema with Visual Outcomes Two Years Later: Post-hoc Analysis of DRCR.net Protocol T. Adam R. Glassman. Jaeb Center for Health Research, Tampa, FL ⚡

- 4825 — C0183 Intravitreal diclofenac in the treatment of macular edema in patients with diabetic macular edema.** *Gilberto Noe Gutierrez Ruiz, A. Meza Anguiano, S. Paz Camacho, W. Quiñónez, E. Romo García, J. Mier, A. Ramón Concepción. Centro de Investigación y Docencia en Ciencias de la Salud, Universidad Autónoma de Sinaloa, Culiacán, Sinaloa, Mexico*
- 4826 — C0184 Aqueous Humour Cytokine Levels May Predict Diabetic Macular Edema Response to Intravitreal Dexamethasone Implant Injection.** *Marc Figueras-Roca, A. Sala-Puigdollers, S. Alforja, E. Blanch, V. Budi, J. Zarranz-Ventura, A. Adán, B. Molins. Hospital Clinic Barcelona, Barcelona, Spain *CR*
- 4827 — C0185 Long-term outcome of steroid eye drop therapy for diabetic macular edema.** *Sachi Abe, K. Nishitsuka, H. Yamashita. Yamagata University Sch of Med, Yamagata, Yamagata, Japan *CR*
- 4828 — C0186 Prior steroid response as a predictor of real-world IOP safety with 0.2 µg/day fluocinolone acetonide (FAc) in diabetic macular edema (DME) therapy.** *James C. Lai^{1,2}. ¹Retina Consultants of Hawaii, Honolulu, HI; ²Division of Ophthalmology, University of Hawaii Medical School, Honolulu, HI *CR, ✕*
- 4829 — C0187 Aqueous humor cytokine levels in patients with diabetic macular edema refractory to intravitreal anti-VEGF treatment and a dexamethasone implant.** *Yoon seob Sim¹, J. Kwon². ¹Ophthalmology, St. Mary's hospital, Seoul, Korea (the Republic of); ²St. Vincent hospital, Suwon, Korea (the Republic of)*
- 4830 — C0188 Optical coherence tomography analysis of patients with untreated diabetic macular edema.** *Haiying Chen¹, M. Tan¹, D. Pomerleau¹, E. W. Chong^{1,2}, L. L. Lim^{1,2}, R. C. Symons^{1,3}. ¹Department of Ophthalmology, The Royal Melbourne Hospital, Melbourne, Victoria, Australia; ²Centre for Eye Research Australia, Department of Surgery, The University of Melbourne, Melbourne, Victoria, Australia; ³Department of Surgery, The University of Melbourne, Melbourne, Victoria, Australia; ⁴The Royal Melbourne Hospital, Melbourne, Victoria, Australia *CR*
- 4831 — C0189 Predictive factors of selective retina therapy for diabetic macular edema.** *Kumiko Hirayama¹, M. Yamamoto¹, T. Kohno¹, D. Theissen-Kunde², Y. Miura^{2,3}, R. Brinkmann², K. Shiraki¹. ¹ophthalmology, Osaka City University, Osaka, Japan; ²Medical Laser Center Luebeck, Luebeck, Germany; ³Institute of Biomedical Optics, University of Luebeck, Luebeck, Germany ✕*
- 4832 — C0190 Hemoglobin A1C as a Predictor of Compliance and Treatment Efficacy in Patients with Diabetic Macular Edema.** *Paymohn Mahdavi, M. S. Katz. National Retina Institute, Columbia, MD*
- 4833 — C0191 Correlating renal function and Diabetic Macular Edema in Latino and African American Populations with Type 2 Diabetes.** *Aisha Hasan¹, J. Levine¹, B. Levine². ¹Bronx Lebanon Hospital, New York, NY; ²Medicine, VA Medical Center West, Los Angeles, CA*
- 4834 — C0192 Identification of Key Vitreous Biomarkers in Diabetic Macular Edema Associated with Proliferative Diabetic Retinopathy.** *Gianna C. Teague¹, N. Nandakumar¹, F. J. Lopez², K. Lashkari¹. ¹Schepens Eye Research Institute, Massachusetts Eye and Ear, Boston, MA; ²Allergan plc, Irvine, CA*
- 4835 — C0193 Short-Term Effects of Intravitreal Bevacizumab in Contrast Sensitivity of Patients with Diabetic Macular Edema and Optimizing Glycemic Control.** *Augusto Motta, M. B. Bonanomi, D. A. Ferraz, R. C. Preti, R. Sophie, F. M. Medina, M. Abalem, M. Queiroz, S. G. Pimentel, W. Y. Takahashi, F. Damico. Ophthalmology, University of Sao Paulo, Juiz de Fora, Minas Gerais, Brazil ✕*
- 4836 — C0194 Subthreshold micropulse laser may stabilize foveal-threatening diabetic macular edema.** *Sanam Salimi¹, J. Keen^{1,3}, C. Cunningham², V. Raji¹. ¹Chicago Medical School, Rosalind Franklin University of Medicine & Science, Chicago, IL; ²Ophthalmology, University of Iowa, Iowa City, IA; ³Ophthalmology, Kresge Eye Institute, Detroit, MI; ⁴Ophthalmology, John H. Stroger Jr. Hospital of Cook County, Chicago, IL*
- 4837 — C0195 Dexamethasone Intravitreal Implant versus Intravitreal Anti-VEGF for the Treatment of Persistent Diabetic Macular Edema, Six Month Interim Study Analysis (DIME Study).** *Gina Hong, G. M. Gordon, D. J. Pieramici. Research, California Retina Consultants, Santa Barbara, CA ✕*
- 4838 — C0196 Parafoveal SD-OCT Changes after Injection of Dexamethasone Implant for Diabetic Macular Edema.** *Krishni Peddada, K. Kelly, W. Li. Ophthalmology, Drexel University, Philadelphia, PA*
- 4839 — C0197 The Influence of Intravitreal Ranibizumab on Aqueous Cytokine Concentrations in Diabetic Macular Edema.** *Sanjeewa Wickremasinghe¹, S. Gnanasekaran¹, E. Bandala-Sanchez², M. Kolic¹, S. Rogers¹, A. McAuley³, S. S. Sandhu¹, L. L. Lim¹. ¹Centre for Eye Research Australia, East Melbourne, Victoria, Australia; ²Walter and Eliza Hall Institute of Medical Research, Parkville, Victoria, Australia; ³Monash University, Melbourne, Victoria, Australia *CR*
- 4840 — C0198 Quantitative Optical Coherence Tomography Angiography Metrics Predict Diabetic Macular Edema.** *Carol Y. Cheung¹, Z. Sun¹, F. Tang¹, R. Wong^{1,2}, C. Chan^{1,2}, S. Mohamed^{1,2}, C. C. Tham¹, M. E. Brelen¹, L. Chen¹, D. Ng¹. ¹Ophthalmology and Visual Sciences, The Chinese University of Hong Kong, Hong Kong, Hong Kong; ²Hong Kong Eye Hospital, Hong Kong, Hong Kong*
- 4841 — C0199 Optical Coherence Tomography Biomarkers in Diabetic Macular Edema treated with anti-VEGF.** *Emilia Maggio¹, S. Mauro¹, A. Polito¹, G. Massimo², F. Bauci¹, G. Pertile¹. ¹Ophthalmology, Sacrocuore Hospital, Negrar, Italy; ²Department of Computer Science, University of Verona, Verona, Italy*
- 4842 — C0200 Relationship between cytokine aqueous humour levels and Optical Coherence Tomography features in Diabetic Macular Edema.** *Anna Sala-Puigdollers, M. Figueras-Roca, S. Alforja, E. Blanch, M. Hernandez, J. Zarranz-Ventura, A. Adán, B. Molins. Hospital Clinic de Barcelona, Hospital Clinic de Barcelona (ICOF), Barcelona, Spain*
- 4843 — C0201 Comparison of efficacy of intravitreal triamcinolone acetonide versus intravitreal bevacizumab in diabetic patients with macular edema and cataract undergoing phacoemulsification.** *Shikha Bassi, S. salim, E. Rishi. Cataract, Sankara Nethralaya, Chennai, India*
- 4844 — C0202 36-months real-world experience in patients with refractory chronic diabetic macular edema (DME) treated with the 190 micrograms fluocinolone acetonide intravitreal implant (ILUVIEN).** *Christine Anggun Putri, F. Quhill. Ophthalmology, Sheffield Teaching Hospitals NHS Foundation Trust, Sheffield, United Kingdom *CR*
- 4845 — C0203 Ocular photostimulation with the 577 nm micropulse yellow laser in the management of clinically significant diabetic macular edema (CSDME) – 4th Year of Follow-up.** *Ezio Cappello, E. Cecchin, C. Della Guardia, S. Morselli. Ophthalmology, Ospedale San Bassiano - Bassano del Grappa, Bassano del Grappa, Italy*
- 4846 — C0204 Femtosecond laser assisted cataract surgery combined with intravitreal dexamethasone implant in patients with cataract and diabetic macular edema.** *Claudio Furino¹, M. Grassi¹, A. Niro¹, F. Boscia², N. Recchimurzo¹, C. Palmisano¹, A. Montepara¹, G. Alessio¹. ¹UO Oftalmologia Universitaria, Azienda Ospedaliero-Universitaria Consorziale Policlinico, Bari, Italy; ²Dep of Ophthalmology, University of Sassari, Sassari, Italy*

4847 — C0205 Five year outcomes of the Bevodex Study (a multicenter randomized clinical trial of intravitreal bevacizumab versus intravitreal dexamethasone). Elisa E. Cornish^{1,2}, K. Teo^{1,3}, M. C. Gillies^{1,2}, L. L. Lim⁴, I. McAllister⁵, S. Sanmugasundram⁴, V. Nguyen², S. Wickremasinghe⁴, H. Mehta⁶, S. Fraser-Bell^{1,2}. ¹Ophthalmology, Sydney Eye Hospital, Sydney, New South Wales, Australia; ²Save Sight and Eye Health Institute, Sydney Medical School, Sydney University, Sydney, New South Wales, Australia; ³Singapore National Eye Centre, Singapore, Singapore; ⁴Centre for Eye Research Australia, University of Melbourne, Royal Victorian Eye and Ear Hospital, Melbourne, Victoria, Australia; ⁵Lions Eye Institute, Centre for Ophthalmology and Visual Sciences, University of Western Australia, Perth, Western Australia, Australia; ⁶Ophthalmology, Royal Free London NHS Foundation Trust, London, United Kingdom *CR

4848 — C0206 Optimization of diabetic macular edema (DME) therapy following 0.2 µg/day fluocinolone acetonide (FAc) implant administration. Victor H. Gonzalez. Valley Retina Institute PA, Edinburg, TX *CR, ✕

4849 — C0207 Changes of the Individual Thickness of Retinal Layers in Non-proliferative Diabetic Retinopathy in Type 2 Diabetic. Chang Wook Choi. Ophthalmology, Wonkwang Medical Center, Iksan City, Jeollabuk-do, Korea (the Republic of)

4850 — C0208 OCT-Angiography changes after subthreshold micropulse yellow laser in diabetic macular edema. Stela Vujosevic, V. Gatti, A. Muraca, L. Masoero, C. Toma, S. De Cilla'. Ophthalmology, University Hospital Maggiore della Carita', Novara, Italy

4851 — C0209 Anterior flare intensity after intravitreal injection of ranibizumab, aflibercept or triamcinolone acetonide in diabetic macular edema. masakazu morioka, Y. Takamura, Y. Yamada, M. Gozawa, T. Matsumura, M. Inatani. University of Fukui Hospital, Yoshida, Fukui, Japan ✕

4852 — C0210 Posterior subtenon infusion of triamcinolone acetonide as adjunctive treatment to panretinal photocoagulation using pattern scan laser for severe diabetic retinopathy. Yutaka Yamada, Y. Takamura, T. Matsumura, M. Morioka, M. Gozawa, M. Inatani. University Of Fukui, Yoshida, Fukui, Japan

4853 — C0211 Direct photocoagulation guided with merged retinal images for the treatment of focal diabetic macular edema. Yoshihiro Takamura, t. matsumura, S. Arimura, m. gozawa, m. morioka, Y. Yamada, M. Inatani. Ophthalmology, University of Fukui, Yoshida, FUKUI, Japan

4854 — C0212 The Role of Midperipheral Retinal Non-perfusion in Diabetic Macular Edema. Amro Omari, L. Su, C. Sesi, K. Jolitkov, R. C. Rao, A. Shah, T. Jayaundera, T. Gardner. Kellogg Eye Center, Ann Arbor, MI

4855 — C0213 Semi-Automated Segmentation of Hyperreflective Foci on Optical Coherence Tomography. Philip DeSouza¹, S. Walter², D. Cunefare², R. Shah¹, S. Farsiu^{3,2}, G. J. Jaffe². ¹Ophthalmology, Wake Forest School of Medicine, Winston-Salem, NC; ²Ophthalmology, Duke University Medical Center, Durham, NC; ³Biomedical Engineering, Duke University, Durham, NC

4856 — C0214 Retro-IDEAL study - results from real-world practice show that after substantial amounts of prior treatment with anti-VEGF and other therapies a single ILUVIEN (fluocinolone acetonide; FAc) implant leads to sustained improvements lasting up to 36 months. Albert J. Augustin. Ophthalmology, Klinikum Karlsruhe, Karlsruhe, Germany *CR

Exhibit Hall C0302-C0350

Wednesday, May 02, 2018 11:15 AM-1:00 PM

Cornea

453 Dry Eye Clinical II

Moderators: Tor P. Utheim and Pedram Hamrah

4857 — C0302 Meibomian gland structure is correlated to meibomian gland function. Donald R. Korb¹, W. J. Benjamin², A. Nau¹. ¹Korb Associates, Boston, MA; ²Material Performance Assessments, Hoover, AL

4858 — C0303 Clinical Application of Matrix Metalloproteinase 9 Test Using Immunoassay Kit. In Boem Chang, J. Park, J. Kim. Sanggye Paik Hospital, Inje University, Seoul, Korea (the Republic of)

4859 — C0304 Exploring the predisposition of the Asian eye to dry eye disease in a paediatric cohort. Jennifer P. Craig, J. Kim, M. T. Wang. Ophthalmology, University of Auckland, Auckland, New Zealand *CR

4860 — C0305 Automated classification of dry eye type analyzing interfering fringe color images of tear film using machine learning technologies. Katsumi Yabusaki¹, R. Arita^{2,3}, T. Yamauchi¹. ¹Kowa Company, Ltd., Tokyo, Japan; ²Itoh Clinic, Omiya, Japan; ³Lid and Meibomian gland working group, Tokyo, Japan *CR

4861 — C0306 Dry Eye Risk Assessment (DERA): Predictive Value of Newly Identified Risk Factors. Justin Kwan¹, J. S. Harthan², T. Doll³, S. Schwartz⁴, C. Halleran⁵, S. G. Hauswirth⁶, L. E. O'Dell^{7,8}, S. Schachter⁹, K. Mastrotola¹⁰, N. Bernabe¹¹, M. M. Hom¹¹. ¹Southern California College of Optometry, Marshall B. Ketchum University, Fullerton, CA; ²Illinois College of Optometry, Chicago, IL; ³College of Optometry, Pacific University, Forest Grove, OR; ⁴Dr. Schwartz Optometrist and Associates, Sterling Heights, MI; ⁵East Coast EyeCare, Clarenville, Newfoundland, Canada; ⁶University of Colorado, Denver, CO; ⁷Mechanicsburg Eye Associates, Mechanicsburg, PA; ⁸Wheatlyn EyeCare, Manchester, PA; ⁹Advanced Eyecare and The Eyewear Gallery, Pismo Beach, CA; ¹⁰New York Hotel Trade Council / The Hotel Association of New York City Employee Benefits Fund, Health Center, Inc., New York, NY; ¹¹Private Practice, Azusa, CA *CR

4862 — C0307 Effects of Diabetes type 2 on Meibomian glands, ocular surface and tear function. Johanna J. Garzon¹, A. López-Alemamy². ¹Optometry and vision sciences, University of La Salle, Bogota, Colombia; ²Optics and Optometry, University of Valencia, Valencia, Valencia, Spain

4863 — C0308 Comparative analysis of tear meniscus measurement by KOWA DR-1a tear interferometer with fluorescein staining. Takanori Yamauchi¹, R. Arita^{2,3}, K. Yabusaki¹, T. Ichitashi¹. ¹Kowa Company, Ltd., Tokyo, Japan; ²Itoh Clinic, Saitama, Japan; ³Lid and Meibomian Gland Working Group, Tokyo, Japan *CR, ✕

4864 — C0309 Efficacy of Ivermectin for the Treatment of cutaneous and ocular Rosacea. Manfred Zierhut¹, B. Sobolewska¹, D. Doycheva¹, C. M. Deuter¹, M. Schaller². ¹Centre for Ophthalmology, University of Tuebingen, Tuebingen, Germany; ²Centre of Dermatology, University of Tuebingen, Tuebingen, Germany

4865 — C0310 Quality of Life and Dry Eye Disease Severity in People with Diabetes. Suzanne Hagan¹, M. Byambajav¹, R. Elshein¹, A. Collier^{2,1}, S. Jonuscheit¹. ¹Life Sciences, Glasgow Caledonian University, Glasgow, SCOTLAND, United Kingdom; ²Diabetes Day Centre, University Hospital Ayr, Ayr, United Kingdom

4866 — C0311 The difference of subjective symptoms related to eye pain between dry eye subtypes. Aoi Komuro, N. Yokoi, H. Kato, Y. Sonomura, C. Sotozono. Department of Ophthalmology, Kyoto Prefectural University of Medicine, Kyoto, KYOTO, Japan

4867 — C0312 The Impact of Short-term Play of Visual Reality Games on Ocular Surface, Tear Functions and Dioptric Status in College Students. Zongyi Zhan, Y. Yang, M. Yu. ZhongShan Ophthalmic Center, Guangzhou, China

4868 — C0313 Tear Film Osmolarity and Matrix Metalloproteinase-9 (MMP-9) Levels after Cataract Surgery. Ashlie A. Bernhisel, A. Lin. Ophthalmology, University of Utah, Salt Lake City, UT ✕

- 4869 — C0314 Demodex Folliculorum In Patients With Mild To Severe Dry Eye.** Christina Jacobi^{1,2}, J. K. Kurz², F. P. Paulsen³, A. G. Juenemann⁴. ¹Ophthalmological practice, Hamburg, Germany; ²Ophthalmology, University of Erlangen, Rostock, Germany; ³Institute of Anatomy II, University of Erlangen, Erlangen, Germany; ⁴Ophthalmology, University of Rostock, Rostock, Germany
- 4870 — C0315 The anti-inflammatory effect of isotonic glycerol in Sjögren's syndrome-related dry eye.** Huba Kiss, A. Fust, Z. Z. Nagy, J. Nemeth. Department of Ophthalmology, Semmelweis University, Budapest, Hungary ✗
- 4871 — C0316 Clinical Signs in Dry Eye: a multicentric cross-sectional study.** Elisa Cantalamessa¹, E. Villani¹, P. Nucci¹, M. Rolando². ¹University of Milan. San Giuseppe Hospital, Milan, Italy; ²IS.PRE Oftalmica, Genoa, Italy *CR
- 4872 — C0317 The roles of IL-13 and Granulysin in the pathogenesis of Stevens-Johnson Syndrome/Toxic Epidermal Necrolysis.** Omer Iqbal. Ophthalmology, Loyola University Chicago, Maywood, IL
- 4873 — C0318 Neutrophil Extracellular Traps (NETs) in Patients with Dry Eye Disease Secondary to ocular Graft-vs-Host-Disease (oGVHD): Pathological Consequences and Therapeutic Implications.** Sandeep Jain¹, S. AN¹, I. RAJU¹, B. Surenkhuu¹, S. Sinha¹, D. Rondelli², C. Mun¹. ¹Ophthalmology & Visual Sciences, University of Illinois at Chicago, Chicago, IL; ²Medicine, University of Illinois at Chicago, Chicago, IL *CR
- 4874 — C0319 MUC5AC assay of extracts from Schirmer strips with human tear using a modified commercial ELISA kit.** Naoto Mori¹, H. Miyake¹, H. Mano¹, T. Imanaka¹, M. Nakamura¹, T. Matsugi¹, N. K. Shams². ¹Santen Pharmaceutical Co., Ltd., Osaka, Japan; ²Santen Inc., Emeryville, CA *CR
- 4875 — C0320 Association between meibomian lipid profiles and age-related changes in gland morphology and function.** Nisha S. Yeotikar¹, J. Flanagan^{2,3}, T. J. Naduvilath¹, M. Markoullis², D. Tilia^{1,3}, E. B. Papas³. ¹Clinical & Research Trials Centre, Brien Holden Vision Institute, Kensington, New South Wales, Australia; ²Research & Development, Brien Holden Vision Institute, Sydney, New South Wales, Australia; ³School of Optometry & Vision Science, University of New South Wales, Sydney, New South Wales, Australia ✗
- 4876 — C0321 Tear Supplementation with Preservative-Free Zinc-Hyaluronate Improves Visual Performance and Ocular Surface Sensations in Dry Eye Patients.** Lorant Dienes^{1,2}, H. Kiss², G. Sandor², Z. Nagy², C. Belmonte³, M. Acosta³, J. Gallar³, I. Kovacs². ¹Ophthalmology, Szt. Imre University Teaching Hospital, Budapest, Budapest, Hungary; ²Ophthalmology, Semmelweis University, Budapest, Budapest, Hungary; ³Instituto de Neurociencias de Alicante, Universidad Miguel Hernandez – CSIC, Alicante, Spain
- 4877 — C0322 Ocular surface involvement on GVHD patients.** Lazreg Sihem¹, R. Didier². ¹Blida, Cabinet Dr Lazreg, Blida, Algeria; ²Laboratoires Thea, Clermont Ferrand, France
- 4878 — C0323 Sleep and mood disorders in Chinese adult patients with dry eye.** Yan Wang, M. Wu, J. Han, T. Shao. Ophthalmology, Eye and ENT Hospital of Fudan University, Shanghai, China
- 4879 — C0324 Investigation of the Factors Determining Central Corneal Epithelial Damage in Dry Eye Patients.** Hiroaki Kato^{1,2}, N. Yokoi¹, R. Sakai¹, A. Watanabe¹, C. Sotozono¹, S. Kinoshita³. ¹Ophthalmology, Kyoto Prefectural University of Medicine, Kyoto, Japan; ²Ophthalmology, National Center for Geriatrics and Gerontology, Obu, Japan; ³Frontier Medical Science and Technology for Ophthalmology, Kyoto Prefectural University of Medicine, Kyoto, Japan *CR
- 4880 — C0325 Association of systemic omega-3 fatty acids with dry eye signs and symptoms at baseline in the DRy Eye Assessment and Management (DREAM[®]) Study.** Eric Kuklinski¹, M. M. Hom², M. G. Maguire⁴, G. Ying⁴, M. C. Lin², R. Chapkin², P. A. Asbell¹. ¹Ophthalmology, Icahn School of Medicine at Mount Sinai, New York, NY; ²Nutrition & Chronic Disease Prevention, Texas A&M University, College Station, TX; ³Private Practice, Azusa, CA; ⁴Ophthalmology, University of Pennsylvania, Philadelphia, PA; ⁵School of Optometry, UC Berkeley, Berkeley, CA *CR, ✗
- 4881 — C0326 Surgical treatment for superior limbic keratoconjunctivitis refractory to most recent eye drop treatment.** Yamato Yoshikawa^{1,2}, N. Yokoi², A. Komuro², Y. Sonomura², H. Kato², T. Ikeda¹, C. Sotozono². ¹Osaka Medical College, Takatsuki-City, Osaka, Japan; ²Kyoto Prefectural University of Medicine, Kyoto, Japan
- 4882 — C0327 The relationship between non-invasive tear film break-up time and tear film lipid layer thickness.** park jun sang. nune eye hospital, Seoul, Korea (the Republic of)
- 4883 — C0328 Correlation Between Noninvasive Tear Break-up Time and Ocular Parameters of Dry Eye Syndrome.** Do Yeh Yoon¹, H. Jeon¹, W. Wee², J. Hyon¹. ¹Department of Ophthalmology, Seoul National University Bundang Hospital, Seongnam, Korea (the Republic of); ²Department of Ophthalmology, Seoul National University College of Medicine, Seoul, Korea (the Republic of)
- 4884 — C0329 Comparison of tear breakup between tear interferometry DR-1a and infrared illuminated video topography Keratograph 5M.** Hyungil Kim^{1,6}, R. Arita^{2,6}, B. Cho¹, H. Hwang^{4,6}, J. Kim⁵, K. Itoh², N. Morishige^{3,6}. ¹Ophthalmology, Gyeongju St. Mary Eye Clinic, Gyeong-ju, Gyeong book, Korea (the Republic of); ²Itoh Clinic, Saitama, Japan; ³Division of Cornea and Ocular Surface, Ohshima Eye Hospital, Fukuoka, Japan; ⁴Ophthalmology, Hallym University, Chuncheon, Korea (the Republic of); ⁵University of James Cook, Townsville, Queensland, Australia; ⁶Lid and Meibomian Gland Working Group, Tokyo, Japan *CR
- 4885 — C0330 Investigating the influence of using a smartphone on the tear film, blink rate and tear osmolarity.** Muhammad Afzam Shah Bin Abdul Rahim^{1,2}, P. Buckhurst¹, C. Purslow¹, H. Buckhurst¹. ¹School of Health Professions, Plymouth University, Plymouth, Devon, United Kingdom; ²Department of Optometry and Visual Science, International Islamic University Malaysia, Kuantan, Pahang, Malaysia
- 4886 — C0331 Therapeutic efficacy of the chronic application of sodium hyaluronate (SH) in comparison to carboxymethylcellulose (CMC) tear formulations in the management of dry eye disease.** Hamad Alzamil, L. Madden. Glasgow Caledonian University, Glasgow, United Kingdom *CR
- 4887 — C0332 Failure to Validate the Fluorescein Breakup Patterns Classification in an Italian Sample of Dry Eye Patients.** Edoardo Villani¹, E. Cantalamessa¹, S. Luccarelli¹, S. Lucentini¹, M. Rolando², P. Nucci¹. ¹DISCCO. Eye Clinic., University of Milan. San Giuseppe Hospital., Milan, Italy; ²IS.PRE Oftalmica, Genoa, Italy *CR
- 4888 — C0333 Dry eye signs and symptoms before and after cataract surgery.** Alberto Recchioni^{1,2}, G. Bhogal², M. Aujla², J. S. Wolffsohn², S. Kollit², A. Hartwig^{1,2}, C. O'Donnell^{1,2}. ¹Optegra Eye Sciences, Birmingham, United Kingdom; ²Aston University, Birmingham, United Kingdom; ³Queen Elizabeth Hospital, Birmingham, United Kingdom *CR
- 4889 — C0334 Change in Discomfort- and Vision-Related Symptoms of the Ocular Surface Disease Index in Patients with Neuropathic Corneal Pain.** Anam Akhlaq^{1,2}, R. Rashad^{1,3}, A. Jamali¹, P. Hamrah^{1,2}. ¹Center for Translational Ocular Immunology, Department of Ophthalmology, Tufts Medical Center, Tufts University School of Medicine, Boston, MA; ²Cornea Service, New England Eye Center, Department of Ophthalmology, Tufts Medical Center, Tufts University School of Medicine, Boston, MA; ³Tufts University School of Medicine, Boston, MA *CR
- 4890 — C0335 The features and treatment effect of keratoepitheliopathy for meibomitis-related keratoconjunctivitis.** Yukiko Sonomura^{1,2}, N. Yokoi², A. Komuro², H. Kato², C. Sotozono², S. Kinoshita³. ¹Department of Ophthalmology, Kyoto Yamahiro general medical center, Kidu, Kyoto, Japan; ²Department of Ophthalmology, Kyoto Prefectural University of Medicine, Kyoto, Japan; ³Department of Frontier Medical Science and Technology for Ophthalmology, Kyoto Prefectural University of Medicine, Kyoto, Japan
- 4891 — C0336 Investigation of the Tear Function in Ocular Sarcoidosis.** Takanori Aoki, K. Nagata, N. Yokoi, H. Deguchi, C. Sotozono. Kyoto Prefectural University of Medicine, Kyoto, Kyoto, Japan

4892 — C0337 Associations between meibum quality and sphingolipid quantity and composition. Vikram Paranjpe^{1,2}, N. A. Mandal³, J. Tan⁴, J. Nguyen⁵, J. Y. Lee^{1,2}, A. Galor^{1,2}. ¹Bascom Palmer Eye Institute, University of Miami, Miami, FL; ²Miami Veterans Administration Medical Center, Miami, FL; ³Department of Ophthalmology, Anatomy and Neurobiology, University of Tennessee Health Sciences Center, Hamilton Eye Institute, Memphis, TN; ⁴Ophthalmic Surgeons and Consultants of Ohio, Ohio State University, Columbus, OH; ⁵West Virginia University Eye, Morgantown, WV

4893 — C0338 Expression of NOD-like receptor and clinical correlations in patients with dry eye disease. Zhengri Li¹, w. Li¹, Z. Liu¹, r. zong¹, L. Cui², Y. Li², K. Yoon². ¹Eye Institute of Xiamen University, Xiamen, Fujian, China; ²Department of Ophthalmology, Chonnam National University Medical School and Hospital, Gwangju, Korea (the Republic of)

4894 — C0339 Effect of 3% diquafosol ophthalmic solution on tear film lipid layer in dry eye with meibomian gland dysfunction. Shima Fukuoka^{1,2}, R. Arita^{3,2}. ¹Ophthalmology, Omiya Hamada Eye Clinic, Omiya-ku, SAITAMA, Japan; ²Lid and Meibomian Gland Working Group (LIME), Saitama, Japan; ³Ophthalmology, Itho Clinic, Saitama, Japan *CR, ✗

4895 — C0340 Association Between Smoking and Sjögren's Syndrome and Signs of Keratoconjunctivitis Sicca: Is Smoking Protective? John A. Gonzales^{1,2}, A. Chou¹, J. Rose-Nussbaumer^{1,2}, V. Y. Bunya³, L. Criswell^{5,4}, C. Shiboski⁴, T. Lietman^{1,2}. ¹Francis I. Proctor Foundation, San Francisco, CA; ²Ophthalmology, University of California, San Francisco, San Francisco, CA; ³Scheie Eye Institute, University of Pennsylvania, Philadelphia, PA; ⁴Orofacial Sciences, University of California, School of Medicine, San Francisco, CA; ⁵Medicine, University of California, San Francisco, San Francisco, CA *CR

4896 — C0341 Comparison of tear film break-up time measured by fluorescein staining and non-invasive measurement techniques. Takashi Suzuki^{1,2}, Y. Okajima², T. Itokawa², Y. Hori². ¹Ophthalmology, Ishizuchi eye clinic, Niihama-shi, Ehime, Japan; ²Toho University Omori Medical Center, Tokyo, Japan *CR, ✗

4897 — C0342 Comparison of Dry Eye between Femtosecond Laser-Assisted Cataract Surgery and Conventional Phacoemulsification. Xiaobo Zhang. Eye Institute of Xiamen University, Xiamen, China

4898 — C0343 Effectiveness of Autologous Serum Tears for the Treatment of Corneal Neuropathic Pain. Dalia Zhang¹, C. Apperson-Hanson², R. R. Sayegh¹. ¹University Hospitals Eye Institute, Case Western Reserve University School of Medicine, Cleveland, OH; ²Clinical and Translational Science Collaborative, Case Western Reserve University School of Medicine, Cleveland, OH

4899 — C0344 Sodium concentration affects the physical properties of hyaluronic acid-based lubricant eye drops. Peter A. Simmons¹, H. Wang², T. Wang², R. Meller², J. G. Vehige². ¹PCS Research, Yorba Linda, CA; ²Research & Development, Allergan, Irvine, CA *CR

4900 — C0345 Meibomian Gland Dysfunction is An Early Sign and Major Cause of Dry Eye in Type 2 Diabetes. Huping Wu, F. Xie, S. Luo, L. Zhirong, N. Dong, Z. Liu, X. Shang, Z. Liu. Eye Institute & Affiliated Xiamen Eye Center of Xiamen University, Xiamen, Fujian, China

4901 — C0346 Heated Eye Pad tested for in-office treatment of Meibomian gland dysfunction. Charles G. Connor, D. Andrade, T. Hicks, S. David, N. Kasraie, W. Miller, S. Narayanan. Rosenberg School of Optometry, University of the Incarnate Word, San Antonio, TX

4902 — C0347 Conjunctival microvascular alterations in dry eye patients and their responses to anti-inflammation treatment. YUQING DENG^{1,2}, J. Wang¹, H. Jiang^{1,3}, W. Chen², J. Yuan². ¹Bascom Palmer Eye Institute, University of Miami, Miami, FL; ²Zhongshan Ophthalmic Centre, Sun Yat-sen University, Guangzhou, Guangdong, China; ³Department of Neurology, University of Miami Miller School of Medicine, Miami, FL

4903 — C0348 Lifestyle factors and menstrual cycle phases: impact on dry eye signs and symptoms. Luisa Colorado, K. Edwards, L. Dinh, S. Ha, D. Liu, A. Luu, S. Trang, T. Yu-Ting, K. L. Schmid. School of Optometry and Vision Science, Queensland University of Technology, Brisbane, Queensland, Australia

4904 — C0349 Changes in corneal mechanical, chemical and cold thresholds following repeated tear film instability. Deborah Antwi¹, C. G. Begley¹, P. Situ¹, T. L. Simpson². ¹Indiana University, School of Optometry, Bloomington, IN; ²Optometry, University of Waterloo, Waterloo, Ontario, Canada

4905 — C0350 Gender Disparity in how Dry Eye Symptoms are influenced by Pain Sensitivity. Wing Li, M. C. Lin. UC Berkeley, Millbrae, CA

Exhibit Hall C0351-C0375

Wednesday, May 02, 2018 11:15 AM-1:00 PM
Cornea

454 Tear Film, Lacrimal gland, Meibomian Gland

Moderators: Gordon W. Laurie and Shivalingappa K. Swamynathan

4906 — C0351 Structure of tear film lipid layer models containing cholesteryl esters and lysophosphatidylcholine. Riku Paananen¹, I. Vattulainen², J. Moilanen¹. ¹Ophthalmology, University of Helsinki and Helsinki University Hospital, Helsinki, Finland; ²Laboratory of Physics, University of Helsinki, Helsinki, Finland

4907 — C0352 Simulation and measurement of Glob-Driven Tear Film Breakup. Lan Zhong¹, D. Antwi², R. J. Braun¹, P. E. King-Smith³, C. G. Begley³. ¹Department of Mathematical Sciences, University of Delaware, Newark, DE; ²College of Optometry, The Ohio University, Columbus, OH; ³School of Optometry, Indiana University, Bloomington, IN

4908 — C0353 Serotonin and stress in contact lens-related dry eye. Cori Jones, K. M. Haworth. Southern College of Optometry, Memphis, TN

4909 — C0354 Tear Proteins as Possible Biomarkers for Parkinson's Disease. Sarah F. Hamm-Alvarez^{1,2}, M. Lew³, D. Feigenbaum³, S. R. Janga⁴, M. Shah¹, D. Freire³, B. Cooperman², R. Ghanshani^{1,3}, W. Mack⁴, C. Okamoto². ¹Roski Eye Institute and Department of Ophthalmology, Keck School of Medicine, University of Southern California, Los Angeles, CA; ²Pharmacology and Pharmaceutical Sciences, School of Pharmacy, University of Southern California, Los Angeles, CA; ³Department of Neurology, Keck School of Medicine, University of Southern California, Los Angeles, CA; ⁴Department of Preventive Medicine, Keck School of Medicine, University of Southern California, Los Angeles, CA

4910 — C0355 The long-term effects of aerobic exercise on tear meniscus of normal people: an SS-OCT study. Hao Li, S. Chen, Y. Liu, F. Li, L. Liang, X. Zhang. Zhongshan Ophthalmic Center, Guangdong, China

4911 — C0356 The effect of blinking pattern on tear film break-up time. Dorota H. Szczesna-Iskander¹, C. Llorens Quintana², K. Swiderska¹. ¹Department of Optics and Photonics, Wrocław University of Science and Technology, Wrocław, Poland; ²Department of Biomedical Engineering, Wrocław University of Science and Technology, Wrocław, N/A - International, Poland

4912 — C0357 Organic Osmolytes as Osmotic Agents vs. Salts in Artificial Tears. Haixia Liu, A. Nguyen, J. Giyanani, J. G. Vehige. Clinical Development, Allergan Plc., Irvine, CA *CR

4913 — C0358 The effects of warm compress on tear film lipid layer thickness in dry eyes following corneal refractive surgeries. xueyi zhou^{1,2}, Y. Shen^{1,2}, J. Shang^{1,2}, X. Zhou^{1,2}. ¹Ophthalmology, Eye and ENT Hospital of Fudan University, Shanghai, Shanghai, China; ²Key Lab of Myopia, Ministry of Health, Shanghai, China

4914 — C0359 Development of a Quantitative Multiplex Western Blot Assay for Tear Lacritin Proteins. Robert L. McKown¹, B. M. Justis¹, C. E. Coburn¹, R. W. Raab¹, B. Rivers², R. K. Sia², G. W. Laurie³. ¹Integrated Science & Technology, James Madison University, Harrisonburg, VA; ²Warfighter Refractive Eye Surgery Program and Research Center, Fort Belvoir, Fort Belvoir, VA; ³Cell Biology, University of Virginia, Charlottesville, VA *CR, ✗

4915 — C0360 Detection of Extracellular Vesicles in the Human Tear Film. William Ngo, C. Postnikoff, A. Pucker, J. J. Nichols. University of Alabama at Birmingham, Birmingham, AL *CR

- 4916 — C0361 Clinical evaluation of the optimal pulse technology treatment for dry eye disease caused by meibomian gland dysfunction.** Baikai Ma^{1,2}, Y. Gao^{1,2}, R. Liu^{1,2}, C. Huang^{1,3}, Y. Li⁴, Y. Liu^{1,2}, H. Qi^{1,2}. ¹Ophthalmology department, Peking University Third Hospital, Beijing, China; ²Beijing Key Laboratory of Restoration of Damaged Ocular Nerve, Beijing, China; ³Beijing No.6 Hospital, Beijing, China; ⁴The First Hospital of Fangshan District, Beijing, China ✕
- 4917 — C0362 Human meibomian gland epithelial cell membrane lysate inhibits the growth rate of *Pseudomonas aeruginosa*.** Robin Kelleher Davis, D. A. Sullivan, Y. Liu. *Ophthalmology, Schepens Eye Research Inst/MEEI, Boston, MA*
- 4918 — C0363 Influence of androgen receptor absence on murine lacrimal and meibomian glands.** David A. Sullivan¹, F. Jardi², X. Chen¹, H. Xie¹, F. Claessens³, Y. Liu¹. ¹Schepens Eye Res Inst/ Harvard Med School, Boston, MA; ²Katholieke Universiteit, Leuven, Belgium; ³Katholieke Universiteit, Leuven, Belgium
- 4919 — C0364 The clinical analysis of endonasal dacryocystorhinotomy on treatment of the recurrent dacryocystitis after polyurethane stent placement.** qianqian wang¹, J. Cui². ¹State Key Laboratory of Ophthalmology (SKLO), Zhongshan Ophthalmic Center (ZOC), Guangzhou, Guangdong Province, China; ²The second hospital of Jilin University, Changchun, Jilin, China
- 4920 — C0365 Subconjunctival dendrimer-drug therapy for the treatment of dry eye in rabbits with induced autoimmune dacryoadenitis.** Hui Lin, S. Kambhampati, C. Hsu, K. Rangaramanujam, S. C. Yiu. *Wilmer Eye Institute, Johns Hopkins University, Lutherville Timonium, MD*
- 4921 — C0366 Biomarkers for epithelial cells and basement membranes in the human meibomian gland.** Di Chen^{1,2}, Y. Liu¹, D. A. Sullivan¹, M. Hatton^{1,3}, W. Kam¹, H. Xie^{1,4}. ¹Schepens eye research institute, Massachusetts Eye and Ear, Harvard Medical School, Boston, MA; ²Department of ophthalmology, Peking Union Medical College Hospital, Peking Union Medical College, Chinese Academy of Medical Sciences, Beijing, China; ³Ophthalmic Consultants of Boston, Boston, MA; ⁴Department of ophthalmology, Union Hospital, Huazhong University of Science and Technology, Wuhan, China
- 4922 — C0367 The effects of brimonidine on human Meibomian gland epithelial cells.** Alexander Pleet, M. Eslani, A. R. Djalilian, A. Aref. *Ophthalmology, University of Illinois, Chicago, IL*
- 4923 — C0368 Intracellular pathways of α_1 adrenergic stimulation-evoked fluid secretion in isolated lacrimal gland ducts in mice.** Edit Toth-Molnar^{1,2}, D. Szarka¹, O. Berczeli¹, E. Vizvari¹, Z. Rakonczay^{3,4}, P. Hegyi^{5,6}, C. Ding⁷. ¹Ophthalmology, University of Szeged, Szeged, Hungary; ²Pharmacology and Pharmacotherapy, University of Szeged, Szeged, Hungary; ³1st Department of Internal Medicine, University of Szeged, Szeged, Hungary; ⁴Pathophysiology, University of Szeged, Szeged, Hungary; ⁵Institute for Translational Medicine and First Department of Internal Medicine, University of Pecs, Szeged, Hungary; ⁶Translational Gastroenterology Research Group, MTA-SZTE, Szeged, Hungary; ⁷Department of Pharmacology and Pharmaceutical Sciences, Ophthalmology, University of Southern California, Los Angeles, CA
- 4924 — C0369 Toxicity of cosmetic preservatives on human ocular surface and adnexal cells.** Xiaomin Chen^{1,2}, Y. Liu¹, W. Kam¹, D. A. Sullivan¹. ¹Schepens/MEEI and Harvard Medical School, Boston, MA; ²Ophthalmology, Zhongnan Hospital of Wuhan University, Wuhan, Hubei, China
- 4925 — C0370** Analysis of complement pathway in dacryoadenitis of programmed cell death-1 deficient mice. Yutaka Sakurai, M. Ito, Y. Karasawa, M. Takeuchi. *National defense medical collage, Tokoroawa, Saitama, Japan*
- 4926 — C0371 High-fat diet induces inflammation in murine meibomian gland via regulating PPAR- γ pathway.** JingHua Bu, X. Cai, Y. Wu, Z. Liu, W. Li. *eye institute of xiamen university, Xiamen, China*
- 4927 — C0372 Histone Deacetylase Inhibitor Sodium Butyrate Promotes Differentiation of Human Meibomian Gland Epithelial Cells.** Masataka Ito¹, Y. Karasawa², M. Inada², K. Jin³, K. Tsubota³, M. Takeuchi². ¹Developmental Anatomy and Regenerative Biology, National Defense Medical College, Tokorozawa, Saitama, Japan; ²Department of Ophthalmology, National Defense Medical College, Tokorozawa, Saitama, Japan; ³Department of Ophthalmology, Keio University School of Medicine, Tokyo, Japan
- 4928 — C0373 Impact of aponeurotic blepharoptosis surgery to the tarsal plate and the Meibomian gland.** Rika Shirakawa¹, T. Toyono¹, R. Akiyama¹, M. Noda^{2,1}, R. Arita^{3,1}, J. Yoshida¹, T. Miyai¹, T. Usui¹. ¹Ophthalmology, University of Tokyo, Tokyo, Japan; ²Ophthalmology, Keio University, Tokyo, Japan; ³Ophthalmology, Itoh Clinic, Saitama, Japan *CR
- 4929 — C0374 Evaluation of the regenerative potential of the secretome of lacrimal gland derived mesenchymal stem cells isolated by explant technique or cell sorting.** Jana Dietrich, M. Roth, G. Geerling, S. Mertsch, S. Schrader. *Department of Ophthalmology, University Hospital Duesseldorf, Duesseldorf, Germany*
- 4930 — C0375 Circadian clock regulates tear secretion in the lacrimal gland.** Chi H. Vu^{1,2}, M. Kawashima¹, K. Sano¹, W. Nakamura³, T. J. Nakamura⁴, K. Tsubota¹. ¹Department of Ophthalmology, Keio University, School of Medicine, Tokyo, 35 Shinanomachi, Shinjuku-ku, Japan; ²Department of Cornea and External Diseases, Vietnam Institute of Ophthalmology, Hanoi, Viet Nam; ³Department of Oral Chrono-Physiology, Nagasaki University, Graduate School of Biomedical Sciences, Nagasaki, Japan; ⁴Department of Life Sciences, Meiji University, School of Agriculture, Kanagawa, Kawasaki-shi, Japan

Room 301AB

Wednesday, May 02, 2018 1:30 PM-3:00 PM

**Retinal Cell Biology / Eye Movements/
Strabismus/Amblyopia/Neuro-Ophthalmology /
Retina**

**455 Animal Models of Ocular Trauma
- SIG**

Retinal and optic nerve pathologies from models of non-accidental-, blunt-, and blast-induced injury will be presented and compared. We will discuss animal models, injury mechanisms, and molecular pathways that could lead to therapies.

Moderators: *Tonia S. Rex and Richard J. Blanch*

Organizer and Moderator. *Tonia S. Rex.* Ophthalmology & Visual Science, Vanderbilt University Medical Center, Nashville, TN

Age-related changes in retinal biomechanics that influence vulnerability during trauma. *Brittany Coats.* Mechanical Engineering, University of Utah, Salt Lake City, UT

Atypical retinal disease phenotype after acoustic blast overpressure injury. *Machelle T. Pardue.* GA Tech/Biomedical Engineering, Atlanta VA Medical Center, Atlanta, GA

Cell death mechanisms in blunt and repeated blast ocular trauma. *Chloe N. Thomas.* Institute of Inflammation and Ageing, University of Birmingham, Birmingham, United Kingdom

Room 306AB

Wednesday, May 02, 2018 1:30 PM-3:00 PM

Low Vision Group

456 LV Group - Implementing low vision service

In the global efforts to reduce the impact of vision impairment, blindness, and low vision, the emphasis has been on prevention and treatment of eye diseases and provision of refractive correction. Vision rehabilitation has received less attention. This session will concentrate on the provision of services to people with low vision. Of particular interest is providing low vision services in mid- and low-income settings, improving access and reducing barriers to access, and how research can influence policy decisions and service implementation at regional and country level by organizations and governments.

Moderators: *Walter Wittich and Lisa J. Keay*

— 1:30 **Introductions and Remarks**

— 1:40 **Initiatives: Lessons from country perspectives.** *Jill Keefe. L.V. Prasad Eye Institute, Temporary, India*

— 2:10 **Improving the provision of low vision services in medium and low-income countries.**

*Kovin S. Naidoo^{1,2}. ¹Global, Brien Holden Vision Institute, Sydney, New South Wales, Australia; ²Optometry, African Vision Research Institute, University of KwaZulu Natal, Durban, KwaZulu Natal, South Africa *CR*

— 2:35 **Working with government to improve low vision services: A Canadian experience.**

Olga Overbury. School of Optometry, University of Montreal, Montreal, Quebec, Canada

Room 310

Wednesday, May 02, 2018 1:30 PM-3:00 PM

Biochemistry/Molecular Biology / Anatomy and Pathology/Oncology / Cornea / Genetics / Glaucoma / Immunology/Microbiology / Lens / Retina / Retinal Cell Biology / Visual Neuroscience

**457 Biobanking with a Purpose:
Advancing Research in Ophthalmology
- SIG**

A discussion to develop consensus and methods to enhance the utility, best practices and regulatory considerations of biobanks in clinical, translational, diagnostic and basic vision research.

Moderator: *Liliana Guedez*

Organizer. *Robert B. Hufnagel.* ¹Ophthalmic Genomics Laboratory, National Eye Institute, NIH, Bethesda, MD; ²eyeGENE(R) Program, National Eye Institute, Bethesda, MD

eyeGENE®: a DNA bank for research into inherited eye diseases. *Rebecca Parrish.* eyeGENE(R) Program, National Eye Institute, Bethesda, MD

The Liverpool Ocular Oncology Biobank: its establishment and outputs. *Sarah E. Coupland.* University of Liverpool, Liverpool, United Kingdom

The deep resource for cancer discovery in retinoblastoma tumor and clinical data banks. *Brenda L. Gallie.* ¹Retinoblastoma Program, Hospital for Sick Children, Toronto, Ontario, Canada; ²Ophthalmology, University of Toronto, Toronto, Ontario, Canada *CR

Integrated biospecimen applications in the genomic era. *Robert B. Hufnagel.* ¹Ophthalmic Genomics Laboratory, National Eye Institute, NIH, Bethesda, MD; ²eyeGENE(R) Program, National Eye Institute, Bethesda, MD

Panelist. *Liliana Guedez.* National Eye Institute, Bethesda, MD

Panelist. *Rebecca Parrish.* eyeGENE(R) Program, National Eye Institute, Bethesda, MD

Panelist. *Sarah E. Coupland.* University of Liverpool, Liverpool, United Kingdom

Panelist. *Brenda L. Gallie.* ¹Retinoblastoma Program, Hospital for Sick Children, Toronto, Ontario, Canada; ²Ophthalmology, University of Toronto, Toronto, Ontario, Canada *CR

Panelist. *Robert B. Hufnagel.* ¹Ophthalmic Genomics Laboratory, National Eye Institute, NIH, Bethesda, MD; ²eyeGENE(R) Program, National Eye Institute, Bethesda, MD

Room 311

Wednesday, May 02, 2018 1:30 PM-3:00 PM

Retina

**458 Regenerative Medicine Wnt Signaling and Retinal vascular Disease
- SIG**

We will present and discuss the role of Wnt signaling in the management of Pediatric and Adult retinal vascular disease
How Wnt signaling might be used therapeutically to repair or regenerate retinal capillaries damaged by acquired or inherited disease

Moderator: *Michael T. Trese*

Wnt signaling. *Kimberly Drenser.* ophthalmology William Beaumont Oakland University, Associated Retinal Consultants, Royal Oak, MI *CR
wnt signaling activation in adults. *Eric nudleman.* Ophthalmology, University of California San Diego, San Diego, CA

basic Wnt signaling. *Lois E. Smith.* Ophthalmology, Harvard Childrens, Boston, MA

Room 312

Wednesday, May 02, 2018 1:30 PM-3:00 PM

Multidisciplinary Ophthalmic Imaging Group / Cornea / Glaucoma / Retina

459 Optical Coherence Tomography and Ophthalmic Surgery: New Visualizations, Functional Analysis, and Enabling Robotic Assistance - SIG

Panel discussion of advances in intraoperative OCT. A panel of leading intraoperative OCT technologists and clinicians will discuss advances in intraoperative OCT and the future of ophthalmic surgery.

Moderator: *Anthony N. Kuo*

(Organizer). *Anthony N. Kuo.* ¹Ophthalmology, Duke University Eye Center, Durham, NC; ²Biomedical Engineering, Duke University, Durham, NC *CR

New intrasurgical visualizations in anterior segment ophthalmic surgery. *William J. Dupps.* Ophthalmology, Cleveland Clinic, Cleveland, OH *CR

OCTA and the enhancement of clinical visualization. *David Huang.* ¹Ophthalmology, Casey Eye Institute, Portland, OR; ²Oregon Health Sciences Institute, Biomedical Engineering, Portland, OR *CR

New visualizations in ophthalmic posterior segment surgery. *Cynthia A. Toth.* ¹Ophthalmology, Duke University Eye Center, Durham, NC; ²Biomedical Engineering, Duke University, Durham, NC *CR

Novel OCT Guided Microsurgical tools: Micrometer Resolution Visualization Enables Micrometer Resolution Tool Control. *Jin Kang.* Electrical and Computer Engineering, Johns Hopkins University, Baltimore, MD *CR

Towards OCT-guided immersive robotic ophthalmic surgery. *Joseph A. Izatt.* ¹Biomedical Engineering, Duke University, Durham, NC; ²Ophthalmology, Duke University Eye Center, Durham, NC *CR

Room 313A

Wednesday, May 02, 2018 1:30 PM-3:00 PM

Glaucoma

460 Patient report outcome measures (PROMs) in clinical glaucoma research: refining current tools, exploring new opportunities and improving means of data capture and analysis - SIG

A discussion of:

- Current problems and inconsistencies in clinical glaucoma PROMs
- Strategies for improved PROM choice and data analysis (eg item response theory)
- Future PROM development and implementation
- New opportunities for data collection

Moderator: David Crabb

Patient reported outcomes in clinical glaucoma research: problems, inconsistencies and opportunities. *Simon Skalicky.* ¹Glaucoma Unit, Royal Victorian Eye and Ear Hospital, Malvern East, Victoria, Australia; ²Royal Melbourne Hospital, Dept of Surgery, Melbourne, Victoria, Australia

The Impact of Glaucoma: functional, psychological and socioeconomic dimensions. *Pradeep Y. Ramulu.* Glaucoma, John Hopkins Wilmer Institute, Baltimore, MD

The future of PROMs: Superior methods of PROM development (eg item banking), data collection (eg Computer Adaptive Testing Systems) and implementation into routine clinical practice. *Ecosse Lamoureux.* Singapore Eye Research Institute (SERI), Singapore, Singapore

N/A. Eva Fenwick. Singapore Eye Research Institute (SERI), Singapore, Singapore

Room 313BC

Wednesday, May 02, 2018 1:30 PM-3:00 PM

461 Understanding the NEI Granting Process (NEI Extramural Roundtable)

Whether you are new to the NIH grant process, or an established NEI investigator seeking to hear about how new programs and policies may impact you and your institutions, join this session to meet with the Director and staff of the NEI Division of Extramural Science Programs. During this session, you will learn about new opportunities and current policy issues, key compliance requirements governing NIH awards, and how to get your great research idea to NEI for funding consideration. There will be short presentations and ample time for Q&As on the NEI granting process.

Moderator: Michael Steinmetz

- 1:30 **Michael Steinmetz - Introductions**
- 2:10 **What is NIH.** *George A. McKie.* National Institutes of Health, Bethesda, MD
- 2:20 **How to Prepare and Submit an Application.** *Ellen S. Liberman.* National Eye Institute, National Institute of Health, Bethesda, MD
- 2:30 **Elements of Successful Applications.** *Houmam Araj.* National Eye Institute/NIH, Rockville, MD
- 2:40 **The peer review system.** *Paul Sheehy.* Division of Extramural Activities, NEI, Bethesda, MD
- 2:50 **What Happens after Review?** *Grace L. Shen.* National Eye Institute, Bethesda, MD

Room 314

Wednesday, May 02, 2018 1:30 PM-3:00 PM

462 Data sharing: Clinical science in the era of artificial intelligence

Data Sharing is recognized as a key driver of open scientific inquiry and a conduit to stimulating new investigations and analysis. International initiatives in Data Sharing are growing consistently, as much as the magnitude of data repositories. Of particular interest to this workshop is Data sharing in ophthalmology and visual sciences, which can bring innovative strategies to clinical research, identify new biomarkers and study endpoints, and accelerate scientific advances, with positive impact across scientific fields – from experimental basic science to patient care. However, ethics and regulations of Data Sharing must protect data integrity and must assure that private or potentially sensitive patient’s information is not revealed. Under the right circumstances and for the right reasons, Data Sharing between organizations can play a crucial role in serving science. For such, fit-for-purpose governance frameworks should support responsible sharing of information. In this workshop, experts from academia, industry and regulatory authorities will engage in a timely discussion about opportunities, challenges and best practices related to Data Sharing.

Moderators: Daniela Ferrara, Larry Kagemann and Muhammad Abdulrazik

- 1:30 **“Data Sharing for Clinical Trials and Collaborative Research: A Reading Center Perspective”.** *Nadia K. Waheed*^{1,2}. ¹Ophthalmology, New England Eye Center/Tufts University, Boston, MA; ²Boston Image Reading Center, Boston, MA *CR
- 1:42 **How Data Sharing Enables Artificial Intelligence in the Clinic and Beyond.** *Andrew Beam.* Biomedical Informatics, Harvard University, Boston, MA
- 1:54 **Mobile technologies for data sharing.** *Douglas Foster.* DigiSight Technologies, Inc., San Francisco, CA *CR
- 2:06 **Advanced biomedical imaging and data analysis with the IMAGENet Research Suite.** *Charles Reisman.* Research and Development, Topcon Healthcare Solutions, Oakland, NJ *CR, ↗
- 2:18 **Treatment patterns for diabetic macular edema (DME) in the United States: Analysis of the IRIS® Registry (Intelligent Research in Sight).** *Jeffrey R. Willis.* Genentech, Inc., South San Francisco, CA *CR
- 2:30 **Q & A and Discussion**

**Wednesday Workshops/
SIGs
1:30 pm – 3:00 pm**

↗ Refer to the Program Number in the Clinical Trial (CT) Registration Index. *CR Refer to the Program Number in the Commercial Relationships (CR) Index for Disclosures.

Room 316A

Wednesday, May 02, 2018 1:30 PM-3:00 PM

Clinical/Epidemiologic Research / Cornea / Eye Movements/Strabismus/Amblyopia/Neuro-Ophthalmology / Genetics / Glaucoma / Lens / Low Vision / Retina / Retinal Cell Biology / Visual Psychophysics/Physiological Optics

463 Ontology and Common Data Elements for Collaborative Research in Ophthalmology - SIG

This SIG will provide Ontologies, Controlled Vocabularies and Clinical Data Capture best practices. Attendees will learn how to evaluate research needs to decide the level of detail needed for hypothesis testing and select the data capture model.

Moderators: Kerry E. Goetz and Helene Dollfus

Ontology and Common Data Elements for Collaborative Research in Ophthalmology. *Santa J. Tumminia.* Office of the Director, National Eye Inst/NIH, Bethesda, MD

The NIH Common Data Elements Repository. *Liz Amos.* CTR on Health Serv Res & Health Care Technology, National Library of Medicine/NIH, Bethesda, MD

NEI Initiatives for Standardizing Phenotype Description for Collaborative Research . *Kerry E. Goetz.* Ophthalmic Genetics and Visual Function Branch, National Eye Institute/NIH, Bethesda, MD

EYE-ERN Overview. *Helene Dollfus.* Centre de référence pour les affections rares en génétique ophtalmologique (CARGO), Institut de Génétique Médicale d'Alsace (IGMA), Strasbourg, France

Clinical Data Capture in Ophthalmic Clinics in the USA. *Flora Lum.* American Academy of Ophthalmology, San Francisco, CA

Introduction to the Human Phenotype Ontology (HPO). *Peter Robinson.* Jackson Laboratory for Genomic Medicine, Farmington, CT

Room 316B

Wednesday, May 02, 2018 1:30 PM-3:00 PM

464 Making ARVO more accessible: Experience from countries with emerging vision-oriented research agenda

The workshop will provide highlights on the Infrastructure for vision and ophthalmology related research in China, India, Russia, and Brazil. These are populous countries with well recognized academic systems, and emerging vision-oriented research agendas that nevertheless maintain low accessibility to ARVO activities. Speakers will review local prominent research projects in the field, unique research infrastructure and research database initiatives in their countries that could be valuable for potential global research partners. Discussions will address obstacles that contribute to the relatively low global visibility of vision and ophthalmology research from emerging research countries and the low accessibility to ARVO activities.

Moderators: Daniel L. Rathbun, Thanasis Panorgias and Muhammad Abdulrazik

— 1:30 **Introductory notes: How ARVO is working to lower participation barriers for global members.** *Daniel L. Rathbun.* Institute for Ophthalmic Research, University of Tuebingen, Tuebingen, Germany

— 1:40 **Chinese Ophthalmological Society & ARVO.** *Ningli Wang.* Ophthalmology, Beijing Tongren Hospital, Capital Medical University, Beijing, China

— 1:57 **India's Eye Research Environment, Support Systems and Indian participation in ARVO.** *Gullapalli Rao.* LV Prasad Eye Institute, Hyderabad, India

— 2:14 **Research in vision and ophthalmology in Brazil: perspectives and obstacles.** *Solange Salomao.* Departamento de Oftalmologia e Ciencias, Universidade Federal de Sao Paulo, Sao Paulo, Brazil

— 2:31 **Eye care and vision research in Ukraine.** *Oksana P. Vitovska.* Ophthalmology, Bogomolets National medical University, Kyiv, Ukraine

— 2:48 **Q & A and Discussion**

Room 316C

Wednesday, May 02, 2018 1:30 PM-3:00 PM

465 The path from bench to bedside: Professional development and entrepreneurship

The objective of this workshop is to discuss the stepwise manner in which new therapeutics are advanced from initial discovery through clinical evaluation regulatory agencies. The entire therapeutic development process will be summarized and laid out in a stepwise manner. Attendees will walk away with knowledge on: 1. Obtaining funding to advance novel therapeutic concepts 2. How to demonstrate adequate proof-of-concept for a specific clinical indication 3. Regulatory hurdles necessary to advance a new therapeutic into clinical trial 4. Phases of clinical trials and the effect of the desired indication on timeline.

Moderators: Rafal Farjo, Barbara Wirostko and Joao Barbosa-Breda

— 1:30 **Introductions and Remarks**

— 1:40 **Funding opportunities and sources for innovative development.** *Barbara Wirostko^{1,2}.* ¹Ophthalmology, University of Utah, Park City, UT; ²Chief Medical Officer, EyeGate, Salt Lake City, TX

— 1:55 **Selection of preclinical pharmacology models to guide clinical development.** *Rafal Farjo.* Research and Development, EyeCRO, Ann Arbor, MI *CR

— 2:10 **Regulatory considerations to open and advance an investigative new drug application.** *Gary Novack^{1,2}.* ¹PharmaLogic Development Inc, San Rafael, CA; ²Pharmacology & Ophthalmology, University of California, Davis, Davis, CA *CR

— 2:25 **Navigating clinical trial phases in ophthalmology.** *Patrick Healy.* Trial Runners, LLC, Dickinson, MD

— 2:40 **Panel Discussion**

Wednesday Workshops/
SIGs
1:30 pm – 3:00 pm

Room 320

Wednesday, May 02, 2018 1:30 PM-3:00 PM

Physiology/Pharmacology / Glaucoma

466 Phagocytosis in the outflow pathway: what we can learn from other ocular tissues - SIG

This SIG will bring together experts in phagocytosis in different ocular tissues to identify and discuss how phagocytic activity in the trabecular meshwork might regulate outflow pathway tissue function and contribute to glaucoma disease.

Moderator: Donna M. Peters

Phagocytic activity in the outflow pathway, what we know and what we need to know. *Paloma B. Liton.* Ophthalmology, Duke University Eye Center, Durham, NC

RPE phagocytosis, or the importance of being on time. *Emeline F. Nandrot.* Institut de la Vision, Paris, France

Astrocyte Phagocytosis and Debris Clearance in the Optic Nerve. *Nicholas Marsh-Armstrong.* Department of Ophthalmology and Vision Science, University of California Davis, Davis, CA

The pathogenic role of mononuclear phagocytes in age-related macular degeneration. *Florian Sennlaub.* Institut de la Vision, Paris, France

Ballroom A

Wednesday, May 02, 2018 1:30 PM-3:00 PM

Cornea

467 Mechanisms and therapies for corneal endothelial dysfunction - SIG

Corneal endothelial dysfunction is a major causes for lamellar and penetrating keratoplasties around the globe. This SIG discusses pathologies and novel translational treatment concepts for corneal endothelial dysfunction. This includes cell and gene therapy approaches, novel surgical techniques and cell injection therapies.

Moderators: Thomas A. Fuchsluger and Ula V. Jurkunas

Novel insights into the protection of the corneal endothelium. *Thomas A. Fuchsluger.* Department of Ophthalmology, Friedrich-Alexander-University, Erlangen, Germany

Novel insights into the protection of the corneal endothelium. *Thomas A. Fuchsluger.* Department of Ophthalmology, Friedrich-Alexander-University, Erlangen, Germany

DNA damage leads to mitochondrial dysfunction in Fuchs endothelial corneal dystrophy . *Ula V. Jurkunas.* Ophthalmology, Massachusetts Eye and Ear Infirmary, Boston, MA

Gene editing for Fuchs corneal dystrophy. *Albert Jun.* Ophthalmology, Johns Hopkins Hospital, Baltimore, MD

Autogenic or Allogenic Descemet's Membrane as a therapy for Endothelial Dysfunction. *Jodhbir Mehta.* Ophthalmology, Singapore National Eye Center, Singapore, Singapore *CR

Endothelial Cell Injection Therapy – the end of conventional transplantation? *Shigeru Kinoshita.* Department of Frontier Medical Science and Technology for Ophthalmology, Kyoto Prefectural University of Medicine, Kyoto, Japan

Room 301AB

Wednesday, May 02, 2018 3:30 PM-5:15 PM

Immunology/Microbiology

468 Mechanisms and Therapy for Viral Infection**Moderators: Marlyn P. Langford and Robert L. Hendricks**

4931 — 3:30 Targeting Akt phosphorylation by a small molecule inhibitor generates an effective strategy to curb corneal herpes simplex virus type-1 infection. Deepak Shukla, D. Jaishankar. *Ophthal/Visual Sciences, University of Illinois at Chicago, Chicago, IL*

4932 — 3:45 Induction of the PD1/PD-L1 pathway by varicella-zoster virus inhibits CD4⁺ T cell function. Katherine Lee, D. Claypool, M. Levin. *Pediatrics, University of Colorado Denver AMC, Aurora, CO*

4933 — 4:00 Exhausted Senescent T-cells and Cytomegalovirus Anterior Uveitis. Jay J. Siak^{1,2}, S. Tan³, X. Lim¹, K. Woon¹, S. Waduthantri¹, S. Chee^{1,5}, A. Larbi³, N. Yawata^{1,4}. ¹Ocular Inflammation and Immunology, Singapore National Eye Centre, Singapore Eye Research Institute, Singapore, Singapore; ²Uveitis Clinic, Casey Eye Institute, Oregon Health & Science University, Portland, OR; ³Singapore Immunology Network (SIGN), Agency for Science, Technology and Research (A*STAR), Singapore, Singapore; ⁴Ophthalmology, School of Medicine, Kyushu University, Fukuoka, Kyushu, Japan; ⁵Ophthalmology & Visual Sciences Academic Clinical Program, Duke-NUS Medical School, Singapore, Singapore

4934 — 4:15 VEGF-A regulates sympathetic nerve innervation in murine herpes stromal keratitis (HSK). Hongmin Yun¹, R. L. Hendricks^{1,2}. ¹Ophthalmology, Eye and Ear institute, University of Pittsburgh, Pittsburgh, PA; ²Immunology, University of Pittsburgh, Pittsburgh, PA

4935 — 4:30 AMP-activated Kinase (AMPK) Promotes Innate immunity and Antiviral Defense against Zika Virus Induced Ocular Infection. Pawan Kumar Singh^{1,2}, S. Giri³, A. Kumar^{1,2}. ¹Kresge Eye Institute, Wayne State University School of Medicine, Detroit, MI; ²Anatomy and Cell Biology, Wayne State University School of Medicine, Detroit, MI; ³Department of Neurology, Henry Ford Health System, Detroit, MI

4936 — 4:45 The HSV-1 Δ NLS vaccine functionally preserves visual axis integrity following corneal HSV-1 challenge in mice. Derek J. Royer¹, D. M. Robertson², J. F. Hendrix¹, D. J. Carr^{1,3}. ¹Ophthalmology, University of Oklahoma Health Sciences Center, Oklahoma City, OK; ²Ophthalmology, University of Texas Southwestern Medical Center, Dallas, TX; ³Microbiology and Immunology, University of Oklahoma Health Sciences Center, Oklahoma City, OK *CR

Room 310

Wednesday, May 02, 2018 3:30 PM-5:15 PM

Visual Psychophysics/Physiological Optics

469 Refractive Error and Visual Function**Moderators: Andrew Carkeet and Christopher A. Clark**

4937 — 3:30 Retinal contour and peripheral optical quality interactions in isomyopia and anisomyopia. Carles Otero Molins¹, E. Kallamata¹, G. Velonias¹, J. Tabernero², F. A. Vera-Diaz¹. ¹Optometry, New England College of Optometry, Boston, MA; ²Vision and Eye Research Unit, Anglia Ruskin University, Cambridge, United Kingdom

4938 — 3:45 Image quality dynamics over the retina: can there be a link to myopia? Dmitry Romashchenko, P. Papadogiannis, P. Unsbo, L. Lundström. *Royal Institute of Technology, KTH, Stockholm, Sweden*

4939 — 4:00 Neural Adaptation to Brightness Perception in Patients Implanted with a Small Aperture Inlay. Pablo Artal, S. Manzanera. *Laboratorio de Optica, Universidad de Murcia, Murcia, Spain *CR*

4940 — 4:15 Blur adaptation response to continuous or alternating episodes of myopic and hyperopic defocus. Samaneh Delshad, M. J. Collins, S. A. Read, S. Vincent. *Optometry and Vision Science, Queensland University of Technology, Brisbane, Queensland, Australia*

4941 — 4:30 Orientation specific impairment in contrast sensitivity following long-term neural adaptation to optical blur in keratoconus. Janet Hrdina, A. Barbot, G. Yoon. *Optics, University of Rochester, Rochester, NY *CR*

4942 — 4:45 Eccentricity Effect in Shape Discrimination Hyperacuity Compensated by Scaling Factors Lower than the Cortical Magnification Factor. Anna B. Zolubak, L. Garcia-Suarez. *School of Health Professions, Plymouth University, Plymouth, Devon, United Kingdom*

4943 — 5:00 Accuracy in detecting vision changes with visual acuity and contrast sensitivity tests. Zhong-Lin Lu¹, Y. Zhao¹, L. A. Lesmes², M. Dorr⁴, P. J. Bex². ¹Psychology, The Ohio State University, Columbus, OH; ²Psychology, Northeastern University, Boston, MA; ³Adaptive Sensory Technology, Inc, San Diego, CA; ⁴Technical University of Munich, Munich, Germany *CR

Room 311

Wednesday, May 02, 2018 3:30 PM-5:15 PM

Retina

470 AMD Clinical Research**Moderators: Deeba Husain and Won Ki Lee**

4944 — 3:30 Peripheral Changes in Age-related Macular Degeneration Associated with Delayed Dark Adaptation. Deeba Husain, i. Iains, D. Park, D. Yavvas, I. Kim, J. W. Miller, J. B. Miller. *Retina Service/Ophthal, Massachusetts Eye and Ear Infirmary, Boston, MA *CR*

4945 — 3:45 Structure-function correlation of dark-adapted two color fundus-controlled perimetry and multimodal imaging in neovascular age-related macular degeneration. Leon von der Emde, M. Pfau, S. Thiele, R. Hassenrik, P. T. Möller, J. Nadal, M. Schmid, M. Fleckenstein, F. Holz, S. Schmitz-Välckenberg. *Universitäts-Augenklinik Bonn, Bonn, Germany *CR*

4946 — 4:00 Human Plasma Metabolomics in Age-related Macular Degeneration – Results of Two Distinct Cohorts. Ines Lains^{1,2}, R. S. Kelly³, J. B. Miller¹, J. Gil^{2,4}, M. Marques^{4,5}, R. Silverman¹, D. Vavvas¹, I. Kim¹, J. N. Murta^{2,4}, J. Lasky-Su³, R. M. Silva^{2,5}, J. W. Miller¹, D. Husain¹. ¹Massachusetts Eye and Ear, Boston, MA; ²Faculty of Medicine, University of Coimbra, Coimbra, Portugal; ³Systems Genetics and Genomics Unit, Channing Division of Network Medicine Brigham and Women's Hospital and Harvard Medical School, Boston, MA, United States, Boston, MA; ⁴Ophthalmology Department, Centro Hospitalar e Universitário de Coimbra, Coimbra, Coimbra, Portugal; ⁵Association for Innovation and Biomedical Research on Light and Image, Coimbra, Portugal *CR

4947 — 4:15 Development of Geographic Atrophy following Untreated Neovascular Age-related Macular Degeneration—Results from AREDS. Panos G. Christakis¹, E. Agron¹, M. L. Klein², J. Campbell², F. L. Ferris¹, E. Y. Chew¹. ¹National Eye Institute (NEI/NIH), Bethesda, MD; ²Ophthalmology, Casey Eye Institute, Portland, OR *CR, \times

4948 — 4:30 Lampalizumab for geographic atrophy (GA) in age-related macular degeneration (AMD): pooled results of the Chroma and Spectri phase 3 randomized clinical trials (RCTs).

Dante J. Pieramici¹, F. Holz², J. S. Heier³, S. R. Sadda^{4,10}, B. G. Busbee⁵, E. Y. Chew⁶, P. Mitchell⁷, A. Tufail⁸, C. Brittain¹¹, D. Ferrara¹¹, S. Gray¹¹, L. Honigberg¹¹, J. Martin¹¹, B. Tong¹¹, J. Ehrlich¹¹, N. M. Bressler⁹. ¹California Retina Consultants, Santa Barbara, CA; ²Department of Ophthalmology, University of Bonn, Bonn, Germany; ³Ophthalmic Consultants of Boston, Boston, MA; ⁴Ophthalmology, University of California - Los Angeles, Los Angeles, CA; ⁵Tennessee Retina, Nashville, TN; ⁶Division of Epidemiology and Clinical Applications, National Eye Institute, National Institutes of Health, Bethesda, MD; ⁷Department of Ophthalmology and Westmead Institute for Medical Research, University of Sydney, Sydney, New South Wales, Australia; ⁸Moorfields Eye Hospital, London, United Kingdom; ⁹Johns Hopkins University School of Medicine, Baltimore, MD; ¹⁰Doheny Eye Institute, Los Angeles, CA; ¹¹Genentech, Inc., a member of the Roche Group, South San Francisco, CA *CR, ✕

4949 — 4:45 2-Year Results of the PLANET Study: Intravitreal Afibercept Alone and With Rescue Photodynamic Therapy in Polypoidal Choroidal Vasculopathy.

Won Ki Lee¹, Y. Ogura², T. Iida³, S. Chen⁴, T. Wong⁵, P. Mitchell⁶, J. Qiu⁷, S. Leal⁸, T. Ishibashi⁹. ¹Department of Ophthalmology and Visual Science, Seoul St. Mary's Hospital, The Catholic University of Korea, Seoul, Korea (the Republic of); ²Department of Ophthalmology and Visual Science, Nagoya City University Graduate School of Medical Sciences, Nagoya, Japan; ³Department of Ophthalmology, Tokyo Women's Medical University, Tokyo, Japan; ⁴Department of Ophthalmology, Taipei Veterans General Hospital, Taipei, Taiwan; ⁵Singapore National Eye Centre, Singapore AND Duke-NUS, National University of Singapore, Singapore, Singapore; ⁶University of Sydney, Sydney, New South Wales, Australia; ⁷Bayer, Beijing, China; ⁸Bayer, Basel, Switzerland; ⁹Department of Ophthalmology, Kyushu University Hospital, Fukuoka, Japan *CR, ✕

4950 — 5:00 Clinical Study of Squalamine Lactate Ophthalmic Solution 0.2% in Combination with Ranibizumab Compared to Ranibizumab Monotherapy in Treatment Naive Neovascular Age-Related Macular Degeneration

Clinical Study of Squalamine Lactate Ophthalmic Solution 0.2% in Combination with Ranibizumab Compared to Ranibizumab Monotherapy in Treatment Naive Neovascular Age-Related Macular Degeneration. Michael J. Elman¹, D. M. Brown³, P. K. Kaiser¹, J. S. Slakter². ¹Elman Retina Group PA, Baltimore, MD; ²Ohr Pharmaceutical, Inc, New York, NY; ³Retina Consultants of Houston, Houston, TX; ⁴Cleveland Clinic, Cleveland, OH *CR, ✕

Room 312

Wednesday, May 02, 2018 3:30 PM-5:15 PM

Cornea

471 Dry Eye Non-clinical

Moderators: Darlene A. Dartt, Jennifer P. Craig and Sharmila Masli

4951 — 3:30 Once-a-day Cyclosporine-A-MiDROPS™ for treatment of dry eye disease.

Terry G. Coursey, D. Wassel, A. Quiambao, A. J. Dockins, D. G. Dillion, J. R. Johnson, L. M. Morris, M. L. Lambros, R. Farjo. Charlesson, LLC/ EyeCRO, LLC, Oklahoma City, OK *CR

4952 — 3:45 Positive effects of oral antibiotics administration to murine graft-versus-host disease.

Eisuke Shimizu¹, Y. Ogawa¹, J. He^{2,1}, S. Fukuda³, K. Tsubota¹. ¹Ophthalmology, Keio University, Shinjuku-ku, TOKYO, Japan; ²Ayer School of Ophthalmology, Central South University, Changsha, China; ³Institute for Advanced Biosciences, Keio University, Tsuruoka, Japan *CR, ✕

4953 — 4:00 IL-12 depletion Ameliorates Autoimmunity in the Germ-Free CD25KO Model of Sjögren Syndrome by Decreasing Generation of Th-1 cells.

Cintia S. De Paiva¹, M. Zaheer¹, Z. Yu¹, A. G. Swennes³, R. Britton², S. C. Pflugfelder¹. ¹Ophthalmology, Baylor College of Medicine, Houston, TX; ²Department of Molecular Virology and Microbiology, Baylor College of Medicine, Center for Metagenomics and Microbiome Research, Houston, TX; ³Department of Molecular Virology and Microbiology, Baylor College of Medicine, Center for Comparative Medicine, Houston, TX *CR

4954 — 4:15 Is hypoxia beneficial for the meibomian gland?

Yang Liu¹, X. CHEN^{1,2}, D. Chen^{1,3}, M. Hatton^{1,4}, W. Kam¹, D. A. Sullivan¹. ¹Schepens Eye Research Institute, Massachusetts Eye and Ear, Harvard Medical School, Boston, MA; ²Department of Ophthalmology, Zhongnan Hospital, Wuhan University, Wuhan, China; ³Department of Ophthalmology, Peking Union Medical College Hospital, Peking Union Medical College, Beijing, China; ⁴Ophthalmic Consultants of Boston, Boston, MA

4955 — 4:30 Tear-lipid films: decoding enigma of “water-evaporation barrier” by studying model-lipid films *in vitro*.

Tatyana F. Svitova, M. C. Lin. Optometry School, University of California, Berkeley, Berkeley, CA

4956 — 4:45 Labial salivary gland transplantation for severe dry eye in a rhesus monkey model.

Yi Qin, Z. Pan. Beijing Tongren Eye Center, Beijing, China

4957 — 5:00 Neurokinin-1 Receptor Antagonism Ameliorates Dry Eye Disease by Inhibiting Antigen-presenting cell Maturation and Th17 cell Activation.

Man Yu^{1,2}, Y. Chen¹, S. Lee¹, T. Nakao¹, R. Dana¹. ¹Ophthalmology, Schepens Eye Research Institute/Massachusetts Eye and Ear Infirmary, Harvard Medical School, Boston, MA; ²Ophthalmology, Sichuan Academy of Medical Sciences & Sichuan Provincial People's Hospital, Chengdu, Sichuan, China

Room 313A

Wednesday, May 02, 2018 3:30 PM-5:15 PM

Anatomy and Pathology/Oncology

472 Basic Innovations in Oncology

Moderators: Geeta K. Vemuganti, Shahar Frenkel and Dong Hyun Jo

4958 — 3:30 Identification of novel targeted therapies for BAP1 mutated tumors.

Mohamed H. Abdel-Rahman^{2,1}, L. Shahriyar³, J. B. Massengill¹, K. Kendra⁴, T. Olencki⁴, F. H. Davidorf¹, C. M. Cebulla¹. ¹Ophthalmology and Visual Science, The Ohio State University, Columbus, OH; ²Division of Human Genetics, The Ohio State University, Columbus, OH; ³Mathematical Biosciences Institute, The Ohio State University, Columbus, OH; ⁴Medical Oncology, James Comprehensive Cancer Center, The Ohio State University, Columbus, OH

4959 — 3:45 Combined inhibition of SDHA and MIF in Uveal Melanoma cells effectively reduces cell survival.

Chandrani Chattopadhyay, J. Roszik, E. Grimm. Melanoma Medical Oncology, UT MD Anderson Cancer Ctr, Houston, TX

4960 — 4:00 The role of MYB and NOTCH in the oncogenesis of adenoid cystic carcinoma of the lacrimal gland.

Wensi Tao, C. Choi, R. Doddapaneni, D. T. Tse, D. Pelaez. ophthalmology, Bascom Palmer Eye Institute, University of Miami, Miami, FL

4961 — 4:15 pRB Loss Induces Human Cone Precursor Proliferation and Inward Migration in Intact Cultured Retina.

Hardeep P. Singh^{1,2}, D. Koos^{2,4}, E. Fernandez², M. E. Thornton⁷, B. H. Grubbs⁷, R. Moats^{4,5}, S. Fraser^{5,6}, D. Cobrinik^{1,3}. ¹Department of Surgery, The Vision Center, Children's Hospital Los Angeles, Los Angeles, CA; ²The Saban Research Institute, Children's Hospital Los Angeles, Los Angeles, CA; ³Department of Ophthalmology, USC Roski Eye Institute, Keck School of Medicine of the University of Southern California, Los Angeles, CA; ⁴Department of Radiology, Children's Hospital Los Angeles, Los Angeles, CA; ⁵Department of Biomedical Engineering, Viterbi School of Engineering, University of Southern California, Los Angeles, CA; ⁶Translational Imaging Center, University of Southern California, Los Angeles, CA; ⁷Department of Obstetrics and Gynecology, Keck School of Medicine, University of Southern California, Los Angeles, CA

4962 — 4:30 Retinoblastoma regulates cellular energetics through Hexokinase1 dependent AMPK α activation. Arkasubhra Ghosh¹, V. Suresh Babu¹, R. Lim², L. Winer², D. SA³, A. Mallipatna⁴, S. S. Chaurasia², N. Guha³. ¹GROW Research Laboratory, Narayana Nethralaya Foundation, Bangalore, India; ²University of Missouri - Columbia, Columbia, MO; ³Agilent Technologies, Lexington, MA; ⁴Narayana Nethralaya, Bangalore, India

4963 — 4:45 Novel PLGA Nanoparticles Encapsulating Melphalan for the Treatment of Retinoblastomas. Lee Sims¹, A. Ramasubramanian², J. M. Steinbach-Rankins¹. ¹Bioengineering, University of Louisville, Louisville, KY; ²Ophthalmology and Visual Sciences, University of Louisville, Louisville, KY

Room 315

Wednesday, May 02, 2018 3:30 PM-5:15 PM

Retinal Cell Biology

473 Signaling in retinal degeneration

Moderators: Steven F. Abcouwer and Isabelle S. Audo

4964 — 3:30 Retinal Detachment Triggers an Innate Immune Response in the Retina. Bing X. Ross, J. Yao, S. Shanmugam, S. F. Abcouwer, D. N. Zacks. *Ophthalmology and Visual Science, Kellogg Eye Center, University of Michigan, Ann Arbor, MI*

4965 — 3:45 Suppressing thyroid hormone signaling reduces cellular necroptosis and oxidative stress in retinas of LCA model Rpe65-deficient mice. Xi-Qin Ding, F. Yang, H. Ma. *Cell Biology, Univ Oklahoma Hlth Sciences Ctr, Oklahoma City, OK*

4966 — 4:00 cGMP/PKG Signaling Regulation of Endoplasmic Reticulum Calcium Channels in Cyclic Nucleotide-gated Channel-deficient Cones. Fan Yang¹, H. Ma¹, M. Butler¹, W. Baehr², M. Biel³, S. Michalak³, X. Ding¹. ¹Cell Biology, University of Oklahoma Health Sciences Center, Oklahoma City, OK; ²John A. Moran Eye Center, University of Utah, Salt Lake City, UT; ³Center for Integrated Protein Science Munich (CIPSM) and Department of Pharmacy - Center for Drug Research, Ludwig-Maximilians-Universität München, Munich, Germany

4967 — 4:15 Modulation of GLUT1 expression in the RPE impacts outer segment renewal and results in photoreceptor degeneration. Aditi Swarup⁵, I. S. Samuels^{1,2}, J. Soto^{3,4}, E. Abel^{3,4}, N. Peachey^{1,2}, N. J. Philp⁵. ¹Louis Stokes Cleveland VA Medical Center, Cleveland, OH; ²Cole Eye Institute, Cleveland Clinic, Cleveland, OH; ³Fraternal Order of Eagles Diabetes Research Center, University of Iowa, Iowa City, IA; ⁴Division of Endocrinology & Metabolism, Carver College of Medicine, University of Iowa, Iowa City, IA; ⁵Department of Pathology, Anatomy and Cell Biology, Thomas Jefferson University, Philadelphia, PA

4968 — 4:30 Loss of *ush2a* causes rhodopsin mislocalisation and adult onset photoreceptor degeneration in a zebrafish model of Usher syndrome. Maria Toms¹, M. Hayes¹, A. Webster^{1,2}, M. Moosajee^{1,2}. ¹UCL Institute of Ophthalmology, London, United Kingdom; ²Moorfields Eye Hospital NHS Foundation Trust, London, United Kingdom

4969 — 4:45 Restoring miRNAs of the miR-183/96/182 cluster results in target gene regulation and ameliorates symptoms of retinal degeneration in a mouse model of retinitis pigmentosa. melanie Hermeck, A. Seto, K. Hutnik, A. Jackson. R&D, miRagen Therapeutics Inc, Boulder, CO *CR

4970 — 5:00 Ablation of CRB2 in Rod Photoreceptors with Concomitant Loss of CRB1 in Müller Glial Cells Mimics Retinitis Pigmentosa. Celso H. Alves, J. Wijnholds. *Ophthalmology, Leiden University Medical Center, Leiden, Netherlands*

Room 316C

Wednesday, May 02, 2018 3:30 PM-5:15 PM

Lens

474 Accommodation and cataractogenesis

Moderators: Juliet A. Moncaster and Mitchell G. Nye-Wood

4971 — 3:30 Function of Thioltransferase in Ultraviolet Radiation-induced Cataract in Thioltransferase Knockout Mice. Jie Zhang¹, X. Ning¹, C. Guo¹, H. Yan^{1,2}. ¹Department of Ophthalmology, Tangdu Hospital, Xi'an, China; ²The First Affiliated Hospital of Chongqing Medical University, Chongqing, China

4972 — 3:45 Screening of FDA approved drugs for their ability to inhibit or worsen hydrogen peroxide mediated aggregation of calf lens crystallins. Vincent M. Monnier¹, S. Wong², H. Zhou², X. Fan². ¹Pathology & Biochemistry, Case Western Reserve Univ, Shaker Heights, OH; ²Pathology, Case Western Reserve University, Cleveland, OH

4973 — 4:00 Nerve Growth Factor Attenuates Cataract Formation in the Diabetic Lens. Jin Hyoung Park^{1,2}, S. Kang², J. SHIN², J. Sunwoo², E. Kim², J. Kim^{3,2}, H. Tchah^{3,2}. ¹Ophthalmology, Miso Eye Clinic, Seongnam-siGyeonggi-do, Korea (the Republic of); ²Research Institute for Biomacromolecules, University of Ulsan College of Medicine, Asan Medical Center, Seoul, Korea (the Republic of); ³Ophthalmology, University of Ulsan College of Medicine, Asan Medical Center, Seoul, Korea (the Republic of) *CR

4974 — 4:15 Lens stiffness and homeostasis in connexin mutant mice. Xiaohua Gong^{1,2}, W. Stopka², N. Tjahjono¹, C. Xia¹. ¹Vision Sci School of Optometry, University of California, Berkeley, Berkeley, CA; ²UC Berkeley/UCSF Graduate Program in Bioengineering, Berkeley, CA

4975 — 4:30 Physiological optics of the accommodating lens: a clinical observational study using MRI. Mitchell G. Nye-Wood^{1,3}, A. L. Lie^{1,3}, P. J. Donaldson^{2,3}, E. Vaghefi^{1,3}. ¹Optometry and Vision Science, University of Auckland, Auckland, Auckland, New Zealand; ²Department of Physiology, School of Medical Sciences, University of Auckland, Auckland, New Zealand; ³New Zealand National Eye Centre, University of Auckland, Auckland, New Zealand

4976 — 4:45 Evaluation of fractional anisotropy in differently aged human lenses measured by UHF-MRI at 7 Tesla. Thomas Stahnke¹, R. F. Guthoff¹, O. Stachs¹, A. Wree², N. Grabow³, S. Polei⁴, T. Lindner⁴. ¹Department of Ophthalmology, Rostock University Medical Center, Rostock, Germany; ²Institute of Anatomy, Rostock University Medical Center, Rostock, Germany; ³Institute of Biomedical Engineering, Rostock University Medical Center, Rostock, Germany; ⁴Core Facility Multimodal Small Animal Imaging, Rostock University Medical Center, Rostock, Germany

Room 320

Wednesday, May 02, 2018 3:30 PM-5:15 PM

Biochemistry/Molecular Biology

475 Biochemistry and Molecular Biology of the Retina

Moderators: Jonathan H. Lin, Alexander M. Dizhoor and Vsevolod V. Gurevich

4977 — 3:30 R-SNARE VAMP7 in rhodopsin trafficking and phototransduction membrane renewal. Dusanka Deretic¹, B. Tam², O. L. Moritz², V. Kandachar¹. ¹Surgery, Univ of New Mexico Sch of Med, Albuquerque, NM; ²Ophthalmology, University of British Columbia, Vancouver, British Columbia, Canada

4978 — 3:45 Role of Short-Term Light Adaptation Enabling Clearance of Retinaldehydes in Modulating Retinal Susceptibility to Light-Induced Injury. Malgorzata B. Rozanowska¹, M. Golczak², A. Maeda³, K. Palczewski². ¹School of Optometry and Vision Sciences, Cardiff University, Cardiff, United Kingdom; ²Pharmacology, Case Western Reserve University, Cleveland, OH; ³Ophthalmology and Vision Sciences, Case Western Reserve University, Cleveland, OH

4979 — 4:00 Delivery and deployment of a ciliary actin dynamics module by PCARE drives the neogenesis of phototransductive membrane disks. Rob W. Collin¹, J. Corral Serrano¹, J. van Reeuwijk¹, A. D. Hoogendoorn¹, R. A. Ruigrok¹, A. Yildirim², S. J. Letteboer¹, L. Duijkers¹, S. Sakami³, K. Palczewski³, K. Boldt⁴, U. Wolftrum², M. Ueffing⁴, A. Garanto¹, R. Roepman¹. ¹Human Genetics, Radboud University Medical Centre, Nijmegen, Netherlands; ²Johannes Gutenberg University of Mainz, Mainz, Germany; ³Case Western Reserve University, Cleveland, OH; ⁴University of Tuebingen, Tuebingen, Germany

4980 — 4:15 Archaeal Protein-Unfolding ATPase Counteracts Protein-Misfolding Retinopathy in Mice. Celine Brooks¹, A. Snoberger², M. Belcastro¹, O. Kisselev³, D. Smith², M. Sokolov^{1,2}. ¹Ophthalmology, West Virginia University, Morgantown, WV; ²Biochemistry, West Virginia University, Morgantown, WV; ³Ophthalmology, Saint Louis University, St. Louis, MO

4981 — 4:30 Identification of small molecule compounds that alleviate retinal ciliopathy phenotype. Yong Joon Kim, J. Kim. Graduate School of Medical Science and Engineering, Kaist, Daejeon, Korea (the Republic of)

4982 — 4:45 Novel ex and in vivo methods for non-invasive longitudinal tracking of RPE dysmorphology following subretinal injections. Kevin J. Donaldson¹, H. M. Skelton², J. T. Sellers¹, H. Grossniklaus¹, J. M. Nickerson¹. ¹Ophthalmology, Emory University, Atlanta, GA; ²Morehouse School of Medicine, Atlanta, GA

4983 — 5:00 Genome-wide association study underlines the role of the complement system in chronic central serous chorioretinopathy. Rosa Schellevis¹, E. H. Van Dijk², M. Breukink¹, L. Altay³, B. Bakker¹, B. Koeleman⁴, L. Kiemeneys⁵, D. Swinkels⁶, J. Keunen¹, S. Fauser³, C. C. Hoyng¹, A. I. Den Hollander¹, C. Boon², E. de Jong¹. ¹Ophthalmology, Radboudumc, Nijmegen, Netherlands; ²Ophthalmology, Leiden University Medical Center, Leiden, Netherlands; ³Ophthalmology, University Hospital of Cologne, Cologne, Germany; ⁴Genetics, University Medical Center Utrecht, Utrecht, Netherlands; ⁵Radboud Institute for Health Sciences, Radboudumc, Nijmegen, Netherlands; ⁶Translational Metabolic Laboratory, Radboudumc, Nijmegen, Netherlands

Ballroom A

Wednesday, May 02, 2018 3:30 PM-5:15 PM

Glaucoma

476 Structure-Function Relationships

Moderators: Toru Nakazawa and Donald C. Hood

4984 — 3:30 Impact of Beta-Zone Parapapillary Atrophy (PPA) on Optical Coherence Tomography Angiography (OCT-A) Measurement of Parapapillary Retinal Nerve Fiber Layer Vessel Density (RNFL-VD) for Evaluation of Glaucoma. Kelvin H. Wan, A. Lam, C. K. Leung. Department of Ophthalmology & Visual Sciences, Chinese University of Hong Kong, Hong Kong, Hong Kong *CR

4985 — 3:45 A Structural and Functional Machine Learning Classifier Improves Prediction of Patient-Reported Disability in Glaucoma. Susan Wakil, A. A. Jammal, N. Ogata, F. Medeiros. Department of Ophthalmology, Duke University, Durham, NC *CR

4986 — 4:00 Comparison of Rates of Progression of Macular OCT Parameters in Glaucoma. Kouros Nouri-Mahdavi, N. Fatehi, S. Henry, E. Morales, A. L. Coleman, S. Law, J. Caprioli. Ophthalmology, Jules Stein Eye Institute, Los Angeles, CA *CR

4987 — 4:15 Combining Structural (Visual Field) and Functional (OCT) Information to Confirm Early Glaucoma: A Topographical Method is Better Than Metrics. Donald C. Hood^{1,2}, E. Kim², A. Sun², D. Blumberg¹, J. M. Liebmann¹, R. Ritch³, C. De Moraes¹. ¹Ophthalmology, Columbia University, New York, NY; ²Psychology, Columbia University, New York, NY; ³The New York Eye and Ear Infirmary of Mount Sinai, New York, NY *CR

4988 — 4:30 Factors Predicting a Greater Likelihood of Poor Visual Field Reliability in Glaucoma Patients and Suspects. Inas F. Aboobakar¹, J. Wang¹, J. Yohanna¹, B. C. Chauhan², M. V. Boland¹, D. S. Friedman¹, P. Y. Ramulu¹. ¹Wilmer Eye Institute, Culver City, CA; ²Ophthalmology, Dalhousie University, Halifax, Nova Scotia, Canada

4989 — 4:45 Pediatric Eversional Angle Closure with Headache; A Very Treatable Progressive Glaucoma. William E. Sponsel¹, K. Crosnoe². ¹Glaucoma/Vision Sciences/Biomedical Engineering, WESMDPA/UIW/UTSA, San Antonio, TX; ²Glaucoma Service, WESMDPA, San Antonio, TX

4990 — 5:00 Improving perimetric examination of the macular visual field using structural information. Giovanni Montesano^{1,2}, A. Modarelli¹, L. M. Rossetti¹, D. P. Crabb². ¹Eye Clinic, University of Milan, London, England, United Kingdom; ²Optometry and Visual Sciences, City, University of London, London, United Kingdom *CR

Ballrooms BC

Wednesday, May 02, 2018 3:30 PM-5:15 PM

Retina

477 Clinical Posterior Segment Imaging

Moderators: Lejla Vajzovic and Joseph Carroll

4991 — 3:30 Spatial distribution of preserved autofluorescence in patients with choroideremia. Amir H. Hariri¹, A. Girach², M. S. Ip¹, B. L. Lam³, M. Fischer⁴, E. K. Sankila⁵, M. E. Pennesi⁶, F. G. Holz⁷, D. G. Birch⁸, R. E. MacLaren⁹, I. M. MacDonald¹⁰, C. C. Hoyng¹¹, G. Black¹², N. M. Bressler¹³, S. H. Tsang¹⁴, S. R. Sadda¹. ¹Doheny Eye Inst/UCLA, North Hollywood, CA; ²NightStax, London, United Kingdom; ³Bascom Palmer Eye Institute, Miami, FL; ⁴University of Tubingen, Tubingen, Germany; ⁵Helsinki University Eye Hospital, Helsinki, Finland; ⁶Casey Eye Institute - OHSU, Astoria, OR; ⁷University of Bonn, Bonn, Germany; ⁸Retina Foundation of the Southwest, Dallas, TX; ⁹Nuffield Lab of Ophthalmology, London, United Kingdom; ¹⁰Royal Alexandra Hospital, Edmonton, Alberta, Canada; ¹¹Nijmegen Univ Medical Center, Nijmegen, Netherlands; ¹²Manchester Centre for Genomic Medicine, Manchester, United Kingdom; ¹³Wilmer Eye Institute, Baltimore, MD; ¹⁴Columbia Univ-Harkness Eye Inst, New York, NY *CR

4992 — 3:45 Interocturnal symmetry of foveal cone topography in achromatopsia (ACHM). Katie M. Litts¹, C. S. Langlois^{1,2}, E. J. Patterson¹, R. Mastey¹, J. A. Cava¹, P. May¹, B. L. Lam³, G. A. Fishman⁴, M. E. Pennesi⁵, C. N. Kay⁶, A. Dubra⁷, W. W. Hauswirth⁸, K. N. Beasley⁹, J. D. Chulay⁹, J. Carroll^{1,2}. ¹Ophthalmology & Visual Sciences, Medical College of Wisconsin, Milwaukee, WI; ²Cell Biology, Neurobiology and Anatomy, Medical College of Wisconsin, Milwaukee, WI; ³Bascom Palmer Eye Institute, University of Miami, Miami, FL; ⁴Pangere Center for Inherited Retinal Disease, The Chicago Lighthouse, Chicago, IL; ⁵Casey Eye Institute, Oregon Health & Science University, Portland, OR; ⁶Vitreoretinal Associates, Gainesville, FL; ⁷Byers Eye Institute, Stanford University, Palo Alto, CA; ⁸Ophthalmology, University of Florida, Gainesville, FL; ⁹Applied Genetic Technologies Corporation, Alachua, FL *CR

4993 — 4:00 OCT and histopathological analysis of the tractional abnormalities of the central foveal bouquet associated with epiretinal membrane formation. David Sarraf^{1,2}, A. Govetto¹, K. Bhavsar³, K. Freund⁴, C. A. Curcio⁵, C. F. Burgoyne⁶, J. Hubschman¹, G. Virgili⁷. ¹Ophthalmology, Stein Eye Institute UCLA, Los Angeles, CA; ²Surgery, Greater Los Angeles VA Healthcare Center, Los Angeles, CA; ³Casey Eye Institute, Portland, OR; ⁴VRNY, New York, NY; ⁵University of Alabama at Birmingham, Birmingham, AL; ⁶Devers Eye Institute, Portland, OR; ⁷Careggi University Hospital, Florence, Italy *CR

4994 — 4:15 Age-matched Database of a Novel OCT Angiography (OCTA) Parafoveal Capillary Density Deviation Mapping Technique and its Clinical Application on Retinal Vasculopathy. Jorge S. Andrade Romo¹, R. E. Linderman², J. Carroll^{2,3}, R. B. Rosen^{1,4}, T. Y. Chui^{1,4}. ¹Ophthalmology, New York Eye and Ear Infirmary of Mount Sinai, New York, NY; ²Cell Biology, Neurobiology & Anatomy, Medical College of Wisconsin, Milwaukee, WI; ³Ophthalmology & Visual Sciences, Medical College of Wisconsin, Milwaukee, WI; ⁴Icahn School of Medicine at Mount Sinai, New York, NY *CR

4995 — 4:30 Sublingual/Transmucosal Fluorescein Angiography. Alec L. Amram¹, F. Makkouk², S. T. Pace³, C. Kellogg¹, A. Elkeeb⁴. ¹Ophthalmology, UTMB, Galveston, TX; ²Yale University, New Haven, CT; ³Wake Forest University, Winston-Salem, NC; ⁴University of Missouri, Columbia, MO

4996 — 4:45 Foveal vascular development in pediatric eyes assessed using optical coherence tomography angiography. S. Tammy Hsu, H. Ngo, R. House, J. Tian, A. Finn, N. Cheung, M. P. Kelly, S. Freedman, C. A. Toth, L. Vajzovic. Ophthalmology, Duke University School of Medicine, Durham, NC *CR

4997 — 5:00 Spectral-domain optical coherence tomography findings in Coats' disease. Sally S. Ong¹, L. Vajzovic¹, S. Stinnett¹, P. Mruthyunjaya², C. A. Toth¹. ¹Ophthalmology, Duke Univ School of Med, Durham, NC; ²Ophthalmology, Stanford University, Palo Alto, CA *CR

Exhibit Hall A0069-A0082

Wednesday, May 02, 2018 3:30 PM-5:15 PM

Retina

478 Retina/RPE transplantation (clinical)

Moderator: Michiko Mandai

4998 — A0069 Detection of complement activators in immune attack eyes after iPS-derived retinal pigment epithelial cell transplantation. Sunao Sugita, K. Makabe, S. Fujii, M. Takahashi. Laboratory for Retinal Regeneration, Center for Developmental Biology, Riken, Kobe, Japan

4999 — A0070 Retinchoroidal Blood Flow is Demonstrated in an Orthotopic Vascularized Whole Eye Transplant Model. Maxine R. Miller^{1,2}, J. Noori^{4,2}, T. Banaee^{1,2}, Y. Wang¹, C. Komatsu¹, B. Li^{1,3}, W. Chen¹, K. L. Lathrop², J. Barnett¹, J. S. Schuman^{6,7}, W. Zhang¹, M. G. Solar¹, J. Sahel^{2,5}, A. W. Eller², K. M. Washington^{1,2}. ¹Plastic Surgery, University of Pittsburgh School of Medicine, Pittsburgh, PA; ²Ophthalmology, University of Pittsburgh School of Medicine, Pittsburgh, PA; ³Plastic Surgery, First Hospital of Jilin University, Changchun, Jilin, China; ⁴Ophthalmology, University of Miami Miller School of Medicine, Miami, FL; ⁵Ophthalmology, Institut de la Vision, Sorbonne Universités, UPMC Univ Paris 06, INSERM, CNRS; CHNO des Quinze-Vingts; Fondation Ophtalmologique Rothschild, Paris, France; ⁶Ophthalmology, New York University School of Medicine, New York, NY; ⁷Engineering, New York University Tandon School of Engineering, New York, NY *CR

5000 — A0071 Long-term survival and integration of the retina/RPE allograft in rat models of retinal degeneration. Henri Lorach¹, S. Kang^{2,4}, A. Trouillet³, R. Dalal², D. V. Palanker^{1,2}. ¹Hensen Experimental Physics Lab, Stanford University, Stanford, CA; ²Ophthalmology, Stanford University, Stanford, CA; ³Otolaryngology, Stanford University, Stanford, CA; ⁴Ophthalmology and Visual Science, Catholic University of Korea, College of Medicine, Seoul, Korea (the Republic of)

5001 — A0072 Patch Grafting Adult Human Bruch's Membrane Explants To Repair Focal Defects In The Host Bruch's Membrane (BM): An Initial Step Of Tissue Engineering For Age-Related Macular Degeneration . Tongalp H. Tezel¹, Q. Zeng¹, A. Hondur^{1,2}, Y. Li¹, S. H. Tsang^{1,3}, S. Chang¹. ¹Ophthalmology, Columbia University, New York, NY; ²Ophthalmology, Gazi University, Ankara, Turkey; ³Pathology and Cell Biology, Columbia University, New York, NY

5002 — A0073 Observation of the transplanted autologous induced pluripotent stem cell-derived retinal pigment epithelial cell sheet using polarization-sensitive optical coherence tomography. Mitsuhiro Matsuzaki^{1,2}, S. Takagi^{1,2}, M. Mandai^{1,3}, S. Sugiyama⁴, M. Yamanari⁴, K. Totani⁴, N. Miyamoto^{1,2}, Y. Hirami^{1,2}, S. Oshima⁴, M. Takahashi^{1,3}, Y. Kurimoto^{1,2}. ¹Department of Ophthalmology, Kobe City Eye Hospital, Kobe-city, Hyogo, Japan; ²Department of Ophthalmology, Kobe City Medical Center General Hospital, Kobe-city, Japan; ³Laboratory for Retinal Degeneration, Riken Center for Developmental Biology, Kobe-city, Japan; ⁴Tomey Corporation, Nagoya-city, Japan *CR, ✗

5003 — A0074 Engineering pectin-polyhydroxybutyrate nanofibers as scaffolds for retinal pigment epithelial cell-based therapeutics. Bhav H. Parikh¹, S. Chan², D. Kai², X. Su^{1,3}, X. Loh^{2,4}, Z. Liu¹. ¹Ophthalmology, National University of Singapore, Singapore, Singapore; ²Institute of Materials Research and Engineering, Singapore, Singapore; ³Institute of Molecular and Cell Biology, Singapore, Singapore; ⁴Materials Science and Engineering, National University of Singapore, Singapore, Singapore

5004 — A0075 Human Embryonic Stem Cell-Derived Retinal Pigment Epithelial Transplantation for Retinal Degenerations: Three-Year Outcomes Data. Steven D. Schwartz¹, C. Regillo², B. L. Lam³, D. Elliott⁴, N. Gregori², J. Hubschman¹, G. Heilweil³, M. Spinn², J. Maguire², R. Ostrick¹, L. Del Priore⁶, E. Anglade⁷, R. Lanza⁷. ¹Ophthalmology, Stein Eye Institute, UCLA, Los Angeles, CA; ²Wills Eye Hospital, Philadelphia, PA; ³Bascom Palmer Eye Institute, Palm Beach Gardens, FL; ⁴Mass Eye and Ear, Boston, MA; ⁵Doheny Eye Institute, Arcadia, CA; ⁶Ophthalmology, Yale University School of Medicine, New Haven, CT; ⁷Astellas Institute for Regenerative Medicine, Marlborough, MA *CR, ✗

5005 — A0076 Identifying distinctive cell surface markers on hESC-RPE for the objective evaluation of xeno-free and defined differentiation protocols. Alvaro Plaza Reyes¹, S. Petrus-Reurer², S. Padrel Sánchez¹, I. Douagi³, A. P. Kvant², F. Lanner¹. ¹Department of Clinical Science, Intervention and Technology, Division for Obstetrics and Gynaecology, Karolinska Institutet, Huddinge, Stockholm, Sweden; ²Department of Clinical Neuroscience, Division for Eye and Vision, Karolinska Institutet, Stockholm, Sweden; ³Department of Medicine, Center for Hematology and Regenerative Medicine, Karolinska Institutet, Stockholm, Sweden

5006 — A0077 Computational modelling as a tool to accelerate designs of spray systems for cell-based therapies to treat retinal diseases. Miriam Nweze^{1,3}, T. Baker¹, A. Limb², R. J. Shipley¹. ¹Mechanical Engineering, UCL, Greater London, London, United Kingdom; ²Institute of Ophthalmology, UCL, London, United Kingdom; ³Institute of Healthcare Engineering, UCL, London, United Kingdom

5007 — A0078 Preclinical safety studies of hESC-derived RPE cells including tumorigenicity, biodistribution and genomic stability: a step towards treatment of Age-related Macular Degeneration. Sara Padrell Sánchez¹, S. Petrus-Reurer¹, P. Kumar¹, A. Plaza Reyes¹, A. P. Kvant², F. Lanner¹. ¹Karolinska Institutet, Stockholm, Sweden; ²S:t Eriks Ögonsjukhus, Stockholm, Sweden

5008 — A0079 Preclinical validation of a tissue engineered product consisting in RPE derived from human embryonic stem cells disposed on human amniotic membrane in non-human primates. Christelle Monville¹, K. Ben M'Barek^{1,2}, S. Bertin^{3,4}, E. Brazhnikova^{3,4}, H. Walter^{1,2}, a. Plancheron^{1,2}, C. Nouvel-Jaillard^{3,4}, C. Fovet⁵, M. Jarraya⁷, A. Chartois⁶, N. Morand⁸, C. Marechal⁸, J. A. Sahel^{3,4}, m. Peshanski^{1,2}, O. Goureau^{3,4}. ¹INSERM/UEVE UMR 861-ISTEM, AFM, Corbeil-Essonnes, France; ²CECS/ISTEM, Corbeil-Essonnes, France; ³Institut de la Vision, Paris, France; ⁴INSERM U968, Sorbonne Universités, UPMC Univ Paris 06, UMR_S 968; CNRS, UMR_7210, Paris, France; ⁵MirCen, CEA, Fontenay aux Roses, France; ⁶EFS-ABG, Nantes, France; ⁷Hopital Saint-Louis, APHP, Paris, France; ⁸Medical Device Engineering, Clermont-Ferrand, France *CR

5009 — A0080 Estimation of visual acuity of the mouse retina *in vitro* using multi-electrode array recording. Darwin Babino¹, T. Benster², L. Bencivengo¹, R. Van Gelder¹. ¹Ophthalmology, University of Washington School of Medicine, Seattle, WA; ²Stanford University, Stanford, CA

5010 — A0081 MSC-Exo as adjuvant potentiate vision preservation following subretinal injection of neural progenitor cells. Shaomei Wang, B. Lu, S. Girman, c. Zhang, M. Jones, Z. Chen, B. Bakondi. Regenerative Medicine Institute, Cedars-Sinai Medical Center, Los Angeles, CA

5011 — A0082 Effects of Fibrin Glue as a Three Dimensional Scaffold on Cultivated Adult Human Retinal Pigment Epithelial Cells. Mozghan Rezaeikanavi¹, S. Balagholi², S. Alizadeh². ¹Ocular Tissue Engineering Research Center, Shahid Beheshti University of Medical Sciences, Tehran, Iran (the Islamic Republic of); ²Department of Hematology, School of Allied Medicine, Tehran University of Medical Sciences, Tehran, Iran (the Islamic Republic of)

Exhibit Hall A0208-A0230

Wednesday, May 02, 2018 3:30 PM-5:15 PM

Visual Neuroscience

479 Human electrophysiology

Moderator: Michael Bach

5012 — A0208 Effect of Chloroquine (Resochin®) and Hydroxychloroquine (Quensyl®) on the ERG b-Wave Amplitude From the Isolated Superfused Vertebrate Retina. Serge Sjapic^{1,2}, A. Goebel¹, P. Walter¹. ¹RWTH Aachen University, Aachen, Germany; ²Institute of Neurophysiology, University of Cologne, Cologne, Germany

5013 — A0209 Quantitative Calibration of Sensor Strip ERG Electrodes. Cyrus Golshani, S. E. Brodie. Ophthalmology, Icahn School of Medicine at Mount Sinai, New York, NY *CR

5014 — A0210 Photopic negative response (PhNR) of broadband and monochromatic stimuli in diabetic patients with different stages of diabetic retinopathy. Parveen Sen^{1,2}, A. Banerjee², R. Sachidanandan³, A. Joe³. ¹Vitreoretina, Sankara Nethralaya, Chennai, India; ²Electrophysiology, Sankara Nethralaya, Chennai, Tamil Nadu, India; ³Department of Optometry, Sankara Nethralaya, Chennai, Tamil Nadu, India

5015 — A0211 Qualitative ERG diagnosis using SensorStrip adhesive skin electrodes. Palak Majmudar, S. E. Brodie. Ophthalmology, Icahn School of Medicine at Mount Sinai, New York, NY

5016 — A0212 Full-field ERG i-wave parameters in patients with retinal degenerations. David Drucker, G. Ortiz, C. Hyde, J. Staffetti, R. T. Tzekov. Department of Ophthalmology, University of South Florida, Tampa, FL

5017 — A0213 Comparison of the uniform field and pattern ERG in humans. Stuart G. Coupland^{1,2}, L. Kuntungane^{1,2}, R. Karanjia^{1,2}, J. Brownstein^{1,2}. ¹Ophthalmology, Univ of Ottawa Eye Institute, Ottawa, Ontario, Canada; ²Ottawa Hospital Research Institute, Ottawa, Ontario, Canada *CR

5018 — A0214 Clinical Utility of Visual Evoked Potential in Children with Non-Syndromic Craniosynostosis in a Hospital Setting. Simone L. Li, R. W. Hertle, T. Núñez-Villaveirán, W. Lawhon, N. Hanna, N. Patel, A. Murthy, T. Chen. Akron Children's Hospital, Akron, OH

5019 — A0215 Advanced understanding of face processing through ERP component analysis of electrical brain responses in low vision conditions. Yingxin Jia, C. W. Tyler. Smith-Kettlewell Eye Research Institute, San Francisco, CA

5020 — A0216 Retinal Prion Protein Deposition in Sporadic Creutzfeldt-Jakob Disease: A Retrospective Study of 14 Cases. Vanessa Goodwill¹, J. H. Lin^{1,2}, C. Sigurdson¹, H. Sanchez³, M. Geschwind³. ¹Pathology, University of California San Diego, San Diego, CA; ²Shiley Eye Institute, University of California San Diego, San Diego, CA; ³University of California San Francisco, San Francisco, CA

5021 — A0217 Reductions in primary visual cortex volume in patients receiving long-term treatment for neovascular age-related macular degeneration. Rachel Woodall^{1,2}, R. Gale^{3,4}, A. Gouws², M. Scott^{1,2}, E. Silson¹, K. Bell¹, M. Wells¹, A. Wright¹, S. Waterson¹, F. Akhtar¹, H. Baseler^{1,5}, A. Morland^{1,2}. ¹Department of Psychology, University of York, York, United Kingdom; ²York Neuroimaging Centre, York, United Kingdom; ³Academic Unit of Ophthalmology, York Teaching Hospital NHS Foundation Trust, York, United Kingdom; ⁴Department of Health Sciences, University of York, York, United Kingdom; ⁵Hull York Medical School, University of York, York, United Kingdom *CR

5022 — A0218 Evaluation of scotopic and photopic function using a mydriasis-free, portable system for recording electroretinograms. Henry Liu^{2,1}, S. Dhaliwal¹, X. Ji¹, S. Rahman¹, A. Tumber¹, J. Locke¹, A. Vincent¹, C. A. Westall¹. ¹Ophthalmology, The Hospital for Sick Children, Toronto, Ontario, Canada; ²Medicine, University of Ottawa, Ottawa, Ontario, Canada

5023 — A0219 Evaluation of a Contact Lens Electrode Incorporating a Light Diffusing Element. John R. Hetling^{1,2}, S. Patangay¹, J. C. Park², J. McAnany^{2,1}. ¹Bioengineering, Univ of Illinois at Chicago, Chicago, IL; ²Ophthalmology and Visual Sciences, University of Illinois at Chicago, Chicago, IL *CR

5024 — A0220 Foveal Avascular Zone Dimensions and Its Reliability in healthy Korean eyes using OCT angiography. Do Gyun Kim, H. Song, J. Yang. Ophthalmology, Myong-ji Hospital, Goyang, Korea (the Republic of)

5025 — A0221 Filtering effect of progressive-scan displays on pERG response waveforms. Shresta Patangay², J. C. Park¹, J. McAnany^{1,2}, J. R. Hetling^{2,1}. ¹Ophthalmology and Visual Sciences, University of Illinois at Chicago, Chicago, IL; ²Bioengineering, University of Illinois at Chicago, Chicago, IL

5026 — A0222 Bringing light to bipolar disorder: peering through the window to the brain. Allison L. Dorfman¹, A. Malienko², M. Gauvin¹, J. M. Little¹, P. Cervantes³, P. Lachapelle¹. ¹Ophthalmology/Neurology-Neurosurgery, Research Institute of the McGill University Health Center-Montreal Children's Hospital, Montreal, Quebec, Canada; ²School of Optometry, University of Montreal, Montreal, Quebec, Canada; ³Mood Disorders Program, McGill University Health Center, Montreal, Quebec, Canada

5027 — A0223 Electrooculogram artifacts in long flash electroretinogram recordings. Yoshiaki Shimada. Ophthalmology, Fujita Health Univ Banbuntane Hosp, Nagoya, AICHI, Japan

5028 — A0224 Dynamics of human ON and OFF Visual Pathways. Jeffrey L. Goldberg¹, A. Yakovleva¹, B. Hung^{1,2}, A. Norcia². ¹Ophthalmology, Byers Eye Institute at Stanford University, Palo Alto, CA; ²Psychology, Stanford University, Stanford, CA

5029 — A0225 Photopic Negative Response as an Objective Outcome Measure in Mitochondrial Disease. Melanie R. Lalonde^{1,2}, A. Kuntungane^{1,2}, A. A. Sadun^{3,4}, S. G. Coupland^{1,2}, R. Karanjia^{1,4}. ¹University of Ottawa Eye Institute, Ottawa, Ontario, Canada; ²Ottawa Hospital Research Institute, Ottawa, Ontario, Canada; ³Ophthalmology, David Geffen School of Medicine at UCLA, Doheny Eye Centers UCLA, Los Angeles, CA; ⁴Doheny Eye Institute, Los Angeles, CA *CR

5030 — A0226 Can we assess the visual function in a blink? Anthony Fanous, A. Dorfman, M. Gauvin, P. Lachapelle. Ophthalmology and Neurology-Neurosurgery, Research Institute of the McGill University Health Centre-Montreal Children's Hospital, Montreal, Quebec, Canada

5031 — A0227 Early biological marker changes in the visual system of patients with Mild Cognitive Impairment and Alzheimer's Disease. Kallene S. Vidal^{1,7}, B. V. Nagy², M. T. Barboni^{1,3}, G. L. Duque-Chica⁴, D. Declava⁴, M. Leal-Fonseca⁵, J. J. Kremers⁷, G. Bussato-Filho⁶, D. F. Ventura¹. ¹Institute of Psychology, University of São Paulo, Brazil, São Paulo, Brazil; ²Department of Mechatronics, Optics and Mechanical Engineering Informatics, Budapest University of Technology and Economics, Budapest, Hungary; ³Department of Ophthalmology, Semmelweis University, Budapest, Hungary; ⁴Departamento de Psicología, Universidad de Medellín, Medellín, Colombia; ⁵Prevent Senior Institute, São Paulo, Brazil; ⁶Laboratory of Neuroimaging (LIM-21), Department and Institute of Psychiatry, University of São Paulo, Brazil, São Paulo, Brazil; ⁷Dept. of Ophthalmology, ERG Laboratory, Friedrich-Alexander-University Erlangen-Nürnberg, Germany, Erlangen, Germany

5032 — A0228 The mapping and reconstruction of the brain's mind eye in the absence of visual experience: a population receptive field mapping of soundscape space. Shir Hofstetter¹, w. zuiderbaan², S. Dumoulin^{2,3}, A. Amedi¹. ¹Medical Neurobiology, Hebrew University of Jerusalem, Jerusalem, Israel; ²The Spinoza Centre for Neuroimaging, Amsterdam, Netherlands; ³Experimental and Applied Psychology, Utrecht University, Utrecht, Netherlands

5033 — A0229 Locomotor reproduction of memorized trajectories: where peripheral vision matters. Colas Authié^{1,2}, A. Berthoz³, J. Sahe^{2,4}, A. B. Safran^{2,5}. ¹Streetlab, Paris, France; ²Institut de la Vision, Sorbonne Universités, UPMC Université Paris 06 & INSERM & CNRS & Centre Hospitalier National d'Ophthalmologie des Quinze-Vingt, Paris, France; ³Equipe Pr Alain Berthoz Professeur Emérite au Collège de France, Paris, France; ⁴Department of Ophthalmology, School of Medicine, University of Pittsburgh, Pittsburgh, PA; ⁵Département des Neurosciences Cliniques, Université de Genève, Genève, Switzerland

5034 — A0230 From baseline or from preceding peak: effects of method of PhNR measurement on correlation with other parameters. Radouil T. Tzekov^{1,2}, D. Drucker¹, G. Ortiz¹, C. Hyde¹, J. Staffetti¹. ¹Department of Ophthalmology, USF Eye Institute, Bradenton, FL; ²The Roskamp Institute, Sarasota, FL

Exhibit Hall A0231-A0245

Wednesday, May 02, 2018 3:30 PM-5:15 PM

Visual Neuroscience

480 ipRGCs and Circadian Rhythms

Moderator: Andrew J. Zele

5035 — A0231 Topical Ocular Anesthesia Has no Effect on Photophobia Induced by Red and Blue Light Stimulus. Shaobo Lei¹, M. Zivcevska², H. C. Goltz^{1,2}, X. Chen³, A. M. Wong^{1,2}. ¹Ophthalmology, University of Toronto, Toronto, Ontario, Canada; ²Program in Neurosciences and Mental Health, The Hospital for Sick Children, Toronto, Ontario, Canada; ³The Krembil Research Institute, Toronto Western Hospital, Toronto, Ontario, Canada

5036 — A0232 Melanopsin contributions to image forming vision in humans. Andrew J. Zele¹, B. K. Feig^{2,3}, P. Adhikari¹, D. Cao⁴. ¹School of Optometry and Vision Science & Institute of Health and Biomedical Innovation, Queensland University of Technology (QUT), Brisbane, Queensland, Australia; ²School of Biomedical Sciences & Institute of Health and Biomedical Innovation, Queensland University of Technology (QUT), Brisbane, Queensland, Australia; ³Queensland Eye Institute, Brisbane, Queensland, Australia; ⁴Department of Ophthalmology and Visual Sciences, University of Illinois at Chicago (UIC), Chicago, IL

5037 — A0233 Melanopsin interacting with the cone-mediated white noise electroretinogram (wnERG). Prakash Adhikari¹, A. J. Zele¹, D. Cao², J. J. Kremers³, B. K. Feig^{4,5}. ¹School of Optometry and Vision Science & Institute of Health and Biomedical Innovation, Queensland University of Technology (QUT), Brisbane, Queensland, Australia; ²Department of Ophthalmology and Visual Sciences, University of Illinois at Chicago (UIC), Chicago, IL; ³Laboratory for Retinal Physiology, Department of Ophthalmology, University Hospital Erlangen, Erlangen, Germany; ⁴School of Biomedical Sciences & Institute of Health and Biomedical Innovation, Queensland University of Technology (QUT), Brisbane, Queensland, Australia; ⁵Queensland Eye Institute, Brisbane, Queensland, Australia

5038 — A0234 Melanopsin containing ganglion cells and displaced cholinergic amacrine cells in human retina express calbindin. Ashleigh J. Chandra^{1,2}, S. C. Lee^{1,2}, R. A. Masri^{1,2}, U. Grunert^{1,2}. ¹Discipline of Ophthalmology and Save Sight Institute, The University of Sydney, Sydney, New South Wales, Australia; ²Australian Research Council Centre of Excellence for Integrative Brain Function, University of Sydney, Sydney, New South Wales, Australia

5039 — A0235 Functional characterisation of naturally occurring mutations in human melanopsin. Steven Hughes, J. Rodgers, C. A. Potheary, D. Hickey, S. N. Peirson, M. W. Hankins. Nuffield Department of Clinical Neurosciences, University of Oxford, Oxford, Oxfordshire, United Kingdom

5040 — A0236 Comparison of *in vivo* pupil responses and *in vitro* ipRGC spiking responses to repeated light stimuli in rats. Phillip T. Yuhas, A. Hartwick. College of Optometry, The Ohio State University, Columbus, OH

5041 — A0237 Role of melanopsin in retinal light damage. Teele Palumaa, R. Foster, A. Jagannath. Nuffield Department of Clinical Neurosciences, University of Oxford, Oxford, United Kingdom

5042 — A0238 Opioids trigger waking behavioral activity via melanopsin ganglion cells. Allison M. Cleymaet¹, J. Vigh². ¹Clinical Sciences, Colorado State University, Fort Collins, CO; ²Biomedical Sciences, Colorado State University, Fort Collins, CO

5043 — A0239 Effects of Long-Wavelength Lighting on Activity Patterns and the Pupil in Infant Rhesus Monkeys. Baskar Arumugam^{1,2}, L. Hung^{1,2}, L. A. Ostrin¹, Z. She^{1,2}, E. L. Smith^{1,2}. ¹College of Optometry, University of Houston, Houston, TX; ²Brien Holden Vision Institute, Sydney, New South Wales, Australia

5044 — A0240 Consequences of circadian clock disruption in the retina. Shuo Zhang¹, P. Lyuboslavsky¹, M. A. Chrenek¹, I. Piano^{2,3}, K. Baba², G. Tosini², P. Iuvone¹. ¹Ophthalmology, Emory University, Atlanta, GA; ²Pharmacology, Morehouse School of Medicine, Atlanta, GA; ³Farmacia, University of Pisa, Pisa, Italy

5045 — A0241 Circadian and dopamine modulation of sensitivity to light-induced retinal degeneration (LIRD) in mice. Polina Lyuboslavsky¹, J. T. Sellers¹, G. Tosini², P. Iuvone¹. ¹Ophthalmology, Emory University, Atlanta, GA; ²Pharmacology, Morehouse School of Medicine, Atlanta, GA

5046 — A0242 Circadian Modulation in ERG responses 3 rodent models. Maria d. Arietti^{1,2}, M. Kamermans¹, D. Hicks². ¹Retinal Signal Processing, Netherlands Institute of Neuroscience, Amsterdam, Amsterdam, Netherlands; ²Rythme, vie et mort de la rétine, INCI - Institute of Cellular and Integrative Neurosciences, Strasbourg, Strasbourg, France

5047 — A0243 Light dark cycle influence gut microbiota and body weight through ipRGC. Shih-Kuo Chen, C. Lee, T. Lu. Life Science, National Taiwan University, Taipei, Taiwan

5048 — A0244 Diurnal Cycling of Clock and Melanopsin Genes in Chick Choroid. Richard A. Stone³, W. Wei¹, S. Sarfare², W. Pan¹, K. C. Engelhar², T. S. Khurana³, M. G. Maguire¹, P. Iuvone⁴, D. L. Nickla². ¹Ophthalmology, University of Pennsylvania School of Medicine, Philadelphia, PA; ²Bioscience, New England College of Optometry, Boston, MA; ³Physiology, University of Pennsylvania School of Medicine, Philadelphia, PA; ⁴Ophthalmology, Emory University School of Medicine, Atlanta, GA

5049 — A0245 Evaluation of photoreceptors and ipRGC responses in conscious black kite (*Milvus migrans*) using chromatic pupillometry. Pierre-Francois Isard¹, S. Potier², T. Dulaurent¹, M. Mentek³. ¹Ophthalmology, Veterinary Hospital Center Saint-Martin, Saint-Martin Bellevue, France; ²Lund Vision Group, Lund University, Lund, Sweden; ³R&D Innovation Center, Menicon Co., Ltd., Geneva, Switzerland

Exhibit Hall B0001-B0047

Wednesday, May 02, 2018 3:30 PM-5:15 PM

Glaucoma

481 Capillaries, Blood Flow, OCT Angiography

Moderators: Bang V. Bui and Patricia Isabel C. Manalastas

5050 — B0001 Role of OCT-angiography and electrophysiological testing in glaucoma diagnostics and monitoring. Natalia I. Kuryшева^{1,2}, E. V. Maslova^{1,2}, I. V. Zolnikova³, A. V. Fomin⁴. ¹Consultative-Diagnostic Department of Ophthalmology Center, Federal Medical and Biological Agency of the Russian Federation, Moscow, Russian Federation; ²A.I. Burnazyan Federal Medical and Biophysical Center, FMBA, Moscow, Russian Federation; ³Moscow Helmholtz Research Institute of Eye Diseases, Moscow, Russian Federation; ⁴National Research Institute of Eye Diseases, Russian Academy of Medical Sciences, Moscow, Russian Federation

5051 — B0002 Additive role of OCT angiography to detect glaucomatous damage in highly myopic eyes. Hyunmin Na¹, E. Lee².

¹Ophthalmology, Seoul National University Hospital, Seoul, Korea (the Republic of); ²Ophthalmology, Seoul National University Bundang Hospital, Gyeonggi Do, Korea (the Republic of)

5052 — B0003 Effects of Simulated High Altitude on Retinal Nerve Fiber Layer Thickness and Radial Peripapillary Capillary Density Evaluated by OCT-angiography: The Beijing Intracranial and Intraocular pressure(ICOP) study. Yuan Xie, D. Yang, Y. Yang, J. Sun, J. Tian, Y. Chen, N. Wang. Beijing Tongren Eye Hospital, Capital medical university, Beijing, China ✕

5053 — B0004 Optical Coherence Tomography Angiography (OCTA) Measure of Macular Vessel Density in Exfoliation Glaucoma and Exfoliation Syndrome Compared to Primary Open Angle Glaucoma and Healthy Controls. Shawn Philip^{1,2}, A. Najafi¹, L. Silva¹, A. Tantraworasin², R. Ritch¹. ¹Einhorn Clinical Research Center, New York Eye and Ear Infirmary of Mount Sinai, New York, NY; ²Lake Erie College of Osteopathic Medicine, Erie, PA; ³Department of Surgery, Chiang Mai University, Chiang Mai, Thailand

5054 — B0005 Sectoral First Peak Fractal Analysis of Optical Coherence Tomography Angiography in Glaucomatous Eyes. Jillian K. Chong¹, A. N. Young¹, B. Chiu¹, E. Tsui¹, N. K. Scripsema², J. F. Panarelli², P. A. Sidoti², R. B. Rosen², P. Garcia², J. Young¹. ¹Ophthalmology, New York University School of Medicine, New York, NY; ²New York Eye and Ear Infirmary, New York, NY

5055 — B0006 Blood flow rate of ophthalmic artery in patients with normal tension glaucoma and healthy controls. Martin Kristiansen¹, C. Lindén¹, S. Qvarlander², A. Wählin², K. Ambarkä², P. Hallberg², A. Eklund², G. Johannesson¹. ¹Dept. of Clinical Science, Umeå University, Umeå, Sweden; ²Dept. of Radiation Sciences, Biomedical Engineering, Umeå University, Umeå, Sweden

5056 — B0007 Evaluation of OCT Angiography Nerve and Peripapillary Vasculature and Vasculature-Structure, Vasculature-Function Relationships in Glaucoma. Carolyn Majcher, R. Trevino, K. Ramirez, W. E. Sponsel, E. Dosch, J. Nozicka, C. Villafior. Optometry, University of the Incarnate Word, San Antonio, TX *CR

5057 — B0008 Optical Coherence Tomography Angiography of Peripapillary Retina Pre- and Post- Trabeculectomy. Liang Liu, B. Alonzo, H. Takusagawa, J. C. Morrison, B. Edmunds, S. Tehrani, Y. Jia, D. Huang. Casey Eye Institute, Oregon Health & Science University, Portland, OR *CR, ✕

5058 — B0009 The Effect of Topical Ocular Hypotensive Agents on Ocular Perfusion as measured by OCT Angiography. Hana Takusagawa, L. Liu, X. Zhang, S. Gupta, L. Lombardi, E. Davis, B. Edmunds, S. Tehrani, Y. Jia, J. C. Morrison, D. Huang. Casey Eye Institute, Oregon Health and Sciences University, Eugene, OR *CR, ✕

5059 — B0010 Comparison of the Diagnostic Accuracy of Macular Vessel Parameters from 4.5mmx4.5mm and 6mmx6mm SD-OCT Angiography Scans for Glaucoma. Yong S. Han¹, R. Chang¹, Z. Chu², B. Burkemper¹, S. Bedrood¹, A. Reznik¹, R. K. Wang¹, G. Richter¹. ¹Ophthalmology, USC Roski Eye Institute, Los Angeles, CA; ²University of Washington, Seattle, WA *CR

5060 — B0011 Comparison of Diagnostic Accuracy of Peripapillary Vessel Parameters from 4.5x4.5mm and 6x6mm SD-OCT Scans for Glaucoma. Ryuna Chang¹, Z. Chu², B. Burkemper¹, S. Bedrood¹, A. Reznik¹, R. K. Wang², G. C. Lee³, A. Fard³, M. K. Durbin³, G. Richter¹. ¹Ophthalmology, Keck Medicine of University of Southern California, Los Angeles, CA; ²Bioengineering, University of Washington, Seattle, WA; ³Carl Zeiss Meditec, Inc., Dublin, CA *CR

5061 — B0012 400kHz Optical Coherence Tomography Angiography based capillary density assessment in 3D vs 2D as a potential biomarker of retinal neurodegeneration. Rainer A. Leitgeb^{1,2}, L. G. Ginner^{1,2}, C. Mitsch³, M. Augustin¹, V. Hacker², S. Holzer², U. Schmidt-Erfurth³, C. Vass³. ¹Cntr Medical Physics and Biomed. Eng., Medical Univ. Vienna, Vienna, Austria; ²Christian Doppler Laboratory OPTRAMED, Medical University Vienna, Vienna, Austria; ³University Clinics of Ophthalmology and Optometry, Medical University Vienna, Vienna, Austria

5062 — B0013 Diagnostic accuracy and correlates of OCTA macular vessel density in glaucoma. Rick Trevino¹, C. Majcher¹, W. E. Sponsel^{1,2}, J. Nozicka¹, C. Villafior¹, D. Juett¹, K. Ramirez¹, E. Dosch¹. ¹Rosenberg School of Optometry, University of the Incarnate Word, San Antonio, TX; ²Biomedical Engineering, University of Texas San Antonio, San Antonio, TX *CR

5063 — B0014 Comparison of Ocular Hemodynamic and OCT-A Parameters in Patients with Normal-tension Glaucoma and Healthy Controls. Lina Siaudvytyte¹, A. Daveckaite¹, I. Januleviciene¹, J. Skruodyte¹, K. Petrikonis², A. Vaitkus², A. Harris³. ¹Eye Clinic of Lithuanian University of Health Sciences, Kaunas, Lithuania; ²Neurology department, Lithuanian University of Health Sciences, Kaunas, Lithuania; ³Eugene and Marilyn Glick Eye Institute, Indiana University School of Medicine, Indianapolis, IN ✕

5064 — B0015 Amplitudes of spontaneous venous pulsations are associated with retinal ganglion cell count estimates in glaucoma. Sahar Shariflou¹, K. A. Rose¹, A. Agar^{2,3}, M. Golzan¹. ¹Orthoptics, University of Technology Sydney, Sydney, New South Wales, Australia; ²University of New South Wales, Sydney, New South Wales, Australia; ³Marsden Eye Specialists, Sydney, New South Wales, Australia

5065 — B0016 Quantitative Analysis of Retinal Vascular Parameters in Patients with Normal Tension Glaucoma. Tudor Tepelus, S. Song, E. Borrelli, M. G. Nittala, E. Baghdasaryan, S. R. Sada, V. Chopra. Doheny Eye Institute, Los Angeles, CA *CR

5066 — B0017 Attenuation Correction and Building 3-D Geometry of Retinal Vasculature from SD-OCT Volume Scans without Contrast Agents. Madhusudhanan Balasubramanian, W. Ahmed. Electrical and Computer Engineering, The University of Memphis, Germantown, TN

5067 — B0018 Peripheral blood flow and peripapillary vessel density in exfoliation syndrome and exfoliation glaucoma: a nailfold capillaroscopy and optical coherence tomography angiography study. Ahmad Najafi¹, S. Philip¹, A. Sriram³, A. Tantraworasin², R. Ritch¹. ¹Ophthalmology, New York Eye and Ear Infirmary of Mount Sinai, New York, NY; ²Surgery, Chiang Mai University, Chiang Mai, Thailand; ³New York Medical College, New York, NY

5068 — B0019 Repeatability of vessel density measurements of high-density optical coherence tomography angiography scans and their comparability with standard-density scans in normal and glaucoma eyes. Harsha L. Rao¹, J. P. Venugopal¹, R. N. Weinreb², Z. Pradhan¹, N. K. Puttaiah¹, S. Devi¹, K. Mansouri³, C. A. Webers⁴. ¹Glaucoma, Narayana Nethralaya, Bangalore, India; ²Ophthalmology, University of California San Diego, San Diego, CA; ³Glaucoma Center, Montchoisi Clinic, Swiss Vision Network, Lausanne, Switzerland; ⁴University Eye Clinic Maastricht, University Medical Center, Maastricht, Netherlands *CR

5069 — B0020 Quantifying Peripapillary Microvasculature Changes Before and After Trabeculectomy Using Optical Coherence Tomography Angiography. Betty A. Situ³, R. Chang¹, Z. Chu², A. Reznik¹, S. Bedrood¹, R. K. Wang², G. Richter¹. ¹Ophthalmology, USC Roski Eye Institute, Los Angeles, CA; ²Bioengineering, University of Washington, Seattle, WA; ³USC Keck School of Medicine, Los Angeles, CA *CR

- 5070 — B0021 Ocular blood flow alterations following image brightness and contrast Dynamic Altering Stimuli (DAS) when viewing a video content in healthy and glaucomatous subjects.** Aadiya Shah¹, A. Harris¹, A. Verticchio Vercellin^{1,2}, D. Camp¹, R. M. Kawiecki¹, M. Antheriou³, B. A. Siesky¹. ¹Ophthalmology, Indiana University School of Medicine, Indianapolis, IN; ²University Eye Clinic, Dipartimento di Scienze Clinico-Chirurgiche, Diagnostiche e Pediatriche, Fondazione IRCCS, Policlinico San Matteo, Pavia, Italy; ³Ophthalmology, University Hospitals of Geneva, Geneva, Switzerland; ⁴Glaucoma Unit, Istituto di Ricovero e Cura a Carattere Scientifico, Fondazione G.B.Bietti, Rome, Italy *CR
- 5071 — B0022 Accuracy and reproducibility of peripapillary microvasculature quantification using ZEISS AngioPlex Metrix™.** Ali Fard, H. Bagherinia, A. Kolli, M. K. Durbin, J. Straub. Carl Zeiss Meditec Inc., Dublin, CA *CR
- 5072 — B0023 The relationship between macular vessel density and ganglion cell/inner plexiformlayer thickness and their combinational index using artificial neural network.** Jiwoong Lee¹, K. Park¹, J. Kim². ¹Ophthalmology, Pusan National University Hospital, Busan, Korea (the Republic of); ²Biostatistics, Clinical Trial Center, Biomedical Research Institute, Pusan National University Hospital, Busan, Korea (the Republic of)
- 5073 — B0024 The investigating of optic disc vessel density by swept source optical coherence tomography angiography.** Itaru Kimura, J. Kanno, T. Shoji, Y. Yoshikawa, K. Ozaki, H. Ibuki, H. Ishii, T. Akiyama, K. Shinoda. Department of Ophthalmology, Saitama Medical University Faculty of Medicine, Iruma-gun, Saitama, Japan
- 5074 — B0025 Circumpapillary microvascular density as a new feature for the everyday glaucoma practice.** Danilo Andrade de Jesus¹, J. Barbosa-Breda^{1,2}, K. Van Keer^{1,3}, S. Lemmens^{1,3}, I. Stalmans^{1,3}. ¹Research Group Ophthalmology, Department of Neurosciences, KU Leuven, Leuven, Belgium; ²Surgery and Physiology (Ophthalmology Unit), Faculdade de Medicina da Universidade do Porto, Porto, Portugal; ³Ophthalmology Department, UZ Leuven, Leuven, Belgium
- 5075 — B0026 Macular and Peripapillary Vascular Dropout Are Associated with Disease Severity in Advanced Glaucoma.** Elham Ghahari¹, L. M. Zangwill¹, C. Bowd¹, K. Hasenstab¹, H. Hou¹, R. Pentead¹, P. C. Manalastas¹, S. Moghimi¹, T. Shoji^{1,2}, A. J. Li^{1,3}, K. Nguyen^{1,4}, G. Villatoro^{1,5}, A. Yarmohammadi¹, R. N. Weinreb¹. ¹Ophthalmology, UCSD, San Diego, CA; ²Ophthalmology, Saitama Medical University, Iruma, Saitama, Japan; ³Dartmouth College, Hanover, NH; ⁴Northeast Ohio Medical University, Rootstown, OH; ⁵UCSD School of Medicine, University of California, La Jolla, CA *CR
- 5076 — B0027 Strong Correlation between Retinal Vessel Density Structural Measurements from OCT-Angiography and Functional Retinal Sensitivity Parameters from Humphrey Visual Field in Low Tension Glaucoma.** Sheena Song¹, T. C. Tepelus^{1,2}, E. Borrelli^{1,2}, M. G. Nittala^{1,2}, V. Chopra^{1,2}, S. R. Sadda^{1,2}. ¹Doheny Eye Institute, Los Angeles, CA; ²Ophthalmology, University of California-Los Angeles, Los Angeles, CA *CR
- 5077 — B0028 Three-Dimensional Vessel Density Measurements of Pre-Laminar Tissue Correspond Better with Macular Thickness Than Conventional Two-Dimensional Projection Measurements.** Lauren Seo, H. Ishikawa, G. Wollstein, M. Wu, J. S. Schuman. Ophthalmology, New York University, New York, NY
- 5078 — B0029 Nailfold Hemorrhages in Primary Open-Angle Glaucoma: Systemic Differences in African American and Caucasian Patients.** Paul A. Knepper^{1,2}, N. Pfahler¹, I. Bielskus¹, T. Cronin¹, J. Haney¹, M. Giovingo³, T. Patrianakos³, L. R. Pasquale⁴, A. P. Tanna², N. J. Volpe². ¹Ophthalmology & Visual Science, University of Illinois at Chicago, Chicago, IL; ²Ophthalmology, Northwestern University, Chicago, IL; ³Ophthalmology, John H. Stroger, Jr. Hospital of Cook County, Chicago, IL; ⁴Ophthalmology, Harvard Medical School, Boston, MA
- 5079 — B0030 Differences in Blood Pressure, Retinal Blood Flow, and Intraocular Pressure in open angle glaucoma patients of African Descent versus European Descent.** Brent A. Siesky¹, A. Harris¹, A. Shah¹, D. Camp¹, R. M. Kawiecki¹, G. Eckert⁴, A. Verticchio Vercellin^{2,3}. ¹Ophthalmology, Indiana University School of Medicine, Indianapolis, IN; ²Glaucoma Unit, Istituto di Ricovero e Cura a Carattere Scientifico, Fondazione G.B.Bietti, Rome, Italy; ³University Eye Clinic, Dipartimento di Scienze Clinico-Chirurgiche, Diagnostiche e Pediatriche, Fondazione IRCCS Policlinico San Matteo, Pavia, Italy; ⁴Department of Biostatistics, Indiana University, Indianapolis, IN *CR
- 5080 — B0031 Diurnal fluctuations of optic disc perfusion as measured by optical coherence tomography angiography in healthy eyes and glaucomatous eyes.** Lucia Tanga¹, M. Michelessi¹, M. Ferrazza¹, G. Manni^{2,1}, F. Berardo¹, G. Roberti¹, C. Carnevale¹, L. Agnifili², L. Quaranta⁴, M. Figus⁵, I. Riva¹, F. Oddone¹. ¹IRCCS Fondazione G.B. Bietti, Rome, Italy; ²University of Rome Tor Vergata, Rome, Italy; ³Ophthalmology Clinic, Department of Medicine and Aging Science, “G. d’Annunzio” University of Chieti-Pescara, Chieti, Italy; ⁴Section of Ophthalmology, Department of Medical and Surgical Specialties, Radiological Sciences, and Public Health, University of Brescia, Brescia, Italy; ⁵Department of Neurosciences, University of Pisa, Pisa, Italy
- 5081 — B0032 Calculated (surrogate) ocular perfusion pressure is not the same as ocular perfusion pressure (OPP).** Wulff-Dieter Ulrich⁴, K. Wernecke¹, A. Moeller⁴, C. Ulrich⁴, K. E. Kotliar², C. Erb³. ¹Sostana GmbH, Berlin, Germany; ²Aachen University of Applied Sciences, Aachen, Germany; ³Augenlinik am Wittenbergplatz, Berlin, Germany; ⁴Clinical Ophthalmology and Research, Borna, Germany *CR
- 5082 — B0033 The Impact of Intraocular Pressure Elevation on Optic Nerve Head and Choroidal Blood Flow.** Naoki Kiyota¹, Y. shiga¹, K. Ichinohasama¹, S. Suzuki¹, M. Yoshida¹, N. Honda², H. Kunikata¹, T. Nakazawa¹. ¹Tohoku University Graduate School of Medicine, Sendai, Japan; ²Medical Development Dept., Eye Care Div., Nidek Co., Ltd., Gamagori, Japan
- 5083 — B0034 The effect of low cerebrospinal fluid pressure on optic disc and macula perfusion in monkey model using optical coherence tomography angiography.** Jing Li, X. Liu, N. Wang. Beijing Tongren Hospital, Beijing, China
- 5084 — B0035 Optic nerve head morphology at baseline is associated with changes in capillary blood flow in diabetic patients with open angle glaucoma after four years.** Alice Chandra Verticchio Vercellin^{3,2}, A. Harris¹, B. A. Siesky¹, D. Camp¹, A. Shah¹, A. Belamkar¹, S. Mathew¹, T. A. Ciulla⁴. ¹Ophthalmology, Indiana University School of Medicine, Indianapolis, IN; ²University Eye Clinic, Dipartimento di Scienze Clinico-Chirurgiche, Diagnostiche e Pediatriche, Fondazione IRCCS, Policlinico San Matteo, Pavia, Italy; ³Glaucoma Unit, Istituto di Ricovero e Cura a Carattere Scientifico, Fondazione G.B.Bietti, Rome, Italy, Rome, Italy; ⁴Retina Service, Midwest Eye Institute, Indianapolis, IN *CR
- 5085 — B0036 Translaminar pressure gradient and ocular perfusion pressure in glaucoma patients with different optic disc sizes.** Natasha Cruz, K. Santos, M. Matuoka, N. Kasahara. ISCMSP, S’o Paulo, S’o Paulo, Brazil
- 5086 — B0037 Correlation between the translaminar pressure gradient and the ocular perfusion pressure in glaucoma patients.** Mateus Matuoka, K. Santos, N. Cruz, N. Kasahara. ISCMSP, S’o Paulo, S’o Paulo, Brazil
- 5087 — B0038 Effects of body posture on spontaneous retinal venous pulsatility.** Mojtaba Golzan, D. Georgevsky. Graduate School of Health, University of Technology Sydney, Ultimo, New South Wales, Australia
- 5088 — B0039 The association between degree of myopia and retinal vascular density in healthy eye.** Seok-Joon Kang¹, S. Park². ¹Ophthalmology, BORA eye clinic, Gwangju, Korea (the Republic of); ²Ophthalmology, Chonnam National University Medical School and Hospital, Gwangju, Korea (the Republic of)
- 5089 — B0040 Caffeine and Optic Nerve Blood Oxygenation.** Vasile Diaconu, P. Lamothe, P. Forcier. Ecole D’optometrie, University of Montreal, Montreal, Quebec, Canada ✕

5090 — B0041 The effect of acupuncture on different ocular blood flow parameters in patients with primary open-angle glaucoma. Anna Leszczynska, C. Theinert, N. Terai, E. Spoerl, L. E. Pillunat. *Ophthalmology, Univ. Hospital Carl Gustav Carus, TU Dresden, Germany, Dresden, Germany* ✕

5091 — B0042 Is Obstructive Sleep Apnoea Associated with Glaucoma Progression? Rupert R. Bourne^{1,2}, D. R. Wozniak³, G. Peretz⁶, J. Kean¹, R. Foster⁴, S. Downes⁵, I. Smith³. ¹Vision & Eye Research Unit, Anglia Ruskin University, Hartford, England, United Kingdom; ²Dept of Ophthalmology, North West Anglia Foundation Trust, Huntingdon, Cambridgeshire, United Kingdom; ³Respiratory Support and Sleep Centre, Papworth Hospital, Papworth, United Kingdom; ⁴Nuffield Department of Clinical Neurosciences, University of Oxford, Oxford, United Kingdom; ⁵Oxford Eye Hospital, Oxford, United Kingdom; ⁶Assaf Harofeh Medical Center, Tel Aviv, Israel

5092 — The probable contribution of mural and endothelial cells to porcine iridal vascular auto-regulation from a morphological view. Hongfang Yang¹, X. Sun¹, P. Yu². ¹Ophthalmology, Fudan University affiliated EENT Hospital, Shanghai, China; ²Physiology and pharmacology, Lions Eye Institution, Perth, Western Australia, Australia

5093 — B0044 Prevalence of Obstructive Sleep Apnoea in Glaucoma: the POSAG Study. Dariusz Wozniak^{1,2}, J. Kean³, G. Peretz³, S. Harun⁴, C. Willshire⁴, S. Villar^{5,6}, R. Foster⁷, S. Downes⁸, I. Smith¹, R. R. Bourne^{3,4}. ¹Respiratory Support and Sleep Centre, Papworth Hospital, Cambridge, United Kingdom; ²Faculty of Medical Science, Anglia Ruskin University, Cambridge, United Kingdom; ³Vision & Eye Research Unit, Anglia Ruskin University, Cambridge, United Kingdom; ⁴Department of Ophthalmology, North West Anglia Foundation Trust, Huntingdon, Cambridgeshire, United Kingdom; ⁵Research and Development, Papworth Hospital, Cambridge, United Kingdom; ⁶University of Cambridge School of Clinical Medicine, Cambridge, United Kingdom; ⁷Nuffield Department of Clinical Neurosciences, University of Oxford, Oxford, United Kingdom; ⁸Oxford Eye Hospital, Oxford, United Kingdom

5094 — B0045 Hypercapnia Impairs Vascular Responses To Changes In Ocular Perfusion Pressure In Rat Retina. Grant Cull¹, L. Wang¹, B. V. Bui². ¹Devers Eye, Legacy Research Institute, Portland, OR; ²Department of Optometry and Vision Sciences, The University of Melbourne, Melbourne, Victoria, Australia

5095 — B0046 Heterogeneous Effects Of Glia On BP- AND IOP-Induced Retinal Vascular Responses. Lin Wang¹, G. Cull¹, B. V. Bui². ¹Devers Eye Institute, Legacy Research Institute, Portland, OR; ²University of Melbourne, Parkville, Victoria, Australia

5096 — B0047 Flip or Flop: Calcium activated chloride channel in the phosphatidylserine flip: Superactivated platelets and POAG. James Haney¹, I. Bielskus¹, N. Pfahler¹, T. Cronin¹, J. Hill², M. Giovino², N. J. Volpe³, T. Patrianakos², P. A. Knepper^{1,3}. ¹University of Illinois at Chicago, Chicago, IL; ²Ophthalmology, John H. Stroger, Jr. Hospital of Cook County, Chicago, IL; ³Ophthalmology, Northwestern University, Chicago, IL

Exhibit Hall B0086-B0123

Wednesday, May 02, 2018 3:30 PM-5:15 PM

Glaucoma

482 Electrophysiology and Visual Fields

Moderators: Allison M. McKendrick and Luis Alarcon-Martinez

5097 — B0086 Photopic electroretinographic sub-components reveal inner retinal function in a rat glaucoma model. Sharon Jiyoung Jung^{1,2}, Y. Park^{1,2}, S. Park^{1,2}, S. Paik^{1,2}, J. Lee¹, H. Kim³, S. Oh¹, M. Lee^{1,2}, I. Kim^{1,2}. ¹Department of Anatomy, College of Medicine, The Catholic University of Korea, Seoul, Korea (the Republic of); ²Catholic Neuroscience Institute, College of Medicine, The Catholic University of Korea, Seoul, Korea (the Republic of); ³Integrative Research Support Center, The Catholic University of Korea, Seoul, Korea (the Republic of)

5098 — B0087 Discrete wavelet transform of the electroretinogram for glaucoma classification; choice of mother wavelet by variable ranking. Marc Sarossy^{2,1}, B. Aliahmad¹, D. K. Kumar¹. ¹Engineering, MIT University, Melbourne, Victoria, Australia; ²CERA, University of Melbourne, Melbourne, Victoria, Australia

5099 — B0088 Pattern Electroretinogram association with RNFLT and ONH anatomy in preperimetric glaucoma patients. Peter H. Derr¹, A. Tirs², J. Soria³, A. Djougarian², J. Lee², L. A. Schwartz², S. Park², A. Gonzalez Garcia⁴, C. Tello². ¹Regulatory Affairs and Clinical Trials, Diopsys Inc, Pine Brook, NJ; ²Ophthalmology, MEETH, New York, NY; ³Ophthalmology, CIVE, Guayaquil, Ecuador; ⁴Clinical Trials, Diopsys Inc, Pine Brook, NJ *CR

5100 — B0089 Electrophysiological Evidence of Early Retinal Ganglion Cell Dysfunction in Preperimetric Glaucoma Using Diopsys NOVA PERG Device and its Associations with Visual Field and OCT Parameters. Andrew Tirs¹, J. Soria², A. Djougarian¹, J. Lee¹, L. A. Schwartz¹, S. Park¹, P. H. Derr³, A. Gonzalez Garcia³, C. Tello¹. ¹Ophthalmology, MEETH, NYC, NY; ²Ophthalmology, CIVE, Guayaquil, Ecuador; ³Diopsys Inc., Pine Brook, NJ *CR

5101 — B0090 What amount of visual field loss is associated with visual impairment in glaucoma? Alessandro Jammal^{1,2}, N. G. Ogata¹, F. B. Daga¹, R. Y. Abe², V. P. Costa², F. Medeiros¹. ¹Duke Eye Center; Duke University, Durham, NC; ²Ophthalmology, Universidade Estadual de Campinas (UNICAMP), Campinas, SP, Brazil *CR

5102 — B0091 Sharing the visual field dataset by sharing the model. Qian Cheng¹, H. Zhu^{1,2}, D. Crabb³, D. F. Garway-Heath². ¹State Key Laboratory of Software Development Environment, Beihang University, Beijing, China; ²NIHR Biomedical Research Centre for Ophthalmology, Moorfields Eye Hospital NHS Foundation Trust and UCL Institute of Ophthalmology, London, United Kingdom; ³School of Health Sciences, City University London, London, United Kingdom

5103 — B0092 Rates of Visual Field Loss in Primary Open-Angle Glaucoma. Golnoush Sadat Mahmoudi Nezhad¹, E. De Guzman¹, S. Yousefi^{1,2}. ¹Department of Ophthalmology, University of Tennessee Health Science Center, Memphis, TN; ²Department of Genetics, Genomics, and Informatics, University of Tennessee Health Science Center, Memphis, TN

5104 — B0093 Cataract Surgery and Rate of Visual Field Progression in Glaucoma. Wen-Shin Lee¹, J. Kim^{1,2}, N. Fatehi¹, E. Morales¹, F. Yu^{1,3}, A. Afifi¹, K. Nouri-Mahdavi¹, J. Caprioli¹. ¹Ophthalmology, Stein Eye Institute, David Geffen School of Medicine, University of California at Los Angeles, Los Angeles, CA; ²Ophthalmology, Siloam Eye Hospital, Seoul, Korea (the Republic of); ³Biostatistics, Fielding School of Public Health, University of California, Los Angeles, Los Angeles, CA *CR

5105 — B0094 Glaucoma Rate Index (GRI)-based risk factor analysis for visual field decay in glaucoma. Esteban Morales¹, J. Kim^{1,2}, N. Fatehi¹, F. Yu^{1,3}, A. Afifi¹, K. Nouri-Mahdavi¹, J. Caprioli¹. ¹Glaucoma, UCLA Stein Eye Institute, Arleta, CA; ²Glaucoma, Siloam Eye Hospital, Seoul, Korea (the Republic of); ³Department of Biostatistics, Fielding School of Public Health, UCLA, Los Angeles, CA

5106 — B0095 Rate of Visual Field Decay in Glaucomatous Eyes with Acquired Pits of the Optic Nerve. Mark Lin^{1,2}, R. Alizadeh², J. Kim², S. Sudhakaran^{3,2}, E. Morales², P. Hirunpotravong², F. Sharifpour^{4,2}, J. Caprioli². ¹University of California, Irvine, Irvine, CA; ²UCLA Stein Eye Institute, Los Angeles, CA; ³Narayana Nethralaya Eye Hospital, Bangalore, India; ⁴Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran (the Islamic Republic of)

- 5107 — B0096 Predicting Functional Progression in Glaucoma from Baseline Visual Fields.** Mengyu Wang¹, L. R. Pasquale², L. Q. Shen², M. V. Boland³, S. R. Wellik⁴, C. De Moraes⁵, J. S. Myers⁶, N. Baniasad¹, D. Li¹, H. Wang^{1,7}, P. J. Bex⁸, T. Elze¹. ¹Schepens Eye Research Institute, Harvard Medical School, Boston, MA; ²Massachusetts Eye and Ear, Harvard Medical School, Boston, MA; ³Wilmer Eye Institute, Johns Hopkins University, Baltimore, MD; ⁴Bascom Palmer Eye Institute, University of Miami, Miami, FL; ⁵Edward S. Harkness Eye Institute, Columbia University, New York, NY; ⁶Wills Eye Hospital, Thomas Jefferson University, Philadelphia, PA; ⁷Institute for Psychology and Behavior, Jilin University of Finance and Economics, Changchun, Jilin, China; ⁸Department of Psychology, Northeastern University, Boston, MA *CR
- 5108 — B0097 Identification of visual field progression in glaucoma: comparison of event-based and trend-based glaucoma progression analyses with standard achromatic perimetry.** Chankeum Park¹, C. Y. Kim¹, H. Bae¹, S. Lee¹, G. Seong¹, J. Kim², J. Park². ¹Ophthalmology, Severance Hospital of Yonsei University, Seoul, Korea (the Republic of); ²Ophthalmology, National Health Insurance Service Ilsan Hospital, Ilsan, Korea (the Republic of)
- 5109 — B0098 Visual field using color information by healthy subject.** Yoshiki Tanaka¹, H. Sato², R. Horai¹, S. Yokoyama³, M. Mitamura⁴, K. Ichikawa¹, S. Tanabe¹. ¹Chukyo Eye Clinic, Nagoya, Japan; ²Satoh Yuya Eye Clinic, Sendai, Japan; ³JCHO Chukyo Hospital, Philadelphia, PA; ⁴Japanese Red Cross Gifu Hospital, Gifu, Japan ✕
- 5110 — B0099 Glaucoma Progression in Patients with Obstructive Sleep Apnea-Hypopnea Syndrome: Study of The CGMH Polysomnography Database.** Yuan-Yao Fan, M. Sun. Ophthalmology, Chang Gung Memorial Hospital, Taoyuan City, Taiwan
- 5111 — B0100 Evaluation of the SITA Faster 24-2C visual field test.** Thomas Callan¹, S. Yu¹, G. C. Lee¹, A. Covita¹, T. Severin². ¹Carl Zeiss Meditec, Inc., Dublin, CA; ²East Bay Eye Center, San Ramon, CA *CR
- 5112 — B0101 Diagnostic efficacy of global summary parameters of SITA Faster.** Buck Cunningham¹, S. Yu¹, G. C. Lee¹, T. Callan¹, M. K. Durbin¹, A. Covita¹, T. Fitzmorris¹, T. Severin². ¹Carl Zeiss Meditec, Inc., Dublin, CA; ²East Bay Eye Center, San Ramon, CA *CR
- 5113 — B0102 The Relationship Between Machine Learning-Derived Patterns of Visual Field Loss and Patient-Reported Disability in Glaucoma.** Nara G. Ogata^{1,2}, A. A. Jammal¹, F. Medeiros¹. ¹Department of Ophthalmology, Duke University, Durham, NC; ²Department of Ophthalmology, University of Sao Paulo, Sao Paulo, SP, Brazil *CR
- 5114 — B0103 Improved precision and accuracy with trail traced threshold test (T4).** Haogang Zhu^{1,2}, H. Yang¹, D. Crabb³, M. Miranda³, D. F. Garway-Heath². ¹State Key Laboratory of Software Development Environment, Beihang University, Beijing, China; ²NIHR Biomedical Research Centre for Ophthalmology, Moorfields Eye Hospital NHS Foundation Trust and UCL Institute of Ophthalmology, London, United Kingdom; ³School of Health Sciences, City University London, London, United Kingdom *CR
- 5115 — B0104 Trail Traced Threshold Test (T4) algorithm shows reduced variability compared to the Swedish Interactive Thresholding Algorithm (SITA).** Bledi Petriti¹, M. A. Miranda¹, H. Zhu^{1,3}, P. Mulholland^{1,2}, D. Crabb³, C. Bronze¹, R. Anderson², D. F. Garway-Heath¹. ¹National Institute for Health Research (NIHR) Biomedical Research Centre, Moorfields Eye Hospital NHS Foundation Trust and UCL Institute of Ophthalmology, London, United Kingdom; ²Optometry and Vision Science Research Group, University of Ulster, Coleraine, United Kingdom; ³Division of Optometry and Visual Sciences, City University London, London, United Kingdom *CR
- 5116 — B0105 Gaussian Mixture Model Expectation Maximization for Glaucoma Progression Detection: An open-source R Package.** Edward De Guzman¹, C. Bowd², M. H. Goldbaum², G. S. Mahmoudi Nezhad¹, S. Yousefi^{1,3}. ¹Department of Ophthalmology, University of Tennessee Health Science Center, Memphis, TN; ²University of California San Diego, California, CA; ³Department of Genetics, Genomics, and Informatics, University of Tennessee Health Science Center, Memphis, TN
- 5117 — B0106 Modelling the contrast transducer for intense perimetric stimuli.** Andrew J. Anderson, S. Rashidi, A. Turpin. University of Melbourne, Parkville, Victoria, Australia *CR
- 5118 — B0107 Validating variational Bayes linear regression model with 10-2.** Hiroshi Murata, R. Asaoka. Department of Ophthalmology, The University of Tokyo Hospital, Tokyo, Tokyo, Japan *CR
- 5119 — B0108 Visual Field-based Automatic Diagnosis of Glaucoma Using Deep Convolutional Neural Network.** Fei Li¹, K. Gao¹, Z. Wang², G. Qu³, H. Zhong⁴, Y. Qiao³, X. Zhang¹. ¹Zhongshan Ophthalmic Center, State Key Laboratory of Ophthalmology, Sun Yat-Sen University, Guangzhou, China; ²SenseTime Group Limited, Hong Kong, China; ³Guangdong key lab of Computer Vision & Virtual Reality, Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences, Shenzhen, China; ⁴Department of Ophthalmology, the First Affiliated Hospital of Kunming Medical University, Kunming, China
- 5120 — B0109 A comparison study between Humphrey automated perimetry and fundus automated perimetry Compass in ocular hypertension patients and glaucomatous ones.** Alessandra Rosati^{1,2}, A. Perdicchi^{1,2}, F. Gualdi^{1,2}, A. de Paula^{1,2}, G. Scuderi^{1,2}. ¹Sant'Andrea Hospital, "La Sapienza" University, Rome, Rome, Italy; ²Ophthalmology Unit, NESMOS Department, St. Andrea Hospital, Faculty of Medicine and Psychology, University of Rome "La Sapienza", Via di Grottarossa 1035, Rome 00189, Italy, Rome, Italy
- 5121 — B0110 Expediency of the automated perimetry using the Goldmann V stimulus size in visually impaired glaucoma patients.** Cristiano Umbelino, A. Morgan, L. Mazzoli, C. Urata, A. Kusabara, N. Kasahara. Ophthalmology, Santa Casa de Sao Paulo, Sao Paulo, Brazil
- 5122 — B0111 Comparison of the test-retest variability (TRV) between MP3 and Octopus 900 using 0.5 degree high resolution perimetry.** Takuya Numata, C. Matsumoto, S. Okuyama, H. Nomoto, S. Hashimoto, F. Tanabe, Y. Shimomura. Kindai University Faculty of Medicine, Osakasayama City, Osaka, Japan
- 5123 — B0112 Dynamic color and brightness adaptation abnormalities in early stages of glaucoma.** Muen Yang, M. W. Dul, R. Bachy, Q. Zaidi. SUNY College of Optometry, Forest Hills, NY
- 5124 — B0113 Chromatic pupillometry can accurately classify functional severity in primary open angle glaucoma.** Dan Milea¹, D. Rukmini¹, Z. Jing¹, S. Sharma¹, S. A. Perera², R. Husain², S. Christopher², E. Atalay², E. Lamoureux², B. Mani², T. Aung², R. Najjar^{1,2}. ¹Visual Neuroscience, Singapore Eye Research Institute, Singapore, Singapore; ²Singapore Eye Research Institute, Singa, Singapore *CR
- 5125 — B0114 The agreement between an iPad visual field app and Humphrey Frequency Doubling Technology in screening for visual field defects at health fairs.** Ken Kitayama^{1,2}, A. G. Young^{1,2}, F. Yu¹, A. L. Coleman^{1,2}. ¹UCLA Stein Eye Institute, Los Angeles, CA; ²David Geffen School of Medicine at UCLA, Los Angeles, CA *CR
- 5126 — B0115 Comparison of Perimetry for Glaucoma Using Standard Size iPad and Large Screen iPad Pro with Humphrey Field Analyzer.** Yu Xiang George Kong^{2,1}, L. Sahhar², K. R. Martin³, M. He¹, J. G. Crowston^{1,2}, A. J. Vingrys⁴. ¹Ophthalmology Research, Centre for Eye Research Australia, East Melbourne, Victoria, Australia; ²Ophthalmology, Royal Victorian Eye and Ear Hospital, Melbourne, Victoria, Australia; ³Ophthalmology, Cambridge University Hospitals NHS Foundation Trust, Cambridge, Cambridgeshire, United Kingdom; ⁴Department of Optometry & Vision Sciences, The University of Melbourne, Melbourne, Victoria, Australia *CR

5127 — B0116 Pointwise variability of a tablet perimetry application. *Algis J. Vingrys¹, S. M. Prea¹, A. Mehta², M. He⁶, J. G. Crowston^{3,4}, V. Gupta², K. R. Martin⁵, Y. Kong^{3,4}.* ¹Optometry & Vision Sciences, University of Melbourne, Parkville, Victoria, Australia; ²All India Institute of Medical Sciences, New Delhi, India; ³Center for Eye Research Australia, The University of Melbourne, Melbourne, Victoria, Australia; ⁴Royal Victorian Eye and Ear Hospital, Melbourne, Victoria, Australia; ⁵Department of Ophthalmology, Cambridge University Hospitals NHS Foundation Trust, Cambridge, Cambridgeshire, United Kingdom; ⁶Department of Ophthalmology, The University of Melbourne, Melbourne, Victoria, Australia *CR

5128 — B0117 Does Age Influence Test-retest Variability of 10-2 Visual Fields? *Lam Lu¹, C. De Moraes¹, J. M. Liebmann¹, G. A. Cioffi¹, D. Blumberg¹, L. A. Al-Aswad¹, R. Ritch², D. C. Hood³.* ¹Department of Ophthalmology, Edward S. Harkness Eye Institute, New York City, NY; ²Department of Ophthalmology, Einhorn Clinical Research Center, New York City, NY; ³Department of Psychology, Columbia University, New York City, NY ✕

5129 — B0118 The effect of observer response criterion on perimetric sensitivity. *Andrew Turpin², N. Rubinstein¹, A. M. McKendrick¹.* ¹Department of Optometry and Vision Sciences, The University of Melbourne, Melbourne, Victoria, Australia; ²School of Computing and Information Systems, The University of Melbourne, Melbourne, Victoria, Australia *CR

5130 — B0119 Does the eye testing order for visual fields matter? *Stephen R. Kelly, S. R. Bryan, D. P. Crabb.* Division of Optometry and Visual Sciences, School of Health Sciences, City, University of London, London, United Kingdom *CR

5131 — B0120 Spontaneous and evoked gaze movements in fundus perimetry. *Antonio Modarelli¹, L. M. Rossetti¹, L. Ottobelli¹, P. Fogagnolo¹, D. P. Crabb², G. Montesano^{1,2}.* ¹Eye Clinic, University of Milan, Milan, Italy; ²Optometry and Visual Sciences, City, University of London, London, United Kingdom *CR

5132 — B0121 Measurements of fixation eye movements with head-mounted perimeter “imo”. *Takuya Ishibashi¹, C. Matsumoto¹, H. Nomoto¹, I. Umebara¹, A. Wakayama¹, s. kimura², Y. Shimomura¹.* ¹Kindai University Faculty of Medicine, Osakasayama, Japan; ²CREWT Medical, Inc, Osaka, Japan *CR

5133 — B0122 Influence of Head Position on Blind Spot location in Visual Field Assessment. *Fumi Tanabe, C. Matsumoto, S. Okuyama, H. Nomoto, T. Kayazawa, T. Numata, Y. Shimomura.* Ophthalmology, Kindai University Faculty of Medicine, Osaka Sayama, Japan

5134 — B0123 Effect modification of refractive error on visual field pattern deviation in glaucoma. *Qingying Jin^{1,2}, T. Thein², L. R. Pasquale³, L. Q. Shen³, M. V. Boland⁴, S. R. Wellik⁵, C. De Moraes⁶, J. S. Myers⁷, P. J. Bex⁸, N. Baniasadi², D. Li², H. Wang^{9,2}, M. Wang², T. Elze².* ¹Department of Psychology, Jilin University, Changchun, Jilin, China; ²Schepens Eye Research Institute, Harvard Medical School, Boston, MA; ³Mass. Eye and Ear, Harvard Medical School, Boston, MA; ⁴Wilmer Eye Institute, Johns Hopkins University School of Medicine, Baltimore, MD; ⁵Bascom Palmer Eye Institute, Miami, FL; ⁶Edward S. Harkness Eye Institute, Columbia University, New York, NY; ⁷Wills Eye Hospital, Philadelphia, PA; ⁸Department of Psychology, Northeastern University, Boston, MA; ⁹Institute for Psychology and Behavior, Jilin University of Finance and Economics, Changchun, Jilin, China *CR

Exhibit Hall B0158-B0183

Wednesday, May 02, 2018 3:30 PM-5:15 PM

Genetics Group

483 Genetics of Glaucoma

Moderators: *Sayoko E. Moroi and Jessica Cooke Bailey*

5135 — B0158 Ocular phenome-wide association study (PheWAS) of glaucoma-associated genes identifies significant associations with ocular quantitative traits. *Baojian Fan¹, V. Konduri¹, P. Ferdina Marie Sharmila², N. Soumitra², S. Sripriya², D. S. Friedman³, L. Vijaya⁴, J. L. Haines⁵, R. J. George⁴, J. L. Wiggs¹.* ¹Dept of Ophthalmology Harvard Med Sch, Massachusetts Eye & Ear Infirmary, Boston, MA; ²SNONGC Department of Genetics and Molecular Biology, Vision Research Foundation, Chennai, India; ³Wilmer Eye Institute, Johns Hopkins Medical School, Baltimore, MD; ⁴Medical Research Foundation, Sankara Nethralaya, Chennai, India; ⁵Department of Population and Quantitative Health Sciences, Institute for Computational Biology, Case Western Reserve University School of Medicine, Cleveland, OH

5136 — B0159 Genome-wide association study of primary open-angle glaucoma in continental and admixed African populations. *Pieter W. Bonnemaier^{1,2}, A. Iglesias^{1,3}, A. Sanyiw⁴, H. G. Hassan⁵, H. Philippin⁶, C. Cook⁷, J. L. Wiggs⁸, C. J. Hammond⁹, M. A. Hauser¹⁰, H. G. Lemij¹¹, R. Loos^{14,15}, C. van Duijn¹², A. A. Thiadens¹, C. C. Klover^{1,13}.* ¹Department of Ophthalmology & Epidemiology, Erasmus MC, Rotterdam, Netherlands; ²The Rotterdam Eye Hospital, Rotterdam, Netherlands; ³Department of Clinical Genetics, Erasmus MC, Rotterdam, Netherlands; ⁴Department of Ophthalmology, Muhimbili University of Health and Allied Sciences, Dar es Salaam, Tanzania, United Republic of; ⁵Department of Ophthalmology, Comprehensive Community Based Rehabilitation in Tanzania (CCBRT) Hospital, Dar es Salaam, United Republic of; ⁶Department of Ophthalmology, Kilimanjaro Christian Medical Centre, Moshi, Tanzania, United Republic of; ⁷Division of Ophthalmology, University of Cape Town, Cape Town, South Africa; ⁸Department of Ophthalmology, Harvard Medical School, Boston, MA; ⁹Department of Twin Research and Genetic Epidemiology, King's College London, London, United Kingdom; ¹⁰Department of Ophthalmology & Medicine, Duke University, Durham, NC; ¹¹Glaucoma Service, The Rotterdam Eye Hospital, Rotterdam, Netherlands; ¹²Department of Epidemiology, Erasmus MC, Rotterdam, Netherlands; ¹³Department of Ophthalmology, Raaboud University Medical Center, Nijmegen, Netherlands; ¹⁴The Charles Bronfman Institute of Personalized Medicine, Icahn School of Medicine at Mount Sinai, New York, NY; ¹⁵The Mindich Child Health and Development Institute, Icahn School of Medicine at Mount Sinai, New York, NY

5137 — B0160 Genomic Architecture of POAG in Individuals of African Descent

--African Descent & Glaucoma Evaluation Study (ADAGESIII). Kent Taylor^{1,2}, X. Guo¹, L. M. Zangwill³, J. M. Liebmann¹, C. A. Girkin⁴, R. M. Feldman⁵, H. Dubiner⁶, N. D. Palmer^{7,8}, B. I. Freedman^{8,9}, D. W. Bowden^{10,7}, M. C. Ng^{10,7}, Y. I. Chen^{1,2}, R. Ayyagari³, J. I. Rotter^{1,2}, R. N. Weinreb³. ¹Translational Genomics and Population Sciences, Los Angeles Biomedical Research Institute, Torrance, CA; ²Pediatrics, University of California Los Angeles, Los Angeles, CA; ³Department of Ophthalmology, Hamilton Glaucoma Center, Shiley Eye Institute, UC San Diego, La Jolla, CA; ⁴Department of Ophthalmology, University of Alabama at Birmingham, Birmingham, Birmingham, AL; ⁵Ruiz Department of Ophthalmology, University of Texas Health Science Center, Houston, TX; ⁶Eye Care Center Management, Inc, Marrow, GA; ⁷Center for Genomics and Personalized Medicine Research, Wake Forest School of Medicine, Winston-Salem, NC; ⁸Center for Public Health Genomics, Wake Forest School of Medicine, Winston-Salem, NC; ⁹Department of Internal Medicine, Section on Nephrology, Wake Forest School of Medicine, Winston-Salem, NC; ¹⁰Department of Biochemistry, Wake Forest School of Medicine, Winston-Salem, NC; ¹¹Bernard and Shirlee Brown Glaucoma Research Laboratory, Harkness Eye Institute, Columbia University Medical Center, New York, NY *CR

5138 — B0161 In-silico prediction of novel splice altering variants in the myocilin gene in primary open angle glaucoma.

Angela Cree¹, L. O'Gorman¹, H. Griffiths¹, A. Lotery¹, J. Gibson², S. Ennis¹. ¹Faculty of Medicine, University of Southampton, Southampton, United Kingdom; ²Faculty of Natural and Environmental Sciences, University of Southampton, Southampton, United Kingdom

5139 — B0162 Targeted sequencing to identify the candidate gene in two south Indian POAG families.

Periasamy Sundaresan¹, M. H. SHAH¹, K. S. R², B. D³, M. K⁴, M. A. Kader⁵. ¹Genetics, Aravind Med Res Foundation, Madurai, Tamilnadu, India; ²Glaucoma clinic, Aravind Eye Hospital, Madurai, Tamilnadu, India; ³Bioinformatics, Aravind Medical Research Foundation, Madurai, Tamilnadu, India; ⁴Bioinformatics, Aravind Medical Research Foundation, Madurai, Tamilnadu, India; ⁵Glaucoma clinic, Aravind Eye Hospital, Tirunelveli, Tamilnadu, India

5140 — B0163 Targeted next generation amplicon sequencing for candidate genes of Pigment Dispersion Syndrome and Pigmentary Glaucoma.

Tim Footz¹, A. Lahola-Chomiak¹, O. J. Lehmann^{1,2}, J. L. Wiggs^{3,4}, M. A. Walter¹. ¹Medical Genetics, University of Alberta, Edmonton, Alberta, Canada; ²Ophthalmology, University of Alberta, Edmonton, Alberta, Canada; ³Ophthalmology, Massachusetts Eye & Ear, Harvard Medical School, Boston, MA; ⁴Ocular Genomics Institute, Massachusetts Eye and Ear, Harvard Medical School, Boston, MA

5141 — B0164 Massively Parallel sequencing of Mitochondrial DNA and evaluation of cellular dysfunction in High Tension and Normal Tension Glaucoma.

Neeru A. Vallabh¹, D. Criddle², A. Choudhary¹, B. Lane¹, B. McDonagh², C. E. Willoughby¹. ¹Eye and Vision Science, University of Liverpool, Manchester, United Kingdom; ²University of Liverpool, Liverpool, United Kingdom

5142 — B0165 Identifying Novel Genetic Loci associated with Primary Open-Angle Glaucoma.

Sangbea Kim^{1,2}, Z. Qi³, Y. Chen⁴, Y. Li^{1,2}, B. J. Frankfort⁵, X. Sun⁴, J. Cooke Bailey⁶, J. L. Wiggs⁷, Y. Guan³, R. Chen^{1,2}. ¹Human Genome Sequencing Center, Baylor College of Medicine, Houston, TX; ²Molecular and Human Genetics, Baylor College of Medicine, Houston, TX; ³CNRC, Department of Pediatrics, Baylor College of Medicine, Houston, TX; ⁴Department of Ophthalmology, Fudan University, Shanghai, China; ⁵Department of Ophthalmology, Baylor College of Medicine, Houston, TX; ⁶Department of Quantitative Health Sciences, Case Western Reserve University, Cleveland, OH; ⁷Department of Ophthalmology, Harvard Medical School, Boston, MA

5143 — B0166 Rare non-synonymous genetic variants do not account for susceptibility to primary angle closure glaucoma at eight known common variant GWAS loci.

Eranga N. Vithana^{1,2}, M. E. Nongpiur^{1,2}, Z. Li³, S. A. Perera^{1,4}, R. Husain⁴, T. Wong^{1,4}, C. Ho⁴, C. Cheng^{1,2}, T. Wong^{1,5}, C. Khor^{1,3}, T. Aung^{1,4}. ¹Singapore Eye Research Institute, Singapore, Singapore; ²Duke-NUS Graduate Medical School, Singapore, Singapore; ³Genome Institute of Singapore, A-STAR, Singapore, Singapore; ⁴Glaucoma, Singapore National Eye Centre, Singapore, Singapore; ⁵Singapore National Eye Centre, Singapore, Singapore

5144 — B0167 Shared genetic effects between diabetes-related traits and glaucoma-related traits.

Louis R. Pasquale¹, V. Laville², H. Aschard^{2,3}, A. Iglesias⁴, J. H. Kang⁵, D. Mackey⁶, V. Vitari⁷, C. van Duijn⁴, J. L. Haines⁸, J. L. Wiggs¹. ¹Ophthalmology, Harvard Medical School, Boston, MA; ²Pasteur Institute, Paris, France; ³Harvard School of Public Health, Boston, MA; ⁴Erasmus University, Rotterdam, Netherlands; ⁵Brigham and Women's Hospital, Boston, MA; ⁶Lions Eye Institute, Netherlands, Tasmania, Australia; ⁷The University of Edinburgh, Edinburgh, United Kingdom; ⁸Case Western Reserve University, Cleveland, OH

5145 — B0168 Genetic analysis reveal significant and consistent pairwise interactions between common non-coding LOXLI polymorphisms.

Mineo Ozaki^{1,2}, T. Mizoguchi³, S. Nakano⁴, S. Manabe⁵, M. Inatani⁶, K. Sugiyama⁷, S. Williams⁸, M. Ramsay⁹, T. R. Carmichael⁸, K. Mori¹⁰, Y. S. Astakhov¹¹, S. Y. Astakhov¹¹, M. Dubina^{11,12}, T. Kubota⁴, T. Aung¹³, C. Khor¹⁴. ¹Ozaki Eye Hosp, Hyuga, Miyazaki, Japan; ²Ophthalmology, Faculty of Medicine University of Miyazaki, Miyazaki, Japan; ³Mizoguchi Eye Hospital, Sasebo, Japan; ⁴Ophthalmology, Oita University Faculty of Medicine, Oita, Japan; ⁵Hayashi Eye Hospital, Fukuoka, Japan; ⁶Ophthalmology, Faculty of Medical Science, University of Fukui, Fukui, Japan; ⁷Ophthalmology, Kanazawa University Graduate School of Medical Science, Kanazawa, Japan; ⁸Ophthalmology, University of the Witwatersrand, Johannesburg, South Africa; ⁹Sydney Brenner Institute for Molecular Bioscience, Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, South Africa; ¹⁰Ophthalmology, Kyoto Prefectural University of Medicine, Kyoto, Japan; ¹¹Pavlov First Saint Petersburg State Medical University, St. Petersburg, Russian Federation; ¹²St. Petersburg Academic University, St. Petersburg, Russian Federation; ¹³Singapore Eye Research Institute, Singapore, Singapore; ¹⁴Genome Institute of Singapore, Singapore, Singapore

5146 — B0169 Rare, non-synonymous variants at CACNA1A have a limited role in the pathogenesis for exfoliation syndrome.

Mei Chin Lee^{1,2}, A. Chan^{3,2}, Y. Chong¹, E. N. Vithana^{1,2}, C. Khor^{4,5}, T. Aung^{6,7}. ¹Ocular Genomics, Singapore Eye Research Institute, Singapore, Singapore; ²The Ophthalmology & Visual Sciences Academic Clinical Program, Duke-NUS Medical School, Singapore, Singapore; ³Translational Ophthalmic Pathology, Singapore Eye Research Institute, Singapore, Singapore; ⁴Human Genetics, Genome Institute of Singapore, Singapore, Singapore; ⁵Singapore Eye Research Institute, Singapore, Singapore; ⁶Glaucoma, Singapore National Eye Centre, Singapore, Singapore; ⁷Glaucoma, Singapore Eye Research Institute, Singapore, Singapore

5147 — B0170 Mutations of CYP11B and other candidate genes in Chinese patients with primary congenital glaucoma.

Man Hu^{1,2}, h. wang², L. Li¹, N. Wang². ¹Department of Ophthalmology, Beijing Children's Hospital, Capital Medical University, Beijing, China; ²Department of Ophthalmology, Beijing Tongren Eye Center, Beijing Tongren Hospital, Capital Medical University, Beijing, China

5148 — B0171 Genetic Interactions of Crystallins with Known Primary Congenital Glaucoma Genes. Subhabrata Chakrabarti¹, M. Kabra¹, G. Pyatla¹, S. Rath¹, A. K. Mandala¹, S. Senthil², I. Kaur¹, R. C. Khanna³, H. Khanna⁴. ¹Brien Holden Eye Research Centre, LV Prasad Eye Institute, Hyderabad, Andhra Pradesh, India; ²Jasti V Ramanamma Children's Eye Care Centre, L.V. Prasad Eye Institute, Hyderabad, India; ³Gullapalli Pratibha Rao International Centre for Advancement of Rural Eye Care, L.V. Prasad Eye Institute, Hyderabad, Telangana, India; ⁴Ophthalmology, UMASS Medical School, Worcester, MA

5149 — B0172 Preliminary Results of Whole exome sequencing of Primary Angle Closure Glaucoma in 1,000 Singaporean Chinese cases and 1,000 controls. Tin Aung^{1,2}, E. Vithana¹, M. E. Nongpiur¹, S. Perera¹, C. Khor³. ¹Singapore Eye Research Institute, Singapore National Eye Centre, Singapore, -----, Singapore; ²National University of Singapore, Singapore, -----, Singapore; ³Genome Institute of Singapore, Singapore, -----, Singapore

5150 — B0173 Pharmacogenetics of the Spanish Multicenter Genetic Glaucoma Group. Elena Milla¹, S. Duch², M. Gamundi³, M. Carballo³. ¹Ophthalmology, Hospital Clinic, Barcelona, Spain; ²ICO, Barcelona, Spain; ³Hospital de Terrassa, Terrassa, Spain

5151 — B0174 Pharmacogenetic markers predictors of response to treatment for primary open angle glaucoma: Systematic review and meta-analysis. David Jimenez-Collado¹, A. C. Perez-Ortiz^{2,1}, A. Rendon³, C. Zepeda-Palacio^{4,1}, C. Palacio-Pastrana⁴, S. Jimenez-Chaidez¹, B. Antonio-Aguirre¹, F. J. Estrada-Mena¹. ¹Escuela de Medicina, Universidad Panamericana, Mexico City, Benito Juárez, Mexico; ²School of Public Health, Yale University, New Haven, CT; ³Institut de la Vision, Paris, France; ⁴Fundacion Hospital Nuestra Señora de la Luz IAP, Mexico City, Mexico

5152 — B0175 Genetic Risk Score for Primary Open-Angle Glaucoma Prediction: Inverse Correlations with Plasma Vitamin C and E Concentrations. Vicente Zanon-Moreno^{1,2}, J. J. Garcia-Medina³, M. D. Pinazo-Duran¹, J. M. Ordovás⁴, D. Corella². ¹Ophthalmology Research Unit Santiago Grisolia, Dr. Peset University Hospital, Valencia, Valencia, Spain; ²Preventive Medicine & Public Health, University of Valencia, Valencia, Valencia, Spain; ³Ophthalmology, Reina Sofia University General Hospital, Murcia, Spain; ⁴Nutrition and Genomics Laboratory, Tufts University, Boston, MA

5153 — B0176 Diagnostic genetic testing using whole exome sequencing in Filipino families with early-onset glaucoma. Edward Ryan Collantes^{1,2}, B. Fan¹, K. Linkroum¹, J. L. Wiggs¹. ¹Harvard Medical School, Mass Eye and Ear, Cambridge, MA; ²Department of Ophthalmology, Manila Doctors Hospital, Manila, Philippines

5161 — B0184 TGFβ Signaling in Human Schlemm's Canal Endothelial Cells. Jingwen Cai¹, W. M. Johnson², K. M. Perikuma², W. Stamer², Y. Liu¹. ¹Cellular Biology and Anatomy, Augusta University, Augusta, GA; ²Department of Ophthalmology, Duke University, Durham, NC

5154 — B0177 Identifying discordant twins for glaucoma using self-report. Sam Myers, M. J. Simcoe, J. Vehof, C. J. Hammond. Kings College London, London, United Kingdom

5155 — B0178 Genomic modulation of optic nerve regeneration in mice. Jiaying Wang^{1,2}, Y. Li¹, R. King¹, F. Struebing¹, E. Geisert¹. ¹Ophthalmology, Emory University, Atlanta, GA; ²Ophthalmology, Tianjin Medical University General Hospital, Tianjin, China

5156 — B0179 Dissecting the Role of the Premelanosome Protein Gene (PMEL) in the Development of Pigmentary Glaucoma Using the Zebrafish Animal Model. Kim Nguyen-Phuoc², G. Neil³, T. Foot², A. Lahola-Chomiak², O. J. Lehmann^{2,1}, M. A. Walter², W. Allison^{2,2}. ¹Ophthalmology, University of Alberta, Edmonton, Alberta, Canada; ²Medical Genetics, University of Alberta, Edmonton, Alberta, Canada; ³Biological Sciences, University of Alberta, Edmonton, Alberta, Canada

5157 — B0180 Functional annotation of glaucoma-associated ATXN2 variants using zebrafish. Shi Song Rong¹, L. R. Pasquale^{1,2}, A. Larson¹, K. M. Bujakowska¹, J. L. Wiggs¹. ¹Ophthalmology, Massachusetts Eye and Ear, Harvard Medical School, Brookline, MA; ²Channing Division of Network Medicine, Department of Medicine, Brigham & Women's Hospital and Harvard Medical School, Boston, MA

5158 — B0181 Strain dependent differences modulating ocular phenotypes in *Lmx1b* mutant mice. Nicholas Tolman^{1,2}, K. H. MacNicol¹, K. Kizhatil¹, S. Nair³, S. H. Cross⁴, R. S. Smith¹, S. W. John^{1,2}. ¹The Jackson Laboratory, Bar Harbor, ME; ²Tufts University, Boston, MA; ³University of San Francisco, San Francisco, CA; ⁴The University of Edinburgh, Edinburgh, United Kingdom

5159 — B0182 Transcriptomic profiling of retinal ganglion cells following microbead induced intraocular pressure elevation. Yong H. Park^{1,2}, E. J. Ostrin³, S. Kim⁴, R. Chen^{4,5}, B. J. Frankfort^{1,2}. ¹Ophthalmology, Baylor College of Medicine, Houston, TX; ²Clayton Foundation for Research, Houston, TX; ³Pulmonary Medicine, The University of Texas MD Anderson Cancer Center, Houston, TX; ⁴Human Genome Sequencing Center, Baylor College of Medicine, Houston, TX; ⁵Molecular and Human Genetics, Baylor College of Medicine, Houston, TX

5160 — B0183 miRNA-mediated gene expression changes in a glaucoma mouse model. Lu Lu¹, J. Yue², F. Xu¹, M. Jablonski³, R. Williams¹. ¹Department of Genetics, Genomics and Informatics, UTHSC, Memphis, TN; ²Department of Pathology, UTHSC, Memphis, TN; ³Department of Ophthalmology, UTHSC, Memphis, TN

Exhibit Hall B0185-B0215

Wednesday, May 02, 2018 3:30 PM-5:15 PM

Clinical/Epidemiologic Research

484 Consequences of and associations with vision impairment

Moderators: Farzana Choudhury and Joshua R. Ehrlich

5162 — B0185 Subjective Memory Complaints in the Visually Impaired: An NHANES Analysis. Moon Jeong Lee¹, V. Varadaraj¹, P. Y. Ramulu¹, H. Whitson^{2,5}, J. A. Deal^{3,4}, B. K. Swenor^{1,3}. ¹Wilmer Eye Institute, Johns Hopkins University School of Medicine, Baltimore, MD; ²Department of Geriatrics and Ophthalmology, Duke University School of Medicine, Durham, NC; ³Epidemiology, Johns Hopkins Medical Institutions, Baltimore, MD; ⁴Center on Aging and Health, The Johns Hopkins Medical Institutions, Baltimore, MD; ⁵Department of Ophthalmology, Duke University Medical Center, Durham, NC

5163 — B0186 Age-related eye disease and cognitive function. Melanie Varin¹, M. Kergoat², S. Belleville², G. Li³, J. Rousseau², M. Roy-Gagnon¹, S. Moghadaszadeh⁴, E. E. Freeman^{1,4}. ¹School of Epidemiology and Public Health, Ottawa University, Ottawa, Ontario, Canada; ²Institut universitaire de gériatrie de Montréal, Montreal, Quebec, Canada; ³Ophthalmology Department, Université de Montréal, Montreal, Quebec, Canada; ⁴Maisonneuve-Rosemont Hospital Research Center, Montreal, Quebec, Canada

5164 — B0187 The intrinsically-photosensitive retinal ganglion cell (ipRGC)-mediated pupil light reflex (PLR) as a potential biomarker for sleep and cognition. Yanjun Chen, A. Pinto, A. J. Paulsen, K. J. Cruickshanks. Ophthalmology and Visual Sciences, University of Wisconsin School of Medicine and Public Health, Madison, WI

5165 — B0188 Effect of Central Serous Chorioretinopathy on Sleep and Mood. Yunfei Yang¹, S. R. Stevenson¹, C. Andrews¹, I. Alexander², R. Foster², S. Downes¹. ¹Oxford Eye Hospital, Oxford University Hospitals NHS Foundation Trust, Nuffield Laboratory of Ophthalmology, University of Oxford, Oxford, United Kingdom; ²Nuffield Laboratory of Ophthalmology, Sleep and Circadian Neuroscience Institute, University of Oxford, Oxford, United Kingdom

- 5166 — B0189 Association between vision-specific functioning and mobility, and objectively-assessed cognitive impairment.** Eva Fenwick^{1,2}, A. T. Gan¹, R. Man¹, P. Gupta¹, C. Sabanayagam^{1,2}, C. Cheng^{1,2}, C. Chen^{3,4}, C. Cheung⁵, C. Wang⁶, N. Ramani^{3,4}, X. Xu^{3,4}, S. Hilal^{3,4}, T. Y. Wong^{1,2}, E. L. Lamoureux^{1,2}. ¹Singapore Eye Research Institute, Singapore, Singapore; ²Duke-NUS Medical School, Singapore, Singapore; ³Department of Pharmacology, National University of Singapore, Singapore, Singapore; ⁴Memory Aging and Cognition Centre, National University Health System, Singapore, Singapore; ⁵The Chinese University of Hong Kong, Hong Kong, Hong Kong; ⁶Department of Ophthalmology, National University of Singapore, Singapore, Singapore
- 5167 — B0190 Longitudinal impact of visual impairment on cognitive function in the US.** Stephanie Chen¹, S. Pershing^{1,2}. ¹Ophthalmology, Stanford University School of Medicine, Palo Alto, CA; ²Ophthalmology, Veterans Affairs Palo Alto Healthcare System, Palo Alto, CA
- 5168 — B0191 Development of a screening tool to identify eye conditions in patients admitted to hospital for stroke.** Michelle Courtney-Harris¹, N. Jolly¹, F. J. Rowe^{2,1}, K. A. Rose¹. ¹Graduate School of Health Orthoptics, University of Technology Sydney, Sydney, New South Wales, Australia; ²University of Liverpool, Liverpool, United Kingdom
- 5169 — B0192 Risk of ischemic stroke, hemorrhagic stroke, and all-cause mortality in retinal vein occlusion: A population-based cohort study.** Yu-Yen Chen¹, S. Sheu². ¹Ophthalmology, National Yang-Ming University Hospital, Taipei City, Taiwan; ²Ophthalmology, Kaohsiung Veterans General Hospital, Kaohsiung, Taiwan
- 5170 — B0193 Association of Retinal Vein Occlusion with Cardiovascular Events and Mortality: A Systematic Review and Meta-Analysis.** Chris Y. Wu¹, A. Deobhakta^{1,2}. ¹Ophthalmology, New York Eye and Ear Infirmary, New York, NY; ²Ophthalmology, Icahn School of Medicine at Mount Sinai, New York, NY
- 5171 — B0194 An Evaluation of Computer Tablet-based Low Contrast Acuity Measurement.** Yi Pang, L. Sparschu, E. Nylin. Illinois Coll of Optom, Chicago, IL *CR
- 5172 — B0195 The Effect of filter lenses on Reading Distance and Visual Performance.** Jinhua Bao^{1,2}, C. Xu^{1,2}, B. Drobe^{3,2}, H. Chen^{1,2}. ¹School of Ophthalmology and Optometry, Wenzhou Medical University, Wenzhou, China; ²WEIRC, WMU-Essilor International Research Centre, Wenzhou, China; ³R&D Vision Sciences AMERA, Essilor International, Singapore, Singapore *CR
- 5173 — B0196 Evaluation of a wearable optical-digital assistive device with multiple applications for visually impaired.** Filippo Maria Amore, v. silvestri, M. Sulfaro, P. Piscopo, P. Sasso. Nat. Cen for Serv and Res on Low Vision, Inter Agency for Prev of Blindness - Italy, Roma, Italy
- 5174 — B0197 CAPTCHA performance in patients with active macular disease.** Gautam Vangipuram, C. S. Lee, A. Y. Lee. University of Washington, Seattle, WA
- 5175 — B0198 Qualitative assessment of Traumatic Brain Injury-related Visual Light Sensitivity.** Nawaf Almutairi^{3,2}, S. Balaji¹, N. Muthuramalingam^{2,4}, S. Aljohani^{4,2}. ¹Nifty Eye Care, Chennai, India; ²Qassim University, Qassim, Saudi Arabia; ³Vision Science, Pacific University, Forest Grove, OR; ⁴Salus University, Philadelphia, PA
- 5176 — B0199 Knowledge, beliefs, and attitudes regarding major eye diseases. Comparison between Canadian and Mexican millennials.** Luz A. Paczka-Giorgi¹, M. Núñez-Méndez², M. G. Tinajero¹, S. García Aurora³. ¹Life Sciences, University of Toronto, Toronto, Ontario, Canada; ²Universidad Panamericana, Mexico City, Mexico; ³ISSSTE, Guadalajara, Mexico
- 5177 — B0200 Development and Qualitative validation of KAMRA Inlay Patient Questionnaire (KIPQ).** Srividhya Vilupuru¹, L. Lin¹, C. van de Poel¹, R. L. Chalmers³, L. A. Webb⁴. ¹Acufocus, Irvine, CA; ²Optometry, Marshall B. Ketchum University, Fullerton, CA; ³Clinical Trial Consultant, Atlanta, GA; ⁴Patient-Centered Outcomes Assessments, Cheshire, United Kingdom *CR
- 5178 — B0201 Vision-related quality of life in keratoconus.** Jeremy C. Tan^{2,1}, V. Nguyen², A. Ferd¹, E. Fenwick², S. L. Watson². ¹Ophthalmology, Prince Of Wales Hospital, Sydney, New South Wales, Australia; ²Save Sight Institute, University Of Sydney, Sydney, New South Wales, Australia
- 5179 — B0202 Vision-related Activity Limitations of a Large Sample of People with Retinitis Pigmentosa.** Francisco Costela^{3,2}, K. Pesudovs¹, M. Sandberg^{4,2}, C. Weigel-DiFranco⁴, R. L. Woods^{3,2}. ¹Ophthalmology, Flinders University, Adelaide, South Australia, Australia; ²Ophthalmology, Harvard Medical School, Boston, MA; ³Schepens Eye Research Institute, Boston, MA; ⁴Ophthalmology, Massachusetts Eye and Ear, Boston, MA
- 5180 — B0203 The Impact of 8-year Change in Visual Acuity on Novel NEI-VFQ-25 Composites in the Los Angeles Latino Eye Study (LALES).** Malcolm Barrett, R. McKean-Cowdin, X. Jiang, M. Torres, F. Choudhury, A. Fairbrother-Crisp, B. Burkemper, R. Varma. University of Southern California, Monrovia, CA
- 5181 — B0204 Visually disabled in the Ontario Disability Support Program: Trends in socio-demographics, financial support and use of vision care benefits from 2003 to 2013.** Yaping Jin^{1,2}, S. Y. Liu³, Y. M. Buys¹, A. Khan², G. E. Trope¹. ¹Ophthalmology & Vis Sci, University of Toronto, Toronto, Ontario, Canada; ²Dalla Lana School of Public Health, University of Toronto, Toronto, Ontario, Canada; ³University of Toronto, Toronto, Ontario, Canada
- 5182 — B0205 Ophthalmologic evaluation of patients attending a low-vision rehabilitation service in Brazil.** Gabriela Cavaliere¹, M. B. Silva¹, E. Z. Frare², L. Cota², E. Hoyama^{1,2}, T. Matsuo¹, N. Hasegawa¹. ¹Hospital de Olhos de Londrina - Hoftalon, Florianopolis, Brazil; ²Pontifícia Universidade Católica de Londrina, Londrina, Brazil
- 5183 — B0206 Taking the strain? Impact of glaucoma on patient's informal caregivers.** Leanne McDonald¹, L. Chang², P. Turnbull¹, D. Crabb¹. ¹Optometry and Visual Science, City, University of London, London, United Kingdom; ²Ophthalmology, North West Anglia NHS Foundation Trust, Huntingdon, United Kingdom *CR
- 5184 — B0207 Optimizing the accuracy of activity monitors in visually-impaired older populations.** Rohan P. Bajaj¹, L. Dillon², P. Y. Ramulu¹, A. Tiedemann³, K. Jakobsen², K. Rogers², L. J. Keay². ¹Dana Center for Preventative Ophthalmology, Johns Hopkins Wilmer Eye Institute, Baltimore, MD; ²The George Institute for Global Health, UNSW, Sydney, New South Wales, Australia; ³Sydney School of Public Health, University of Sydney, Sydney, New South Wales, Australia
- 5185 — B0208 Physical activity in people aged 50+ with low vision.** Lisa J. Keay¹, K. Jakobsen¹, L. Dillon¹, A. Tiedemann², K. Rogers¹, P. Y. Ramulu³. ¹The George Institute for Global Health, UNSW, Sydney, New South Wales, Australia; ²Musculoskeletal Health Sydney, School of Public Health, The University of Sydney, Sydney, New South Wales, Australia; ³Dana Center for Preventive Ophthalmology, Wilmer Eye Institute, Johns Hopkins University, Baltimore, MD *CR
- 5186 — B0209 Fall Risk in Moderate Glaucoma.** Sheryl S. Wizov¹, M. Waisbourd³, C. Jordan², E. Shiuely¹, L. Gianchetti¹, J. Tran¹, C. Sanvicente¹, G. L. Spaeth¹. ¹Glaucoma Research Center, Wills Eye Hospital, Philadelphia, PA; ²Sidney Kimmel Medical College, Thomas Jefferson University, Philadelphia, PA; ³Tel-Aviv Medical Div of Ophthalmology, Tel-Aviv University, Tel-Aviv, Israel *CR
- 5187 — B0210 Central and Peripheral Visual Impairment and Contrast Sensitivity Loss as Risk Factors for Falls and Falls with Injury in 50+ year-old Chinese Americans.** Suzie Kazaryan¹, Y. Liu³, G. Richter², M. Torres², R. McKean-Cowdin^{2,3}, R. Varma², X. Jiang^{2,3}. ¹Ophthalmology, Tulane University School of Medicine, New Orleans, LA; ²Ophthalmology, USC Roski Eye Institute, Los Angeles, CA; ³Preventive Medicine, University of Southern California, Los Angeles, CA
- 5188 — B0211 Influence of two alcohol intake on night vision.** Jose J. Castro, M. Casares-Lopez, F. Martino, S. Ortiz-Peregrina, E. Hita, J. R. Jiménez. Optics, University of Granada, Granada, Granada, Spain

5189 — B0212 Visual and driving performance after alcohol consumption. *Miriam Casares-Lopez, J. J. Castro, S. Ortiz-Peregrina, L. J. del Barco, R. G. Anera. Optics, University of Granada, Granada, Granada, Spain*

5190 — B0213 Effects of age-related visual changes on distracted driving by WhatsApp. *Sonia Ortiz-Peregrina, C. Ortiz, C. Salas, M. Casares-Lopez, R. G. Anera. Optics, University of Granada, Granada, Granada, Spain*

5191 — B0214 Prevalence of Depression and Anxiety among Participants with Glaucoma in a European cohort: The Gutenberg Health Study. *Jasmin Rezapour⁷, S. Nickels⁷, A. K. Schuster⁷, M. Michal², T. Münzel¹, P. Wild³, I. Schmidtman⁴, K. Lackner⁵, A. Schulz⁶, N. Pfeiffer⁷, M. Beutel².* ¹Center for Cardiology I, University Medical Center Mainz, Mainz, Germany; ²Department of Psychosomatic Medicine and Psychotherapy, University Medical Center Mainz, Mainz, Germany; ³Center for Thrombosis and Hemostasis (CTH), University Medical Center Mainz, Mainz, Germany; ⁴Institute for Medical Biostatistics, Epidemiology and Informatics, University Medical Center Mainz, Mainz, Germany; ⁵Institute for Clinical Chemistry and Laboratory Medicine, University Medical Center Mainz, Mainz, Germany; ⁶Preventive Cardiology and Preventive Medicine / Center for Cardiology, University Medical Center Mainz, Mainz, Germany; ⁷Department of Ophthalmology, University Medical Center Mainz, Mainz, Germany

5192 — B0215 Vision, Stress, Depression, and Number of Anti-VEGF Treatments in Age-related Macular Degeneration. *Bradley E. Dougherty¹, E. E. Segerstrom¹, S. L. Cooley¹, F. H. Davidorf¹.* ¹College of Optometry, The Ohio State University, Columbus, OH; ²Ophthalmology, The Ohio State University, Columbus, OH

Exhibit Hall B0306-B0327

Wednesday, May 02, 2018 3:30 PM-5:15 PM

Eye Movements/Strabismus/Amblyopia/Neuro-Ophthalmology

485 Pediatric Ophthalmology

Moderator: Huibert J. Simonsz

5193 — B0306 Relationship Between Preoperative Axial Length And Myopic Shift After Congenital Cataract Surgery With Primary Intraocular Lens Implantation. *Diego A. Valera^{1,2}.* ¹Ophthalmology, Vista Clinic, Lima, Lima, Peru; ²Lima, National Institute of ophthalmology, Lima, Lima, Peru

5194 — B0307 Visual Outcomes after Side Ports Lensectomy and Intraocular Lens Trans-Scleral Sulcus Suture Fixation in Pediatric Marfan Syndrome. *Minjae Kim, T. Nakajima, M. Nagahara. Ophthalmology, University of Tokyo, Shinden, Adachi-ku, Japan*

5195 — B0308 Spectacle adherence in the Infant Aphakia Treatment Study: A secondary analysis of a randomized clinical trial. *Scott R. Lambert¹, L. DuBois², E. Hartmann², G. Cotsonis², C. Drews-Botsch².* ¹Ophthalmology, Stanford University, Palo Alto, CA; ²Emory University, Atlanta, GA ✕

5196 — B0309 Parenting Stress and Adherence to Occlusion Therapy in the Infant Aphakia Treatment Study: A secondary analysis of a randomized clinical trial. *Carolyn Drews-Botsch¹, M. Celano², G. Cotsonis³, L. DuBois⁴, S. R. Lambert⁵.* ¹Epidemiology, Rollins School of Public Health, Emory University, Dunwoody, GA; ²Department of Psychiatry and Behavioral Sciences, School of Medicine, Emory University, Atlanta, GA; ³Department of Biostatistics and Bioinformatics, Rollins School of Public Health, Emory University, Atlanta, GA; ⁴Department of Ophthalmology, School of Medicine, Emory University, Atlanta, GA; ⁵Department of Ophthalmology, Stanford University, Palo Alto, CA ✕

5197 — B0310 First Application of 3D Near-Vision Test for near vision examination in pediatric patients without polarized glasses: a new clinical evaluation of stereopsis. *Luigi Marino¹, D. Borroni², M. Ferronato³, M. Parekh⁴, S. Pisani¹.* ¹Dry Eye Center, Istituto Europeo Occhio Secco - Lugano- Milano, Milano, Italy; ²Department of Ophthalmology, Riga Stradins University, Riga, Latvia; ³School of Medicine, Riga Stradins University, Riga, Latvia; ⁴International Center for Ocular Physiopathology (ICOP), Venice Eye Bank - FBOV, Mestre, Italy

5198 — B0311 Validation of the Pediatric Vision Scanner (PVS) in a normal preschool population. *Shaival Shah¹, J. Jimenez², E. Rozema², M. Nguyen², A. Mehta¹.* ¹Ophthalmology, Southern California Permanente Medical Group, Tustin, CA; ²Research & Evaluation, Southern California Permanente Medical Group, Pasadena, CA ✕

5199 — B0312 Can you see the panda? Visual acuity assessment using the pandacuity test in children – preliminary results. *Torsten Strasser¹, B. Spieth², E. Zrenner^{1,3}, D. Besch², C. Kelbsch².* ¹Institute for Ophthalmic Research, University of Tuebingen, Tuebingen, Germany; ²University Eye Hospital Tuebingen, Tuebingen, Germany; ³Werner Reichardt Center for Integrative Neuroscience, Tuebingen, Germany

5200 — B0313 The fix and follow grade: a new method of grading the visual performance in infant. *Hee-Young Choi¹, H. Jeon¹, J. JUNG².* ¹Ophthalmology, Pusan national university hospital, Busan, Korea (the Republic of); ²Ophthalmology, Busan national university yangsan hospital, Yangsan, Korea (the Republic of)

5201 — B0314 Visual function and ocular morphology in relation to growth and cardiovascular status in 10-year-old children born moderate-to-late preterm. *Marita A. Gronlund¹, A. Lind¹, L. Raffa¹, K. Allvin², D. Ghazi Mroué¹, J. Dahlgren².* ¹Pediatric Ophthalmology, Inst Neurosci & Phys/Ophthal, Goteborg, Sweden; ²Department of Pediatrics, Institute of Clinical Sciences, Sahlgrenska Academy at the University of Gothenburg, Gothenburg, Sweden

5202 — B0315 Comparison of a handheld versus a flexible arm mounted SD-OCT for morphological evaluation of the retina in infants and toddlers. *Birgit Lorenz, K. Holve, R. Knobloch, K. Steger, W. Bowl. Ophthalmology, Justus-Liebig University Giessen, Giessen, Germany*

5203 — B0316 Miniature hand-held OCT probe for wide-field retinal angiography for prematurity and pediatric applications. *Shaozheng Song¹, J. Xu¹, Y. Li¹, Q. Zhang¹, R. K. Wang^{1,2}.* ¹Bioengineering, University of Washington, Seattle, WA; ²Ophthalmology, University of Washington, Seattle, WA *CR

5204 — B0317 Detection and characterisation of primary congenital glaucoma using hand-held optical coherence tomography. *Anastasia Pilat¹, S. Shah¹, V. Sheth¹, F. Proudlock¹, J. Abbot², I. Gottlob¹.* ¹University of Leicester, UK, Leicester, United Kingdom; ²Birmingham Childrens Hospital, Birmingham, United Kingdom

5205 — B0318 Longitudinal evaluation of changes in retinal architecture using optical coherence tomography (OCT) in achromatopsia. *Magdalini Triantafylla¹, V. Sheth¹, Z. Tu¹, R. McLean¹, M. G. Thomas¹, S. Koh¹, F. A. Proudlock¹, I. Gottlob¹.* ¹Ulverschroft Eye Unit, Neuroscience, Psychology and Behaviour, Robert Kilpatrick Clinical Sciences Building, Leicester Royal Infirmary, University of Leicester, Leicester, United Kingdom; ²Institute for Ophthalmic Research, Centre for Ophthalmology, University Clinics Tübingen, Tübingen, Germany

5206 — B0319 Portable OCT retinal evaluation of children undergoing vigabatrin treatment. *Xiang Ji^{1,2}, T. Wright³, C. VandenHoven², L. MacKeen², S. Dhaliwal², H. Liu^{3,2}, A. Reginald², R. Buncie², C. A. Westall^{4,2}.* ¹Institute of Medical Science, University of Toronto, Toronto, Ontario, Canada; ²Ophthalmology and Vision Sciences, Hospital For Sick Children, Toronto, Ontario, Canada; ³Faculty of Medicine, University of Ottawa, Toronto, Ontario, Canada; ⁴Ophthalmology and Vision Sciences, University of Toronto, Toronto, Ontario, Canada; ⁵Ophthalmology, Kensington Eye Institute, Toronto, Ontario, Canada

- 5207 — B0320 Searching for a structural abnormality supportive of the functional anomaly observed in pediatric patients with hydroxychloroquine associated retinal toxicity.** Andre N. Ali-Ridha^{1,2}, A. Dorfman¹, J. Yue You¹, A. Khan¹, P. Lachapelle^{1,3}. ¹Ophthalmology, Research Institute of the McGill University Health Centre/Montreal Children's Hospital, Montreal, Quebec, Canada; ²Ophthalmology, McGill University, Montreal, Quebec, Canada; ³Departments of Ophthalmology & Neurology-Neurosurgery, Research Institute of the McGill University Health Centre/Montreal Children's Hospital, Montreal, Quebec, Canada
- 5208 — B0321 Intravitreal Conbercept or Ranibizumab injections combined with laser therapy for Coats' disease.** Longli Zhang¹, Y. Ke¹, W. Wang², x. Li¹. ¹Tianjin Mmedical University Eye Hospital, Tianjin, China; ²Hebei Eye Hospital, Xintai, China
- 5209 — B0322 Can Eyemasks Reduce Neonatal Stress Following Dilated Retinal Examination?** Andrei Szgiato^{1,2}, M. Speckert³, J. Zielonka⁴, K. Hollamby⁴, M. Debono⁵, F. Altomare², E. Ng⁶, R. Nisenbaum⁷, M. Sgro⁴. ¹Ophthalmology, Université de Montréal, Montréal, Quebec, Canada; ²Ophthalmology, University of Toronto, Toronto, Ontario, Canada; ³Medicine, University of Toronto, Toronto, Ontario, Canada; ⁴Neonatology, St Michael's Hospital, Toronto, Ontario, Canada; ⁵University of Toronto, Toronto, Ontario, Canada; ⁶Neonatology, Sunnybrook Health Sciences Centre, Toronto, Ontario, Canada; ⁷Biostatistics, St Michael's Hospital, Toronto, Ontario, Canada ✕
- 5210 — B0323 Bilateral retinal detachments in a patient with Pierson Syndrome with a missense LAMB2 mutation.** Nathaniel Gelinas¹, C. Holick², L. Galang³. ¹Ophthalmology, Saint John's Providence Hospital, Royal Oak, MI; ²Michigan State University College of Osteopathic Medicine, East Lansing, MI; ³Eye Clinic of Wisconsin, Wausau, WI
- 5211 — B0324 Ocular Findings in Children with Headache.** Lisa Lin¹, W. Pan², G. Ying², G. Binenbaum^{1,2}. ¹Ophthalmology, The Children's Hospital of Philadelphia, Philadelphia, PA; ²Scheie Eye Institute, Perelman School of Medicine at the University of Pennsylvania, Philadelphia, PA *CR
- 5212 — B0325 Novel management of pediatric iris stromal cysts.** Arundhati Dev Borman, C. Fenerty, S. Biswas. Pediatric Ophthalmology, Manchester University Hospitals NHS Foundation Trust and Manchester Academic Health Sciences Centre, Manchester, United Kingdom
- 5213 — B0326 Characteristic radiologic findings in pediatric patients with adenoviral epidemic keratoconjunctivitis.** Maria Fernandez-Ruiz^{1,2}, J. Go³, A. Bhatt¹. ¹Ophthalmology, Texas Children's Hospital, Houston, TX; ²Ophthalmology, Baylor College of Medicine, Houston, TX; ³Baylor College of Medicine, Houston, TX
- 5214 — B0327 Surgical Loupe Customization to Prevent Chronic Back and Neck Pain During Ocular Surgeries.** Sidra Akhter², J. Hermesen¹, P. Kalaga³, J. Cox¹, G. Linke¹, T. Scherr¹, H. Akhter¹, D. W. Suh¹. ¹University of Nebraska Medicine, Omaha, United States Minor Outlying Islands; ²Creighton University School of Medicine, Omaha, NE; ³CHI Alegent Health, Omaha, NE
-
- Exhibit Hall B0328-B0365
Wednesday, May 02, 2018 3:30 PM-5:15 PM
Clinical/Epidemiologic Research
486 Healthcare delivery
-
- Moderators: Mohamed Dirani and Varshini Varadaraj**
- 5215 — B0328 Practice Pattern Differences in Generations of Canadian Ophthalmologists over Two Decades.** Tina Felfeli, Y. Jin, M. Canizares, Y. M. Buys. Ophthalmology and Vision Sciences, University of Toronto, Toronto, Ontario, Canada
- 5216 — B0329 The changing trends in human resources and infrastructural facilities over a period of ten years in two Southern Indian States.** Srinivasa R. Pallerla. Andhra Pradesh Right to Sight Society, Hyderabad, Telangana, India
- 5217 — B0330 Cost-Effectiveness of Limited Vitrectomy for Vision Degrading Vitreopathy.** Benjamin Rostami¹, J. Nguyen-Cuu², G. Brown^{3,5}, M. Brown^{3,5}, A. A. Sadun^{6,4}, J. Sebag². ¹David Geffen School of Medicine at UCLA, Los Angeles, CA; ²VMR Institute for Vitreous Macula Retina, Huntington Beach, CA; ³Center for Value Based Medicine, Hilton Head, SC; ⁴Neuro-Ophthalmology, Doheny Eye Institute, Los Angeles, CA; ⁵Wills Eye Hospital, Philadelphia, PA; ⁶Ophthalmology, David Geffen School of Medicine at UCLA, Los Angeles, CA
- 5218 — B0331 Cost-Benefit Analysis of Supplementation of Amphotericin in Corneal Storage Media to prevent Post-Endothelial Keratoplasty Fungal Infections.** TsunKang Chiang¹, G. H. Grossman². ¹School of Medicine, Case Western Reserve University, Cleveland Heights, OH; ²Eversight, Ann Arbor, MI
- 5219 — B0332 Trends in Ophthalmic Drug Prices Based on Drug Acquisition Cost from 2013-2017.** Aaron Priluck, D. A. Ghatge. University of Nebraska Medical Center, Omaha, NE
- 5220 — B0333 Factors affecting Cost-Effectiveness of Crosslinking for Keratoconus.** Young Seol, P. R. Rizzuto. Brown University, Providence, RI
- 5221 — B0334 Healthcare Costs of Stargardt Disease.** Kanza Aziz¹, J. Canner², M. S. Singh¹. ¹Wilmer Eye Institute, Johns Hopkins University School of Medicine, Baltimore, MD; ²Johns Hopkins Surgery Center for Outcomes Research, Johns Hopkins University School of Medicine, Baltimore, MD
- 5222 — B0335 Geographic Variation in Medicare Part D Spending on Ophthalmic Drugs.** Nathan W. Liles, M. A. Woodward, P. Newman-Casey, L. Delott. Ophthalmology, University of Michigan, Ypsilanti, MI
- 5223 — B0336 Healthcare Resource Use, Characteristics, and Predictors of High-Cost Patients with Non-Infectious Inflammatory Eye Disease (NIED) In a Commercially-Insured US Population.** Winnie Nelson¹, J. Rice², A. G. White², A. Lopez², J. Reiff², L. Bartels-Peculis¹, G. Ciepielewska¹, F. Lima¹, T. A. Albini³. ¹Mallinckrodt Pharmaceuticals, Bedminster, NJ; ²Analysis Group, Inc, Boston, MA; ³Bascom Palmer Eye Institute, University of Miami, Miami, FL *CR
- 5224 — B0337 Epidemiology of Eye Disorders by Race within a Multi-Subspecialty, Multi-Satellite Ophthalmology Department.** Daniel Brill, A. Alsamarae, D. Darnley, D. Goldman. Ophthalmology, Henry Ford Health System, Detroit, MI
- 5225 — B0338 Accuracy of a popular online symptom checker for ophthalmic diagnoses.** Michael Nguyen¹, A. Gregor², A. Beattie¹, G. Isaza¹, C. Shen¹. ¹McMaster University, Hamilton, Ontario, Canada; ²University of Toronto, Toronto, Ontario, Canada
- 5226 — B0339 Three Years of the Sunshine Act: An Analysis of Industry Payments to Eye Care Providers.** Erik Mothersbaugh, E. Wyles. Illinois College of Optometry, CHICAGO, IL
- 5227 — B0340 Perceived autonomy support from the healthcare team is associated with glaucoma medication adherence.** Paula Anne Newman-Casey¹, L. M. Nizio¹, P. P. Lee¹, K. Resnicow², M. Heisler³. ¹Ophthalmology & Visual Sciences, Kellogg Eye Ctr, Univ of Michigan, Ann Arbor, MI; ²Health Behavior Health Education, University of Michigan, Ann Arbor, MI; ³Internal Medicine and Health Behavior Health Education, University of Michigan, Ann Arbor, MI ✕
- 5228 — B0341 The relationship of self-report and medication possession with success of glaucoma medication administration.** Aaron Hein¹, J. A. Rosdahl², H. Bosworth^{3,4}, S. Woolson³, M. Olsen^{3,5}, M. Kirshner³, K. Muir^{2,3}. ¹Duke University School of Medicine, Durham, NC; ²Department of Ophthalmology, Duke University School of Medicine, Durham, NC; ³Health Services Research and Development, Durham VA Medical Center, Durham, NC; ⁴Department of Medicine, Duke University School of Medicine, Durham, NC; ⁵Department of Biostatistics and Bioinformatics, Duke University School of Medicine, Durham, NC
- 5229 — B0342 Treatment Experience of Open Angle Glaucoma Patients Undergoing Trabeculectomy in the US.** Anik Patel¹, C. Chen², C. McGuiness², J. Campbell¹. ¹Allergan, Newport Beach, CA; ²Quintiles IMS, Plymouth Meeting, PA *CR

5230 — B0343 Outcomes of an international ophthalmology mission and causes of blindness in central Tanzania. Ru-ik Chee^{2,1}, F. Sandi^{3,4}, N. Papworth-Jones², D. J. D'Amico², E. Lat², C. Cole², G. Sun². ¹Ophthalmology and Visual Sciences, Illinois Eye and Ear Infirmary, University of Illinois at Chicago, Chicago, IL; ²Ophthalmology, Weill Cornell Medicine, New York, NY; ³College of Health Sciences, The University of Dodoma, Dodoma, Tanzania, United Republic of; ⁴Department of Eye Health, Benjamin Mkapa Hospital, Dodoma, Tanzania, United Republic of

5231 — B0344 Accuracy of ophthalmology clinic follow up in the incarcerated patient population. Michelle Abou-Jaoude¹, J. Crawford¹, R. Kryscio², D. B. Moore¹. ¹Ophthalmology and Visual Sciences, University of Kentucky, Lexington, KY; ²Statistics, University of Kentucky, Lexington, KY

5232 — B0345 Analysis of the patients motives and prevalence of eye health problems on the emergency department of the Municipal Hospital of Santo André. Rafael C. Almeida¹, B. A. Ulrich¹, G. Soares¹, R. A. Cunha de Almeida², D. A. Matushita¹, R. A. Hiroshi Aoki¹, V. A. Lima¹, J. Lima Rheder¹. ¹Faculdade de Medicina do ABC, São Paulo, Brazil; ²Universidade do Vale do Sapucaí, Pouso Alegre, Brazil

5233 — B0346 The prevalence and impact of eye disease in an urban homeless population. Collier Jiang¹, m. lichter². ¹Faculty of Medicine, University of Toronto, Toronto, Ontario, Canada; ²3. University of Toronto Department of Ophthalmology & Visual Sciences, Toronto, Ontario, Canada

5234 — B0347 Unmet Eye Care Needs Among a Syrian Adult Refugee Population. Tarek Bin Yameen¹, m. lichter². ¹Faculty of Medicine, University of Toronto, Mississauga, Ontario, Canada; ²Ophthalmology, St Michael's Hospital, Toronto, Ontario, Canada

5235 — B0348 Glaucoma Patient Preferences for Telemedicine. Lindsay A. Rhodes, C. Huisingh, C. A. Girkin, C. Owsley. Ophthalmology, Univ of Alabama at Birmingham, Birmingham, AL

5236 — B0349 Tele-ophthalmology Screening Results: Differences in Disease Prevalence between Health Centers. Bryce Chiang¹, J. Stevenson², S. Gupta², Y. Khalifa¹, A. Maa¹. ¹Emory University, Atlanta, GA; ²Intelligent Retinal Imaging Systems, Pensacola, FL *CR

5237 — B0350 Efficacy of Teleretinal Imaging for Detection of Nondiabetic Eye Disease. Jennifer Lindsey^{2,1}, A. Noll¹, A. Chomsky^{2,1}. ¹Ophthalmology, Vanderbilt Eye Institute, Nashville, TN; ²Surgical, Ophthalmology, Veterans Affairs Tennessee Valley Healthcare System, Nashville, TN

5238 — B0351 The Online Face of U.S. Academic Ophthalmology. Samuel Leeman², T. Begaj¹, o. helmy², S. Schaal². ¹Medicine, Cambridge Health Alliance, Harvard Medical School, Cambridge, MA; ²Ophthalmology, University of Massachusetts Medical School, Worcester, MA

5239 — B0352 The Efficacy of a VA Teleretinal Imaging Screening Program. Amy Chomsky^{2,1}, J. Lindsey^{2,1}. ¹Ophthalmology, Vanderbilt University, Nashville, TN; ²VA, Tennessee Valley Healthcare System, Nashville, TN

5240 — B0353 Patient Perceptions and Satisfaction with the Teleretinal Screening Experience. Angela J. Verkade¹, N. T. Le², C. K. McClard², S. Thacker², L. M. Douglas², C. Y. Weng¹. ¹Ophthalmology, Baylor College of Medicine, Texas, TX; ²School of Medicine, Baylor College of Medicine, Houston, TX

5241 — B0354 Patient Follow Up After Teleretinal Imaging in a Primary Care Network. Kristen Stebbins¹, E. Chaum^{1,2}. ¹Vision Care, Welch Allyn, Skaneateles, NY; ²RetinaVue, P.C., Knoxville, TN *CR

5242 — B0355 Evaluation of virtual clinic follow-up for medical retina patients in a tertiary eye care referral centre. Yijun Cai, K. U. Kortuem, K. Fasler, A. Charnley, P. A. Keane, K. Balaskas, D. A. Sim. Moorfields Eye Hospital, London, United Kingdom *CR

5243 — B0356 Efficiency in consultation time through the use of Smartphone Care Collaboration Software on new patients at a tertiary eye care center. Jose Francisco F. Perez-Vazquez¹, R. Garcia-Vazquez¹, K. J. Herrera-Juarez¹, R. Gonzalez-Salinas¹, S. Soberon¹, R. Guliás-Cañizo¹, V. Sanchez-Huerta², H. Quiroz-Mercado¹. ¹Research Department, Asociación Para Evitar la Ceguera en México, Mexico City, Mexico; ²Cornea Department, Asociación Para Evitar la Ceguera en México, Mexico City, Mexico *CR

5244 — B0357 The usefulness of medical students in a teleretinal screening program, a pilot study. Zachary Mortensen¹, C. Ray², D. Kirk¹, L. Truong¹, M. Littlejohn¹, J. Herrmann¹, J. Gilmore¹, A. Compton¹, N. Stippa², K. Mitchell¹. ¹Texas Tech University Health Sciences Center, Lubbock, TX; ²Department of Ophthalmology and Visual Sciences, Texas Tech University Health Sciences Center, Lubbock, TX

5245 — B0358 Eye care utilization and its determinants in Canada: Cross-sectional findings from the Canadian Longitudinal Study on Aging. Rumaisa Alijed¹, M. Aubin², R. Buhrmann³, S. Sabeti³, E. E. Freeman^{1,4}. ¹Faculty of Medicine, University of Ottawa, Ottawa, Ontario, Canada; ²Department of Ophthalmology, Université de Montréal, Montréal, Ontario, Canada; ³Department of Ophthalmology, University of Ottawa, Ottawa, Ontario, Canada; ⁴Ottawa Hospital Research Institute, Ottawa, Ontario, Canada

5246 — B0359 Results from a 3-year prospective survey of referrals and medical reports in optometric practices in Norway: The effect of education on referrals and diagnostic conformity. Per O. Lundmark, K. Luraas. Optometry, Radiography and Lighting Design, University College of Southeast Norway, Kongsberg, Norway

5247 — B0360 Impact of referral letter content on management of glaucoma patients and suspects in collaborative care. Jessie Huang^{1,2}, M. Yapp^{1,2}, K. Masselos^{3,1}, M. Kalloniatis^{1,2}, B. Zangerl^{1,2}. ¹Centre For Eye Health, Kensington, New South Wales, Australia; ²School of Optometry & Vision Science, UNSW, Sydney, New South Wales, Australia; ³Ophthalmology, Prince Of Wales Hospital, Sydney, New South Wales, Australia

5248 — B0361 Improving Clinic Wait Times with Scheduling Templates Developed from Computer-Based Simulation using Electronic Health Record Data. Michelle Hribar¹, S. Read-Brown², I. Goldstein², L. Reznick², M. F. Chiang^{2,1}. ¹DMICE, OHSU, Portland, OR; ²Ophthalmology, OHSU, Portland, OR *CR

5249 — B0362 Impact of Race on Press Ganey Measures of Ophthalmology Clinic Visits. Tiffany A. Chen, S. Chen, M. D. Lee, A. C. Fisher, C. C. Lin, K. Singh, R. Chang. Byers Eye Institute, Stanford University School of Medicine, Anaheim, CA

5250 — B0363 Emergency Department Ophthalmology Consultations in a Tertiary Care Hospital. Michael J. Heiferman¹, S. Khanna², D. Gu¹, S. Agron¹, S. Eichinger¹, P. Bryar¹. ¹Department of Ophthalmology, Northwestern University, Chicago, IL; ²Department of Ophthalmology, University of Wisconsin, Madison, WI

5251 — B0364 Patterns of follow up after emergency room ophthalmic consultation. Cecilia Q. Dong, B. Farhat, J. N. Kruh. Ophthalmology, NYMC - Jamaica Hospital Medical Center, Long Island City, NY

5252 — B0365 Impact of Affordable Care Act on Eye Care Compliance. Daniel Ren, Y. Pang. Illinois College of Optometry, Chicago, IL

Exhibit Hall C0099-C0127

Wednesday, May 02, 2018 3:30 PM-5:15 PM

Retina / Biochemistry/Molecular Biology / Retinal Cell Biology

487 PVR and Vitreoretinal Interface

Moderator: Roger Wong

5253 — C0099 A rabbit model of penetrating eye injury leading to intraocular fibrosis in the posterior segment. Whitney Greene, T. A. Burke, G. T. Bramblett, H. H. Wang. Ocular Trauma, United States Army Inst of Surgical Rsrch, San Antonio, TX

5254 — C0100 Inactive Cas9 blocks vitreous-induced contraction of retinal pigment epithelial cells. Zhengping Hu^{1,2}, N. Chen^{1,2}, P. A. D'Amore^{1,2}, H. Lei^{1,2}. ¹Schepens Eye Research Institute, Boston, MA; ²Ophthalmology, Harvard medical school, Boston, MA

- 5255 — C0101 Contractility can be reversed: discovering compounds with therapeutic potential for patients with Proliferative Vitreoretinopathy.** Timothy A. Blenkinsop, M. Fernandes, L. Schiff, B. A. Nachmani. *Cell, Development and Regenerative Biology, Icahn School of Medicine at Mount Sinai, New York, NY*
- 5256 — C0102 Expression of connective tissue growth factor and its potential role in synthesis of the extracellular matrix by retinal pigment epithelial cells.** Changmei Guo. *Department of Ophthalmology, Xijing Hospital, Fourth Military Medical University, Xi'an, Shaanxi, China*
- 5257 — C0103 Caveolin-1 downregulates glial fibrillary acidic protein and vimentin expression of mouse retina and cultured human Muller cell in pathology of proliferative vitreoretinopathy.** Yosuke Nagasaka, H. Kaneko, H. Terasaki. *ophthalmology, Nagoya University Graduated School Of Medicine, Nagoya, Japan*
- 5258 — C0104 Sub-Internal Limiting Membrane Haemorrhage: A clinico-pathological study to guide the timing of surgical intervention.** Theodor Stappler^{1,2}, R. Hussain², G. Pappas⁴, P. Hiscott³, D. Wong². ¹Hopital Ophthalmique Jules Gonin, Lausanne, Switzerland; ²St Paul's Eye Unit, Royal Liverpool University Hospital, Liverpool, United Kingdom; ³University of Liverpool, Liverpool, United Kingdom; ⁴Venizeleio Hospital of Heraklio, Heraklion, Greece
- 5259 — C0105 Novel gene therapy for proliferative vitreoretinopathy.** Ting-Chia Wong¹, S. Cao¹, A. Tjoa¹, H. Jung¹, L. Kojic¹, W. Jia², M. S. Cynader^{3,4}, J. Z. Cui¹, J. A. Matsubara¹. ¹Department of Ophthalmology & Visual Sciences, University of British Columbia, Vancouver, British Columbia, Canada; ²Department of Surgery, University of British Columbia, Vancouver, British Columbia, Canada; ³Djavad Mowafaghian Centre for Brain Health, Vancouver, British Columbia, Canada
- 5260 — C0106 p38 signaling activates quiescent primary adult human RPE into contractile membranes modeling Proliferative Vitreoretinopathy.** Lauren Schiff¹, N. Boles², B. A. Nachmani¹, M. Fernandes¹, T. A. Blenkinsop¹. ¹Cell, Development and Regenerative Biology, Icahn School of Medicine at Mount Sinai, New York, NY; ²Neural Stem Cell Institute, Rensselaer, NY
- 5261 — C0107 Association of vitreous Angiopoietin-2 levels with severity of experimental proliferative vitreoretinopathy.** Chee Wai Wong^{1,2}, S. Ong⁴, V. A. Barathi², S. Lee^{1,3}, T. Wong^{1,2}. ¹Singapore National Eye Centre, Singapore, Singapore; ²Singapore Eye Research Institute, Singapore, Singapore; ³Duke-NUS Medical School, Singapore, Singapore; ⁴Ayoxxa biosystems, Singapore, Singapore
- 5262 — C0108 Macular Changes in eyes with Alport Syndrome.** Yasuki Ito, H. Fukukita, K. Kataoka, H. Kaneko, J. Takeuchi, H. Ito, H. Terasaki. *Ophthalmology, Nagoya Univ Graduate School of Medicine, Nagoya, AICHI, Japan*
- 5263 — C0109 Micro-RNAs in the pathogenesis of epiretinal membrane (ERM) formation.** Georgia Kaidonis¹, C. M. Stary², T. Leng¹. ¹Ophthalmology, Byers Eye Institute at Stanford University, Palo Alto, CA; ²Anesthesiology, Perioperative and Pain Medicine, Stanford University, Palo Alto, CA
- 5264 — C0110 Foveal avascular zone in cases with epiretinal membrane or lamellar macular hole in the perioperative period.** Ippei Takasu, T. Takasu. *Takasu eye clinic, Okayama, Okayama, Japan*
- 5265 — C0111 Comparison of color funduscopy and Spectralis multicolor on detection of epiretinal membrane and relationship between ERM findings and metamorphologia.** Ryoh Funatsu, H. Terasaki, H. Shiihara, N. Kakiuchi, S. Sonoda, T. Sakamoto. *Kagoshima University, Kagoshima-shi, Japan *CR*
- 5266 — C0112 Association of unilateral epiretinal membrane is a factor of predominant progression in patients with open-angle glaucoma.** Tomoyuki Okazaki, S. Sakimoto, S. Usui, H. Sakaguchi, K. Nishida. *ophthalmology, Osaka University Graduate School of Medicine, Osaka, Asia, Japan*
- 5267 — C0113 Vitreous fluid neurofilament light as an axonal injury marker in degenerative changes of the posterior segment.** Henrik Zetterberg^{1,3}, G. Jakobsson², U. Andreasson¹, K. Blennow¹, M. Zetterberg². ¹Department of Psychiatry and Neurochemistry, Institute of Neuroscience and Physiology, Molndal, Sweden; ²Department of Ophthalmology, Institute of Neuroscience and Physiology, Molndal, Sweden; ³Department of Molecular Neuroscience, UCL Institute of Neurology, London, United Kingdom
- 5268 — C0114 Managing focal vitreomacular traction with pneumatic vitreolysis, an emerging surgical technique.** Martha Henao¹, C. Mein^{2,3}, M. Chica², G. Lane², C. K. Chan¹. ¹Ophthalmology, Loma Linda University, Loma Linda, CA; ²Retinal Consultants of San Antonio, San Antonio, TX; ³Ophthalmology, University of Texas Health, San Antonio, TX; ⁴Southern California Desert Retina Consultants, Palm Desert, CA *CR
- 5269 — C0115 Visualization of Epiretinal Membrane Progression on En-Face OCT.** Connie Wang¹, K. Tsang¹, R. Rajshekhar¹, R. Ritch², J. Odel¹, S. Chang¹, D. C. Hood¹. ¹Columbia University, New York, NY; ²The New York Eye and Ear Infirmary of Mount Sinai, New York, NY *CR
- 5270 — C0116 Vitreo-Papillary Adhesion in Lamellar Macular Holes.** Justin Nguyen, K. M. Yee, J. Nguyen-Cuu, J. Sebag. *VMR Institute for Vitreous, Macula, Retina, Huntington Beach, CA*
- 5271 — C0117 Deep Learning for the Prediction of Treatment Indication for Epiretinal Membrane Removal based on Macular OCT Scans.** Philipp Prah¹, C. Brandl^{1,3}, V. Radeck¹, Y. Cvetkov¹, C. Mayer², H. Helbig¹, D. Maerker¹. ¹Department of Ophthalmology, University of Regensburg, Regensburg, Germany; ²Department of Ophthalmology, Technical University Munich, Munich, Germany; ³Department of Genetic Epidemiology, University of Regensburg, Regensburg, Germany
- 5272 — C0118 The changes in foveal avascular zone assessed using optical coherence tomography angiography and its association with visual outcome after idiopathic epiretinal membrane removal.** Jongho Park¹, S. Lee¹, S. Park^{2,3}, J. E. Lee^{2,3}, I. Byon^{1,3}. ¹Department of Ophthalmology, Research Institute for Convergence of Biomedical Science and Technology, Pusan National University Yangsan Hospital, Yangsan, South Korea, Yangsan, Korea (the Republic of); ²Department of Ophthalmology, Medical Research Institute, Pusan National University Hospital, Busan, South Korea, Busan, Korea (the Republic of); ³Pusan National University School of Medicine, Yangsan, South Korea, Yangsan, Korea (the Republic of)
- 5273 — C0119 Idiopathic Macular Holes Treated with Topical Anti-Inflammatory Agents: A Case Series.** Joseph B. Alsberge, J. M. Jumper. *West Coast Retina Medical Group / California Pacific Medical Center, San Francisco, CA*
- 5274 — C0120 The vitreoretinal interface in eyes with macular hole or macular pucker – how often do we find a vitreopapillary adhesion? An SD-OCT-based morphological study.** Julian Klaas¹, C. Frank¹, M. Weschta¹, N. Feucht¹, C. Haritoglou², C. P. Lohmann¹, M. Maier¹. ¹Klinik und Poliklinik für Augenheilkunde, Technical University Munich, Munich, Germany; ²Augenklinik Herzog Carl Theodor, Munich, Germany
- 5275 — C0121 Evaluation of the choriocapillary vessel density in unilateral idiopathic macular hole after vitrectomy.** Yifei Teng¹, W. Liu². ¹Beijing Institute of Ophthalmology, Beijing Tongren hospital, Beijing, China; ²Beijing Tongren Eye Center, Beijing Tongren Hospital, Capital Medical University, Beijing, Beijing, China
- 5276 — C0122 Progression of full thickness macular hole diameter in pre-operative patients: A retrospective analysis.** Julian Robins, M. Parnell, R. Wong. *Guy's and St Thomas' Hospital, Harrow, United Kingdom*
- 5277 — C0123 The non-surgical closure of full thickness macular holes in patients treated with nonsteroidal anti-inflammatory drugs.** Patrick Burke^{1,3}, D. Parver^{2,3}. ¹Ophthalmology, MedStar Georgetown University Hospital, Washington, District of Columbia; ²Retina Consultants, Washington, District of Columbia; ³Ophthalmology, MedStar Washington Hospital Center, Washington, District of Columbia

5278 — C0124 Swept Source OCT en-face imaging of vitreous cavity reveals topographic relationship of premacular bursa, Cloquet's canal, prevascular vitreous fissures and cisterns. Talia R. Kaden^{2,1}, B. Leong^{2,1}, M. Engelbert^{2,1}. ¹New York University, New York, NY; ²Vitreous Retina Macula Consultants of New York, New York, NY

5279 — C0125 A Novel Method for Macular Hole Closure Without Returning to the Operating Room for Failed or Recurrent Macular Holes After Vitrectomy Surgery. Abdhish R. Bhavsar¹, N. A. Bhavsar², N. A. Bhavsar². ¹Retina Center, Minnesota, Medina, MN; ²Blake School, Minneapolis, MN *CR

5280 — C0126 Inner nuclear layer microcysts in patients with epiretinal membrane after vitrectomy and membrane peeling. Shih Jen Chen^{1,2}, M. Hsieh³, Y. Chou¹, I. Huang¹, D. Huang¹. ¹Ophthalmology, Taipei Veterans General Hospital, Taipei, Taiwan; ²School of Medicine, National Yang-Ming university, Taipei, Taiwan; ³Ophthalmology, Taipei City Hospital, Heping Branch, Taipei, Taiwan *CR

5281 — C0127 Comparison of Clinical Characteristics and Macular Hole Closure Rates Between the Inverted ILM Flap Technique and Standard ILM Peeling. Poorav J. Patel^{1,2}, M. J. Ang^{1,2}, J. J. Chen^{3,1}, A. Fu^{3,2}. ¹Department of Ophthalmology, California Pacific Medical Center, San Francisco, CA; ²The Eye Institute, San Francisco, CA; ³West Coast Retina, San Francisco, CA

Exhibit Hall C0215-C0242

Wednesday, May 02, 2018 3:30 PM-5:15 PM

Physiology/Pharmacology

488 Retina

Moderator: Heping Xu

5282 — C0215 Inhibition of non-NMDA ionotropic glutamate receptors delays the retinal degeneration in rd10 mouse. Ying Xu¹, Z. Xiang¹, Y. Bao¹, J. Zhang¹, J. Dong², Y. Qu¹. ¹GHM Institute of CNS Regeneration, Jinan University, Guangzhou, Guangdong, China; ²Department of Pathophysiology, Key Laboratory of the State Administration of Traditional Chinese Medicine, Medical College, Jinan University, Guangzhou, China

5283 — C0216 Evaluation of the Trans-Scleral Intravitreal Administration Procedure in Mice and Rats via 3H-Dexran Recovery. Craig B. Struble¹, J. Oswald¹, M. Jansson¹, T. M. Nork². ¹Covance Laboratories, Madison, WI; ²University of Wisconsin, Madison, WI

5284 — C0217 A_{2A} adrenoceptor stimulation reduces dilatation of retinal arterioles induced by flickering light in normal persons. Anna Dons-Jensen¹, L. Petersen¹, H. Bøtker², T. Bek¹. ¹Department of Ophthalmology, Aarhus University Hospital, Aarhus C, Denmark; ²Department of Cardiology, Aarhus University Hospital, Aarhus N, Denmark *R

5285 — C0218 The Virtual Eye - the basis of in silico treatments. Simon Dörsam¹, V. Olkhovskiy¹, J. Stein¹, P. Zirjacks¹, G. Auffarth¹, E. Friedmann¹. ¹Department of Applied Mathematics, University Heidelberg, Heidelberg, Germany; ²Department of Ophthalmology, University Heidelberg, Heidelberg, Germany

5286 — C0219 Lycium Barbarum Polysaccharides Improves Visual Function and Mediates Reaction of Retinal Glial Cells in Acute Ocular Hypertensive Mice. Xue-Song Mi¹, K. So². ¹Ophthalmology, 1st Hospital of Jinan University, Guangzhou, China; ²GHM neural regeneration institute, Guangzhou, China

5287 — C0220 Pharmacological modulation of retinal ischemia – reperfusion syndrome in rats. Juan San Cristobal^{1,2}, I. Garcia-Alonso², B. Herrero². ¹Hospital Universitario Basurto, Bilbao, Spain; ²Experimental Surgery and Radiology, University of the Basque Country, Leioa, Vizcaya, Spain

5288 — C0221 The dilating effect of glucose on retinal vessels differs at different vessel branching levels. Peter Skov Jensen, T. Bek. Department of Ophthalmology, Aarhus University Hospital, Aarhus, Denmark

5289 — C0222 Therapeutic Effect of Ophthalmic Formulation containing Nilvadipine Nanoparticles on Retinal Dysfunction in Rats Injected with Streptozotocin. Noriaki Nagai¹, S. Deguchi¹, M. Ishii¹, Y. Fukuoka¹, H. Otake¹, Y. Nakazawa². ¹Faculty of Pharmacy, Kindai University, Osaka, Japan; ²Faculty of Pharmacy, Keio University, Tokyo, Japan

5290 — C0223 Simvastatin Protects Photoreceptors from all-trans-retinal Induced Oxidative Stress with Up-regulating Interphotoreceptors Retinoid Binding Protein. Ling Zhu, T. Zhang, W. Shen, M. C. Gillies. Save Sight Institute, the University of Sydney, Sydney, New South Wales, Australia

5291 — C0224 Astrocytes Promote Synapse Formation and Survival of Retinal Ganglion Cells at Early Phase During Endothelin Treatment. Shaoqing He, H. Ma, T. Yorio. Pharmacology and Neuroscience, North Texas Eye Research Institute, Fort Worth, TX

5292 — C0225 Acute Cannabis Use: Retinal Function. Denise A. Valenti¹, C. Halsor², D. Carbonetti². ¹President CEO, IMMAD, Quincy, MA; ²Understanding Legal Marijuana, LLC, Denver, CO *CR

5293 — C0226 Deciphering the role of neurotransmitters in shaping the properties of distinct retinal ganglion cell types in the mouse retina. Lior Pinkus, A. Heukamp, M. Rivlin-Etzion. Neurobiology, Weizmann Institute of Science, Rehovot, Israel

5294 — C0227 RNA-Seq Analysis of the Translome in Primary Retinal Ganglion Cells (RGCs) Treated with Endothelin-1. Renuka M. Chaphalkar, D. L. Stankowska, S. He, R. R. Krishnamoorthy. Pharmacology and Neuroscience, University of North Texas Health Science Center, Fort Worth, TX

5295 — C0228 The neuroprotective potential of a small, blood-retinal barrier permeable peptide in glaucoma. Dorota L. Stankowska¹, R. B. Nahomi², R. M. Chaphalkar¹, R. R. Krishnamoorthy¹, R. H. Nagaraj². ¹Department of Pharmacology and Neuroscience, NTERI, University of North Texas Health Science Center, Fort Worth, TX; ²Department of Ophthalmology, University of Colorado School of Medicine, Aurora, CO

5296 — C0229 Activation of Sigma-1 Receptor Restores Retinal Ganglion Cell Losses in Optic Nerve Crush Model for Glaucoma. Dorette Z. Ellis¹, L. Li¹, Y. Liu², S. He², T. Yorio². ¹UNT System College of Pharmacy, Fort Worth, TX; ²UNT Health Science Center, Fort Worth, TX

5297 — C0230 Nogo-A inactivation promotes visual recovery and plasticity after retinal injury. Julius B. Mdzomba, L. Rodriguez, S. Joly, F. Bretznier, V. Pernet. Ophthalmology, Université Laval-CHUL, Quebec City, Quebec, Canada

5298 — C0231 Bi-functional small molecule for glaucomatous optic neuropathy. Suchismita Acharya^{1,2}, D. L. Stankowska^{1,2}, R. M. Chaphalkar^{1,2}, L. Li^{1,2}, D. Z. Ellis¹, K. T. Nguyen³, T. Yorio^{1,2}. ¹Department of Pharmacology and Neuroscience, UNT Health Science Center, Fort Worth, TX; ²North Tx Eye Research Institute, UNT Health Science Center, Fort Worth, TX; ³Department of Bioengineering, The University of Texas at Arlington, Arlington, TX

5299 — C0232 Idelalisib inhibits neovascularization in a mouse model of oxygen-induced retinopathy. wenyi wu^{1,2}, G. Zhou¹, X. Huang¹, P. A. D'Amore¹, S. Mukai¹, H. Lei¹. ¹Schepens Eye Research Institute, Boston, MA; ²ophthalmology, xiangya hospital, Changsha, Hunan, China

5300 — C0233 Augmented levels of Ap₄A and ectonucleotidases in glaucomatous mice retinas. Jesus J. Pintor¹, M. J. Perez de Lara¹, A. I. Guzman-Aranguez¹, R. Gomez-Villafuertes², J. Gualix², G. Carracedo³, M. T. Mlras-Portugal². ¹Bioquímica y Biología Molecular IV, E U de Optica UCM, Madrid, Spain; ²Bioquímica y Biología molecular IV, F. Veterinaria, UCM, Madrid, Spain; ³Dep. Optica II, Optometria y Vision, UCM, Madrid, Spain

5301 — C0234 Efficacy of Subconjunctival Aflibercept in Choroidal Neovascularization (CNV) Mice Model. Jayabalan Nirmla^{2,1}, V. A. Barathi³, V. Ravichandiran², S. Venkatraman¹, R. Agrawal¹. ¹Nanyang Technological University, Singapore, Singapore; ²National Institute of Pharmaceutical Education and Research, Kolkata, West Bengal, India; ³Singapore Eye Research Institute, Singapore, --None--, Singapore; ⁴Tan Tock Seng Hospital, Singapore, --None--, Singapore

5302 — C0235 The role of the P2X₇ receptor in microglia in relation to glaucoma. Matthew Felgate¹, L. Stokes¹, D. C. Broadway^{2,1}, J. Sanderson¹. ¹School of Pharmacy, University of East Anglia, Norwich, Norfolk, United Kingdom; ²Department of Ophthalmology, Norfolk and Norwich University Hospital, Norwich, Norfolk, United Kingdom

5303 — C0236 Effects of BIBF1120 on inner and outer blood-retinal barrier permeability. Mahdy Ranjbar¹, J. Stutzer¹, H. L. Deissler², S. Grisanti¹. ¹Department of Ophthalmology, University of Lübeck, Lübeck, Germany; ²Department of Ophthalmology, University of Ulm, Ulm, Germany

5304 — C0237 Purinergic Calcium Responses in Human Müller Cells. Sofia Noor Habib^{1,2}, N. Niyadurupola², D. C. Broadway², J. Sanderson¹. ¹School of Pharmacy, The University of East Anglia, Norwich, United Kingdom; ²Ophthalmology, Norfolk & Norwich University Hospital NHS Foundation Trust, Norwich, United Kingdom

5305 — C0238 Melatonin Receptor Heterodimers formation and signaling in 661 W cells. Aida Sanchez-Bretano, T. Suen, K. Baba, J. DeBruyne, G. Tosini. Morehouse School of Medicine, Atlanta, GA

5306 — C0239 Hippo signaling effector Yap regulates hyaloid vasculature regression in the developing eye. Mei Xin¹, M. Sakabe¹, Y. Odaka¹, M. Fruttiger², Q. Lu¹, R. A. Lang¹. ¹Cincinnati Children's Hospital, Cincinnati, OH; ²UCL Institute of Ophthalmology, London, United Kingdom

5307 — C0240 The relationship between inflammatory cytokines in the sub-silicone oil fluid and retinal thickness in eyes with proliferative vitreoretinopathy and proliferative diabetic retinopathy. Hiroki Kaneko, H. Shimizu, T. Tsunekawa, T. Iwase, T. Matsuura, A. Suzumura, R. Namba, H. Terasaki. Ophthalmology, Nagoya Univ Graduate Sch of Medicine, Nagoya, Aichi, Japan *CR

5308 — C0241 Hepatocyte growth factor (HGF) induces vascular leakage in the retina. Valeria E. Lorenc, R. Formica, S. Fortmann, P. A. Campochiaro. Ophthalmology, Johns Hopkins University, Wilmer Eye Institute, Baltimore, MD

5309 — C0242 FDA Adverse Event Reports of Retinal Vascular Occlusions Associated with Combined Hormonal Contraceptive Vaginal Ring Use. Albert Li. Department of Ophthalmology and Visual Sciences, Washington University School of Medicine, Saint Louis, MO

Exhibit Hall C0243-C0270

Wednesday, May 02, 2018 3:30 PM-5:15 PM

Physiology/Pharmacology

489 Retina, drugs

Moderator: **Iok-Hou Pang**

5310 — C0243 Suprachoroidal delivery of non-viral DNA nanoparticles in a rabbit model. Donna Taraborelli¹, G. Noronha¹, R. Moen², J. Yoo¹, O. S. Laird², M. J. Cooper². ¹Clearside Biomedical, Inc., Atlanta, GA; ²Copernicus Therapeutics, Inc, Cleveland, OH *CR

5311 — C0244 Manufacturing of novel ultra-high molecular weight branched biopolymers for use with antibody based bioconjugate therapies. Stephen Raillard, D. G. Benoit, W. To, Y. Hu, S. Charles, D. Perloth. Kodiak Sciences, Palo Alto, CA

5312 — C0245 Development of potent dual action biopharmaceuticals for the treatment and prevention of neovascular retinal diseases.

Fernando Correa, R. D. Jacobson, h. liang, N. Prasad, X. Huang, W. Ngo, D. Dang, J. Lu, D. Perloth. Kodiak Sciences Inc., Palo Alto, CA *CR

5313 — C0246 A cellular disease model system of ARB: The creation of iPS-RPE from a patient with a premature stop mutation (p.R200X).

Britta Nommiste¹, I. Vaino², M. J. Radeke³, S. Nymark², P. J. Coffey^{1,3}, A. F. Carr¹. ¹Institute of Ophthalmology, UCL, London, United Kingdom; ²Cell and Tissue Center, University of Tampere, Tampere, Finland; ³Center for the Study of Macular Degeneration Neuroscience Research Institute, University of California, Santa Barbara, CA

5314 — C0247 Combined nonsense mediated decay inhibition and suppression as a treatment approach for choroideremia. Mohamed Ali¹, D. Tracey-White¹, M. Smart¹, M. Moosajee^{1,2}. ¹UCL Institute of Ophthalmology, London, United Kingdom; ²Moorfields Eye Hospital, London, United Kingdom

5315 — C0248 Oligonucleotide-based splice correction of the ABCA4 c.5461-10T>C mutation in Stargardt disease type 1. Kalyan Dulla, S. Yilmaz-Elis, J. Miao, I. Schmidt, I. Schulkens, H. Chan, P. S. Adamson. ProQR Therapeutics, Leiden, Netherlands

5316 — C0249 Inhibition of ocular fibrosis with a miR-29b mimic. Corrie L. Gallant-Behm, S. Propp, A. Jackson. R&D, miRagen Therapeutics, Inc., Boulder, CO *CR

5317 — C0250 Retinal Changes and Nerve Fiber Layer Loss in Pediatric Patients on Vigabatrin: An Electroretinogram and Imaging Study. Salar Rafieetary¹, J. Barnett¹, N. Kerr^{1,2}, A. Iannaccone^{1,2}. ¹Ophthalmology, University of Tennessee- Hamilton Eye Institute, Memphis, TN; ²LeBonheur Children's Hospital, Memphis, TN

5318 — C0251 Association of long-term RPE65 expression and photoreceptor preservation in RPE65-gene therapy-treated canines. Kristin L. Gardiner^{1,2}, W. A. Beltran¹, G. D. Aguirre¹. ¹Department of Clinical Sciences and Advanced Medicine, University of Pennsylvania, Philadelphia, PA; ²Pathobiology, University of Pennsylvania, Philadelphia, PA *CR

5319 — C0252 Pharmacological nonsense suppression therapy in the Rpe65^{-/-} mouse model of Leber congenital amaurosis reverses the retinal deficits in vivo. Xia Wang¹, O. Sivak², K. Wasan³, K. Gregory-Evans¹, C. Gregory-Evans¹. ¹Ophthalmology, University of British Columbia, Vancouver, British Columbia, Canada; ²University of British Columbia, Vancouver, British Columbia, Canada; ³Pharmacy, University of Saskatchewan, Saskatoon, Saskatchewan, Canada

5320 — C0253 A novel biocompatible polymer platform enables customizable small molecule loadings for extended durability and sustained release in ophthalmology. Didier G. Benoit, S. Raillard, S. Charles, D. Perloth. Kodiak Sciences, Inc, Palo Alto, CA *CR

5321 — C0254 Variability of 10-2 automated perimetry results in screening for hydroxychloroquine retinopathy. Vlad M. Matei, Y. L. Goldenmerry, Y. He. Ophthalmology, University of Texas Southwestern Medical Center, Dallas, TX

5322 — C0255 Inhibition of Experimental PVR by a Novel Nutlin-3 Analogue. Jinggong Yin¹, W. Huo¹, K. Guy², E. Chaum¹. ¹Ophthalmology, University of Tennessee HSC, Memphis, TN; ²Department of Pharmaceutical Sciences, University of Kentucky College of Pharmacy, Lexington, KY *CR

5323 — C0256 The effects of exogenous and endogenous liver X receptor agonists on LPS-induced inflammation in human retinal pigment epithelium cells. Peng Yu¹, Y. Qiu¹, L. Yang¹, Y. Mai¹, B. Lei². ¹First Hospital of Chongqing Medical University, Chongqing, China; ²Henan Eye Institute, Henan Eye Hospital, Zhengzhou, Henan, China

5324 — C0257 Ataluren-mediated read-through of a nonsense mutation in FAMIL61A gene which causes retinitis pigmentosa. Avigail Beryozkin¹, A. Samanta², S. Khateb¹, E. Banin¹, D. Sharon¹, U. Wolfrum², K. Nagel-Wolfrum². ¹Ophthalmology, Hadassah Hebrew university, Jerusalem, Israel, Jerusalem, Israel; ²Inst. of Molecular Physiology, Johannes Gutenberg University of Mainz, Mainz, Germany

5325 — C0258 Rock inhibitor-induced enhancement of retinal pigment epithelial cell adhesion. Hiroyuki Kamao, A. Miki, J. Kiryu. Ophthalmology, Kawasaki Medical School, Kurashiki, OKAYAMA, Japan

5326 — C0259 Dichloroacetate prevents abnormal proliferation and differentiation of retina pigment epithelial cells. Kaid Johar^{1,2}, D. Shukal^{1,3}, A. Vasavada¹, A. Sudhalkar¹. ¹Cell and Molecular Biology, Iladevi Cataract and IOL Research Centre, Ahmedabad, Gujarat, India; ²School of Sciences, Gujarat University, Ahmedabad, Gujarat, India; ³Manipal University, Manipal, Karnataka, India

5327 — C0260 CxCl10 mediates CNTF inhibition of outer retinal neovascularization. Felicitas Bucher^{1,2}, E. Aguilar¹, K. V. Marra¹, A. Stahl², M. Friedlander¹. ¹Department of Molecular Medicine, The Scripps Research Institute, San Diego, CA; ²Eye Center, Faculty of Medicine, University of Freiburg, Freiburg, Baden-Württemberg, Germany

5328 — C0261 Attenuation of Intraocular Inflammatory Responses in Experimental Autoimmune Uveitis by TMP Is Associated with Modulating of the STAT3 and STAT4 Pathways. Bo Lei¹, R. Lin². ¹Henan Eye Institute, Henan Eye Hospital, People's Hospital of Henan, Zhengzhou, Henan, China; ²Ophthalmology, 1st Hospital of Chongqing Medical Univ., Chongqing, China

5329 — C0262 Efficient generation of laminated and light responsive retinal organoids for use in toxicological assays. Dean Hallam¹, G. Hilgen², B. Dorgau¹, M. Yu¹, L. Zhu¹, S. Bojic¹, P. Hewitt³, M. Schmitt³, M. Uteng⁴, S. Kustermann⁵, D. Steel¹, A. Porter⁶, A. Treumann⁶, E. Sernagor², L. Armstrong^{1,7}, M. Lako¹. ¹Institute of Genetic Medicine, Newcastle University, Newcastle Upon Tyne, Tyne and Wear, United Kingdom; ²Institute of Neuroscience, Newcastle University, Newcastle Upon Tyne, United Kingdom; ³Merck KGaA, Darmstadt, Germany; ⁴Novartis, Basel, Switzerland; ⁵University of Tübingen, F. Hoffmann-La Roche Ltd, Basel, Switzerland; ⁶Newcastle University Protein and Proteome Analysis, Newcastle University, Newcastle Upon Tyne, United Kingdom; ⁷Newcells Biotech, Newcastle Upon Tyne, United Kingdom

5330 — C0263 A Novel non-Retinoid RPE65 Inhibitor CU239 Prevents Light-Induced Degeneration of the Mouse Retina through Slowing of the Visual Cycle. Gennadiy P. Moiseyev¹, Y. Shin¹, Y. Takahashi¹, K. Petrukhin², J. Ma¹. ¹Univ of Oklahoma Hlth Sci Ctr, Edmond, OK; ²Columbia University, New York, NY

5331 — C0264 New treatment of recidivant Central Serous Choriorretinopathy: oral Eplerenone vs topic therapy. Gaston Gomez Caride¹, N. Barbieri¹, F. Pereyra¹, F. Perrone¹, G. Valvecchia¹, M. Iglicky². ¹Retina, Centro de Ojos Quilmes, Quilmes, Argentina; ²Hospital de Clinicas, Buenos Aires, Argentina

5332 — C0265 IL-1 receptor modulators protect against oxygen-induced retinopathy. Colin W. Cheng^{1,2}, A. Geranurimi¹, J. C. Rivera^{1,3}, I. Lahaie¹, C. Quiniou³, W. Lubell⁴, S. Chemtob^{1,3}. ¹Ophthalmology, Hôpital Maisonneuve-Rosemont, Montréal, Quebec, Canada; ²Pharmacology & Therapeutics, McGill University, Montreal, Quebec, Canada; ³Pharmacology, CHU Sainte-Justine Research Center, Montréal, Quebec, Canada; ⁴Chemistry, Université de Montréal, Montréal, Quebec, Canada

5333 — C0266 Messenger RNA Therapeutics for Gene Delivery in the Retina. Siddharth Patel¹, R. C. Ryals², M. E. Pennesi², G. Sahay¹. ¹Pharmaceutical Sciences, Oregon State University, Portland, OR; ²Oregon Health and Science University, Portland, OR

5334 — C0267 CRISPR/Cas9 and antisense oligonucleotides for therapy of a deep intronic CLRN1 splice mutation. Elvir Becirovic^{1,2}, L. M. Riedmayr^{1,2}, M. Biel^{1,2}. ¹Pharmacology, Ludwig Maximilians-Universitaet Muenchen, Munich, Germany; ²Center for Integrated Protein Science Munich CiPSM, Munich, Germany

5335 — C0268 Drug Screening and Hit Identification for Retinitis Pigmentosa with Zebrafish. Logan Ganzen^{1,2}, C. Pang³, M. Zhang⁴, M. Tsujikawa⁵, Y. Leung^{6,7}. ¹Purdue University Interdisciplinary Life Sciences Program, Purdue University, West Lafayette, IN; ²Purdue Institute for Integrative Neuroscience, Purdue University, West Lafayette, IN; ³Department of Ophthalmology and Visual Sciences, Chinese University of Hong Kong, Kowloon, Hong Kong; ⁴Joint Shantou Eye Center, hantou University & the Chinese University of Hong Kong, Shantou, China; ⁵Department of Ophthalmology, Osaka University Graduate School of Medicine, Osaka, Japan; ⁶Department of Biological Sciences, Purdue University, West Lafayette, IN; ⁷Purdue Institute for Drug Discovery, Purdue University, West Lafayette, IN

5336 — C0269 Dissecting the structure and function of bestrophin channels. Alec Kittredge¹, Y. Zhang¹, N. Ward¹, S. Chen², T. Yang¹. ¹Pharmacology and Physiology, University of Rochester, Rochester, NY; ²Department of Experimental Medicine, The Fifth Affiliated Hospital of Sun Yat-sen University, Zhuhai, Guangzhou, China

5337 — C0270 Histopathology of radiation-related ocular toxicity following intravitreal placement of ¹²⁵I-labeled anti-VEGF therapeutic agents in a non-human primate model. John B. Christofridis^{2,1}, D. Coble³, K. Briley⁴, K. Kumar⁴, M. V. Knopp⁴, K. La Perle⁵. ¹Retina Specialists of Southern Arizona, Tucson, AZ; ²Dept Ophthalmology - Retina, University of Arizona College of Medicine, Tucson, AZ; ³Veterinary Preventive Medicine, The Ohio State University, Columbus, OH; ⁴Radiology, The Ohio State University College of Medicine, Columbus, OH; ⁵Department of Veterinary Biosciences, The Ohio State University, Columbus, OH

Ballroom A

Wednesday, May 02, 2018 5:30 PM-7 PM

**490 Special Session: Clinical
Trial Design and Endpoints for
Choroideremia Clinical Trials**

This session will discuss clinical trial design and the selection of clinical endpoints for clinical trials for Choroideremia, including discussion of existing data and expert opinion from clinical leaders. Patient relevant endpoints, disease stage and inclusion/exclusion criteria for various clinical trial phases will also be discussed.

Moderator: Mark Pennesi

Panel Discussion:

*Randy Wheelock, Choroideremia Research
Foundation*

Robert MacLaren, University of Oxford

Ian MacDonald, University of Alberta, Edmonton

*Jacque Duncan, University of California - San
Francisco*

David Birch, Retina Foundation of the Southwest

Mark Pennesi, Oregon Health Sciences University

*Christopher Moen, Choroideremia Research
Foundation*

Thursday

May 3, 2018

ARVO Annual Meeting
Registration
Main Lobby
7am – 2pm

ARVO 2019 —Vancouver
Kickoff Reception
10:15 – 11am
Exhibit Hall

ARVO/Alcon Keynote Session
Principles of gene repair
in human embryos
2:15 – 3:45pm
Kalakaua Ballroom BC

ARVO
2018

April 29 – May 3 | Honolulu

Stand strong for science
Stand for strong vision science

Thursday, May 3 – Symposia, papers and lectures

Time	Session	Title	Location
8:15 – 10:15 am	501	In Galileo's Footsteps: visualizing immunity [IM, CO, RE] #5338-5342	311
	502	Neuronal Health in AMD and Glaucoma: Lifestyle-based Therapies to Live Long and Prosper [GL, RE, CL, BI, LV] #5343-5348	Ballroom A
11am – 12:45pm	524	Advances in Clinical Therapeutics for Uveitis [IM] #5948-5953	301AB
	525	Amblyopia [EY] #5954-5960	306AB
	526	Visual psychophysics in color and complex vision [VI, VN] #5961-5967	310
	527	Retinal Vascular Diseases II [RE] #5968-5974	311
	528	Cornea Refractive Surgery [CO] #5975-5981	312
	529	Clinical Innovations in Oncology [AP] #5982-5987	313A
	530	Diseases and Protection [VN] #5988-5994	314
	531	Retinal lipid and glucose metabolism in health and disease — Minisymposium [RC, BI, RE] #5995-6000	315
	532	Retina III [PH] #6001-6007	316A
	533	AMD Epidemiology and Treatment [CL] #6008-6013	316B
	534	Cataract Surgery, epidemiology and clinical outcomes [LE] #6014-6019	316C
	535	Genome: Structure, Function and Editing [BI] #6020-6026	320
	536	Visual Fields, Vision Function, Psychophysics [GL] #6027-6033	Ballroom A
	537	Pharmacological Interventions and Cellular Mechanisms [GL] 6034-6040	Ballrooms BC
1 – 2pm	546	Beckman-Argyros Award in Vision Research	Ballrooms BC
2:15 – 3:45pm	547	ARVO/Alcon Keynote Session: Principles of gene repair in human embryos	Ballrooms BC

Symposia and minisymposia highlighted in **boldface**

Thursday, May 3 – Posters

Time	Session	Title	Program No.	Board No.	
8:15 – 10am	503	Molecular mechanisms of diabetic retinopathy [BI]	5349 - 5379	A0001 - A0031	
	504	Gene variants and regulation of ocular genes expression in health and disease [BI]	5380 - 5422	A0032 - A0074	
	505	Retinal vascular diseases II (excluding diabetes) [RE]	5423 - 5460	A0092 - A0129	
	506	Retinal ischemia, angiogenesis and vascular remodeling [RC]	5461 - 5492	A0130 - A0161	
	507	Ganglion Cells: Metabolism and response to injury [RC]	5493 - 5517	A0162 - A0186	
	508	Animal electrophysiology [VN]	5518 - 5532	A0210 - A0224	
	509	AMD Epidemiology and outcomes [CL]	5533 - 5550	A0225 - A0242	
	510	AMD: immunobiology [IM]	5551 - 5564	A0243 - A0256	
	511	Conjunctival Allergic Disease [IM]	5565 - 5576	A0257 - A0268	
	512	Lymphoma, hemangioma, surface, orbit, and eyelid tumors [AP]	5577 - 5611	A0296 - A0330	
	513	Thyroid and orbital diseases [EY]	5612 - 5631	A0331 - A0350	
	514	Cataractogenesis and PCO [LE]	5632 - 5653	A0351 - A0372	
	515	Gene therapy, implants [PH]	5654 - 5674	A0373 - A0393	
	516	Drug and gene delivery systems [PH]	5675 - 5713	A0394 - A0432	
	517	Corneal Imaging and Topography [CO]	5714 - 5744	C0001 - C0031	
	518	Cornea Surgery; Refractive [CO]	5745 - 5781	C0032 - C0068	
	519	Fixational Eye Movements and Nystagmus [EY]	5782 - 5796	C0069 - C0083	
	520	Image Quality and Vision [VI]	5797 - 5815	C0084 - C0102	
	11am – 12:45pm	521	Animal Imaging [MOI, BI]	5816 - 5858	C0103 - C0145
		522	Innovations in Imaging [MOI]	5859 - 5883	C0146 - C0170
523		Imaging: Anterior Segment [GL]	5884 - 5912	C0171 - C0199	
523a		Vitreoretinal Surgery: Novel Approaches [RE]	5913 - 5947	C0310 - C0344	
538		Potpourri in genetic eye disease [GEN]	6041 - 6057	A0075 - A0091	
539		Retinal diseases and aging: preclinical studies [RC, LV, VI]	6058 - 6080	A0187 - A0209	
540		Surgery and Wound Healing III [GL]	6081 - 6109	C0200 - C0228	
541		Neuroprotection [GL]	6110 - 6152	C0229 - C0271	
542		Medical education, training and telemedicine [CL]	6153 - 6172	C0272 - C0291	
543		Trauma and Endophthalmitis [RE]	6173 - 6190	C0292 - C0309	
545	Image-guided Laser Applications and Lasers in Retinal Therapy [RE]	6191 - 6202	C0345 - C0356		

Poster board numbers correspond to poster location in Exhibit Hall; A = Poster Area A and C = Poster Area C.

Room 311

Thursday, May 03, 2018 8:15 AM-10:15 AM

Cornea / Immunology/Microbiology / Retina

**501 In Galileo's Footsteps:
visualizing immunity**

Novel methods have emerged in recent years that allow clinicians and scientists to directly image immune-mediated events in patients and animals. Ranging from the rapid and safe clinical confocal microscopy of the cornea and anterior segment to intravital imaging of specific immune cell types in the brain and retina. These clinical tools and experimental approaches have been made possible by advances in imaging techniques combined a plethora of genetically modified model animal systems ranging from zebra fish to mice and primates. In addition there are now modalities of intravital microscopy, such as adaptive optics, that allow visualization of tissue and cellular detail deep within tissues that allowing clinicians and basic researchers to unravel and directly visualize dynamic mechanisms of immune mediated processes that cause loss of vision.

Moderators: Paul G. McMenamin and Richard W. Lee

— 8:15 Introduction

5338 — 8:20 In vivo confocal microscopy of immune cells in the living human cornea. Dipika V. Patel. *Department of Ophthalmology, University of Auckland, Auckland, New Zealand*

5339 — 8:40 In vivo and ex vivo multi-modal imaging of ocular inflammation in animal models of disease. Samantha Dando. *Monash Biomedicine Discovery Institute and Department of Anatomy and Developmental Biology, Monash University, Clayton, Victoria, Australia*

5340 — 9:00 Real-time leukocyte trafficking in the living brain. Wolfgang Weninger. *Centenary Institute, Sydney, New South Wales, Australia*

5341 — 9:20 Adaptive optics imaging of leukocytes and microglia in the living mouse retina. Jesse B. Schallak^{1,2}. ¹Flaum Eye Institute, University of Rochester, Rochester, NY; ²Ctr for Visual Science, University of Rochester, Rochester, NY *CR

5342 — 9:40 Imaging immune cell dynamics in the kidney. Michael Hickey. *Centre for Inflammatory Diseases, Monash University, Melbourne, Victoria, Australia*

— 10:00 Panel Discussion

Ballroom A

Thursday, May 03, 2018 8:15 AM-10:15 AM

Biochemistry/Molecular Biology / Clinical/Epidemiologic Research / Glaucoma / Low Vision / Retina

502 Neuronal Health in AMD and Glaucoma: Lifestyle-based Therapies to Live Long and Prosper

While there is much published on the correlation of the positive effects of healthy lifestyle activities on retina and brain health, clinicians seek a clear understanding of the specific mechanisms underlying these recommendations for age-related vision conditions such as glaucoma and AMD. This session will review evidence-based research that supports preventive and prescriptive lifestyle modifications, such as exercise, diet, nutritional supplements, and other factors, with an emphasis on exploring mechanisms of action. Such evidence-based research is essential to meet the current national and global imperatives to improve eye and brain health. These imperatives include those set out in the recommendations of the September 2016 National Academies of Sciences, Engineering, and Medicine (NASEM) report “Making Eye Health a Population Health Imperative: Vision for Tomorrow,” the “Healthy People 2020” program of the United States, the “Vision 2020” program of the International Agency to Prevent Blindness and the World Health Organization, and the “Vital Directions for Health and Health Care” of the National Academy of Medicine. Topics to be discussed in this symposium include the involvement of oxidative stress and mitochondria in exercise, epidemiology, and epigenetics, and the biochemistry of diet and nutritional interventions. Attending this symposium should empower participants to discuss evidence-based lifestyle modification research with fellow clinicians and researchers, patients, the public, and policymakers.

Moderators: Adriana Di Polo, David J. Calkins and Diane Bovenkamp

5343 — 8:15 Introduction: Evidence-based, interdisciplinary eye and brain research to address public health issues and public interest. Diane Bovenkamp. *BrightFocus Foundation, Clarksburg, MD*

5344 — 8:25 Mitochondria, exercise, diet and the aging retina. Ian A. Trounce. *Center for Eye Research Australia, University of Melbourne, Melbourne, Victoria, Australia*

5345 — 8:45 Epidemiological evidence informing the benefit nutrients to prevent or slow glaucoma and AMD. Julie A. Mares. *Ophthal and Visual Sci, Univ of Wisconsin-Madison, Madison, WI*

5346 — 9:05 Genetic Interactions between Diet and Oral Supplements in Age-related Macular Degeneration. Emily Y. Chew. *Epidemiology & Clinical Applications, National Eye Inst/NIH, Bethesda, MD*

5347 — 9:25 Lifestyle X gene interactions in systemic and ocular health. Louis R. Pasquale. *Ophthalmology, Harvard Medical School, Boston, MA *CR*

5348 — 9:45 “Nature-Nurture, Behaviors, Common and Rare Genetic Variants Predict AMD”. Johanna M. Seddon. *Tufts Univ School of Medicine, Boston, MA *CR*

— 10:05 Panel Discussion

Exhibit Hall A0001-A0031

Thursday, May 03, 2018 8:15 AM-10:00 AM

Biochemistry/Molecular Biology

503 Molecular mechanisms of diabetic retinopathy

Moderators: Carmel Toomes and Susan Bolch

5349 — A0001 Evaluation of osteopontin in the vitreous of proliferative diabetic retinopathy. Koichi Nagura. National Defense Medical College, Tokorozawa, Japan

5350 — A0002 Long-term intermittent fasting prevents development of diabetic retinopathy and is associated with an increase in tauroursodeoxycholate (TUDCA) in db/db mice. Cristiano Pedrozo Vieira¹, E. Beliz², L. Moldovan², Y. Duan³, J. V. Busik⁴, M. Grant¹. ¹Ophthalmology, University of Alabama at Birmingham, Birmingham, AL; ²Ophthalmology, Indiana University, Indianapolis, IN; ³Cellular and Integrative Physiology, Indiana University, Indianapolis, IN; ⁴Ophthalmology, Michigan State University, East Lansing, MI

5351 — A0003 Alterations in Serum Protein Levels in Patients with Diabetic Retinopathy. Shruti Sharma^{1,2}, S. Purohit¹, S. Kodeboyina¹, S. Bai¹, J. She¹, A. Sharma^{1,3}. ¹Center for Biotechnology and Genomic Med, Georgia Regents University, Augusta, GA; ²Department of Ophthalmology, Augusta University, Augusta, GA; ³Department of Population Health Sciences, Augusta University, Augusta, GA

5352 — A0004 Aspartame Effect on Cell Viability and VEGF Secretion on Rhesus Monkey Retinal Endothelial Cells in culture. Andrew T. Tsin¹, B. Obregon². ¹Biomedical Sciences, UTRGV/SOM, Edinburg, TX; ²Biomedical Sciences, UTRGV/SOM, Edinburg, TX

5353 — A0005 Effect of glucose on cultured mouse cone photoreceptor cell viability and VEGF secretion. Cristian Mercado, A. T. Tsin. Biomedical Science, UTRGV/SOM, Edinburg, TX; Biomedical Science, UTRGV/SOM, Edinburg, TX

5354 — A0006 Foxo1 and Pten coordinate Irs2-mediated photoreceptor survival. Yue Yu^{1,2}, X. Dong¹, S. Guo¹, M. White¹. ¹Boston Children's Hospital, Harvard medical school, Boston, MA; ²New England College of Optometry, Boston, MA

5355 — A0007 Dopamine Levels in the Vitreous of Diabetic and Non-Diabetic Humans. Jesse Smith¹, C. Stelton³, S. Barb², J. Yan², B. Cribbs², N. Jain², S. Yeh², G. Hubbard², P. Iuvone², A. Hendrick². ¹Ophthalmology, University of Colorado, Denver, CO; ²Ophthalmology, Emory University, Atlanta, GA; ³SK Retina, Sarasota, FL

5356 — A0008 Impact of the ROCK inhibitor ripasudil on distribution of claudin-5 in vascular endothelial cells in diabetic retinopathy. Mitsuru Arima¹, S. Nakao¹, F. Hao^{1,2}, M. Yamaguchi¹, K. Shibata¹, Y. Kaizu¹, I. Wada¹, S. Yoshida¹, K. Sonoda¹. ¹Ophthalmology, Kyushu University, Fukuoka, Fukuoka, Japan; ²China Medical University, Shenyang, China *CR

5357 — A0009 The phospholipase D pathway modulates the inflammatory response of retinal pigment epithelium cells exposed to high glucose concentrations. Melina V. Mateos^{1,2}, P. E. Tenconi^{1,2}, V. Bermúdez¹, G. M. Oresti^{1,2}, G. A. Salvador^{1,2}, N. M. Giusto^{1,2}. ¹Instituto de Investigaciones Bioquímicas de Bahía Blanca (INIBIBB)-CONICET, Bahía Blanca, Buenos Aires, Argentina; ²Depto. de Biología, Bioquímica y Farmacia (DBByF), Universidad Nacional del Sur (UNS), Bahía Blanca, Buenos Aires, Argentina

5358 — A0010 Intravitreal pro-inflammatory cytokines induce signs of diabetic retinopathy in non-obese diabetic mice. Odunayo O. Mugisho^{1,2}, C. R. Green², D. Squirrel², S. Bould², J. Zhang², M. Acosta³, I. D. Rupenthal^{1,2}. ¹Buchanan Ocular Therapeutics Unit, Department of Ophthalmology and the New Zealand National Eye Centre, The University of Auckland, Auckland, New Zealand; ²Department of Ophthalmology and the New Zealand National Eye Centre, The University of Auckland, Auckland, New Zealand; ³School of Optometry and Vision Science and the New Zealand National Eye Centre, The University of Auckland, Auckland, New Zealand *CR

5359 — A0011 Erythropoietin Protects Retinal Pigment Epithelium in Experimental Diabetic Retinopathy. Chaoyang Zhang¹, H. Xie¹, Y. Yang¹, Q. Yang¹, H. Tian¹, L. Lu¹, W. Li², J. Zhang³, G. Xu¹. ¹Department of Ophthalmology of Shanghai Tenth People's Hospital, and Tongji Eye Institute, Tongji University School of Medicine, Shanghai, China; ²Department of Ophthalmology, Drexel University College of Medicine, Philadelphia, PA; ³Department of Ophthalmology, Renji Hospital, Shanghai Jiaotong University School of Medicine, Shanghai, China

5360 — A0012 Analysis of fluid phase complement system activation in diabetic retinopathy. Jeya Maheshwari Jayapal¹, R. R. Pai¹, N. L. Demonte¹, V. P¹, B. P. Phangtey², K. Ramasamy², D. Kuppamuthu¹. ¹Department of Proteomics, Aravind Medical Research Foundation, Madurai, Tamil Nadu, India; ²Retina-Vitreous Services, Aravind Eye Hospital, Madurai, Tamil Nadu, India

5361 — A0013 Systemic reduction of GLUT1 prevents hallmarks of diabetic retinopathy. Ivy S. Samuels^{1,2}, M. Tarchick^{1,3}, T. D. Trobenter^{1,2}, M. R. Kozlowski². ¹Research Service, Louis Stokes VA Medical Center, Cleveland Heights, OH; ²Ophthalmic Research, Cole Eye Institute, Cleveland Clinic, Cleveland, OH; ³Biology, University of Akron, Akron, OH

5362 — A0014 Validation of a Novel Cytokine Multiplex Assay for Vitreous Analysis in Diabetic Retinopathy. Markus Zumbansen¹, S. Ong², K. Teo^{3,4}, M. Ang^{3,4}, T. Endermann¹, V. Arndt¹, S. Lee^{3,4}, I. Yeo^{3,4}, E. Wong^{3,4}, G. Tan^{3,4}, A. Tan^{3,4}, Y. Yanagisawa^{3,4}, T. Y. Wong^{3,4}, N. Yawata^{3,5}. ¹Ayoxxa Biosystems GmbH, Cologne, Germany; ²Ayoxxa Living Health Technologies Pte. Ltd, Singapore, Singapore; ³Singapore National Eye Centre, Singapore, Singapore; ⁴Singapore Eye Research Institute, Singapore, Singapore; ⁵Fukuoka Dental College, Fukuoka, Japan *CR

5363 — A0015 Supplementation with EPA and DHA to Improve VLC-PUFA Levels in Diabetic Mice. Aruna Gorusupudi, F. Chang, P. S. Bernstein. Department of Ophthalmology and Visual sciences, University of Utah, Salt Lake City, UT

5364 — A0016 Diabetic retinopathy-clinical and molecular genetic insights from a type 2 diabetes mellitus population-based cohort study.. Maria D. Pinazo-Duran¹, V. Zanón-Moreno¹, S. Sanz-Gonzalez¹, J. J. Garcia-Medina¹, J. Raga-Cervera¹, M. Lopez-Galvez², J. AREVALO³. ¹Retinal Research, Ophthalmic Research Unit Santiago Grisolia, Valencia, Spain; ²Diabetic Retinopathy, Institute ophthalmobiology IOBA, Valladolid, Valladolid, Spain; ³Ophthalmology, Wilmer Institute, Baltimore, Mariland, United States of America, MD

5365 — A0017 Retinal Fatty Acid Synthase Activity is Elevated in Diabetes. Rithwick Rajagopal¹, S. Zhang¹, C. Oberlin¹, G. Ling², C. F. Semenkovich². ¹Ophthalmology and Visual Sciences, Washington University, Saint Louis, MO; ²Division of Endocrinology, Metabolism and Lipid Research, Department of Medicine, Washington University School of Medicine, Saint Louis, MO

5366 — A0018 Insulin in the vitreous humor of patients with proliferative diabetic retinopathy. Nikhil S. Sahajpal¹, S. Jain¹, V. Vig², P. Singh², R. Singh², H. Singh², K. Singh², R. Goel¹, J. Yasuda⁵, D. Wright⁶, A. Chaubey⁶. ¹Pharmaceutical Sciences, Guru Nanak Dev University, Amritsar, India; ²Sardar Bahadur Dr Sohan Singh Eye Hospital, Amritsar, Punjab, India; ³Government Medical College, Amritsar, India; ⁴Punjabi University, Patiala, Punjab, India; ⁵Thermo Fisher Scientific, San Diego, CA; ⁶Greenwood Genetic Center, Greenwood, SC *CR

5367 — A0019 Selective PPAR alpha modulator, pemafibrate as a novel therapeutic target for diabetic retinopathy. Akira Shiono, H. Sasaki, H. Takagi. ophthalmology, St marianna university of medicine, Kawasaki, Japan *CR

5368 — A0020 The characteristics of diabetic retinopathy in ZDF type-2 diabetes rats. Akifumi Yamamoto, O. Sakai, H. Tokushige. New Drug Research Laboratories, Senju Pharmaceutical Co., Ltd., Kobe, Japan *CR

- 5369 — A0021 IRS-2 necessary for structural organization of the retina.** Jesus Fraile Maya², R. Romero Martín², J. Carretero Gonzalez¹, P. Ciudad Betegon². ¹Anatomy and Cell Biology, University of Salamanca, Salamanca, Salamanca, Spain; ²Ophthalmology, University Hospital of La Paz, Madrid, Madrid, Spain
- 5370 — A0022 The Effect of DR circulatory microRNAs on VEGF secretion in human retinal pigment epithelial cells.** Zeljka Smit-McBride, K. N. Nguyen, A. W. Lai, G. W. Elliott, J. D. Nguyen, A. T. Nguyen, L. S. Morse. Vitreo-Retinal Research Lab, Univ of California, Davis Sch of Med, Davis, CA *CR
- 5371 — A0023 Distinct Roles of Wnt Co-receptors in the Regulation of Wnt Signaling in Diabetic Retinopathy.** Yusuke Takahashi^{1,2}, H. Singh², J. Ma^{3,2}. ¹Medicine, The University of Oklahoma Health Sciences Center, Oklahoma City, OK; ²Harold Hamm Diabetes Center, Oklahoma City, OK; ³Physiology, The University of Oklahoma Health Sciences Center, Oklahoma City, OK
- 5372 — A0024 Increased plasma galectin-1 is correlated with advanced glycation end products and interleukin-1 β in patients with proliferative diabetic retinopathy.** Keitaro Hase, A. Kanda, K. Noda, S. Ishida. Laboratory of Ocular Cell Biology and Visual Science, Department of Ophthalmology, Faculty of Medicine and Graduate School of Medicine, Hokkaido University, Sapporo, Hokkaido, Japan *CR
- 5373 — A0025 The utility to evaluate inflammatory cytokines in the aqueous humor and aqueous flare in patients with proliferative diabetic retinopathy.** Yuki Fujita, T. Sato, H. Someya, K. Takayama, Y. Karasawa, M. Takeuchi. Ophthalmology, National Defense Medical College, Tokorozawa, Saitama, Japan
- 5374 — A0026 Glucose-regulated protein 78 in the aqueous humor in diabetic macular edema patients.** Jinwoo Kwon. Ophthalmology, St. Vincent hospital, Suwon, Kyunggi-do, Korea (the Republic of)
- 5375 — A0027 Serum and aqueous humor vitamin D levels in diabetic macular edema patients Section: Retina.** Sung Pyo Park. Hallym University Medical Center, KangDong Sacred Heart Hospital, Seoul, Korea (the Democratic People's Republic of)
- 5376 — A0028 Increased Expression of Periostin and Tenascin-C in the Aqueous Humor in Neovascular Glaucoma secondary to PDR.** Keijiro Ishikawa, S. Yoshida, Y. Kubo, Y. Kobayashi, T. Nakama, Y. Murakami, Y. Ikeda, S. Nakao, K. Sonoda. Ophthalmology, Kyushu University, Fukuoka, Japan
- 5377 — A0029 Pinacidil Rescues Diabetes-induced Down-regulation of Kir4.1 and Aquaporin-4 in Müller cells.** Hong Li¹, H. Xu^{1,3}, J. Ma^{1,2}, J. Chen^{1,2}, S. Tang^{1,2}. ¹Aier school of ophthalmology, ChangSha, China; ²Aier Eye Institute, ChangSha, China; ³Centre for Experimental Medicine, School of Medicine, Dentistry & Biological Sciences, Queen's University Belfast, UK, Belfast, United Kingdom
- 5378 — A0030 Identification of anti-citrin antibody as a serum biomarker of diabetic retinopathy.** Tatsuya Yoshitake, T. Murakami, K. Suzuma, H. Nakanishi, M. Fujimoto, Y. Dodo, M. Oishi, A. Tsujikawa. Kyoto University Graduate School of Medicine, Kyoto, Kyoto Prefecture, Japan
- 5379 — A0031 Microglial involvement in the neurovascular unit and alterations during early diabetic retinopathy.** Andrew I. Jobling¹, S. A. Mills¹, J. A. Phipps¹, K. A. Vessey¹, M. A. Dixon¹, U. Greferath¹, B. Y. Bui², E. L. Fletcher¹. ¹Anatomy & Neuroscience, The University of Melbourne, Melbourne, Victoria, Australia; ²Optometry and Vision sciences, The University of Melbourne, Melbourne, Victoria, Australia
-
- Exhibit Hall A0032-A0074
Thursday, May 03, 2018 8:15 AM-10:00 AM
Biochemistry/Molecular Biology
- 504 Gene variants and regulation of ocular genes expression in health and disease**
-
- Moderators: James E. Self and Vivek Kumar Gupta**
- 5380 — A0032 Identification of a microRNA signature in the serum of non-infectious uveitis patients.** Fleurieke H. Verhagen^{1,2}, C. Bekker², M. Rossato², S. Hiddingh², L. de Vries³, A. Devaprada², A. Pandit², J. Ossewaarde-van Norel¹, N. ten Dam-van Loon¹, M. Moret-Pot¹, S. Imhof¹, J. de Boer¹, T. Radstake^{2,4}, J. Kuiper^{1,2}. ¹Ophthalmology, University Medical Center Utrecht, Utrecht, Utrecht, Netherlands; ²Laboratory of Translational Immunology, University Medical Center Utrecht, Utrecht, Utrecht, Netherlands; ³Ophthalmology, Radboud University Medical Center Nijmegen, Nijmegen, Netherlands; ⁴Rheumatology & Clinical Immunology, University Medical Center Utrecht, Utrecht, Netherlands
- 5381 — A0033 MicroRNA 144 regulates Nr1f2 and related antioxidant signaling in RPE.** Ravirajsinh Jadeja¹, F. L. Powell¹, M. Thounaojam², M. A. Jones¹, M. Bartoli², P. M. Martin¹. ¹Biochemistry and Molecular Biology, Augusta University, Augusta, GA; ²Ophthalmology, Augusta University, Augusta, GA
- 5382 — A0034 Long Non-coding RNA LINC00276 is involved in the differentiation of human retinal pigment epithelial cells.** William Samuel, T. Duncan, O. Postnikova, C. Jaworski, R. K. Kutty, T. Redmond. LRCMB, National Eye Institute, Bethesda, MD
- 5383 — A0035 A homozygous mutation in the novel gene ARFGAP2 is associated with non-syndromic recessive inherited retinal degeneration (IRD).** Pooja Biswas¹, A. K. Chekuri¹, J. Ear², S. Borooh¹, H. Matsui³, M. D'Antonio³, K. Frazer^{3,4}, S. Devalaraja¹, S. Y. Khan⁵, M. A. Naeem⁶, S. Riazuddin^{6,7}, J. Akram^{7,8}, J. Hejtmanic⁹, P. Ghosh², S. Riazuddin⁵, R. Ayyagari¹. ¹Shiley Eye Institute, University of California San Diego, La Jolla, CA; ²Departments of Medicine and Cellular and Molecular Medicine, University of California San Diego, La Jolla, CA; ³Institute for Genomic Medicine, University of California San Diego, La Jolla, CA; ⁴Department of Pediatrics, Division of Genome Information Sciences, Rady Children's Hospital, La Jolla, CA; ⁵The Wilmer Eye Institute, Johns Hopkins University School of Medicine, Baltimore, MD; ⁶National Centre of Excellence in Molecular Biology, University of the Punjab, Lahore, Pakistan, Pakistan; ⁷National Centre for Genetic Diseases, Shaheed Zulfiqar Ali Bhutto Medical University, Islamabad, Pakistan; ⁸Allama Iqbal Medical College, University of Health Sciences, Lahore, Punjab, Pakistan; ⁹Ophthalmic Genetics and Visual Function Branch, National Eye Institute, Bethesda, MD
- 5384 — A0036 Effectiveness of near-cognate amino acid insertion for KCNJ13 nonsense suppression.** Bikash R. Pattnaik^{1,2}, R. Ramesh⁴, P. K. Shah^{4,2}, S. Counter⁴, S. Stulo⁴, D. M. Pillers^{3,2}. ¹Pediatrics, Ophthalmology and Visual Science, Univ of Wisconsin, Madison, WI; ²McPherson Eye Research Institute, University of Wisconsin, Madison, WI; ³Pediatrics, Medical Genetics, University of Wisconsin, Madison, WI; ⁴Pediatrics, University of Wisconsin, Madison, WI
- 5385 — A0037 Genome-wide Maps of Histone Modifications in the Human Retina.** Weiwei Chen^{1,2}, X. Chen^{1,2}, S. Yang^{1,2}, P. S. Reinach^{1,2}, D. Yan^{1,2}. ¹School of Ophthalmology and Optometry, Wenzhou Medical University, Wenzhou, Zhejiang, China; ²State Key Laboratory of Ophthalmology, Optometry and Visual Science, Wenzhou, Zhejiang, China
- 5386 — A0038 Epigenomic profiling of zebrafish retinal progenitor cells during neurogenesis.** Pawat Serittrakul^{1,2}, D. Kostka³, J. M. Gross¹. ¹Ophthalmology, University of Pittsburgh, Pittsburgh, PA; ²Molecular Biosciences, University of Texas at Austin, Austin, TX; ³Developmental Biology, University of Pittsburgh, Pittsburgh, PA

5387 — A0039 An unusual presentation of choroideremia with macular dystrophy associated with early visual acuity loss. Georgios Kontos¹, J. Kwan¹, R. E. MacLaren^{1,2}, S. Downes^{1,2}. ¹Oxford Eye Hospital, John Radcliffe Hospital, Oxford, England, United Kingdom; ²Nuffield Laboratory of Ophthalmology, Oxford University, Oxford, United Kingdom *CR

5388 — A0040 MicroRNAs as mediators of fibrosis in an *in vitro* model of proliferative vitreoretinopathy. Patricia Sanchez-Diaz¹, W. Greene², P. A. Clark¹, T. A. Burke², H. H. Wang². ¹Rosenberg School of Optometry, University of the Incarnate Word, San Antonio, TX; ²Ocular Trauma, United States Army Institute of Surgical Research, San Antonio, TX

5389 — A0041 Intravitreal Injection of MicroRNA-126 Reduces the Expression of Vascular Endothelial Growth Factor and Inhibits Oxygen-Induced Retinal Neovascularization. An-Lun Wu, C. Lai, W. Wu. Department of Ophthalmology, Chang Gung Memorial Hospital, Linkou, New Taipei City, Taiwan

5390 — A0042 Microglia-specific expression of Translocator Protein (18kDa). Khalid Rashid¹, A. Wolf¹, M. Karlstetter², T. Langmann¹. ¹Ophthalmology, University of Cologne, Cologne, North Rhine Westphalia, Germany; ²BPH-DD-TRG-CIPL, Bayer AG, Cologne, North Rhine Westphalia, Germany

5391 — A0043 Characterization of ICR, MALAT1 and MEG3 lncRNA expression in human retinal endothelial cells in relation to TNF α induced ICAM-1 expression. Binoy Appukuttan¹, L. M. Ashander¹, A. Lumsden², Y. Ma¹, M. Z. Michael³, J. R. Smith¹. ¹Eye & Vision Health, Molecular Medicine and Pathology, Flinders University, Adelaide, South Australia, Australia; ²Molecular and Cellular Physiology Laboratory, Flinders University, Adelaide, South Australia, Australia; ³Gene Expression Laboratory, Flinders Centre for Innovation in Cancer, Flinders Medical Centre, Adelaide, South Australia, Australia

5392 — A0044 Molecular Characterization of Missense Mutations in Nucleotide Binding Domains of ABCA4 Associated with Stargardt Disease. Robert S. Molday^{1,2}, L. Molday¹. ¹Biochemistry/Molecular Biology, University of British Columbia, Vancouver, British Columbia, Canada; ²Ophthalmology and Visual Sciences, University of British Columbia, Vancouver, British Columbia, Canada

5393 — A0045 An Australian perspective: Genomics, molecular diagnoses and genotype-phenotype insights in the Inherited Retinal Dystrophies. Benjamin M. Nash^{1,2}, A. Ma^{1,4}, D. Wright^{1,4}, B. Bennetts^{1,2}, J. R. Grigg^{1,3}, R. Jamieson^{1,4}. ¹Eye Genetics Research Unit, Children's Medical Research Institute, Sydney Children's Hospital Network, Westmead, New South Wales, Australia; ²Sydney Genome Diagnostics, Sydney Children's Hospital Network - Westmead, Westmead, New South Wales, Australia; ³Save Sight Institute, Sydney, New South Wales, Australia; ⁴Discipline of Genetic Medicine, University of Sydney, Sydney, New South Wales, Australia

5394 — A0046 Pathogenic Mechanisms Responsible for Stargardt Disease Associated with the N965S Missense Mutation in ABCA4. Laurie L. Molday, R. S. Molday. Biochemistry & Molecular Biology, University of British Columbia, Vancouver, British Columbia, Canada

5395 — A0047 Mutation spectrum and genotype-phenotype relevancy of retinitis pigmentosa among Chinese population. Tingyu Yan, X. Zhang, R. Wei, N. Yang, Y. Ding, X. Wang, F. Liu, Y. Wang, H. Liu, J. Liu, Y. Liu, W. Sun, X. Li, J. Kong. The Ophthalmology Hospital, The 4th Affiliated Hospital of China Medical University, Shenyang, China

5396 — A0048 40 Retinitis Pigmented Families-Study on Pathogenic Mutagenesis and Molecular Diagnosis Based on Target Capture Next Generation Sequencing Technology. Xinxin Zhang, w. sun, N. Yang, T. Yan, X. Li, J. Liu, F. Liu, Y. Liu, X. Wang, H. Liu, Y. Wang, Y. Ding, R. Wei, R. Wang, J. Kong. China Medical University, Shenyang, China

5397 — A0049 CRB1 Related Retinal Degeneration with Novel Mutations. Benjamin K. Ghiam², E. H. Wood¹, A. Thanos³, S. Randhawa¹. ¹Associated Retinal Consultants, William Beaumont Hospital, Royal Oak, MI; ²Oakland University, William Beaumont School of Medicine, Rochester, MI; ³Legacy Devers Eye Institute, Portland, OR

5398 — A0050 Identification Of Five Somatic Mutations In KRAS And FGFR1 Genes In Mexican Patients With Oculocutaneous Syndromes. Sofía Pérez Solórzano, Ó. Chacón-Camacho, B. Fuerte-Flores, D. López-Moreno, E. Hofmann, J. Zenteno-Ruiz. Instituto de Oftalmología Conde de Valenciana, Mexico City, Mexico

5399 — A0051 Identification of the rs121908120 polymorphism of the WNT10A gene as a risk factor for developing Keratoconus in a Mexican population sample. David Lozano-Giral¹, B. Buentello², J. C. Zenteno³. ¹Integral Ophthalmology, Instituto de Oftalmología Conde de Valenciana, CDMX, Distrito Federal, Mexico; ²Genetics, Instituto de Oftalmología, CDMX, CDMX, Mexico; ³Genetics, Instituto de oftalmología Conde de Valenciana, CDMX, CDMX, Mexico

5400 — A0052 Personalized diagnosis and management of inherited pediatric ophthalmic diseases by Next-Generation Sequencing. Jinu Han¹, S. Lee², J. Choi², J. Rim², H. Park¹, S. Han¹. ¹Department of Ophthalmology, Yonsei University College of Medicine, Seoul, Korea (the Democratic People's Republic of); ²Department of Laboratory Medicine, Yonsei University College of Medicine, Seoul, Korea (the Republic of)

5401 — A0053 Ocular and renal phenotypes of NPHP1 deletion in Senior Loken syndrome. Ke Ning¹, E. Song¹, K. M. Haider², A. Ghaffarieh², J. A. Alvarado¹, Y. Sun^{1,3}. ¹Ophthalmology, Stanford University School of Medicine, Palo Alto, CA; ²Department of Ophthalmology, Indiana University, Indianapolis, IN; ³Palo Alto VA Medical Center, Palo Alto, CA

5402 — A0054 Long-range polymerase chain reaction validates copy number variation in autosomal dominant optic pit. Eileen Hwang^{1,2}, D. Morgan¹, L. Owen¹, J. H. Fingert³, P. S. Bernstein¹, M. M. DeAngelis¹. ¹Moran Eye Center/University of Utah, Salt Lake City, UT; ²Ophthalmology, Medical College of Wisconsin, Milwaukee, WI; ³Ophthalmology, University of Iowa, Iowa City, IA

5403 — A0055 Functional characterization of N-terminal TIMP3 mutation underlying Sorsby fundus dystrophy in Belgian and French pedigrees. Sarah Naessens¹, D. Sxyl¹, F. Peelman², R. Vandenbroucke³, S. De Jaegere¹, F. Smeets⁴, J. De Zaeytjij⁴, B. P. Leroy^{4,5}, E. De Baere¹, F. Coppiepers¹. ¹Center for Medical Genetics Ghent, Ghent University, Ghent, Belgium; ²VIB-UGent Center for Medical Biotechnology, Ghent University, Ghent, Belgium; ³Inflammation Research Center, VIB, Ghent University, Ghent, Belgium; ⁴Department of Ophthalmology, Ghent University Hospital, Ghent, Belgium; ⁵Division of Ophthalmology, The Children's Hospital of Philadelphia, Philadelphia, PA

5404 — A0056 Leveraging consanguinity in inherited retinal diseases uncovers missing genetic variation: rare novel disease genes and a multitude of novel pathogenic variants in known disease genes. Kristof Van Schil¹, S. Naessens¹, S. Van de Sompele¹, M. Carron¹, L. Lambrechts¹, N. Gruartmoner Roura¹, K. Dannhausen², F. Coppiepers¹, M. Karlstetter², T. Langmann², R. Maroofian³, A. Webster^{4,5}, M. Michaelides⁵, B. P. Leroy^{6,7}, E. De Baere¹. ¹Center for Medical Genetics Ghent, Ghent University, Ghent, Belgium; ²Laboratory for Experimental Immunology of the Eye, Department of Ophthalmology, University of Cologne, Cologne, Germany; ³Monogenic Molecular Genetics, University of Exeter Medical School, Exeter, United Kingdom; ⁴UCL Institute of Ophthalmology, University College London, London, United Kingdom; ⁵Moorfields Eye Hospital, London, United Kingdom; ⁶Department of Ophthalmology, Ghent University Hospital, Ghent, Belgium; ⁷Division of Ophthalmology, The Children's Hospital of Philadelphia, Philadelphia, PA

- 5405 — A0057 Genetic Association of Axial Length in Chinese Children.** Li Jia Chen^{1,2}, S. Lu¹, J. Yam¹, P. Tam¹, A. Young^{1,2}, C. Pang¹. ¹Ophthalmology and Visual Sciences, The Chinese University of Hong Kong, Hong Kong, Hong Kong; ²Department of Ophthalmology & Visual Sciences, Prince of Wales Hospital, Hong Kong, Hong Kong
- 5406 — A0058 A novel mutation in the FLVCR1 gene implicated in Retinitis Pigmentosa without ataxia.** Adrian Dockery¹, M. Carrigan¹, K. Stephenson², N. Wynne³, G. Silvestri^{4,5}, D. J. Keegan², P. F. Kenna^{1,3}, G. J. Farrar¹. ¹Genetics, Trinity College Dublin, Dublin, Ireland; ²Mater Misericordiae University Hospital, Dublin, Ireland; ³The Royal Victoria Eye and Ear Hospital, Dublin, Ireland; ⁴Department of Ophthalmology, The Royal Victoria Hospital, Belfast, Ireland; ⁵Centre for Experimental Medicine, Queen's University Belfast, Belfast, Ireland
- 5407 — A0059 A rare chromosomal rearrangement in the X-linked opsin gene array is associated with retinal degeneration.** Atta Ur Rehman¹, Q. A. Ngo¹, I. Martin-Merida^{2,3}, B. Garcia-Sandoval⁴, C. Ayuso^{2,3}, C. Rivolta^{4,5}. ¹Department of Computational Biology, University of Lausanne, Lausanne, Switzerland; ²Department of Genetics, Instituto de Investigación Sanitaria-Fundación Jimenez Diaz University Hospital (IIS-FJD, UAM), Madrid, Spain; ³Center for Biomedical Network Research on Rare Diseases (CIBERER), ISCIII, Madrid, Spain; ⁴Department of Ophthalmology, Instituto de Investigación Sanitaria-Fundación Jimenez Diaz University Hospital (IIS-FJD, UAM), Madrid, Spain; ⁵Department of Genetics and Genome Biology, University of Leicester, Leicester, United Kingdom
- 5408 — A0060 Exome-based RetNet panel analysis in a Belgian cohort with inherited retinal disease expands the molecular and phenotypic spectrum of recently identified iRD genes.** Frauke Coppeters¹, S. Van de Sompele¹, K. Van Schil¹, c. Van Cauwenbergh^{1,2}, T. Rosseel¹, S. De Jaegere¹, T. Van Laethem¹, I. Balikova², B. P. Leroy^{1,2}, E. De Baere¹. ¹Center for Medical Genetics Ghent, Ghent University, Ghent, Belgium; ²Department of Ophthalmology, Ghent University Hospital, Ghent, Belgium
- 5409 — A0061 Rare variants in the phosphoglycerate dehydrogenase (PHGDH) gene in MacTel patients lead to decreased enzymatic activity.** Regis Fallon¹, J. Zernant², T. Nagasaki², M. Gantner¹, s. harkins-perry¹, K. Eade¹, R. Allikmets², M. Friedlander^{3,1}. ¹Lowy Medical Research Institute, La Jolla, CA; ²Ophthalmology, Columbia University, New York, NY; ³Molecular Medicine, The Scripps Research Institute, La Jolla, CA
- 5410 — A0062 Careful clinical-functional phenotyping combined with systematic, broad NGS Panel-based genotyping identify numerous novel disease-causing mutations and deletions in inherited retinal dystrophy (IRD) patients.** Alessandro Iannaccone¹, J. Berdia¹, W. Kheir¹, L. Mighion², N. Wang³, C. DaSilva⁴, J. Duan³, J. J. Alexander^{2,4}, J. Chiang³. ¹Duke Eye Center; Duke University Medical Center, Durham, NC; ²Dept. Human Genetics, Emory University, Atlanta, GA; ³Molecular Vision Laboratory, Hillsboro, OR; ⁴EGL Genetics, Tucker, GA *CR
- 5411 — A0063 Microphthalmia, coloboma and WNT signalling.** Steven Eamegdool, T. Loi, A. Cheng, R. V. Jamieson. Children's Medical Research Institute, Westmead, New South Wales, Australia
- 5412 — A0064 A novel genetic diagnostic approach combines NGS and RNA-seq methodologies for detection of non-coding mutations in IRD patients.** Revital Bronstein¹, S. Mehrotra¹, E. E. Capowski², D. M. Gamm², E. A. Pierce¹. ¹Ophthalmology, Mass Eye and Ear, Boston, MA; ²Waisman Center, University of Wisconsin-Madison, Madison, WI
- 5413 — A0065 Functional study of two canonical splice site variants c.3877+1G>A and c.2992_2992+6delinsTG in the EYS gene associated with recessive retinitis pigmentosa in northern Sweden.** Ida Maria Westin^{1,2}, F. Jonsson¹, L. Österman¹, M. Burstedt², M. Holmberg¹, I. Golovleva¹. ¹Department of Medical Biosciences, Faculty of Medicine, Umeå, Sweden; ²Department of Clinical Sciences, Faculty of Medicine, Umeå, Sweden
- 5414 — A0066 Mutation Analysis of Japanese Patients with Leber Congenital Amaurosis by Next Generation Sequencing.** Katsuhiko Hosono¹, S. Nishina², T. Yokoi², S. Katagiri^{2,3}, K. Kurata¹, D. Miyamichi¹, K. Mizobuchi³, T. Nakano³, S. Minoshima⁴, M. Fukami⁵, H. Kondo⁶, M. Sato¹, T. Hayashi³, N. Azuma², Y. Hotta¹. ¹Ophthalmology, Hamamatsu University School of Medicine, Hamamatsu, Japan; ²Ophthalmology and Laboratory for Visual Science, National Center for Child Health and Development, Tokyo, Japan; ³Ophthalmology, Jikei University School of Medicine, Tokyo, Japan; ⁴Preeminent Medical Photonics Education & Research Center, Hamamatsu University School of Medicine, Hamamatsu, Japan; ⁵Molecular Endocrinology, National Center for Child Health and Development, Tokyo, Japan; ⁶Ophthalmology, University of Occupational and Environmental Health, Fukuoka, Japan
- 5415 — A0067 A missense variant in CACNA1F causes variable phenotype in female carriers and hemizygous males of three unrelated Jewish families of Russian origin.** Adva Kimchi^{1,2}, V. Meiner¹, O. Elpeleg¹, M. Macarov^{1,2}, A. Blumenfeld², I. S. Audo³, C. Zeitz³, H. Mechoulam², E. Banin², D. Sharon², C. Yahalom². ¹Department of Genetics and Metabolic Diseases, Hadassah-Hebrew University Medical Center, Jerusalem, Israel; ²Department of Ophthalmology, Hadassah-Hebrew University Medical Center, Jerusalem, Israel; ³Institut de la Vision, Sorbonne Universités, UPMC Univ Paris 06, Paris, France
- 5416 — A0068 Structural and splicing RPGRIP1 mutations in inherited retinal degenerations.** Farzad Jamshidi¹, E. Place¹, D. Navarro-Gomez², M. Maher¹, E. Valkanas², M. Lek², D. MacArthur², K. M. Bujakowska¹, E. A. Pierce¹. ¹Ocular Genomics Institute, Mass. Eye and Ear, Boston, MA; ²Broad Institute, Boston, MA
- 5417 — A0069 Analysis of BEST1 mutations and clinical features in Chinese patients with multifocal vitelliform retinopathy.** Xing Liu, J. Luo, H. Xiao, X. Xu, Y. Zhong, W. Wei. State Key Laboratory of Ophthalmology, Zhongshan Ophthalmic Center, Sun Yat-sen University, Guangzhou, Guangdong, China
- 5418 — A0070 Insights into EYS protein function(s) by deciphering the novel transcripts expressed in human dermal fibroblasts and zebrafish eye.** Shimpei Takita, K. Miyamoto-Matsui, Y. Seko. Department of Rehabilitation for Sensory Functions, National Rehabilitation Center for Persons with Disabilities Research Institute, Tokorozawa, Saitama, Japan
- 5419 — A0071 Comprehensive molecular diagnosis of 118 Leber Congenital Amaurosis and Early Onset Severe Retinal Dystrophy by targeted next generation sequencing.** Fernanda B. Porto^{1,2}, S. A. Sampaio¹, E. Jones³, F. Kok⁴, R. Chen⁵, R. T. Simoes³. ¹Retina Department, INRET Clínica e Centro de Pesquisa, Belo Horizonte, Minas Gerais, Brazil; ²Retina Department, Centro Oftalmológico De Minas Gerais, Belo Horizonte, Minas Gerais, Brazil; ³Instituto De Ensino E Pesquisa Da Santa Casa Bh, Belo Horizonte, Minas Gerais, Brazil; ⁴Mendelics Análise Genômica, Sao Paulo, Sao Paulo, Brazil; ⁵Human Genome Sequencing Center Department of Molecular and Human Genetics, Baylor College of Medicine, Houston, TX
- 5420 — A0072 Genetic analysis of inherited retinal degenerative diseases with "hole exome sequencing."** Shigeru Sato, T. Morimoto, T. Fujikado, K. Nishida. Ophthalmology, Osaka University, Suita, Japan

5421 — A0073 A heterozygous deletion of a noncoding part of the *PRPF31* gene causes retinitis pigmentosa via reduced gene expression. Francesco Paolo Ruberto¹, S. Balzano¹, A. Kimchi², P. Namburi³, T. Ben-Yosef⁴, E. Banin³, D. Sharon³, C. Rivolta^{1,2}. ¹Department of Computational Biology, University of Lausanne, Lausanne, Switzerland; ²Department of Genetics and Genome Biology, University of Leicester, Leicester, United Kingdom; ³Department of Ophthalmology, Hadassah-Hebrew University Medical Center, Jerusalem, Israel; ⁴Genetics Department Medicine, Technion, Haifa, Israel

5422 — A0074 Sector Retinitis Pigmentosa caused by mutations of the *RHO* gene. Yang Li, K. Xu, T. Xiao, X. Zhang, Y. Xie. Beijing Inst of Ophthalmology, Beijing Tongren Hospital, Beijing, China

Exhibit Hall A0092-A0129

Thursday, May 03, 2018 8:15 AM-10:00 AM

Retina

505 Retinal vascular diseases II (excluding diabetes)

Moderator: Robert L. Avery

5423 — A0092 Phloroglucinol suppresses inflammatory responses induced by vascular endothelial growth factor in mouse cone photoreceptor-derived cells through regulation of nuclear factor kappa B. Minsup Lee¹, S. Yoon¹, S. Choi¹, J. Yang^{1,2}. ¹T2B Infrastructure Center for Ocular Disease, Busan, Korea (the Democratic People's Republic of); ²Ophthalmology, Inje University College of Medicine, Busan, Korea (the Republic of)

5424 — A0093 Predictors of Neovascular Glaucoma in Central Retinal Vein Occlusion. Andrew J. Rong, S. S. Swaminathan, E. Vanner, R. K. Parrish. Ophthalmology, Bascom Palmer Eye Institute, Miami, FL

5425 — A0094 Ultra-Wide Field Fluorescein Angiography in Sickle Cell Retinopathy: Correlations Between Peripheral Nonperfusion Area and Macular Vascular Density on Optical Coherence Tomography Angiography. Cynthia J. Kamami-Levy, A. Miere, A. Moullem, e. bruyere, L. Debillon, A. Glacet-Bernard, O. Zambrowski, E. H. Souied. Ophthalmology, Creteil Intercommunal Hospital, Paris, Ile-De-France, France *CR

5426 — A0095 The effect of early-scatter laser photocoagulation on the formation of collateral vessels in branch retinal vein occlusion. An Seoung Hyun, W. Jeong, W. Park. Ophthalmology, Dong-A University College of Medicine, Busan, Korea (the Republic of)

5427 — A0096 Quantitative Optical Coherence Tomography Angiography Parameters in Central Retinal Vein Occlusion. Sarwar Zahid¹, M. Alam², X. Yao^{2,1}, J. I. Lim¹. ¹Department of Ophthalmology and Visual Sciences, University of Illinois at Chicago, Chicago, IL; ²Department of Bioengineering, University of Illinois at Chicago, Chicago, IL

5428 — A0097 Arterial Stiffness and Pulse Wave Velocity Quantification in Bovine Retinal Arteries. Mahdieh Rezaeian¹, A. Schulz¹, A. Leloup², M. Abbasi¹, M. Golzan³, S. L. Graham¹, M. Butlin⁴. ¹Clinical Medicine, Macquarie University, Sydney, New South Wales, Australia; ²Pharmaceutical Sciences, University of Antwerp, Antwerp, Belgium; ³Vision Science Group, University of Technology Sydney, Sydney, New South Wales, Australia; ⁴Biomedical Sciences, Macquarie University, Sydney, New South Wales, Australia

5429 — A0098 FK506 Prevents Retinal Neovascularization by Regulating CaN-NFATc1 Pathway. Yaguang Hu¹, Y. Xu¹, X. Lu¹, M. Chen², S. Yu¹, C. Tsui¹, J. Li¹, X. Liang¹. ¹State Key Laboratory of Ophthalmology, Zhongshan Ophthalmic Center, Guangzhou, Guangdong, China; ²Department of Ophthalmology, Dongguan People's Hospital, Dongguan, Guangdong, China

5430 — A0099 The pathophysiological roles of vascular endothelial growth factor (VEGF) on retinal edema and nonperfusion areas in retinal vein occlusion murine model. Anri Nishinaka, Y. Inoue, S. Fuma, Y. Hida, S. Nakamura, M. Shimazawa, H. Hara. Gifu Pharmaceutical University, Gifu, Japan

5431 — A0100 The increased arterial oxygen saturation in branch retinal vein occlusion depends on the size of the affected retinal area. Signe K. Jeppesen^{1,2}, T. Bek^{1,2}. ¹Ophthalmology, Aarhus University Hospital, Aarhus City, Denmark; ²Aarhus University, Aarhus City, Denmark

5432 — A0101 Difference of aqueous cytokines according to distribution of ischemia assessed by ultra-widefield fluorescein angiography in macular edema secondary to retinal vein occlusion. Min Sagong¹, D. Noh¹, J. Lee¹, N. Choi¹, I. Kim¹, J. Hemert², J. Son¹, Y. Kim³, S. Cha¹. ¹Department of Ophthalmology, Yeungnam University College of Medicine, Daegu, Korea (the Republic of); ²Opiot PLC, Dunfermline, United Kingdom; ³Department of Ophthalmology, Catholic University of Daegu School of Medicine, Daegu, Korea (the Republic of)

5433 — A0102 Prospective evaluation of morphological and functional change after intravitreal ranibizumab therapy for macular edema secondary to branch retinal vein occlusion. Jujo Tatsuya, H. Sasaki, A. Shiono, J. Kogo, H. Takagi. St.marianna university, Kawasaki, Kanagawa, Japan *CR, ✕

5434 — A0103 Peripheral Findings with Ultra-Widefield Fluorescein Angiography of Patients with Juxtafoveal Telangiectasis. Viren Govindaraju^{1,2}, S. N. Moysidis¹, S. Gamsky^{1,3}, N. Koullis¹, P. Rao¹, G. A. Williams^{1,3}, M. T. Trese^{1,3}, A. Capone^{1,3}. ¹Associated Retinal Consultants, Royal Oak, MI; ²Central Michigan University College of Medicine, Grosse Pointe Park, MI; ³Oakland University, William Beaumont School of Medicine, Rochester, MI

5435 — A0104 Spectral-domain optical coherence tomography (SD-OCT) findings in retinal vessel occlusion – Can retinal ischemia be detected in OCT findings?. Egbert Matthe¹, O. Furashova². ¹Dept of Ophthalmology, University of Dresden, Dresden, Germany; ²Klinikum Chemnitz, Chemnitz, Germany

5436 — A0105 Effect of Epiretinal Membranes on Intravitreal Dexamethasone Implant Treatment for Macular Edema Secondary to Branched Retinal Vein Occlusion: A Pilot Study. Mirinae Jang, S. Lee, J. Kim, E. Lee. Ophthalmology, Jeju National University Hospital, Jeju-si, Korea (the Republic of)

5437 — A0106 Initial Loss of Interdigitation Zone on OCT following CRVO May Predict Future Visual Acuity Improvement. Wyatt Messenger, J. I. Lim. University of Illinois at Chicago, Chicago, IL

5438 — A0107 Rabbit and Monkey Retinal GSH/GSSG Ratios as Preclinical Predictors of Toxicity from Potential Retinal Therapeutics. Corinne G. Wong, T. C. Bruice, T. W. Bruice. Sclera LLC, Carlsbad, CA

5439 — A0108 The Presence of Collateral Vessels is a Useful Prognostic Sign in Patients with Retinal Vein Occlusions. Kyle N. Kaneko^{1,2}, G. T. Kokame^{1,2}, R. Wee^{1,2}, S. Choi³, J. J. Chen³, J. C. Lai^{1,2}. ¹Research, Hawaii Macula and Retina Institute, Honolulu, HI; ²Retina Consultants of Hawaii, Honolulu, HI; ³Biostatistics, University of Hawaii School of Medicine, Honolulu, HI *CR

5440 — A0109 Real world clinical audit of aflibercept and ranibizumab use in the management of macular oedema secondary to central retinal vein occlusion. Mohammed Elatfy^{1,2}, J. Than², G. Palexas². ¹UCL London, United Kingdom; ²Ophthalmic department, North Middlesex University Hospital, London, United Kingdom

5441 — A0110 Real world results of aflibercept treatment for macular oedema secondary to central retinal vein occlusions. Zaria Ali¹, T. M. Aslam^{2,1}, C. Bailey¹, R. Chhabra¹, A. Stone¹, Y. D'Souza¹, S. Mahmood¹, K. Balaskas^{3,2}. ¹Manchester Royal Eye Hospital, Blackburn, England, United Kingdom; ²University of Manchester, Manchester, United Kingdom; ³NIHR Biomedical Research Centre at Moorfields Eye Hospital NHS Foundation Trust and UCL Institute of Ophthalmology, London, United Kingdom *CR

- 5442 — A0111 Identification of hypoxia-regulated genes in wild type and clock gene knock out mouse retinal Müller cells by RNAseq analysis.** Lili Xu¹, Q. Liu², D. McMahon¹. ¹Biological Science, Vanderbilt University, Nashville, TN; ²Biomedical Informatics, Vanderbilt University, Nashville, TN *CR
- 5443 — A0112 Effects of topical brimonidine-timolol on injection intervals in patients receiving combination therapy for retinal vein occlusions.** Chelsey Krambeer¹, R. Membreno², D. Kermany³, S. Bahadorani², K. Beck², K. Wannamaker², W. Tie², R. Diaz-Rohena², D. Nolan⁴, J. Sohn², M. Singer⁴. ¹Texas Tech University Health Science Center El Paso, San Antonio, TX; ²Long School of Medicine at University of Texas Health San Antonio, San Antonio, TX; ³University of Texas at Austin, Austin, TX; ⁴Medical Center Ophthalmology Associates, San Antonio, TX *CR
- 5444 — A0113 Cilioretinal Artery Occlusion Associated with Optic Disc Edema.** Eric Weinlander, T. Wubben, M. Thomas, K. Davis, W. Cornblath, M. W. Johnson. Kellogg Eye Center, University of Michigan, Ann Arbor, MI
- 5445 — A0114 Intra-arterial Thrombolysis for Central Retinal Artery Occlusion.** Benjamin Botsford¹, A. LAHAM¹, G. Bonhomme¹, S. Desai², T. G. Jovin², A. W. Eller¹. ¹Department of Ophthalmology, University of Pittsburgh Medical Center, Pittsburgh, PA; ²Department of Neurology, University of Pittsburgh Medical Center, Pittsburgh, PA
- 5446 — A0115 Longitudinal changes in choroidal thickness in branch retinal vein occlusion with and without cystoid macular edema.** Jane S. Kim, A. Thomas, S. Yoon, F. Birnbaum, N. Mukherjee, K. Khan, J. Powers, M. Gomez-Caraballo, S. Fekrat. Department of Ophthalmology, Duke University Health System, Durham, NC *CR
- 5447 — A0116 Morphologic changes in the optic nerve head of eyes with central retinal vein occlusion treated with multiple intravitreal injections.** Mohsin Ali, A. S. Thomas, S. Fekrat. Ophthalmology, Duke University, Durham, NC
- 5448 — A0117 Optical Coherence Tomography Angiography Findings in Retinal Vein Occlusion Treated with Anti-Vascular Endothelial Growth Factor.** Eung-Suk Kim, J. Kim, S. Noh, K. Kim, K. Bae, S. Yu. Ophthalmology, Kyung Univ Medical Center, Seoul, Korea (the Democratic People's Republic of)
- 5449 — A0118 Beyond two years of treatment with anti-vascular endothelial growth factor for patients with retinal vein occlusions.** Annette Rasmussen¹, M. Larsen^{1,2}, H. Lund-Andersen^{1,2}. ¹Department of Ophthalmology, Rigshospitalet - Glostrup, Denmark, Glostrup, Denmark, Denmark; ²Department of Clinical Medicine, University of Copenhagen, Copenhagen, Denmark *CR
- 5450 — A0119 Measurement of Vessel Density along the Retinal Vascular Arcades with OCT-Angiography (OCT-A) in Acute Retinal Vein Occlusion (RVO) and Correlation to Visual Acuity.** Emilia Karaiskou, K. Wehrmann, N. Feucht, M. Ulbig, M. Maier. Technical University Munich, Munich, Germany *CR
- 5451 — A0120 Systemic and ocular associations of central retinal vein occlusion in young versus old patients.** Abdulrahman ALSAEDI¹, H. Al-Dhibi¹, A. Badawi¹. ¹King Khaled Eye Specialist Hospital, Riyadh, Saudi Arabia; ²Ophthalmology Department, Al Imam Mohammad Ibn Saud Islamic University (IMSIU), Riyadh, Saudi Arabia
- 5452 — A0121 Familial Retinal Arteriolar Tortuosity and Quantification of Vascular Coherence Tomography Angiography.** Steven Saraf, A. J. Tyring, C. Chen, T. Le, R. K. Wang, J. R. Chao. Ophthalmology, University of Washington, Seattle, WA
- 5453 — A0122 A Mouse Model of Retinal Vasculopathy with Cerebral Leukodystrophy.** Bliss E. O'Bryhim¹, S. Li², C. Miner³, A. Santeford^{1,4}, A. Smith², Z. You², R. Apte^{1,4}, J. Miner³. ¹Ophthalmology, Washington University of St. Louis, St. Louis, MO; ²Department of Cell Biology and Physiology, Washington University in St. Louis, St. Louis, MO; ³Medicine, Washington University in St. Louis, St. Louis, MO; ⁴Developmental Biology, Washington University in St. Louis, St. Louis, MO
- 5454 — A0123 Management and Outcomes of Anterior Segment Neovascularization.** Ananth Sastry, C. Ryu, H. Ameri. Ophthalmology, USC Roski Eye Institute, Los Angeles, CA
- 5455 — A0124 Assessing central retinal microcirculation changes by optical coherence tomography angiography in patients with sickle cell retinopathy.** Benjamin R. Pace, C. J. Chen, M. Olsen, D. Robbins. Ophthalmology, University of Mississippi Medical Center, Ridgeland, MS *CR
- 5456 — A0125 Thicknesses of the central retina, retina nerve fiber layer and choroid in SCUBA divers.** Tamara Vrabec¹, W. R. Blodgett², V. D. Baldassano³, b. tsai⁴, R. R. Peairs⁵. ¹Geisinger Eye Institute, Danville, PA; ²Blodgett Optical, Danville, PA; ³Wyoming Seminary, Kingston, PA; ⁴Chung and Associates, Toronto, Ontario, Canada; ⁵Northeastern Eye Institute, Scranton, PA
- 5457 — A0126 Incidence of retinal artery occlusion following intravitreal anti-vascular endothelial growth factor injections.** Xinxiao Gao^{1,2}, D. S. Borkar¹, P. Storey¹, D. Su¹, A. Obeid¹, K. Sioufi¹, a. ho¹, S. Garg¹, J. Hsu¹. ¹Ophthalmology, Wills Eye Hospital, Philadelphia, PA; ²Ophthalmology, Beijing Anzhen Hospital, Capital Medical University, Beijing, China *CR
- 5458 — A0127 Assessment of Quantitative Optical Coherence Tomography Angiography Parameters in Branch Retinal Vein Occlusion and Monitoring Response to Treatment.** Judy L. Chen¹, S. Zahid¹, M. Alam², X. Yao², J. I. Lim¹. ¹Illinois Eye and Ear Infirmary, University of Illinois at Chicago, Chicago, IL; ²Department of Bioengineering, University of Illinois at Chicago, Chicago, IL
- 5459 — A0128 The Impact and Implication of a Fovea-Involving Intraretinal Hemorrhage in Patients with Central Retinal Vein Occlusion.** Mark Goerlitz-Jessen¹, T. A. Mir², A. S. Thomas¹, S. P. Yoon¹, S. Fekrat¹. ¹Ophthalmology, Duke Eye Center, Durham, NC; ²Wilmer Eye Institute, Baltimore, MD *CR
- 5460 — A0129 Density of the Retinal Blood Flow and Thickness Mapping by Spectralis OCT in Patients with Fabry Disease.** Katerina Hufendiek¹, J. Kaufeld², I. Volkmann¹, D. Brockmann¹, M. Awe¹, R. Kromer³, K. Hufendiek¹, B. Junker¹, C. Framme¹. ¹University Eye Hospital, Hannover Medical School, Hannover, Germany; ²Division of Nephrology, Center for Internal Medicine, Hannover Medical School, Germany, Hannover, Germany; ³Department of Ophthalmology, University Medical Center Hamburg-Eppendorf, Germany, Hannover, Germany

Exhibit Hall A0130-A0161

Thursday, May 03, 2018 8:15 AM-10:00 AM

Retinal Cell Biology

506 Retinal ischemia, angiogenesis and vascular remodeling

Moderators: Erica L. Fletcher and M. Elizabeth Hartnett

5461 — A0130 VEGFR1 inhibition hinders developmental retinal vessel outgrowth in pups and reduces pathological neovascularization in OIR model in mice. Eunice Cheung, J. Cao, C. Romano. Ophthalmology, Regeneron Pharmaceuticals, Inc., Tarrytown, NY *CR

5462 — A0131 3-Hydroxypruvate accumulates in the retina of newborn mice exposed to hyperoxia and may contribute to angiostasis. Amit Sharma, C. Singh, W. Song, Y. Bolok, J. Zhang, G. Hoppe, J. E. Sears. Cole Eye Institute, Cleveland Clinic, Cleveland, OH

5463 — A0132 Exosomes from microglia cells attenuate hypoxia-induced photoreceptor cells injury through inhibiting ER stress and decrease angiogenic growth factors through MiR155 in photoreceptor cells. Wenqin Xu, Y. Wang. Ophthalmology, Fourth Military Medical University, Xi, Shaanxi, China

5464 — A0133 Serine metabolism is a key pathway involved in the prevention of oxygen-induced retinopathy by Roxadustat. Charandeep Singh¹, A. Sharma¹, G. Hoppe¹, H. Brunengraber², J. E. Sears¹. ¹Cole Eye Institute, Cleveland Clinic, Cleveland, OH; ²Department of Nutrition, Case Western Reserve University, Cleveland, OH

5465 — A0134 The effect of intravitreal injection of anti-VEGF antibody on ocular circulation in a rat model of retinopathy of prematurity. Tadashi Matsumoto¹, Y. Saito², T. Itokawa¹, M. Tomita¹, K. Yokoyama², C. Yui², T. Shiba¹, H. Takahashi², Y. Hori¹. ¹Department of Ophthalmology, School of Medicine, Toho University, Tokyo, Japan; ²Department of Ophthalmology, School of Medicine, Showa University, Tokyo, Japan

5466 — A0135 Abnormal retinal function and vasculature in mouse neonates with hyperglycemic mother after oxygen-induced retinopathy. Kwan Wun Tsang, A. C. Lo. Ophthalmology, The University of Hong Kong, Hong Kong, Hong Kong

5467 — A0136 Endothelial Cell STAT3 Knockdown Inhibits Intravitreal Neovascularization in a Rat Model of Oxygen Induced Retinopathy. Colin A. Bretz¹, E. Kunz¹, T. Suwanmanee², T. Kafri², M. Hartnett¹. ¹Ophthalmology, Moran Eye Center, Salt Lake City, UT; ²Gene Therapy Center, University of North Carolina, Chapel Hill, NC

5468 — A0137 Interleukin 1 Beta prevents neovascularisation through regulation of retinal glycolysis in oxygen induced retinopathy. Senthil Selvam^{1,2}, A. Scott², M. J. Radeke³, M. Fruttiger¹. ¹Institute of Ophthalmology, University College London, London, England, United Kingdom; ²NIHR Biomedical Research Centre, Moorfields Eye Hospital, London, London, United Kingdom; ³Neuroscience Research Institute, University of California Santa Barbara, Santa Barbara, CA *CR

5469 — A0138 Knockdown of endothelial cell VEGFR2 reduces intravitreal neovascularization in the rat model of Retinopathy of Prematurity. Aaron B. Simmons¹, E. Kunz¹, H. Wang¹, C. A. Bretz¹, T. Suwanmanee², T. Kafri², M. Hartnett¹. ¹Moran Eye Center, University of Utah, Salt Lake City, UT; ²Microbiology and Immunology, University of North Carolina Gene Therapy Center, Chapel Hill, NC

5470 — A0139 Endothelial cell specific gene expression changes in Oxygen Induced Retinopathy (OIR). Alena Bartakova¹, G. Weiner², M. Oldham⁵, N. Ferrara⁴, R. Daneman³, E. Nudleman¹. ¹Ophthalmology, University of California San Diego (UCSD), La Jolla, CA; ²Medical Scientist Training Program, University of California, San Diego (UCSD), La Jolla, CA; ³Pharmacology, University of California, San Diego (UCSD), La Jolla, CA; ⁴Pathology, University of California, San Diego (UCSD), La Jolla, CA; ⁵Neurological Surgery, University of California, San Francisco (UCSF), San Francisco, CA

5471 — A0140 Absence of Surfactant Protein A Leads To a Decrease in Retinal Vascularization in Neonatal Mice. Johannes W. Kung¹, F. N. Bhatti^{1,2}. ¹Pediatrics, University of Oklahoma Health Sciences Center, Oklahoma City, OK; ²Ophthalmology, University of Oklahoma Health Sciences Center, Oklahoma City, OK

5472 — A0141 Celastrol Inhibits pathological neovascularization in Oxygen-Induced Retinopathy Along with a Downregulation of HIF-1 and VEGFA Expression. Yaping Jiang¹, c. Yang², Y. Chen¹. ¹Yangpu District Central Hospital, Shanghai, China; ²Jiangsu Province Hospital, Nanjing, China

5473 — A0142 The dual roles of Epac1 in a mouse model of oxygen-induced retinopathy. Hua Liu^{1,2}, Y. Ha¹, S. Zhu¹, F. Xia^{1,4}, W. Zhang^{1,3}. ¹Ophthalmology, University of Texas Medical Branch, Galveston, TX; ²Center for Biomedical Engineering, University of Texas Medical Branch, Galveston, TX; ³Neuroscience, Cell Biology and Anatomy, University of Texas Medical Branch, Galveston, TX; ⁴Ophthalmology, Union Hospital, Tongji Medical College, Huazhong University of Science and Technology, Wuhan, Hubei, China

5474 — A0143 Sdc4 deficiency leads to reduced VEGFA induced pathological ocular angiogenesis. Maria Vähätupa¹, G. De Rossi², T. A. Järvinen^{1,4}, H. Uusitalo-Järvinen^{1,3}, J. R. Whiteford⁵. ¹Faculty of Medicine and Life Sciences, University of Tampere, Tampere, Finland; ²William Harvey Research Institute, Barts and The London School of Medicine and Dentistry, Queen Mary University of London, London, United Kingdom; ³Tays Eye Centre, Tampere University Hospital, Tampere, Finland; ⁴Orthopedics & Traumatology, Tampere University Hospital, Tampere, Finland

5475 — A0144 Tmem30a plays critical roles in retina vascular development. Shanshan Zhang, L. Zhang, X. Zhu. University of Electronic Science and Technology of China, Chengdu, Sichuan, China

5476 — A0145 Defining a Novel Role for Complement Factor B in Diabetic Retinopathy. Hannah Murray^{1,2}, B. Qiu², W. English¹, G. Reilly¹, X. Wang^{2,3}. ¹The University of Sheffield, Sheffield, United Kingdom; ²Institute of Molecular and Cell Biology, A*STAR, Singapore, Singapore; ³Lee Kong Chian School of Medicine, Nanyang Technological University, Singapore, Singapore

5477 — A0146 Proteomic analysis of Oxygen Induced Retinopathy Model using SWATH -MS proteomics reveals novel potential therapeutic target molecules. Hannele Uusitalo-Järvinen^{1,2}, M. Vähätupa², J. Näntinen², A. Jylha², M. Kataja¹, U. Aapola², T. Jarvinen^{2,3}, H. M. Uusitalo^{2,1}. ¹Eye Centre, Tampere University Hospital, Tampere, Finland; ²Faculty of Medicine & Life Sciences, University of Tampere, Tampere, Finland; ³Orthopaedics, Tampere University Hospital, Tampere, Finland

5478 — A0147 In vitro activity and ocular pharmacokinetics (PK) of SF0166, a topically administered α_v integrin antagonist. Takeru Furuya, B. Askew, S. Edwards. SciFluor Life Sciences, Cambridge, MA

5479 — A0148 Metformin inhibits oxidative stress and enhances anti-oxidative signaling pathway in human retinal vascular endothelial cells. Yue Li, T. Zhou, P. A. Edwards, H. Gao, X. Qiao. Ophthalmology, Henry Ford Health System, Ferndale, MI

5480 — A0149 The role of a novel regulator of Wnt signalling in ocular angiogenesis. Xiaomeng Wang^{1,2}, B. Qiu², L. Zhou², N. Cheung⁴, G. Cheung⁴, T. Wong⁴, W. Hong². ¹Lee Kong Chian School of Medicine, Nanyang Technological University, Singapore, Singapore; ²Institute of Molecular and Cell Biology, Singapore, Singapore; ³Singapore Eye Research Institute, Singapore, Singapore; ⁴Singapore National Eye Center, Singapore, Singapore

5481 — A0150 Endomucin (EMCN) Regulates Angiogenesis by Controlling VEGFR2 Endocytosis. Michelle LeBlanc, K. Saez-Torres, M. Saint-Geniez, Y. Ng, P. A. D'Amore. Harvard Medical School, Department of Ophthalmology, Schepens Eye Research Institute of Mass Eye and Ear, Boston, MA

5482 — A0151 Analysis of VEGF expression in a chronic model of retinal neovascularization. Carl Romano, B. Iglesias, J. Cao. Ophthalmology, Regeneron Pharmaceuticals, Tarrytown, NY*CR

5483 — A0152 Persistent leaking in long term follow-up in the primate model of DL-2-aminoadipic acid-induced retinal neovascularization and vascular leakage. Wenzheng Hu, D. James, V. Woodley, C. Patel, A. Kurian, M. S. Lawrence. RxGen Inc, New Haven, CT*CR

5484 — A0153 High Efficacy and Safety of Anti-Secretogranin III therapy to treat Oxygen-Induced Retinopathy. Fen Tang^{1,2}, D. Liang¹, W. Li². ¹State Key Laboratory of Ophthalmology, Zhongshan Ophthalmic Center, Sun Yat-sen University, Guangzhou, Guangdong, China; ²Department of Ophthalmology, Bascom Palmer Eye Institute, University of Miami, Miami, FL

5485 — A0154 Mig6 exhibits anti-angiogenic effect by modulate endothelial cell proliferation and apoptosis. Liu Lixian, R. Chen, C. Lee, X. Li. State Key Laboratory of Ophthalmology, Zhongshan Ophthalmic Center, Sun Yat-sen University, Guangzhou, China

5486 — A0155 Differential anti-angiogenic properties of the bile acids UDCA and TUDCA in human retinal endothelial cells. Menaka Thounaojam¹, D. Gutsaeva¹, F. L. Powell², P. M. Martin², M. Bartoli¹, R. Jadeja². ¹Ophthalmology, Augusta University, Augusta, GA; ²Biochemistry and Molecular Biology, Augusta University, Augusta, GA

- 5487 — A0156 1a, 25(OH)₂D₃ Promotes Vascular Maturation through Vitamin D Receptor Mediated VEGF Production and Attenuation of Pericyte Proliferation and Migration.** Nasim Jamali^{1,2}, S. Wang¹, S. Darjatmoko¹, C. Sorenson^{3,2}, N. Sheibani^{1,2}. ¹Ophthalmology and Visual Sciences, UW-Madison, Madison, WI; ²McPherson Eye Research Institute, Madison, WI; ³Pediatrics, UW-Madison, Madison, WI
- 5488 — A0157 IncEgFL7OS regulates human ocular angiogenesis via cis and trans regulatory mechanisms.** Shusheng Wang, Q. Zhou, J. Ma, B. Yu. Cell Molecular Biology and Ophthalmology, Tulane University, New Orleans, LA
- 5489 — A0158 Extracellular vesicles from endothelial colony forming cells as paracrine mediators of neurovasculotrophic repair of the retina.** Kyle V. Marra^{2,1}, S. Sakimoto², S. Murinello², E. Aguilar², F. Bucher², M. Friedlander². ¹Department of Bioengineering, University of California, San Diego, La Jolla, CA; ²Department of Molecular Medicine, The Scripps Research Institute, La Jolla, CA
- 5490 — A0159 Endothelial colony forming cells modulate angiogenesis by directly integrating with the choroidal vasculature.** Stuart McKeown, P. Canning, S. McNutt, R. Medina, A. W. Stitt. CEM, Queen's University Belfast, Belfast, United Kingdom
- 5491 — A0160 Identification of resident vasculoreparative endothelial stem cells responsible for ocular angiogenesis.** Taku Wakabayashi^{1,2}, H. Naito², N. Takakura², K. Nishida¹. ¹Ophthalmology, Osaka University Graduate School of Medicine, Suita, Japan; ²Department of Signal Transduction, Research Institute for Microbial Diseases, Osaka University, Suita, Japan
- 5492 — A0161 Claudin-3 regulates hyaloid vessel formation and retinal development in zebrafish.** Jing Lu, L. Lu, Y. Luo. State Key Laboratory of Ophthalmology, Zhongshan Image Reading Center, Zhongshan Ophthalmic Center, Sun Yat-Sen University, Guangzhou, Guangdong, China
- 5494 — A0163 Temporal and spatial expression patterns of Rbfox1 and Rbfox2 during mouse retinal development.** Lei Gu, J. Caprioli, N. Piri. Ophthalmology, University of California Los Angeles, Los Angeles, CA
- 5495 — A0164 Receptors of intermediates of carbohydrate metabolism, GPR91 and GPR99, mediate axon growth.** Jean-Francois Bouchard¹, H. Cherif¹, F. Duhamel^{2,3}, B. Cécylre¹, A. Bouchard¹, A. Quintal¹, S. Chemtob^{2,3}. ¹School of Optometry, University of Montreal, Montreal, Quebec, Canada; ²Pediatrics, Research Center-CHU Sainte-Justine, Montreal, Quebec, Canada; ³Pharmacology, Université de Montréal, Montreal, Quebec, Canada
- 5496 — A0165 Characterization of SMI-32 positive RGC in the mouse retina.** Maria Soledad S. Velasco Dalesio^{1,2}, I. Thompson². ¹Jersey General Hospital, St Helier, Jersey; ²School of Biomedical Sciences, King's College London, London, United Kingdom
- 5497 — A0166 Characterization of Tbr2-expressing Retinal Ganglion Cells.** Chai-An Mao¹, C. J. Chen², T. Kiyama¹, Y. Long¹, C. Whitaker¹, T. C. Badea³, S. L. Mills¹, S. C. Massey¹. ¹Ophthalmology & Visual Science, U.T. Health Science Center Houston, Houston, TX; ²Ophthalmology, Baylor College of Medicine, Houston, TX; ³NEI, Bethesda, MD
- 5498 — A0167 Melanopsin phototransduction is repurposed by ipRGC subtypes to shape distinct visual circuits.** Tiffany M. Schmidt, T. Sonoda, S. Lee. Neurobiology, Northwestern University, Evanston, IL
- 5499 — A0168 Mild stress promotes neurite outgrowth of retinal explants in postnatal mice.** Grace H. Chen¹, C. Chiao^{1,2}. ¹Institute of Systems Neuroscience National Tsing Hua University, Hsinchu City, Taiwan; ²Department of Life Science, National Tsing Hua University, Hsinchu, Taiwan
- 5500 — A0169 Blue light promotes neurite outgrowth of retinal explants in postnatal ChR2 mice.** CHIN I LIN¹, C. Chiao^{1,2}. ¹Institute of Systems Neuroscience, National Tsing Hua University, Hsinchu, Taiwan; ²Department of Life Science, National Tsing Hua University, Hsinchu, Taiwan
- 5501 — A0170 Retinal ganglion cells are protected through hypothermia treatment in an organ culture model.** Jose Hurst¹, S. Kuehn², A. Maliha², F. Herms², H. Dick², K. Bartz-Schmidt¹, S. Schnichels¹, S. C. Joachim². ¹Research, Eye Hospital Tuebingen, Tuebingen, Germany; ²Ophthalmology, Ruhr-University Bochum, Bochum, Germany
- 5502 — A0171 Regulation of retinal ganglion cell gene expression by histone methyltransferase Ezh2 requires an interaction with G9a.** Jia Xie^{1,2}, L. WANG², K. Batsuuri², K. Cho², L. Yang¹, D. F. Chen². ¹Ophthalmology, Peking University First Hospital, Beijing, Beijing, China; ²Schepens Eye Research Institute, Boston, MA
- 5503 — A0172 Expression of sigma 2 receptors in the retina.** Xuezhong Zhou^{1,2}, Y. Li¹, J. Sahn³, S. F. Martin³, R. Wen¹. ¹Bascom Palmer Eye Institute, University of Miami, Miami, FL; ²Zhong Shan Ophthalmic Center, Sun Yat-Sen University, Guangzhou, Guangdong, China; ³Department of Chemistry, University of Texas at Austin, Austin, TX *CR
- 5504 — A0173 Expression of the CGRP family peptides and their receptors in the rat retina.** Karin Warfvinge^{1,2}, K. Sörensen¹, L. Edvinsson^{1,2}, V. Fedulov¹, K. Haanes¹, F. Blixt². ¹Department of Clinical Experimental Research, Copenhagen University Hospital, Rigshospitalet-Glostrup, Glostrup, Denmark; ²Department of Clinical Sciences, Lund University, Lund, Sweden
- 5505 — A0174 Similarities in expression of CGRP/PACAP and their receptors in the rat retina.** Lars Edvinsson^{1,2}, F. Blixt², V. Fedulov¹, K. Sörensen¹, K. Haanes¹, K. Warfvinge^{1,2}. ¹Department of Clinical Experimental Research, Copenhagen University Hospital, Rigshospitalet-Glostrup, Glostrup, Denmark; ²Department of Clinical Sciences, Lund University, Lund, Sweden
- 5506 — A0175 The Role of Sox11 in Retinal Ganglion Cell Survival and Axon Regeneration.** Ying Li¹, F. Struebing¹, R. King¹, J. Wang^{1,2}, E. Geisert¹. ¹Emory Eye Center, Atlanta, GA; ²Tianjin Medical University General Hospital, Tianjin, China
- 5507 — A0176 Retinal nerve fibre layer analysis in toxic and nutritional optic neuropathy.** Radhika P. Patel¹, K. B. Michael^{1,2}. ¹Ophthalmology Department, Gartnavel General Hospital, Glasgow, United Kingdom; ²Glasgow Centre for Ophthalmic Research, Gartnavel General Hospital, Glasgow, United Kingdom
- 5508 — A0177 3-Dimensional visualization and quantification of optic nerve degeneration after traumatic brain injury in CUBIC-cleared tissue.** April Myers^{2,1}, C. Miranda^{2,1}, G. Kiri^{2,1}, F. Crawford^{2,3}, R. Tzekov^{2,4}. ¹Neurobiology, New College of Florida, Sarasota, FL; ²Vision Research Program, The Roskamp Institute, Sarasota, FL; ³James A. Haley Veterans' Administration Hospital, Tampa, FL; ⁴Ophthalmology, University of South Florida, Tampa, FL
- 5509 — A0178 A detailed in vivo analysis of the retinal nerve fibre layer (RNFL) in choroideremia.** Dun Jack Fu^{2,1}, K. Xue^{2,1}, J. K. Jolly^{2,1}, R. E. MacLaren^{2,1}. ¹Nuffield Laboratory of Ophthalmology, University of Oxford, Oxford, United Kingdom; ²Oxford Eye Hospital, Oxford University Hospitals NHS Foundation Trust, Oxford, United Kingdom *CR
- 5510 — A0179 Relationship between plasma aldosterone concentration and retinal ganglion cell death.** Yukari Takasago, K. Hirooka, A. Ono, M. Kobayashi, Y. Nakano. Kagawa Univ, Kitagun, Kagawa, Japan

Exhibit Hall A0162-A0186

Thursday, May 03, 2018 8:15 AM-10:00 AM

Retinal Cell Biology

507 Ganglion Cells: Metabolism and response to injury

Moderator: Erica L. Fletcher

5493 — A0162 Wnt-induced neurite growth in retinal ganglion cells (RGCs) is regulated by Ripk1. Adanna Udeh, G. Dvorianchikova, T. Carmy, D. V. Ivanov, A. S. Hackam. Bascom Palmer Eye Institute, University of Miami Miller School of Medicine, Miami, FL

5511 — A0180 Visual function after acoustic blast overpressure (ABO) injury: Effects of antioxidants and blast frequency. Cara Motz¹, R. S. Allen¹, A. Feola^{2,1}, D. Daszynski³, T. A. Woolman³, P. F. Kador³, S. Ramachandra Rao⁴, S. J. Fliesler^{4,5}, M. T. Pardue^{1,2}. ¹Center for Visual and Neurocognitive Rehabilitation, Veterans Affairs Hospital - Atlanta, Atlanta, GA; ²Biomedical Engineering, Georgia Institute of Technology, Atlanta, GA; ³Pharmaceutical Science, University of Nebraska Medical Center, College of Pharmacy, Omaha, NE; ⁴Ophthalmology, Biochemistry, & Neuroscience Program, SUNY- University at Buffalo, Buffalo, NY; ⁵Research Service, VA Western NY Healthcare System, Buffalo, NY

5512 — A0181 In Vivo Retinal Imaging of Post-Traumatic Neuroinflammation and Sequelae in Impact Concussion and Blast Exposure Mouse Models. Lee E. Goldstein^{1,2}, O. Minaeva^{2,1}, M. Wojnarowicz¹, J. A. Moncaster¹, I. Arellano³, A. M. Fisher^{2,1}, E. S. Franz^{2,1}, R. D. Ferguson⁴, M. Mujat⁴, B. R. Huber^{1,5}, A. B. Fulton^{3,6}, J. D. Akula^{2,6}, D. G. Hunter^{3,6}. ¹Boston University School of Medicine, Boston, MA; ²College of Engineering, Boston University, Boston, MA; ³Ophthalmology, Boston Children's Hospital, Boston, MA; ⁴Biomedical Optics, Physical Sciences, Inc, Andover, MA; ⁵VA Boston Healthcare System, Boston, MA; ⁶Ophthalmology, Harvard Medical School, Boston, MA *CR

5513 — A0182 Increased Cellularity in the Optic Nerves of Mice after Repeated Traumatic Brain Injury. Gaurav Kiri^{1,2}, C. Miranda^{1,2}, A. Myers^{1,2}, F. Crawford^{1,4}, R. T. Tzekov^{1,3}. ¹The Roskamp Institute, Sarasota, FL; ²New College of Florida, Sarasota, FL; ³Department of Ophthalmology, University of South Florida, Tampa, FL; ⁴James A. Haley Veterans' Administration Hospital, Tampa, FL

5514 — A0183 The IL-1 pathway is a key mediator of axon degeneration and vision loss in a mouse model of indirect traumatic optic neuropathy. Tonia S. Rex¹, A. Bernardo-Colon¹, V. Vest¹, A. Clark¹, B. Kim¹, J. Clifton¹, R. Dahl¹, F. Harrison². ¹Ophthalmology & Visual Science, Vanderbilt University Medical Center, Nashville, TN; ²Endocrinology, Vanderbilt University Medical Center, Nashville, TN

5515 — A0184 Differential regulation of prokineticin 2 and its receptor in traumatic optic neuropathy. Ornella A. Oluwole¹, C. Kim¹, M. Thounaojam¹, P. M. Martin¹, D. Gutsaeva¹, M. Bartoli¹. ¹Ophthalmology, Medical College of Georgia, Augusta, GA; ²Biochemistry and Molecular Biology, Medical College of Georgia, Augusta, GA

5516 — A0185 Olfactomedin1 provides retinal ganglion cell neuroprotection and stimulates axon regeneration after optic nerve crush in rodents. Mohor B. Sengupta, C. Kole, B. Mead, N. Nakaya, S. I. Tomarev. Laboratory of Retinal Cell and Molecular Biology, Section of Retinal Ganglion Cell Biology, National Eye Institute, National Institutes of Health, Rockville, MD

5517 — A0186 Serine and glycine biosynthesis and uptake in the mouse retina. Marin Gantner¹, M. Wallace², I. Polis³, K. Eade¹, R. Fallon¹, M. Kitano³, C. Metallo², M. Friedlander^{1,3}. ¹The Lowy Medical Research Institute, La Jolla, CA; ²University of California, San Diego, La Jolla, CA; ³The Scripps Research Institute, La Jolla, CA

Exhibit Hall A0210-A0224

Thursday, May 03, 2018 8:15 AM-10:00 AM

Visual Neuroscience

508 Animal electrophysiology

Moderator: Jan J. Kremers

5518 — A0210 A zebrafish thyroxin-β2-receptor gain-of-function transgenic alters the development of the ERG b-wave and the synaptic amplification of cone responses by bipolar cells. Annika Balraj^{1,2}, R. F. Nelson¹. ¹National Institute of Neurological Disorders and Stroke, National Institutes of Health, Rockville, MD; ²Anatomy and Regenerative Biology, George Washington University, Washington, District of Columbia

5519 — A0211 Optic nerve crush alters the light adapted ERG of adult zebrafish. Josue Franco, A. Herrera, S. Saszik. Northeastern Illinois University, Chicago, IL

5520 — A0212 Nitric Oxide (NO) affects neuronal adaptation in the turtle retina. Reem Taha, I. Perlman. Ruth and Bruce Rappaport Faculty of Medicine, Technion – Israel Institute of Technology, Haifa, Israel

5521 — A0213 Assessment of the uniform field electroretinogram for mouse retinal ganglion cell functional analysis. Catherine Tsilfidis^{1,2}, P. Lagali^{1,3}, U. Shanmugalingam⁴, P. Smith⁴, A. N. Baker^{1,3}, S. G. Coupland^{3,2}. ¹Regenerative Medicine, Ottawa Hospital Research Institute, Ottawa, Ontario, Canada; ²Ophthalmology, University of Ottawa, Ottawa, Ontario, Canada; ³University of Ottawa Eye Institute, Ottawa, Ontario, Canada; ⁴Neuroscience, Carleton University, Ottawa, Ontario, Canada

5522 — A0214 Human tau expression exerts beneficial effects on the mouse retinal function. Léa Rodriguez, J. Mdzomba, M. Boudreau-Laprise, S. Joly, V. Pernet. Ophthalmology, CHUL Université Laval, Quebec, Quebec, Canada

5523 — A0215 Effects of light adaptation on mouse photopic ERG. Yichao Li, H. Qian. Visual Function Core, National Eye Institute, Bethesda, MD

5524 — A0216 Basal electroretinogram reveals slow oscillatory activity that is not altered in obese mice. Ramsés Noguez, E. Morales, A. Martínez, S. Thebault, J. Iledzma. Neurobiología Molecular y Celular, Universidad Nacional Autónoma de México, Ciudad de México, México

5525 — A0217 New device to measure behavioral vision in rodents. Marianna Bacellar-Galdino, J. A. Jamison. Ophtho-DS, Portage, MI *CR

5526 — A0218 Luminance stimulus response and Naka-Rushton parameter changes in rats following ozone exposure. Carlos A. Garcia^{1,2}, A. Aitsebaomo³, S. E. Smith¹, J. M. Wetzl¹. ¹Math, Science and Engineering, University of the Incarnate Word, San Antonio, TX; ²Basic Science, Rosenberg School of Optometry, San Antonio, TX; ³Basic Science, Rosenberg School of Optometry, San Antonio, TX

5527 — A0219 Changes in Visual Cues Affect Morris Water Maze Performance in Juvenile Rats. Thomas S. Vihtelic¹, S. A. Colton², E. P. Howard³, S. Denham³, R. F. Boyd¹, J. T. Bartoe¹. ¹Ophthalmology Services, MPI Research, Mattawan, MI; ²Reproductive Toxicology, MPI Research, Mattawan, MI; ³Biostatistics, MPI Research, Mattawan, MI

5528 — A0220 Pattern Electroretinogram in Guinea Pigs: A Measure of Visual Function. Ashutosh Jnawali, K. Beach, S. Puri, O. Lisa. College of Optometry, University of Houston, Houston, TX

5529 — A0221&#tab; Temporal properties of flicker ERGs in a transgenic rabbit model of retinitis pigmentosa. Shinji Ueno¹, S. Okado¹, T. Kominami¹, D. Inooka¹, A. Nakanishi¹, A. Sayo¹, M. Kondo², H. Terasaki¹. ¹Ophthalmology, Nagoya Univ School of Med, Nagoya, AICHI, Japan; ²Mie University Graduate School of Medicine, Tsu, Japan

5530 — A0222 Reproducibility and inter-animal variability of electroretinography measures in African green monkeys. Jordan D. Attwood, V. Woodley, C. Patel, A. Kurian, M. S. Lawrence. RX Gen, New Haven, CT *CR

5531 — A0223 Evaluation of the Relationship between Body Temperature, Oxygen Saturation and Electroretinographic Responses in Mauritius Cynomolgus Monkeys. Margaret E. Collins. Toxicology, Charles River, Reno, NV *CR

5532 — A0224 Electroretinography evaluation in the Göttingen Minipig: An alternative animal model for ocular preclinical safety assessment. Christian Li, L. Negro Silva, R. Foster, S. Authier. Study Management, CiToxLAB North America Inc., Laval, Quebec, Canada

Exhibit Hall A0225-A0242

Thursday, May 03, 2018 8:15 AM-10:00 AM

Clinical/Epidemiologic Research

509 AMD Epidemiology and outcomes**Moderator: Jie Jin Wang**

5533 — A0225 Small hard macular drusen and associations in 11-12 year-old children in the Copenhagen Child Cohort 2000 Study. Michael Larsen¹, X. Q. Li¹, I. C. Munch². ¹Rigshospitalet, Dept of Ophthalmology, University of Copenhagen, Glostrup, Denmark; ²Øjenafdelingen, Sjællands Universitetshospital, Roskilde, Denmark *CR

5534 — A0226 Estimation of the co-prevalence of age-related macular degeneration and glaucoma. Anh-Danh T. Phan¹, E. N. Dunn^{1,2}, J. D. Rupp¹, L. A. Myers¹, L. C. Ozobu¹, L. Racette^{1,3}. ¹Ophthalmology, Indiana University / Glick Eye Institute, Indianapolis, IN; ²Ophthalmology, University of Illinois at Chicago / Illinois Eye and Ear Infirmary, Chicago, IL; ³Ophthalmology, University of Alabama at Birmingham, Birmingham, AL

5535 — A0227 Time trends in the incidence of legal blindness due to age related macular degeneration in City of Buenos Aires. Malena Daich Varela², P. Franco^{2,1}, P. G. Schlotmann¹, A. Suwzeda³, R. E. Rosenstein⁴. ¹Organizacion Medica de Investigacion, Buenos Aires, Argentina; ²Hospital Oftalmologico Santa Lucia, Buenos Aires, Argentina; ³Hospital de Niños "Fundacion Hospitalaria", Buenos Aires, Argentina; ⁴Department of Human Biochemistry, School of Medicine/CEFyBO, Buenos Aires, Argentina *CR

5536 — A0228 Sleep Apnea Increased The Risk of Central Serous Chorioretinopathy. Pei-Kang Liu^{1,2}, M. Tsai^{3,5}, J. Hung³, K. Wu^{1,4}. ¹Department of Ophthalmology, Kaohsiung Medical University Hospital, Kaohsiung, Taiwan; ²Institute of Biomedical Sciences, National Sun Yat-sen University, Kaohsiung, Taiwan; ³Division of Pulmonary and Critical Care Medicine, Department of Internal Medicine, Kaohsiung Medical University Hospital, Kaohsiung, Taiwan; ⁴Department of Ophthalmology, School of Medicine, Kaohsiung Medical University, Kaohsiung, Taiwan; ⁵Graduate Institute of Medicine, College of Medicine, Kaohsiung Medical University, Kaohsiung, Taiwan

5537 — A0229 Four-Year Incidence and Risk Factors of Age-Related Macular Degeneration: the ALIENOR Study. Audrey Cougnard-Gregoire¹, V. Saunier^{1,2}, B. M. Merle¹, M. Delyfer^{1,2}, M. B. Rougier², P. Amouyel³, J. Lambert³, J. Dartigues¹, J. Korobelnik^{1,2}, C. DelCourt¹. ¹Univ. Bordeaux, Inserm, Bordeaux Population Health Research Center, team LEHA, UMR 1219, Bordeaux, F-33000, France; ²CHU de Bordeaux, Service d'Ophthalmologie, Bordeaux, F-33000, France; ³Lille University, Inserm, Lille University Hospital, Institut Pasteur de Lille, U1167 - RID-AGE - Risk factors and molecular determinants of aging-related diseases; Labex Distalz, Lille, France *CR

5538 — A0230 Characterization of Geographic Atrophy Patients in a Large Cohort from The United States Medical Records. Felipe Conti^{1,2}, M. Han³, K. Wai³, W. Song⁴, R. P. Singh^{1,3}. ¹Cole Eye Institute, Cleveland Heights, OH; ²Federal University of São Paulo, São Paulo, Brazil; ³Case Western Reserve University, Cleveland, OH; ⁴Cleveland Clinic Lerner College of Medicine, Cleveland, OH *CR

5539 — A0231 The Role of Aspirin in Age-related Macular Degeneration: the ASPREE-AMD Randomized Controlled Trial. Liubov D. Robman^{1,2}, R. H. Guymer², R. Woods¹, L. Hodgson², R. Wolfe¹, J. Phung¹, G. Makeyeva², Y. LePham¹, K. Aung², T. Gilbert¹, J. Suleiman¹, E. Maguire¹, J. Lockyer¹, R. Trevaks¹, M. Ernst³, J. McNeil¹. ¹Epidemiology and Preventive Medicine, Monash University, Melbourne, Victoria, Australia; ²Centre for Eye Research Australia, University of Melbourne, East Melbourne, Victoria, Australia; ³College of Pharmacy and Carver College of Medicine, The University of Iowa, Iowa City, IA ✕

5540 — A0232 Proteomic Profiles in Advanced Age-related Macular Degeneration Using an Aptamer-based Proteomic Technology. Anne M. Lynch^{1,4}, B. D. Wagner^{2,1}, S. J. Weiss³, K. M. Wall³, A. G. Palestine¹, M. T. Mathias¹, F. S. Siringo¹, C. N. Jennifer¹, J. L. Patnaik¹, D. W. Drolet³, N. Janjic³, N. Mandava¹. ¹Ophthalmology, University of Colorado School of Medicine, Aurora, CO; ²Biostatistics and Informatics, Colorado School of Public Health, Aurora, CO; ³SomaLogic, Inc., Boulder, CO; ⁴Epidemiology, Colorado School of Public Health, Aurora, CO *CR

5541 — A0233 Diacron-reactive oxygen metabolites and biological antioxidant potential tests in patients with age-related macular degeneration. Toshiyuki Matsuura, H. Kaneko, K. Takayama, H. Shimizu, T. Tsunekawa, A. Suzumura, R. Namba, H. Terasaki. Nagoya University Graduate School of Medicine, Nagoya, Japan

5542 — A0234 The relationship between lutein and zeaxanthin intake and change in macular pigment in the Second Carotenoids in Age-Related Eye Disease (CAREDS 2) study. Tom P. Lawler¹, Z. Liu², K. Christensen³, Y. Liu², R. Wallace⁴, A. E. Millen⁵, E. Johnson⁶, K. Hall⁷, K. Gehrs⁷, B. A. Blodi², J. A. Mares^{2,1}. ¹Nutritional Sciences, University of Wisconsin - Madison, Madison, WI; ²Ophthalmology and Visual Sciences, University of Wisconsin - Madison, Madison, WI; ³Ophthalmology and Visual Sciences, University of Wisconsin - Madison, Madison, WI; ⁴Epidemiology, University of Iowa, Iowa City, IA; ⁵Epidemiology and Environmental Health, University of Buffalo, Buffalo, NY; ⁶Jean Mayer USDA Human Nutrition Research Center on Aging, Tufts University, Boston, MA; ⁷Ophthalmology & Visual Sciences, University of Iowa, Iowa City, IA

5543 — A0235 Macular Pigment and Contrast Sensitivity Among Older Women in the Second Carotenoids in Age-Related Eye Disease Study (CAREDS2), an ancillary study of the Women's Health Initiative. Zhe Liu¹, K. Christensen¹, T. P. Lawler², K. Wood¹, Y. Liu¹, M. Snodderly³, A. E. Millen⁴, L. Tinker⁵, J. A. Mares¹. ¹Ophthalmology & Visual Science, University of Wisconsin Madison, Madison, WI; ²Nutritional Sciences, University of Wisconsin-Madison, Madison, WI; ³Department of Neuroscience and Department of Nutritional Sciences, The University of Texas, Austin, TX; ⁴Department of Epidemiology and Environmental Health, University at Buffalo, Buffalo, NY; ⁵Public Health Sciences, Fred Hutchinson Cancer Research Center, Seattle, WA

5544 — A0236 Nut intake and Risk of Age-related Macular Degeneration in Women. Chung-Jung Chiu¹, W. Willett², J. H. Kang², A. Taylor¹. ¹Human Nutrition Res Ctr, Tufts University, Boston, MA; ²Channing Division of Network Medicine, Department of Medicine, Brigham and Women's Hospital, Harvard Medical School, Boston, MA

5545 — A0237 Natural history of geographic atrophy secondary to age-related macular degeneration: Proxima A data from the 1-year analysis of 100 patients. Giovanni Stawrenghi¹, N. Holekamp², J. Mones³, F. Tang⁴, B. Tong⁴, R. A. Cantrell⁴, C. Brittain⁴, J. Ehrlich⁴, H. Lin⁴, C. C. Wykoff⁵. ¹Dept of Clinical Sci (Luigi Sacco), University of Milan, Milano, Italy; ²Pepose Vision Institute, Chesterfield, MO; ³Institut de la Màcula, Barcelona, Spain; ⁴Genentech, Inc., South San Francisco, CA; ⁵Retina Consultants of Houston, Houston, TX *CR, ✕

5546 — A0238 Longitudinal progression of visual function metrics in early and intermediate age-related macular degeneration. Atalie C. Thompson¹, S. Stinnett¹, U. F. Luhmann², V. Oza¹, L. Vajzovic¹, A. Horne¹, C. A. Toth¹, S. W. Cousins¹, E. M. Lad¹. ¹Ophthalmology, Duke University Medical Center, Durham, NC; ²Roche Pharmaceutical Research and Early Development, Translational Medicine Ophthalmology, Roche Innovation Center, Basel, Switzerland *CR, ✕

5547 — A0239 Wet Age-Related Macular Degeneration in Asian Americans and non-Asians: An Analysis of Comparative Outcomes. Caleb Ng¹, S. Kim^{1,2}, M. M. La². ¹Ophthalmology, Loma Linda University, Loma Linda, CA; ²Ophthalmology, Georgetown University, Washington D.C., District of Columbia

5548 — A0240 Clinical Course and Outcomes of Drusenoid Pigment Epithelial Detachment in Age-Related Macular Degeneration in AREDS2. Jeannette J. Yu¹, E. Agron¹, C. A. Cukras¹, T. E. Clemons², E. Y. Chew¹. ¹Clinical Trials Branch, Division of Epidemiology and Clinical Application, National Eye Institute, Bethesda, MD; ²The Emmes Corporation, Rockville, MD

5549 — A0241 Macular function in Early and Intermediate Age-related Macular Degeneration (AMD): effect of systemic risk factors. Angelo M. Minnella, B. Falsini, m. piccardi. Ophthalmology, Università Cattolica S. Cuore Fondazione Policlinico A. Gemelli, Rome, Italy

5550 — A0242 Ethnic differences in presenting characteristics and visual acuity outcomes of neovascular age-related macular degeneration within an urban tertiary ophthalmic hospital. Farid Afshar¹, S. Wagner¹, K. Fasler¹, R. Chopra¹, K. U. Kortuem³, N. Pontikos¹, T. Ramakrishnan¹, G. C. Preston¹, K. Balaskas^{1,2}, A. Tufail¹, P. Patel¹, P. Keane¹. ¹NIHR Biomedical Research Centre at Moorfields Eye Hospital NHS Foundation Trust and UCL Institute of Ophthalmology, London, UK, London, United Kingdom; ²University of Manchester, London, United Kingdom; ³University Eye Hospital Munich, Munich, Germany *CR

Exhibit Hall A0243-A0256

Thursday, May 03, 2018 8:15 AM-10:00 AM

Immunology/Microbiology

510 AMD: immunobiology

Moderator: Gerard A. Luttj

5551 — A0243 Inflammatory monocytes but not microglia contribute to light-induced retinal degeneration. Hongkang Xi¹, T. Truong¹, J. Elstrott², J. Tao³, M. Dohse³, R. Arceo³, L. Diehl³, A. Sene¹, M. Van Lookeren Campagne¹. ¹Immunology, Genentech Inc, South San Francisco, CA; ²Biomedical Imaging, Genentech Inc, South San Francisco, CA; ³Pathology, Genentech Inc, South San Francisco, CA *CR

5552 — A0244 Complement C3a Induces Macrophage to Myofibroblast Transition (MMT) in Sub-retinal Fibrosis Secondary to Neovascular Age-Related Macular Degeneration. Karis Little, M. Chen, H. Xu. Queen's University Belfast, Belfast, United Kingdom

5553 — A0245 Angiotensin II favors subretinal inflammation in a splenic-dependent manner in acute and chronic mouse model of AMD. Christophe Roubeix^{1,2}, S. Augustin¹, N. Reichhart³, F. Béguier¹, X. P. Guillonnet¹, O. Strauss^{3,2}, F. Sennlaub^{1,2}. ¹Institut de la Vision, UMR5 968, UPMC, Paris, France, Paris, France; ²Berlin Institute of Health (BIH), Berlin, Germany; ³Department of ophthalmology, Charité University Medicine, Berlin, Germany

5554 — A0246&#tab; Cytokine profiles of aqueous humor in patients with neovascular age-related macular degeneration by cluster analysis. Tomohito Sato¹, M. Takeuchi¹, Y. Karasawa¹, M. Ito², T. Enoki³. ¹Ophthalmology, National Defense Medical College, Tokorozawa, Saitama, Japan; ²Developmental Anatomy and Regenerative Biology, National Defense Medical College, Tokorozawa, Japan; ³Enoki Eye Clinic, Sayama, Japan

5555 — A0247 Modulation of mast cells regulates retinal microenvironment and vascular integrity. Sofia Theodoropoulou, D. A. Copland, J. Liu, L. Scott, J. Wu, A. D. Dick. Academic Unit of Ophthalmology, Bristol Medical School, Bristol, United Kingdom

5556 — A0248 Photoreceptors Constitutively Express A Variety of Complement Components. Jian Liu¹, K. Harkin², C. Luo¹, J. Chen¹, S. Tang¹, M. Chen², H. Xu^{1,2}. ¹Aier Eye Institute, ChangSha, HuNan, China; ²Queen's University Belfast, Centre for Experimental Medicine, School of Medicine, Dentistry & Biological Sciences, Belfast, United Kingdom

5557 — A0249 Long-term Low-dose Aspirin Exacerbates Laser-induced Choroidal Neovascularization Through Down-regulating Thrombospondin-1 Expression. Chang Luo¹, M. Chen², R. G. Penalva², J. Zhao², J. Chen¹, S. Tang¹, H. Xu^{1,2}. ¹Aier Eye Institute, Aier Eye Hospital Group, Changsha, Hunan, China; ²Centre for Experimental Medicine, School of Medicine, Dentistry & Biological Sciences, Queen's University Belfast, Belfast, United Kingdom

5558 — A0250 Role of macrophage microRNA-150 in age-related macular degeneration. Jonathan Lin¹, H. V. Moolani¹, A. Sene¹, R. Sidhu², J. B. Lin¹, Z. Dong¹, N. Ban¹, D. S. Ory², R. Apte^{1,2}. ¹Ophthalmology & Visual Sciences, Washington University School of Medicine, Saint Louis, MO; ²Medicine, Washington University School of Medicine, Saint Louis, MO

5559 — A0251 Systemic inflammation in a collagen-induced arthritis mouse model of rheumatoid arthritis leads to attenuated laser-induced choroidal neovascularization. Gloriane Schnabolk¹, E. Oberl¹, N. K. Banda², B. Rohrer^{1,3}. ¹Department of Ophthalmology, Medical University of South Carolina, Charleston, SC; ²Division of Rheumatology, University of Colorado Anschutz Medical Campus, Aurora, CO; ³Division of Research, Ralph H. Johnson VA Medical Center, Charleston, SC

5560 — A0252 Chemokine receptor profiles of T cells in age-related macular degeneration. Young Joon Choi¹, D. Lim², S. Byeon¹, E. Shin³, H. Chung². ¹Ophthalmology, Yonsei University, Seoul, Korea (the Republic of); ²Ophthalmology, Konkuk University, Seoul, Korea (the Republic of); ³Graduate School of Medical Science and Engineering, KAIST, Daejeon, Korea (the Republic of)

5561 — A0253 Human Retinal Pigment Epithelial (hRPE) single cell genomics of NLRP3 inflammasome is modulated by Elovandoid (ELV32-6) and NeuroprotectinD1 (NPD1) in response to Uncompensated Oxidative Stress (UOS). Aram Asatryan, M. I. Kautzmann, J. Heap, N. G. Bazan. Neuroscience, LSUHSC, New Orleans, LA *CR

5562 — A0254 Is the polarized secretion of complement factor H of importance in age-related macular degeneration? Camilla Mohlin¹, S. Petrus-Reurer^{2,3}, F. Lanner³, k. sandholm¹, P. Nilsson^{1,4}, B. Nilsson⁵, K. N. Ekdahl^{1,5}. ¹Chemistry and Biomedicine, Linnaeus Center of Biomaterials Chemistry, Linnaeus University, Kalmar, Sweden; ²Department of Clinical Neuroscience, Section for Ophthalmology and Vision, St. Erik Eye Hospital, Karolinska Institutet, Stockholm, Sweden; ³Department of Clinical Sciences, Intervention and Technology, Karolinska Institutet, Stockholm, Sweden and Division of Obstetrics and Gynecology, Karolinska University Hospital, Stockholm, Sweden; ⁴Department of Immunology, University of Oslo, Oslo, Norway; ⁵Department of Immunology, Genetics and Pathology, Rudbeck Laboratory, Uppsala University, Uppsala, Sweden

5563 — A0255 Classical pathway complement activation contributes to photoreceptor degeneration. Kenneth J. Katschke¹, H. Xi¹, C. Cox¹, T. Truong¹, Y. Malato¹, J. Elstrott², J. Tao³, L. Diehl³, M. Van Lookeren Campagne¹. ¹Immunology, Genentech, South San Francisco, CA; ²Neuroscience, Genentech, South San Francisco, CA; ³Pathology, Genentech, South San Francisco, CA *CR

5564 — A0256 Association of Age-related Macular Degeneration with Retinal Vascular Caliber in Patients with the Acquired Immunodeficiency Syndrome. Douglas A. Jabs^{1,2}, M. L. Van Natta², J. W. Pak³, R. P. Danis³, P. Hunt⁴. ¹Icahn School of Medicine at Mount Sinai, New York, NY; ²Johns Hopkins University Bloomberg School of Public Health, Baltimore, MD; ³University of Wisconsin School of Medicine and Public Health, Madison, WI; ⁴University of California, San Francisco School of Medicine, San Francisco, CA

Exhibit Hall A0257-A0268

Thursday, May 03, 2018 8:15 AM-10:00 AM

Immunology/Microbiology

511 Conjunctival Allergic Disease

Moderator: Akira Matsuda

5565 — A0257 Conjunctival Injection Reduction in Patients with Atopic Keratoconjunctivitis After Administration of Enteric-Coated Lactoferrin. Hiroshi Fujishima¹, K. Fukagawa³, H. Yazu², E. Shimizu², N. Okada¹. ¹Ophthalmology, Tsurumi Univ School of Dental Med, Yokohama, Kanagawa, Japan; ²Ophthalmology, Keio University School of medicine, Tokyo, Japan; ³Ophthalmology, Ryogoku eye clinic, Tokyo, Japan *CR, ✕

5566 — A0258 The efficacy of 0.1% Tacrolimus Ophthalmic Suspension in the Treatment of Atopic Keratoconjunctivitis: A one year follow-up study. Hiroyuki Yazu^{1,2}, E. Shimizu¹, N. Nakayama¹, M. Dogru¹, N. Okada³, K. Fukagawa^{1,4}, H. Fujishima³. ¹Ophthalmology, Keio University School of Medicine, Tokyo, Japan; ²Ophthalmology, Hino Municipal Hospital, Tokyo, Japan; ³Ophthalmology, Tsurumi University Dental Hospital, Kanagawa, Japan; ⁴Ryogoku Eye Clinic, Tokyo, Japan *CR

5567 — A0259 Development of a RNAi therapeutic for the treatment of allergic conjunctivitis. Victoria Gonzalez, C. Paneda, T. Martinez, A. Guerra, S. Monteiro, B. Vargas, A. Bleau, V. Ruz, A. Jimenez. Sylentis, Madrid, Madrid, Spain *CR

5568 — A0260 Preclinical Assessment of the Syk Inhibitor PRT2761 for Allergic Conjunctivitis. Andy Whitlock¹, L. Belen¹, M. J. Chapin², P. J. Gomes³, M. Birrell⁴, A. Pandey⁴, D. Hollander². ¹Pre-Clinical, Ora, Andover, MA; ²Ora, Inc, Andover, MA; ³Allergy, Ora, Inc, Andover, MA; ⁴Portola Pharmaceuticals, South San Francisco, CA *CR

5569 — A0261 PR013, a novel therapy for Allergic Conjunctivitis and Dry Eye, demonstrates significant anti-inflammatory activity *in vitro* and is well tolerated in repeat dose toxicity studies. Cary Schockemoehl, M. Sampson, E. Solomon, C. Peters. Realm Therapeutics, Malvern, PA *CR

5570 — A0262 Fungus-specific IgG in patients with allergic conjunctivitis. Tatsuya Mimura, E. Watanabe, A. Mizota. Ophthalmology, Teikyo University School of Medicine, Itabashi-ku, Tokyo, Japan ✕

5571 — A0263 A Randomized, Multi-Center, Double-Masked, Vehicle-Controlled, Parallel-Group Phase 2b Allergic Conjunctivitis Clinical Trial of Topical Ocular ADX-102, a Novel Aldehyde Sequestering Agent. Paul J. Gomes², T. Brady¹, D. Hollander², D. Clark¹. ¹Aldeyra Therapeutics, Lexington, MA; ²Ora, Inc., Andover, MA *CR, ✕

5572 — A0264 Topical Cyclosporine A 1 mg/mL Cationic Emulsion Yields Improvements in Signs of Active Severe Vernal Keratoconjunctivitis (VKC) in Pediatric Patients: Results of the Phase III VEKTIS Study. Serge Doan¹, A. Leonard², M. Amrane³, D. Ismail³, J. Montero⁴, P. Aragona⁵, J. Nemeth⁶, D. Brémond-Gignac⁷. ¹Bichat Hospital and Foundation A. de Rothschild, Paris, France; ²Department of Neuroscience, Ophthalmology Unit, University of Padua, Padua, Italy; ³Santen SAS, Evry, France; ⁴Universidad de Sevilla, Sevilla, Spain; ⁵Dipartimento de Scienze Biomediche, Università di Messina, Messina, Italy; ⁶Department of Ophthalmology, Semmelweis University, Budapest, Hungary; ⁷University Hospital Necker Enfants Maladies, APHP, and Paris Descartes University, Paris, France *CR, ✕

5573 — A0265 The role of ILC2 in mouse models of papain-induced conjunctivitis with lacrimal gland excision. Yosuke Asada^{1,2}, A. Matsuda¹, S. Nakae³. ¹Ophthalmology, Juntendo University School of Medicine, Tokyo, TOKYO, Japan; ²Ophthalmology, Tobu Chiiki Hospital, Tokyo, Japan; ³Laboratory of Systems Biology, Center for Experimental Medicine and Systems Biology, The Institute of Medical Science, The University of Tokyo, Tokyo, Japan

5574 — A0266 Control of mouse allergic conjunctivitis by resolvins. Satoshi Iwamoto, T. Yokomizo, A. Murakami, A. Matsuda. Juntendo Univ School of Med, Chiyodaku, TOKYO, Japan

5575 — A0267 Dietary omega-3 fatty acids alleviate allergic conjunctivitis in a mouse model. Toshiaki Hirakata^{1,2}, H. Lee², M. Ohba², T. Okuno², A. Murakami¹, A. Matsuda¹, T. Yokomizo². ¹Ophthalmology, Juntendo University Graduate School of Medicine, Bunkyo-ku, Tokyo, Japan; ²Biochemistry, Juntendo University School of Medicine, Bunkyo-ku, Tokyo, Japan *CR

5576 — A0268 Role of Antigen-presenting Cells within Conjunctiva-associated Lymphoid Tissue in the Induction of Ocular Allergy. Philipp Steven^{1,2}, S. Schwab^{1,3}, D. R. Saban³, J. Y. Niederkorn⁴, U. Gehlsen^{1,2}. ¹Ophthalmology, University of Cologne, Cologne, Germany; ²Cluster of Excellence: Cellular Stress Responses in Aging-associated Diseases, University of Cologne, Cologne, Germany; ³Institute of Molecular Medicine and Experimental Immunology, Friedrich-Wilhelms University Bonn, Bonn, Germany; ⁴Ophthalmology, University of Texas Southwestern, Dallas, TX; ⁵Ophthalmology, Immunology, Duke University School of Medicine, Durham, NC

Exhibit Hall A0296-A0330

Thursday, May 03, 2018 8:15 AM-10:00 AM

Anatomy and Pathology/Oncology

512 Lymphoma, hemangioma, surface, orbit, and eyelid tumors

Moderators: Martine J. Jager and Hakan Demirci

5577 — A0296 Relapse of Leukemia in the Anterior Segment of the Eye: A systematic review. Thomas B. Gillette², A. Stacey¹. ¹Ophthalmology, University of Washington, Seattle, WA; ²Ophthalmology, Seattle Children's Hospital, Seattle, WA

5578 — A0297 Clinical spectrum of vitreoretinal lymphoma and its association with MyD88 L265P mutation. Ester Carreno¹, T. Clench², L. R. Steeples¹, S. Salvatore¹, R. W. Lee¹, A. D. Dick¹, J. Pawade³. ¹Bristol Eye Hospital, Bristol, England, United Kingdom; ²Bristol Royal Infirmary, Bristol, United Kingdom; ³Severn Pathology Services, Bristol, United Kingdom

5579 — A0298 Sensitivity of four diagnostic tests using vitreous samples for diagnosing intraocular lymphoma. Rie Tanaka¹, T. Kaburaki¹, A. Karakawa¹, K. Taoka², J. Matsuda³, H. Tsuji⁴, A. Yoshida⁴, M. Takamoto¹, Y. Fujino¹. ¹Ophthalmology, The University of Tokyo Hospital, Tokyo City, Japan; ²Haematology and Oncology, The University of Tokyo Hospital, Tokyo, Japan; ³Ophthalmology, Nerima Hikarigaoka Hospital, Tokyo, Japan; ⁴Ophthalmology, The Cancer Institute Hospital Of JFCR, Tokyo, Japan

5580 — A0299 Systemic therapy for vitreoretinal lymphoma: a single-center experience. Bertil Damato¹, G. Bever¹, J. Kim¹, A. Afshar¹, J. Rubenstein². ¹Ophthalmology, University of California San Francisco, San Francisco, CA; ²Hemato-Oncology, University of California, San Francisco, San Francisco, CA

5581 — A0300 Optical Coherence Tomography Findings in Primary Central Nervous System Lymphoma with or without Ocular Involvement. Arash Maleki^{1,2}, M. Hassan¹, M. Halim¹, R. Afridi¹, N. V. Nguyen^{1,3}, Y. Sepah¹. ¹Byers Eye Institute, Palo Alto, CA; ²Noor Eye Hospital, Tehran, Iran (the Islamic Republic of); ³Ocular Imaging and Reading Center, Menlo Park, CA

5582 — A0301 Clinical features of primary vitreoretinal lymphomas with lesions involving organs other than central nervous system. Makoto Imazeki, Y. Usui, K. Tsubota, K. Umazume, R. Nemoto, H. Goto. Ophthalmology, Tokyo Medical University Hospital, Tokyo, Japan

5583 — A0302 Analysis of clinical features of primary vitreoretinal lymphoma followed for over 5 years. Kinya Tsubota, Y. Usui, K. Umazume, R. Nemoto, M. Shibata, H. Goto. Ophthalmology, Tokyo Medical University, Shinjuku, Tokyo, Japan

5584 — A0303 Novel characterization of orbital precursor B-cell Lymphoblastic Lymphoma.

Rasmus Ejstrup¹, L. H. Mikkelsen^{1,2}, M. Andersen³, S. Heegaard^{1,2}. ¹Ophthalmology, Rigshospitalet, University Hospital of Copenhagen, Copenhagen, Denmark; ²Pathology, Rigshospitalet, University Hospital of Copenhagen, Copenhagen, Denmark; ³Clinical Genetics, Rigshospitalet, University Hospital of Copenhagen, Copenhagen, Denmark

5585 — A0304 Clinical differentiation of non-Hodgkin orbital lymphoma and idiopathic orbital inflammation.

Kamil G. Laban^{1,2}, R. van Aarle¹, J. Kuiper^{1,2}, J. de Boer¹, R. Kalmann¹. ¹Ophthalmology, University Medical Center Utrecht, Utrecht, Netherlands; ²Laboratory of Translational Immunology, University Medical Center Utrecht, Utrecht, Netherlands

5586 — A0305 The pathological features of orbital lymphoma combined with orbital inflammation.

Weimin He. Ophthalmology, West China Hospital, Chengdu, Sichuan, China

5587 — A0306 Ocular adnexal lymphoma in Denmark from 1980-2017 – a national study of 372 cases.

Frederik Holm¹, P. Ramussen¹, L. H. Mikkelsen¹, L. D. Sjö¹, E. Ralfkiaer¹, S. Heegaard^{1,2}. ¹Department of Pathology, Rigshospitalet, University of Copenhagen, Copenhagen Ø, Denmark; ²Department of Ophthalmology, Rigshospitalet-Glostrup, University of Copenhagen, Copenhagen, Denmark

5588 — A0307 Toll-like receptors (TLRs) involvement in conjunctival marginal zone lymphomas.

Sunny Shen^{1,2}, A. Chan^{2,3}. ¹Oculoplastic, Singapore National Eye Centre, Singapore, Singapore; ²Singapore Eye Research Institute, Singapore, Singapore; ³Singapore National Eye Centre, Singapore, Singapore

5589 — A0308 Clinical presentation and Treatment Outcomes of Primary Ocular Adnexal MALT Lymphoma in Thailand.

Kasem Seresirikachorn¹, S. Ausayakhun¹, D. Wiwatwongwana¹, L. Norasetthada², S. Tangchittam³, V. Pruksakorn³, K. Wudhikorn⁴. ¹Ophthalmology, Chiang Mai University, Bangkok, Thailand; ²Internal Medicine, Chiang Mai University, Chiang Mai, Thailand; ³Ophthalmology, King Chulalongkorn Memorial Hospital, Bangkok, Thailand; ⁴Internal Medicine, King Chulalongkorn Memorial Hospital, Bangkok, Thailand

5590 — A0309 Circumscribed Choroidal Hemangioma : Topographical Features.

Arun D. Singh¹, J. Krohn², P. Rishi³. ¹Ophthalmic Oncology, Cole Eye Institute, Solon, OH; ²Ophthalmology, Haukeland University Hospital, Bergen, Norway; ³Shri Bhagwan Mahavir Vitreoretinal Services, Sankara Nethralaya, Chennai, India

5591 — A0310 Single photodynamic therapy session for exudative circumscribed choroidal hemangiomas. Clinical series of 33 patients.

xavier proumen¹, A. Guagnini², P. Bartoszek¹, A. Kozyreff¹, P. De Potter¹. ¹Ocular Oncology Unit, Institut Roi Albert 2, CUSL, Brussels, Belgium; ²Retina Unit, Institut Roi Albert 2, CUSL, Brussels, Belgium

5592 — A0311 Long-term results of photodynamic therapy for circumscribed choroidal hemangioma.

Yuko Hayashi, M. Kitahashi, T. Baba, T. Nizawa, M. Kubota, S. Yamamoto. Chiba University Graduate School of Medicine, Chiba, Japan

5593 — A0312 Plaque Radiotherapy as Treatment for Medulloepithelioma in 6 Cases at a Single Center.

Su Mae Ang¹, L. A. Dalvin^{1,2}, C. L. Shields¹. ¹Ocular Oncology, Wills Eye Hospital, Philadelphia, PA; ²Department of Ophthalmology, Mayo Clinic, Rochester, MN *CR

5594 — A0313 HPV16/18 and p16 gene expression in ocular surface squamous neoplasia: a retrospective cross-sectional analysis.

Pavan Mann¹, S. Diamond², R. Masanganise³, L. Gwanzura⁴, Y. Liu⁵, R. T. Schooley⁵, J. H. Lin^{2,5,6}. ¹School of Medicine, University of California San Diego, La Jolla, CA; ²Pathology, University of California San Diego, La Jolla, CA; ³Ophthalmology, Department of Surgery, College of Health Sciences, University of Zimbabwe, Harare, Zimbabwe; ⁴Department of Medical Laboratory Sciences, College of Health Sciences, University of Zimbabwe, Harare, Zimbabwe; ⁵Medicine, University of California San Diego, La Jolla, CA; ⁶Ophthalmology, University of California San Diego, La Jolla, CA

5595 — A0314 Treatment with topical and subconjunctival interferon alfa 2b in ocular surface squamous neoplasia (OSSN).

Nathalia Juliana Moreno¹, E. Viteri¹, V. Galvis². ¹Fundacion Oftalmologica de Santander, Bucaramanga, Colombia; ²Santander, Centro Oftalmologico Virgilio Galvis, Bucaramanga, Colombia

5596 — A0315 CD109: a novel marker for Ocular Surface Squamous Neoplasia differentiation.

Prisca R. Bustamante, J. M. Lasiste, D. Miyamoto, S. Bergeron, C. Mastromonaco, L. Nuñez, M. N. Burnier. Pathology, MUHC McGill University, Montreal, Quebec, Canada

5597 — A0316 Correlation between High Resolution Optical Coherence Tomography features and Histological Diagnosis in Ocular Surface Squamous Neoplasia.

Nallely Ramos Betancourt, J. Dávila Alquisiras, R. García-Vazquez, D. Yoshiro-Miyake. Cornea and Refractive Surgery, Asociación para Evitar la Ceguera en México, Mexico City, Mexico

5598 — A0317 Extending far and wide: The role of biopsy and staging in the management of ocular surface squamous neoplasia (OSSN).

Christine Greer, A. A. Polski, J. L. Berry. Ophthalmology, University of Southern California Roski Eye Institute, Pasadena, CA

5599 — A0318 Refractory follicular conjunctival lesions: overlook as just inflammation or not?.

Su Kyung Jung¹, s. Kim², W. Cho³, J. Paik², S. Yang². ¹national cancer center, Korea, Go yang, Korea (the Republic of); ²Seoul St.Mary's hospital, Seoul, Korea (the Republic of); ³Daejeon St.Mary's hospital, Daejeon, Korea (the Republic of)

5600 — A0319 Cavernous Hemangioma of the Conjunctiva: A Case Series of 4 Patients.

Prashanth Iyer¹, L. A. Dalvin², E. B. Elimian², s. lally², C. L. Shields². ¹Ophthalmology, Drexel University, Philadelphia, PA; ²Ocular Oncology, Wills Eye Hospital, Philadelphia, PA

5601 — A0320 Eyelid Tumors: A 13-year Survey from a Tertiary Hospital in Japan.

Hiroto Obata², M. Watanabe¹, Y. Arai¹, H. Kawashima¹. ¹Department of Ophthalmology, Jichi Medical University, Shimotsuke, Tochigi, Japan; ²Department of Ophthalmology, Saitama Medical Center, Saitama Medical University, Kawagoe, Saitama, Japan

5602 — A0321 Treatment of Eyelid Squamous Cell Carcinoma and Papilloma with Interferon Alpha-2b.

Elizabeth B. Elimian¹, M. Marous¹, M. Casey¹, L. A. Dalvin^{1,2}, s. lally¹, C. L. Shields¹. ¹Ocular Oncology, Wills Eye Hospital, Philadelphia, PA; ²Mayo Clinic, Rochester, MN

5603 — A0322 The transcription factor SREBP-1 as a novel marker for sebaceous cell carcinoma of the eyelid.

Paulina Garcia de Alba Graue¹, A. T. Dias², D. Miyamoto², C. Mastromonaco², P. R. Bustamante², M. MacDonald², J. V. Burnier², M. N. Burnier². ¹Universidad Nacional Autonoma de Mexico, Mexico city, Mexico; ²Ocular Pathology Laboratory, McGill University Health Centre, Montreal, Quebec, Canada

5604 — A0323 Clinicopathological Correlation of Merkel Cell Carcinoma of the Eyelid.

Xiao Yi Zhou^{1,2}, P. Monsalve^{1,2}, Y. Lopez³, G. W. Elgart⁴, S. R. Dubovy^{1,2}. ¹Department of Ophthalmology, Bascom Palmer Eye Institute, University of Miami Miller School of Medicine, Miami, FL; ²Florida Lions Ocular Pathology Laboratory, Department of Ophthalmology, Bascom Palmer Eye Institute, University of Miami Miller School of Medicine, Miami, FL; ³Universidad Iberoamericana, Santo Domingo, Dominican Republic; ⁴Department of Dermatology, University of Miami Miller School of Medicine, Miami, FL

5605 — A0324 Adjuvant high-dose rate (HDR) brachytherapy for ocular tumours with orbital invasion. Monica M. Pagliara¹, L. Tagliaferri², A. Lanza¹, L. Azario³, G. Savino¹, R. Autorino², a. scupola¹, V. Valentini², M. Blasi¹. ¹Ocular Oncology Unit, Department of Ophthalmology, Fondazione Policlinico Universitario Agostino Gemelli, Rome, Italy; ²Gemelli Advanced Radiation Therapy Center, Fondazione Policlinico Universitario Agostino Gemelli, Rome, Italy; ³Physics Institute, Fondazione Policlinico Universitario Agostino Gemelli, Rome, Italy

5606 — A0325 The accuracy of orbital imaging in foretelling specific tumor diagnosis. Rita D. Page, T. Martz, O. Filutowski, Z. Karcioğlu. Ophthalmology, University of Virginia, Charlottesville, VA

5607 — A0326 Prevalence of Ocular Findings in Patients with Central Nervous System Tumor in a Tertiary Hospital. Sabrina J. Cho, C. P. Gracitelli, D. A. Paulo, L. d. Noia. Ophthalmology and Visual Sciences, Federal University of Sao Paulo, Sao Paulo, SP, Brazil

5608 — A0327 Orbital varices. Rebecca M. Sieburth¹, J. A. Matsumoto², S. A. Newman¹. ¹Ophthalmology, University of Virginia, Charlottesville, VA; ²Radiology, University of Virginia, Charlottesville, VA

5609 — A0328 AZD4547 fibroblast growth factor receptor-1 inhibitor as a potential drug target for lacrimal gland adenoid cystic carcinoma. Ann Tran², R. Doddapaneni¹, W. Tao¹, D. T. Tse^{2,1}, D. Pelaez¹. ¹Dr. Nasser Ibrahim Al-Rashid Orbital Vision Research Center, Bascom Palmer Eye Institute, University of Miami Miller School of Medicine, Miami, FL; ²Ophthalmology, Bascom Palmer Eye Institute - University of Miami, Miami, FL

5610 — A0329 Lacrimal Gland Adenoid Cystic Carcinoma in Chinese Patients: Local Recurrence, Metastasis, Mortality. JIE YANG. Ninth People's Hospital of Shanghai, Shanghai, China

5611 — A0330 A xenograft model for lacrimal gland adenoid cystic carcinoma in mice. Jugchawin Kanokkantapong¹, W. Tao¹, C. Choi¹, R. Doddapaneni¹, D. T. Tse^{1,2}, D. Pelaez^{1,2}. ¹Ophthalmology, Bascom Palmer Eye Institute, Miami, FL; ²Biomedical Engineering, University of Miami, Miami, FL

Exhibit Hall A0331-A0350

Thursday, May 03, 2018 8:15 AM-10:00 AM

Eye Movements/Strabismus/Amblyopia/Neuro-Ophthalmology

513 Thyroid and orbital diseases

Moderator: Howard S. Ying

5612 — A0331 ⁹⁹Tc^m-Octreotide Scintigraphy and occult active Thyroid-Associated Ophthalmopathy in Pediatric Patients. Bin Sun, Z. Zhang. Shanxi Eye Hospital, Taiyuan, Shanxi, China

5613 — A0332 Measurement of Medial Wall Bowing and Clinical Associations in Thyroid Eye Disease. Christine L. Bokman, S. Ugradar, D. Rootman. Ophthalmology, Jules Stein Eye Institute, Los Angeles, CA

5614 — A0333 New uses of short tau inversion recovery magnetic resonance imaging for the evaluation of Graves Ophthalmopathy activity. Tomas Ortiz Basso, R. L. Vigo, M. F. Shokida, J. M. Gonzalez Barlatay, c. pagano, G. Hernandez Gauna, E. J. Premoli. Ophthalmology, Hospital Italiano de Buenos Aires, Buenos Aires, Argentina

5615 — A0334 Effect of systemic steroid and orbital radiotherapy on dry eye parameters in Thyroid Associated Orbitopathy (TAO). Nicole C. Tsim^{1,2}, J. Chin^{1,2}, R. Chan^{1,2}, C. Li^{1,2}, A. Law², L. Y. Yeung², K. Wong^{1,2}, A. Young^{1,2}, K. Chong^{1,2}. ¹Department of Ophthalmology & Visual Science, Prince of Wales Hospital, Hong Kong, Hong Kong; ²Department of Ophthalmology & Visual Sciences, The Chinese University of Hong Kong, Hong Kong, Hong Kong *CR

5616 — A0335 Long-term results of extraocular muscle surgery for thyroid ophthalmopathy. Akiko Kimura. Ophthalmology, Hyogo College of Medicine, Nishinomiya, Japan

5617 — A0336 Thyroid-associated orbitopathy in HIV patients. Eugenie W. Poh. Ophthalmology, Tan Tock Seng Hospital, Singapore, Singapore

5618 — A0337 The negative psychosocial impact of thyroid eye disease - comparing results from the CIRTED trial with strabismus and other facially disfiguring conditions. Shokufeh Tavassoli¹, R. Rajendram², V. Wilson³, P. White⁴, J. Uddin², C. Dayan³, R. W. Lee¹, S. Jackson⁴. ¹Bristol Eye Hospital, Bristol, United Kingdom; ²Moorfields Eye Hospital, London, United Kingdom; ³University of Bristol, Bristol, United Kingdom; ⁴University of West of England, Bristol, United Kingdom; ⁵University of Cardiff, Cardiff, United Kingdom

5619 — A0338 How reliable are diagnostic ultrasounds of temporal arteries in comparison to temporal artery biopsies (TAB) in Giant Cell Arteritis? Anshu Sachdev¹, M. George¹, S. Dubey², C. Tiivas³, P. Mehta¹. ¹Ophthalmology, University Hospital Coventry, Coventry, United Kingdom; ²Rheumatology, University Hospital Coventry, Coventry, United Kingdom; ³Medical Physics, University Hospital Coventry, Coventry, United Kingdom

5620 — A0339 Ultrasound Guided Intralesional Injection of Bleomycin for Orbital Lymphangioma- A prospective study. Bipasha Mukherjee¹, S. G². ¹Orbit, oculoplasty, reconstructive & aesthetics, Medical Research Foundation, Chennai, India; ²Vitreoretina, Medical Research Foundation, Chennai, India

5621 — A0340 Hedgehog Pathway Inhibitors as Neoadjuvant Therapy for Orbital/Periorbital Basal Cell Carcinoma. Arthika Chandramohan¹, A. Nair², A. L. Chang¹, A. Kossler¹. ¹Stanford University, Palo Alto, CA; ²New York University, New York, NY

5622 — A0341 Histological findings in the orbital biopsies of patients undergoing rituximab treatment – a case series. Matthew Starr, D. Salomao, J. Garrity. Mayo Clinic, Rochester, MN

5623 — A0342 Differences in surgical approach and tissue yield in adult orbital lesion biopsies. Alexander Knezevic, M. Mbagwu, H. Heymann, S. Eichinger, P. Thyparampil, P. Bryar. Northwestern University, Chicago, IL

5624 — A0343 Assessing the Accuracy of Intraoperative Frozen Sections for the Evaluation of Orbital Lesions. Michael Mbagwu, A. Knezevic, H. Heymann, S. Eichinger, P. Bryar. Department of Ophthalmology, Northwestern University, Chicago, IL

5625 — A0344 Peripheral rim enhancement: a radiographic clue for diagnosis of thrombosed orbital varices. Connor Nathe¹, S. R. Grob^{1,2}, J. Tao^{1,2}, K. Feldman³. ¹Department of Ophthalmology, University of California, Irvine School of Medicine, Irvine, CA; ²Gavin Herbert Eye Institute, University of California, Irvine, CA; ³Oculoplastic and Reconstructive Surgery, Kaiser Permanente South Bay Medical Center, Harbor City, CA

5626 — A0345 Clinical characteristics of retrobulbar hemorrhage following blow out fracture repair. Jaehwi Park¹, H. Oh², E. Cho¹, W. Son¹, S. Cha¹, J. Son¹. ¹Ophthalmology department, Yeungnam University Medical Center, Daegu, Korea (the Republic of); ²Bright eye clinic, Daegu, Korea (the Republic of)

5627 — A0346 The use of a thermo-responsive gel as a treatment material for enophthalmos. Katherine Duncan, M. A. Washington, M. V. Fedorchak, J. Y. Yu. University of Pittsburgh Medical Center, Baltimore, MD

5628 — A0347 Ocular and Orbital Manifestations of PHACES Syndrome: A case series. Paul Huang^{1,3}, E. Sanders^{3,1}, A. Harrop^{1,3}, F. Kherani^{1,2}. ¹University of Calgary, Calgary, Alberta, Canada; ²University of British Columbia, Vancouver, Alberta, Canada; ³Alberta Health Services, Calgary, Alberta, Canada

5629 — A0348 Risk Factors for Urgent Ophthalmologic Intervention in Orbital Fractures at a Level I Trauma Center. Georges Nassrallah, M. Ross, J. Deschenes. Ophthalmology, McGill University, Ottawa, Ontario, Canada

5630 — A0349 Deoxycholic Acid and the Marginal Mandibular Nerve: A Cadaver Study. Alex D. Blandford¹, W. Ansari¹, T. Plesec², C. J. Hwang¹, J. D. Perry¹. ¹Cole Eye Institute, Cleveland Clinic Foundation, Cleveland, OH; ²Anatomic Pathology, Cleveland Clinic Foundation, Cleveland, OH

5631 — A0350 The role of the specialist in directing judicious imaging in children with periorbital cellulitis. Daniel Gealy, M. Migliori. Ophthalmology, Brown University, Providence, RI

Exhibit Hall A0351-A0372

Thursday, May 03, 2018 8:15 AM-10:00 AM

Lens

514 Cataractogenesis and PCO

Moderator: Linda Musil

5632 — A0351 CTGF Contributes to the Development of Posterior Capsule Opacification: an *in vitro* and *in vivo* study. Ruihua Jing, B. Ma, J. Liu, C. Pei. Ophthalmology, First Affiliated Hospital of Xi'an Jiaotong University, Xi'an, Shaanxi, China

5633 — A0352 SMAD7 mediated suppression of epithelial to mesenchymal transition markers in lens. Matthew L. Hupy¹, M. G. Pedler¹, B. Shieh¹, D. Wang², X. Wang², J. Petrash¹. ¹Ophthalmology, University of Colorado School of Medicine, Aurora, CO; ²Pathology, University of Colorado School of Medicine, Aurora, CO *CR

5634 — A0353 AGEs promote TGFβ2-mediated EMT response through the non-canonical pathway. Ram H. Nagaraj, M. Nam. Ophthalmology, University of Colorado School of Medicine, Aurora, CO

5635 — A0354 Resveratrol inhibits cell growth, matrix contraction & EMT: a putative agent for PCO management. Andrew J. Smith, J. A. Eldred, M. Wormstone. School of Biological Sciences, University of East Anglia, Norwich, England, United Kingdom

5636 — A0355 Expression of proteoglycan decorin in opacified posterior capsule and its suppression by TGFβ in mouse lens epithelial cells. Shinsuke Shibata¹, N. Shibata¹, T. Shibata¹, H. Ishida¹, E. Kiyokawa², H. Sasaki¹, E. Kubo¹. ¹Department of Ophthalmology, Kanazawa Medical University, Ishikawa, Japan; ²Department of Oncogenic Pathology, Kanazawa Medical University, Kahoku, Ishikawa, Japan

5637 — A0356 Regulation of TGF-β mediated epithelial-mesenchymal transition of lens epithelial cells by c-src kinase at high glucose concentration. Jian Zhou. Department of Ophthalmology, Xijing Hospital, Xi'an, Shaanxi, China

5638 — A0357 The Rho kinase signaling pathway can facilitate TGFβ-mediated matrix contraction and transdifferentiation of human lens epithelial cells to myofibroblasts. Michael Wormstone, A. J. Smith, J. A. Eldred. School of Biological Sciences, University of East Anglia, Norwich, England, United Kingdom *CR

5639 — A0358 Reactive oxidant species play a key role in sulforaphane induced MAPK signalling, autophagy and cell death in human lens epithelial cells. Ngoc Phuong Thao Huynh¹, h. liu², S. Ball¹, A. J. Smith¹, R. P. Bowater¹, M. Wormstone¹. ¹School of Biological Sciences, University of East Anglia, Norwich, United Kingdom; ²Beijing Tongren Eye Center, Beijing, China

5640 — A0359 Aβ-potentiated and Aβ-independent age-related changes in the lens of Alzheimer's Disease and wild-type mice. Juliet A. Moncaster¹, M. Wojnarowicz², O. Minaeva¹, R. Zeng¹, L. E. Goldstein¹. ¹Radiology, Boston University, Boston, MA; ²Pathology and Laboratory Medicine, Boston University, Boston, MA

5641 — A0360 Targeted depletion of Myo/Nog cells during cataract surgery significantly reduces posterior capsule opacification in the rabbit. Jacquelyn V. Gerhart¹, L. Werner², N. Mamalis², C. Withers¹, R. Getts³, M. George-Weinstein¹. ¹Research, Philadelphia College of Osteopathic Medicine, Philadelphia, PA; ²John Moran Eye Center, University of Utah, Salt Lake City, UT; ³Genisphere, Hatfield, PA *CR

5642 — A0361 Cytokine profile in aqueous humor of congenital cataract with posterior capsule defect. Yinying Zhao, p. chang, Z. Li, X. Ding, Y. Zhao. the eye hospital affiliated wenzhou medical university, Wenzhou, China *CR

5643 — A0362 Clinical and Morphological Features in a Family with Congenital Cataract and Macular Hypoplasia. Karsten Hufendiek¹, D. Brockmann¹, A. Ashurov¹, O. Greb¹, T. Neuhaus², H. Stoehr³, K. Hufendiek¹, C. Framme¹. ¹University Eye Hospital, Hannover Medical School, Hannover, Germany; ²MGZ - Medizinisch-Genetisches Zentrum, Munich, Germany; ³Human Genetics, University of Regensburg, Regensburg, Germany

5644 — A0363 ATF3 inhibiting ASNS expression Contributes to Naphthalene Induced Cataract Development. Jing-Ying Xu^{2,1}, Y. YANG¹, P. Shang¹, C. Zhang², q. Ou¹, F. Gao¹, H. Tian¹, C. Jin¹, L. Lu¹, G. Xu^{1,2}. ¹Lab of Visual Science, Tongji Univ School of Med, Shanghai, China; ²Department of Ophthalmology of Shanghai Tenth People's Hospital, and Tongji Eye Institute, Tongji University, Shanghai, China

5645 — A0364 UV or H₂O₂ accelerated the opacification of LBs which could partially serve as age-related cataracts model. Lifang Zhang^{2,1}, Q. FU^{2,1}, Z. Qin^{2,1}, D. Lyu^{2,1}, K. Yao^{2,1}. ¹Zhejiang Provincial Key Lab of Ophthalmology, Hangzhou, Zhejiang, China; ²Eye Center of the 2nd Affiliated Hospital, School of Medicine, Zhejiang University, Hangzhou, Zhejiang, China

5646 — A0365 Using Grapes as a Magic Bullet to Fight Against Free Radicals in the Eye: Application for Cataract Prevention. Hongli Wu^{2,1}, X. Liu², C. Xavier², D. Wang², P. Ananti², Y. Liu¹. ¹North Texas Eye Research Institute, University of North Texas Health & Science Center, Fort Worth, TX; ²Pharmaceutical Sciences, UNT System College of Pharmacy, Fort Worth, TX

5647 — A0366 Differentiation and proliferation potential of lens epithelial cells *ex vivo* - possible cause for late intraocular lens dislocation. Jovana Bisevac^{1,2}, D. J. Szabo⁴, N. Anisimova³, R. Nagymihály¹, A. Noer¹, I. Sharafetdinov³, M. C. Moe^{1,2}, B. Malyugin³, G. Petrovski^{1,2}. ¹Center for Eye Research, Department of Ophthalmology, Oslo University Hospital, Oslo, Norway; ²Institute of Clinical Medicine, Faculty of Medicine, University of Oslo, Oslo, Norway; ³S. Fyodorov Eye Microsurgery Federal State Institution, Moscow, Russian Federation; ⁴Stem Cells and Eye Research Laboratory, Department of Ophthalmology, University of Szeged, Szeged, Hungary

5648 — A0367 Transparency Distribution of Cataractous Crystalline Lens from Analysis of Images Obtained by a Shack-Hartmann Wavefront Aberrometer. Toshifumi Mihashi¹, Y. Hirohara², S. Morishima², H. Mori¹, T. Hiraoka¹, F. Okamoto¹, T. Oshika¹. ¹Department of Ophthalmology, University of Tsukuba, Tsukuba, Ibaraki, Japan; ²Eye Care Technology Development Dept., Topcon Corp., Itabashi, Tokyo, Japan *CR, *CR

5649 — A0368 Quantifying crystalline lens opacities in Down syndrome with Anterior Segment OCT. Julie-Anne Little, P. S. Richardson, K. J. Saunders, A. S. Mahil. Biomedical Sciences Research Institute, Ulster University, Coleraine, Northern Ireland, United Kingdom

5650 — A0369 Hsa-let-7c-3p downregulates lens epithelial mesenchymal transition by inhibiting CDH11 in TGFβ induced anterior subcapsular cataract in retinitis pigmentosa. Min Hou², F. Luo², X. Bao², M. Wu^{2,1}. ¹Cataract, Zhongshan Ophthalmic Center, Guangzhou, Guangdong, China; ²State Key Laboratory of Ophthalmology, Zhongshan Ophthalmic Center, Guangzhou, Guang Dong, China

5651 — A0370 ER Stress involves in lens capsular opacification through regulating EMT in lens epithelium. Jing Yang, S. Zhou, Y. Liu, M. Wang, Y. Liu. State Key Laboratory of Ophthalmology, Zhongshan Ophthalmic Center, Sun Yat-sen University, Guangzhou, China, Guangzhou, China; State Key Laboratory of Ophthalmology, Zhongshan Ophthalmic Center, Sun Yat-sen University, Guangzhou, China, Guangzhou, China

5652 — A0371 Ginkgolic Acid Inhibits Aberrant Sumoylation-Mediated Dysregulation of Prdx6 and Sp1 to Protect Lens Epithelial Cells against Oxidative Injury. Dhirendra P. Singh¹, B. Chhunchha¹, g. won¹, E. Kubo². ¹Ophthalmology and Visual Sciences, Univ of Neb Med Center; Omaha, NE; ²Ophthalmology, Kanazawa Medical University, Kanazawa, Ishikawa, Japan

5653 — A0372 Comparison between injectable anesthetic agents on transient cataract induced by general anesthesia in rats. Atsuko Yamashita, O. Sakai, H. Tokushige. SENJU Pharmaceutical Co., Ltd, Kobe, Hyogo, Japan *CR

Exhibit Hall A0373-A0393

Thursday, May 03, 2018 8:15 AM-10:00 AM

Physiology/Pharmacology

515 Gene therapy, implants

Moderator: Kristyn Huffman

5654 — A0373 Vector shedding and immunology results from a gene therapy clinical trial for choroideremia. Alun R. Barnard^{1,2}, A. Rudenko^{2,1}, K. Xue^{1,2}, R. E. MacLaren^{1,2}. ¹Nuffield Lab of Ophthalmology, University of Oxford, Oxford, England, United Kingdom; ²Oxford Eye Hospital, Oxford University Hospitals NHS Trust and NIHR Biomedical Research Centre, Oxford, United Kingdom *CR, ✎

5655 — A0374 A Non-Viral Gene Therapy Approach for Retinitis Pigmentosa. Karine Bigot¹, P. Gondouin¹, P. Montagne¹, R. Benard¹, E. Picard^{3,2}, Y. G. Courtois^{3,2}, R. Buggage¹, T. Bordet¹, F. F. Behar-Cohen^{3,2}. ¹Eyeevensys, Paris, France; ²Université Paris Descartes Sorbonne Paris Cité, Paris, France; ³Centre de Recherche des Cordeliers, INSERM UMRS1138, Paris, France *CR

5656 — A0375 Repeat Administration of AAV8 Vector in the Mouse Eye Results in Transgene Expression. Lisa L. Wei¹, Y. Zeng², S. Hiriyananna¹, Z. Wu¹, P. Sieving¹, R. A. Bush². ¹National Eye Institute, Bethesda, MD; ²National Institute on Deafness and Communication Disorders, Bethesda, MD

5657 — A0376 Assessment of transduction efficiency and tropism of different adeno-associated virus (AAV) serotypes based on route of delivery in rats. Ian C. Han^{1,2}, C. Jiao^{1,2}, E. E. Kaalberg^{1,2}, S. Bhattarai^{1,2}, E. R. Burnight^{1,2}, B. A. Tucker^{1,2}, R. F. Mullins^{1,2}, E. M. Stone^{1,2}. ¹Ophthalmology and Visual Sciences, University of Iowa Hospitals and Clinics, Iowa City, IA; ²Stephen A. Wynn Institute for Vision Research, Iowa City, IA

5658 — A0377 Ocular Safety of AAV2.7m8-ChrimsonR-tdTomato (GS030-DP) following intravitreal injection and exposure to 595 nm LED light in blind rd1 mice. Brian J. Christian¹, S. D. Sorden¹, M. Ward¹, T. M. Nork², P. E. Miller², A. Douar³, N. Thomasson³, C. Bouquet³. ¹Covance Laboratories, Inc, Madison, WI; ²Ocular Services On Demand, Madison, WI; ³GenSight Biologics, Paris, France *CR

5659 — A0378 Optimized Homology Directed Repair for Treatment of Inherited Retinal Diseases Using the CRISPR/Cas9 System. Brian P. Rossmiller, T. Iwata. Molecular and Cellular Biology, The National Hospital Organization, Tokyo, Japan

5660 — A0379 The effect of Surgical removal of the Internal Limiting Membrane on AAV vector delivery to the Retina in a Non-Human Primate model. Kelvin Teo^{1,2}, S. Lee³, I. Constable¹. ¹Medical Retina, Singapore National Eye Centre, Sydney, New South Wales, Australia; ²Medical Retina, Sydney Eye Hospital, Sydney, New South Wales, Australia; ³Retina, Singapore National Eye Centre, Singapore, Singapore; ⁴Lions Eye Institute, Perth, Western Australia, Australia

5661 — A0380 Modulation of gene transduction by rAAV2 in the rat retina after intravitreal injection. Mariana Santana Dias, V. Guedes de Araujo, R. Linden, H. Peters Silva. IBCCF - UFRJ, Rio de Janeiro, RJ, Brazil

5662 — A0381 Subfoveal Injections in Non-Human Primates: Safety and Efficacy Following Administration of a Photoreceptor-Targeted AAV5. Ryan F. Boyd¹, J. T. Bartoe¹, T. S. Vihtelic¹, S. L. Boye², S. E. Boye². ¹Ophthalmology Services, MPI Research, Inc, Mattawan, MI; ²Department of Ophthalmology, University of Florida College of Medicine, Gainesville, FL

5663 — A0382 Evaluation of reconstitution efficiencies of rAAV-dCas9-VPR split-intein protein trans-splicing vectors in retinal cells. Victoria Splith, S. Boehm, J. Wagner, M. Biel, E. Becirovic, S. Michalakakis. LMU Munich, Muenchen, Germany

5664 — A0383 Preclinical evaluation of rAAV. CNGB1 in the Cngb1 knockout mouse model of retinitis pigmentosa. Johanna Wagner¹, C. Schön¹, C. O'Riordan², A. Scaria², S. Cheng², M. Biel¹, S. Michalakakis¹. ¹Ludwig-Maximilians Universität, Munich, Germany; ²Gene Therapy, Rare Diseases, Sanofi, Framingham, MA

5665 — A0384 Novel Approach to treat Wet Age-Related Macular Degeneration (wAMD) and other Retinal Vascular Diseases. Mark C. Butler^{1,2}, U. Chitgupi³, J. Myers^{1,2}, M. D. Anger^{1,2}, J. Lovell³, J. M. Sullivan^{1,2}. ¹Research Service, VA Western NY Healthcare System, Buffalo, NY; ²Ophthalmology, (Ross Eye Institute), University at Buffalo-SUNY, Buffalo, NY; ³Biomedical Engineering, University at Buffalo-SUNY, Buffalo, NY

5666 — A0385 Complement Membrane Attack Complex activates the NLRP3 inflammasome in experimental autoimmune uveitis and inhibition by AAV mediated delivery of sCD59. Binit Kumar, S. Cashman, R. Kumar-Singh. Developmental Molecular & Chemical Biology, Tufts University School Of Medicine, Boston, MA

5667 — A0386 Optimization of Mitochondrial AAV-Mediated Gene Delivery for Outer Retina and Glia. Cecile Fortuny¹, E. A. Zin¹, J. Ngo¹, C. Dunlap¹, J. G. Flannery^{1,2}. ¹Vision Science Graduate Group, University of California, Berkeley, Berkeley, CA; ²HWNI, University of California, Berkeley, Berkeley, CA

5668 — A0387 CVCM: A polymeric delivery system for the ocular delivery of mRNA. Joanna Rejman, P. Baumhof. CureVac AG, Tubingen, Germany *CR

5669 — A0388 Wireless Oxygen Generator to Treat Retinal Ischemia. Juan Carlos Martinez^{1,3}, N. Sciammarello², C. A. Cook², K. Murali³, Q. Yang^{1,3}, A. H. Kashani^{1,3}, Y. Tai², M. S. Humayun^{1,3}. ¹Ophthalmology, USC Roski Eye Institute, Los Angeles, CA; ²MEMS Laboratory, California Institute of Technology, Pasadena, CA; ³USC Institute of Biomedical Therapeutics, University of Southern California, Los Angeles, CA

5670 — A0389 Safety and feasibility of new nanofiber subretinal delivery system with injector for RPE cell transplantation. Igor Kozak¹, Z. Stranak², S. Popelka³, T. Ardan⁴, D. Rais³, J. Cizkova⁴, S. Rohiwal⁴, J. Motlik⁴. ¹Moorfields Eye Hospital Centre, Abu Dhabi, United Arab Emirates; ²3rd Faculty of Medicine, Prague, Czechia; ³Institute of Macromolecular Chemistry, Academy of Sciences of the Czech Republic, Prague, Czechia; ⁴Institute of Animal Physiology and Genetics, Academy of Sciences of the Czech Republic, Prague, Czechia

5671 — A0390 Evaluation of Reproducibility and Uniformity of PRINT Implant Manufacturing. Melissa Sandahl¹, D. Melton¹, J. Tully¹, M. Yang², A. Garcia², L. Trevino¹, S. Williams¹. ¹Aerie Pharmaceuticals, Durham, NC; ²Envisia Therapeutics, Durham, NC *CR

5672 — A0391 Sustained Release, Biodegradable PEA Implants for Intravitreal Delivery of the ROCK/PKC Inhibitor AR-13503. Angela Glendenning, K. Crews, J. Sturdivant, M. A. deLong, C. Kocpczynski, C. Lin. Aerie Pharmaceuticals, Durham, NC *CR

5673 — A0392 AR-1105 Dexamethasone Extended Release and Pharmacokinetics in the Non-Human Primate. Janet Tully¹, S. Williams¹, D. Melton¹, R. Robeson², M. Yang², R. Verhoeven¹. ¹Aerie Pharmaceuticals, Durham, NC; ²Envisia Therapeutics, Durham, NC *CR

5674 — A0393 Development of Dissolution Assays for Ocular Implants. Jennifer Haley¹, J. Tully¹, M. Yang², S. Williams¹, J. Hansen¹. ¹Aerie Pharmaceuticals, Durham, NC; ²Envisia Therapeutics, Durham, NC *CR

Exhibit Hall A0394-A0432

Thursday, May 03, 2018 8:15 AM-10:00 AM

Physiology/Pharmacology

516 Drug and gene delivery systems

Moderators: Uday B. Kompella and Kristyn Huffman

5675 — A0394 Improving Retention Rates for Sustained Therapeutic Delivery Through Punctal Plugs. Deepank Uikhede, R. William. Mati Therapeutics Inc, Austin, TX *CR, ✗

5676 — A0395 Cornea-targeting peptide-functionalized nanomicelles with enhanced pharmaceutical efficacy on rabbit eye. Kaihui Nan. Eye Hospital, Wenzhou Medical University, Wenzhou, Zhejiang, China

5677 — A0396 Elastin-like polypeptide mediate subcutaneous delivery of Rapamycin in a murine model of Sjögren's Syndrome. Changrim Lee¹, H. Guo¹, W. Klinngam¹, S. R. Janga², F. Yarber², M. C. Edman², S. Peddi¹, S. F. Hamm-Alvarez^{2, 1}, J. MacKay^{1, 2}. ¹Department of Pharmacology and Pharmaceutical Sciences, School of Pharmacy, University of Southern California, Los Angeles, CA; ²Department of Ophthalmology, USC Roski Eye Institute, Keck School of Medicine, University of Southern California, Los Angeles, CA *CR

5678 — A0397 Non-Invasive Drug Delivery of Nanoparticles for the Treatment of Glaucoma Directly Targeting Schlemm's Canal and Trabecular Meshwork. Molly M. Walsh¹, j. west². ¹Ophthalmology, Duke University, Chapel Hill, NC; ²Biomedical Engineering, Duke University, Durham, NC *CR

5679 — A0398 Non-Clinical Safety of Ciliary Muscle Electrotransfection. Thierry Borden¹, K. Bigot¹, R. Benard¹, J. Laffitte¹, E. Touchard¹, R. Buggage¹, F. F. Behar-Cohen^{1, 2}. ¹Eyevensys, Paris, France; ²Universite Paris Descartes, Paris, France *CR

5680 — A0399 Subtenon Transfusion Dexamethasone to treat Rabbit Experimental Autoimmune Uveitis. xuetao Huang, d. yiqin, M. Peng, K. Li, L. Zhao, C. Ye, D. Lin. Changsha aier hospital, Changsha, China

5681 — A0400 Novel Topical Formulation Reduces IOP for up to 34 Hours After a Single Dose. Monica M. Jablonski^{1, 3}, D. N. Maria^{3, 2}, M. M. Ibrahim^{1, 2}. ¹Hamilton Eye Institute, Univ Tennessee Health Sci Ctr, Memphis, TN; ²Pharmaceutics, Mansoura University, Mansoura, Egypt; ³Pharmaceutical Sciences, University of Tennessee Health Sci Ctr, Memphis, TN

5682 — A0401 Stereochemistry Enhances Potency and Duration of Effect of MALAT1 Antisense Oligonucleotides In Vivo in the Mouse. Michael Byrne, H. Yang, Y. Yin, A. Shah, L. Apponi, C. Shivalila, A. Durbin, N. Iwamoto, R. Looby, J. Kerner, K. Bowman, Z. Zhong, C. Vargeese. WAVE Life Sciences, Natick, MA *CR

5683 — A0402 DNA Nanoparticles for the Treatment of Retinal Diseases: in-vivo results. Sven Schnichels¹, D. Simang¹, L. Strudel¹, J. Hurst¹, J. de Vries¹, K. Bartz-Schmidt¹, A. Herrmann³, M. S. Spitzer^{1, 2}. ¹University Eye Hosp Tübingen, Centre for Ophthalmology Tübingen, Tuebingen, Germany; ²University Eye Hospital, Hamburg, Germany; ³DWI - Leibniz-Institute for Interactive Materials, Aachen, Germany *CR

5684 — A0403 Lipid DNA Nanoparticles – a versatile vehicle for anterior segment drug delivery. Lisa Strudel¹, J. Hurst¹, J. de Vries¹, A. Gruszka¹, K. Bartz-Schmidt¹, A. Herrmann², M. S. Spitzer^{1, 3}, S. Schnichels¹. ¹University Eye Hospital, Department of Ophthalmology, Tübingen, Germany; ²DWI-Leibniz-Institute for Interactive Materials, Aachen, Germany; ³University Eye Hospital Hamburg Eppendorf, Hamburg, Germany *CR

5685 — A0404 Lipidoid-siRNA formulations promote gene silencing in differentiated and non-dividing ARPE-19, primary porcine and human embryonic stem cell-derived retinal pigment epithelial cells. Astrid Subrizi¹, C. Yang¹, T. Ilmarinen², H. Skottman², A. Urtti^{3, 4}, J. Kjems^{1, 5}. ¹iNANO, Aarhus University, Aarhus, Denmark; ²Faculty of Medicine and Life Sciences, BioMeditech Institute, University of Tampere, Tampere, Finland; ³Centre for Drug Research, University of Helsinki, Helsinki, Finland; ⁴School of Pharmacy, University of Eastern Finland, Kuopio, Finland; ⁵Department of Molecular Biology and Genetics, Aarhus University, Aarhus, Denmark

5686 — A0405 Development of dual corticosteroid loaded functionalized liposomes for enhanced drug delivery to the retinal endothelium. Anhoula Arta, F. Melander, T. L. Andresen, A. Urquhart. Micro- and Nanotechnology, Technical University of Denmark, Kgs. Lyngby, Denmark

5687 — A0406 Episcleral sustained ocular delivery of bromfenac and brinzolamide. Jacklyn H. Salmon¹, S. Abbaraju², S. Hanna³, L. Hamm³, R. Amin², D. Culp⁴, B. C. Gilger¹. ¹Clinical Sciences, North Carolina State University, Raleigh, NC; ²Symmetry Biosciences, Research Triangle Park, NC; ³Origin Bioanalytical Laboratory, Inc., Rancho Cordova, CA; ⁴Powered Research, LLC, Research Triangle Park, NC

5688 — A0407 Therapeutic potential and safety of sequential intravitreal dosing to the contralateral eye of novel AAV vectors in non-human primates. Annahita Keravala, A. Rosario, J. Nieves, C. Ceballos-Diaz, D. Cepeda, R. Zhang, A. Nguyen, M. Gasm. Aduverum Biotechnologies, Inc., Menlo Park, CA *CR

5689 — A0408 Degradation assessment of crosslinked CMHA-S polymer products for ophthalmic applications. Darren Stirland, C. Pompero, B. Mann. EyeGate Pharmaceuticals, Salt Lake City, UT *CR

5690 — A0409 A Highly Bioavailable Nanocore (OcuSurf™) Brinzolamide Drug Product for Glaucoma Therapy, Compared to Azopt™. Koushik Barman, K. Ward, C. Li, S. P. Barman. Pharmaceutical Development, Integral BioSystems, Bedford, MA *CR

5691 — A0410 Corneal penetration of functionalized poly (N-isopropylacrylamide) (PNIPAM) polymers. Sudeep Kumar Gade¹, R. Hoskins³, S. Rimmer³, P. Garg¹, V. Venuganti². ¹Jhaveri Microbiology Centre, LV Prasad Eye Institute, Hyderabad, Telangana, India; ²Department of Pharmacy, BITS Pilani Hyderabad Campus, Hyderabad, Telangana, India; ³School of Chemistry and Biosciences, University of Bradford, Bradford, United Kingdom

5692 — A0411 Crosslinked Hyaluronic Acid (CMHA-S), Ocular Bandage Gel-based Delivery of Small Molecules. Hee-Kyoung Lee, S. Luo, B. Mann. EyeGate Pharma, Salt Lake City, UT *CR

5693 — A0412 Co-delivery of Dexamethasone-Melatonin-CoQ10 from a microparticulate drug delivery system. Potential usefulness in neuroprotective therapy. Alicia Arranz-Romera^{1, 2}, E. Shamsheer³, S. Esteban-Pérez^{1, 2}, B. Davis³, D. Garcia-Herranz¹, L. Guo³, I. Molina-Martinez^{1, 2}, I. Bravo-Osuna^{1, 2}, M. Cordeiro^{3, 4}, R. Herrero-Vanrell^{1, 2}. ¹Pharmacy and Pharmaceutical Technology, Faculty of Pharmacy(UCM920415), Complutense University of Madrid, Madrid, Spain; ²Red Temática de Investigación Cooperativa Sanitaria en Enfermedades Oculares Oftared e Instituto de Investigación Sanitaria del Hospital Clínico San Carlos, Madrid, Spain; ³Department of Visual Neuroscience, Glaucoma and Retinal Neurodegeneration Research, UCL Institute of Ophthalmology, London, United Kingdom; ⁴Western Eye Hospital, Imperial College London, London, United Kingdom

5694 — A0413 in vivo laser-mediated retinal ganglion cell optoporation using Kv1.1 conjugated gold nanoparticles. Ariel Wilson^{1, 3}, J. Mazzaferri², E. Bergeron³, S. Patskovsky³, S. Costantino², M. Meunier³, M. Sapieha¹. ¹Biochemistry, Université de Montreal, Montreal, Quebec, Canada; ²Ophthalmology, Université de Montreal, Montreal, Quebec, Canada; ³Engineering Physics, Polytechnique Montreal, Montreal, Quebec, Canada *CR

- 5695 — A0414 Biocompatibility of dexamethasone-eluting contact lens.** Amy Ross¹, L. Bengani¹, H. Kobashi², D. S. Kohane², J. B. Ciolino¹. ¹Ophthalmology, Schepens Eye Research Institute, Boston, MA; ²Anesthesia, Boston Children's Hospital, Boston, MA; ³Ophthalmology, Keio University School of Medicine, Tokyo, Japan *CR
- 5696 — A0415 Long-term functional delivery of the human L-opsin cDNA via intravitreal administration of an AAV vector in Mongolian gerbils.** Diana Cepeda¹, J. Ver Hoeve^{2,3}, M. Ni¹, A. Keravala¹, A. Phillips¹, M. Gami¹. ¹Adverum Biotechnologies, Menlo Park, CA; ²OSOD, Madison, WI; ³University Of Wisconsin–Madison, Madison, WI *CR
- 5697 — A0416 Endophthalmitis Rates of Ranibizumab in Pre-Filled Syringes Compared to Vials.** Zujaja Tauqeer¹, P. Storey², J. D. Wolfe³, B. Todorich⁴, A. R. Shah⁵, T. Koto⁶, A. Abbey⁷, Y. Morizane⁸, K. Jeng-Miller¹, E. Chen⁵, P. Williams⁷, F. Shiraga⁸, A. Hirakata⁶, S. Garg², Y. Yonekawa^{1,9}. ¹Massachusetts Eye and Ear Infirmary, Boston, MA; ²Mid-Atlantic Retina, Wills Eye Hospital, Philadelphia, PA; ³Associated Retinal Consultants, Royal Oak, MI; ⁴Pennsylvania Retina Specialists, Camp Hill, PA; ⁵Retina Consultants of Houston, Houston, TX; ⁶Kyorin Eye Center, Tokyo, Japan; ⁷Texas Retina Associates, Dallas, TX; ⁸Department of Ophthalmology, Okayama University Graduate School of Medicine, Okayama, Japan; ⁹Boston Children's Hospital, Boston, MA *CR
- 5698 — A0417 Assessment of intravitreal pharmacokinetics using an *in vitro* eye model.** Sachin S. Thakur, I. D. Rupenthal. Ophthalmology, University of Auckland, Auckland, New Zealand
- 5699 — A0418 Comparative study on ocular pharmacokinetics of gatifloxacin between continuous lavage and hourly topical instillation in rabbits.** Xin Zhao¹, X. Shen¹, X. Zhang¹, S. Shen¹, H. Lu¹, M. Wang². ¹R&D, Shenyang Sinqi Pharmaceutical Co.,LTD, Shenyang, China; ²University of Arizona College of Medicine, Tucson, AZ
- 5700 — A0419 The effects of amniotic membrane transplantation on moxifloxacin delivery into the cornea evaluated by in-vivo two-photon microscopy.** jin longyu¹, W. Park¹, W. Jeong¹, K. Kim², U. Jegal², J. Lee². ¹School of medicine, Dong-A University, Busan, Korea (the Republic of); ²Pohang Uniuersity of science and technology, Pohang, Korea (the Republic of)
- 5701 — A0420 Differences in ocular tissue metabolism of WP-1303 (H-1129, a novel antiglaucoma agent) by species.** Ayako Suzuki, M. Kimura, M. Yoda, S. Muratani, R. Arakawa, A. Naito. wakamoto pharmaceutical co., LTD, Ashigarakami-gun, Kanagawa, Japan *CR
- 5702 — A0421 Extended preclinical ocular biodistribution and pharmacodynamic profile of ISTH0036, an antisense oligonucleotide targeting transforming growth factor beta 2 (TGF-β2) for the treatment of ophthalmic diseases.** Katja Wosikowski¹, B. Korbmacher², M. Krampert², I. Roehl³, M. Janicot¹. ¹Preclinical Research and Development, Isarna Therapeutics, Munich, Germany; ²Covance Preclinical Services GmbH, Münster, Germany; ³LGC AxoLabs, Kulmbach, Germany *CR
- 5703 — A0422 Portable Imaging Device for Monitoring Patient Eye Drop.** Ruixue Liu, A. Eaton, W. Nelson, H. Wafapoor. Research, Retina Health Center, Fort Myers, FL *CR
- 5704 — A0423 A Refillable Drug Delivery Device to the Retina.** Nobuhiro Nagai¹, S. Saijo¹, Y. Song¹, H. Kaji², M. Nishizawa², T. Abe¹. ¹Graduate School of Medicine, Tohoku University, Sendai, Miyagi, Japan; ²Graduate School of Engineering, Tohoku University, Sendai, Japan *CR
- 5705 — A0424 Accuracy and Precision of Intravitreal Injections of Anti-VEGF Agents in Real Life.** Elad Moisseiev¹, I. Loewenstein¹, M. Goldstein¹, J. Moisseiev². ¹Ophthalmology, Tel Aviv Medical Center, Ramat Hasharon, Israel; ²Ophthalmology, Sheba Medical Center, Ramat Gan, Israel
- 5706 — A0425 Sustained release protein formulation for intraocular use.** Sahar Awwad^{1,2}, P. T. Khaw², S. Brocchini^{1,2}. ¹UCL School of Pharmacy, London, United Kingdom; ²National Institute for Health Research (NIHR) Biomedical Research Centre at Moorfields Eye Hospital NHS Foundation Trust and UCL Institute of Ophthalmology, London, United Kingdom
- 5707 — A0426 Ocular Pharmacokinetics of WP-1303 (H-1129), a novel antiglaucoma agent, in rabbits.** Moto Kimura, M. Yoda, A. Suzuki, S. Muratani, H. Miyai, R. Arakawa, A. Naito. wakamoto pharmaceutical co.,LTD, Ohi-machi, Kanagawa, Japan *CR
- 5708 — A0427 Study into the ability of viral and non-viral vectors to overcome vitreous and ILM in a vitreoretinal explant.** Karen Peynshaert¹, J. Devoldere¹, A. Minnaert¹, D. Dalkara², H. Khabou², S. De Smedt¹, K. Remaut¹. ¹Ghent University, Ghent, Belgium; ²Institut de la Vision, Paris, France
- 5709 — A0428 Ocular surface kinetics of fluorescein in human eyes: Effect of viscosity enhancing agents and drop size.** Subashree Murugan¹, P. Padmanabhan¹, R. R. Sudhir¹, A. Goyal¹, D. Talele¹, S. P. Srinivas². ¹Cornea and Refractive surgery, Medical Research Foundation, Sankara Nethralaya, Chennai, India; ²School of Optometry, Indiana University, Bloomington, IN
- 5710 — A0429 An Injectable Depot Formulation of an Outflow Prodrug for Sustained Reduction of Intraocular Pressure.** Bryan Hoang¹, C. Crean², M. Yang¹, A. Anonuevo¹, W. Peterson¹, J. Cleland¹. ¹Graybug Vision Inc, Baltimore, MD; ²Chatham Biopharma Consulting, Pittsboro, NC *CR
- 5711 — A0430 Dexamethasone-Eluting Contact Lenses Inhibit VEGF-Induced Retinal Vascular Leakage in a Rabbit Model.** Lokendrakumar Bengani¹, A. Ross¹, H. Kobashi¹, D. Maidana², H. Zhai¹, D. G. Vavvas², D. S. Kohane³, J. B. Ciolino². ¹Harvard Ophthalmology, Schepens Eye Research Institute at Mass Eye & Ear, Boston, MA; ²Harvard Ophthalmology, Massachusetts Eye & Ear Infirmary, Boston, MA; ³Boston Children's Hospital, Boston, MA *CR
- 5712 — A0431 Effects of enzymes on the fluid properties of vitreous.** Aysan Rangchian¹, A. A. Francone³, M. Farajzadeh³, K. Connelly², J. Hubschman³, H. Kavehpour^{2,1}. ¹Bioengineering, University of California, Los Angeles, Redondo Beach, CA; ²Mechanical Engineering, University of California, Los Angeles, Los Angeles, CA; ³Department of Ophthalmology - Retina Div, Jules Stein Eye Institute - UCLA, Los Angeles, CA
- 5713 — A0432 Sustained controllable sub-Tenon infusion for delivery of Dexamethasone to the experimental autoimmune uveitis.** Libei Zhao^{1,2}, x. Huang^{1,2}, W. Lin^{1,2}, D. Lin^{1,2}. ¹Aier School of Ophthalmology, Central South University, Changsha, China; ²Changsha Aier Hospital, Changsha, China

Exhibit Hall C0001-C0031

Thursday, May 03, 2018 8:15 AM-10:00 AM
Cornea**517 Corneal Imaging and Topography****Moderators: Patrice Tankam and Elena Koudouna**

5714 — C0001 En-face spectral domain optical coherence tomography (SD-OCT) of the corneoscleral limbus. Ghouli Wajdene¹, R. Tahiri Joutei Hassani¹, H. Liang¹, Z. Djerada², M. El sanharawi¹, A. Labbé¹, C. Baudouin¹. ¹CHNO des Quinze-Vingts, Paris, France; ²Reims University Hospital, Reims, France*CR

5715 — C0002 Anatomic Feature of the Limbus Differs between Chinese and United States Populations. Qihua Le^{1,2}, D. Cordova¹, J. Xu², S. X. Deng¹. ¹Stein Eye Institute, UCLA, Los Angeles, CA; ²Ophthalmology, Eye & ENT Hospital of Fudan University, Shanghai, China *CR

5716 — C0003 Limbal and Conjunctival Epithelial Thickness in Ocular Graft-versus-Host Disease. Giulia Coco¹, A. Khairkhan¹, V. Satitpitakul^{1,2}, R. Dana¹. ¹Massachusetts Eye and Ear, Harvard Medical School, Boston, MA; ²Chulalongkorn University and King Chulalongkorn Memorial Hospital, Bangkok, Thailand

5717 — C0004 Novel method to detect corneal lymphatic vessels in vivo by intrastromal injection of fluorescein. Viet Nhat Hung Le. *Ophthalmology, University of Cologne, Cologne, Germany*

5718 — C0005 Differences in corneal nerves tortuosity indexes between healthy and diabetic subjects. Fabio Scarpa, A. Ruggeri. *University of Padova, Padova, Italy*

5719 — C0006 Building a validated in vivo confocal microscopy (IVCM) dataset for the study of corneal nerves. Davide Borroni^{1,2}, M. Beech¹, B. Williams³, R. Liu⁴, Y. Zhao^{5,3}, B. Ma⁴, V. Romano¹, U. Alam⁶, H. Qi¹, S. B. Kaye^{1,3}, Y. Zheng^{3,1}. ¹St. Paul's Eye Unit, Royal Liverpool University Hospital, Liverpool, United Kingdom; ²Department of Ophthalmology, Riga Stradins University, Riga, Latvia; ³Department of Eye and Vision Science, University of Liverpool, Liverpool, United Kingdom; ⁴Department of Ophthalmology, Peking University Third Hospital, Beijing, China; ⁵Ningbo Institute of Industrial Technology, Cixi Institute of Biomedical Engineering, Ningbo, China; ⁶Clinical Sciences Centre, University Hospital Aintree, Institute of Ageing & Chronic Disease, Liverpool, United Kingdom

5720 — C0007 Evaluation of corneal nerve density with contact lens wear. Nicole M. Putnam¹, S. Pilcher¹, D. Bowin¹, W. W. Harrison^{2,1}. ¹Arizona College of Optometry, Midwestern University, Phoenix, AZ; ²College of Optometry, University of Houston, Houston, TX

5721 — C0008 Automated detection of corneal nerves using deep learning. Hong Qi^{1,2}, D. Borroni³, R. Liu^{1,2}, B. Williams⁴, M. Beech⁵, Y. Zhao^{5,4}, B. Ma^{1,2}, V. Romano⁵, U. Alam⁶, S. B. Kaye^{5,4}, Y. Zheng^{4,5}. ¹Ophthalmology department, Peking University Third Hospital, Beijing, China; ²Beijing Key Laboratory of Restoration of Damaged Ocular Nerve, Beijing, China; ³Department of Ophthalmology, Riga Stradins University, Riga, Latvia; ⁴Department of Eye and Vision Science, University of Liverpool, Liverpool, United Kingdom; ⁵St. Paul's Eye Unit, Royal Liverpool University Hospital, Liverpool, United Kingdom; ⁶Institute of Ageing & Chronic Disease, Clinical Sciences Centre, University Hospital Aintree, Liverpool, United Kingdom; ⁷Cixi Institute of Biomedical Engineering, Ningbo Institute of Industrial Technology, Chinese Academy of Sciences, Ningbo, China

5722 — C0009 A Comparative Study of the Mouse and Human Corneal Elastic System. Eleanor M. Feneck², P. N. Lewis², J. Ralphs¹, K. M. Meek². ¹School of Biosciences, Cardiff University, Cardiff, United Kingdom; ²School of Optometry and Vision Sciences, Cardiff University, Cardiff, United Kingdom

5723 — C0010 Reliability and repeatability of in vivo corneal confocal imaging in young patients with type 1 diabetes mellitus. Noemi Toth¹, E. Szalai¹, E. Deak^{1,2}, A. Berta¹, A. Biro³, T. Peto⁴, A. Csutak¹. ¹Department of Ophthalmology, University of Debrecen, Debrecen, Hungary; ²Biomarker Research Group, Department of Biochemistry and Molecular Biology, Faculty of Medicine, University of Debrecen, Debrecen, Hungary; ³3T Research Kft, Debrecen, Hungary; ⁴Centre for Public Health, Queen's University Belfast, Belfast, United Kingdom

5724 — C0011 Comparison of metrics obtained with discriminant analysis and decision trees for the detection of subclinical keratoconus. Jens Buehren^{1,2}, S. Kleinhans², E. Herrmann³, T. Kohlen². ¹Augenpraxisklinik Triangulum, Hanau, Germany; ²Dept. of Ophthalmology, Goethe University, Frankfurt am Main, Hesse, Germany; ³Dept. of Biostatistics and Mathematical Modelling, Goethe University, Frankfurt am Main, Hesse, Germany *CR

5725 — C0012 Agreement between keratometry measurements obtained with full gradient topography and Scheimpflug tomography systems in pre- and postoperative LASIK eyes. Janice Tarrant, S. Kasthurirangan. *Abbott Medical Optics, Martinez, CA* *CR

5726 — C0013 Corneal Ectasia Associated with Post-Operative Hypotony. Kai Kang, E. Tu, A. Aref, J. Wilensky, T. S. Vajaranant. *Ophthalmology and Visual Sciences, University of Illinois at Chicago, Chicago, IL*

5727 — C0014 Co-/Cross-polarized channel supported limbus to limbus corneal Epithelium (ET-) and Bowman'S Layer Thickness (BLT) Mapping in keratoconic eyes and healthy eyes using large Field of View (FoV-) Polarization-Sensitive (PS-) Optical Coherence Tomography (OCT). Niklas Pircher¹, F. Beer², S. Holzer¹, J. Lammer¹, M. Pircher², C. K. Hitzenberger², G. Schmidinger¹. ¹Ophthalmology, Medical University of Vienna, Vienna, Austria; ²Center for Med Pyhs & Biomed Eng, Medical University of Vienna, Vienna, Austria

5728 — C0015 Validation of Smartphone Specular Microscopy: A new tool for endothelial cell analysis in resource-limited settings. Michael J. Fliotsos^{1,2}, J. Jalali², O. Dryjski¹, A. O. Eghrari¹. ¹Wilmer Eye Institute, Baltimore, MD; ²Johns Hopkins University School of Medicine, Baltimore, MD; ³Case Western Reserve University, Cleveland, OH

5729 — C0016 Clinical features and confocal microscopic findings of contact lens-related noninfectious keratitis. Naoyuki Morishige, K. Shinkai, Y. Soejima, T. Matsui. *Ohshima Eye Hospital, Fukuoka, Fukuoka, Japan* ✗

5730 — C0017 Application of high resolution anterior segment optical coherence tomography for non-invasive diagnosis and differentiation of benign lymphoid hyperplasia, conjunctival lymphoma and conjunctival amyloidosis. Nandini Venkateswaran, A. Tran, A. Galor, C. Karp. *Ophthalmology, Bascom Palmer Eye Institute, Miami, FL*

5731 — C0018 Postoperative detection of unusual pathology in Donor Corneal Tissue: A Case Series. Rasik B. Vajpayee^{1,2}, P. Finn^{3,4}, G. Pollock^{3,4}. ¹Royal Victorian Eye and Ear Hospital, University of Melbourne, Melbourne, Victoria, Australia; ²Vision Eye Institute, Melbourne, Victoria, Australia; ³Lions Eye Donation Service, Royal Victorian Eye and Ear Hospital, Melbourne, Victoria, Australia; ⁴Centre for Eye Research Australia, University of Melbourne, Melbourne, Victoria, Australia

5732 — C0019 Automated classification of post orthokeratology corneal topography difference maps. Paul Gifford^{1,3}, C. Stancombe^{2,3}. ¹Sch of Optometry & Vision Sci, University of New South Wales, Sydney, New South Wales, Australia; ²3CS Software Pty Ltd, Brisbane, Queensland, Australia; ³Myopia Profile Pty Ltd, Brisbane, Queensland, Australia

5733 — C0020 Analysis of which device is reliable for measuring central corneal thickness in novice examiner. Yujeong Kim, J. Joung, S. Ryu, H. Lim. *ophthalmology, Hanyang University Hospital, Seoul, Korea (the Republic of)*

5734 — C0021 Comparison of corneal astigmatism with manifest refractive astigmatism in pseudophakic eyes. Omkar Thaware, M. Tang, D. Huang. *Caesy Eye Institute, Oregon Health and Science University, Portland, OR* *CR

5735 — C0022 Quantitative evaluation of corneal epithelial edema after cataract surgery using corneal densitometry. Sho Ishikawa, N. Kato. *Saitama medical university, Moroyama, Japan*

5736 — C0023 A Novel Low-Cost Photokeratoscope for Use with Smartphones. Alexander Bottini, E. Young, A. Qureshi, J. Young, E. Tsui. *New York University School of Medi, New York, NY*

5737 — C0024 Validation Study for Corneal Microlayer Tomography Automatic Segmentation Algorithm. Amr Elsayy⁴, I. O. Sayed-Ahmed¹, d. wen¹, V. Roongpoovapatr¹, M. Ruggeri², F. Manns^{2,3}, M. A. Mottaleb⁴, M. Abou Shousha¹. ¹Ophthalmology, Bascom Palmer Eye Institute, University of Miami, Miami, FL; ²Ophthalmic Biophysics Center, Bascom Palmer Eye Institute, University of Miami Miller School of Medicine, Miami, FL; ³Biomedical Engineering Department, University of Miami College of Engineering, Miami, FL; ⁴Electrical and Computer Engineering Department, University of Miami College of Engineering, Coral Gables, FL *CR

5738 — C0025 Corneal topography, thickness and Fourier analysis in Fuchs endothelial corneal dystrophy using 1310 nm swept source optical coherence tomography. Anna Nowinska, S. Teper, E. Wylegala. Chair and Department of Ophthalmology, Medical University of Silesia, Katowice, Slaskie, Poland

5739 — C0026 High Resolution Anterior Segment Optical Coherence Tomography of Microbial and Autoimmune Keratitis. Jeffrey Ma, R. Feder. Ophthalmology, Northwestern University, Chicago, IL

5740 — C0027 A New Method for Computation of Important Metrics for Corneal Disease Diagnosis. Farzana Nasrin, R. Iyer, S. Mathews. Department of Mathematics and Statistics, Texas Tech University, Lubbock, TX

5741 — C0028 Dynamic Focusing Spiral Scan OCT for High Resolution, Wide Field, Corneal and Anterior Chamber Imaging. Yuxiao Wei², R. P. McNabb¹, O. Carrasco-Zevallos², M. Jackson-Atogi¹, J. A. Izatt^{1,2}, A. N. Kuo^{1,2}. ¹Ophthalmology, Duke University, Durham, NC; ²Biomedical Engineering, Duke University, Durham, NC *CR

5742 — C0029 Three-Dimensional Bowmans Microlayer Optical Coherence Tomography for the Diagnosis of Subclinical Keratoconus. Vatookarn Roongpoovapat¹, A. Elsayy², D. Wen¹, J. Kanokkantapong¹, I. O. Sayed-Ahmed¹, Z. Syed¹, M. A. Mottaleb², S. H. Yoo¹, M. Abou Shousha¹. ¹Ophthalmology, Bascom Palmer Eye Institute, Miami, FL; ²Electrical and computer engineering, University of Miami, Miami, FL *CR

5743 — C0030 Assessment of Keratoconus Prevalence in a Pediatric Population of Riyadh Saudi Arabia. Andre L. Piccinini, E. Torres, F. Hafezi, N. L. Hafezi, J. B. Randleman. Department of Ophthalmology, USC Roski Eye Institute, Los Angeles, CA

5744 — C0031 Keratometry correlation and vector analysis of astigmatism using IOLMaster 500 and Pentacam HR – a pilot study in toric IOL candidates. Daniela L. Marques¹, F. Langella¹, H. Y. Kurimori¹, R. Y. Hida¹, i. C. Teixeira^{1,2}. ¹Ophthalmology, Hospital Santa Casa de São Paulo, Sao Paulo, Brazil; ²Ophthalmology, Hospital de Olhos Paulista, Sao Paulo, Brazil

Exhibit Hall C0032-C0068

Thursday, May 03, 2018 8:15 AM-10:00 AM

Cornea

518 Cornea Surgery; Refractive

Moderators: Ryan Smith and Francisco C. Figueiredo

5745 — C0032 Secreted protein profiles of tear fluid following endothelial keratoplasty. Nobuyo Yawata^{2,1}, S. Awate², Y. Liu^{1,5}, S. Yuan¹, J. J. Siak^{1,5}, G. Daston³, J. S. Mehta^{1,5}, M. Yawata^{2,4}. ¹Singapore Eye Research Institute, Singapore Eye Research Institute, Singapore, Singapore; ²Singapore Institute for Clinical Sciences, Singapore, Singapore; ³Procter and Gamble company, Cincinnati, OH; ⁴National University of Singapore, Singapore, Singapore; ⁵Singapore National Eye centre, Singapore, Singapore *CR

5746 — C0033 Develop a novel nomogram for manual astigmatic keratotomy to correct mild astigmatism during cataract surgery utilizing ORA and Verion. Ming Chen⁴, M. Reinsbach¹, N. Wilbanks², C. Chang³. ¹Ophthalmology, Nassau university, New York, NY; ²Ophthalmology, University of Virginia, Charlottesville, VA; ³Taipei Nobel eye clinic, Taipei, Taiwan; ⁴Ophthalmology, University of Hawaii, Honolulu, HI

5747 — C0034 Visual and refractive outcomes of topography guided LASIK on virgin eyes. Sharif Hashmani, N. Hashmani. Ophthalmology, Hashmanis Hospital, Karachi, Sindh, Pakistan

5748 — C0035 Biases in patient-reported outcomes after laser vision correction. Neel D. Pasricha¹, S. Hannan², S. Schallhorn¹, J. Schallhorn¹. ¹Ophthalmology, University of California, San Francisco, San Mateo, CA; ²Optical Express, Glasgow City, United Kingdom *CR

5749 — C0036 Central cornea regularization and collagen cross-linking in treatment of keratoconus. Francesco Cifariello, R. Dell'Omo, C. Costagliola. University of Molise, Campobasso, Molise, Italy

5750 — C0037 Outcomes in myopic LASIK and PRK. Kelly Krespan, J. M. Lustbader. Medstar Georgetown/Washington Hospital Center, Washington, District of Columbia

5751 — C0038 Reducing Spherical Aberration in LASIK Surgeries Using Periphery Modification Function. Guang-ming G. Dai, D. A. Chernyak, S. Kasthurirangan. R & D, Abbott Medical Optics, Milpitas, CA *CR

5752 — C0039 Three years follow-up of central flow toric implantable collamer lens implantation. Eduardo Martinez Sanchez, V. Oliva, A. Gomez Bastar, A. Lichtinger, A. Jimenez-Corona, E. O. Graue-Hernandez, A. J. Ramirez-Miranda, A. Navas. Instituto de Oftalmologia "Fundacion de Asistencia Privada Conde de Valenciana IAP", Ciudad de Mexico, Mexico

5753 — C0040 Visual Quality and Contrast Sensitivity Function after Corneal Transplant. Jin Yuan¹, J. Zhong¹, Z. Lu², F. Hou⁴, M. Dorr⁵, Z. Chen³, S. Deng³, J. Li³. ¹Cornea, Zhongshan Ophthalmic Center, Guangzhou, China; ²Psychology Department, Ohio State University, Columbus, OH; ³Astigmatism, Zhongshan Ophthalmic Center, Guangzhou, Guangdong, China; ⁴Wenzhou Medical University, Wenzhou, China; ⁵Technical University of Munich, Munich, Germany *CR, ✗

5754 — C0041 Hyperopia Lenticule Quality of Small Incision Lenticule Extraction in Rabbits Evaluated via Scanning Electron Microscopy. Yu Zhao, F. Zhao, T. Han, J. Zhao, X. Zhou. Fudan University, Shanghai, China

5755 — C0042 Corneal densitometry and polarization power 20 years after Excimer Laser Photorefractive Keratectomy. Feliciano Menna¹, N. Rosa², G. Cennamo³, D. Montorio¹, F. Sinisi¹, P. Donna¹, P. Napolitano¹, G. Cennamo¹. ¹Eye Clinic, Department of Neurosciences, Reproductive Sciences and Dentistry, University of Naples Federico II, Napoli, Italy, Napoli, Italy; ²Department of Medicine, Surgery and Dentistry, University of Salerno, Salerno, Italy, Napoli, Italy; ³Department of Public Health, University Federico II, Napoli, Italy, Napoli, Italy

5756 — C0043 Refractive Stability after LASIK-Xtra for Hyperopia and Astigmatism. Abraham Olvera-Barrios, K. Mohamed-Noriega, A. Garza-Briones, F. Morales-Wong, E. E. Cuervo-Lozano, G. Villarreal M^ondez, J. Mohamed-Hamsho. Universidad Autonoma de Nuevo Leon, Faculty of Medicine, University Hospital, Ophthalmology Department, Monterrey, Nuevo Leon, Mexico

5757 — C0044 Visual and Patient Reported Outcomes of Monovision LASIK versus Multifocal Intraocular Lens Implantation for the Treatment of Presbyopia. Craig Schallhorn¹, J. Schallhorn², S. Schallhorn^{2,3}, S. Hannan⁴. ¹Flight Surgery, US Navy, San Diego, CA; ²Ophthalmology, University of California, San Francisco, San Francisco, CA; ³Zeiss, Dublin, CA; ⁴Optical Express, Glasgow, United Kingdom *CR

5758 — C0045 Six-Year Follow-up of SMILE (Small-Incision Lenticule Extraction) Procedure for the Correction of Astigmatism. Arturo J. Ramirez-Miranda, A. Navas, E. Gonzalez Mendoza, E. O. Graue-Hernandez. Cornea and Refractive Surgery, Inst of Ophthal "Conde de Valenciana", Mexico City, DF, Mexico *CR

5759 — C0046 Efficacy and Safety of Riboflavin-Ultraviolet Type A Rays Inducing Cross-Linking of Corneal Collagen in Patients Aged 8 to 16 Years with Progressing Keratoconus. Julia Polido¹, M. Arai¹, E. Nakano¹, T. Wakamatsu¹, L. Mello², T. Cabral^{1,2}, D. Freitas¹. ¹Ophthalmology, UNIFESP, Vitória, ES, Brazil; ²Ophthalmology, UFES, Vitória, ES, Brazil

5760 — C0047 A 10-year review of underlying diseases for endothelial keratoplasty (DSAEK/DMEK) in a tertiary referral hospital in Japan. Akira Kobayashi, T. Nishino, H. Yokogawa, N. Mori, T. Masaki, K. Sugiyama. Dept of Ophthalmology, Kanazawa Univ Sch of Medicine, Kanazawa, Ishikawa, Japan

5761 — C0048 Biomechanical stability after Small Incision Lenticule Extraction (SMILE) using a 110 or 160µm cap thickness: An ex vivo study on human donor corneas. Iben B. Damgaard, A. Ivarsen, J. Hjortdal. Department of Ophthalmology, Aarhus University Hospital, Aarhus C, Denmark

5762 — C0049 Development of a Liquid Dissection Technique for Small-Incision Lenticule Extraction: Clinical Results and Ultra-Structural Evaluation. Shengbei Weng, Q. Liu. State Key Laboratory of Ophthalmology, Zhongshan Ophthalmic Center, Sun Yat-sen University, Guangzhou 510060, China, Guangzhou, Guangdong, China

5763 — C0050 Corneal Higher-Order Aberrations of the Anterior, Posterior and Total Cornea After Pterygium Surgery. AYAKO TSUCHIYA¹, T. Hayashi^{1,2}, T. Shimizu^{1,2}, N. Kato³. ¹Ophthalmology, Yokohama Minami Kyosai Hospital, Yokohama, Kanagawa, Japan; ²Ophthalmology, Yokohama City University Hospital, Yokohama, Kanagawa, Japan; ³Ophthalmology, Saitama Medical University Hospital, Kawagoe, Saitama, Japan ✕

5764 — C0051 Reverse changes in corneal shape post FS-LASIK. Fangjun Bao¹, S. Chen¹, Y. Li¹, Q. Wang¹, A. Elsheikh². ¹The affiliated Eye Hospital, Wenzhou Medical University, Wenzhou City, China; ²University of Liverpool, Liverpool, United Kingdom

5765 — C0052 Clinical results of SMILE in treating high myopic errors exceeding 10 Diopters. Xiaonan Yang^{1,2}, Q. Liu^{1,2}. ¹Zhongshan Ophthalmic Center, Sun Yat-sen University, Guangzhou, Guangdong, China; ²State Key Laboratory of Ophthalmology, Sun Yat-sen University, Guangzhou, China

5766 — C0053 A Novel Femtosecond Laser Platform enabled by Hollow Core Photonics Crystal Fiber. Vladimir G. Lemberg, D. Wong, S. Rahaman, H. Fu. Advanced R&D, Johnson & Johnson Vision, Milpitas, CA *CR

5767 — C0054 Laser presbyopia surgery with point-symmetry corneal correction. Jose Alberto Rodriguez Agudo^{1,2}, J. Park^{2,3}, J. Park³, S. Lee⁴, A. Jahn⁵, K. Park³. ¹Institute of Fluid Mechanics, University of Erlangen-Nuremberg, Busan, Korea (the Republic of); ²FAU Busan Campus, Institute of Fluid Mechanics, Busan, Korea (the Republic of); ³ShapeVision, Hwaseong, Korea (the Republic of); ⁴Lee Seong Su Eye Center, Jinju, Korea (the Republic of); ⁵Department of Bio-chemical Engineering, Dongseo University, Busan, Korea (the Republic of) *CR

5768 — C0055 Long Term Effects of using Intra-stromal Mitomycin-C with Small Aperture Corneal Inlay Implantation for Presbyopia Correction. Majid Moarefi, S. Bajna, W. Wiley. Cataract and Refractive Surgery, Cleveland Eye Clinic, Cleveland, OH *CR

5769 — C0056 Predicting Undercorrection of Myopia After Small Incision Lenticule Extraction using Corneal Topographic and Biomechanical Properties. Yan Wang^{1,2}, Y. Zhang², W. Wu^{1,2}, J. Young³, K. Hatch⁴, U. V. Jurkunas⁴, R. Pineda II⁴, T. Elze⁵, M. Wang⁵. ¹Tianjin Eye Hospital & Eye Institute, Tianjin Key Lab of Ophthalmology and Visual Science, NanKai University, Tianjin, China; ²Tianjin Medical University, Tianjin, China; ³Department of Ophthalmology, NYU Langone Health, New York, NY; ⁴Massachusetts Eye and Ear, Harvard Medical School, Boston, MA; ⁵Schepens Eye Research Institute, Harvard Medical School, Boston, MA *CR

5770 — C0057 Excimer laser-assisted SMILE lenticule reshaping to induce topographical and refractive changes in porcine corneas. Andri K. Riau¹, I. B. Damgaard², Y. Liu¹, M. Tey¹, G. Yam¹, J. S. Mehta¹. ¹Tissue Engineering and Stem Cell Group, Singapore Eye Research Institute, Singapore, Singapore; ²Department of Ophthalmology, Aarhus University Hospital, Aarhus, Denmark; ³Singapore National Eye Centre, Singapore, Singapore *CR

5771 — C0058 Determinants of using adjuvant method modulated anxiety and pain in LASIK. Suvin Choi¹, S. Park², S. Chung². ¹Graduate School of Public Health & Institute of Health and Environment, Seoul National University, Seoul, Korea (the Republic of); ²Ophthalmology, Saevit Eye Hospital, Goyang, Korea (the Republic of); ³Department of Applied Statistics, Chung-Ang University, Seoul, Korea (the Republic of) ✕

5772 — C0059 Clinical outcomes after intracorneal ring segment implantation for keratoconus management in thin corneas. Zisis Gatziofias^{1,2}, L. Eggenschwiler¹, D. Goldblum¹, I. Guber², A. Khine², S. Hamada², D. Lake², M. Elalfy². ¹Ophthalmology, University Hospital Basel, Basel, Switzerland; ²Corneo-Plastic Unit, Queen Victoria Hospital, East Grinstead, Sussex, United Kingdom

5773 — C0060 Variation of potential pain biomarkers in saliva of patients after Advanced Surface Ablation (ASA) refractive technique. Eva Sobas Abad^{1,2}, A. Vazquez¹, S. Videla³, R. Reinoso^{1,4}, I. Fernandez^{1,4}, M. J. Maldonado^{1,5}, J. Pastor^{1,5}. ¹Ophthalmology, IOBA, Valladolid, Valladolid, Spain; ²Enfermería, Universidad de Valladolid, Valladolid, Valladolid, Spain; ³Ciencias Experimentales y de la Salud, Facultad de Ciencias de la Salud y de la Vida, Universidad Pompeu Fabra, Barcelona, Barcelona, Spain; ⁴Networking Research Center on Bioengineering, Biomaterials and Nanomedicine, CIBER-BBN, Valladolid, Spain; ⁵Medicina, Universidad de Valladolid, Valladolid, Spain

5774 — C0061 Identifying Optimal Scheimpflug Parameters to Predict Ectasia Risk after LASIK. James B. Randleman¹, E. Hwang¹, J. M. Schallhorn². ¹Ophthalmology, USC Roski Eye Institute, Los Angeles, CA; ²Ophthalmology, UCSF, San Francisco, CA

5775 — C0062 Corneal Wound Healing and Inflammatory Responses following Femtosecond Laser LASIK and Small Incision Lenticule Extraction: Comparison of the Expression of Different Cytokines. Lingjia Liu¹, W. Cheng³, G. Cheng⁴, K. Chiu⁵, Y. Wang^{2,3}. ¹Medical College of Nankai University, Tianjin, China; ²Tianjin Eye Hospital & Eye Institute, Tianjin Key Lab of Ophthalmology and Visual Science, NanKai University, Tianjin, China; ³Tianjin Medical University, Tianjin, China; ⁴Hong Kong Laser Eye Center, Hong Kong SAR, China; ⁵Department of Ophthalmology, State Key Laboratory of Brain and Cognitive Sciences, LKS Faculty of Medicine, The University of Hong Kong, Hong Kong SAR, China

5776 — C0063 Correlation between cyclorotation and clinical parameters after iris registration followed by wavefront-optimized femtosecond-assisted LASIK. Ricardo M. Nose, S. Basak, R. Pineda II. Refractive Surgery, Massachusetts Eye and Ear Infirmary, Harvard Medical School, Boston, MA

5777 — C0064 Safety and efficacy of accelerated corneal crosslinking with laser in situ keratomileusis (3 years). Jing Zhang, Y. Zhou. Beijing Tongren Hospital, Beijing, China

5778 — C0065 Astigmatic Outcomes for Arcuate Incisions in Femtosecond Laser Assisted Cataract Surgery. Giovanni Greaves¹, B. Wong¹, A. Malik¹, S. Malik¹, T. Hufnagel², L. Rosen³, C. Shih¹. ¹Ophthalmology, Northwell Health, Hofstra School of Medicine, Baltimore, MD; ²Stahl Eye Care, Garden City, NY; ³Statistics, Northwell Health, Feinstein Institute, Great Neck, NY

5779 — C0066 Changes in the Density of Choroicapillary and Choroidal Thickness in Myopic Patients with Femtosecond Laser in Situ Keratomileusis. Liang Hu, S. Gui, J. Huang, Z. Xu, F. Lu. School of Optometry & Ophthalmology, Wenzhou Medical University, Wenzhou, China

5780 — C0067 Comparative Analysis of Dual Scheimpflug Metrics in Patients With Highly Asymmetric Keratoconus. Oren Golan¹, E. Hwang², M. Krauthammer¹, J. B. Randleman³. ¹Ophthalmology, Tel Aviv Soraski Medical Center, Valley Village, CA; ²University of South California, Los Angeles, CA; ³Ophthalmology, USC Roski Eye Institute, Los Angeles, CA

5781 — C0068 Effect of angle kappa on deviation of corneal vertex after small incision lenticule extraction (SMILE) for the correction of myopia. Wenbo Cheng, Y. Wang, J. Zhang, L. Zhang, T. CUI, W. Zhao. Tianjin eye hospital & eye institute, Tianjin key lab of ophthalmology and visual science, Tianjin medical university, Tianjin, China

Exhibit Hall C0069-C0083

Thursday, May 03, 2018 8:15 AM-10:00 AM

Eye Movements/Strabismus/Amblyopia/Neuro-Ophthalmology

519 Fixational Eye Movements and Nystagmus

Moderator: Vallabh Das

5782 — C0069 A novel reversible technique for treating congenital nystagmus. Lejin Wang, Z. Miao, L. Huang. Department of Ophthalmology, Eye diseases and optometry Institute, Peking University People's Hospital, Beijing, China

5783 — C0070 Monocular nystagmus in chiasmal tumors. John P. Kelly^{1,2}, M. Estrada², J. Wright³, J. O. Phillips^{1,2}, A. H. Weiss^{1,2}. ¹Ophthalmology OA.5.342, Seattle Children's Hospital, Seattle, WA; ²Ophthalmology, University of Washington, Seattle, WA; ³Radiology, Seattle Childrens Hospital, Seattle, WA

5784 — C0071 The contribution of common population variants to hypomorphic oculocutaneous albinism phenotypes: a novel tri-allelic TYR genotype. Chelsea S. Norman¹, L. O'Gorman¹, J. Gibson¹, R. J. Pengelly¹, D. Baralle¹, J. Ratnayaka¹, S. Ennis¹, J. E. Self^{1,2}. ¹The University of Southampton, Southampton, Hampshire, United Kingdom; ²Eye unit, University Hospital Southampton, Southampton, United Kingdom

5785 — C0072 A UKGTN approved next-generation sequencing clinical test for Albinism and/or Nystagmus. James E. Self¹, L. Michaels¹, T. Newall¹, D. Hunt², C. Norman¹, S. Thomas³. ¹CES, University of Southampton, Southampton, Hampshire, United Kingdom; ²Clinical Genetics, University Hospital Southampton, Southampton, Hampshire, United Kingdom; ³Lab, Wessex Regional Genetics Lab, Salisbury, Wiltshire, United Kingdom

5786 — C0073 Role of Frmd7 in synaptic connectivity in the retina. Ahmed Salman. University of Southampton, Southampton, United Kingdom

5787 — C0074 A putative causal variant in SLC38A8 segregating with foveal hypoplasia in an autosomal recessive family with primary exotropia. Zia Chaudhuri^{1,2}, J. John², A. Mukhopadhyay², S. Aneja³, B. Thelma². ¹Department of Ophthalmology, Lady Hardinge Medical College & PGIMER, Dr RML Hospital, New Delhi, India, New Delhi - 110001, Delhi, India; ²Department of Genetics, University of Delhi South Campus, New Delhi, India, New Delhi - 110021, Delhi, India; ³Department of Pediatrics, Lady Hardinge Medical College, University of Delhi, New Delhi, India, New Delhi - 110001, Delhi, India

5788 — C0075 Comparison of quantitative segmentation analysis and structural grading of foveal hypoplasia in infants for the prediction of future visual acuity: A longitudinal cohort study. Sohaib R. Rufai², M. G. Thomas², R. Purohit², H. Lee¹, F. A. Proudlock², I. Gottlob². ¹Ophthalmology, University of Southampton, Southampton, Hampshire, United Kingdom; ²Ulverschroft Eye Unit, University of Leicester, Leicester, United Kingdom

5789 — C0076 Assessing visual acuity – test-retest repeatability and level of agreement between the electronic ETDRS chart (E-ETDRS), optokinetic nystagmus (OKN), and sweep VEP. Lily Yu-Li Chang^{1,2}, P. Guo², B. Thompson³, M. Sangi⁴, J. Turuwhenua^{2,1}. ¹Optometry & Vision Science, University of Auckland, Auckland, New Zealand; ²Auckland Bioengineering Institute, University of Auckland, Auckland, New Zealand; ³Optometry and Vision Science, University of Waterloo, Waterloo, Ontario, Canada; ⁴Uniservices, University of Auckland, Objective Acuity Ltd, Auckland, New Zealand *CR

5790 — C0077 Age impairs OKN suppression during divided attention tasks. Larry A. Abel, R. Dyer. Optometry & Vision Sciences, University of Melbourne, Parkville, Victoria, Australia

5791 — C0078 Fixation stability with Bessel beams. Dipesh Bhattarai¹, M. Suheimat¹, A. J. Lambert², D. A. Atchison¹. ¹School of Optometry and Vision Science, Queensland University of Technology, Brisbane, Queensland, Australia; ²School of Engineering and Information Technology, University of New South Wales, Canberra, Australian Capital Territory, Australia

5792 — C0079 How correlated are drifts in both eyes during fixational eye movements? Daria Ivanchenko¹, Z. Hafed², F. Schaeffel¹. ¹Section of Neurobiology of the Eye, Ophthalmic Research Institute, Tuebingen, Germany; ²Physiology of Active Vision, Werner Reichardt Centre for Integrative Neuroscience, Tuebingen, Germany

5793 — C0080 Similar multiplicative improvements in fixation stability in normal vision and amblyopia. Sevdia Agaoglu¹, A. M. Aizenman¹, P. Verghese², D. M. Levi¹. ¹School of Optometry, University of California, Berkeley, Berkeley, CA; ²The Smith-Kettlewell Eye Research Institute, San Francisco, CA

5794 — C0081 Longitudinal Results of the Relationship Between Saccadic and Fixation Movements to Birth Order. Christine L. Allison, D. G. Schlange. Binocular Vision/Pediatric Optometry, Illinois College of Optometry, Chicago, IL

5795 — C0082 Characteristics of Fixational Eye Movements During Prolonged Recording. Arun k. Krishnan^{1,2}, M. N. Agaoglu^{2,3}, S. T. Chung^{2,3}. ¹Envision Research Institute, Wichita, KS; ²School of Optometry, University of California, Berkeley, CA; ³Vision Science Graduate Program, University of California, Berkeley, CA

5796 — C0083 Fixation instability during binocular viewing in strabismic and anisometropic children. Krista R. Kelly, C. Cheng-Patel, R. M. Jost, E. E. Birch. Pediatric Vision, Retina Foundation of the Southwest, Dallas, TX

Exhibit Hall C0084-C0102

Thursday, May 03, 2018 8:15 AM-10:00 AM

Visual Psychophysics/Physiological Optics

520 Image Quality and Vision

Moderator: Nancy J. Coletta

5797 — C0084 Theoretical study of the effect of longitudinal vibrations on vision via the Visual Strehl ratio Optical Transfer Function metric. Andrei Martinez-Finkelshtein^{1,2}, A. Castañón-Fernández², D. Iskander³. ¹Mathematics, Baylor University, Waco, TX; ²Mathematics, University of Almeria, Almeria, Almeria, Spain; ³Biomedical Engineering, Wroclaw University of Science and Technology, Wroclaw, Poland

5798 — C0085 The impact of higher order wavefront aberrations dynamics on instantaneous retinal image quality. Maciej M. Bartuzel, D. Iskander. Faculty of Fundamental Problems of Technology, Wroclaw University of Science and Technology, Wroclaw, Poland

5799 — C0086 Correlation between Central and Peripheral Ocular Wavefront Aberrations in Young Adults. Jason Shen, F. Spors, D. Tsang. College of Optometry, Western Univ of Hlth Sciences, Pomona, CA

5800 — C0087 The Influence of Pupil Size on Visual Image Quality and Optimal Refraction during Simulated Spectacle Wear in Keratoconus. Elizabeth Shumard¹, G. D. Hastings¹, J. J. Rozema², R. A. Applegate¹, J. D. Marsack¹. ¹College of Optometry, University of Houston, Houston, TX; ²Ophthalmology, University of Antwerp, Antwerp, Belgium

5801 — C0088 An attempt to determine normal range of corneal higher-order aberrations. Takahiro Hiraoka, G. Kiuchi, Y. Ueno, T. Oshika. Department of Ophthalmology, Faculty of Medicine, University of Tsukuba, Tsukuba, Ibaraki, Japan *CR

5802 — C0089 Relationships between corneal higher order aberrations, age, and refractive status. Gaku Kiuchi, T. Hiraoka, Y. Ueno, T. Oshika. University of Tsukuba, Tsukuba, Japan

5803 — C0090 Extending depth of focus of ophthalmic elements with trefoil aberration. Eva Acosta², J. A. Arines³, M. Olvera-Ángeles¹, A. Padilla-Vivanco¹, J. Sasiañ³, J. Schwiegerling³. ¹University of Tulancingo, Tulancingo, Hidalgo, Mexico; ²University of Santiago de Compostela, Santiago de Compostela, La Coruna, Spain; ³University of Arizona, Tucson, AZ

5804 — C0091 The impact of misalignment on the optical and visual image quality of template-based corrections in keratoconus. David Rio^{1,2}, J. J. Rozema^{3,4}, G. D. Hastings², J. D. Marsack². ¹New England College of Optometry, Boston, MA; ²College of Optometry, University of Houston, Houston, TX; ³Department of Ophthalmology, Antwerp University Hospital, Edegem, Belgium; ⁴Faculty of Medicine and Health Sciences, University of Antwerp, Antwerp, Belgium

5805 — C0092 Central, Paracentral and Near-Peripheral Retinal Response to Chromatic Blur. Muteb Alanazi^{1,2}, J. Kim¹. ¹College of Optometry, Pacific University, Forest Grove, OR; ²College of Applied Medical Sciences, Optometry Department, King Saud University, Riyadh, Riyadh, Saudi Arabia

5806 — C0093 Method for assessing the impact of residual roughness after corneal ablation in polychromatic vision. Shwetabh Verma^{1,2}, J. Hesser², S. Arba Mosquera¹. ¹Research and Development, Schwind eye-tech-solutions, Kleinostheim, Germany, Kleinostheim, Bayern, Germany; ²Experimental Radiation Oncology, Interdisciplinary Center for Scientific Computing, Central Institute for Computer Engineering, Heidelberg University, Heidelberg, Baden Württemberg, Germany *CR

5807 — C0094 In-Vivo Evaluation of Peripheral Refraction Changes with Single Vision and Multifocal Soft Contact Lenses. Frank Spors¹, J. Shen¹, D. Tsang¹, L. McNaughton¹, D. Egan². ¹Western University of Health Sciences, Pomona, CA; ²University of Pikeville, Pikeville, KY *CR

5808 — C0095 Influence of optical defocus on peripheral vision with and without aberrations. Petros Papadogiannis, D. Romashchenko, P. Unsbo, L. Lundström. KTH Royal Institute of Technology, Stockholm, Sweden

5809 — C0096 Study of the optical properties of two brands of commercial multifocal contact lenses (steep vs smooth addition increase) in combination with the higher order aberrations of 65 eyes. Pablo De Gracia, N. Purrier, C. Des Rosiers, A. Marcell, G. Pashak. Chicago College of Optometry, Midwestern University, Downers Grove, IL *CR

5810 — C0097 Elevation-based detection of keratoconus. Ikram Issarti^{1,3}, A. Consejo^{1,2}, J. J. Rozema^{1,3}. ¹Department of Ophthalmology, Antwerp University Hospital, Antwerp, Belgium; ²Biomedical Engineering, Wrocław University of Science and Technology, Wrocław, Poland; ³Faculty of Medicine and Health Sciences, Antwerp University, Antwerp, Belgium

5811 — C0098 Assessment of corneal scattering using Purkinje images. Pau Santos¹, J. Martínez-Roda¹, J. Ondategui¹, J. Caza², M. Ballesta¹, F. Díaz-Doutón¹, J. Pujol¹, M. Vilaseca¹. ¹Centre for Sensors, Instruments and Sensors Development (CD6), Universitat Politècnica de Catalunya (UPC), Barcelona, Spain; ²Hospital CIMA Barcelona, Barcelona, Spain *CR

5812 — C0099 Stromal scattering mean-free path, as a quantitative measure of corneal transparency, derived from objective analysis of depth-resolved corneal images. Romain Bocheux^{1,2}, V. M. Borderie², L. Laroche², K. Plamann¹, K. Irsch^{2,3}. ¹Loa, Ensta ParisTech, École polytechnique, CNRS, Université Paris-Saclay, 828 bd des Maréchaux, 91762 Palaiseau, France; ²Institut de la Vision / Quinze-Vingts National Eye Hospital, UPMC-Sorbonne Universities, Paris, France; ³The Wilmer Eye Institute, The Johns Hopkins University School of Medicine, Baltimore, MD

5813 — C0100 Scattering extinction of human eye lenses and straylight. Thomas J. Van Den Berg. Ophthalmic Research, Netherlands Inst for Neurosci, Royal Acad, Amsterdam, Netherlands *CR

5814 — C0101 Effectiveness and Safety of a phototherapeutic contact lens for Diabetic Retinopathy. Qianhui Yang^{1,2}, J. Martinez-Camarillo^{1,2}, C. A. Cook³, N. Scianmarello³, Y. Tai³, A. H. Kashani^{1,2}, M. S. Humayun^{1,2}. ¹Department of Ophthalmology, USC Roski Eye Institute, Los Angeles, CA; ²USC Institute of Biomedical Therapeutics, University of Southern California, Los Angeles, CA; ³Micro-ElectroMechanical Systems Lab, California Institute of Technology, Pasadena, CA

5815 — C0102 Case Series of Pediatric Sutured Scleral Lens Fixation in Guatemala City. Sofia Bravo-Beltranena¹, M. Zimmermann-Paiz¹, E. Hernandez Bogantes². ¹Comité Pro-Ciegos y Sordos de Guatemala, Guatemala, Guatemala; ²Centro Ocular, Heredia, Costa Rica

Exhibit Hall C0103-C0145

Thursday, May 03, 2018 8:15 AM-10:00 AM

Multidisciplinary Ophthalmic Imaging Group / Biochemistry/Molecular Biology

521 Animal Imaging

Moderators: Ian A. Sigal and Joseph Carroll

5816 — C0103 Comparison of optical coherence tomography angiography with immunolabeling experiment in laser-induced choroidal neovascularization. Kazuki Nakagawa, H. Yamada, k. takahashi. Kansai Medical University Hospital, Osaka, Osaka, Japan

5817 — C0104 Detection of early microvascular retinal changes in type I diabetic mice with OCT-Angiography. Hironori Uehara, T. Lesuna, B. K. Ambati. University of Utah, Salt Lake City, UT

5818 — C0105 In vivo imaging of therapeutic response in the rat retina by anti-vascular growth factor inhibitors using optical coherence tomography angiography (OCT-A). Johanna Meyer, J. Groß, F. G. Holz, S. Schmitz-Valckenberg. Ophthalmology, University of Bonn, Bonn, Germany *CR

5819 — C0106 Retinal and choroidal blood perfusion in response to elevated intraocular pressure in male and female rats assessed by swept source OCTA. Yuandong Li¹, J. Xu¹, W. Cepurna², E. C. Johnson², D. C. Lozano², J. C. Morrison², R. K. Wang^{1,3}. ¹Bioengineering, University of Washington, Seattle, WA; ²Casey Eye Institute, Oregon Health & Science University, Portland, OR; ³Ophthalmology, University of Washington, Seattle, WA *CR

5820 — C0107 Longitudinal characterization of branched retinal vein occlusions created by imaging-guided photocoagulation. Brian Soetikno, L. Beckmann, X. Zhang, H. Ryu, A. Fawzi, H. F. Zhang. Northwestern University, Chicago, IL

5821 — C0108 Retinal Characterization of SOD1^{-/-} Mice by Multi-Functional OCT. Marco Augustin, D. J. Harper, S. Fialová, C. K. Hitzberger, B. Baumann. Medical University of Vienna, Vienna, Austria

- 5822 — C0109 Longitudinal monitoring of Photoreceptor-RPE-Choroid Neurovascular Unit (PRC-NVU) morphology and function in the mouse model of Doyme Honeycomb Retinal Dystrophy.** Robert J. Zawadzki^{1,2}, R. Meleppat², S. MANNA², G. Peinado², S. J. Karlen², M. Heisler², P. Zhang², M. Sarunic³, E. A. Pierce⁴, E. N. Pugh². ¹Ophthalmology & Vision Science, University of California Davis, Sacramento, CA; ²Cell Biology and Human Anatomy, UC Davis, Davis, CA; ³Engineering Science, Simon Fraser University, Burnaby, British Columbia, Canada; ⁴Dept. of Ophthalmology, Harvard University, Boston, MA
- 5823 — C0110 Precise retinotopic mapping of rat visual cortex using high-speed and wide-field OCT angiography and fundus camera stimulator.** Paul Shin, J. Joo, W. Oh. Korea Advanced Institute of Science and Technology, Daejeon, Korea (the Republic of)
- 5824 — C0111 Dependence of Optical Coherence Tomography Angiography on Microvessel Orientation Angle.** Vivek J. Srinivasan^{1,2}, M. Bernucci¹, C. M. Merkle¹, J. Zhu¹. ¹Biomedical Engineering, University of California, Davis, Davis, CA; ²Ophthalmology and Vision Science, University of California Davis School of Medicine, Sacramento, CA *CR
- 5825 — C0112 Novel features of optophysiological signals from mouse rod outer segment tips observed by optical coherence tomography.** Pengfei Zhang¹, M. Goswami¹, S. Manna¹, R. Meleppata¹, R. J. Zawadzki^{1,2}, E. N. Pugh¹. ¹Cell Biology, UC Davis, Davis, CA; ²UC Davis, Ophthalmology & Vision Science, Davis, CA
- 5826 — C0113 White Light Optical Coherence Tomography for Sub-Micron Resolution and Spectroscopic Imaging in the Mouse Retina.** Danielle J. Harper¹, M. Augustin¹, A. Lichtenegger¹, P. Eugui¹, M. Glösmann², C. K. Hitzberger¹, B. Baumann¹. ¹Medical University of Vienna, Vienna, Austria; ²University of Veterinary Medicine Vienna, Vienna, Austria
- 5827 — C0114 Subretinal A β injections induce a localised, early CNV phenotype in C57BL/6 mice.** Savannah Lynn, J. Scott, H. h. Lee, R. Desai, T. Newman, A. Cree, A. Lotery, J. Ratnayaka. Clinical & Experimental Sciences, The University of Southampton, Southampton, United Kingdom
- 5828 — C0115 The Presence of Protein in Formulation Ameliorates Retinal Changes Observed on OCT Following Intravitreal Administration of Hyperosmotic Solution in Cynomolgus Monkeys.** Nardos Tassew¹, V. Bantsev¹, A. McKenzie¹, R. Andaya¹, D. O'Connor¹, D. Sheinson¹, C. A. Rasmussen², T. Nork², T. Streit³, H. S. Booler¹, F. Lorget¹. ¹Genentech, South San Francisco, CA; ²OSOD, Madison, WI; ³Covance Laboratories, Madison, WI *CR
- 5829 — C0116 Detection of melanin in the zebrafish retina using photothermal optical coherence tomography.** Maryse Lapierre-Landry^{1,2}, A. L. Huckenpahler³, B. A. Link³, R. F. Coltery⁴, J. Carroll⁴, M. Skala^{2,5}. ¹Biomedical Engineering, Vanderbilt University, Nashville, TN; ²Medical Engineering, Morgridge Institute for Research, Madison, WI; ³Cell Biology, Neurobiology & Anatomy, Medical College of Wisconsin, Milwaukee, WI; ⁴Ophthalmology & Visual Sciences, Medical College of Wisconsin, Milwaukee, WI; ⁵Biomedical Engineering, University of Wisconsin Madison, Madison, WI
- 5830 — C0117 Noninvasive retinal imaging of small to large animals using ultrahigh-resolution optical coherence tomography without a contact lens.** Sang-Won Lee^{1,2}, H. Kang¹, T. Lee^{1,2}. ¹Center for Nano-Bio Measurement, Korea Research Institute of Standards and Science, Daejeon, Korea (the Republic of); ²Department of Nano Science, University of Science and Technology, Daejeon, Korea (the Republic of)
- 5831 — C0118 A new look on Alzheimer's and Parkinson's disease: *in vivo* imaging of neurodegenerative disease processes in the retina.** Lies De Groef¹, L. Veys¹, M. Vandenabeele¹, L. Andries¹, E. Lefevre¹, L. Bousset², C. Van den Haute³, I. Stalmans^{3,4}, R. Melki², V. Baekelandt³, L. K. Moons¹. ¹Department of Biology, KU Leuven, Leuven, Belgium; ²Paris-Saclay Institute of Neuroscience, Centre National de la Recherche Scientifique, Paris, France; ³Department of Neurosciences, KU Leuven, Leuven, Belgium; ⁴University Hospitals Leuven, Leuven, Belgium
- 5832 — C0119 Wavelength-dependent OCT of the mouse retina in four spectral bands from visible to infrared.** Aaron M. Kho¹, C. M. Merkle¹, R. Meleppata², M. Bernucci¹, T. Zhang¹, P. Zhang², S. Manna², R. J. Zawadzki^{2,3}, V. J. Srinivasan^{1,3}. ¹Biomedical Engineering, University of California, Davis, Davis, CA; ²Cell Biology and Human Anatomy, University of California, Davis, Davis, CA; ³Ophthalmology and Vision Science, University of California, Davis, Sacramento, CA *CR
- 5833 — C0120 Multimodal photoacoustic microscopy, OCT, and fluorescence imaging system to detect retinal neovascularization in rabbit eyes.** Yanxiu Li^{1,2}, W. Zhang³, V. Nguyen², X. Xia², X. Wang³, Y. M. Paulus^{1,3}. ¹Department of Ophthalmology and Visual Sciences, The University of Michigan, Ann Arbor, MI; ²Department of Ophthalmology, Xiangya Hospital, Central South University, Changsha, Hunan, China; ³Department of Biomedical Engineering, The University of Michigan, Ann Arbor, MI
- 5834 — C0121 Investigation of angular reflectivity of mouse retina layers using directional optical coherence tomography system.** Ratheesh Kumar Meleppat¹, P. Zhang¹, E. N. Pugh¹, R. J. Zawadzki^{1,2}. ¹UC Davis Eye-Pod Imaging Laboratory, Dept. of Cell Biology and Human Anatomy, University of California Davis, Davis, CA; ²VSRI, Dept. of Ophthalmology & Vision Science, University of California Davis, Sacramento, CA
- 5835 — C0122 High Resolution Optical Coherence Elastography of Retina under Prosthetic Electrode.** TAI-CHI LIN¹, Y. Qu², Y. He², X. Qian³, Z. Chen³, Q. Zhou³, M. S. Humayun¹. ¹Department of Ophthalmology, USC Roski Eye Institute, Los Angeles, CA; ²Department of Biomedical Engineering, Beckman Laser Institute, University of California, Irvine, Irvine, CA; ³Department of Biomedical Engineering and Ophthalmology, University of Southern California, Los Angeles, CA *CR
- 5836 — C0123 Optical Observation of Retinal Ganglion Cells and their Apoptosis in Optic Nerve Degeneration.** SeokHwan Kim¹, J. Oh², Y. kim³, J. Kim², D. kim⁴, K. Park³, S. Park². ¹Ophthalmology, Seoul National University, Boramae Medical Center, Seoul, Korea (the Republic of); ²Sensor System Research Center, Korea Institute of Science and Technology (KIST), Seoul, Korea (the Republic of); ³Ophthalmology, Seoul National University Hospital, Seoul, Korea (the Republic of); ⁴Electrical Engineering, Inha University, Seoul, Korea (the Republic of)
- 5837 — C0124 Intravital imaging of corneolimb cell dynamics by two-photon microscope.** Yueh-Feng Wu¹, H. Tan^{2,3}, S. Lin^{1,4}. ¹Institute of Biomedical Engineering, National Taiwan University, Taipei, Taiwan; ²Department of Ophthalmology, Chang Gung Memorial Hospital, Linkou, Taoyuan, Taiwan; ³College of Medicine, Chang Gung University, Taoyuan, Taiwan; ⁴Department of Dermatology, National Taiwan University Hospital, Taipei, Taiwan
- 5838 — C0125 Imaging Endoglin mRNA in Mouse OIR with Anti-Sense Hairpin-DNA Gold-Nanoparticle Conjugates.** Md Imam Uddin, T. C. Kilburn, J. S. Penn. Ophthalmology, Vanderbilt University School of Medicine, Nashville, TN
- 5839 — C0126 Development of imaging biomarkers of photoreceptor transplantation outcomes in mice based on confocal scanning laser ophthalmoscopy.** Ying Liu, S. Sodhi, K. Hudspith, D. Johnson, M. S. Singh. Wilmer Eye Institute, Johns Hopkins University, Baltimore, MD
- 5840 — C0127 Imaging Lutein and Zeaxanthin in the Primate Macula by Confocal Resonance Raman Microscopy.** Binxing Li¹, E. George¹, G. T. Rognon¹, F. Chang¹, J. M. Frederick¹, J. Stoddard², T. J. McGill², M. Neuringer², P. S. Bernstein¹. ¹Ophthalmology and Visual Sciences, Univ of UT Sch Med/Moran Eye Ctr, Salt Lake City, UT; ²Ophthalmology, Oregon Health & Science University, Portland, OR

5841 — C0128 Superresolution Ultrasound Imaging of the Rat Eye Vasculature. Harriet O. Lloyd¹, A. Yu², R. Urs¹, B. Yu², J. Ketterling³, R. H. Silverman¹. ¹Ophthalmology, Columbia University Medical Center, New York, NY; ²Electrical and Computer Engineering, University of Waterloo, Waterloo, Ontario, Canada; ³F.L. Lizzi Center for Biomedical Imaging, Riverside Research, New York, NY

5842 — C0129 Microfluidic platform to study pressure-induced changes in neurons. Julie Cho¹, P. Sternberg⁴, D. Colon-Ramos^{3,2}, C. Teng¹. ¹Ophthalmology, Yale University, New Haven, CT; ²Developmental Cell Biology and Genetics, Yale University, New Haven, CT; ³Cellular Neuroscience, Neurodegeneration and Repair, Yale University, New Haven, CT; ⁴Biology, California Institute of Technology, Pasadena, CA

5843 — C0130 Intra and Inter-Observer Variability of Laser Speckle Flowgraphy for Retinal Blood Flow Measurements in Wild Type C57BL/6J Mouse Model. Veluchamy A. Barathi^{1,2}, R. Agrawal^{3,1}, P. K. Balne¹, N. Khandelwal³, S. Tun¹, L. Schmetterer⁴. ¹Translational Pre-Clinical Model Platform, Singapore Eye Research Institute, Singapore, Singapore; ²ophthalmology, The Ophthalmology & Visual Sciences ACP (EYE-ACP), SingHealth and Duke-NUS, Singapore, Singapore; ³ophthalmology, National Healthcare Group Eye Institute, Tan Tock Seng Hospital, Singapore, Singapore; ⁴Imaging group, Singapore Eye Research Institute, Singapore, Singapore

5844 — C0131 Simultaneous second harmonic generation and Mueller Matrix polarimetry imaging of the rat cornea. Ilyas Saytashev¹, N. Lopez², J. Chue-Sang², J. Ramella-Roman^{1,2}. ¹Ophthalmology, HWCOR, Florida International University, Miami, FL; ²Biomedical Engineering, Florida International University, Miami, FL

5845 — C0132 A3ID - Automated Avascular Area Identification in a rat oxygen-induced retinopathy model. Michael Simmons^{1,2}, A. Cheng¹, S. Becker¹, R. Gerkin², M. Hartnett¹. ¹Ophthalmology and Visual Sciences, Moran Eye Center, Salt Lake City, UT; ²Internal Medicine, Banner University Medical Center - Phoenix, Phoenix, AZ

5846 — C0133 Ultrahigh-field diffusion weighted MR imaging of the chicken eye in vivo throughout the in ovo period. Tobias Lindner¹, F. Streckenbach², R. Klose³, S. Hadlich⁴, T. Stahnke³, R. F. Guthoff³, S. Langner², O. Stachs³. ¹Core Facility Multimodal Small Animal Imaging, Rostock University Medical Center, Rostock, Germany; ²Institut für Diagnostische und Interventionelle Radiologie, Rostock University Medical Center, Rostock, Germany; ³Ophthalmology, Rostock University Medical Center, Rostock, Germany; ⁴Institute for Diagnostic Radiology and Neuroradiology, University Medicine Greifswald, Greifswald, Germany

5847 — C0134 Characterization of ocular anatomical and electrophysiological differences between young and geriatric African green monkeys. Shervin Liddie, C. Patel, V. Woodley, J. Attwood, A. Browne, M. S. Lawrence. Research, RxGen Inc., New Haven, CT

5848 — C0135 Alterations in inner retinal oxygen delivery and metabolism during bilateral common carotid artery occlusion in rats. Preny Karamian¹, J. Burford¹, S. Farzad¹, N. P. Blair², M. Shahidi¹. ¹Ophthalmology, University of Southern California, Los Angeles, CA; ²Ophthalmology and Visual Sciences, University of Illinois at Chicago, Chicago, IL *CR

5849 — C0136 Assessing seasonal changes of cone photoreceptor structure in the 13-lined ground squirrel. Benjamin S. Sajdak¹, A. E. Salmon¹, A. C. Williams², D. K. Merriman³, J. Carroll^{1,4}. ¹Cell Biology, Neurobiology, & Anatomy, Medical College of Wisconsin, Milwaukee, WI; ²Clinical & Translational Science Institute, Medical College of Wisconsin, Milwaukee, WI; ³Biology, University of Wisconsin Oshkosh, Oshkosh, WI; ⁴Ophthalmology & Visual Sciences, Medical College of Wisconsin, Milwaukee, WI

5850 — C0137 Complex organization of V1 projections to extrastriate cortex in tree shrew. Kuo-Sheng Lee^{1,2}, D. Fitzpatrick¹. ¹Max Planck Florida Institute, Jupiter, FL; ²Florida Atlantic University, Boca Raton, FL

5851 — C0138 Using ImageJ to quantify microbial keratitis related corneal opacification in a mouse model. Gibran Butt¹, K. Brock¹, A. Ng¹, c. vareechon², E. Pearlman², L. J. Hill¹, G. R. Wallace¹, S. Rauz¹. ¹Institute of Inflammation and Ageing, University of Birmingham, Leeds, United Kingdom; ²Case Western Reserve University, Irvine, CA

5852 — C0139 Image-guided photo-mediated ultrasound therapy as a novel method to selectively treat eye vasculature. xinyi xie^{1,3}, W. Zhang^{1,2}, Y. Qin², X. Yang⁴, X. Wang², S. Yuan³, Y. M. Paulus^{1,2}, Q. Liu³. ¹Ophthalmology, University of Michigan, Kellogg Eye center, Ann Arbor, MI; ²Biomedical Engineering, University of Michigan, Ann Arbor, MI; ³Ophthalmology, First Affiliated Hospital of Nanjing Medical University, Nanjing, Jiangsu, China; ⁴Mechanical Engineering, University of Kansas, Lawrence, KS

5853 — C0140 Characterization of Deeply Embedded Corneal Foreign Bodies with Anterior Segment Optical Coherence Tomography. Sharon Armarnik^{1,2}, M. Mimouni⁴, D. Goldenberg³, n. geffen⁵. ¹Ophthalmology, BC Children Hospital, Vancouver, Prince Edward Island, Canada; ²Ophthalmology, Meir Medical Center, Kfar Saba, Israel; ³Ophthalmology, Tel Aviv Medical Center, Tel Aviv, Israel; ⁴Ophthalmology, Rambam Health Care Campus, Haifa, Israel; ⁵Ophthalmology, Beilinson medical center, Petach Tikva, Israel

5854 — C0141 Mutations in the microphthalmia transcription factor (Mitf) gene affect retinal vessel diameter. Thor Eysteinnsson¹, S. B. Danielsson¹, A. García Llorca¹, H. Reynisson¹, M. H. Ogmundsdottir², E. Steingrímsson². ¹Physiology, University of Iceland, Reykjavik, Iceland; ²Biochemistry and Molecular Biology, University of Iceland, Reykjavik, Iceland

5855 — C0142 Fluorescence Lifetime Imaging Ophthalmoscopy of ex-vivo retinal pigment epithelium after selective laser irradiation. Yoko Miura^{1,2}, A. Hufzilz¹, B. Lewke¹, C. Coelius², S. Grisanti², R. Brinkmann^{1,3}. ¹Institute of Biomedical Optics, University of Luebeck, Luebeck, Germany; ²Department of Ophthalmology, University of Lübeck, Lübeck, Germany; ³Medical Laser Center Lübeck, Lübeck, Germany

5856 — C0143 Measuring Short Wavelength and Near Infrared Fundus Autofluorescence in the presence of ABCA4 Mutations and Albinism. Janet R. Sparrow, M. Paavo, H. Kim, J. Zhao, W. Lee, R. Allikmeets, S. H. Tsang. Department of Ophthalmology, Columbia University, New York, NY

5857 — C0144 Fluorophore Hyperspectral Signatures and Distribution in Canine Best Disease Compared to Analogous Fluorophores in Humans. Taariq Mohammed¹, Y. Tong², T. Ach⁴, M. Hammer⁵, R. Smith², K. E. Guzewicz³. ¹Ophthalmology, New York University School of Medicine, New York, NY; ²New York Eye and Ear Infirmary, New York, NY; ³School of Veterinary Medicine, University of Pennsylvania, Philadelphia, PA; ⁴Department of Ophthalmology, University Hospital Würzburg, Würzburg, Germany; ⁵Department of Ophthalmology, University of Jena, Jena, Germany

5858 — C0145 The hyperspectral autofluorescence (AF) differentiation of lipofuscin in the RPE and vitelliform debris of canine bestrophinopathy. Yuehong Tong¹, T. Mohammed², N. Dey³, T. Ach⁴, M. Hammer⁵, R. Smith¹, K. E. Guzewicz⁶. ¹Ophthalmology, Icahn School of Medicine at Mount Sinai, New York, NY; ²Ophthalmology, New York University School of Medicine, New York, NY; ³Computer Science & Engineering, New York University, New York, NY; ⁴Ophthalmology, University Hospital Würzburg, Würzburg, Germany; ⁵Ophthalmology, University of Jena, Jena, Germany; ⁶School of Veterinary Medicine, University of Pennsylvania, Philadelphia, PA

Exhibit Hall C0146-C0170

Thursday, May 03, 2018 8:15 AM-10:00 AM

Multidisciplinary Ophthalmic Imaging Group

522 Innovations in Imaging

Moderators: Mahnaz Shahidi and Yan Li

5859 — C0146 Development of a binocular video-ophthalmoscope to compare parameters of heart beat induced blood volume changes between both eyes. Ralf P. Tornow¹, F. Horn¹, J. Odstrcilik², R. Kolar². ¹Augenlinik, Universitaetsklinikum Erlangen, Erlangen, Germany; ²Department of Biomedical Engineering, Brno University of Technology, Brno, Czechia *CR, ✂

5860 — C0147 Fluorescence Lifetime Imaging Ophthalmoscopy in early Alzheimer's disease. Soonil Kwon^{1,2}, W. Fang², E. Borrelli², A. Ebraheem², K. Marion², Y. Katayama⁴, S. R. Sadda^{2,3}. ¹ophthalmology, Hallym Sacred Heart hospital, Anyang, Gyeonggi-do, Korea (the Republic of); ²Doheny Image Reading Center, Doheny Eye Institute, Los Angeles, CA; ³ophthalmology, David Geffen School of Medicine at UCLA, Stein Eye Institute, Los Angeles, CA; ⁴Engineering GmbH, Heidelberg, Germany*CR

5861 — C0148 Holographic laser Doppler retinal imaging. Leo Puyo¹, M. Paques², M. Fink¹, J. A. Sahel², M. Atlan¹. ¹ESPCI - Institut Langevin, Paris, France; ²Institut de la Vision, Paris, France

5862 — C0149 Holographic line field en-face OCT with digital aberration correction in the human retina in-vivo. Laurin G. Ginner¹, T. Schmolz¹, A. Kumar¹, M. Salas¹, N. Pricoupenko¹, L. Wurster¹, R. Leügel¹. ¹ZMPBMT, Medical University of Vienna, Wien, Austria; ²Carl Zeiss Meditec, Dublin, CA

5863 — C0150 Blood flow quantification in retinal vessels by three-channel Doppler OCT with variable beam switching patterns. Christoph K. Hitzengerger, A. Wartak, F. Beer, B. Baumann, M. Pircher. Center F Med Physics & Biomed Eng, Medical University of Vienna, Vienna, Austria

5864 — C0151 In-vivo holographic imaging and reconstruction of the human eye. Marwan Suheimat¹, A. J. Lambert², D. A. Atchison¹. ¹Institute of Health and Biomedical Innovation, Queensland University of Technology, Brisbane, Queensland, Australia; ²School of Engineering and Information Technology, University of New South Wales, Canberra, Canberra, Australian Capital Territory, Australia

5865 — C0152 Hyperspectral fundus camera with sensitivity beyond the visible range: a pilot study. Tommaso Alterini, F. Díaz-Doutón, M. Vilaseca. Centre for Sensors, Instruments and Systems Development (CD6), Universitat Politècnica de Catalunya (UPC), Terrassa, Barcelona, Spain

5866 — C0153 Imaging the human iris: a hyperspectral approach. Luca Di Cecilia, F. Marazzi, L. Rovati. Dept. of Engineering "E. Ferrari", University of Modena and Reggio Emilia, Modena, Modena, Italy

5867 — C0154 Trabecular meshwork detection in automated gonioscopy. Simone Pajaro, L. Cappellari, A. De Giusti, A. Paviotti. R&D, NIDEK Technologies Srl, Albignasego, Padova, Italy*CR

5868 — C0155 Irido-corneal angle visualization in automated gonioscopy. Mauro Campigotto, A. Paviotti, A. De Giusti, L. Cappellari. Research & Development, NIDEK Technologies Srl, Albignasego (PD), Italy *CR

5869 — C0156 Handheld Adaptive Optics Scanning Laser Ophthalmoscopy for in vivo Photoreceptor Imaging of Supine Adults and Neonates. Theodore DuBose¹, D. Nankivil^{1,3}, F. LaRocca¹, K. Hagan¹, G. Waterman¹, D. Tran-Viet², A. N. Kuo^{2,1}, C. A. Toth^{2,1}, J. A. Izatt^{1,2}, S. Farsiu^{1,2}. ¹Biomedical Engineering, Duke University, Durham, NC; ²Ophthalmology, Duke University Eye Center, Durham, NC; ³Johnson & Johnson Vision Care, Inc., Jacksonville, FL *CR

5870 — C0157 Characterizing retinal radiant exposure of line illumination. Yuan Liu, K. O'Hara, Y. WANG, N. Shemonski, J. Straub, C. Campbell. Carl Zeiss Meditec, Inc., Dublin, CA *CR

5871 — C0158 Non-mydratric wide field fundus camera with flexible shape field of view. Meinert Jordan¹, P. Voigtmann¹, G. Michelson^{2,3}, B. Schmauss¹. ¹Institute of Microwaves and Photonics, Friedrich-Alexander-University of Erlangen-Nuremberg, Erlangen, Germany; ²Department of Ophthalmology, Friedrich-Alexander-University of Erlangen-Nuremberg, Erlangen, Germany; ³Talkingeyes&More GmbH, Erlangen, Germany; ⁴Voigtmann GmbH, Nuremberg, Germany *CR

5872 — C0159 Optical Design of Ultra-Wide-angle Fundus Imaging Device Using Four-color Lasers. Koichi Ito¹, N. Honda², H. Nakanishi², M. Hanebuchi¹, N. Isogai². ¹Advanced Technology Development Dept., Eye Care Div., NIDEK Co., Ltd., Gamagori, Aichi, Japan; ²Medical Development Dept., Eye Care Div., NIDEK Co., Ltd., Gamagori, Aichi, Japan *CR

5873 — C0160 Ocular blood flow imaging and quantification. Mircea Mujat, Y. Zhao, N. Iftimia, R. D. Ferguson. Physical Sciences Inc., Acton, MA *CR

5874 — C0161 Ultrafast Scanning Laser Ophthalmoscope for retinal tracking and on-line correction of the eye motion artifacts. Maciej Szkulmowski¹, M. Nowakowski², K. Dalasinski², M. M. Bartuzel^{1,3}, K. Wrobel¹, S. Tamborski¹, E. Pijewska¹, A. Szkulmowska². ¹Institute of Physics, Nicolaus Copernicus Univ, Torun, Poland; ²AM2M Ltd. L.P., Torun, Poland; ³Faculty of Fundamental Problems of Technology, Wroclaw University of Science and Technology, Wroclaw, Poland *CR

5875 — C0162 The use of TeraHertz scanning system as a new quantitative tool in corneal edema. Yu-Chi Liu^{1,2}, L. Ke³, N. Zhang³, H. Liu³, E. Teo¹, J. Mehta². ¹Ophthalmology, Singapore Eye Research Institute, Singapore, Singapore; ²Singapore National Eye Center, Singapore, Singapore; ³Institute of Materials Research and Engineering, Singapore, Singapore

5876 — C0163 Phase imaging of retinal cells for clinical studies and diagnosis. Timothé Laforest¹, D. Carpentras¹, M. Künzi¹, L. Kowalczyk^{2,3}, F. F. Behar-Cohen^{3,4}, C. Moser¹. ¹LAPD, EPFL, Lausanne, Switzerland; ²Faculty of Biology and Medicine, University of Lausanne, Lausanne, Switzerland; ³Fondation Asile des aveugles, Jules Gonin eye hospital, Lausanne, Switzerland; ⁴Centre de Recherche des Cordeliers, INSERM UMR1138 Team17, Paris, France

5877 — C0164 Sodium (²³Na) In Vivo Magnetic Resonance Imaging of the Human Eye at 7.0 Tesla: a New Tool to Investigate Ocular Disorders. Daniel Wenz¹, O. Stachs², A. Kuehne³, T. Huelnhagen¹, A. M. Nagel^{4,5}, H. Waiczies³, E. Seeliger⁶, B. Flemming⁶, T. Niendorf^{1,3}. ¹Berlin Ultra High Field Facility, Max Delbrueck Centrum, Berlin, Germany; ²Department of Ophthalmology, University Medical Center, Rostock, Germany; ³MRI.TOOLS GmbH, Berlin, Germany; ⁴Institute of Radiology, University Hospital Erlangen, Erlangen, Germany; ⁵Division of Medical Physics in Radiology, German Cancer Research Center, Heidelberg, Germany; ⁶Institute of Physiology, Charite University Medicine, Berlin, Germany *CR

5879 — C0165 Visualizing Retinal and Choroidal Blood Flow Noninvasively. Paras Vora, N. Bell, J. Cho, G. Botzet, R. Albuquerque. University of Kentucky, Lexington, KY

5878 — C0166 Non-invasive, non-mydratric imaging of retinal blood flow over multiple fields of view. Abhishek Rege¹, Y. Liu¹, Y. Jing¹, J. Howarth¹, O. Saeedi². ¹Vasoptic Medical Inc, Baltimore, MD; ²Department of Ophthalmology and Visual Sciences, University of Maryland Baltimore, Baltimore, MD *CR

5880 — C0167 Fundus Flavoprotein Autofluorescence in Compressive Optic Neuropathy. Katie Topping^{1,2}, K. Cockerham¹, A. Kossler¹. ¹Ophthalmology, Stanford University, Mountain View, CA; ²Ophthalmology, United States Navy, San Diego, CA

5881 — C0168 Dynamic Near-Infrared Imaging of Vitreous Opacities. Jorge Fortun, A. Nadelson, L. J. Haddock. Department of Ophthalmology, Bascom Palmer Eye Institute, University of Miami Miller School of Medicine, Palm Beach Gardens, FL *CR

5882 — C0169 Assessment of retinal biomechanical properties under prosthetic electrode using ultrasonic micro-elastography. Xuejun Qian^{2,3}, T. LIN², K. Shung³, M. S. Humayun^{2,3}, Q. Zhou^{2,1}. ¹University of Southern California, Los Angeles, CA; ²USC Roski Eye Institute, University of Southern California, Los Angeles, CA; ³Department of Biomedical Engineering, University of Southern California, Los Angeles, CA

5883 — C0170 Evaluation of self stabilizing gonioleins for intraoperative gonioscopy during microstent glaucoma procedures. K V Chalam, H. Dhalla, S. Russo. Univ of Florida-Jacksonville, Jacksonville, FL

Exhibit Hall C0171-C0199

Thursday, May 03, 2018 8:15 AM-10:00 AM

Glaucoma

523 Imaging: Anterior Segment

Moderators: Sayoko E. Moroi and Benjamin Xu

5884 — C0171 Methods of analyzing chromatic pupillometry in glaucoma. Werner Eisenbarth¹, A. Kwiatkowski¹, N. Feucht², L. Reznicek², C. P. Lohmann². ¹Munich Center for Applied Vision Science, Munich University of Applied Sciences, Munich, Germany; ²Augenlinik und Poliklinik des Klinikum rechts der Isar der TU München, TU München, Munich, Germany

5885 — C0172 Post-phacoemulsification iris changes in glaucomatous and nonglaucomatous eyes. Qinyun Wang, Y. C. Hsia, C. I. Perez, M. Feinstein, M. Masis, M. Mora, S. C. Lin. Ophthalmology, University of California, San Francisco, San Francisco, CA

5886 — C0173 Interpicata distance as part of ciliary body biometry to understand complications of plateau iris configuration. Xiaofei MAN¹, D. M. Reed², J. Queen³, B. Ayres³, S. Moroi². ¹Ophthalmology, Xin Hua Hospital Affiliated to Shanghai Jiao Tong University School of Medicine, Shanghai, China; ²Ophthalmology and Visual Sciences, University of Michigan, Ann Arbor, MI; ³Ophthalmology, Houston Methodist, Houston, TX

5887 — C0174 The Association of Ocular Surface Disease with Quality of Life in Patients with Glaucoma. Jenifer S. Wu, L. F. Machado, R. Portela, N. T. Fares, A. F. Leão, A. Paranhos, T. S. Prata, C. P. Gracitelli. Ophthalmology and Visual Science, Federal University of São Paulo, São Paulo, São Paulo, Brazil

5888 — C0175 Influence of Music on Intraocular Pressure and Morphology of Schlemm's Canal: An SS-OCT Study. rouxi zhou, F. Li, Y. Yuan, X. Zhang. State Key Laboratory of Ophthalmology, Zhongshan Ophthalmic Center, Guangzhou, China

5889 — C0176 Evaluation of Ocular Surface Disease in Patients with Glaucoma: Clinical parameters, Self-report assessment and Keratograph Analysis. Renata Portela, N. T. Fares, D. Freitas, A. Paranhos, T. S. Prata, C. P. Gracitelli. Ophthalmology, UNIFESP, Sao Paulo, Sao Paulo, Brazil ✗

5890 — C0177 Effect of Preoperative Use of Steroid Eyedrops in Glaucoma Patient and its Outcomes after Trabeculectomy. Nikoly T. Fares, R. Portela, L. Machado, A. Paranhos, D. Freitas, C. P. Gracitelli. Department of Ophthalmology and Visual Sciences, Federal University of São Paulo, São Paulo, Brazil

5891 — C0178 Corneal microstructure in suspects with glaucomatous optic disc appearance. Comparison with healthy subjects and glaucoma patients. D. Robert Iskander¹, M. Majewska¹, D. Jesus², P. Krzyzanowska-Berkowska². ¹Biomedical Engineering, Wrocław University of Science and Technology, Wrocław, Poland; ²KU Leuven, Leuven, Belgium; ³Wrocław Medical University, Wrocław, Poland

5892 — C0179 Central Corneal Thickness Variances Among Different Asian Ethnicities In Glaucoma And Non-glaucoma Patients. Mai Badr, M. Masis, B. Amoozgar, A. Nguyen, S. C. Lin. University of California San Francisco (UCSF), San Francisco, CA

5893 — C0180 The relationship between adult height and ocular biometry in a Nepalese population: The Jiri Eye Study. Matthew P. Johnson¹, S. Laston¹, K. L. Anderson², B. Towne³, J. Subedi⁴, J. Blangero¹, S. Williams-Blangero¹, S. S. Thapa⁵. ¹South Texas Diabetes & Obesity Institute, School of Medicine, UTRGV, Brownsville, TX; ²Ophthalmology, School of Medicine, UT Health, San Antonio, TX; ³Population & Public Health Sciences, School of Medicine, Wright State Univ., Kettering, OH; ⁴Sociology & Gerontology, College of Arts & Science, Miami Univ., Oxford, OH; ⁵Tilganga Institute of Ophthalmology, Kathmandu, Nepal

5894 — C0181 The relationship between corneal hysteresis and progression of glaucoma after trabeculectomy. Yuri Fujino¹, H. Murata¹, M. Matsuura^{1,2}, R. Asaoka¹. ¹Tokyo Hospital, The University of Tokyo, Tokyo, Japan; ²Graduate school of Medical Science, Kitasato University, Kanagawa, Japan

5895 — C0182 In open angle glaucoma patients with diabetes mellitus longitudinal changes in central corneal thickness are associated with changes in optic nerve head morphology. David Camp¹, A. Harris¹, T. A. Ciulla⁵, A. Verticchio Vercellin^{3,4}, A. Shah¹, P. Parekh¹, M. Antheriou², B. A. Siesky¹. ¹Ophthalmology, Indiana University School of Medicine, Indianapolis, IN; ²Ophthalmology, University Hospitals of Geneva, Geneva, Switzerland; ³Glaucoma Unit, Istituto di Ricovero e Cura a Carattere Scientifico, Fondazione G.B. Bietti, Rome, Italy; ⁴University Eye Clinic, Dipartimento di Scienze Clinico-Chirurgiche, Diagnostiche e Pediatriche, Pavia, Italy; ⁵Retina Service, Midwest Eye Institute, Indianapolis, IN *CR

5896 — C0183 Correlations Between Anterior Segment Optical Coherence Tomography Parameters in Different Stages of Primary Angle Closure Disease. Jing Shan, A. A. Pardeshi, R. Varma, B. Xu. USC Roski Eye Institute, Los Angeles, CA

5897 — C0184 Anterior choroidal thickness increased in POAG and PACD eyes evidenced by UBM and SS-OCT. Xiulan Zhang, F. Li, K. Gao. Zhongshan Ophthalmic Center, the State Key Laboratory of Ophthalmology, Sun Yat-sen University, Guangzhou, China

5898 — C0185 Biometric factors associated with acute primary angle closure: A comparison of the affected and eyes with a similar short axial length. Yoshiaki Kiuchi, Y. Shimizu, S. Nakakura, A. Noguchi, H. Tabuchi. Ophthalmology, Tsukazaki Hospital, Himeji, Japan *CR

5899 — C0186 A Novel Smartphone-Based Method for Quantitative Estimation of the Anterior Chamber Depth. Tanya Kowalski, E. Zamir. Centre for Eye Research Australia, Melbourne, Victoria, Australia

5900 — C0187 Angle and Ciliary Body Conformation in Anatomically Narrow Angle by Ultrasound Biomicroscopy. Suzanne Daly², D. Coleman¹, H. O. Lloyd¹, R. H. Silverman¹. ¹Ophthalmology, Columbia University Medical Center, New York, NY; ²Ophthalmology, Columbia University Medical Center, NY, NY

5901 — C0188 Diagnostic sensitivity of Ultrasound Biomicroscopy (UBM) in identifying Clinical Aqueous Misdirection Syndrome. Mona Khurana⁵, R. Malik¹, N. Saleh Al-Salameh², A. E. Al-Garni⁴, A. Gaeed¹, R. Philip³, S. Narasimhan³, R. J. George³, T. S. Vajaranant³, J. Wilensky³, D. P. Edward³. ¹King Khaled Eye Specialist Hospital, Riyadh, Saudi Arabia; ²King Saud University, Riyadh, Saudi Arabia; ³University of Illinois Eye and Ear Infirmary Chicago, Chicago, IL; ⁴King Saud bin Abdulaziz University for Health Sciences, Riyadh, Saudi Arabia; ⁵Sankara Nethralaya Medical Research Foundation, Chennai, India

- 5902 — C0189 Assessment of circumferential angle closure with Swept-Source Optical Coherence Tomography: a community based study.** Natalia Porporato¹, B. Mani¹, R. S. Ganguly², T. A. Tun¹, M. C. Tan³, J. H. Quah⁴, M. E. Nongpiur¹, J. Allen², C. Cheng¹, T. Aung¹. ¹Glaucoma, Singapore Eye Research Institute, Singapore, Singapore; ²National University of Singapore, Singapore, Singapore; ³National University Hospital of Singapore, Singapore, Singapore; ⁴SingaHealth Polyclinic, Singapore, Singapore
- 5903 — C0190 Biomicroscopic Findings In Pseudoexfoliation Syndrome At Santa Casa De São Paulo Hospital.** Joao Duvilio B Andreolli, N. Kasahara, R. Cohen. ISCMSP, Sao Paulo, Brazil
- 5904 — C0191 Comparison of anterior segment in nanophthalmic eyes with secondary chronic angle closure glaucoma and eyes with chronic primary angle closure glaucoma: an ultrasound biomicroscopy study.** Zhongwen Li, Z. Zhao, J. Liu, J. Li, C. Guo, J. Zhang, D. Zhang, Z. Fan. Zhongshan Ophthalmic Center, Sun Yat-sen University, Guangzhou, Guangdong, China
- 5905 — C0192&#tab; Using a Novel Anterior Segment Optical Coherence Tomography (AS-OCT) Method to Assess Iridocorneal Angle.** Mariana Nunez⁵, M. Y. Chen¹, S. S. Lee², C. Nien³, F. Medeiros⁴, J. L. Goldberg³. ¹Ophthalmology, Allergan, Irvine, CA; ²Ophthalmology, Allergan, Irvine, CA; ³Ophthalmology, Allergan, Irvine, CA; ⁴Ophthalmology, Duke University, Durham, NC; ⁵Ophthalmology, Byers Eye Institute at Stanford, Palo Alto, CA *CR
- 5906 — C0193 Imaging Techniques for Trabecular Microbypass Stent (TMS).** Carson Schell, S. Reich, J. Ellant, S. L. Thomas, E. Moriarty, E. Simpson, F. Kremer, J. B. Serle. Ophthalmology, Icahn School of Medicine at Mount Sinai, New York, NY *CR
- 5907 — C0194 Collector Channel Dynamics: OCT Capture of Real-time Pressure-dependent Changes in Lumen Area in Ex Vivo Normal and Glaucomatous Eyes.** Murray A. Johnstone¹, C. R. Ethier^{2,4}, T. S. Acott³, J. Vranka³, S. J. Padilla¹, K. Wen¹, C. Xin^{5,6}, L. Zhang⁵, S. SONG⁵, R. K. Wang^{5,1}. ¹Department of Ophthalmology, University of Washington, Seattle, WA; ²Biomedical Engineering, Georgia Institute of Technology, Atlanta, GA; ³Department of Ophthalmology, Casey Eye Institute, Portland, OR; ⁴George W. Woodruff School of Mechanical Engineering, Georgia Institute of Technology, Atlanta, GA; ⁵Department of Bioengineering, University of Washington, Seattle, WA; ⁶Department of Ophthalmology, Beijing Tongren Hospital/Capital Medical University, Beijing, Beijing, China
- 5908 — C0195 Imaging distal aqueous outflow pathways in a Spontaneous Model of Primary Congenital Glaucoma (PCG).** Gillian J. McLellan¹, K. Snyder¹, K. Oikawa¹, J. A. Kiland¹, S. Gehrke¹, A. Huang². ¹University of Wisconsin-Madison, Madison, WI; ²Ophthalmology, University of California, Los Angeles, Pasadena, CA *CR
- 5909 — C0196 Neuro-scleral Canal Size in Veterans with and without Glaucoma.** Jake Hillard^{1,2}. ¹Veterans Health Administration, Veterans Affairs, Boston, MA; ²New England College of Optometry, Boston, MA
- 5910 — C0197 A deep Learning Algorithm to Automatically segment the trabecular meshwork from anterior segment optical coherence tomography images.** Baskaran Mani^{1,2}, X. Wang³, P. Hung³, t. a. tun^{1,3}, T. Aung¹, M. J. Girard^{3,1}. ¹Glaucoma, Singapore Eye Research Institute, Singapore, Singapore; ²EYE ACP, Duke NUS graduate School, Singapore, Singapore; ³Dept of Bioengineering, National University of Singapore, Singapore, Singapore; ⁴Ophthalmology, Yong Loo Lin School of Medicine, National University of Singapore, Singapore, Singapore
- 5911 — C0198 Effect of Prostaglandin Analogues on Anterior Choroid Thickness in Untreated Primary Open Angle Glaucoma: An SS-OCT Study.** Kai Gao, F. Li, Y. Yuan, R. Zhou, Y. Sun, X. Zhang. Glaucoma, State Key Laboratory of Ophthalmology, Zhongshan Ophthalmic Center, Sun Yat-sen University, Guangzhou, China, Guangzhou, China
- 5912 — C0199 Effect of Topical Trehalose/Hyaluronic Acid on OCT Image Quality in Glaucoma Patients.** Eduardo M. Normando^{3,2}, C. Blackwell¹, M. Cordeiro^{1,3}. ¹Visual Neuroscience, UCL Institute of Ophthalmology, London, England, United Kingdom; ²Western Eye Hospital, Imperial College Healthcare NHS Trust, London, United Kingdom; ³ICORG, Imperial College London, London, United Kingdom
-
- Exhibit Hall C0310-C0344
Thursday, May 03, 2018 8:15 AM-10:00 AM
Retina
- 523a Vitreoretinal Surgery: Novel Approaches**
-
- Moderators: T Michael Nork and Peter L. Gehlbach**
- 5913 — C0310 The effect of distracting elements on surgical performance in a validated training program in vitreoretinal virtual reality surgery.** Anna Stage Vergmann, A. H. Vestergaard, J. Grauslund. Department of Ophthalmology, Odense University Hospital, Odense C, Denmark ✂
- 5914 — C0311 Long-term outcomes of lamellar macular hole surgery using LHEP.** Kosuke Takahashi¹, Y. Morizane¹, S. Kimura¹, M. Hosokawa¹, Y. Shiode¹, M. Hirano¹, S. Doi¹, S. Toshima¹, M. Hosogi¹, Y. Kanzaki¹, A. Fujiwara¹, I. Takasu², F. Shiraga¹. ¹Okayama University, Okayama, Japan; ²Takasu Eye Clinic, Okayama, Japan
- 5915 — C0312 Very Low-Pressure Subretinal Injection with Internal Limiting Membrane Removal Preserves Retinal Microstructure in Macaque Eyes.** Shinji Toshima¹, K. Takahashi¹, Y. Morizane¹, T. Hisatomi², T. Tachibana², S. Kimura¹, M. Hosokawa¹, Y. Shiode¹, M. Hirano¹, S. Doi¹, M. Hosogi¹, Y. Kanzaki¹, A. Fujiwara¹, K. Sonoda², F. Shiraga¹. ¹Department of Ophthalmology, Okayama University Graduate School of Medicine, Dentistry and Pharmaceutical Sciences, Okayama, Japan; ²Department of Ophthalmology, Graduate School of Medical Sciences, Kyushu University, Fukuoka, Japan
- 5916 — C0313 Low versus Standard Latency Digital 3D Monitor Visualization for Ophthalmic Surgery.** William R. Freeman, K. Chen, D. Chao, H. Ferreyra, E. Nudleman, D. G. Bartsch. Ophthalmology, UCSD Jacobs Retina Ctr, UCSD Shiley Eye Institute, La Jolla, CA *CR
- 5917 — C0314 Intra-ocular diathermy forceps: first study in human subjects.** Koen A. van Overdam^{1,2}, J. Pawiroredjo³, D. Jiawan³, S. Manning⁴. ¹Department of Vitreoretinal Surgery, The Rotterdam Eye Hospital, Rotterdam, Netherlands; ²The Rotterdam Ophthalmic Institute, Rotterdam, Netherlands; ³Suriname Eye Centre, Academic Hospital Paramaribo, Paramaribo, Suriname; ⁴Department of Ophthalmology, University Hospital Waterford, Waterford, Ireland *CR
- 5918 — C0315 Controlled injection pressure prevents damage during subretinal injections in pigs.** Liva Spindler^{2,3}, M. Alberti^{2,1}, N. Sorensen^{2,1}, A. T. Christiansen^{2,1}, T. W. Kjær^{2,3}, S. Heegaard^{2,1}, J. F. Kiilgaard^{2,1}. ¹Department of Ophthalmology, Rigshospitalet, University of Copenhagen, Denmark, Copenhagen, Denmark; ²University of Copenhagen, Copenhagen, Denmark; ³Department of Neurology, Zealand University Hospital, Roskilde, Denmark
- 5919 — C0316 Endoscopy-assisted ciliary body membrane peeling is an effective treatment for hypotony secondary to rhegmatogenous retinal detachment repair.** Rachel Tandias¹, P. Sun^{1,2}, L. Campo¹, J. Campo¹, J. G. Arroyo¹. ¹Division of Ophthalmology, Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, MA; ²Department of Ophthalmology, First Hospital of China Medical University, Shenyang, China
- 5920 — C0317 OCT guided femtosecond laser treatment of vitreous floaters: A safety study.** Georg Schuele¹, J. Wang¹, D. Dewey¹, P. Gooding¹, M. Wiltberger¹, P. Monahan², A. Vankov¹. ¹Johnson & Johnson Vision, Milpitas, CA; ²Retinal Diagnostic Center, Campbell, CA *CR

5921 — C0318 Combined Femtosecond Laser-Assisted Cataract Surgery and Small-Gauge Pars Plana Vitrectomy Using Different Devices: A New Trend for Vitreoretinal Surgery? Bruno Q. Alves¹, O. F. Brasil¹, C. T. Espinhosa¹, R. M. Japiassu¹, M. B. Gonçalves¹, O. M. Júnior¹, A. Maia¹, E. B. Cardoso¹, P. Serraino², A. Alezzandrinni², M. Maia¹.

¹Ophthalmology, Federal University os São Paulo, São Paulo, SP, Brazil; ²University of Buenos Aires, Buenos Aires, Argentina

5922 — C0319 Inverted Internal Limiting Membrane flap peeling technique for large macular holes: 6-month results. Giulia Airaghi, E. Medda, G. D'Amico Ricci, E. Giancipoli, F. Boscia, A. Pinna. Department of Surgical, Microsurgical, and Medical Sciences, Section of Ophthalmology, University of Sassari, Sassari, Italy

5923 — C0320 Intraocular biocompatibility evaluation of thermogelling as a vitreous tamponade agent in rabbits. Zengping Liu¹, X. Su^{1,2}, S. Liow³, M. Tan³, Z. Li³, X. Loh³, C. Chee¹, G. Lingam^{1,4}. ¹Ophthalmology, National University of Singapore, Singapore, Singapore; ²Singapore Eye Research Institute, Singapore, Singapore; ³Institute of Materials Research and Engineering, A*Star (Agency for Science, Technology and Research), Singapore, Singapore; ⁴Medical Research Foundation, Chennai, India

5924 — C0321 HULC study (Heads Up Learning Curve): 3D Visualization system learning curve. Laurent Velasquez¹, M. Dominguez¹, E. Fourmaux¹, L. Rosier¹, C. Seguy¹, M. Lapeyre^{1,2}. ¹Retine Gallien, Bordeaux, France; ²Chu Bordeaux, Bordeaux, France

5925 — C0322 Computational Fluidic Dynamics (CFD) modeling of a novel vitreous liquifier. Brian McCary¹, O. B. Basaran³, V. Kolesnitchenko². ¹R+D, Bausch + Lomb, St. Louis, MO; ²Medical Affairs, Bausch + Lomb, Irvine, CA; ³Purdue University, West Laffeyette, IN *CR

5926 — C0323 Quantitative Evaluation of Tool-to-Sclera Forces, in a Model of Retinal Microsurgery. Marina Roizenblatt, A. Ebrahimi, C. He, N. Patel, I. Iordachita, P. L. Gehlbach. Johns Hopkins University, Baltimore, MD

5927 — C0324 Emulsification of silicone oil (SiO) tamponade with high-molecular-weight (HMW) additive under simulated saccadic eye movements *in vitro* using an “Eye-on-a-Chip”. Yau Kei Chan^{1,2}, Y. Lu¹, D. Wong^{3,2}, H. Shum¹. ¹Mechanical Engineering, University of Hong Kong, Hong Kong, Hong Kong; ²Eye and Vision Science, University of Liverpool, Liverpool, United Kingdom; ³St. Paul's Eye Unit, The Royal Liverpool University Hospital, Liverpool, United Kingdom *CR

5928 — C0325 Allogenic anterior capsular flap transplantation in the management of refractory macular holes. Peiquan Zhao¹, H. Jin¹, J. Peng¹, H. Zhang². ¹Ophthalmology, Xinhua Hospital, Shanghai Jiaotong University, Shanghai, China; ²Ophthalmology, Binzhou Hubin Aier Eye Hospital, Binzhou, Shanghai, China

5929 — C0326 Development of Minipigs Surgical Model: Cauterization of the Choroid Following Scleral Dissection Mitigates Risk of Post-Operative Vitreous Hemorrhage Following Ocular Implantation of RPDS. Vladimir Bantseev¹, G. Barteselli¹, C. Schuetz¹, J. Horvath¹, K. Hovaten¹, S. R. Erickson¹, J. M. Stewart², E. Bentley³, P. E. Miller³, B. Dwyer⁴, J. J. Prusakiewicz⁴, T. M. Nork³, H. S. Booler¹. ¹Genentech Inc., South San Francisco, CA; ²Ophthalmology, University of California, San Francisco, San Francisco, CA; ³Ocular Services On Demand, Madison, WI; ⁴Covance Laboratories Inc., Madison, WI *CR

5930 — C0327 Evaluation of OCT versus surgeon guided robotic manipulation in a simulated vitreoretinal model. Saskia van Romunde¹, K. Faridpooya¹, K. A. Vermeer¹, M. D. De Smet², G. Naus², M. Beelen², T. Meenink², M. Cereda³, A. Gianti³, J. C. van Meurs¹. ¹Eye Hospital Rotterdam, Rotterdam, Netherlands; ²Preceyes, Eindhoven, Netherlands; ³Ospedale Sacco, Milan, Italy *CR

5931 — C0328 Hyaluronic acid based cross-linked hydrogels – a biosafe, sufficient tamponade of the vitreous body. Lisa K. Pohl¹, K. Januschowski^{1,2}, S. Schnichels¹, J. Hurst¹, C. Hohenadl⁴, C. Reither⁴, M. S. Spitzer^{1,3}. ¹Center of Ophthalmology, University Hospital Tübingen, Tübingen, Germany; ²Augenlinik Sulzbach, Sulzbach, Germany; ³University Medical Center Hamburg-Eppendorf, Hamburg, Germany; ⁴Croma-Pharma GmbH, Leobendorf, Austria *CR

5932 — C0329 Thermal Effects of Vitesse™ Hypersonic Vitrector during Simulated Surgery. Nicole Bergmann¹, B. McCary¹, V. Kolesnitchenko², A. Pilon³. ¹R&D, Bausch + Lomb, St. Louis, MO; ²Medical Affairs, Bausch + Lomb, Irvine, CA; ³Surgical, Bausch + Lomb, Irvine, CA *CR

5933 — C0330 Successful use of a silicone lacrimal plug to treat a case of refractory serous macular detachment complicating a large optic disk pit. Jean-Baptiste Deltour, O. Lebreton, H. Masse, M. Weber. Ophthalmology, Centre Hospitalier Universitaire de Nantes, Nantes, France

5934 — C0331 Comparison of Relative and Threshold Flow Rates for Vitreous Removal Between Two Vitrectomy Removal Techniques: Guillotine-Based Cleavage versus Open-Port, Hypersonic Liquification. Valeri Kolesnitchenko¹, N. Bergmann², B. McCary², L. Barr², A. Pilon³. ¹Medical Affairs, Bausch + Lomb, Irvine, CA; ²R&D, Bausch + Lomb, St. Louis, MO; ³Surgical, Bausch + Lomb, Irvine, CA *CR

5935 — C0332 Improved 27-Gauge Flow Performance of Dual-Pneumatic 10,000 cpm Cutters. Dina Joy Abulon¹, I. Mohamedy², H. Gariepy². ¹Clinical Development and Medical Affairs, Alcon, Lake Forest, CA; ²Alcon, Lake Forest, CA *CR

5936 — C0333 A first-in-man trial assessing robotic surgery inside the human eye to perform a subretinal injection. Thomas L. Edwards¹, K. Xue¹, T. Meenink², M. Beelen², G. Naus¹, M. P. Simunovic¹, M. Latasiewicz⁴, A. Farmery³, M. D. De Smet², R. E. MacLaren¹. ¹Nuffield Laboratory of Ophthalmology, University of Oxford, East Melbourne, Victoria, Australia; ²Technical University of Eindhoven, Eindhoven, Netherlands; ³Nuffield Department of Anaesthesia, Oxford, United Kingdom; ⁴Oxford Eye Hospital, Oxford, United Kingdom *CR, ✗

5937 — C0334 A Model to Study Thermal Energy Delivery to the Choroid: A Comparison of Surgical Devices. Stephen A. LoBue^{2,1}, P. Taylor⁴, P. Loftness³, T. W. Olsen^{2,1}. ¹Ophthalmology, Mayo Clinic Rochester, MN, Rochester, MN; ²Ophthalmology, Emory School of Medicine, Atlanta, GA; ³University of Minnesota, Minneapolis, MN; ⁴Medical College of Georgia, Augusta, GA *CR

5938 — C0335 Modified Sutured Intraocular Lens Technique: Description and Case Series of Early Results. Mark Barakat. Retinal Consultants of Arizona, Phoenix, AZ

5939 — C0336 Syringe adapter for intraocular injection with stabilized grip position. M. Ali Nasseri, M. Zhou, M. Maier, C. P. Lohmann. Ophthalmology, Klinikum rechts der Isar, TUMuenchen, Muenchen, Germany

5940 — C0337 Jointing Macular Hole Edges Centripetally by Internal Limiting Membrane-Retina Adhesive Forces: A Novel Technique for Macular Holes. Jie Peng, P. Zhao. Ophthalmology, Xin Hua Hospital Affiliated to Shanghai Jiao Tong University School of Medicine, Shanghai, China

5941 — C0338 Developing a retinal detachment model for *in vivo* testing of vitreous substitutes with repeated pars plana vitrectomy. Henrik Barth¹, S. W. Crafoord², F. K. Ghosh¹. ¹Department of Ophthalmology, Lund University Hospital, Lund, Sweden; ²Department of Ophthalmology, Örebro University Hospital, School of Health and Medical Sciences, Örebro University, Örebro, Sweden

5942 — C0339 23-Gauge BSS Flow of Dual-Pneumatic 10,000cpm Vitrectomy Probes. Helaine Gariepy¹, I. Mohamedy², D. Abulon¹. ¹Global Medical Affairs, Alcon Laboratories Inc., Lake Forest, CA; ²Alcon Laboratories Inc., Lake Forest, CA

5943 — C0340 Duty Cycle of 23-Gauge of Dual-Pneumatic 10,000cpm Vitrectomy Probes. Ishaq Scott Mohamedy¹, H. Gariepy¹, D. Abulon². ¹Alcon, Lake Forest, CA; ²Clinical Development and Medical Affairs, Alcon, Lake Forest, CA

5944 — C0341 Vitreous Traction Comparison of 27-Gauge High-Speed Dual-Pneumatic Vitrectomy Probes. Brian McDonell, H. Gariepy, D. Abulon. Alcon, Lake Forest, CA

5945 — C0342 Scleral Buckling For Severe Posttraumatic Hypotony New Therapeutic Approach For Traumatic Ciliochoroidal Detachment Consequences. Eleonora Lavaque¹, M. Iros², A. Zambrano³.
¹Retina, Hospital Oftalmologico Santa Lucia, Buenos Aires, Argentina; ²Instituto de Microcirugia Ocular Cordoba, Cordoba, Argentina; ³Fundación Zambrano, Buenos Aires, Argentina

5946 — C0343 Intraocular three pieces lens implantation device. carlos f. penaranda, L. Garcia Arzate, M. A. Beltran, V. Morales-Canton. Retina, asociacion para evitar la ceguera, Mexico, DF, Mexico *CR

5947 — C0344 The efficacy and safety of a novel posterior scleral reinforcement in the treatment of pathological myopia. Zequn Miao, L. Wang. Department of Ophthalmology, Eye diseases and optometry Institute, Peking University People's Hospital, Beijing, China

Room 301AB

Thursday, May 03, 2018 11:00 AM-12:45 PM

Immunology/Microbiology

524 Advances in Clinical Therapeutics for Uveitis**Moderators: H Nida N. Sen and Justine R. Smith**

5948 — 11:00 Efficacy of IL-12/23 inhibition for the Treatment of Active Sight-Threatening Uveitis: A Pilot Study. Lotta Utriainen, J. Lee, Z. Li, B. Chaon, I. Thompson, B. Chaigne-Delalande, H. N. Sen. National Eye Institute, NIH, Bethesda, MD ✕

5949 — 11:15 Posterior Segment Inflammatory Outcomes (Month-6) in the STOP-Uveitis Study: Evaluating the Safety, Tolerability, and Efficacy of Tocilizumab in Patients with Non-Infectious Uveitis. Mohammad A. Sadiq¹, M. Hassan², M. Halim³, R. Afridi², D. V. Do², Q. Nguyen², Y. Sepah^{2,3,4}. ¹West Virginia University, Morgantown, WV; ²Byers Eye Institute, Stanford University, Palo Alto, CA; ³Ocular Imaging Research and Reading Center, Palo Alto, CA ✕

5950 — 11:30 Improvement in Macular Edema with Sarilumab in Non-infectious Uveitis (NIU): SATURN Trial. Diana V. Do. Stanford University School of Medicine, Palo Alto, CA *CR, ✕

5951 — 11:45 Long-Term Efficacy and Safety of Adalimumab by Immunosuppressant Use in Patients with Non-Infectious Uveitis in the VISUAL III Trial. Yan J. Guex-Crosier¹, C. S. Foster^{2,3}, K. Nakai⁴, H. Goto⁵, K. Douglas⁶, S. Pathai⁷, M. Kron⁸, A. P. Song⁶, J. Van Calster⁹, A. Adan Civera¹⁰. ¹Jules Gonin Eye Hospital, University of Lausanne, Lausanne, Switzerland; ²Massachusetts Eye Research and Surgery Institution (MERSI), Ocular Immunology & Uveitis Foundation (OIUF), Waltham, ME; ³Harvard Medical School, Boston, ME; ⁴Yodogawa Christian Hospital, Osaka, Japan; ⁵Tokyo Medical University, Tokyo, Japan; ⁶AbbVie Inc, North Chicago, IL; ⁷AbbVie Ltd, Maidenhead, United Kingdom; ⁸AbbVie Deutschland GmbH & Co KG, Ludwigshafen, Germany; ⁹University Hospitals Leuven, Leuven, Belgium; ¹⁰Hospital Clinic de Barcelona, Barcelona, Spain *CR, ✕

5952 — 12:00 Safety and Efficacy of an intravitreal 0.18 mg fluocinolone acetonide insert (FAi) for the treatment of non-infectious posterior segment uveitis (NIPU) – pooled results of two phase 3 trials. Eric B. Suhler. Casey Eye Institute-OHSU and VA Portland HCS, Portland, OR *CR, ✕

5953 — 12:15 Novel Dexamethasone Sodium Phosphate Treatment (DSP-Visulex) for Noninfectious Anterior Uveitis: Phase I/II, Double Masked, Randomized Study. Kongnara Papangkorn, J. W. Higuchi, B. Brar, W. I. Higuchi. Aciont Inc, Salt Lake City, UT *CR, ✕

Room 306AB

Thursday, May 03, 2018 11:00 AM-12:45 PM

Eye Movements/Strabismus/Amblyopia/ Neuro-Ophthalmology

525 Amblyopia**Moderators: Frank A. Proudlock and Eileen E. Birch**

5954 — 11:00 Visual function and optical coherence tomography angiography features in children born preterm. Siva Balasubramanian^{1,2}, E. Borrelli¹, M. Lonngi¹, F. Velez^{2,3}, D. Sarraf^{2,3}, S. R. Sadda^{1,2}, I. Tsui^{1,2}. ¹Doheny Eye Institute, Los Angeles, CA; ²Ophthalmology, David Geffen School of Medicine at UCLA, Los Angeles, CA; ³Ophthalmology, Stein Eye Institute UCLA, Los Angeles, CA; ⁴Ophthalmology, Fundación Oftalmológica Nacional, Bogotá, Colombia *CR

5955 — 11:15 Spiking Noise in V2 Neurons in Infants Monkeys. Bin Zhang^{1,2}, Y. Wang², X. Tao³, G. Shen³, J. M. Wensveen², E. L. Smith², Y. M. Chino². ¹College of Optometry, Nova Southeastern University, Plantation, FL; ²College of Optometry, University of Houston, Houston, TX; ³Baylor College of Medicine, Houston, TX

5956 — 11:30 EEG recordings during binocular rivalry reveals changes of binocular interaction following perceptual learning in adult amblyopia. Siyuan Deng¹, L. Gu², Z. Lu³, F. Hou⁴, Z. Chen¹, Z. Chen¹, M. Yu¹, X. Wu¹, J. Li¹. ¹State Key Laboratory of Ophthalmology, Guangdong Provincial Key Lab of Ophthalmology and Visual Science, Zhongshan Ophthalmic Center, Sun Yat-sen University, Guangzhou, Guangdong, China; ²Department of Psychology, Sun Yat-sen University, Guangzhou, Guangdong, China; ³Department of Psychology, The Ohio State University, Columbus, OH; ⁴School of Ophthalmology & Optometry and Eye Hospital, Wenzhou Medical University, Wenzhou, Zhejiang, China *CR

5957 — 11:45 Visual Sensory Deficits in Amblyopic Children with and without Latent Nystagmus. Fatema F. Ghasia, C. Gallagher. Ophthalmology and visual science, Cole Eye Institute-Cleveland Clinic, Chagrin Falls, OH

5958 — 12:00 Attention is biased towards the fellow eye in strabismic amblyopia. Amy H. Chow¹, D. Giaschi², B. Thompson¹. ¹Optometry and Vision Science, University of Waterloo, Waterloo, Ontario, Canada; ²Ophthalmology and Visual Sciences, University of British Columbia, Vancouver, British Columbia, Canada

5959 — 12:15 Impaired Fellow Eye Motion Perception in Amblyopic Children is Alleviated by Binocular Treatment. Eileen E. Birch^{1,2}, R. M. Jost¹, Y. Wang^{1,2}, K. R. Kelly¹, D. Giaschi³. ¹Retina Foundation of the Southwest, Dallas, TX; ²Ophthalmology, UT Southwestern Medical Center, Dallas, TX; ³Psychology & Ophthalmology, University of British Columbia, Vancouver, British Columbia, Canada

5960 — 12:30 The acuity and crowding deficits in strabismic amblyopia are stronger in the fovea than the visual periphery. Alexandra V. Kalpadakis-Smith¹, V. Taylor^{1,2}, A. H. Dahlmann-Noor², D. Schwarzkopf^{3,1}, J. A. Greenwood¹. ¹Experimental Psychology, University College London, London, United Kingdom; ²NIHR Biomedical Research Centre, Moorfields Eye Hospital NHS Foundation Trust, London, United Kingdom; ³School of Optometry and Vision Science, The University of Auckland, Auckland, New Zealand

Room 310

Thursday, May 03, 2018 11:00 AM-12:45 PM

Visual Psychophysics/Physiological Optics / Visual Neuroscience

526 Visual psychophysics in color and complex vision**Moderators: Jay Neitz and John S. Werner**

5961 — 11:00 S-cone inputs to midget retinal ganglion cells and their implications for color vision. Sara Patterson^{1,3}, J. Kuchenbecker³, A. Bordt², C. M. Linehan³, J. R. Anderson¹, D. W. Marshak², M. Neitz³, J. Neitz³, M. B. Manookin³. ¹Neuroscience Graduate Program, University of Washington, Seattle, WA; ²Neurobiology and Anatomy, University of Texas Health Science Center, Houston, TX; ³Ophthalmology, University of Washington, Seattle, WA; ⁴John Moran Eye Center, University of Utah Health Science Center, Salt Lake City, UT

5962 — 11:15 Color detection without hue perception. Alexandra Neitz, X. Jiang, S. Patterson, A. Doebly, M. Neitz, J. Neitz, R. Sabesan. University of Washington, Seattle, WA

5963 — 11:30 Prevalence of Color Vision Deficiency in Chinese 6-year-old Children. Mengmeng Wang, M. Zhang. Hebei Provincial Eye Hospital, Xingtai City, Hebei Province, China

5964 — 11:45 Shape discrimination hyperacuity robust to decreased retinal illuminance and induced optical degradation for achromatic and colour vision. Luis Garcia-Suarez, M. S. Mousavi-Jalali, M. Nelson. School of Health Professions, Plymouth University, Plymouth, Devon, United Kingdom

5965 — 12:00 Fast-paced videogame training improves balance under dynamic visual conditions in older adults. Allen M. Cheong¹, H. Lam¹, R. Li³, S. Leat², W. Tsang¹. ¹The Hong Kong Polytechnic University, Hung Hom, Kowloon, Hong Kong; ²University of Waterloo, Waterloo, Ontario, Canada; ³University of California, Berkeley, Berkeley, CA ✂

5966 — 12:15 A novel experimental setup for induction and objective assessment of visual fatigue. Daniel Spiegel, E. Lim, B. Drobe. Essilor International, Singapore, Singapore *CR

5967 — 12:30 Study of photic phenomena sizes and subjective vision quality while virtually implanting different chromatic correcting intraocular lenses. Karsten Sperlich¹, J. Schubert¹, M. Gerlach², V. Fuchs², S. Bohn¹, H. Stolz³, P. Marczuk², R. F. Guthoff¹, O. Stachs¹. ¹Department of Ophthalmology, University Medical Center Rostock, Rostock, Germany; ²Carl Zeiss Meditec AG, Berlin, Germany; ³Institute of Physics, University of Rostock, Rostock, Germany *CR

Room 311

Thursday, May 03, 2018 11:00 AM-12:45 PM

Retina

527 Retinal Vascular Diseases II

Moderators: Michael S. Ip and Catherine Egan

5968 — 11:00 Melatonin suppressed HIF-1 α -VEGF pathway to induced retinal neovascularization and neuroglial dysfunction in an oxygen-induced retinopathy model. Xi Lu, Y. Xu, Y. Hu, S. Yu, C. Tsui, J. Li, X. Liang. State Key Laboratory of Ophthalmology, Zhongshan Ophthalmic Center, Guangzhou, Guangdong, China

5969 — 11:15 Choroidal Changes after Suprachoroidal Injection of CLS-TA, Triamcinolone Acetonide Injectable Suspension, in Eyes with Macular Edema Secondary to Retinal Vein Occlusion. Alex Willoughby¹, V. Vuong¹, D. Cunefare², S. Farsiu², G. Noronha³, R. P. Danis⁴, G. Yiu¹. ¹Ophthalmology, UC Davis, Sacramento, CA; ²Duke University Biomedical Engineering, Durham, NC; ³Cleaveside Biomedical, Inc., Alpharetta, GA; ⁴Univ. Wisconsin- Madison, Madison, WI *CR

5970 — 11:30&#tab; Efficacy of bevacizumab and laser photocoagulation for preventing the recurrence of macular edema due to branch vein occlusion (BRVO). Arnaldo F. Bordon, N. S. Abujamra, B. C. Monteiro. Hospital Oftalmologico de Sorocaba, Miami, FL *CR, ✂

5971 — 11:45 SCORE2 Month 6 to Month 12 Results: 12 Month Outcomes of Treatment Change among Poor Responders at Month 6. Michael S. Ip^{1,2}, P. C. VanVeldhuisen³, I. U. Scott⁴, B. A. Blodi⁵, T. Ghuman⁶, C. W. Baker², N. L. Oden³. ¹Ophthalmology, University of California Los Angeles, Los Angeles, CA; ²Ophthalmology, Doheny Eye Institute, Los Angeles, CA; ³Emmes Corporation, Rockville, MD; ⁴Departments of Ophthalmology and Public Health Sciences, Penn State College of Medicine, Hershey, PA; ⁵Fundus Photograph Reading Center, The University of Wisconsin, Madison, WI; ⁶National Ophthalmic Research Institute, Fort Myers, FL; ⁷Paducah Retinal Center, Paducah, KY *CR, ✂

5972 — 12:00 Quantification of Optical Coherence Tomography Angiography Metrics and their Relationship to Visual Acuity in Eyes Treated with Plaque Radiotherapy for Uveal Melanoma. Kareem Sioufi, A. Obeid, V. Bekerman, S. R. Ferenczy, J. Hsu, C. L. Shields. Philadelphia, Wills Eye Hospital, Philadelphia, PA *CR

5973 — 12:15 Optical coherence tomography angiography analysis of collateral formation in branch vein occlusion supports a serial arrangement of retinal flow with the origin of venous outflow in the deep vascular complex. Belinda C. Leong¹, K. Freund^{1,6}, D. Sarraf², S. Garrity², K. Vupparaboina³, K. K. Dansingani^{4,5}. ¹Vitreous Retina Macula Consultants of New York, Brooklyn, NY; ²Stein Eye Institute, Los Angeles, CA; ³Surjana Center for Innovation, LV Prasad Eye Institute, Hyderabad, India; ⁴Ophthalmology, University of Pittsburgh Medical Center, Pittsburgh, PA; ⁵Moorfields Eye Hospital, London, United Kingdom; ⁶Ophthalmology, New York University, Manhattan, NY *CR

5974 — 12:30 The Association of Venous Malformations of Retina and Brain. Giulia Corradetti¹, F. Pichi³, K. Freund², A. Ciardella⁴, E. Abboud⁵, N. Ghazi³, C. Dackiw³, N. Choudhry^{5,6}, E. Cunha-Souza¹⁰, L. P. Cunha^{8,9}, J. Arevalo⁷, T. Liu⁷, A. Wenick⁷, G. Villarreal jr⁷, L. He⁷, D. Sarraf¹. ¹Ophthalmology, Stein Eye Institute, UCLA, Los Angeles, CA; ²Vitreous Retina Macula Consultants of New York, New York, NY; ³Cleveland Clinic Abu Dhabi, Abu Dhabi, United Arab Emirates; ⁴Sant'Orsola-Malpighi Hospita, Bologna, Italy; ⁵Ophthalmology, Department of Ophthalmology and Visual Sciences, University of Toronto, Toronto, Ontario, Canada; ⁶Ophthalmology, Cleveland Clinic Canada, Toronto, Ontario, Canada; ⁷Retina Division, Wilmer Eye Institute, Johns Hopkins University School of Medicine, Baltimore, MD; ⁸Department of Ophthalmology, School of Medicine, Federal University of Juiz de Fora, Juiz de Fora, Brazil; ⁹University of São Paulo Medical School, São Paulo, Brazil; ¹⁰University of Sao Paulo, Sao Paulo, Brazil

Room 312

Thursday, May 03, 2018 11:00 AM-12:45 PM

Cornea

528 Cornea Refractive Surgery

Moderators: Julie Schallhorn and Richard Y. Hida

5975 — 11:00 Aspheric Micro-monovision LASIK in Correction of Presbyopia and Myopic Astigmatism: Results after 3 Years in a Chinese Population. Fang Liu, T. Zhang, S. Weng, X. Yang, Q. Liu. refractive surgery, zhongshan Ophthalmic center, Guangzhou, Guangdong, China

5976 — 11:15 Photorefractive Keratectomy versus Laser *in situ* Keratomileusis for Hyperopia in 58,562 Eyes. Liuyang Li^{1,2}, J. M. Schallhorn¹. ¹University of California, San Francisco, California, USA, San Francisco, CA; ²Clinical College of Ophthalmology, Tianjin Medical University, Tianjin, China, Tianjin, China

5977 — 11:30 Quality of Vision After Wavefront-Guided or Wavefront-Optimized Photorefractive Keratectomy: A Prospective Randomized Contralateral Eye Study. Ryan Smith, E. E. Manche. Stanford Univeristy, Los Altos, CA *CR, ✂

5978 — 11:45 Patient-Reported Visual Symptoms after Refractive Lens Exchange. Kristin Hirabayashi¹, J. M. Schallhorn¹, S. Schallhorn^{1,3}, S. Hannan². ¹Ophthalmology, University of California, San Francisco, Burlingame, CA; ²Optical Express, Edinburgh, United Kingdom; ³Carl Zeiss Meditec, Inc., Dublin, CA *CR

5979 — 12:00 Long-term Outcomes of Femtosecond Laser-Assisted Small Incision Endokeratophakia Using a Xenogeneic Lenticle in Rhesus Monkeys. Miao He¹, H. Ding², W. Wang¹, W. Huang¹, X. Zhong^{1,2}. ¹Zhongshan ophthalmic center, Sun Yat-sen University, Guangzhou, China; ²Hainan Eye Hospital, Zhongshan Ophthalmic Center, Sun Yat-sen University, Haikou, China

5980 — 12:15 Altered corneal stromal molecular profile associated with post-refractive ectasia. Pooja Khamar¹, R. Shetty¹, N. Kumar², T. Vaidya², M. Francis², A. Sinha Roy³, S. Sethu², A. Ghosh². ¹Narayana Netralaya, Ahmedabad, Gujarat, BIHAR, India; ²GROW laboratory, Narayana Nethralaya, Bengaluru, Karnataka, India; ³IBMS, Narayana Nethralaya, Bengaluru, Karnataka, India

5981 — 12:30 Analysis of Topography-Guided LASIK Treatment Planning Strategies. Ronald R. Krueger, V. S. De Stefano, C. Meister. Cole Eye Institute, Cleveland Clinic, Cleveland, OH *CR

Room 313A

Thursday, May 03, 2018 11:00 AM-12:45 PM

Anatomy and Pathology/Oncology

529 Clinical Innovations in Oncology**Moderators: Colleen M. Cebulla, Vikas Khetan and Lauren A. Dalvin**

5982 — 11:00 Chemoreduction with Topotecan and Vincristine: Clinical Validation of a Novel Chemotherapeutic Regimen for Bilateral Intraocular Retinoblastoma. Benjamin King^{1,2}, M. W. Wilson^{1,2}, R. C. Brennan³. ¹Surgery, St. Jude Children's Research Hospital, Memphis, TN; ²Ophthalmology, University of Tennessee Health Science Center, Memphis, TN; ³Oncology, St. Jude Children's Research Hospital, Memphis, TN ✕

5983 — 11:15 Doppler-based angiography of retinoblastoma in diagnostic imaging of pediatric patients: clinical trials with a novel 1050nm OCT system. Oleg Nadiarnykh^{1,2}, V. Davidoiu¹, M. G. Gräfe¹, F. D. Verbraak³, M. B. m.bosscha@yumc.nl³, A. Mol¹, J. De boer¹. ¹Physics, Vrije Universiteit Amsterdam, Amsterdam, Netherlands; ²VU MC, Amsterdam, Netherlands; ³Vrije University Medical Center, Amsterdam, Netherlands *CR

5984 — 11:30 Vitreous Seed and Soil: Elevated Levels of Platelet-Derived Growth Factor (PDGF) in the Vitreous of Patients with Retinoblastoma. Zachary K. Goldsmith¹, s. R. barsh¹, K. Yuan¹, B. King¹, R. C. Brennan^{1,2}, M. W. Wilson^{1,3}, V. M. Morales-Tirado^{1,4}. ¹Ophthalmology, University of Tennessee Health Science Center, Germantown, TN; ²Oncology, St. Jude Children's Research Hospital, Memphis, TN; ³Surgery, St. Jude Children's Research Hospital, Memphis, TN; ⁴Microbiology, Immunology, and Biochemistry, University of Tennessee Health Science Center, Memphis, TN

5985 — 11:45 Recurrence prediction and usefulness of Mohs microscopic surgery in Chinese patients of eyelid sebaceous gland carcinoma: a retrospective cohort study of 238 patients. Chuandi Zhou, R. Jia, X. Fan. Ophthalmology, Ninth People's Hospital of Shanghai, Shanghai Jiao Tong University School of Medicine, Shanghai, Shanghai, China

5986 — 12:00 Orbital Lymphoma - An International Multicenter Retrospective Study. Tine Gadegaard G. Olsen¹, P. Ramussen², F. Holm¹, L. H. Mikkelsen¹, S. E. Coupland³, S. Heegaard^{1,2}. ¹Department of Pathology, Rigshospitalet-Glostrup, Copenhagen, Denmark; ²Department of Ophthalmology, Rigshospitalet-Glostrup, Copenhagen, Denmark; ³Department of Cellular and Molecular Pathology, University of Liverpool, Liverpool, United Kingdom

5987 — 12:15 Ranibizumab for Radiation Retinopathy (RRR): A Prospective, Multicenter Trial of Monthly versus PRN Dosing for Radiation Retinopathy-Related Cystoid Macular Edema. Amy C. Schefler^{1,2}, D. Fuller³, R. Anand³, T. Fuller³, M. E. Bretana¹, C. Cone¹, C. Moore¹, R. Kim^{1,4}. ¹Ophthalmology, Retina Consultants of Houston, Houston, TX; ²Ophthalmology, Blanton Eye Institute, Houston Methodist Hospital, Houston, TX; ³Texas Retina Associates, Dallas, TX; ⁴University of Texas Houston, Houston, TX *CR, ✕

Room 314

Thursday, May 03, 2018 11:00 AM-12:45 PM

Visual Neuroscience

530 Diseases and Protection**Moderators: Bang V. Bui and Rachael S. Allen**

5988 — 11:00 An ultra light-sensitive CoChR mutant restores functional vision in a blind mouse model under ambient light conditions. Tushar H. Ganjawala¹, Q. Lu¹, M. D. Fenner¹, G. W. Abrams², Z. Pan². ¹Anatomy & Cell Biology, Wayne State University, Detroit, MI; ²Ophthalmology and Anatomy & Cell Biology, Wayne State University/Kresge Eye Institute, Detroit, MI *CR

5989 — 11:15 Chimeric human opsins as optogenetic light sensitizers. Doron Hickey^{2,1}, W. I. Davies^{2,3}, S. Hughes^{2,5}, J. Rodgers^{2,4}, N. Thavanesan², R. E. MacLaren^{2,5,6}, M. W. Hankins^{2,5}. ¹Royal Victorian Eye and Ear Hospital, Heidelberg, Victoria, Australia; ²Nuffield Laboratory of Ophthalmology, University of Oxford, Oxford, United Kingdom; ³School of Biological Sciences and UWA Oceans Institute, Perth, Western Australia, Australia; ⁴Division of Neuroscience and Experimental Psychology, University of Manchester, Manchester, United Kingdom; ⁵Sleep and Circadian Neuroscience Institute, University of Oxford, Oxford, United Kingdom; ⁶Oxford University Hospitals NHS Trust Biomedical Research Centre, Oxford, United Kingdom

5990 — 11:30 A Pathoconnectome of Early Retinal Remodeling. Rebecca Pfeiffer¹, R. E. Marc¹, J. R. Anderson¹, D. P. Emrich¹, C. B. Watt¹, J. Yang¹, K. D. Rapp¹, J. Dahal¹, M. Kondo², H. Terasaki³, B. W. Jones¹. ¹Moran Eye Center/Ophthalmology, University of Utah, Salt Lake City, UT; ²Mie University, Tsu, Japan; ³Nagoya University, Nagoya-shi, Japan *CR

5991 — 11:45 Early retinal and cerebral deficits in a high fat diet + low dose STZ rat model of Type II diabetes. Rachael S. Allen^{1,2}, A. Feola^{1,2}, K. C. Chesler^{1,2}, C. Motz¹, M. M. Coulter¹, P. M. Thule^{3,4}, J. H. Boatright^{1,5}, M. T. Pardue^{1,2}. ¹Center for Visual and Neurocognitive Rehabilitation, Atlanta VA Medical Center, Decatur, GA; ²Department of Biomedical Engineering, Georgia Institute of Technology, Atlanta, GA; ³Section Endocrinology and Metabolism, Atlanta VA Medical Center, Decatur, GA; ⁴Section Endocrinology and Metabolism, Emory University School of Medicine, Atlanta, GA; ⁵Department of Ophthalmology, Emory University School of Medicine, Atlanta, GA

5992 — 12:00 Morphological changes to retinal ganglion cells in a murine model of Alzheimer's disease. Vickie Wong¹, C. T. Nguyen¹, P. Jusuf¹, J. K. Lim¹, M. Tayebi³, B. V. Bui¹. ¹Optometry and Vision Sciences, University of Melbourne, Parkville, Victoria, Australia; ²School of Biosciences, University of Melbourne, Parkville, Victoria, Australia; ³School of Medicine, Western Sydney University, Campbelltown, New South Wales, Australia

5993 — 12:15 Morphometric Analysis of the Retinal Ganglion Cell and Inner Plexiform Layers in Alzheimer's Disease: Biomarkers in the Eye for degeneration in the Brain. Samuel Asanad^{1,2}, F. N. Ross-Cisneros^{1,2}, E. Barron¹, A. Golston³, E. A. Barron¹, A. A. Sadun^{1,2}. ¹Ophthalmology, Doheny Eye Institute - UCLA, Woodland Hills, CA; ²Ophthalmology, David Geffen School of Medicine at University of California Los Angeles, Los Angeles, CA; ³Biostatistics, UCLA, Los Angeles, CA

5994 — 12:30 Retinal ganglion cell function in recovered optic neuritis is abnormally fast. Vittorio Porciatti, P. Monsalve, S. Ren, M. Kostic, P. Gordon, J. Wang, H. Jiang, Bascom Palmer Eye Inst, Univ of Miami Miller Sch Med, Miami, FL

Room 315

Thursday, May 03, 2018 11:00 AM-12:45 PM

Retinal Cell Biology / Biochemistry/Molecular Biology / Retina

531 Retinal lipid and glucose metabolism in health and disease - Minisymposium

The retina is one of the most metabolically demanding tissues in the body. Fluctuating energy demands in the retinal neurons, glia, and vascular cells often require lipid as well as glucose metabolism for energy. The highly complex regulation of aerobic and anaerobic metabolism is beginning to be understood, and this minisymposium will explore these pathways in various retinal cell types with in health and disease.

Moderator: Julia V. Busik

— 11:00 Introduction & Welcome

5995 — 11:05 Retinal lipid and glucose metabolism dictates angiogenesis. Jean-Sebastien Joyal. *Pediatrics and Pharmacology, University of Montreal, Montreal, Quebec, Canada*

5996 — 11:20 Retinal oxygenation and metabolism in health and disease. Mahnaz Shahidi. *Ophthalmology, University of Southern California, Los Angeles, CA* *CR

5997 — 11:35 Protein synthesis and lipid metabolism as key pathogenic processes of retinal sensibility to diabetes. Patrice E. Fort^{1,2}. ¹*Ophthalmology and Visual Sciences, University of Michigan, Ann Arbor, MI*; ²*Molecular and Integrative Physiology, University of Michigan, Ann Arbor, MI*

5998 — 11:50 Oxidative stress and mitochondrial function in Müller cells. Miriam Kolko. *Drug Design and Pharmacology, University of Copenhagen, Copenhagen, Denmark*

5999 — 12:05 Photoreceptor metabolic and redox signaling in health & disease. Thierry D. Leveillard. *Institut De La Vision, Paris, France* *CR

6000 — 12:20 Molecular mechanisms underpinning temporal and spatial energy demands of the retina. Jianhai Du^{1,2}. ¹*Ophthalmology, West Virginia University, Morgantown, WV*; ²*Biochemistry, West Virginia University, Morgantown, WV*

— 12:35 **Conclusion**

Room 316A

Thursday, May 03, 2018 11:00 AM-12:45 PM

Physiology/Pharmacology

532 Retina III

Moderators: Matias Iglücki and Gustavo D. Aguirre

6001 — 11:00 Progression of Diabetic Retinopathy Severity after Treatment with Dexamethasone Implant – A 24-Month Cohort Study The ‘DR-Pro-DEX Study’. Matias Iglücki¹, D. Zur², C. Busch³, M. Okada⁴, A. Loewenstein^{2,5}. ¹*University of Buenos Aires, Caba, Argentina*; ²*Division of Ophthalmology, Tel Aviv Sourasky Medical Center, Sackler Faculty of Medicine, Tel Aviv University, Tel Aviv, Israel*; ³*Ophthalmology, Department of Ophthalmology, University of Leipzig, Germany, Leipzig, Germany*; ⁴*Royal Victorian Eye and Ear Hospital, Royal Victorian Eye and Ear Hospital, Melbourne, Victoria, Australia, Melbourne, Victoria, Australia*; ⁵*Incumbent, Sydney A. Fox chair in Ophthalmology, Incumbent, Sydney A. Fox chair in Ophthalmology, Tel Aviv University, Tel Aviv, Israel, Tel Aviv, Israel*

6002 — 11:15 Intermittent Fasting (IF) Prevents Development of Diabetic Retinopathy (DR) by regulating low-grade inflammation through changes in lipid metabolism. Eleni Beli¹, L. Moldovan², Y. Duan³, S. Li Calzi⁵, C. Evans-Molina^{2,1}, J. V. Busik⁴, M. Grant⁶. ¹*Pediatrics, IUPUI, Indianapolis, IN*; ²*Medicine, VA Hospital, Indianapolis, IN*; ³*Physiology, IUPUI, Indianapolis, IN*; ⁴*Physiology, MSU, East Lansing, MI*; ⁵*Ophthalmology, UAB, Birmingham, AL*

6003 — 11:30 Ocular Pharmacokinetics of Insulin-loaded Thermoresponsive Biodegradable Nanogels. Tao L. Lowe¹, F. Sahle¹, C. Filiz², D. Will¹, S. Davison², D. Hamilton². ¹*Pharmaceutical Sciences, Univ of Tennessee Health Science Ctr, Memphis, TN*; ²*Comparative Medicine, University of Tennessee Health Science Center, Memphis, TN*

6004 — 11:45 Drug delivery to the back of the eye using A minimally invasive adjustable-depth blunt injector. Ygal Rotenstreich^{2,3}, E. Bubis^{2,3}, Z. Goldberg^{2,3}, H. Ziv^{1,3}, S. Pri-Chen^{1,3}, I. Sher-Rosenthal⁴. ¹*Goldscheleger Eye Research Institute, Sheba Medical Center, Tel Hashomer, Israel*; ²*The Maurice and Gabriela Goldschleger Eye Institute, Sheba Medical Center, Tel Hashomer, Israel*; ³*The Sackler School of Medicine, Tel Aviv University, Tel Aviv, Israel* *CR

6005 — 12:00 Hydroxychloroquine enhances the efficacy of retinal gene therapy. Laurel C. Chandler^{1,2}, A. R. Barnard^{1,2}, M. I. Patricio^{1,2}, K. Xue^{1,2}, R. E. MacLaren^{1,2}. ¹*Nuffield Laboratory of Ophthalmology, University of Oxford, Oxford, United Kingdom*; ²*Oxford Eye Hospital, Oxford University Hospitals NHS Foundation Trust, Oxford, United Kingdom* *CR

6006 — 12:15 Long-term preservation of photoreceptor function and structure following early-stage treatment by AAV-mediated gene augmentation in canine model of NPHP5 Leber congenital amaurosis. Gustavo D. Aguirre¹, A. V. Cideciyan², S. L. Boye³, S. Iwabe⁴, V. Dufour⁴, M. Swider², K. Roszak¹, W. W. Hauswirth³, S. G. Jacobson², W. A. Beltran¹. ¹*Clinical Studies, Univ of Penn Sch Veterinary Med, Philadelphia, PA*; ²*Ophthalmology, University of Pennsylvania, Philadelphia, PA*; ³*Ophthalmology, University of Florida, Gainesville, FL* *CR

6007 — 12:30 Potential and pitfalls of intravitreal injected mRNA as ocular neuroprotection strategy. Katrien Remaut¹, J. Devoldere¹, L. De Groef², K. Peynshaert¹, H. Dewitte¹, L. K. Moons², S. De Smedt¹. ¹*Lab General Biochem and Physical Pharm, Ghent University, Ghent, Belgium*; ²*Department of Biology, Ku Leuven, Leuven, Belgium*

Room 316B

Thursday, May 03, 2018 11:00 AM-12:45 PM

Clinical/Epidemiologic Research

533 AMD Epidemiology and Treatment

Moderators: Tiarnan D. Keenan and Susan Vitale

6008 — 11:00 Exploring factors underlying ethnic differences in age-related macular degeneration (AMD) prevalence. Jie Jin Wang^{1,2}, M. Jones⁴, E. Holliday^{4,3}, A. G. Tan², C. Oldmeadow⁴, R. M. van Dam⁵, X. Sim⁵, V. Flood^{6,7}, C. Whitton⁵, R. Klein⁸, Y. Teo⁵, P. Mitchell⁹, T. Y. Wong^{9,10}, E. Tai¹¹, J. Attia^{4,3}. ¹*Centre for Clinician-Scientist Development, Duke-NUS Medical School, Singapore, Singapore, Singapore*; ²*Centre for Vision Research, Westmead Institute for Medical Research, University of Sydney, Sydney, New South Wales, Australia*; ³*School of Medicine and Public Health, University of Newcastle, Newcastle, New South Wales, Australia*; ⁴*Clinical Research Design and Stats Support Unit, Hunter Medical Research Institute, University of Newcastle, Newcastle, New South Wales, Australia*; ⁵*Swee Hock School of Public Health, National University of Singapore, Singapore, Singapore*; ⁶*Faculty of Health Sciences, University of Sydney, Sydney, New South Wales, Australia*; ⁷*Westmead Hospital, Western Sydney Local Health District, Sydney, New South Wales, Australia*; ⁸*Department of Ophthalmology & Visual Sciences, University of Wisconsin Medical School, Madison, WI*; ⁹*Ophthalmology & Visual Sciences Academic Clinical Program (Eye ACP), Duke-NUS Medical School, Singapore, Singapore*; ¹⁰*Singapore National Eye Centre, Singapore, Singapore*; ¹¹*Department of Medicine, Yong Loo Lin School of Medicine, National University of Singapore, Singapore, Singapore*

6009 — 11:15 Does cataract surgery (CSG) increase the risk of incident age-related macular degeneration (AMD)? Alfred Gan¹, R. Man^{1,2}, E. Fenwick^{1,2}, C. Sabanayagam^{1,2}, P. Gupta¹, Y. Tham¹, J. Wang^{2,4}, N. Tan³, P. Mitchell⁴, G. Cheung^{1,3}, T. Wong^{1,3}, C. Cheng^{1,2}, E. L. Lamoureux^{1,2}. ¹*Singapore Eye Research Institute, Singapore, Singapore*; ²*Duke-NUS Medical School, Singapore, Singapore*; ³*National University of Singapore, Singapore, Singapore*; ⁴*Centre for Vision Research, University of Sydney, Sydney, New South Wales, Australia*

6010 — 11:30 Geographic atrophy of age-related macular degeneration in the Age-Related Eye Disease Study 2 (AREDS2): incidence, clinical characteristics and factors influencing growth rate. Tiarnan D. Keenan^{1,2}, E. Agron¹, A. Domalpally², T. E. Clemons³, F. Van Asten⁴, W. T. Wong⁵, R. P. Danis², M. L. Klein⁶, R. Ramapriya⁴, A. Swaroop⁴, F. L. Ferris¹, E. Y. Chew¹. ¹Division of Epidemiology and Clinical Applications, National Eye Institute, Bethesda, MD; ²Fundus Photographic Reading Center, The University of Wisconsin, Madison, WI; ³The EMMES Corporation, Rockville, MD; ⁴Neurobiology-Neurodegeneration & Repair Laboratory, National Eye Institute, Bethesda, MD; ⁵Unit on Neuron-Glia Interactions in Retinal Disease (UNGIRD), National Eye Institute, Bethesda, MD; ⁶Devers Eye Institute, Portland, OR; ⁷Faculty of Biology, Medicine and Health, University of Manchester, Manchester, United Kingdom *CR, ✗

6011 — 11:45 The Characteristics of Geographic Atrophy From 25 Years of The Beaver Dam Eye Study (BDES). Stacy M. Meuer, K. E. Lee, B. E. Klein, R. Klein. *Ophthalmology & Visual Sciences, University of Wisconsin-Madison, Madison, WI*

6012 — 12:00 Smoking and the Clinical Features of Neovascular Age Related Macular Degeneration in a Clinic-Based Cohort. Nichole Joachim, P. Mitchell, G. Liew, G. Burlutsky, H. Dharamdasani, B. Gopinath. *Centre for Vision Research, The University of Sydney, Westmead, New South Wales, Australia*

6013 — 12:15 Visual acuity outcomes in eyes treated with anti-VEGF injections during the Age-Related Eye Disease Study 2 (AREDS2). Susan Vitale¹, E. Agron¹, T. Keenan¹, T. E. Clemons², E. Y. Chew¹. ¹Div Epidemiol & Clin Applications, National Eye Inst/NIH, Bethesda, MD; ²Emmes Corporation, Rockville, MD

Room 316C

Thursday, May 03, 2018 11:00 AM-12:45 PM

Lens

534 Cataract Surgery, epidemiology and clinical outcomes

Moderators: Leah Owen and Azin Abazari

6014 — 11:00 North of England Deprivation Study of Cataract presentation and outcomes. Alexander J. Silvester, R. Scott, A. Pitalia. *Ophthalmology, SpaMedica, Bolton, United Kingdom*

6015 — 11:15 Histopathological analysis of residual lens cells in capsular opacities after cataract surgery. Christina Mastromonaco¹, M. Balazsi², A. T. Dias¹, D. Sanft¹, J. M. Lasiste¹, A. Cardillo¹, J. J. Mansure³, M. N. Burnier¹. ¹MUHC Ocular Pathology Laboratory, Montreal, Quebec, Canada; ²Medical Parachute, Montreal, Quebec, Canada; ³McGill Urologic Oncology, Montreal, Quebec, Canada *CR

6016 — 11:30 Utility of Vision Index Pen in detecting early cataract and loss of accommodation. Azin Abazari¹, H. Dhadwal². ¹Ophthalmology, Stony Brook University, Stony Brook, NY; ²Electrical and Computer Engineering, Stony Brook University, Stony Brook, NY *CR, ✗

6017 — 11:45 Cataract Surgery and Traffic Crashes: Population-based Exposure-Crossover Design. Matthew Schlenker^{1,3}, D. Thiruchelvam⁴, D. Redelmeier^{2,4}. ¹Ophthalmology & Vision Sciences, University of Toronto, Toronto, Ontario, Canada; ²Internal Medicine, Sunnybrook, Toronto, Ontario, Canada; ³Ophthalmology & Vision Sciences, Kensington Eye Institute, Toronto, Ontario, Canada; ⁴Institute of Clinical & Evaluative Sciences, Toronto, Ontario, Canada *CR

6018 — 12:00 Ultrastructural Changes in OCT and Refractive Differences after Refractive Lens Exchange Surgery. Chirag Shah¹, D. Knight¹, J. Tucker¹, B. Cormier¹, M. Wade¹, S. Hannan¹, S. Schallhorn³, M. C. Mehta¹. ¹Ophthalmology, Gavin Herbert Eye Institute, University of California Irvine, Irvine, CA; ²Optical Express, Glasgow, United Kingdom; ³Carl Zeiss Meditec, Dublin, CA *CR

6019 — 12:15 Lens meridian position as a predictor of effective lens position. James Tucker, H. Muniz Castro, C. Shah, D. Knight, S. Garg, M. Farid, M. C. Mehta, M. Wade. *Ophthalmology, University of California, Irvine, Orange, CA *CR*

Room 320

Thursday, May 03, 2018 11:00 AM-12:45 PM

Biochemistry/Molecular Biology

535 Genome: Structure, Function and Editing

Moderators: Ching-Kang J. Chen and Rajendra Kumar-Singh

6020 — 11:00 An AAV-CRISPR/Cas9 gene editing approach for GUCY2D-associated cone rod dystrophy (CORD6). Kevin McCullough¹, S. L. Boye¹, D. Fajardo¹, C. E. Strang², D. C. Witherspoon², S. Gloskowski³, A. Dass³, P. D. Gamlin², M. Maeder³, S. E. Boye¹. ¹Ophthalmology, University of Florida, Gainesville, FL; ²University of Alabama Birmingham, Birmingham, AL; ³Editas Medicine, Inc., Cambridge, MA *CR

6021 — 11:15 Evaluating the long-term safety and efficacy of CRISPR ablation therapy for dominant retinitis pigmentosa by AAV-delivery. Benjamin Bakondi, B. Lu, S. Girman, C. Svendsen, S. Wang. *Biomedical Sciences, Cedars-Sinai Regenerative Medicine Institute, Los Angeles, CA*

6022 — 11:30 Functional genomics for inherited retinal diseases: characterizing variants of unknown significance in rhodopsin. Jason Comander, A. Wan, K. Wu, E. A. Pierce. *Ocular Genomics Institute, Massachusetts Eye & Ear Infirmary, Boston, MA*

6023 — 11:45 Identification of putative small open reading frame peptides in the retinal transcriptome. Lina Zelinger¹, V. Chaitankar^{1,2}, J. Minehart¹, A. Aponte³, A. Swaroop¹. ¹NNRL, National Eye Institute, Bethesda, MD; ²Bioinformatics and Computational Biology Core Facility, NHLBI, Bethesda, MD; ³Proteomics Core Facility, NHLBI, Bethesda, MD

6024 — 12:00 Distinct protective cell type-specific responses induced by chronic hypoxia in a mouse model of retinal hypovascularization revealed by single-cell RNAseq and metabolic profiling. Jacob S. Heng^{1,3}, A. Rattner¹, H. J. Vernon², B. W. Jones⁴, R. E. Marc⁴, L. A. Goff^{5,2}, J. Nathans^{1,5}. ¹Molecular Biology and Genetics, Johns Hopkins University School of Medicine, Baltimore, MD; ²Institute of Genetic Medicine, Johns Hopkins University School of Medicine, Baltimore, MD; ³Neuroscience, Johns Hopkins University School of Medicine, Baltimore, MD; ⁴Ophthalmology, University of Utah, Salt Lake City, UT; ⁵Ophthalmology, Johns Hopkins University School of Medicine, Baltimore, MD *CR

6025 — 12:15 Integrative functional genomics of age-related macular degeneration. Rinki Ramapriya¹, K. Sosina², M. Starostik¹, M. Kwicklis¹, R. J. Kapphahn³, A. Walton¹, A. Pietraszkiewicz¹, S. R. Montezuma³, L. Fritsche⁵, E. Y. Chew⁴, G. R. Abecasis⁵, D. A. Ferrington³, N. Chatterjee², A. Swaroop¹. ¹Neurobiol-Neurodegen & Repair Lab, National Eye Institute, NIH, Bethesda, MD; ²Department of Biostatistics, Bloomberg School of Public Health, Johns Hopkins University, Baltimore, MD; ³Department of Ophthalmology and Visual Neurosciences, University of Minnesota, Minneapolis, MN; ⁴Division of Epidemiology and Clinical Applications, National Eye Institute, Bethesda, MD; ⁵Center for Statistical Genetics, Department of Biostatistics, University of Michigan, Ann Arbor, MI

6026 — 12:30 CRISPR-derived mouse model of North Carolina Macular Dystrophy reveals *in trans* tissue-specific upregulation of PRDM13. Raquel S. Silva^{1,2}, K. Kraft^{2,7}, G. Arno^{1,3}, V. Heinrich⁴, N. Pontikos^{1,3}, V. Cipriani^{8,3}, B. Puech⁵, A. T. Moore^{6,3}, V. Van Heyningen^{1,3}, S. Mundlos^{2,7}, A. Webster^{1,3}. ¹UCL Institute of Ophthalmology, London, United Kingdom; ²Development and Disease, Max Planck Institute for Molecular Genetics, Berlin, Germany; ³Genetics, Moorfields Eye Hospital, London, United Kingdom; ⁴Department Vingron, Max Planck Institute for Molecular Genetics, Berlin, Germany; ⁵Exploration de la Vision et Neuro-Ophthalmologie, Centre Hospitalier Universitaire, Lille, France; ⁶Ophthalmology Department, UCSF School of Medicine, San Francisco, CA; ⁷Institute for Medical and Human Genetics, Charité Universitätsmedizin, Berlin, Germany; ⁸Queen Mary University, London, United Kingdom

Ballroom A

Thursday, May 03, 2018 11:00 AM-12:45 PM

Glaucoma

536 Visual Fields, Vision Function, Psychophysics

Moderators: Allison M. McKendrick and Tobias Elze

6027 — 11:00 Robot assistants for perimetry: Patient experience and performance. Allison M. McKendrick¹, A. Zeman¹, I. Aden¹, D. Aktepe¹, D. Bhagat¹, K. Do¹, H. D. Nguyen¹, A. Turpin². ¹Optometry & Vision Sciences, University of Melbourne, Parkville, Victoria, Australia; ²Computing and Information Systems, The University of Melbourne, Parkville, Victoria, Australia *CR

6028 — 11:15 A New Method to Detect Visual Field Progression based on Spatial Pattern Analysis. Dian Li¹, L. R. Pasquale², L. Q. Shen², M. V. Boland³, S. R. Wellik⁴, C. De Moraes⁵, J. S. Myers⁶, N. Baniassadi¹, H. Wang^{1,7}, P. J. Bex⁸, T. Elze¹, M. Wang¹. ¹Schepens Eye Research Institute, Harvard Medical School, Boston, MA; ²Massachusetts Eye and Ear, Harvard Medical School, Boston, MA; ³Wilmer Eye Institute, Johns Hopkins University, Baltimore, MD; ⁴Bascom Palmer Eye Institute, University of Miami, Miami, FL; ⁵Edward S. Harkness Eye Institute, Columbia University, New York, NY; ⁶Wills Eye Hospital, Thomas Jefferson University, Philadelphia, PA; ⁷Institute for Psychology and Behavior, Jilin University of Finance and Economics, Changchun, Jilin, China; ⁸Department of Psychology, Northeastern University, Boston, MA *CR

6029 — 11:30 Visual Field Testing on a Personal Smartphone. Moshe Eizenman^{1,2}, R. B. Shi³, T. L. Fee⁴, Y. J. Mahsood¹, Y. M. Buys⁴, G. Trope¹. ¹Ophthalmology and Vision Sciences, University of Toronto, Toronto, Ontario, Canada; ²Electrical and Computer Engineering, University of Toronto, Toronto, Ontario, Canada; ³Division of Engineering Science, University of Toronto, Toronto, Ontario, Canada; ⁴Electrical and Computer Engineering, University of Toronto, Toronto, Ontario, Canada

6030 — 11:45 Effect of fundus tracking on perimetric test retest-variability. Susan R. Bryan¹, G. Montesano^{1,2}, L. M. Rossetti², P. Fogagnolo², F. Oddone³, A. M. McKendrick⁴, A. Turpin⁵, P. Lanzetta⁶, A. Perdicchi⁷, C. A. Johnson⁸, D. F. Garway-Heath^{9,10}, D. P. Crabb⁷. ¹Optometry and Visual Sciences, City, University of London, London, United Kingdom; ²Eye Clinic, University of Milan, Milan, Italy; ³Glaucoma Unit, IRCCS GB Bietti Eye Foundation, Rome, Italy; ⁴Optometry & Vision Sciences, University of Melbourne, Melbourne, Victoria, Australia; ⁵Computing and Information Systems, University of Melbourne, Melbourne, Victoria, Australia; ⁶Department of Ophthalmology, University of Udine, Udine, Italy; ⁷Azienda ospedaliera Sant'Andrea, Rome, Italy; ⁸Ophthalmology & Visual Sciences, University of Iowa, Iowa City, IA; ⁹Institute of Ophthalmology, University College London, London, United Kingdom; ¹⁰NIHR Biomedical Research Centre, Moorfields Eye Hospital, London, United Kingdom *CR

6031 — 12:00 Clinical evaluation of a new perimetric testing algorithm, SITA Faster. Vincent Michael Patella¹, B. Bengtsson², G. C. Lee¹, L. X. Chong⁶, J. G. Flanagan⁶, A. Iwase⁵, C. K. Leung³, J. Ring², A. Tuulonen⁴, T. Callan^{1,6}, A. Heijl¹. ¹Carl Zeiss Meditec, Inc, Dublin, CA; ²Department of Ophthalmology, Skane University Hospital Malmö, Lund University, Malmö, Sweden; ³Ophthalmology & Visual Sciences, Chinese University of Hong Kong, Hong Kong, China; ⁴Tays Eye Centre, University of Tampere, Tampere, Finland; ⁵Tajimi Iwase Eye Clinic, Tajimi, Japan; ⁶School of Optometry, University of California, Berkeley, CA *CR

6032 — 12:15 Performance of a modified 24-2 test pattern using SITA Faster. Gary C. Lee¹, M. Monhart², T. Callan¹, B. Cunningham¹, S. Yu¹, M. K. Durbin¹, B. Bengtsson³, A. Iwase⁴, J. G. Flanagan⁵, A. Heijl³. ¹Carl Zeiss Meditec, Inc, Dublin, CA; ²Carl Zeiss AG, Feldbach, Switzerland; ³Ophthalmology, Lund University, Malmö, Sweden; ⁴Ophthalmology, Tajimi Iwase Eye Clinic, Tajimi, Japan; ⁵School of Optometry and Vision Science, University of California Berkeley, Berkeley, CA *CR

6033 — 12:30 A comparison of relative diagnostic precision between the Compass fundus perimeter and the Humphrey Field Analyzer. Luca M. Rossetti¹, G. Montesano^{1,2}, S. R. Bryan³, P. Fogagnolo¹, F. Oddone³, A. M. McKendrick⁴, A. Turpin⁵, P. Lanzetta⁶, A. Perdicchi⁷, C. A. Johnson⁸, D. F. Garway-Heath^{9,10}, D. P. Crabb⁷. ¹Eye Clinic, University of Milan, Milan, Italy; ²Optometry and Visual Sciences, City, University of London, London, United Kingdom; ³Glaucoma unit, IRCCS GB Bietti Eye Foundation, Rome, Italy; ⁴Optometry & Vision Sciences, University of Melbourne, Melbourne, Victoria, Australia; ⁵Computing and Information Systems, University of Melbourne, Melbourne, Victoria, Australia; ⁶Department of Ophthalmology, University of Udine, Udine, Italy; ⁷Azienda ospedaliera Sant'Andrea, Rome, Italy; ⁸Ophthalm & Visual Sci, University of Iowa, Iowa City, IA; ⁹Institute of Ophthalmology, University College London, London, United Kingdom; ¹⁰NIHR Biomedical Research Centre, Moorfields Eye Hospital, London, United Kingdom *CR

Ballrooms BC

Thursday, May 03, 2018 11:00 AM-12:45 PM

Glaucoma

537 Pharmacological Interventions and Cellular Mechanisms

Moderators: Claire H. Mitchell and Abbot F. Clark

6034 — 11:00 Linking stressed astrocytes to activated microglia through purinergic signaling. Claire H. Mitchell, K. Campagno, F. Albalawi, W. Lu. University of Pennsylvania, Philadelphia, PA

6035 — 11:15 Inhibition of chronic endoplasmic reticulum stress rescues myocilin-associated glaucoma via stimulation of autophagic flux in the TM. Ramesh Kasetti, p. maddinini, P. Patel, G. Zode. pharmacology and neuroscience, North Texas Eye Research Institute, Fort Worth, TX

6036 — 11:30 The effects of Vitamin B3 on fibroblast mitochondrial function in glaucoma patients. Zaman Durani², D. Gkotsi², D. Chau³, D. F. Garway-Heath^{1,2}. ¹NIHR Biomedical Research Centre at Moorfields Eye Hospital, London, United Kingdom; ²UCL Institute of Ophthalmology, London, United Kingdom; ³Institute of Neurology, London, United Kingdom

6037 — 11:45 Glucocorticoid-Induced Ocular Hypertension in Mice Requires Glucocorticoid Receptor Transactivation Activity. Abbot F. Clark, J. Millar, G. Patel. North Texas Eye Research Institute, University of North Texas HSC, Fort Worth, TX *CR

6038 – 6040 – Thursday – Papers/Minisymposia

6038 — 12:00 RHO-kinase-mediated regulation of myofibroblast differentiation in scleral fibroblasts during experimental glaucoma. *Ian F. Pitha, E. Oglesby, E. Cone-Kimball, J. Schaub, M. Pease, H. A. Quigley. Ophthalmology, Hopkins University, Baltimore, MD*

6039 — 12:15 Distal outflow resistance can be regulated pharmacologically. *Fiona McDonnell¹, W. Dismuke¹, D. R. Overby², W. Stamer¹.*
¹*Ophthalmology, Duke University, Durham, NC;*
²*Bioengineering, Imperial College London, London, United Kingdom*

6040 — 12:30 Δ^9 -THC and CBD differentially regulate intraocular pressure. *Alex Straiker, S. Miller. Indiana University, Bloomington, IN*

Thursday Papers/
Minisymposia
11:00 am – 12:45 pm

Exhibit Hall A0075-A0091

Thursday, May 03, 2018 11:00 AM-12:45 PM

Genetics Group

538 Potpourri in genetic eye disease*Moderator: Periasamy Sundaresan*

6041 — A0075 BMP4 loss of function mutation is a cause of autosomal dominant Stickler syndrome with associated renal dysplasia in one family. Thomas R. Nixon^{1,2}, A. Richards^{3,4}, L. Towns³, R. Sandford^{4,5}, M. Snead^{1,3}. ¹Ophthalmology, Cambridge University Hospital NHS Foundation Trust, Cambridge, England, United Kingdom; ²Faculty of Clinical Medicine, University of Cambridge, Cambridge, United Kingdom; ³Department of Pathology, University of Cambridge, Cambridge, United Kingdom; ⁴Clinical Genetics, Cambridge University Hospitals NHS Foundation Trust, Cambridge, United Kingdom; ⁵Medical Genetics, University of Cambridge, Cambridge, United Kingdom

6042 — A0076 Clinical and Genetic Characterization of Canine Vitreous Degeneration. Maria Kaukonen^{1,2}, H. Lohi^{1,2}. ¹Department of Veterinary Biosciences and Research Programs Unit, University of Helsinki, Helsinki, Finland; ²Folkhälsan Institute of Genetics, Helsinki, Finland *CR

6043 — A0077 Heimler syndrome with macular dystrophy caused by novel PEX6 gene variants. Benjamin Bakall^{1,2}, J. Singer^{2,3}, J. L. Andorf¹, E. M. Stone⁴, M. Champion^{2,5}. ¹Ophthalmology, University of Arizona College of Medicine Phoenix, Phoenix, AZ; ²Associated Retina Consultants, Phoenix, AZ; ³Iowa Retina Consultants, West Des Moines, IA; ⁴Department of Ophthalmology and Visual Sciences, Stephen A. Wynn Institute for Vision Research, University of Iowa, Iowa City, IA; ⁵Department of Ophthalmology, The University of Kansas, Kansas City, KS

6044 — A0078 Copy number variations in CNGB3-linked autosomal recessive achromatopsia. Susanne Kohl¹, A. K. Mayer¹, c. Van Cauwenbergh², C. Rother¹, B. Baumann¹, P. Reuter¹, E. De Baere², B. Wissinger¹. ¹Centre for Ophthalmology, Inst for Ophthalmic Rsrch Tuebingen, Tuebingen, Germany; ²Ghent University and University Hospital, Ghent, Belgium

6045 — A0079 Novel PAX6 heterozygous mutations found in two Chinese families with congenital aniridia. Bo Gong, J. Li. Sichuan Academy of Medical Sciences and Sichuan Provincial People's Hospital, Chengdu, China

6046 — A0080 Efficient High-Throughput Targeted Exome Sequencing Kit for Differential Diagnosis of Congenital Special Forms of Strabismus. Yi Liang¹, H. Jia¹, Y. Liang², H. Wang¹, Y. Jiao¹. ¹Beijing Tongren Hospital, Beijing, China; ²University of Maryland, Baltimore, MD

6047 — A0081 Molecular characterization of congenital eye malformations. Teresa M. Neuhan¹, L. Neuhan¹, A. Laner¹, A. Benet-Pages¹, T. Neuhan², E. Holinski-Feder¹. ¹Medizinisch genetisches Zentrum, Munich, Germany; ²MVZ Prof. Neuhan, Munich, Germany

6048 — A0082 Comprehensive Genetic Testing Identifies Rare Pathogenic Variants for Anterior Segment Dysgenesis. Dayna Morel², S. Thanikachalam¹, E. Hodapp³, T. C. Chang³, F. Cengiz¹, G. Bademci¹, W. Scott¹, A. Grajewski³, M. Tekin^{1,2}. ¹John P.Husmann Institute for Human Genomics, University of Miami, Miami, FL; ²Department of Human Genetics, University of Miami, Miami, FL; ³Bascom Palmer Eye Institute, University of Miami, Miami, FL *CR

6049 — A0083 Contribution of HLA-A and HLA-B genes to genetic predisposition in ocular Behçet's disease. Akira Meguro, T. Yamane, M. Takeuchi, N. Mizuki. Department of Ophthalmology, Yokohama City Univ School of Med, Yokohama, KANAGAWA, Japan

6050 — A0084 Comprehensive genetic analysis of the mir-183/96/182 cluster illuminates a cooperative function for support of hair cells but not retina. Joseph Fogerty¹, L. T. Cianciolo^{1,2}, B. P. Tooke^{1,3}, B. D. Perkins¹. ¹Ophthalmic Research, Cleveland Clinic, Cleveland, OH; ²John Carroll University, University Heights, OH; ³Case Western Reserve University, Cleveland, OH

6051 — A0085 Key pathways and genes influenced by a drug, NK-4, in human neurons. Shihui Liu¹, T. Matsuo¹, M. Miyaji², O. Hosoya². ¹Ophthalmology, Okayama University, Okayama, Japan; ²Medical Neurobiology, Okayama University, Okayama, Japan

6052 — A0086 A new mitochondrial disease: MICHRED “Mitochondrial disorder with Intracranial Calcification, REenal disease, REtinopathy, and Deafness.” Edward H. Wood¹, A. Kreymerman², S. Randhawa¹. ¹Vitreoretinal Surgery, Associated Retinal Consultants, Ann Arbor, MI; ²School of Medicine, Stanford University, Stanford, CA

6053 — A0087 Ocular Vascular Manifestations of Fabry Disease in α -galactosidase A-deficient Rats. Iris S. Kassem^{1,2}, J. J. Miller³, C. Reid¹, N. M. Dahms³. ¹Ophthalmology, Medical College of Wisconsin, Milwaukee, WI; ²Cell Biology, Neurobiology & Anatomy, Medical College of Wisconsin, Milwaukee, WI; ³Department of Biochemistry, Medical College of Wisconsin, Milwaukee, WI

6054 — A0088 THBS1 polymorphism associated with increased risk of pterygium and altered thrombospondin 1 expression. Vinny Keshav, L. Simon, C. Baharozian, R. Regan, S. Masli, H. J. Lee. Ophthalmology, Boston Medical Center, Boston, MA

6055 — A0089 Gene expression pattern difference between pterygium fibroblasts and other types of fibroblasts. Judith Zavala, V. Trevino, J. E. Valdez. Escuela de Medicina y Ciencias de la Salud, Tecnológico de Monterrey, Monterrey, Nuevo Leon, Mexico

6056 — A0090 Clinical description and genetic molecular analysis in three non-related Mexican families with Wolfram syndrome: identification of two novel WFS1 mutations. Rodrigo Matsui^{1,2}, O. Chacon-Camacho², J. C. Zenteno², E. Esparza-García³, J. I. Bianchi¹, U. de Dios Cuadras¹. ¹Retina, Inst de Oftalmología Fundación CONVAL, Cuernavaca, Mexico; ²Genetics, Instituto de Oftalmología CONVAL, Mexico City, Mexico; ³Genetics, Centro Médico Nacional Siglo XXI, Mexico City, Mexico

6057 — A0091 LI profiling, a novel algorithm to investigate genotype-phenotype relationships for large dataset. Jing Yu¹, C. Murphy², N. PONTIKOS³. ¹Nuffield Department of Clinical Neurosciences, University of Oxford, Oxford, United Kingdom; ²University of Warwick, Warwick, United Kingdom; ³University College London, London, United Kingdom

Exhibit Hall A0187-A0209

Thursday, May 03, 2018 11:00 AM-12:45 PM

Retinal Cell Biology / Low Vision / Visual Psychophysics/Physiological Optics

539 Retinal diseases and aging: preclinical studies*Moderator: Kenkichi Baba*

6058 — A0187 Molecular analysis of the p.D477G in RPE65 as a cause of Choroideremia. Lance P. Doucette, a. radziwon, I. M. MacDonald. Ophthalmology & Visual Sciences, University of Alberta, Edmonton, Alberta, Canada

6059 — A0188 Scleral pits are a sign of disease severity in choroideremia. Christy Cunningham^{1,2}, H. Daggett^{2,1}, E. Stone^{1,2}, I. Han^{1,2}. ¹Ophthalmology, University of Iowa, Iowa City, IA; ²Stephen A. Wynn Institute for Vision Research, Iowa City, IA

6060 — A0189 Retinal degeneration in choroideremia follows an exponential decay function. James W. Aylward¹, K. Xue^{1,2}, M. I. Patricio^{1,2}, J. K. Jolly^{1,2}, J. C. Wood¹, J. Brett¹, K. Jasani¹, R. E. MacLaren^{1,2}. ¹Oxford Eye Hospital, Oxford University Hospitals NHS Foundation Trust, Oxford, United Kingdom; ²Nuffield Laboratory of Ophthalmology, University of Oxford, Oxford, United Kingdom *CR

6061 — A0190 Lipidosis in aging monkey retinal epithelium. Peter Gouras¹, T. Nagasaki¹, M. Neuringer², L. Iver³. ¹Ophthalmology, Columbia University, New York, NY; ²Oregon National Primate Research Center, Beaverton, OR; ³Clinical Neuroscience, Karolinska Institutet, Stockholm, Sweden

6062 — A0191 Sodium iodate-induced retinal degeneration in small animal models for Age-related Macular degeneration. Céline Koster¹, A. ten Asbroek¹, J. ten Brink¹, R. O. Schlingemann¹, J. C. van Meurs³, F. D. Verbraak^{2,1}, T. Smit^{2,1}, C. Boon^{1,4}, A. A. Bergen^{1,5}. ¹AMC, Amsterdam, Netherlands; ²VUmc, Amsterdam, Netherlands; ³Rotterdam Eye Hospital, Rotterdam, Netherlands; ⁴LUMC, Leiden, Netherlands; ⁵NIN-KNAW, Amsterdam, Netherlands

6063 — A0192 Describing biomarkers for Alzheimer's disease: Localization of amyloid-β in the retina. Qinyuan (Alis) Xu¹, S. Lee², V. Hirsch-Reinshagen³, I. Mackenzie³, R. Hsiung⁴, S. Cao⁵, K. Jiang⁵, M. Sarunic², M. Beg², J. Z. Cui⁵, J. A. Matsubara⁵. ¹Faculty of Medicine, University of British Columbia, Vancouver; ²British Columbia, Canada; ³School of Engineering Science, Simon Fraser University, Burnaby, British Columbia, Canada; ⁴Pathology, University of British Columbia, Vancouver; ⁵Neurology, University of British Columbia, Vancouver; ⁶Ophthalmology and Visual Sciences, University of British Columbia, Vancouver, British Columbia, Canada

6064 — A0193 Long-term outer retinal damage in rats exposed to neonatal hypoxia-ischemia. Suna Jung^{1,2}, Z. Khoja¹, S. Chemtob^{3,4}, P. Lachapelle², P. Wintermark¹. ¹Dept. Pediatrics, Div. Newborn Medicine, Research Institute of the McGill University Health Centre/Montreal Children's Hospital, McGill University, Montreal, Quebec, Canada; ²Depts. Ophthalmology and Neurology-Neurosurgery, Research Institute of the McGill University Health Centre/Montreal Children's Hospital, McGill University, Montreal, Quebec, Canada; ³Depts. Pediatrics, Pharmacology, and Ophthalmology, CHU Ste-Justine, Université de Montréal, Montreal, Quebec, Canada; ⁴Pharmacology, CHU Ste-Justine, Montreal, Quebec, Canada

6065 — A0194 In vivo imaging of curcumin labeled amyloid beta deposits in retina using fluorescence scanning laser ophthalmoscopy in an Alzheimer mouse model. Ahmad M. Sidiqi¹, D. Wahf², S. Lee², S. Cao¹, J. Z. Cui¹, E. To¹, M. Beg², M. Sarunic², J. A. Matsubara¹. ¹Ophthalmology and Visual Sciences, University of British Columbia, Markham, Ontario, Canada; ²Simon Fraser University, Burnaby, British Columbia, Canada

6066 — A0195 Age related visual deficits in tie2-TNF mice mediated by endoplasmic reticulum stress. Peter G. Nagy², R. Rajesh Lenin², J. Gentry¹, R. Gangaraju¹. ¹Ophthalmology, Hamilton Eye Institute, Memphis, TN; ²Ophthalmology, University of Tennessee Health Science Center, Memphis, TN *CR

6067 — A0196 Evaluation of hydrogen sulfide (H₂S) effects on visual functions and pyroptosis in a mouse model of hyperhomocysteinemia. Mahavir Singh², A. George¹, R. P. Homme³, A. Majumder⁴, S. Tyagi⁵. ¹Physiology, University of Louisville School of Medicine, Louisville, KY; ²Eye and Vision Science Laboratory, Department of Physiology, University of Louisville School of Medicine, Louisville, KY; ³Physiology, University of Louisville School of Medicine, Louisville, KY; ⁴Biochemistry and Molecular Genetics, University of Louisville School of Medicine, Louisville, KY; ⁵Physiology, University of Louisville School of Medicine, Louisville, KY

6068 — A0197 Proteomic changes in retina after transient middle cerebral artery occlusion. Saema Ansari¹, L. J. Cehofski², F. W. Blixt¹, K. Haanes³, V. Fedulov³, B. Honoré⁴, L. Edvinsson^{1,3}, K. Warfvinge^{3,1}. ¹Department of Clinical Sciences, Lund University, Lund, Sweden; ²Department of Ophthalmology, Aalborg University Hospital, Aalborg, Denmark; ³Department of Clinical Experimental Research, Copenhagen University Hospital, Glostrup, Denmark; ⁴Department of Biomedicine, Aarhus University, Aarhus, Denmark

6069 — A0198 Expression and activation of SAPK/JNK in the ONH in a rat model of ocular hypertension. Teresa Mammoné^{1,2}, G. Chidlow^{1,2}, R. J. Casson^{1,2}, J. P. Wood^{1,2}. ¹Ophthalmology, SA Health, Woodville South, South Australia, Australia; ²Ophthalmology and Visual Sciences, University of Adelaide, Adelaide, South Australia, Australia

6070 — A0199 Age related changes in visual and retinal function in Alagille syndrome. Laura Bagdonaite-Bejarano, R. M. Hansen, A. Moskowitz, W. Tan, A. B. Fulton. Boston Children's Hospital/Harvard Medical School, Boston, MA

6071 — A0200 Ceramide-induced Mitochondrial Damage in Diabetic Retinopathy. Yan Levitsky^{1,4}, S. S. Hammer², T. Lydic^{5,2}, A. Muchnik³, A. Saripalli³, P. Kirschner^{2,5,6}, D. Pegouske¹, D. Proshlyakov³, J. V. Busik². ¹Physiology/Chemistry, Michigan State University, East Lansing, MI; ²Physiology, Michigan State University, East Lansing, MI; ³Chemistry, Michigan State University, East Lansing, MI; ⁴DO/PhD - Physician Scientist Training Program, Michigan State University, East Lansing, MI; ⁵Molecular Metabolism and Disease - Mass Spectrometry Core, Michigan State University, East Lansing, MI; ⁶Heinrich-Heine-Universität Düsseldorf, Düsseldorf, Germany

6072 — A0201 Comparative study of VEGF inhibitors in Oxygen Induced Retinopathy (OIR) mouse model: Vascular, non-vascular and functional implications. Magali Evelin E. Ridano¹, M. Paz¹, P. V. Subirada¹, J. D. Luna Pinto², D. O. Croci Russo³, P. F. Barcelona¹, M. Vaglianti¹, G. A. Rabinovich³, M. C. Sanchez¹. ¹Department of Clinical Biochemistry, CIBICI-CONICET, Faculty of Chemical Sciences, National University of Cordoba, Cordoba, Argentina; ²VER Foundation, Private Eye Center Romagosa, Cordoba, Argentina; ³IByME-CONICET, Faculty of Medicine, University of Buenos Aires, Central Federal, Buenos Aires, Argentina

6073 — A0202 Retinal degeneration in a mouse model of neuronal ceroid lipofuscinosis type 1 (CLN1). Yevgeniya Atskova¹, T. Danyukova³, E. Becker¹, S. Bartsch¹, C. Hage¹, S. Storch³, U. Bartsch¹. ¹Ophthalmology, University Medical Center Hamburg-Eppendorf, Hamburg, Germany; ²Institute of Neuropathology, University Medical Center Hamburg-Eppendorf, Hamburg, Germany; ³Childrens Hospital, University Medical Center Hamburg-Eppendorf, Hamburg, Germany

6074 — A0203 Implication of various oxidative stress pathways in the aging phenotype of Prpf31-mutant mice. Abdallah Hamieh¹, N. Hadjout¹, G. Millet-puel², T. D. Leveillard², E. F. Nandrot¹. ¹Therapeutics Department, Institut de la Vision, Faculté des Sciences Sorbonne Université, INSERM U968, CNRS UMR 7210, Paris, France; ²Genetics Department, Institut de la Vision, Faculté des Sciences Sorbonne Université, INSERM U968, CNRS UMR 7210, Paris, France

6075 — A0204 Risk of recurrent and chronic disease in a large cohort of acute central serous chorioretinopathy with long-term follow-up. Danial Mohabati^{1,2}, T. O. Missotten⁵, E. de Jong³, C. Boon^{1,4}, S. Yzer⁵. ¹Leiden University Medical Center, Leiden, Netherlands; ²Rotterdam Ophthalmic Institute, Rotterdam, Netherlands; ³Department of Ophthalmology, Donders Institute for Brain, Cognition and Behaviour, Radboud University Medical Center, Nijmegen, Netherlands; ⁴Academic Medical Center, University of Amsterdam, Amsterdam, Netherlands; ⁵Rotterdam Eye Hospital, Rotterdam, Netherlands

6076 — A0205 Novel mutation in LRRM4 is associated with dominantly inherited macular dystrophy with reduced ON-bipolar cell response. Akiko Suga¹, Y. Kawamura¹, K. Yoshitake^{1,3}, K. Tsunoda¹, A. Murakami², T. Iwata¹. ¹National Institute of Sensory Organs, National Hospital Organization, Tokyo, Japan; ²Department of Ophthalmology, Juntendo University Graduate School of Medicine, Tokyo, Japan; ³Graduate school of Agricultural and Life Science, University of Tokyo, Tokyo, Japan

6077 — A0206 Structural, functional and molecular alterations in the retina of a mouse model of Alzheimer's disease. Antonio F. Ambrosio^{1,2}, C. Neves^{1,2}, S. Chiquita^{1,2}, R. Carecho^{1,2}, F. Baptista^{1,2}, E. J. Campos^{1,2}, P. Moreira^{3,2}. ¹Institute for Biomedical Imaging and Life Sciences (IBILI), Faculty of Medicine, University of Coimbra, Portugal, Coimbra, Portugal; ²CNC.IBILI Consortium, University of Coimbra, Portugal, Coimbra, Portugal; ³Center for Neuroscience and Cell Biology, University of Coimbra, Portugal, Coimbra, Portugal

6078 — A0207 Intravitreal Enzyme replacement therapy attenuates retinal disease progression in a canine model of neuronal ceroid lipofuscinosis type 2 (CLN2). John Sinclair¹, R. Whiting², G. Robinson², K. Bibi², A. Nguyen¹, A. Cherukuri¹, J. Henshaw¹, G. de Hart¹, C. Sundee¹, C. O'Neil¹, M. Katz². ¹Pharmacology / Toxicology, BioMarin Pharmaceutical Inc., Novato, CA; ²Research, University of Missouri, Columbia, MO

6079 — A0208 Retinal iron accumulation and degeneration in mice with high blood iron levels. Bailey Baumann, Y. Song, J. L. Dunaief, F.M. Kirby Center for Molecular Ophthalmology, Scheie Eye Institute, Perelman School of Medicine at the University of Pennsylvania, Philadelphia, PA

6080 — A0209 Treatment of age related macular degeneration using nanosecond laser therapy: Safety profile studies in humans and mice. Kirstan A. Vessey¹, T. Ho¹, A. I. Jobling¹, S. A. Mills¹, M. Tran¹, A. Brandli¹, J. Lam¹, R. H. Guymier², E. L. Fletcher¹. ¹Anatomy and Neuroscience, The University of Melbourne, Melbourne, Victoria, Australia; ²Department of Surgery (Ophthalmology), Center for Eye Research Australia, Melbourne, Victoria, Australia ✗

Exhibit Hall C0200-C0228

Thursday, May 03, 2018 11:00 AM-12:45 PM
Glaucoma

540 Surgery and Wound Healing III

Moderator: Christopher K. Leung

6081 — C0200 Risk related morphometric considerations after prophylactic laser iridotomy (LPI) in primary angle closure suspect (PACS). Alex Casanova^{1,2}, A. Gall², E. Gibin^{1,2}, F. Borner², N. Righetti², A. Consigli², M. Vignanelli². ¹Ophthalmology, KSA, Aarau, Switzerland; ²Ophthalmology, EOC, Lugano, Switzerland

6082 — C0201 Five-year comparative observation of corneal endothelium and angle structure in laser iridotomy-treated and – untreated primary angle closure or its suspect eyes. Koichi Mishima^{1,2}, N. Matakai¹, M. Yonahara⁵, S. Otani², H. Sakai³, A. Tomidokoro⁴, M. Aihara², K. Miyata⁵, A. Iwase⁶, M. Araie¹. ¹ophthalmology, Kanto central Hospital, Setagaya-ku, Japan; ²University of Tokyo, Graduate school of medicine, Tokyo, Japan; ³Department of Ophthalmology, University of the Ryukyus, faculty of medicine, Nakagami-gun, Japan; ⁴Tomidokoro Eye Clinic, Nakano-ku, Japan; ⁵Miyata Eye Hospital, Miyakonojo-city, Japan; ⁶Tajimi Iwase Eye Clinic, Tajimi-city, Japan *CR

6083 — C0202&#tab; Quantitative analysis of anterior and posterior ocular biometry after pharmacological mydriasis in angle closure diseases. Yi Sun, S. Chen, X. Zhang. Zhongshan Ophthalmic Center, Guangzhou, China ✗

6084 — C0203 Side Effects After Laser Peripheral Iridotomy Comparing Lateral Vs Superior Locations in Puerto Rican Population. Rosa A. Lozada Sierra. Ophthalmology, Univeridad de Puerto Rico, Recinto de Ciencias Medicas, Caguas, Puerto Rico

6085 — C0204 Electron-beam irradiated corneal (halo™) versus scleral patch graft erosion rates in glaucoma drainage device surgery. Ross Passo¹, Z. Hoskins¹, K. D. Tran², C. Patzer², S. Tehrani¹. ¹Casey Eye Institute, Oregon Health & Science University, Portland, OR; ²Research and Development, Lions VisionGift, Portland, OR *CR

6086 — C0205 Change in intraocular pressure following selective laser trabeculoplasty among Hispanics in South Texas. Jobeth Nozicka¹, C. Villafior¹, R. Trevino¹, C. Majcher¹, A. Schnegg¹, U. Bui¹, W. E. Sponsel^{1,2}. ¹Rosenberg School of Optometry, University of the Incarnate Word, San Antonio, TX; ²Biomedical Engineering, University of Texas San Antonio, San Antonio, TX

6087 — C0206&#tab; Long Term Efficacy of Selective Laser Trabeculoplasty Performed by Residents in a Large Veteran Population. Junping Li^{1,2}, C. Johnson², C. Kirk². ¹Ophthalmology, Hines VA Medical Center, Hines, IL; ²Ophthalmology, Loyola University of Chicago, Maywood, IL

6088 — C0207 Long Term Effect and Predictive Factors of Success for Selective Laser Trabeculoplasty (SLT). Christopher Johnson^{1,2}, J. Li^{2,1}, C. Kirk^{2,1}. ¹Ophthalmology, Loyola University Medical Center, Lombard, IL; ²Ophthalmology, Edward Hines Jr Veteran's Association, Hines, IL

6089 — C0208 Comparison of Outcomes of Micropulse Laser Trabeculoplasty versus Selective Laser Trabeculoplasty. Catherine Q. Sun, Y. Ou. University of California San Francisco, San Francisco, CA

6090 — C0209 Analysis of the Relative Efficacy of Micropulse Laser Trabeculoplasty and Selective Laser Trabeculoplasty. Briana C. Gapsis¹, M. Bickford², R. A. Sharpe¹, S. Das¹, L. Kammerdeiner¹, M. J. Nutaitis¹. ¹Ophthalmology, Medical University of South Carolina, Charleston, SC; ²Medical University of South Carolina, Charleston, SC

6091 — C0210 Primary Selective Laser Trabeculoplasty for Primary Open Angle Glaucoma & Ocular Hypertension: Early clinical outcomes from a prospective, multi-centre randomised controlled UK trial. Anurag Garg¹, V. Vickerstaff¹, N. Nathwani¹, E. Konstantakopoulou¹, E. Dowse¹, G. Gazzard¹. ¹Glaucoma, Moorfields Eye Hospital, London, United Kingdom; ²University College London, London, United Kingdom *CR, ✗

6092 — C0211 Long-term result of Intraocular Pressure Reduction Efficacy of Pattern Laser Trabeculoplasty in Refractory Glaucoma Patients. Seung Joo Ha, S. Lee, Y. Kim. Ophthalmology, Soonchunhyang University, Seoul, Korea (the Republic of)

6093 — C0212 Normalization of Visual Evoked Potential with Treatment of Selective Trabeculoplasty Laser. Yianni Yiannakou, L. H. Nguyen, P. Namkoong, K. Narain. Ophthalmology, South Bay Retina, Sunnyvale, CA

6094 — C0213 Towards feedback controlled selective laser trabeculoplasty (SLT). Katharina Bliedtner, D. Meier, E. Seifert, R. Brinkmann. Medical Laser Center Luebeck, Lübeck, Germany

6095 — C0214 The consensual ophthalmotonic reaction following selective laser trabeculoplasty. Frank Mei¹, H. Tokko¹, J. Zeiter², N. Nassiri², C. Kim², R. Swendris², M. S. Juzych², A. Goyal², E. In't Veld², A. Mas-Ramirez², B. Hughes². ¹Wayne State University School of Medicine, Detroit, MI; ²Kresge Eye Institute, Detroit, MI

6096 — C0215 Evaluating the efficacy of selective laser trabeculoplasty in patients who underwent prior intraocular pressure reducing procedures. Clayton Kirk¹, J. Li², C. Johnson^{1,2}. ¹Ophthalmology, Loyola University Chicago, River Forest, IL; ²Ophthalmology, Edward Hines Jr. Veterans Administration Hospital, Hines, IL

6097 — C0216 MLT vs SLT in the Hispanic and African American Population for Treatment of Open-Angle Glaucoma. Robert G. Dionisio¹, O. L. German², T. Patrianakos², M. Giovingo². ¹School of Medicine, Chicago Medical School, Chicago, IL; ²Ophthalmology, John H. Stroger, Jr. Hospital of Cook County, Chicago, IL

6098 — C0217 A randomized controlled trial(RCT) comparing the efficacy and safety of pattern laser trabeculoplasty(PLT) and selective laser trabeculoplasty(SLT). Oi Man Mandy Wong^{1,2}, I. Lai^{1,2}, P. Chan^{1,2}, C. Chan^{1,2}, C. K. Leung¹. ¹Department of Ophthalmology and Visual Sciences, The Chinese University of Hong Kong, Hong Kong, Hong Kong; ²Hong Kong Eye Hospital, Hong Kong, Hong Kong *CR, ✗

6099 — C0218 Efficacy of Attending versus Resident performed Selective Laser Trabeculoplasty. Bingjie Ling¹, Y. Tripodis², S. Rowe¹. ¹Department of Ophthalmology, Boston University Medical Center, Boston, MA; ²Department of Biostatistics, Boston University School of Public Health, Boston, MA

6100 — C0219 Intraocular Pressure Reduction After Ultrasound Cyclo Plasty for Glaucoma: Relationship With Biometric Parameters and Intraocular Inflammation. Stefano Sebastiani¹, G. Giannaccare¹, M. Pellegrini¹, L. Urbini², L. Carmassi², E. Bulone², F. Bergamini², E. C. Campos¹. ¹S.Orsola-Malpighi University Hospital, University of Bologna, Bologna, Italy; ²Department of Ophthalmology, Scientific Institute Capitanio Hospital - Istituto Auxologico Italiano, Milan, Italy

6101 — C0220 Micropulse Transscleral Cyclophotocoagulation or MP-TCP VS Endoscopic Cyclophotocoagulation-Plus or ECP-Plus. Behzad Amoozgar, M. Feinstein, J. Lee, K. Liu, T. Porco, J. M. Stewart, Y. Han. Ophthalmology, UCSF, San Francisco, CA

6102 — C0221 Comparing endoscopic cyclophotocoagulation-plus (ECP-Plus) with anterior ECP for the treatment of refractory glaucoma. Jessica M. Kang¹, M. Feinstein¹, J. Lee¹, B. Amoozgar¹, K. Liu¹, J. M. Stewart¹, G. Lazcano-Gomez², T. Porco¹, Y. Han¹. ¹Ophthalmology, UCSF, San Francisco, CA; ²Asociación para Evitar la Ceguera en México, Mexico City, Mexico

6103 — C0222 Evaluating the Long-Term Effects of Micropulse Cyclophotocoagulation on Glaucoma Patients. Soshian Sarrafpour¹, S. Ayoub², N. M. Radcliffe³. ¹Ophthalmology, New York University, New York, NY; ²Medical School, New York University, New York, NY; ³Ophthalmology, Weill Cornell Medical Center, New York, NY *CR

6104 — C0223 Long-Term Outcomes of Micropulse Cyclophotocoagulation in Eyes With and Without Prior Tube Shunt Surgery. Samantha Ayoub², S. Sarrafpour², N. M. Radcliffe^{2,1}. ¹New York Eye Surgery Center, New York City, NY; ²Department of Ophthalmology, New York University, New York City, NY *CR

6105 — C0224 Refractory glaucoma treated with endolaser cyclophotocoagulation during pars plana vitrectomy. Nana Takahashi, Y. Yokoyama, H. Kunikata, K. M. Nishiguchi, F. Nitta, T. Takeshita, T. Nakazawa. Ophthalmology, Tohoku University, Sendai, Miyagi, Japan *CR

6106 — C0225 Trans-scleral Cyclophotocoagulation: A Tale of Two Probes. Leonard Seibold, C. E. Capitena Young, D. A. Ammar, M. Y. Kahook. Ophthalmology, University of Colorado, Denver, CO

6107 — C0226 Success Rate of Micropulse Transscleral Cyclophotocoagulation in Complex Glaucoma Based on Variable Treatment Duration. Facundo G. Sanchez¹, F. Lerner³, J. Sampaolest³, R. Noecker², N. Becerra³, G. Iribarren¹, T. M. Grippo^{2,1}. ¹Grippo Glaucoma Center, Buenos Aires, CABA, Argentina; ²Yale University, New Haven, CT; ³Glaucoma Center, Buenos Aires, Argentina; ⁴Hospital Alemán, Buenos Aires, Argentina

6108 — C0227 Short Term Outcomes of Micropulse Transscleral Cyclophotocoagulation in an Urban Public Hospital. Jun Hui Lee^{1,2}, B. Amoozgar², S. C. Lin², S. Padmanabhan². ¹Yale School of Medicine, NEW HAVEN, CT; ²Ophthalmology, University of California, San Francisco, San Francisco, CA *CR

6109 — C0228 Treatment Pathways of Primary Open Angle Glaucoma prior to Laser Surgery: Real World Evidence from UK Ophthalmology Clinics. Yongsoo Kim¹, J. Banhazi¹, A. Durus¹, L. Rodriguez Torres¹, A. Gondos², D. Viriato¹, V. Bezlyak¹, N. Boxall¹, T. Wintermantel¹, A. Sagkriotis¹, D. Hubatsch³. ¹Novartis Pharma AG, Basel, Baselstadt, Switzerland; ²IQVIA Real World Insights, Frankfurt, Germany; ³Novartis Pharmaceuticals Corporation, Fort Worth, TX *CR

Exhibit Hall C0229-C0271

Thursday, May 03, 2018 11:00 AM-12:45 PM

Glaucoma

541 Neuroprotection

Moderators: Kimberly K. Gokoffski and Miriam Kolko

6110 — C0229 Induced pluripotent stem cells promote retinal ganglion cell survival after transplant. Suqian Wu^{1,2}, K. Chang², M. Nahmou², J. L. Goldberg². ¹Department of Ophthalmology & Visual Science, Eye, Ear, Nose & Throat Hospital, Fudan University, Shanghai, Shanghai, China; ²Department of Ophthalmology, Byers Eye Institute at Stanford University, Palo Alto, CA

6111 — C0230 Rescue of retinal ganglion cells by human umbilical cord mesenchymal stem cells in a microbead induced ocular hypertension rat model. Shangli Ji¹, Z. Li², H. Xu³, J. Chen^{1,3}, S. Tang^{1,3}. ¹ophthalmology, Aier School of ophthalmology, Changsha, China; ²Central South University, Changsha, China; ³Aier Eye Institute, Changsha, United Kingdom

6112 — C0231 Development of injectable antioxidant drug carriers for glaucoma therapy. Li-Jyuan Luo¹, J. Lai². ¹Department of Chemical and Materials Engineering, Chang Gung University, Taoyuan, Taiwan; ²Institute of Biochemical and Biomedical Engineering, Chang Gung University, Taoyuan, Taiwan

6113 — C0232 Sustained release of Taffluprostat with a newly developed drug delivery system protects retinal ganglion cells in rats after optic nerve transection. Yurika Nakagawa, K. Sato, K. Omodaka, T. Nakazawa. Tohoku university, Sendai, Japan *CR

6114 — C0233 Therapeutic potential of Valproic acid in End Stage Glaucoma. Viney Gupta, K. Mahalingam, R. SIHOTA, T. Velpandian, S. Gupta, A. Chaurasia. Ophthalmology, All India Institute of Medical Sciences, Delhi, Delhi, India *CR

6115 — C0234 Citicoline ameliorates the effect of elevated intraocular pressure on functional connectivity in the visual pathway. Kevin C. Chan^{1,2}, Y. van der Merwe^{3,4}, M. C. Murphy^{3,5}, L. C. Ho³, X. Yang³, Y. Yu⁶, Y. Chau⁶, C. K. Leung^{7,8}, G. Wollstein¹, J. S. Schuman¹. ¹NYU Langone Eye Center, Department of Ophthalmology, NYU School of Medicine, New York University, New York, NY; ²Department of Radiology, NYU School of Medicine, New York University, New York, NY; ³Department of Ophthalmology, University of Pittsburgh, Pittsburgh, PA; ⁴Department of Bioengineering, University of Pittsburgh, Pittsburgh, PA; ⁵Department of Radiology, Mayo Clinic, Rochester, MN; ⁶Department of Chemical and Biological Engineering, Hong Kong University of Science and Technology, Hong Kong, Hong Kong; ⁷Hong Kong Eye Hospital, University Eye Center, Hong Kong, Hong Kong; ⁸Department of Ophthalmology and Visual Sciences, The Chinese University of Hong Kong, Hong Kong, Hong Kong *CR

6116 — C0235 Neuro-protective effect of resveratrol on ischemia/reperfusion-Induced Retinal Injury in mice. Mingming Zhu, B. N. Choy, J. S. Lai. Ophthalmology, The University of Hong Kong, Hong Kong, Hong Kong

6117 — C0236 Topical Curcumin Nanocarriers are Neuroprotective in Rodent Retinal Injury Models. Ben Davis¹, L. Guo¹, M. Pahlitzsch¹, S. Balendra¹, P. Shah¹, N. Ravindran¹, G. Malaguarnera¹, C. Sisa¹, E. Shamsher¹, H. Hamze¹, A. Noor¹, A. Sornsute², S. Somavarapu², M. Cordeiro¹. ¹Institute of Ophthalmology, University College London, London, United Kingdom; ²School of Pharmacy, University College London, London, United Kingdom *CR

6118 — C0237 Anthocyanin oligomers counteracts ischemic and oxidative insults to retinal cells and lipid peroxidation to brain membranes. Kui Dong Kang¹, H. Hwang¹, S. Kim². ¹Department of Ophthalmology, Incheon St. Mary's Hospital, Incheon, Korea (the Republic of); ²Department of Ophthalmology, Sahn Yook Medical Center, Seoul, Korea (the Republic of)

6119 — C0238 Cyanin chloride inhibits hyperbaric pressure-induced glutamate-aspartate transporter decrease in mouse retina Müller cells. Min Ke, X. CHEN, F. Han. Ophthalmology, Zhongnan Hospital of Wuhan University, Wuhan, Hubai, China

- 6120 — C0239 Hesperidin has an anti-inflammatory effect after NMDA-induced retinal injury in mice.** Taimu Sato, K. Sato, T. Nakazawa. Tohoku University, Sendai, Miyagi, Japan *CR
- 6121 — C0240 Caveolin-1 Protects retinal ganglion cells(RGCs) in a Glaucoma Model.** Wenjie Hu¹, L. Zhang², Z. Tang¹. ¹State Key Laboratory of Ophthalmology, ZhongShan Ophthalmic Center Sun Yat-Sen University, Guangzhou, Guangdong, China; ²Second People's Hospital of Yunnan Province, Kunming, China
- 6122 — C0241 Mechanistic insights into the PTPN11 actions in the retinal ganglion cells and effects of its loss under glaucoma conditions.** mojdeh abbasi¹, V. Gupta¹, N. Chitranshi¹, S. L. Graham^{1,2}. ¹Clinical Medicine, Macquarie University, Sydney, New South Wales, Australia; ²Save Sight Institute, University of Sydney, Sydney, New South Wales, Australia
- 6123 — C0242 Synergistic neuroprotective effect of rasagiline and idebenone against retinal ischemia-reperfusion injury via the Lin28-let-7-Dicer pathway.** Huiping Yuan, D. Lei, Z. Shao, X. Zhou. Department of Ophthalmology, Harbin Medical University, Harbin, Heilongjiang, China
- 6124 — C0243 Bexarotene suppresses the retinal expression of ER stress marker proteins p-PERK and GADD153 in experimental model of glaucoma.** yogita dheer, N. Chitranshi, S. L. Graham, V. Gupta. Faculty of Medicine and Health Sciences, Macquarie University, Sydney, New South Wales, Australia
- 6125 — C0244 Evaluation of the Potential of AR-13324 and AR-13503 to Induce Phospholipidosis.** Cheng-Wen Lin, B. E. Foley, K. Carbajal, C. Kocczynski. Aerie Pharmaceuticals, Inc., Durham, NC *CR
- 6126 — C0245 Protective Effects of Lipoxins A₂ and B₂ on the Inner Retina in a Chronic Mouse Model of Ocular Hypertension.** Hsin-Hua Liu¹, J. M. Sivak², K. Gronert¹, J. G. Flanagan¹. ¹School of Optometry and Vision Science, University of California Berkeley, Berkeley, CA; ²Department of Ophthalmology and Vision Science, University of Toronto, Toronto, Ontario, Canada
- 6127 — C0246 fMRI shows Functional Recovery by Intravitreal Brimonidine Drug Delivery System (Brimo DDS Generation 1) in a Rabbit Model of Retinal Ganglion Cell (RGC) Degeneration.** Corine Ghosn, J. A. Burke. Biological Sciences, Allergan, Inc, Irvine, CA *CR
- 6128 — C0247 A neuroprotective role of IGFBP1 in glaucoma.** Xin Wei, K. Cho, S. Guo, D. F. Chen. Department of Ophthalmology, Schepens Eye Research Institute, Boston, MA
- 6129 — C0248 The effect of VGF nerve growth factor inducible on retinal ganglion cell injury after optic nerve crush in mice.** Masamitsu Shimazawa¹, H. Takeuchi¹, S. Inagaki^{1,2}, W. Morozumi¹, Y. Nakano¹, Y. Inoue¹, Y. Kuse¹, T. Mizoguchi¹, M. Funato¹, H. Kaneko², H. Hara¹. ¹Molecular Pharmacology, Department of Biofunctional Evaluation, Gifu Pharmaceutical University, Gifu, Japan; ²Department of Clinical Research, National Hospital Organization, Nagara Medical Center, Gifu, Japan
- 6130 — C0249 Novel engineered VEGF variant for glaucoma.** Junhui Shen^{1,2}, P. Baranov¹, R. Xiao¹, Y. Ng¹. ¹Harvard Ophthalmology, Schepens Eye Research Institute of Massachusetts Eye and Ear, Boston, MA; ²Department of Ophthalmology, Shanghai Tenth People's Hospital, Tongji University School of Medicine, Shanghai, China
- 6131 — C0250 Topical rh-NGF is neuroprotective to retinal ganglion cells by targeting secondary degeneration.** Li Guo¹, B. Davis¹, N. Ravindran¹, J. Galva¹, N. Kapoor¹, N. Haamedi¹, M. Cordeiro^{1,2}. ¹Visual Neuroscience, UCL, Institute of Ophthalmology, London, United Kingdom; ²Western Eye Hospital, Imperial College Healthcare NHS Trust, London, United Kingdom *CR
- 6132 — C0251 QTA020V, a novel rAAV2 vector, reduces retinal ganglion cell body and axon loss in rats with laser-induced intraocular pressure elevation.** Peter S. Widdowson¹, A. Osborne^{1,2}, T. Khatib², K. Hall¹, K. R. Martin^{2,1}. ¹Quethera Ltd, Cambridge, England, United Kingdom; ²Clinical Neurosciences, University of Cambridge, Cambridge, United Kingdom *CR
- 6133 — C0252 Sustained up-regulation of neuroprotective intracellular signalling pathways in retinal ganglion cells following intravitreal injection of QTA020V, a novel rAAV2 vector.** Andrew Osborne^{1,2}, L. Songra¹, P. S. Widdowson², K. R. Martin^{1,2}. ¹School of Clinical Neuroscience, University Of Cambridge, Cambridge, England, United Kingdom; ²Quethera Ltd, Cambridge, England, United Kingdom *CR
- 6134 — C0253 Neuroprotective effect of TrkB agonist antibody in humanized TrkB rat.** Henry Chen³, A. Latuszek³, Y. Hu³, J. Lee¹, W. Poueymirou¹, J. Cao³, W. Olson², B. Zambrowicz¹, C. Romano³. ¹Velocigen, Regeneron Pharmaceuticals, Inc, Tarrytown, NY; ²Therapeutic Proteins, Regeneron Pharmaceuticals, Inc, Tarrytown, NY; ³Ophthalmology, Regeneron Pharmaceuticals, Inc, Tarrytown, NY *CR
- 6135 — C0254 AAV mediated delivery of NT4 specifically to Müller glial cells promotes retinal ganglion cell survival in the DBA/2J mouse model of glaucoma.** Anna M. Demetriades¹, C. Pan¹, L. Byrne³, J. Harder², S. W. John², J. G. Flannery³. ¹Ophthalmology, Weill Cornell Medicine, New York, NY; ²The Jackson Laboratory, Bar Harbor, ME; ³Helen Wills Neuroscience Institute, Berkeley, CA
- 6136 — C0255 Effect of XIAP gene therapy in an experimental model of glaucoma.** Shagana Visuvanathan^{2,1}, A. N. Baker^{2,4}, P. Lagali^{2,4}, S. G. Coupland^{3,4}, G. Miller^{3,4}, C. Tsilfidis^{2,3}. ¹Biochemistry, Microbiology and Immunology, University of Ottawa, Ottawa, Ontario, Canada; ²Regenerative Medicine Program, Ottawa Hospital Research Institute, Ottawa, Ontario, Canada; ³Department of Ophthalmology, University of Ottawa, Ottawa, Ontario, Canada; ⁴University of Ottawa Eye Institute, The Ottawa Hospital, Ottawa, Ontario, Canada
- 6137 — C0256 Neuroprotection by overexpression of transcription factor Max in experimental glaucoma.** Rafael Lani¹, M. S. Dias¹, T. G. Araujo¹, W. W. Hauswirth², A. M. Dantas¹, M. Fiorani Junior¹, H. Petrs Silva¹, R. Linden¹. ¹Carlos Chagas Filho Biophysics Institute, Federal University of Rio de Janeiro, Rio de Janeiro, Brazil; ²Department of Ophthalmology Research, University of Florida, Gainesville, FL
- 6138 — C0257 Ecell expression is promoted by damage to axonal flow and protects retinal ganglion cells after optic nerve crush in mice.** Kota Sato, Y. Nakagawa, H. Tawarayama, N. Murayama, Y. shiga, K. Fujita, K. M. Nishiguchi, T. Nakazawa. Ophthalmology, Tohoku University, Sendai, Miyagi, Japan *CR
- 6139 — C0258 A small peptide inhibitor of the Fas receptor prevents axon degeneration and death of retinal ganglion cells in a microbead-induced mouse model of glaucoma.** Meredith S. Gregory-Ksander¹, A. J. Kocab², D. N. Zacks², A. krishnan¹. ¹Schepens Eye Research Institute, Massachusetts Eye and Ear Infirmary/HMS, Boston, MA; ²Kellogg Eye Center, University of Michigan, Ann Arbor, MI; ³ONL Therapeutics, Ann Arbor, MI *CR
- 6140 — C0259 Neuroprotective outcomes of immunomodulation by transgenic inhibition of astroglial NF-κB may involve increased glial metabolic support.** Gulgun Tezel¹, X. Yang¹, J. Cai², J. B. Klein². ¹Ophthalmology, Columbia University, New York, NY; ²Medicine, University of Louisville, Louisville, KY
- 6141 — C0260 Delayed blockade of retinal gap junctions still promotes neuroprotection in a mouse model of glaucoma.** Abram Akopian, S. Kumar, H. Ramakrishnan, S. A. Bloomfield. SUNY College of Optometry, New York, NY
- 6142 — C0261 Immune tolerance to HSP60 attenuates neurodegeneration in a mouse model of glaucoma.** Eric F. Thee^{1,2}, K. Cho¹, M. J. Jager², D. F. Chen¹. ¹Ophthalmology, Schepens Eye Research Institute, Massachusetts Eye and Ear, Harvard Medical School, Boston, MA; ²Ophthalmology, Leiden University Medical Center, Leiden, Netherlands

6143 — C0262 Fc Receptors involved in neuroprotective γ -Synuclein antibody transport into retinal Müller cells. Katharina Bell, C. Wilding, I. Rosignol, N. Pfeiffer, F. H. Grus. *Experimental Ophthalmology, Medical Center University of Mainz, Mainz, Germany*

6144 — C0263 Autotaxin protects retinal ganglion cells in an autoimmune glaucoma model. Stephanie C. Joachim¹, S. Reinehr¹, G. Stute¹, C. Ullmer², H. Dick¹. ¹Experimental Eye Research Institute, Ruhr University, Bochum, Germany; ²Roche Pharma Research & Early Development, F. Hoffmann-La Roche AG, Basel, Switzerland *CR

6145 — C0264 Statins regulate MMP-2 and MMP-9 secretion and activation in human ONH astrocytes. Milyang Kim, J. Shin, K. Sung. *Seoul Asan Medical Center, Seoul, Korea (the Republic of)*

6146 — C0265 Functional Analysis of MANF in Retinal Ganglion Cells by Oxidative Stress. Mina Mizukami, J. Ko, D. G. Ibrahim, H. Okumichi, Y. Kiuchi. *Ophthalmology, Hiroshima University Graduate School of Biomedical Sciences, Hiroshima, Japan*

6147 — C0266 DMP-543 increases cell survival in the mammalian retina by enhancing ACh release. David Linn, A. Ramo, L. Lusardi, L. Schroedter, G. Peterson. *Biomedical Sciences, Grand Valley State University, Allendale, MI*

6148 — C0267 The activation of mGluR5 against retinal neuron death in retinal ischemia/reperfusion model. Zuohong Li, Y. Jia, W. Su, Y. Zhuo. *zhongshan ophthalmic center, Guangzhou, China*

6149 — C0268 Primary Cilia Enhances Retinal Ganglion Cell Survival after Axotomy by Abortive Cell Cycle Inhibition. Brian Choi, P. M. D'Onofrio, P. D. Koerberle. *Surgery, University of Toronto, Toronto, Ontario, Canada*

6150 — C0269 MEF2D activation by mA KAP signalosomes promotes neurite outgrowth and RGC survival. Caroline Yu, S. Shah, J. Galvao, M. Atkins, M. Kapiloff, J. L. Goldberg. *Ophthalmology, Stanford University, Stanford, CA*

6151 — C0270 The Effects of Zeaxanthin on Adult Zebrafish Vision in Both Normal and Glaucoma Fish. Johnny T. Pham², P. G. Davey¹, D. Cameron¹. ¹College of Optometry, Western University of Health Science, Pomona, CA; ²Graduate College of Biomedical Sciences, Western University of Health Science, Pomona, CA *CR

6152 — C0271 Genetic deletion of DLK and LZK reduce colchicine-induced cell death in human stem cell-derived retinal ganglion cells. Pingwu Zhang¹, Y. Duan¹, J. Cheng¹, C. Berlinicke¹, A. K. Pate¹, D. S. Welsbie², D. J. Zack¹. ¹Wilmer Eye Institute, Johns Hopkins University, Baltimore, MD; ²Ophthalmology, University of California San Diego amp055@ucsd.edu, La Jolla, CA

Exhibit Hall C0272-C0291

Thursday, May 03, 2018 11:00 AM-12:45 PM

Clinical/Epidemiologic Research

542 Medical education, training and telemedicine

Moderator: **Jessie Huang**

6153 — C0272 Modeling a National Telemedicine Screening Program for Diabetic Retinopathy in Iran and Implementing a Pilot Project. Sare Safi^{1,2}, H. Ahmadi¹, M. Katibeh^{2,3}, M. Yaseri^{1,4}, H. Nikkhal^{1,5}, S. Karimi^{1,5}, R. Nourinia¹, A. Tivay⁶, M. Zareinejad⁶, D. Abbasi⁷, A. Eshghi Fallah¹, B. Kheiri¹. ¹Ophthalmic Research Center, Shahid Beheshti University of Medical Sciences, Tehran, Iran (the Islamic Republic of); ²Ophthalmic Epidemiology Research Center, Shahid Beheshti University of Medical Sciences, Tehran, Iran (the Islamic Republic of); ³Center for Global Health, Department of Public Health, Aarhus University, Aarhus, Denmark; ⁴Department of Epidemiology and Biostatistics, School of Public Health, Tehran University of Medical Sciences, Tehran, Iran (the Islamic Republic of); ⁵Department of Ophthalmology, Torfeh Medical Center, Shahid Beheshti University of Medical Sciences, Tehran, Iran (the Islamic Republic of); ⁶New Technologies Research Center, Amirkabir University of Technology, Tehran, Iran (the Islamic Republic of); ⁷Iranian Diabetes Society, Islamshahr, Iran (the Islamic Republic of)

6154 — C0273 Philadelphia Telemedicine Glaucoma Detection and Follow-up Study: Adherence to Community Eye Exam Appointments. Lisa A. Hark^{2,1}, L. Katz², J. S. Myers², J. A. Haller³. ¹Ophthalmology, Columbia University Medical Center, Lafayette Hill, PA; ²Glaucoma Research, Wills Eye Hospital, Philadelphia, PA; ³Ophthalmologist-in-Chief, Wills Eye Hospital, Philadelphia, PA ✗

6155 — C0274 Non-mydriatic camera vs OCT for the detection of diabetic macular edema. David Rivera^{1,2}, A. Jimenez-Corona¹, S. Hernandez-Jimenez², P. Almeda-Valdes², L. Perez-Peralta¹, V. Y. Zurita-Cortes², S. E. Cardenas-Gonzalez¹, E. O. Graue-Hernandez¹. ¹Retina, Instituto de Oftalmologia Fundacion Conde de Valenciana, Mexico, Mexico; ²Instituto Nacional De Ciencias Medica y Nutricion Salvador Zubiran, Mexico, Mexico

6156 — C0275 Measuring The Appropriateness Of Eye Care In Australia: Protocol For A Retrospective Record Review. Kam Chun Ho¹, D. Rahardjo¹, F. Stapleton¹, W. Louise^{2,3}, P. Hibbert^{2,3}, A. J. White^{4,5}, G. Liew⁵, I. Jalbert¹. ¹School of Optometry and Vision Science, UNSW Sydney, Sydney, New South Wales, Australia; ²Faculty of Medicine and Health Sciences, Australian Institute of Health Innovation, Macquarie University, Sydney, New South Wales, Australia; ³Centre for Population Health Research, School of Health Sciences, University of South Australia, Adelaide, South Australia, Australia; ⁴Save Sight Institute, Westmead Hospital, University of Sydney, Sydney, New South Wales, Australia; ⁵Centre for Vision Research, Westmead Institute for Medical Research, Westmead Hospital, University of Sydney, Sydney, New South Wales, Australia

6157 — C0276 Primary care physicians' recall of diagnostic and treatment qualities of glaucoma: effect of an educational program. Kirsten Midgley¹, M. Summerfield^{1,2}. ¹Georgetown University/Washington Hospital Center, Washington, District of Columbia; ²Washington Eye Institute, Riverdale, MD

6158 — C0277 Student perceptions of the ophthalmology curriculum in medical school. Lucy Cobbs¹, E. Tsui², I. Haberman², E. Kim², L. Sperber², M. Wu², J. Schuman². ¹New York University School of Medicine, New York, NY; ²Ophthalmology, New York University School of Medicine, New York, NY

6159 — C0278 Development of a curriculum for teaching glaucoma to ophthalmology residents: A needs assessment. George C. Papachristou¹, J. Meka². ¹Ophthalmology, Penn State Eye Center, Hershey, PA; ²Woodward Center for Excellence in Health Sciences Education, Penn State College of Medicine, Hershey, PA

6160 — C0279 Medical Education in the Digital Era: Feasibility and Design of an Open-Access Online Ophthalmology Curriculum. Nikitha Murali, N. Kombo, S. Forster. *Department of Ophthalmology and Visual Science, Yale School of Medicine, New Haven, CT*

6161 — C0280 Integrated Ophthalmology-General Surgery Internship Educational Impact. Lesley Everett, S. Ramanathan. *Ophthalmology, University of California, San Francisco, San Francisco, CA*

6162 — C0281 Creating an Ophthalmology Curriculum for Emergency Medicine Physicians. Deepak Sambhara¹, C. Wright¹, J. Nunn¹, E. B. Werley², M. J. Wilkinson¹, S. Pantanelli¹. ¹Dept of Ophthalmology, Penn State Eye Center, Hummelstown, PA; ²Emergency Medicine, Penn State College of Medicine, Hershey, PA

- 6163 — C0282 Virtual Eye Surgery Training in Ophthalmic Graduate Medical Education.** Samantha K. Paul¹, M. A. Clark⁴, I. U. Scott⁵, P. B. Greenberg^{2,3}. ¹Alpert Medical School, Providence, RI; ²Division of Ophthalmology, Brown University, Providence, RI; ³Section of Ophthalmology, Providence Veterans Affairs Medical Center, Providence, RI; ⁴Department of Quantitative Health Sciences, University of Massachusetts Medical School, Worcester, MA; ⁵Departments of Ophthalmology and Public Health Sciences, Penn State College of Medicine, Hershey, PA
- 6164 — C0283 The Effect of Regular Practice with a Low-cost Simulator on Surgical Skills and Confidence.** Emily W. Gower¹, S. Tulenko¹, W. Alemayehu², D. Tadesse², B. Bayissasse¹, A. Sisay⁴, F. Admassu⁵. ¹Epidemiology, University of North Carolina at Chapel Hill, Chapel Hill, NC; ²Berhan Health Consulting, Addis Ababa, Ethiopia; ³CBM, Addis Ababa, Ethiopia; ⁴Personal Consulting, Addis Ababa, Ethiopia; ⁵Gondar University, Gondar, Ethiopia ✂
- 6165 — C0284 Quantifying the Impact of Research on Matching Into Ophthalmology Residency.** Albert Bargoud¹, L. Thangmathesvaran¹, V. R. Patel¹, A. S. Khouri². ¹Rutgers New Jersey Medical School, Newark, NJ; ²Institute of Ophthalmology and Visual Science, Rutgers New Jersey Medical School, Newark, NJ
- 6166 — C0285 Ophthalmology Urgent Care Preceptorship: Building Medical Student Ophthalmic Knowledge and Developing Residents-as-Teachers.** mona L. Camacci¹, R. Rolius¹, S. D. Kim², P. Nguyen², V. Nguyen², J. Liechty², A. Westcott³, D. A. Quillen¹, S. Pantanelli¹. ¹Ophthalmology, Penn State Health Milton S. Hershey Medical Center, Hershey, PA; ²Pennsylvania State College of Medicine, Hershey, PA; ³Woodward Center for Excellence in Health Sciences Education, Penn State Health Milton S. Hershey Medical Center, Hershey, PA *CR
- 6167 — C0286 Assessment of mentorship needs during ophthalmology residency.** Edmund Tsui¹, C. Lo², E. Kim¹, I. Haberman¹, L. T. Sperber¹, A. Madu¹, D. Lazzaro¹, J. Schuman¹. ¹Ophthalmology, New York University School of Medicine, New York, NY; ²Ophthalmology, UCLA Jules Stein Eye Institute, Los Angeles, CA
- 6168 — C0287 Resident Wellness in United States Ophthalmic Graduate Medical Education: The Resident Perspective.** Elaine M. Tran^{2,1}, I. U. Scott¹, M. A. Clark³, P. B. Greenberg^{1,5}. ¹Division of Ophthalmology, Warren Alpert Medical School of Brown University, Providence, RI; ²Program in Liberal Medical Education, Brown University, Providence, RI; ³Department of Quantitative Health Sciences, University of Massachusetts Medical School, Worcester, MA; ⁴Departments of Ophthalmology and Public Health Sciences, Penn State College of Medicine, Hershey, PA; ⁵Section of Ophthalmology, Providence Veterans Affairs Medical Center, Providence, RI
- 6169 — C0288 Diversity in the Vision Research Community.** Charles Wright, N. Agarwal, C. E. Perez-Gonzalez, D. M. Schneeweis. Office of the Scientific Director, National Eye Institute, Bethesda, MD
- 6170 — C0289 Differences in practice of ophthalmology by gender in Australia.** Tiffany Lo¹, A. J. Hall², L. L. Lim^{1,2}. ¹The Centre for Eye Research Australia, St Kilda East, Victoria, Australia; ²The Royal Victorian Eye and Ear Hospital Melbourne, Melbourne, Victoria, Australia; ³Ophthalmology, The Alfred Hospital, Melbourne, Victoria, Australia *CR
- 6171 — C0290 Difference-in-Differences Analysis of the Association between Publicly Reporting Physician-Industry Relationships and Industry Payments to Ophthalmologists.** Dan Gong¹, J. S. Chang². ¹Department of Ophthalmology, Edward S. Harkness Eye Institute, Columbia University Medical Center, New York, NY; ²Department of Ophthalmology and Visual Sciences, University of Wisconsin School of Medicine and Public Health, Madison, WI
- 6172 — C0291 Academic Ophthalmology Departments and their use of Facebook, Instagram and Twitter Social Media Pages.** Robert F. Melendez^{1,2}, P. Angadi³, E. Sledz¹, G. Acosta¹, M. Griego¹, M. Sherpa¹, C. Teng¹. ¹Surgery/Ophthalmology, University of New Mexico Health Sciences Center, Albuquerque, NM; ²Eye Associates of NM, Albuquerque, NM; ³Ophthalmology, Howard University, Washington, District of Columbia *CR

Exhibit Hall C0292-C0309

Thursday, May 03, 2018 11:00 AM-12:45 PM

Retina

543 Trauma and Endophthalmitis

Moderator: Dennis P. Han

6173 — C0292 Post-surgical versus post-intravitreal injection endophthalmitis: changing patterns in causative flora. Matthew P. Simunovic^{1,2}, A. P. Ong^{1,2}, N. Angbue Te², W. Yates^{1,2}, R. Symes^{1,2}, S. Zagora^{1,2}, P. J. McCluskey^{1,2}, A. Chang^{1,2}. ¹Save Sight Institute, University of Sydney, Sydney, New South Wales, Australia; ²Sydney Eye Hospital, Sydney, New South Wales, Australia

6174 — C0293 The effect of Abusive Head Trauma on the Retina and Its Implication for retinal hemorrhage Using 3D Finate Element. Donny W. Suh¹, L. Gu², H. Mozafari², H. Song³. ¹Department of Ophthalmology, University of Nebraska, Omaha, NE; ²Biomedical Engineering, University of Nebraska, Lincoln, NE; ³University of Nebraska Medical School, Omaha, NE

6175 — C0294 Post traumatic endophthalmitis with intraocular foreign bodies in children in southern China: Epidemiology, prognostic factors and clinical outcomes. Yao Yang^{1,2}, X. Lin^{1,2}, C. Yang³. ¹Zhongshan Ophthalmic Center, Sun Yat-sen University, Guangzhou, Guangdong, China; ²State Key Laboratory of Ophthalmology, Guangzhou, Guangdong, China; ³The Fifth Affiliated Hospital Of Sun Yat-Sen University, Zhuhai, China

6176 — C0295 Complications and Visual Outcomes of Intraocular Foreign Bodies. Sahas Narain¹, W. Wang², H. Sandhu². ¹University of Louisville School of Medicine, Louisville, KY; ²Ophthalmology and Visual Sciences, University of Louisville, Louisville, KY

6177 — C0296 Ocular TASER Trauma. Stavros N. Moysidis^{1,2}, N. Koullis^{3,2}, D. C. Rodger^{2,4}, B. Burkemper², G. A. Williams¹, M. S. Humayun^{2,4}, D. Elliott⁵. ¹Associated Retinal Consultants, Oakland University William Beaumont School of Medicine, Royal Oak, MI; ²USC Roski Eye Institute, Department of Ophthalmology, Keck School of Medicine, University of Southern California, Los Angeles, CA; ³William Beaumont Hospital, Royal Oak, MI; ⁴USC Institute for Biomedical Therapeutics, Lo, CA; ⁵Retina Service, Department of Ophthalmology, Massachusetts Eye and Ear Infirmary, Harvard Medical School, Boston, MA

6178 — C0297 Morphological Analysis of Ovine Retinal Vasculature to Assess Risk for Retinal Hemorrhage as a Function of Age. Brittany Coats, M. Byrne. Mechanical Engineering, University of Utah, Salt Lake City, UT

6179 — C0298 Outcomes of Intraocular Foreign Body Injuries. David Kilpatrick, J. Burnham, C. J. Chen. Ophthalmology, University of Mississippi Medical Center, Jackson, MS

6180 — C0299 Preliminary Optical Coherence Tomography Findings in Abusive Head Trauma (Shaken Baby Syndrome). Maryo Kohen, F. Orge. Department of Ophthalmology, Case Western Reserve University, Beachwood, OH

6181 — C0300 Same day pneumotometry might be a risk for endophthalmitis after small gauge pars plana vitrectomy. Shwu-Jiuan Sheu^{2,1}, C. Tseng². ¹Ophthalmology, National Yang Ming University, Kaohsiung, Taiwan; ²Ophthalmology, Kaohsiung Veterans General Hospital, Kaohsiung, Taiwan, Taiwan

6182 — C0301 Etiology and antimicrobial trends over time in infections endophthalmitis. Austin D. Igelman, J. Simonett, S. Taylor, C. J. Flaxel. Casey Eye Institute, Oregon Health & Science University, Portland, OR

6183 — C0302 Does size really matter?

Comparing rates of endophthalmitis following intravitreal injections using 30 vs. 32 gauge needles. Ilyse Kornblau¹, H. Pasha¹, C. Andersen², J. El-Annan¹. ¹Ophthalmology and Visual Sciences, University of Texas Medical Branch, Galveston, TX; ²Office of Biostatistics, Department of Preventive Medicine and Community Health, University of Texas Medical Branch, Galveston, TX

6184 — C0303 Absence of posterior vitreous detachment as a possible risk factor of severe bleb-related endophthalmitis.

Ryo Baba, K. Umazume, H. Goto. Ophthalmology, Tokyo Medical University, Shinjyukuku, Tokyo, Japan

6185 — C0304 Endophthalmitis Rates after Bilateral Same Day Intravitreal Anti-VEGF Injections.

Durga S. Borkar, A. Obeid, D. Su, P. Storey, X. Gao, R. Kaiser, S. Garg, J. Hsu. Retina Service, Wills Eye Hospital, Philadelphia, PA

6186 — C0305 Clinical features, antibiotic susceptibility profiles, and outcomes of postoperative endophthalmitis caused by Achromobacter xylosoxidans : importance of aggressive surgical removal of capsular bag.

Joong Hyun Park¹, D. Kim², J. Kim¹. ¹Department of Ophthalmology, Jeju National University Hospital, Jeju-si, Jeju Self-Governing Province, Korea (the Republic of); ²Department of ophthalmology, Chungbuk National University Hospital, Cheongju, Korea (the Republic of)

6187 — C0306 Rates of post-injection endophthalmitis with 5% vs. 10% povidone-iodine preparation.

Zachary Mills¹, C. A. Harper², J. A. Martinez², J. Dooner², M. Levitan², P. A. Nixon², R. Wong², R. C. Young², S. Day Ghafouri². ¹Dell Medical School, Austin, TX; ²Austin Retina Associates, Austin, TX

6188 — C0307 Comparing Traditional Gram Stain to Cytospin-Enhanced Cytology of Vitreous Samples in Patients with Endophthalmitis.

Michael Jansen, J. V. Giovino, N. S. Mehta, C. Jacob, D. Gologorsky, R. B. Rosen, A. Deobhakta. Ophthalmology, New York Eye and Ear, New York, NY *CR

6189 — C0308 The Comparative Incidence of Endophthalmitis Following Intravitreal Injection with Bevacizumab, Ranibizumab and Aflibercept.

Brian L. VanderBeek¹, J. Bavinger¹, Y. Yu². ¹Retina, Scheie Eye Institute University of Pennsylvania, Philadelphia, PA; ²Ophthalmology, Center for Preventive Ophthalmology and Biostatistics, University of Pennsylvania, Philadelphia, PA

6190 — C0309 Quantifying Ocular Manifestations in Abusive Head Trauma.

Helen Song¹, H. Mozafari², P. Deegan¹, L. Gu², D. W. Suh^{1,3}. ¹University of Nebraska Medical Center, Omaha, NE; ²Mechanical and Materials Engineering, University of Nebraska - Lincoln, Lincoln, NE; ³Pediatric Ophthalmology, Children's Hospital and Medical Center, Omaha, NE

Exhibit Hall C0345-C0356

Thursday, May 03, 2018 11:00 AM-12:45 PM

Retina

545 Image-guided Laser Applications and Lasers in Retinal Therapy

Moderator: Edoardo Midena

6191 — C0345 Subthreshold Laser Photocoagulation using a Conventional Pattern Scan Laser to Treat Macular Edema.

Tomoyasu Shiraya¹, S. Kato¹, F. Araki¹, A. Tsutsumi². ¹Ophthalmology, The University of Tokyo Hospital, Tokyo, Japan; ²Tsutsumi Eye Clinic, Tokyo, Japan

6192 — C0346 Computer-Navigated Focal Macular Laser in the Treatment of Central Serous Chorioretinopathy.

Matthew S. Katz, T. Choudhury. National Retina Institute, Towson, MD

6193 — C0347 3-year results of short-duration multiple-session subthreshold micropulse yellow laser (577-nm) for chronic central serous chorioretinopathy.

Han Sang Park, S. Kim, O. Kwon, Y. Kim. Nune eye hospital, Daegu, Kyungpook, Korea (the Republic of)

6194 — C0348 What can Adaptive Optics do for Laser Photocoagulation?

Pedro Mecê^{1,2}, C. Petit¹, E. Gofas Salas^{1,3}, L. Mugnier¹, K. Grieve^{3,4}, C. Chabrier², J. A. Sahel^{3,5}, M. Paques^{3,4}, S. Meimon^{1,4}. ¹ONERA - The French Aerospace Lab, Châtillon, France; ²Quantel Medical, Cournon d'Auvergne, France; ³Vision Institute, Quinze-Vingts Ophthalmology Hospital, Paris, France; ⁴Paris' Group : Paris Adaptive-optics for Retinal Imaging and Surgery, Paris, France; ⁵Department of Ophthalmology, The University of Pittsburgh School of Medicine, Pittsburgh, France *CR

6195 — C0349 Retinal and choroidal perfusion status following laser coagulation assessed with Swept Source Optical Coherence Tomography Angiography.

Sonja Karst, C. Mitsch, R. Scharinger, C. Scholda, U. Schmidt-Erfurth. Department of Ophthalmology, Medical University Vienna, Vienna, Austria

6196 — C0350 3D simulation of pan-retinal laser photocoagulation for calculating the photocoagulation index using optical analysis software.

Kentaro Nishida, H. Sakaguchi, K. Nishida. Ophthalmology, Osaka University Graduate School of Medicine, Suita, Osaka, Japan

6197 — C0351 Nd:YAG effects on Vitreous in Patients with Vision Degrading Vitreopathy.

Jeannie Nguyen-Cuu¹, J. Nguyen¹, K. M. Yee¹, J. Mamou², J. Ketterling², J. Sebag¹. ¹VMR Institute for Vitreous Macula Retina, Huntington Beach, CA; ²Lizzi Ctr for Biomedical Engineering, Riverside Research, New York, NY

6198 — C0352 OCTA-guided Navilas therapy for choroidal neovascular membranes.

francesca amoroso, A. Pedinielli, R. Blanco Garavito, P. Astroz, A. Miere, F. Gherdaoui, E. H. Souied. Ophthalmology, Hopital Intercommunal de Creteil, Creteil, France

6199 — C0353 Comparison and analysis of micropulse and continuous wave laser application on retinal pigment epithelium (RPE) ex vivo.

Ralf Brinkmann^{1,2}, K. Inagaki³, B. Schmarbeck², A. Hufilz², K. Bliedner², K. Ohkoshi³, Y. Miura^{1,2}. ¹University of Luebeck, Luebeck, Germany; ²Medical Laser Center Luebeck, Luebeck, Germany; ³St. Luke's International Hospital, Tokyo, Japan

6200 — C0354 Photocoagulation laser control using phase-sensitive optical coherence tomography toward laser lesion management.

En Li, S. Makita, Y. Yasuno. Computational Optics Group, University of Tsukuba, Tsukuba, Japan *CR

6201 — C0355 Comparison of pain and duration of panretinal photocoagulation using conventional multipot laser and Navigated laser.

Alexandre Pedinielli, F. Amoroso, P. Astroz, E. Bruyere, E. H. Souied. Ophthalmology, CHI Créteil, Créteil, France

6202 — C0356 Measurements of retinal temperature using Laser Speckle Imaging (LSI).

Nicole Sevilla¹, I. Saytashev², P. Lopez², J. Chue-Sang¹, H. Wertheim², J. Ramella-Roman². ¹BME, Florida International University, Miami, FL; ²Herbert Wertheim College of Medicine, Ophthalmology, Florida International University, Miami, FL

Ballrooms BC

Thursday, May 03, 2018 1:00 PM-2:00 PM

***546 Beckman-Argyros Award in
Vision Research***

— 1:00 Introduction: Anne Hultgren

— 1:10 James G. Fujimoto, PhD: History,
Evolution and Future Prospects of Optical
Coherence Tomography

Ballrooms BC

Thursday, May 03, 2018 2:15 PM-3:45 PM

**547 ARVO/Alcon Keynote Session:
*Principles of gene repair in
human embryos***

In vitro fertilization (IVF) represents a successful cell therapy approach for treatment of infertility. However, IVF is increasingly utilized for preimplantation genetic diagnosis (PGD) followed by embryo selection to prevent the transmission of heritable human diseases. Our Center is actively investigating novel germ line gene therapy approaches that would allow to repair gene defects in mutant gametes or early preimplantation embryos. We are focused on answering important safety and efficacy questions regarding techniques that could one day be useful in preventing thousands of inherited genetic disorders that affect millions of people worldwide. The focus of this lecture is to inform on applications of gene editing and gene replacement strategies in preclinical and clinical studies demonstrating feasibility, efficacy and long-term safety of germ line gene therapy.

— 2:15 **Principles of gene repair in human embryos: Shoukrat Mitalipov, OHSU**

Indices

Moderator Index	401
Author Index	413

See arvo.org/program-summary for:

- ARVO Commercial Relationships Policy
- Statement of Registering Clinical Trials
- Clinical Trials Index

ARVO
2018

April 29 – May 3 | Honolulu

Stand strong for science
Stand for strong vision science

Moderator Index

This is an alphabetic listing of moderators for paper and poster sessions, symposia, workshops, and SIGs that were confirmed as of March 15, 2018. Included are the Moderator's name, Commercial Relationships disclosure, day, date, time, session location, session number and title.

- Abazari, Azin**, Integrated Fiber Optic Systems, Inc. (F); Moderator: Commercial Relationships Disclosure
Thursday, May 3, 11:00 AM Room 316C
534 Cataract Surgery, epidemiology and clinical outcomes
- Abcouwer, Steven F.**, Unity Biotechnology (San Francisco, CA), ONL Therapeutics (Ann Arbor, MI), F. Hoffmann La Roche (Basel, Switzerland) (F); Unity Biotechnology (San Francisco, CA), ONL Therapeutics (Ann Arbor, MI), F. Hoffmann La Roche (Basel, Switzerland) (R); Moderator: Commercial Relationships Disclosure
Wednesday, May 2, 3:30 PM Room 315
473 Signaling in retinal degeneration
- Abdel-Rahman, Mohamed H.**, Unpaid Consultant to Impact Genetics. I receive no financial compensation. (C); Moderator: Commercial Relationships Disclosure
Wednesday, May 2, 8:15 AM Exhibit Hall
425 Pathology and Omics
- Abdulrazik, Muhammad**, None
Wednesday, May 2, 1:30 PM Room 314
462 Data sharing: Clinical science in the era of artificial intelligence
- Abdulrazik, Muhammad**, None
Wednesday, May 2, 1:30 PM Room 316B
464 Making ARVO more accessible: Experience from countries with emerging vision-oriented research agenda
- Abel, Larry A.**, None
Wednesday, May 2, 11:15 AM Room 306AB
430 Eye Movements and Nystagmus
- Aguirre, Gustavo D.**, Provisional patent applications have been submitted by the University of Pennsylvania (AAV mediated gene augmentation for RPGR-XLRP and NPHP5-LCA) and University of Florida (combined rhodopsin knockdown and replacement for adRP) (P); Moderator: Commercial Relationships Disclosure
Thursday, May 3, 11:00 AM Room 316A
532 Retina III
- Aihara, Makoto**, None
Tuesday, May 1, 3:30 PM Exhibit Hall
371 Biochemical processes and disease mechanisms involved in glaucoma
- Alarcon-Martinez, Luis**, None
Wednesday, May 2, 3:30 PM Exhibit Hall
482 Electrophysiology and Visual Fields
- Allen, Rachael S.**, None
Thursday, May 3, 11:00 AM Room 314
530 Diseases and Protection
- Alves, Celso H.**, None
Monday, April 30, 8:15 AM Exhibit Hall
222 Retinal glia: cell biology
- Antony, Bhavna J.**, IBM Research (E); Moderator: Commercial Relationships Disclosure
Monday, April 30, 8:15 AM Ballrooms BC
214 Deep Learning Highlights
- Argueso, Pablo**, None
Monday, April 30, 8:15 AM Room 312
205 Ocular surface biology, disease, surgery
- Aronow, Mary E.**, None
Wednesday, May 2, 8:15 AM Exhibit Hall
424 Ocular complications of therapy: trends, imaging, treatment
- Arsenijevic, Yvan**, None
Tuesday, May 1, 3:30 PM Room 320
369 Regulation of Ocular Gene Expression and Epigenetics
- Asbell, Penny A.**, None
Wednesday, May 2, 8:15 AM Room 312
405 Contact Lens
- Ash, John D.**, None
Monday, April 30, 8:15 AM Room 315
208 RPE physiology
- Ash, John D.**, None
Wednesday, May 2, 11:15 AM Room 315
435 Gene function and neural protection
- Ashby, Regan S.**, Ashby, Regan (University of Canberra).
2017. Compositions for the Prevention and Treatment of Myopia. Australian International Patent Application PCT/AU2017/050310. (P); Moderator: Commercial Relationships Disclosure
Sunday, April 29, 3:15 PM Room 313A
149 Visual Cues and Signaling in Myopia
- Audo, Isabelle S.**, ProQR (C); Moderator: Commercial Relationships Disclosure
Tuesday, May 1, 11:15 AM Exhibit Hall
337 Macular diseases excluding AMD
- Audo, Isabelle S.**, ProQR (C); Moderator: Commercial Relationships Disclosure
Wednesday, May 2, 3:30 PM Room 315
473 Signaling in retinal degeneration
- Avery, Robert L.**, Genentech, Regeneron (F); Regeneron, Replenish, Novartis (I); Amgen, Allergan, Alimera, Iridex, Novartis, Genentech, Santen, Apellis, psivida, Ocular Therapeutix (C); Replenish (P); Amgen, Allergan, Alimera, Iridex, Novartis, Genentech, Santen, Apellis, psivida, Ocular Therapeutix (R); Moderator: Commercial Relationships Disclosure
Sunday, April 29, 3:15 PM Exhibit Hall
157 AMD and Anti-VEGF I
- Avitabile, Teresio**, None
Sunday, April 29, 3:15 PM Room 316A
152 AMD
- Avitabile, Teresio**, None
Monday, April 30, 3:30 PM Room 316A
269 From optics to electronics: New technologies for improving vision in health and disease - Minisymposium
- Ayton, Lauren N.**, Bionic Vision Technologies (E); Moderator: Commercial Relationships Disclosure
Monday, April 30, 3:30 PM Room 306AB
262 Functional Vision and Visual Function
- Azar, Dimitri T.**, Novartis, Google Verily, Verb Surgical, TFOS, Chicago Medical Society, Chicago Ophthalmological Society (F); Novartis, Google Verily Life Sciences (I); Google Verily Life Sciences (E); Verb Surgical, TFOS, COS, CMS (S); Moderator: Commercial Relationships Disclosure
Tuesday, May 1, 8:15 AM Room 312
303 Corneal Neovascularization and Immunology
- Baba, Kenkichi**, None
Thursday, May 3, 11:00 AM Exhibit Hall
539 Retinal diseases and aging: preclinical studies
- Bach, Michael**, Diagnosys (C); Moderator: Commercial Relationships Disclosure
Wednesday, May 2, 3:30 PM Exhibit Hall
479 Human electrophysiology
- Baker, Sheila**, None
Tuesday, May 1, 11:15 AM Exhibit Hall
335 Biochemistry and molecular biology of the retina/RPE
- Balasubramanian, Madhusudhanan**, None
Wednesday, May 2, 8:15 AM Exhibit Hall
416 Imaging: Posterior Segment II
- Baratz, Keith H.**, None
Wednesday, May 2, 8:15 AM Room 310
403 Treatment on the horizon for Fuchs endothelial corneal dystrophy - Minisymposium
- Barbosa-Breda, Joao**, None
Wednesday, May 2, 1:30 PM Room 316C
465 The path from bench to bedside: Professional development and entrepreneurship
- Behar-Cohen, Francine F.**, advisory board for Allergan, Bayer, Novartis, Genentech, Thrombogenics, Roche, Boehringer-Ingelheim. Founder of Eyevensys. (F); Eyevensys (C); Patent of mineralocorticoid receptor antagonists for retinal diseases (P); Honoraria from Allergan, Bayer (R); Moderator: Commercial Relationships Disclosure
Tuesday, May 1, 11:15 AM Exhibit Hall
337 Macular diseases excluding AMD
- Bell, Katharina**, None
Tuesday, May 1, 3:30 PM Exhibit Hall
377 Neurodegeneration
- Benavente-Perez, Alexandra**, Johnson and Johnson Vision (I); Moderator: Commercial Relationships Disclosure
Monday, April 30, 8:15 AM Room 313A
206 New Perspectives in Human Myopia Research
- Benowitz, Larry I.**, None
Sunday, April 29, 1:00 PM Room 310
118 A Matter of Life or Death: Regulation of RGC Survival by Glia and Interneurons - SIG
- Berger, Elizabeth A.**, None
Sunday, April 29, 1:00 PM Exhibit Hall
134 Infection and Immunology
- Bergua, Antonio**, None
Sunday, April 29, 8:15 AM Exhibit Hall
114 Ocular structures in development, health, and disease
- Besirli, Cagri G.**, iRenix Medical (I); iRenix Medical (C); iRenix Medical, ONL Therapeutics, HIF Technologies (P); iRenix Medical (R); iRenix Medical (S); Moderator: Commercial Relationships Disclosure
Tuesday, April 29, 1:30 PM Room 314
353 Bridging and bootstrapping in today's risk averse environment
- Biagioni, Martina**, None
Sunday, April 29, 3:15 PM Exhibit Hall
162 Photoreceptor Degeneration
- Birch, David G.**, Ionis, Nightstar, Allergan, AGTC (F); AGTC, Genentech, Nacuity, Ionis, Nightstar (C); Moderator: Commercial Relationships Disclosure
Sunday, April 29, 8:15 AM Exhibit Hall
104 Retinitis pigmentosa (clinical)
- Birch, Eileen E.**, Amblyotech (F); Moderator: Commercial Relationships Disclosure
Thursday, May 3, 11:00 AM Room 306AB
525 Amblyopia
- Black, Alex A.**, None
Monday, April 30, 3:30 PM Room 306AB
262 Functional Vision and Visual Function
- Blanch, Richard J.**, None
Sunday, April 29, 1:00 PM Room 316C
126 Grant writing: How to get your proposals funded
- Blanch, Richard J.**, None
Wednesday, May 2, 1:30 PM Room 301AB
455 Animal Models of Ocular Trauma - SIG
- Bodaghi, Bahram**, Novartis, Bayer (F); AbbVie, Allergan, Santen (C); Moderator: Commercial Relationships Disclosure
Wednesday, May 2, 8:15 AM Exhibit Hall
421 Clinical Uveitis and Scleritis: Epidemiology, Diagnosis and Outcomes
- Bolch, Susan**, None
Thursday, May 3, 8:15 AM Exhibit Hall
503 Molecular mechanisms of diabetic retinopathy
- Bonilha, Vera L.**, None
Wednesday, May 2, 8:15 AM Exhibit Hall
413 RPE
- Borras, Terete**, None
Sunday, April 29, 1:00 PM Ballroom A
127 Delivery of therapeutics to ocular tissues - SIG
- Borras, Terete**, None
Wednesday, May 2, 8:15 AM Ballroom A
411 Trabecular Meshwork
- Bovenkamp, Diane**, None
Thursday, May 3, 8:15 AM Ballroom A
502 Neuronal Health in AMD and Glaucoma: Lifestyle-based Therapies to Live Long and Prosper
- Bowes Rickman, Catherine**, None
Sunday, April 29, 3:15 PM Room 320
155 Biochemistry and Molecular Biology of AMD
- Brantley, Milam A.**, None
Sunday, April 29, 3:15 PM Room 316C
154 Macular Diseases Excluding AMD
- Brantley, Milam A.**, None
Wednesday, May 2, 11:15 AM Exhibit Hall
452 Diabetic Macular Edema Clinical Research
- Brunken, William J.**, None
Wednesday, May 2, 8:15 AM Room 315
407 Retinal glial and immune responses

Bucolo – Daniels

- Bucolo, Claudio**, None
Monday, April 30, 11:15 AM Room 316A
231 Retina I
- Bucolo, Claudio**, None
Tuesday, May 1, 11:15 AM Room 301AB
325 Metabolic regulation of ocular immune responses - Minisymposium
- Bui, Bang V.**, None
Wednesday, May 2, 11:15 AM Ballroom A
439 Capillaries, Blood Flow, OCT Angiography
- Bui, Bang V.**, None
Wednesday, May 2, 3:30 PM Exhibit Hall
481 Capillaries, Blood Flow, OCT Angiography
- Bui, Bang V.**, None
Thursday, May 3, 11:00 AM Room 314
530 Diseases and Protection
- Buitendijk, Gabrielle H.**, None
Tuesday, May 1, 11:15 AM Room 316B
331 Nutrition and Eye Disease
- Busik, Julia V.**, None
Monday, April 30, 8:15 AM Room 320
212 Biochemistry and Molecular Biology of Diabetic Retinopathy
- Busik, Julia V.**, None
Thursday, May 3, 11:00 AM Room 315
531 Retinal lipid and glucose metabolism in health and disease - Minisymposium
- Calkins, David J.**, AC Immune SA, Hoffmann-La Roche (F); Sustain Biotechnology, LLC (C); Moderator: Commercial Relationships Disclosure
Thursday, May 3, 8:15 AM Ballroom A
502 Neuronal Health in AMD and Glaucoma: Lifestyle-based Therapies to Live Long and Prosper
- Campbell, J. Peter**, None
Tuesday, May 1, 3:30 PM Exhibit Hall
378 ROP 2
- Campochiaro, Peter A.**, Genentech, Regeneron, Aerpio (F); Moderator: Commercial Relationships Disclosure
Monday, April 30, 1:30 PM Room 311
252 Managing Patients with Diabetic Macular Edema, Diabetic Retinopathy, Neovascular and Non-Neovascular AMD, and Retinal Vein Occlusion: How to Best Utilize the Latest Data from Clinical Trials - SIG
- Canto Soler, Valeria**, Inventor - Methods for Forming Three-Dimensional Human Retinal Tissue In Vitro. US Application US2016033312A1 (P); Moderator: Commercial Relationships Disclosure
Monday, April 30, 3:30 PM Room 315
268 Stem Cells: from retinal organoids to transplantation
- Carkeet, Andrew**, None
Wednesday, May 2, 3:30 PM Room 310
469 Refractive Error and Visual Function
- Carroll, Joseph**, OptoVue, Inc (F); Meira GTx (C); Moderator: Commercial Relationships Disclosure
Wednesday, May 2, 3:30 PM Ballrooms BC
477 Clinical Posterior Segment Imaging
- Carroll, Joseph**, None
Thursday, May 3, 8:15 AM Exhibit Hall
521 Animal Imaging
- Cebulla, Colleen M.**, None
Thursday, May 3, 11:00 AM Room 313A
529 Clinical Innovations in Oncology
- Chaitin, Michael H.**, None
Monday, April 30, 1:30 PM Room 316B
257 NIH-CSR workshop on the peer review of grant applications
- Chan, Kevin C.**, None
Wednesday, May 2, 11:15 AM Exhibit Hall
447 Imaging Technologies and Applications II
- Chan, Matilda F.**, None
Monday, April 30, 3:30 PM Exhibit Hall
282 Corneal Development, Cell and Molecular Biology
- Chandna, Arvind**, None
Sunday, April 29, 8:15 AM Exhibit Hall
106 Eyelids: evaluation, analysis and therapeutics
- Chang, Robert**, Alcon, Allergan, Santen, Iridex, Aerie, Carl Zeiss Meditec (C); Moderator: Commercial Relationships Disclosure
Monday, April 30, 3:30 PM Exhibit Hall
274 Surgery and Wound Healing II
- Chao, Jennifer R.**, None
Tuesday, May 1, 1:30 PM Room 316A
355 Clinician-Scientist Forum: How to become a successful clinician-scientist
- Charbel Issa, Peter**, None
Monday, April 30, 11:15 AM Room 311
227 Inherited Retinal Diseases
- Chaudhuri, Zia**, None
Sunday, April 29, 8:15 AM Exhibit Hall
370 Lacrimal and adnexal diseases
- Chaudhuri, Zia**, None
Monday, April 30, 11:15 AM Room 306AB
225 Strabismus
- Chauhan, Sunil**, None
Tuesday, May 1, 11:15 AM Exhibit Hall
343 Corneal Neovascularization and Immunology
- Chen, Ching-Kang J.**, None
Thursday, May 3, 11:00 AM Room 320
535 Genome: Structure, Function and Editing
- Chen, Dong F.**, PriMed Corp (C); Patent applications on therapies that target autoimmunity for treating glaucoma and optic neuropathy (14/002.036) (P); Moderator: Commercial Relationships Disclosure
Monday, April 30, 3:30 PM Ballroom A
272 Neurodegeneration
- Chen, Jing**, None
Tuesday, May 1, 8:15 AM Exhibit Hall
312 Retinal vascular biology
- Cheng, Ching-Yu**, None
Monday, April 30, 11:15 AM Exhibit Hall
243 Genetic and Retinal disease epidemiology
- Cheong, Allen M.**, None
Monday, April 30, 8:15 AM Exhibit Hall
216 Visual function- beyond clinical VA and CSF
- Chiang, Michael F.**, National Institutes of Health, National Science Foundation (F); Inteleretina (I); Novartis (C); Clarity Medical Systems (S); Moderator: Commercial Relationships Disclosure
Wednesday, May 2, 8:15 AM Room 313A
406 Retinopathy of Prematurity
- Choh, Vivian**, None
Monday, April 30, 11:15 AM Room 313A
229 Anatomical changes during ocular development and disease
- Choudhury, Farzana**, None
Wednesday, May 2, 3:30 PM Exhibit Hall
484 Consequences of and associations with vision impairment
- Chui, Yuen P.**, None
Monday, April 30, 11:15 AM Exhibit Hall
239 Image Processing and Interpretation
- Chung, Susana T.**, None
Tuesday, May 1, 8:15 AM Room 306AB
301 Near Tasks and Reading with Vision Impairment
- Clark, Abbot F.**, Lung Therapeutics, Inc.; Unity Biotechnology (F); Goodmans LLP; Novartis; Allergan; (C); Moderator: Commercial Relationships Disclosure
Thursday, May 3, 11:00 AM Ballrooms BC
537 Pharmacological Interventions and Cellular Mechanisms
- Clark, Christopher A.**, None
Wednesday, May 2, 3:30 PM Room 310
469 Refractive Error and Visual Function
- Coletta, Nancy J.**, None
Thursday, May 3, 8:15 AM Exhibit Hall
520 Image Quality and Vision
- Congdon, Nathan G.**, None
Tuesday, May 1, 11:15 AM Exhibit Hall
345 Refractive error epidemiology and management
- Connor, Kip M.**, None
Tuesday, May 1, 8:15 AM Exhibit Hall
312 Retinal vascular biology
- Cooke Bailey, Jessica**, None
Wednesday, May 2, 3:30 PM Exhibit Hall
483 Genetics of Glaucoma
- Cordeiro, M Francesca**, Inventor on DARC patent (P); Moderator: Commercial Relationships Disclosure
Monday, April 30, 11:15 AM Ballroom A
235 What's new in glaucoma imaging? - Minisymposium
- Cordeiro, M Francesca**, Inventor on DARC patent (P); Moderator: Commercial Relationships Disclosure
Tuesday, May 1, 8:15 AM Room 313A
304 The nuts and bolts of novel drug development - Minisymposium
- Cordeiro, M Francesca**, Inventor on DARC patent (P); Moderator: Commercial Relationships Disclosure
Tuesday, May 1, 11:15 AM Ballroom A
333 New Ideas
- Cordeiro, M Francesca**, Heidelberg Engineering equipment loan (F); Named inventor on DARC patent (P); Heidelberg Engineering travel grant (R); Moderator: Commercial Relationships Disclosure
Tuesday, May 1, 3:30 PM Ballroom A
370 Imaging Posterior Segment and Progression
- Corson, Timothy W.**, PCT/US2016/062851, 2016/0222388 A1, US 2016/0060241 A1 (P); Moderator: Commercial Relationships Disclosure
Tuesday, May 1, 8:15 AM Room 313A
304 The nuts and bolts of novel drug development - Minisymposium
- Costela, Francisco**, None
Wednesday, May 2, 8:15 AM Exhibit Hall
420 Patient reported outcomes, methods and reporting of research
- Coulson-Thomas, Vivien J.**, None
Tuesday, May 1, 11:15 AM Room 312
328 Corneal epithelium
- Coupland, Sarah E.**, None
Wednesday, May 2, 11:15 AM Room 301AB
429 Why cancer inflames the eye - Minisymposium
- Crabb, David**, None
Wednesday, May 2, 1:30 PM Room 313A
460 Patient report outcome measures (PROMs) in clinical glaucoma research: refining current tools, exploring new opportunities and improving means of data capture and analysis - SIG
- Craig, Jamie E.**, None
Sunday, April 29, 3:15 PM Room 301AB
144 Pathogens harbouring in the eye
- Craig, Jennifer P.**, Oculvue, Allergan, Manuka Health NZ, E-Swin, CooperVision, Alcon, Optima Pharmaceuticals, Akorn, Medmont, TearScience, Johnson & Johnson (F); Carl Zeiss Meditec, Azura Ophthalmics (C); Novartis (R); Moderator: Commercial Relationships Disclosure
Wednesday, May 2, 3:30 PM Room 312
471 Dry Eye Non-clinical
- Crosson, Craig E.**, Ocular Services On Demand (OSOD) (C); Moderator: Commercial Relationships Disclosure
Monday, April 30, 11:15 AM Room 316A
231 Retina I
- Crowston, Jonathan G.**, None
Tuesday, May 1, 11:15 AM Ballroom A
333 New Ideas
- Csaky, Karl G.**, Genentech, Allergan, Regeneron, Novartis, Roche (C); Moderator: Commercial Relationships Disclosure
Monday, April 30, 8:15 AM Exhibit Hall
221 AMD and Anti-VEGF II
- Curcio, Christine A.**, Heidelberg Engineering, Hoffman LaRoche (F); Moderator: Commercial Relationships Disclosure
Tuesday, May 1, 1:30 PM Room 306AB
348 Next-Gen autofluorescence imaging - lets get ready - SIG
- Dacey, Dennis M.**, None
Sunday, April 29, 3:15 PM Room 314
150 Primate retina and visual brain - Minisymposium
- daCruz, Lyndon**, None
Tuesday, May 1, 11:15 AM Room 311
327 Retinal Gene Therapy and Stem Cell Transplantation
- Dalvin, Lauren A.**, None
Thursday, May 3, 11:00 AM Room 313A
529 Clinical Innovations in Oncology
- Damato, Bertil**, NIH-NEI EY002162 Core Grant for Vision Research, Research to Prevent Blindness Unrestricted Grant, & research grants from A Cure In Sight (F); NIL (I); NIL (E); Unpaid Consultant/Advisor To Impact Genetics & Aura Biosciences (C); NIL (P); NIL (R); NIL (S); Moderator: Commercial Relationships Disclosure
Tuesday, May 1, 3:30 PM Exhibit Hall
375 Melanoma: Clinical Innovations
- Daniels, Anthony B.**, Patent with Vanderbilt University Medical Center (P); Moderator: Commercial Relationships Disclosure
Monday, April 30, 8:15 AM Room 311
204 Vitreoretinal Interface and Retinal Detachment

- Daniels, Anthony B.**, Patent with Vanderbilt University Medical Center. (P); Moderator: Commercial Relationships Disclosure
Wednesday, May 2, 8:15 AM Exhibit Hall
424 Ocular complications of therapy: trends, imaging, treatment
- Dartt, Darlene A.**, None
Wednesday, May 2, 3:30 PM Room 312
471 Dry Eye Non-clinical
- Das, Vallabh**, None
Thursday, May 3, 8:15 AM Exhibit Hall
519 Fixational Eye Movements and Nystagmus
- De Gracia, Pablo**, Bausch & Lomb, Acufocus (C); Moderator: Commercial Relationships Disclosure
Tuesday, May 1, 11:15 AM Room 310
326 Lens optics and IOLs
- De Paiva, Cintia S.**, None
Sunday, April 29, 3:15 PM Exhibit Hall
160 Ocular Surface Disease Microbiome
- De Paiva, Cintia S.**, Shire (C); Moderator: Commercial Relationships Disclosure
Tuesday, May 1, 1:30 PM Room 310
349 Immune tolerance in steady state and ocular surface/ corneal diseases - SIG
- Del Priore, Lucian**, patent on compounds in my own talk (P); Moderator: Commercial Relationships Disclosure
Sunday, April 29, 3:15 PM Room 316A
152 AMD
- Delshad, Samaneh**, None
Wednesday, May 2, 11:15 AM Exhibit Hall
450 Refractive Error - Myopia and Astigmatism
- Demer, Joseph L.**, None
Monday, April 30, 11:15 AM Room 306AB
225 Strabismus
- Demetriades, Anna M.**, None
Tuesday, May 1, 3:30 PM Exhibit Hall
377 Neurodegeneration
- Demirci, Hakan**, None
Thursday, May 3, 8:15 AM Exhibit Hall
512 Lymphoma, hemangioma, surface, orbit, and eyelid tumors
- Deng, Sophie X.**, None
Monday, April 30, 3:30 PM Room 320
271 Corneal regeneration in health and disease - Minisymposium
- Denniston, Alastair K.**, None
Monday, April 30, 8:15 AM Room 301AB
201 Clinical Uveitis: Etiology, Complications and QoL
- Di Girolamo, Nick**, None
Monday, April 30, 3:30 PM Room 320
271 Corneal regeneration in health and disease - Minisymposium
- Di Girolamo, Nick**, None
Tuesday, May 1, 11:15 AM Room 312
328 Corneal epithelium
- Di Girolamo, Nick**, None
Tuesday, May 1, 3:30 PM Room 312
363 Corneal Development and Regenerative Medicine
- Di Polo, Adriana**, None
Thursday, May 3, 8:15 AM Ballroom A
502 Neuronal Health in AMD and Glaucoma: Lifestyle-based Therapies to Live Long and Prosper
- Dick, Andrew D.**, None
Monday, April 30, 1:30 PM Room 314
255 EVER/ARVO Workshop: Multi-omics, mechanisms and stratification – paradigms for understanding and targeting immune responses in disease
- Dinculescu, Astra**, None
Sunday, April 29, 8:15 AM Room 310
101 Proteostasis networks: challenges and therapeutic opportunities for ocular diseases
- Dirani, Mohamed**, None
Wednesday, May 2, 3:30 PM Exhibit Hall
486 Healthcare delivery
- Dizhoor, Alexander M.**, None
Wednesday, May 2, 3:30 PM Room 320
475 Biochemistry and Molecular Biology of the Retina
- Do, Diana V.**, Genentech, Regeneron, Allergan, Gilead, Aldeyra (F); Moderator: Commercial Relationships Disclosure
Monday, April 30, 1:30 PM Room 311
252 Managing Patients with Diabetic Macular Edema, Diabetic Retinopathy, Neovascular and Non-Neovascular AMD, and Retinal Vein Occlusion: How to Best Utilize the Latest Data from Clinical Trials - SIG
- Dogru, Murat**, Santen, Ohtsuka, Kobayashi (F); Moderator: Commercial Relationships Disclosure
Sunday, April 29, 3:15 PM Exhibit Hall
161 Dry Eye Clinical I
- Dollfus, Helene**, None
Wednesday, May 2, 1:30 PM Room 316A
463 Ontology and Common Data Elements for Collaborative Research in Ophthalmology - SIG
- Donaldson, Paul J.**, None
Tuesday, May 1, 3:30 PM Room 316C
368 Lens Biochemistry
- Dowling, John E.**, None
Monday, April 30, 1:30 PM Ballrooms BC
261 The Lasker/IRRF Initiative for Innovation in Vision Science: Glaucoma and Diabetic Retinopathy - SIG
- Dowling, John E.**, None
Tuesday, May 1, 1:30 PM Ballrooms BC
359 The Lasker/IRRF Initiative for Innovation in Vision Science: Restoring Vision to the Blind and Amblyopia - SIG
- Drago, Filippo**, None
Monday, April 30, 3:30 PM Room 316A
269 From optics to electronics: New technologies for improving vision in health and disease - Minisymposium
- Dubra, Alfredo**, None
Wednesday, May 2, 8:15 AM Exhibit Hall
416 Imaging: Posterior Segment II
- Duh, Elia J.**, None
Tuesday, May 1, 11:15 AM Room 315
330 Diabetic retinopathy: Molecular mechanisms and novel therapeutic targets
- Duncan, Melinda K.**, None
Sunday, April 29, 3:15 PM Exhibit Hall
159 Lens Development and Cell Biology
- Dutta, Debarun**, None
Wednesday, May 2, 8:15 AM Exhibit Hall
417 Prevalence of vision impairment
- Dyka, Frank M.**, None
Tuesday, May 1, 11:15 AM Exhibit Hall
335 Biochemistry and molecular biology of the retina/RPE
- Edwards, Malia M.**, None
Monday, April 30, 3:30 PM Exhibit Hall
288 Early and Atrophic AMD
- Eells, Janis T.**, LumiThera Inc., Multi Radiance Medical Inc. (F); LumiThera Inc., Multi Radiance Medical Inc. (C); LumiThera Inc., Multi Radiance Medical Inc. (R); Moderator: Commercial Relationships Disclosure
Monday, April 30, 11:15 AM Room 320
234 Targeting mitochondrial dysfunction in retinal and optic nerve disease - Minisymposium
- Ehrlich, Joshua R.**, None
Wednesday, May 2, 3:30 PM Exhibit Hall
484 Consequences of and associations with vision impairment
- Elsner, Ann E.**, None
Monday, April 30, 11:15 AM Room 310
226 20/20 Visual acuity is not enough – again - Minisymposium
- Elze, Tobias**, Empirical Support Systems (I); United States PCT/US2014/052414 (P); Adaptive Sensory Technology (R); Moderator: Commercial Relationships Disclosure
Thursday, May 3, 11:00 AM Ballroom A
536 Visual Fields, Vision Function, Psychophysics
- Erkelens, Ian**, None
Sunday, April 29, 3:15 PM Exhibit Hall
164 Strabismus: Basic and Clinical
- Euler, Thomas**, None
Tuesday, May 1, 11:15 AM Room 314
329 Bipolar, Horizontal and Amacrine cells
- Farjo, Rafal**, EyeCRO LLC (E); Moderator: Commercial Relationships Disclosure
Wednesday, May 2, 1:30 PM Room 316C
465 The path from bench to bedside: Professional development and entrepreneurship
- Farsiou, Sina**, P (Duke) (P); Moderator: Commercial Relationships Disclosure
Monday, April 30, 8:15 AM Ballrooms BC
214 Deep Learning Highlights
- Fawzi, Amani**, None
Tuesday, May 1, 1:30 PM Room 312
351 Optical Coherence Tomography Angiography of the Eye - SIG
- Fawzi, Amani**, None
Wednesday, May 2, 11:15 AM Ballrooms BC
440 AMD Imaging II
- Fazio, Massimo A.**, Heidelberg Engineering inc. (F); Moderator: Commercial Relationships Disclosure
Monday, April 30, 3:30 PM Exhibit Hall
273 Biomechanics
- Fedtko, Cathleen**, None
Tuesday, May 1, 11:15 AM Exhibit Hall
345 Refractive error epidemiology and management
- Ferrara, Daniela**, Roche (I); Genentech, Inc. (E); Moderator: Commercial Relationships Disclosure
Wednesday, May 2, 1:30 PM Room 314
462 Data sharing: Clinical science in the era of artificial intelligence
- Figueiredo, Francisco C.**, None
Thursday, May 3, 8:15 AM Exhibit Hall
518 Cornea Surgery; Refractive
- Fischer, M Dominik**, Nightstar Therapeutics, Casebia Therapeutics, Bayer, Novartis (F); Nightstar Therapeutics, Casebia Therapeutics, EyeServ, Spark Therapeutics, Regenxbio (C); P107084GB (P); Nightstar Therapeutics, Casebia Therapeutics, Bayer, Novartis (R); Moderator: Commercial Relationships Disclosure
Tuesday, May 1, 11:15 AM Room 311
327 Retinal Gene Therapy and Stem Cell Transplantation
- Fletcher, Erica L.**, None
Thursday, May 3, 8:15 AM Exhibit Hall
507 Ganglion Cells: Metabolism and response to injury
- Fortinberry, Henry**, None
Monday, April 30, 11:15 AM Exhibit Hall
241 Contact Lens
- Fortune, Brad**, None
Wednesday, May 2, 11:15 AM Ballroom A
439 Capillaries, Blood Flow, OCT Angiography
- Frausto, Ricardo F.**, None
Tuesday, May 1, 8:15 AM Exhibit Hall
320 Corneal Endothelium II
- French, Amanda**, None
Wednesday, May 2, 8:15 AM Room 316B
409 Myopia prevalence, progression and risk factors
- Frenkel, Shahar**, None
Tuesday, May 1, 8:15 AM Room 313A
304 The nuts and bolts of novel drug development - Minisymposium
- Frenkel, Shahar**, None
Wednesday, May 2, 3:30 PM Room 313A
472 Basic Innovations in Oncology
- Frishman, Laura J.**, None
Sunday, April 29, 1:00 PM Room 313A
121 Towards Guidelines for Mouse Electroretinography (ERG) - SIG
- Fruttiger, Marcus**, Bayer (C); Moderator: Commercial Relationships Disclosure
Sunday, April 29, 3:15 PM Room 315
151 Retinal ischemia and mechanisms of vascular remodeling
- Fuchshofer, Rudolf**, None
Wednesday, May 2, 11:15 AM Exhibit Hall
448 Trabecular Meshwork
- Fuchsluger, Thomas A.**, None
Sunday, April 29, 1:00 PM Ballroom A
127 Delivery of therapeutics to ocular tissues - SIG
- Fuchsluger, Thomas A.**, None
Monday, April 30, 1:30 PM Room 316A
256 Keys to writing manuscripts and determining where to publish
- Fuchsluger, Thomas A.**, None
Wednesday, May 2, 1:30 PM Ballroom A
467 Mechanisms and therapies for corneal endothelial dysfunction - SIG
- Fujikado, Takashi**, NIDEK Company (F); Nidek Company (P); Moderator: Commercial Relationships Disclosure
Wednesday, May 2, 11:15 AM Exhibit Hall
443 Retinal prostheses
- Gallar, Juana**, None
Sunday, April 29, 1:00 PM Exhibit Hall
129 Gene editing: methods and outcomes in ocular cells
- Gallego-Pinazo, Roberto**, Novartis, Roche (C); Novartis, Roche, Heidelberg (R); Moderator: Commercial Relationships Disclosure
Sunday, April 29, 1:00 PM Exhibit Hall
130 Macular Edema

Galletti – Iglicki

- Galletti, Jeremias G.**, Moderator: Commercial Relationships Disclosure
Tuesday, May 1, 1:30 PM Room 310
349 Immune tolerance in steady state and ocular surface/ corneal diseases - SIG
- Gamlin, Paul D.**, AGTC, Editas Medicine, Lacerta Therapeutics (F); Moderator: Commercial Relationships Disclosure
Sunday, April 29, 8:15 AM Room 311
102 Ocular and Systemic Circadian Rhythms: Implications in Vision Research
- Gamlin, Paul D.**, None
Tuesday, May 1, 3:30 PM Room 306AB
360 Vergence eye movements and strabismus - Minisymposium
- Gandolfi, Stefano A.**, Ivantis, Glaukos, Allergan (F); Alcon, Allergan, Santen (C); Allergan, Santen, Alcon (R); Moderator: Commercial Relationships Disclosure
Sunday, April 29, 1:00 PM Exhibit Hall
133 Surgery and Wound Healing I
- Gangaputra, Sapna**, None
Monday, April 30, 3:30 PM Room 311
264 Diabetic Macular Edema Clinical
- Gangaputra, Sapna**, None
Wednesday, May 2, 11:15 AM Exhibit Hall
452 Diabetic Macular Edema Clinical Research
- Gangaraju, Rajashekhar**, Cell Care Therapeutics, Inc (F); Cell Care Therapeutics, Inc (I); Cell Care Therapeutics, Inc (P); Cell Care Therapeutics, Inc (S); Moderator: Commercial Relationships Disclosure
Sunday, April 29, 1:00 PM Exhibit Hall
136 Stem Cell Therapy
- Gardner, Thomas W.**, None
Monday, April 30, 11:15 AM Exhibit Hall
248 Diabetic Retinopathy: Imaging
- Gehlbach, Peter L.**, None
Wednesday, May 2, 11:15 AM Room 311
432 Vitreoretinal Surgery and Endophthalmitis
- Gehlbach, Peter L.**, Moderator: Commercial Relationships Disclosure
Thursday, May 3, 8:15 AM Exhibit Hall
523a Vitreoretinal Surgery: Novel Approaches
- Ghasia, Fatema F.**, None
Wednesday, May 2, 8:15 AM Exhibit Hall
418 Amblyopia
- Ghasia, Fatema F.**, None
Wednesday, May 2, 11:15 AM Room 306AB
430 Eye Movements and Nystagmus
- Ghate, Deepta A.**, None
Tuesday, May 1, 11:15 AM Exhibit Hall
344 Neuro-ophthalmology: Optic neuropathy excepting glaucoma
- Gillies, Mark C.**, Novartis, Bayer, Allergan (F); Novartis, Bayer, Allergan (C); Novartis, Bayer, Allergan (R); Moderator: Commercial Relationships Disclosure
Monday, April 30, 11:15 AM Ballrooms BC
236 AMD and Anti-VEGF
- Gillies, Mark C.**, None
Wednesday, May 2, 8:15 AM Room 315
407 Retinal glial and immune responses
- Goetz, Kerry E.**, None
Wednesday, May 2, 1:30 PM Room 316A
463 Ontology and Common Data Elements for Collaborative Research in Ophthalmology - SIG
- Gokoffski, Kimberly K.**, Patent application pending on neuro-regeneration (P); Moderator: Commercial Relationships Disclosure
Thursday, May 3, 11:00 AM Exhibit Hall
541 Neuroprotection
- Golovleva, Irina**, None
Tuesday, May 1, 3:30 PM Room 320
369 Regulation of Ocular Gene Expression and Epigenetics
- Gonzales, John A.**, None
Monday, April 30, 8:15 AM Exhibit Hall
223 Clinical Imaging Retina
- Gonzalez, Sheyla**, Patent Application (PCT/US13/44375): Novel Methods to Cultivate Human Limbal Epithelial Stem/ Progenitor Cells using Human Feeder Cells (UCLA), Patent Application (PCT/US63/433626): Xenobiotic-Free Culture System To Expand Human Limbal Stem Cells (UCLA). (P); Moderator: Commercial Relationships Disclosure
Monday, April 30, 3:30 PM Exhibit Hall
282 Corneal Development, Cell and Molecular Biology
- Goodkin, Margot L.**, None
Tuesday, May 1, 1:30 PM Room 314
353 Bridging and bootstrapping in today's risk averse environment
- Gopinath, Bhamini**, None
Tuesday, May 1, 11:15 AM Room 316B
331 Nutrition and Eye Disease
- Gorbatyuk, Marina S.**, None
Sunday, April 29, 8:15 AM Room 310
101 Proteostasis networks: challenges and therapeutic opportunities for ocular diseases
- Gorbatyuk, Marina S.**, None
Tuesday, May 1, 11:15 AM Room 301AB
325 Metabolic regulation of ocular immune responses - Minisymposium
- Grant, Maria**, None
Monday, April 30, 8:15 AM Room 320
212 Biochemistry and Molecular Biology of Diabetic Retinopathy
- Grant, Patricia**, Wicab, Inc. (E); Moderator: Commercial Relationships Disclosure
Sunday, April 29, 1:00 PM Exhibit Hall
141 Vision Rehabilitation Devices and Training
- Gregg, Ronald G.**, None
Monday, April 30, 11:15 AM Exhibit Hall
246 Visual Disease Models and Restoration
- Gregori, Giovanni**, Carl Zeiss Meditec (F); Moderator: Commercial Relationships Disclosure
Monday, April 30, 11:15 AM Exhibit Hall
239 Image Processing and Interpretation
- Gross, Jeffrey M.**, None
Sunday, April 29, 1:00 PM Exhibit Hall
132 Cataract Surgery Procedures I
- Gross, Jeffrey M.**, None
Tuesday, May 1, 8:15 AM Room 316C
308 Molecular and cellular insights into lens and cornea regeneration - Minisymposium
- Gross, Jeffrey M.**, None
Wednesday, May 2, 11:15 AM Exhibit Hall
451 Cataract Surgery Outcomes and Epidemiology
- Grunert, Ulrike**, None
Sunday, April 29, 3:15 PM Room 314
150 Primate retina and visual brain - Minisymposium
- Grunin, Michelle**, None
Tuesday, May 1, 11:15 AM Exhibit Hall
341 AMD basic research
- Guede, Liliana**, None
Wednesday, May 2, 1:30 PM Room 310
457 Biobanking with a Purpose: Advancing Research in Ophthalmology - SIG
- Gulati, Vikas**, None
Monday, April 30, 3:30 PM Exhibit Hall
274 Surgery and Wound Healing II
- Gupta, Vivek Kumar**, None
Thursday, May 3, 8:15 AM Exhibit Hall
504 Gene variants and regulation of ocular genes expression in health and disease
- Gurevich, Vsevolod V.**, None
Wednesday, May 2, 3:30 PM Room 320
475 Biochemistry and Molecular Biology of the Retina
- Haider, Neena B.**, None
Sunday, April 29, 1:00 PM Room 316B
125 Experimental design for optimal animal research in the age of the «reproducibility crisis»
- Hammond, Christopher J.**, None
Sunday, April 29, 3:15 PM Room 316B
153 Genetic Epidemiology
- Hamrah, Pedram**, Coopervision, Dompe, Allergan (F); Allergan, Dompe, Heidelberg Engineering (C); Moderator: Commercial Relationships Disclosure
Tuesday, May 1, 3:30 PM Room 310
361 Corneal Imaging and Topography
- Hamrah, Pedram**, GlaxoSmithKline, Allergan, TissueTech, Shire (F); Allergan, Bausch & Lomb, Eyegate, Santen, TissueTec, Novemea, Heidelberg Engineering, Shire (C); Moderator: Commercial Relationships Disclosure
Wednesday, May 2, 11:15 AM Exhibit Hall
453 Dry Eye Clinical II
- Han, Dennis P.**, Alcon Research, Alkerm Pharmaceuticals, Acucela (F); None (I); None (E); Tyrogenex, Ophtha (C); Katalyst Surgical (P); Moderator: Commercial Relationships Disclosure
Thursday, May 3, 11:00 AM Exhibit Hall
543 Trauma and Endophthalmitis
- Han, Ian**, None
Wednesday, May 2, 8:15 AM Exhibit Hall
422 Retinal Detachment: Basic and Clinical Science
- Handa, James T.**, Bayer Pharmaceuticals, Inc. (F); Moderator: Commercial Relationships Disclosure
Tuesday, May 1, 3:30 PM Room 314
365 Neovascularization and Vascular Permeability
- Handa, James T.**, Bayer Pharmaceutical, Inc. (F); Moderator: Commercial Relationships Disclosure
Wednesday, May 2, 11:15 AM Exhibit Hall
441 Molecular mechanisms of retinal function and retinal disease
- Hangai, Masanori**, None
Tuesday, May 1, 8:15 AM Exhibit Hall
319 OCT Angiography - Experimental Applications and Technical Improvements
- Hardcastle, Alison J.**, None
Sunday, April 29, 1:00 PM Exhibit Hall
128 Biochemical and molecular mechanisms of age-related macular degeneration
- Hardcastle, Alison J.**, None
Tuesday, May 1, 11:15 AM Room 316C
332 Functional Genomics and Epigenetics in Ocular Disease
- Hartnett, M Elizabeth**, None
Thursday, May 3, 8:15 AM Exhibit Hall
506 Retinal ischemia, angiogenesis and vascular remodeling
- Hauser, Michael A.**, None
Monday, April 30, 8:15 AM Room 314
207 Discoveries in Glaucoma and Associated Endophenotypes
- Hendricks, Robert L.**, None
Wednesday, May 2, 3:30 PM Room 301AB
468 Mechanisms and Therapy for Viral Infection
- Hida, Richard Y.**, None
Sunday, April 29, 3:15 PM Exhibit Hall
161 Dry Eye Clinical I
- Hida, Richard Y.**, None
Thursday, May 3, 11:00 AM Room 312
528 Cornea Refractive Surgery
- Hood, Donald C.**, Topcon, Inc., Heidelberg Engineering Inc (F); Topcon, Inc., Heidelberg Engineering Inc (C); Topcon, Inc., Heidelberg Engineering Inc (R); Moderator: Commercial Relationships Disclosure
Wednesday, May 2, 3:30 PM Ballroom A
476 Structure-Function Relationships
- Hu, Zhenze J.**, 6 Dimensions Capital (E); Moderator: Commercial Relationships Disclosure
Thursday, May 3, 8:15 AM Exhibit Hall
516 Drug and gene delivery systems
- Huang, Jessie**, None
Thursday, May 3, 11:00 AM Exhibit Hall
542 Medical education, training and telemedicine
- Huffman, Kristyn**, Nanovision, Spinnaker Biosciences (F); Moderator: Commercial Relationships Disclosure
Thursday, May 3, 8:15 AM Exhibit Hall
515 Gene therapy, implants
- Hunter, Jennifer J.**, University of Rochester (P); Moderator: Commercial Relationships Disclosure
Monday, April 30, 8:15 AM Room 310
203 Advances in imaging of retinal disease
- Husain, Deeba**, None
Tuesday, May 1, 11:15 AM Exhibit Hall
340 AMD imaging
- Husain, Deeba**, None
Wednesday, May 2, 3:30 PM Room 311
470 AMD Clinical Research
- Husain, Shahid**, None
Sunday, April 29, 8:15 AM Exhibit Hall
110 Diabetic retinopathy
- Hykin, Philip G.**, Novartis, Bayer, Allergan (F); Nil (I); Nil (E); Bayer, Novartis (C); Nil (P); Novartis, Allergan, Bayer (R); Nil (S); Moderator: Commercial Relationships Disclosure
Tuesday, May 1, 8:15 AM Room 311
302 Retinal Vascular Diseases I
- Hysi, Pirro G.**, None
Monday, April 30, 11:15 AM Exhibit Hall
243 Genetic and Retinal disease epidemiology
- Iglicki, Matias**, None
Thursday, May 3, 11:00 AM Room 316A
532 Retina III

- Igo, Robert P.**, None
Monday, April 30, 8:15 AM Exhibit Hall
220 Genetics of AMD and Macular dystrophies
- Invernizzi, Alessandro**, None
Monday, April 30, 1:30 PM Room 320
259 Eye and Brain - the interrelationship and pathology - SIG
- Iomini, Carlo**, None
Monday, April 30, 11:15 AM Exhibit Hall
242 Corneal Neuropathy
- Iomini, Carlo**, None
Tuesday, May 1, 3:30 PM Exhibit Hall
381 Corneal epithelium
- Ip, Michael S.**, None
Wednesday, May 2, 8:15 AM Exhibit Hall
423 Retinal vascular diseases I (excluding diabetes)
- Ip, Michael S.**, None
Thursday, May 3, 11:00 AM Room 311
527 Retinal Vascular Diseases II
- Ishikawa, Hiroshi**, None
Monday, April 30, 11:15 AM Ballroom A
235 What's new in glaucoma imaging? - Minisymposium
- Iyengar, Sudha K.**, None
Monday, April 30, 3:30 PM Exhibit Hall
284 Genetics of Retinal dystrophies and Functional Genomics
- Izatt, Joseph A.**, Leica Microsystems, Inc. (I); Leica Microsystems, Carl Zeiss Meditec, St. Jude Medical (P); Moderator: Commercial Relationships Disclosure
Monday, April 30, 11:15 AM Exhibit Hall
240 Machine Learning on Imaging
- Jabs, Douglas A.**, None
Monday, April 30, 8:15 AM Room 301AB
201 Clinical Uveitis: Etiology, Complications and QoL
- Jager, Martine J.**, None
Thursday, May 3, 8:15 AM Exhibit Hall
512 Lymphoma, hemangioma, surface, orbit, and eyelid tumors
- Jakobs, Tatjana C.**, Merck, Biogen, Qiagen (I); Santen Inc (R); Moderator: Commercial Relationships Disclosure
Tuesday, May 1, 8:15 AM Ballroom A
309 Neuroprotection
- Jayagopal, Ashwath**, F. Hoffmann-La Roche, Ltd. (E); Moderator: Commercial Relationships Disclosure
Tuesday, May 1, 1:30 PM Room 311
350 Molecular Imaging of the Retina in Health and Disease - SIG
- Jhanji, Vishal**, None
Sunday, April 29, 3:15 PM Room 312
148 Keratoconus: Corneal Biomechanics and Imaging
- Ji, Marco H.**, None
Tuesday, May 1, 8:15 AM Exhibit Hall
317 ROP I
- Jia, Yali**, Optovue, Inc. (F); Optovue, Inc. (P); Moderator: Commercial Relationships Disclosure
Tuesday, May 1, 1:30 PM Room 312
351 Optical Coherence Tomography Angiography of the Eye - SIG
- Jiang, Xuejuan**, None
Sunday, April 29, 3:15 PM Room 316B
153 Genetic Epidemiology
- Jo, Dong Hyun**, None
Wednesday, May 2, 3:30 PM Room 313A
472 Basic Innovations in Oncology
- Jonas, Jost B.**, Moderator: Commercial Relationships Disclosure
Monday, April 30, 3:30 PM Exhibit Hall
275 Imaging: Posterior Segment I
- Jun, Albert**, Hunterian Medicine (I); Hunterian Medicine (C); Moderator: Commercial Relationships Disclosure
Wednesday, May 2, 8:15 AM Room 310
403 Treatment on the horizon for Fuchs endothelial corneal dystrophy - Minisymposium
- Jung, Jae-Hyun**, None
Tuesday, May 1, 3:30 PM Exhibit Hall
382 Profound Low Vision and Low-vision Clinical Trials
- Jurkunas, Ula V.**, Santen, Intelia (F); Wave Life Sciences (C); Moderator: Commercial Relationships Disclosure
Wednesday, May 2, 11:15 AM Room 312
433 Corneal Endothelium and Fuchs Corneal Dystrophy
- Jurkunas, Ula V.**, None
Wednesday, May 2, 1:30 PM Ballroom A
467 Mechanisms and therapies for corneal endothelial dysfunction - SIG
- Kagemann, Larry**, None
Wednesday, May 2, 1:30 PM Room 314
462 Data sharing: Clinical science in the era of artificial intelligence
- Kamermans, Maarten**, None
Monday, April 30, 3:30 PM Room 314
267 Photosensitive cells
- Kang, Pauline**, CooperVision Inc USA, Paragon USA (F); Moderator: Commercial Relationships Disclosure
Monday, April 30, 8:15 AM Room 313A
206 New Perspectives in Human Myopia Research
- Karamichos, Dimitrios**, None
Sunday, April 29, 1:00 PM Room 312
120 Extracellular Vesicles and the Anterior Segment - SIG
- Karamichos, Dimitrios**, None
Tuesday, May 1, 3:30 PM Room 320
369 Regulation of Ocular Gene Expression and Epigenetics
- Karamichos, Dimitrios**, None
Wednesday, May 2, 8:15 AM Exhibit Hall
427 Keratoconus and Collagen Crosslinking
- Kardon, Randy H.**, Novartis; Steering Committee and consultant for multi center trial of OCT in Multiple Sclerosis (OCTiMS), Ingelheim Boehringer consultant for planning clinical research trials (F); none (I); none (E); Novartis; Steering Committee and consultant for multi center trial of OCT in Multiple Sclerosis (OCTiMS), Ingelheim Boehringer consultant (C); none (P); Novartis; Steering Committee and consultant for multi center trial of OCT in Multiple Sclerosis (OCTiMS), Ingelheim Boehringer consultant (R); Board of Directors Fight for Sight (non-profit), Board of Directors Iowa City VA Research Foundation (non-profit) (S); Moderator: Commercial Relationships Disclosure
Sunday, April 29, 1:00 PM Exhibit Hall
140 Neuro-ophthalmology
- Kardon, Randy H.**, Novartis; Steering Committee and consultant for multi center trial of OCT in Multiple Sclerosis (OCTiMS), Ingelheim Boehringer consultant for planning clinical research trials (F); none (I); none (E); Novartis; Steering Committee and consultant for multi center trial of OCT in Multiple Sclerosis (OCTiMS), Ingelheim Boehringer consultant (C); none (P); Novartis; Steering Committee and consultant for multi center trial of OCT in Multiple Sclerosis (OCTiMS), Ingelheim Boehringer consultant (R); Board of Directors of Fight for Sight, Board of Directors for Iowa City VA Research Foundation (S); Moderator: Commercial Relationships Disclosure
Sunday, April 29, 3:15 PM Room 306AB
145 Neuro-ophthalmology
- Kasthurirangan, Sanjeev**, E - Johnson & Johnson Vision (E); Moderator: Commercial Relationships Disclosure
Sunday, April 29, 8:15 AM Exhibit Hall
112 Presbyopia and IOL
- Kay, Christine N.**, AGTC (F); AGTC (C); Moderator: Commercial Relationships Disclosure
Sunday, April 29, 1:00 PM Room 311
119 Update on clinical gene therapy trials for inherited retinal disease - SIG
- Keane, Pearce**, Topcon, Heidelberg Engineering, Carl Zeiss Meditec, Haag-Streit, Optos (R); Moderator: Commercial Relationships Disclosure
Tuesday, May 1, 3:30 PM Room 311
362 Diabetic Retinopathy Imaging
- Keay, Lisa J.**, None
Monday, April 30, 8:15 AM Room 316B
210 Implementation science in ophthalmology - Minisymposium
- Keay, Lisa J.**, None
Monday, April 30, 11:15 AM Room 316B
232 Healthcare Delivery
- Keay, Lisa J.**, None
Wednesday, May 2, 11:15 AM Room 316B
437 Impact of vision impairment
- Kedar, Sachin**, None
Tuesday, May 1, 8:15 AM Exhibit Hall
322 Strabismus: Therapy
- Kedar, Sachin**, New Invention Notification (NIN) for "Virtual Reality-Based Pupil Simulator", on 12/8/2016 (NIN No. 17023). This is a virtual reality based educational tool for students and residents for pupillary examination (P); Moderator: Commercial Relationships Disclosure
Wednesday, May 2, 8:15 AM Exhibit Hall
419 Neuro-ophthalmology: Pediatrics and Pupilometry
- Kee, Chea-su**, None
Sunday, April 29, 8:15 AM Exhibit Hall
114 Ocular structures in development, health, and disease
- Keeffe, Jill**, None
Sunday, April 29, 3:15 PM Exhibit Hall
166 Low Vision and Vision Rehabilitation Services
- Keenan, Tiarnan D.**, Bayer (Global Ophthalmology Awards Program awardee) (F); Moderator: Commercial Relationships Disclosure
Thursday, May 3, 11:00 AM Room 316B
533 AMD Epidemiology and Treatment
- Kelley, Mary J.**, None
Tuesday, May 1, 3:30 PM Exhibit Hall
371 Biochemical processes and disease mechanisms involved in glaucoma
- Khaled, Mariam L.**, None
Wednesday, May 2, 8:15 AM Exhibit Hall
427 Keratoconus and Collagen Crosslinking
- Khaw, Peng T.**, Pfizer studies on congenital glaucoma (F); Optecutics (I); No (E); Aerie, Novartis, Santen (C); No (P); Aerie, Novartis, Santen (R); No (S); Moderator: Commercial Relationships Disclosure
Monday, April 30, 3:30 PM Room 316C
270 IOP Measurement, Clinical Trials and Drug Studies
- Kherani, Amin**, None
Wednesday, May 2, 8:15 AM Exhibit Hall
422 Retinal Detachment: Basic and Clinical Science
- Khetan, Vikas**, None
Thursday, May 3, 11:00 AM Room 313A
529 Clinical Innovations in Oncology
- Kilic, Emine**, None
Tuesday, May 1, 11:15 AM Exhibit Hall
338 Melanoma: Basic and Translational
- Kim, Judy E.**, Genentech, Optos (F); Genentech, Alimera Science (C); Moderator: Commercial Relationships Disclosure
Wednesday, May 2, 8:15 AM Exhibit Hall
423 Retinal vascular diseases I (excluding diabetes)
- Kim, Judy E.**, Genentech, Optos (F); Genentech, Alimera Sciences (C); Moderator: Commercial Relationships Disclosure
Wednesday, May 2, 11:15 AM Room 311
435 Vitreoretinal Surgery and Endophthalmitis
- King, Brett**, None
Wednesday, May 2, 11:15 AM Exhibit Hall
446 Imaging Technologies and Applications I
- Kleinman, Mark E.**, None
Tuesday, May 1, 11:15 AM Exhibit Hall
335 Biochemistry and molecular biology of the retina/RPE
- Koizumi, Noriko**, Senju Pharmaceutical Co., Kowa Company Ltd., JCR Pharmaceuticals Co. (F); Senju Pharmaceutical Co., Kowa Company Ltd., (C); Senju Pharmaceutical Co., Doshisha University (P); Moderator: Commercial Relationships Disclosure
Wednesday, May 2, 8:15 AM Room 310
403 Treatment on the horizon for Fuchs endothelial corneal dystrophy - Minisymposium
- Kompella, Uday B.**, Ocugen, Inc (F); Ocugen, Inc, EyeTrans Technologies (I); Ocugen, Inc, Merck (C); Moderator: Commercial Relationships Disclosure
Sunday, April 29, 1:00 PM Ballroom A
127 Delivery of therapeutics to ocular tissues - SIG
- Kompella, Uday B.**, Ocugen, Inc., EyeTrans Technologies, Inc. (I); Merck (C); Ocugen, Inc., EyeTrans Technologies, Inc. (P); Ocugen, Inc., Merck (R); Ocugen, Inc., EyeTrans Technologies, Inc. (S); Moderator: Commercial Relationships Disclosure
Wednesday, May 2, 11:15 AM Room 316A
436 Drug delivery
- Kondo, Mineo**, Alcon, Hoya, Nidek, Novartis, Otsuka, Pfizer, Santen, and Senju (F); None (I); None (E); Senju, Daiichi-sankyo, Bayer, and Novartis (C); None (P); Alcon, Bayer, Hoya, Nidek, Novartis, Otsuka, Pfizer, Sanofi, Santen, Sanwa, Senju. (R); None (S); Moderator: Commercial Relationships Disclosure
Monday, April 30, 11:15 AM Room 311
227 Inherited Retinal Diseases
- Kong, Yu Xiang George**, None
Monday, April 30, 3:30 PM Exhibit Hall
275 Imaging: Posterior Segment I
- Kowluru, Renu A.**, None
Monday, April 30, 11:15 AM Room 320
234 Targeting mitochondrial dysfunction in retinal and optic nerve disease - Minisymposium

Kremers – Marquart

- Kremers, Jan J.**, None
Sunday, April 29, 3:15 PM Room 314
150 Primate retina and visual brain - Minisymposium
- Kremers, Jan J.**, None
Thursday, May 3, 8:15 AM Exhibit Hall
508 Animal electrophysiology
- Krizaj, David**, None
Wednesday, May 2, 8:15 AM Ballroom A
411 Trabecular Meshwork
- Kruse, Friedrich E.**, None
Tuesday, May 1, 3:30 PM Room 312
363 Corneal Development and Regenerative Medicine
- Kumar-Singh, Rajendra**, None
Thursday, May 3, 11:00 AM Room 320
535 Genome: Structure, Function and Editing
- Kuo, Anthony N.**, Leica (P); Moderator: Commercial Relationships Disclosure
Monday, April 30, 3:30 PM Room 313A
266 Highlights of Imaging Technologies
- Kuo, Anthony N.**, ClarVista (C); Leica (P); Moderator: Commercial Relationships Disclosure
Wednesday, May 2, 1:30 PM Room 312
459 Optical Coherence Tomography and Ophthalmic Surgery: New Visualizations, Functional Analysis, and Enabling Robotic Assistance - SIG
- Kurokawa, Kazuhiro**, None
Sunday, April 29, 3:15 PM Room 310
146 Novel imaging techniques and applications
- Lachke, Salil A.**, None
Tuesday, May 1, 8:15 AM Room 316C
308 Molecular and cellular insights into lens and cornea regeneration - Minisymposium
- Lachke, Salil A.**, None
Wednesday, May 2, 11:15 AM Exhibit Hall
451 Cataract Surgery Outcomes and Epidemiology
- Lakkaraju, Aparna**, None
Monday, April 30, 1:30 PM Ballroom A
260 Membrane dynamics in RPE health and disease - SIG
- Lakkaraju, Aparna**, None
Wednesday, May 2, 8:15 AM Exhibit Hall
414 RPE: metabolism
- Lamoureux, Ecosse L.**, None
Sunday, April 29, 3:15 PM Exhibit Hall
165 Diabetic eye disease screening and management
- Lamoureux, Ecosse L.**, None
Tuesday, May 1, 8:15 AM Room 316B
307 Diabetic eye disease and other retinal diseases
- Lampi, Kirsten J.**, None
Tuesday, May 1, 3:30 PM Room 316C
368 Lens Biochemistry
- Landreville, Solange**, None
Tuesday, May 1, 11:15 AM Exhibit Hall
338 Melanoma: Basic and Translational
- Langford, Marlyn P.**, None
Wednesday, May 2, 3:30 PM Room 301AB
468 Mechanisms and Therapy for Viral Infection
- Lauderdale, James D.**, None
Tuesday, May 1, 11:15 AM Exhibit Hall
336 Retinal Cell and Developmental Biology
- Laurie, Gordon W.**, TearSolutions, Inc. (F); TearSolutions, Inc. (I); TearSolutions, Inc. (P); TearSolutions, Inc. (S); Moderator: Commercial Relationships Disclosure
Wednesday, May 2, 11:15 AM Exhibit Hall
454 Tear Film, Lacrimal gland, Meibomian Gland
- Lee, Aaron Y.**, NVIDIA, Novartis (F); Moderator: Commercial Relationships Disclosure
Monday, April 30, 11:15 AM Exhibit Hall
240 Machine Learning on Imaging
- Lee, JeongGoo**, None
Tuesday, May 1, 8:15 AM Exhibit Hall
320 Corneal Endothelium II
- Lee, Olivia L.**, None
Monday, April 30, 8:15 AM Exhibit Hall
217 Corneal Surgery non-refractive
- Lee, Richard W.**, University of Bristol US Patent Application No. 15/106,411 (P); Moderator: Commercial Relationships Disclosure
Monday, April 30, 1:30 PM Room 314
255 EVER/ARVO Workshop: Multi-omics, mechanisms and stratification – paradigms for understanding and targeting immune responses in disease
- Lee, Richard W.**, None
Wednesday, May 2, 11:15 AM Room 301AB
429 Why cancer inflames the eye - Minisymposium
- Lee, Richard W.**, None
Thursday, May 3, 8:15 AM Room 311
501 In Galileos Footsteps: visualizing immunity
- Lee, Sammy C.**, None
Monday, April 30, 11:15 AM Exhibit Hall
245 Inner Retinal circuits
- Lee, Won Ki**, Bayer, Novartis (F); Bayer, Novartis, Allergan (C); Bayer, Novartis, Allergan (R); Moderator: Commercial Relationships Disclosure
Wednesday, May 2, 3:30 PM Room 311
470 AMD Clinical Research
- Leung, Christopher K.**, Topcon, Tomey, Carl Zeiss Meditec, Heidelberg Engineering, Glaukos, Allergan, Novartis (F); ACE VR (I); Allergan, Novartis (C); Topcon, Carl Zeiss Meditec (P); Topcon, Tomey, Carl Zeiss Meditec, Glaukos, Allergan, Novartis (R); Moderator: Commercial Relationships Disclosure
Tuesday, May 1, 3:30 PM Ballroom A
370 Imaging Posterior Segment and Progression
- Leung, Christopher K.**, Topcon, Tomey, Carl Zeiss Meditec, Heidelberg Engineering, Glaukos, Allergan, Novartis (F); ACE VR (I); Allergan, Novartis (C); Topcon, Carl Zeiss Meditec (P); Topcon, Tomey, Carl Zeiss Meditec, Glaukos, Allergan, Novartis (R); Moderator: Commercial Relationships Disclosure
Thursday, May 3, 11:00 AM Exhibit Hall
540 Surgery and Wound Healing III
- Leveillard, Thierry D.**, co-founder SparingVision (I); no (E); consultant for SparingVision (C); patents in serm-transfert (P); no (R); no (S); Moderator: Commercial Relationships Disclosure
Wednesday, May 2, 8:15 AM Room 320
410 Gene Therapies
- Li, Guoqiang**, Apple, Inc. (R); Moderator: Commercial Relationships Disclosure
Sunday, April 29, 3:15 PM Exhibit Hall
168 OCT - Clinical Application
- Li, Yan**, Optovue, Inc. (F); Optovue, Inc. (P); Moderator: Commercial Relationships Disclosure
Thursday, May 3, 8:15 AM Exhibit Hall
522 Innovations in Imaging
- Liebmann, Jeffrey M.**, Topcon, Inc, Heidelberg Engineering, GmBH, Carl Zeiss Meditec, Inc. (R); Moderator: Commercial Relationships Disclosure
Tuesday, May 1, 8:15 AM Exhibit Hall
318 OCT Angiography - Clinical Applications
- Liew, Gerald**, Bayer, educational travel grant 2017, 2018. (R); Moderator: Commercial Relationships Disclosure
Tuesday, May 1, 8:15 AM Room 316B
307 Diabetic eye disease and other retinal diseases
- Lim, Lyndell L.**, None
Wednesday, May 2, 11:15 AM Room 301AB
429 Why cancer inflames the eye - Minisymposium
- Limb, G. Astrid**, None
Wednesday, May 2, 11:15 AM Exhibit Hall
441 Molecular mechanisms of retinal function and retinal disease
- Lin, Jonathan H.**, None
Wednesday, May 2, 3:30 PM Room 320
475 Biochemistry and Molecular Biology of the Retina
- Lin, Meng C.**, None
Wednesday, May 2, 8:15 AM Room 312
405 Contact Lens
- Liskova, Petra**, None
Monday, April 30, 3:30 PM Exhibit Hall
284 Genetics of Retinal dystrophies and Functional Genomics
- Liu, Yutao**, None
Monday, April 30, 8:15 AM Exhibit Hall
219 Corneal Biomechanics
- Ljubimov, Alexander V.**, None
Wednesday, May 2, 11:15 AM Room 310
431 Corneal wound healing
- Lobanova, Ekaterina**, None
Wednesday, May 2, 11:15 AM Exhibit Hall
442 Ocular gene therapies and chemical therapeutics
- Longo, Antonio**, None
Wednesday, May 2, 8:15 AM Room 316A
408 Retina II
- Lorenz, Birgit**, None
Monday, April 30, 8:15 AM Room 306AB
202 EOM and associated tissues: Disease and Development
- Lott, Lori A.**, None
Sunday, April 29, 3:15 PM Exhibit Hall
167 Normal and Aging Vision - Measurement
- Lovicu, Frank J.**, None
Wednesday, May 2, 11:15 AM Exhibit Hall
442 Ocular gene therapies and chemical therapeutics
- Lujan, Brandon J.**, Zeiss, Optovue, Genentech/Roche (F); BioTime, Cell Cure, (C); University of California Berkeley (P); Zeiss (R); Moderator: Commercial Relationships Disclosure
Wednesday, May 2, 8:15 AM Room 311
404 OCT Angiography Update
- Lutty, Gerard A.**, None
Thursday, May 3, 8:15 AM Exhibit Hall
510 AMD: immunobiology
- Lynch, Anne M.**, None
Tuesday, May 1, 8:15 AM Exhibit Hall
317 ROP I
- Ma, Hongwei**, None
Sunday, April 29, 3:15 PM Exhibit Hall
163 Retinal degeneration: models and repair strategies
- Macedo, Antonio F.**, None
Tuesday, May 1, 8:15 AM Room 306AB
301 Near Tasks and Reading with Vision Impairment
- Mackey, David**, None
Wednesday, May 2, 8:15 AM Room 316B
409 Myopia prevalence, progression and risk factors
- MacLaren, Robert E.**, University of Oxford, Nightstar Therapeutics, Choroideremia Research Foundation, Fight for Sight (F); University of Oxford, Nightstar Therapeutics (I); Nightstar Therapeutics, Spark Therapeutics (C); University of Oxford, Nightstar Therapeutics (P); University of Oxford, Nightstar Therapeutics, Choroideremia Research Foundation (R); Research Committee of Euretina, NIH Senior Investigator (S); Moderator: Commercial Relationships Disclosure
Monday, April 30, 8:15 AM Room 316A
209 Gene therapy
- Makrynioti, Dimitra**, None
Tuesday, May 1, 3:30 PM Exhibit Hall
380 Dry eye non-clinical II
- Malek, Goldis**, None
Monday, April 30, 1:30 PM Ballroom A
260 Membrane dynamics in RPE health and disease - SIG
- Manalastas, Patricia Isabel C.**, None
Wednesday, May 2, 3:30 PM Exhibit Hall
481 Capillaries, Blood Flow, OCT Angiography
- Mandai, Michiko**, Dainippon Sumitomo Pharma (F); Heals (C); Moderator: Commercial Relationships Disclosure
Wednesday, May 2, 3:30 PM Exhibit Hall
478 Retina/RPE transplantation (clinical)
- Mandal, Nawajes A.**, None
Tuesday, May 1, 1:30 PM Room 320
358 Lipid and Lipid Targeted Therapies for Eye Diseases-past, present and future - SIG
- Mangel, Stuart C.**, None
Sunday, April 29, 1:00 PM Exhibit Hall
139 Outer Retina Function
- Mao, Chai-An**, None
Monday, April 30, 3:30 PM Exhibit Hall
290 Neuroprotection
- Marcos, Susana**, PhysiOL, CooperVision, Johnson & Johnson, Hoya Surgical Optics, Alcon Research Labs (F); 2EyesVision, Plenoptika (I); PCT/ES2010/070218, PCT/ES2012/070185, PCT/EP2013/078087, PCT/US2014/45261, EP13382367, PCT/ES2016/070673, P201331436 (P); Moderator: Commercial Relationships Disclosure
Tuesday, May 1, 11:15 AM Room 310
326 Lens optics and IOLs
- Mariappan, Indumathi**, None
Wednesday, May 2, 11:15 AM Room 310
431 Corneal wound healing
- Marquart, Mary E.**, None
Sunday, April 29, 3:15 PM Room 301AB
144 Pathogens harbouring in the eye
- Marquart, Mary E.**, None
Monday, April 30, 11:15 AM Room 301AB
224 New Insights into Bacterial Keratitis
- Marquart, Mary E.**, None
Tuesday, May 1, 11:15 AM Room 301AB
325 Metabolic regulation of ocular immune responses - Minisymposium

- Martin, Paul R.**, None
Monday, April 30, 11:15 AM Exhibit Hall
244 Ganglion Cells and Beyond
- Martin, Paul R.**, None
Tuesday, May 1, 8:15 AM Room 314
305 Ganglion cells and beyond
- Masli, Sharmila**, None
Wednesday, May 2, 3:30 PM Room 312
471 Dry Eye Non-clinical
- Matsuda, Akira**, None
Thursday, May 3, 8:15 AM Exhibit Hall
511 Conjunctival Allergic Disease
- McCall, Maureen A.**, None
Monday, April 30, 3:30 PM Room 314
267 Photosensitive cells
- McCall, Maureen A.**, None
Wednesday, May 2, 8:15 AM Room 320
410 Gene Therapies
- McCannel, Tara**, Novartis Pharmaceuticals Inc. (C); Impact Genetics (S); Moderator: Commercial Relationships Disclosure
Tuesday, May 1, 3:30 PM Exhibit Hall
375 Melanoma: Clinical Innovations
- McDowell, Colleen M.**, None
Monday, April 30, 8:15 AM Ballroom A
213 Biomechanics
- McGahan, Mary C.**, None
Sunday, April 29, 1:00 PM Exhibit Hall
128 Biochemical and molecular mechanisms of age-related macular degeneration
- McGregor, Juliette E.**, None
Tuesday, May 1, 8:15 AM Room 314
305 Ganglion cells and beyond
- McKay, Brian S.**, None
Wednesday, May 2, 8:15 AM Exhibit Hall
413 RPE
- McKean-Cowdin, Roberta**, None
Monday, April 30, 11:15 AM Room 316B
232 Healthcare Delivery
- McKendrick, Allison M.**, Heidelberg Engineering GmbH; Haag-Streit AG; CenterVue S.p.A (F); CenterVue S.p.A (C); Moderator: Commercial Relationships Disclosure
Wednesday, May 2, 3:30 PM Exhibit Hall
482 Electrophysiology and Visual Fields
- McKendrick, Allison M.**, Heidelberg Engineering GmbH; Haag-Streit AG; CenterVue S.p.A (F); CenterVue S.p.A (C); Moderator: Commercial Relationships Disclosure
Thursday, May 3, 11:00 AM Ballroom A
536 Visual Fields, Vision Function, Psychophysics
- McLoon, Linda K.**, None
Monday, April 30, 8:15 AM Room 306AB
202 EOM and associated tissues: Disease and Development
- McLoon, Linda K.**, None
Tuesday, May 1, 3:30 PM Room 306AB
360 Vergence eye movements and strabismus - Minisymposium
- McMenamin, Paul G.**, None
Thursday, May 3, 8:15 AM Room 311
501 In Galileo's Footsteps: visualizing immunity
- Mehta, Jodhbir S.**, None
Sunday, April 29, 1:00 PM Room 316B
125 Experimental design for optimal animal research in the age of the <reproducibility crisis>
- Mehta, Jodhbir S.**, None
Sunday, April 29, 3:15 PM Room 312
148 Keratoconus: Corneal Biomechanics and Imaging
- Mehta, Jodhbir S.**, None
Monday, April 30, 8:15 AM Exhibit Hall
217 Corneal Surgery non-refractive
- Mehta, Jodhbir S.**, None
Monday, April 30, 11:15 AM Room 312
228 Cornea surgery, non-refractive
- Melo, Monica B.**, None
Sunday, April 29, 1:00 PM Exhibit Hall
128 Biochemical and molecular mechanisms of age-related macular degeneration
- Mieler, William F.**, None
Sunday, April 29, 3:15 PM Exhibit Hall
158 Vitreoretinal Surgery: Clinical Science
- Miller, Jason**, None
Monday, April 30, 3:30 PM Exhibit Hall
288 Early and Atrophic AMD
- Mitchell, Claire H.**, Patent Number US8828966 B2, 2014. (P); Moderator: Commercial Relationships Disclosure
Monday, April 30, 8:15 AM Room 315
208 RPE physiology
- Mitchell, Claire H.**, Aerie Pharmaceuticals Scientific Advisory Board member (S); Moderator: Commercial Relationships Disclosure
Thursday, May 3, 11:00 AM Ballrooms BC
537 Pharmacological Interventions and Cellular Mechanisms
- Mitra, Ashim K.**, None
Wednesday, May 2, 11:15 AM Room 316A
436 Drug delivery
- Miyai, Takashi**, None
Monday, April 30, 8:15 AM Exhibit Hall
218 Corneal Endothelium I
- Mohr, Susanne**, None
Tuesday, May 1, 3:30 PM Exhibit Hall
373 Diabetic retinopathy - preclinical studies
- Moncaster, Juliet A.**, None
Tuesday, May 1, 1:30 PM Room 316C
357 How to promote vision research to patients and policymakers in different regions of the world
- Moncaster, Juliet A.**, None
Wednesday, May 2, 3:30 PM Room 316C
474 Accommodation and cataractogenesis
- Mones, Jordi**, roche, novartis, bayer, ophthotech, cellcure (F); ophthotech, notalvision (I); roche, novartis, ophthotech, cellcure (C); roche, novartis, cellcure (R); Moderator: Commercial Relationships Disclosure
Monday, April 30, 3:30 PM Exhibit Hall
287 Dry AMD
- Monville, Christelle**, None
Wednesday, May 2, 11:15 AM Exhibit Hall
444 Stem Cells: New Approaches and Disease Modelling
- Moons, Lieve K.**, None
Thursday, May 3, 11:00 AM Exhibit Hall
541 Neuroprotection
- Morales-Tirado, Vanessa M.**, None
Monday, April 30, 11:15 AM Exhibit Hall
237 Retinoblastoma: From Bench to Bedside
- Morgan, Ian**, Santen, Novartis (C); Moderator: Commercial Relationships Disclosure
Sunday, April 29, 1:00 PM Exhibit Hall
143 Insights into myopia - animal models to human studies
- Morgan, Jessica L.**, AGTC (F); US Patent 8,226,236 (P); Moderator: Commercial Relationships Disclosure
Monday, April 30, 8:15 AM Room 310
203 Advances in imaging of retinal disease
- Moroi, Sayoko E.**, Allergan, Icare (F); Moderator: Commercial Relationships Disclosure
Wednesday, May 2, 3:30 PM Exhibit Hall
483 Genetics of Glaucoma
- Moroi, Sayoko E.**, Allergan (F); Moderator: Commercial Relationships Disclosure
Thursday, May 3, 8:15 AM Exhibit Hall
523 Imaging: Anterior Segment
- Morris, Ann C.**, None
Wednesday, May 2, 11:15 AM Room 315
435 Gene function and neural protection
- Musch, David C.**, Glaukos (DSMB member), InnFocus/Santen (DSMB member) (R); Moderator: Commercial Relationships Disclosure
Monday, April 30, 8:15 AM Exhibit Hall
215 Clinical Trials and Drug Studies
- Musil, Linda**, None
Thursday, May 3, 8:15 AM Exhibit Hall
514 Cataractogenesis and PCO
- Nagaraj, Ram H.**, None
Monday, April 30, 11:15 AM Room 316C
233 Posterior capsular opacification (PCO)
- Nakazawa, Toru**, Topcon Corporation, Santen Pharmaceutical Co., Ltd., Kowa Company. Ltd., Senju Pharmaceutical Co., Ltd., Wakamoto Co., Ltd., Nidek Co., Ltd., Otsuka Pharmaceutical Co., Ltd., Alcon Japan Ltd., Daiichi Sankyo Co., Ltd., Japan Tobacco Inc. (F); Moderator: Commercial Relationships Disclosure
Wednesday, May 2, 3:30 PM Ballroom A
476 Structure-Function Relationships
- Nandrot, Emeline F.**, None
Monday, April 30, 1:30 PM Room 306AB
250 Phagocytic mechanisms in ocular tissues: from physiological to pathological processes - SIG
- Nandrot, Emeline F.**, None
Monday, April 30, 3:30 PM Exhibit Hall
289 Disease modeling and potential therapies
- Narayanan, S. Priya**, None
Sunday, April 29, 3:15 PM Room 315
151 Retinal ischemia and mechanisms of vascular remodeling
- Navajas, Eduardo V.**, None
Sunday, April 29, 3:15 PM Exhibit Hall
158 Vitreoretinal Surgery: Clinical Science
- Neitz, Jay**, None
Thursday, May 3, 11:00 AM Room 310
526 Visual psychophysics in color and complex vision
- Ng, Yin Shan Eric**, None
Tuesday, May 1, 8:15 AM Exhibit Hall
311 Neovascular AMD
- Nguyen, Christine**, None
Tuesday, May 1, 3:30 PM Room 313A
364 Surgery and Wound Healing
- Nguyen, Quan Dong**, Genentech, Gilead, Psivida, Regeneron, Santen (F); AbbVie, Regeneron, Santen (C); Moderator: Commercial Relationships Disclosure
Sunday, April 29, 1:00 PM Exhibit Hall
131 Uveitis and Scleritis: Therapeutics
- Nguyen, Quan Dong**, AbbVie, Genentech, Gilead, Optos, OptoVue, Regeneron, Santen (F); Moderator: Commercial Relationships Disclosure
Tuesday, May 1, 1:30 PM Room 301AB
347 Objective Quantification of Intraocular Inflammation: Using Newer Technologies to Overcome an Old Challenge - SIG
- Nishida, Kohji**, Raymei (I); Emmaus Medical (C); Moderator: Commercial Relationships Disclosure
Monday, April 30, 3:30 PM Room 320
271 Corneal regeneration in health and disease - Minisymposium
- Nivison-Smith, Lisa**, None
Sunday, April 29, 8:15 AM Exhibit Hall
109 Pediatric ophthalmology
- Nork, T Michael**, None
Thursday, May 3, 8:15 AM Exhibit Hall
523a Vitreoretinal Surgery: Novel Approaches
- Nye-Wood, Mitchell G.**, None
Wednesday, May 2, 3:30 PM Room 316C
474 Accommodation and cataractogenesis
- Okumura, Jessi**, None
Wednesday, May 2, 11:15 AM Room 312
433 Corneal Endothelium and Fuchs Corneal Dystrophy
- Ortiz, Gustavo**, Shire (C); Shire (S); Moderator: Commercial Relationships Disclosure
Tuesday, May 1, 11:15 AM Exhibit Hall
342 Dry eye non-clinical I
- Ostrin, Lisa A.**, None
Sunday, April 29, 8:15 AM Room 311
102 Ocular and Systemic Circadian Rhythms: Implications in Vision Research
- Ostrin, Lisa A.**, None
Monday, April 30, 11:15 AM Room 310
226 20/20 Visual acuity is not enough – again - Minisymposium
- Ou, Yvonne**, Merck (C); Moderator: Commercial Relationships Disclosure
Monday, April 30, 3:30 PM Ballroom A
272 Neurodegeneration
- Owen, Leah**, None
Thursday, May 3, 11:00 AM Room 316C
534 Cataract Surgery, epidemiology and clinical outcomes
- Ozkan, Jerome**, None
Tuesday, May 1, 3:30 PM Exhibit Hall
379 Cataract, cornea and ocular surface disease
- Padovani-Claudio, Dolly A.**, None
Monday, April 30, 1:30 PM Room 316C
258 Civic and community engagement for stronger science: Effective communication strategies
- Pal, Bish**, None
Tuesday, May 1, 8:15 AM Room 311
302 Retinal Vascular Diseases I
- Palanker, Daniel V.**, Pixium Vision (C); Pixium Vision (P); Moderator: Commercial Relationships Disclosure
Wednesday, May 2, 8:15 AM Ballrooms BC
412 Retinal Prostheses
- Pang, Iok-Hou**, None
Wednesday, May 2, 3:30 PM Exhibit Hall
489 Retina, drugs

Panorgias – Sato

- Panorgias, Thanasis**, None
Wednesday, May 2, 1:30 PM Room 316B
464 Making ARVO more accessible: Experience from countries with emerging vision-oriented research agenda
- Paraoan, Luminita L.**, None
Sunday, April 29, 8:15 AM Room 310
101 Proteostasis networks: challenges and therapeutic opportunities for ocular diseases
- Paraoan, Luminita L.**, None
Monday, April 30, 3:30 PM Exhibit Hall
285 Proteostasis and systems biology approaches for ocular cellular profiling
- Pardue, Machelle T.**, None
Sunday, April 29, 3:15 PM Room 313A
149 Visual Cues and Signaling in Myopia
- Pardue, Machelle T.**, None
Wednesday, May 2, 11:15 AM Room 314
434 ERG: Advances, Disease and Injury
- Park, Susanna S.**, Allergan, Novartis/Roche--contracted research (F); Moderator: Commercial Relationships Disclosure
Tuesday, May 1, 11:15 AM Room 315
330 Diabetic retinopathy: Molecular mechanisms and novel therapeutic targets
- Pasquale, Louis R.**, None
Monday, April 30, 8:15 AM Room 314
207 Discoveries in Glaucoma and Associated Endophenotypes
- Pe'er, Jacob**, None
Wednesday, May 2, 8:15 AM Exhibit Hall
425 Pathology and Omics
- Peachey, Neal S.**, None
Wednesday, May 2, 11:15 AM Room 314
434 ERG: Advances, Disease and Injury
- Pedersen, Hilde Rogeberg**, None
Wednesday, May 2, 8:15 AM Exhibit Hall
415 Color vision and photoreceptors
- Pelaez, Daniel**, None
Wednesday, May 2, 11:15 AM Exhibit Hall
444 Stem Cells: New Approaches and Disease Modelling
- Pepple, Kathryn**, None
Sunday, April 29, 1:00 PM Exhibit Hall
131 Uveitis and Scleritis: Therapeutics
- Perez, Victor L.**, NIH/NEI (F); Shire, EyeGate Pharma (C); Moderator: Commercial Relationships Disclosure
Tuesday, May 1, 8:15 AM Room 312
303 Corneal Neovascularization and Immunology
- Perkins, Brian D.**, None
Sunday, April 29, 3:15 PM Exhibit Hall
162 Photoreceptor Degeneration
- Pesudovs, Konrad**, None
Wednesday, May 2, 8:15 AM Room 306AB
402 Vision Rehabilitation
- Peters, Donna M.**, None
Wednesday, May 2, 1:30 PM Room 320
466 Phagocytosis in the outflow pathway: what we can learn from other ocular tissues - SIG
- Petersen, Christine A.**, None
Monday, April 30, 3:30 PM Exhibit Hall
281 Cataract Surgery Procedures II
- Pircher, Michael**, None
Wednesday, May 2, 11:15 AM Exhibit Hall
447 Imaging Technologies and Applications II
- portal, celine M.**, None
Monday, April 30, 11:15 AM Exhibit Hall
242 Corneal Neuropathy
- Porter, Jason**, None
Wednesday, May 2, 8:15 AM Exhibit Hall
415 Color vision and photoreceptors
- Prakash, Gyan**, None
Tuesday, May 1, 1:30 PM Room 316B
356 Addressing global blindness and eye diseases through international research collaborations
- Prasanna, Ganesh**, Novartis (E); Moderator: Commercial Relationships Disclosure
Tuesday, May 1, 8:15 AM Exhibit Hall
314 Anterior segment
- Proudlock, Frank A.**, None
Thursday, May 3, 11:00 AM Room 306AB
525 Amblyopia
- Pucker, Andrew D.**, Oculus, Inc., Alcon, Bausch + Lomb, and Contamac (F); None (I); None (E); Optikal (C); None (P); Pentavision, Paragon (R); None (S); Moderator: Commercial Relationships Disclosure
Tuesday, May 1, 8:15 AM Exhibit Hall
323 Accommodation and Binocular Functions
- Pusti, Dibyendu**, None
Monday, April 30, 3:30 PM Exhibit Hall
276 Optics, imaging, biometry and function in normal and myopic eye growth
- Puthussery, Teresa**, None
Sunday, April 29, 3:15 PM Exhibit Hall
163 Retinal degeneration: models and repair strategies
- Puthussery, Teresa**, None
Tuesday, May 1, 11:15 AM Room 314
329 Bipolar, Horizontal and Amacrine cells
- Putnam, Nicole M.**, None
Sunday, April 29, 1:00 PM Exhibit Hall
142 AO, OCT and imaging techniques and applications
- Quigley, Harry A.**, Gore:C:F, Sensimed:C, Alcon: C, Graybug Vision:C F I (S); Moderator: Commercial Relationships Disclosure
Tuesday, May 1, 3:30 PM Room 313A
364 Surgery and Wound Healing
- Raasch, Thomas W.**, None
Monday, April 30, 11:15 AM Room 310
226/20/20 Visual acuity is not enough – again - Minisymposium
- Radu, Roxana A.**, None
Sunday, April 29, 1:00 PM Exhibit Hall
129 Gene editing: methods and outcomes in ocular cells
- Radu, Roxana A.**, None
Wednesday, May 2, 8:15 AM Exhibit Hall
414 RPE: metabolism
- Rajagopal, Rithwick**, None
Sunday, April 29, 3:15 PM Exhibit Hall
157 AMD and Anti-VEGF I
- Ramulu, Pradeep Y.**, NIH (F); Implanada, Ivantis, WL Gore (C); Moderator: Commercial Relationships Disclosure
Tuesday, May 1, 8:15 AM Exhibit Hall
316 Glaucoma risk factors, progression and management
- Rathbun, Daniel L.**, None
Wednesday, May 2, 1:30 PM Room 316B
464 Making ARVO more accessible: Experience from countries with emerging vision-oriented research agenda
- Realini, Tony**, None
Sunday, April 29, 1:00 PM Exhibit Hall
133 Surgery and Wound Healing I
- Realini, Tony**, None
Monday, April 30, 11:15 AM Ballroom A
235 What's new in glaucoma imaging? - Minisymposium
- Redford, Maryann**, None
Monday, April 30, 1:30 PM Room 310
251 Omega-3 Fatty Acid Supplementation for Dry Eye Disease: Data on Efficacy and Safety from the Dry Eye Assessment and Management (DREAM©) Study - SIG
- Redmond, T. Michael**, None
Monday, April 30, 3:30 PM Exhibit Hall
285 Proteostasis and systems biology approaches for ocular cellular profiling
- Rex, Tonia S.**, None
Tuesday, May 1, 8:15 AM Ballroom A
309 Neuroprotection
- Rex, Tonia S.**, None
Tuesday, May 1, 11:15 AM Exhibit Hall
339 Blood flow, ischemia
- Rex, Tonia S.**, None
Wednesday, May 2, 1:30 PM Room 301AB
455 Animal Models of Ocular Trauma - SIG
- Richdale, Kathryn**, None
Wednesday, May 2, 11:15 AM Exhibit Hall
450 Refractive Error - Myopia and Astigmatism
- Roberts, Cynthia J.**, Oculus, Ziemer, Optimeyes (C); Carl Zeiss Meditec (R); Moderator: Commercial Relationships Disclosure
Thursday, May 3, 8:15 AM Exhibit Hall
517 Corneal Imaging and Topography
- Roberts, Tawna L.**, None
Tuesday, May 1, 8:15 AM Exhibit Hall
323 Accommodation and Binocular Functions
- Rodger, Damien C.**, U.S. Patent 7,252,006, U.S. Patent 7,600,533, U.S. Patent 7,900,518, U.S. Patent 8,141,573, U.S. Patent 8,246,569, U.S. Patent 8,549,92, U.S. Patent 8,585,6305, U.S. Patent 8,628,492, U.S. Patent 9,180,050 (P); Moderator: Commercial Relationships Disclosure
Tuesday, May 1, 8:15 AM Exhibit Hall
315 IOP
- Rohrer, Baerbel**, None
Sunday, April 29, 3:15 PM Room 320
155 Biochemistry and Molecular Biology of AMD
- Romanowski, Eric G.**, None
Sunday, April 29, 1:00 PM Exhibit Hall
134 Infection and Immunology
- Rosen, Richard B.**, Opticology (I); Boehringer Ingelheim, Astellas, Regeneron, Genentech, Optovue, NanoRetina, Guardian Health, Diopsys, OD-OS, Bayer, CellView (C); Moderator: Commercial Relationships Disclosure
Wednesday, May 2, 8:15 AM Room 311
404 OCT Angiography Update
- Rowe-Rendleman, Cheryl L.**, C; Novaliq GmbH, Heidelberg, Germany (C); Moderator: Commercial Relationships Disclosure
Tuesday, May 1, 8:15 AM Exhibit Hall
313 Toxicology, anti-inflammatory, antibiotics
- Royer, Derek J.**, None
Tuesday, May 1, 3:30 PM Exhibit Hall
376 Epidemiology, Treatments, and Outcomes of Infection
- Rueff, Erin**, None
Sunday, April 29, 3:15 PM Exhibit Hall
167 Normal and Aging Vision - Measurement
- Rupenthal, Ilva D.**, New Zealand Provisional Patent #731353 and #731364 (P); Moderator: Commercial Relationships Disclosure
Tuesday, May 1, 3:30 PM Room 314
365 Neovascularization and Vascular Permeability
- Russell, Stephen R.**, Spark Therapeutics, ProQR (F); IDX, LLC (I); Spark Therapeutics (C); Moderator: Commercial Relationships Disclosure
Monday, April 30, 8:15 AM Room 311
204 Vitreoretinal Interface and Retinal Detachment
- Saban, Daniel R.**, None
Tuesday, May 1, 8:15 AM Room 312
303 Corneal Neovascularization and Immunology
- Saban, Daniel R.**, None
Tuesday, May 1, 11:15 AM Exhibit Hall
343 Corneal Neovascularization and Immunology
- Sadda, Srinivas R.**, Carl Zeiss Meditec, Optos (F); Optos, Centervue, Heidelberg Engineering (C); Topcon, Optos, Heidelberg, Carl Zeiss Meditec (R); Moderator: Commercial Relationships Disclosure
Wednesday, May 2, 11:15 AM Ballrooms BC
440 AMD Imaging II
- Saghizadeh, Mehroosh**, None
Monday, April 30, 1:30 PM Room 316A
256 Keys to writing manuscripts and determining where to publish
- Sahel, Jose A.**, LabEx LIFESENSES (ANR-10-LABX-65), ERC Synergy "HELMHOLTZ", Banque publique d'Investissement, Fondation Fighting Blindness (F); GenSight Biologics, Chronocam, Chronolife, Pixium Vision, Tilak Healthcare, Sparing Vision (I); Pixium Vision; GenSight Biologics; Genesignal (C); Moderator: Commercial Relationships Disclosure
Wednesday, May 2, 8:15 AM Ballrooms BC
412 Retinal Prostheses
- Sallum, Juliana M.**, None
Tuesday, May 1, 1:30 PM Room 316C
357 How to promote vision research to patients and policymakers in different regions of the world
- Sanders, Emi**, None
Monday, April 30, 3:30 PM Exhibit Hall
283 Trauma
- Sarunic, Marinko**, Moderator: Commercial Relationships Disclosure
Tuesday, May 1, 8:15 AM Exhibit Hall
319 OCT Angiography - Experimental Applications and Technical Improvements
- Sarunic, Marinko**, Moderator: Commercial Relationships Disclosure
Wednesday, May 2, 8:15 AM Room 311
404 OCT Angiography Update
- Sato, Tomoko**, None
Sunday, April 29, 1:00 PM Exhibit Hall
135 Corneal Stroma and Keratocytes

- Schaefer, Tania**, None
Tuesday, May 1, 3:30 PM Exhibit Hall
380 Dry eye non-clinical II
- Schaeffel, Frank**, None
Monday, April 30, 3:30 PM Room 310
263 Accommodation and Binocular Vision
- Schallek, Jesse B.**, Hoffman-LaRoche (F); University of Rochester (P); Moderator: Commercial Relationships Disclosure
Sunday, April 29, 3:15 PM Room 310
146 Novel imaging techniques and applications
- Schallek, Jesse B.**, Hoffman-LaRoche (F); University of Rochester (P); Moderator: Commercial Relationships Disclosure
Wednesday, May 2, 11:15 AM Exhibit Hall
446 Imaging Technologies and Applications I
- Schallhorn, Julie**, None
Thursday, May 3, 11:00 AM Room 312
528 Cornea Refractive Surgery
- Schey, Kevin L.**, Janssen Pharmaceutical (F); Moderator: Commercial Relationships Disclosure
Monday, April 30, 3:30 PM Exhibit Hall
280 Cataract Surgery - IOLs
- Schmetterer, Leopold**, None
Monday, April 30, 3:30 PM Room 316C
270 IOP Measurement, Clinical Trials and Drug Studies
- Schmidt, Tiffany M.**, None
Tuesday, May 1, 11:15 AM Exhibit Hall
336 Retinal Cell and Developmental Biology
- Schmidt-Erfurth, Ursula**, Genentech, Novartis (F); Genentech, Novartis, Boehringer, Roche (C); Novartis, Boehringer, Roche (R); Moderator: Commercial Relationships Disclosure
Tuesday, May 1, 8:15 AM Ballrooms BC
310 AMD Imaging I
- Schroedl, Falk**, None
Sunday, April 29, 1:00 PM Exhibit Hall
143 Insights into myopia - animal models to human studies
- Schroedl, Falk**, None
Monday, April 30, 11:15 AM Room 313A
229 Anatomical changes during ocular development and disease
- Scott, William K.**, Inventor on US Patent US808857B2 regarding genetic tests for age related macular degeneration. Assigned to Duke University, not currently licensed. (P); Moderator: Commercial Relationships Disclosure
Wednesday, May 2, 11:15 AM Room 316C
438 Novel genes found through methods old and new
- Seeliger, Mathias W.**, None
Sunday, April 29, 1:00 PM Room 313A
121 Towards Guidelines for Mouse Electroretinography (ERG) - SIG
- Seeliger, Mathias W.**, None
Thursday, May 3, 8:15 AM Exhibit Hall
506 Retinal ischemia, angiogenesis and vascular remodeling
- Self, James E.**, None
Thursday, May 3, 8:15 AM Exhibit Hall
504 Gene variants and regulation of ocular genes expression in health and disease
- Sen, H Nida N.**, None
Thursday, May 3, 11:00 AM Room 301AB
524 Advances in Clinical Therapeutics for Uveitis
- Sennlaub, Florian**, None
Sunday, April 29, 8:15 AM Exhibit Hall
111 AMD
- Shahidi, Mahnaz**, None
Thursday, May 3, 8:15 AM Exhibit Hall
522 Innovations in Imaging
- Shen, Jason**, None
Sunday, April 29, 8:15 AM Exhibit Hall
112 Presbyopia and IOL
- Sigal, Ian A.**, None
Monday, April 30, 8:15 AM Ballroom A
213 Biomechanics
- Sigal, Ian A.**, None
Thursday, May 3, 8:15 AM Exhibit Hall
521 Animal Imaging
- Silverman, Sean**, None
Wednesday, May 2, 11:15 AM Exhibit Hall
445 Inflammatory/immune responses in retinal diseases
- Simonsz, Huibert J.**, None
Wednesday, May 2, 3:30 PM Exhibit Hall
485 Pediatric Ophthalmology
- Singer, Michael**, allergan, regeneron, genentech, aerpio, clearsides, optos, appellis, daiichi, greybug, ophthea, Kalvista (F); none (I); none (E); allergan, genentech, santen, spark, psvida, alimera, clearsides (C); none (P); genentech, regeneron, allergan (R); none (S); Moderator: Commercial Relationships Disclosure
Tuesday, May 1, 3:30 PM Exhibit Hall
374 Diabetic Macular Edema Anti-VEGF
- Singh, Dharendra P.**, None
Monday, April 30, 8:15 AM Room 316C
211 Signaling and Cell Biology
- Singh, Pawan Kumar**, None
Monday, April 30, 11:15 AM Room 301AB
224 New Insights into Bacterial Keratitis
- Singh, Ruchira**, None
Sunday, April 29, 1:00 PM Exhibit Hall
136 Stem Cell Therapy
- Sinha, Debasish**, None
Tuesday, May 1, 3:30 PM Room 315
366 AMD pathogenesis and preclinical studies
- Smith, Justine R.**, National Health & Medical Research Council; Australian Research Council; Rebecca Cooper Foundation; Ophthalmic Research Institute of Australia; Flinders Foundation (F); Abbvie (C); ARVO; ICO; AUS; IOIS; GOIW (S); Moderator: Commercial Relationships Disclosure
Thursday, May 3, 11:00 AM Room 301AB
524 Advances in Clinical Therapeutics for Uveitis
- Smith, Ryan**, None
Thursday, May 3, 8:15 AM Exhibit Hall
518 Cornea Surgery; Refractive
- Soetikno, Brian**, None
Sunday, April 29, 8:15 AM Exhibit Hall
113 OCT - New Biomarkers and Technical Improvements
- Souied, Eric H.**, novartis, allergan, bayer (F); novartis, roche, allergan, bayer, thea (C); bayer, allergan, roche, thea (R); Moderator: Commercial Relationships Disclosure
Monday, April 30, 8:15 AM Exhibit Hall
221 AMD and Anti-VEGF II
- Souied, Eric H.**, Novartis, Allergan, Bayer (F); Novartis, Roche, Allergan, Bayer, Thea (C); Bayer, Allergan, Roche, Thea (R); Moderator: Commercial Relationships Disclosure
Monday, April 30, 3:30 PM Exhibit Hall
286 Neovascular AMD
- Sowden, Jane**, JS with UCL Business PLC submitted a patent application (Provisional Patent number 1703058.6) (P); Moderator: Commercial Relationships Disclosure
Sunday, April 29, 1:00 PM Exhibit Hall
137 New Insights on Retinogenesis from Organoids
- Stamer, W Daniel**, Aerie, Allergan, Ironwood, Inotek, Precision Biosciences, Regeneron (F); Aerie, Precision Biosciences (C); Moderator: Commercial Relationships Disclosure
Tuesday, May 1, 3:30 PM Room 316A
367 Anterior segment, ion channels, IOP
- Stapleton, Fiona**, Alcon, Allergan, Coopervision, Menicon (F); None (I); None (E); None (C); None (P); None (R); None (S); Moderator: Commercial Relationships Disclosure
Tuesday, May 1, 3:30 PM Exhibit Hall
379 Cataract, cornea and ocular surface disease
- Staurenghi, Giovanni**, Heidelberg Engineering, Optos, Optovue, Quantel Medical, Centervue, Carl Zeiss Meditec, Alcon, Allergan, Bayer, Boehringer, Genentech, Novartis, Roche (C); Ocular Instrument (P); Heidelberg Engineering, Carl Zeiss Meditec, Novartis, Bayer, Allergan, Genentech, Roche (R); Moderator: Commercial Relationships Disclosure
Monday, April 30, 3:30 PM Room 311
264 Diabetic Macular Edema Clinical
- Stefanov, Antonia**, None
Monday, April 30, 3:30 PM Exhibit Hall
290 Neuroprotection
- Steinle, Jena J.**, None
Tuesday, May 1, 3:30 PM Exhibit Hall
372 Diabetic retinopathy - Cell Biology
- Steinmetz, Michael**, None
Wednesday, May 2, 1:30 PM Room 313BC
461 Understanding the NEI Granting Process (NEI Extramural Roundtable)
- Stenkamp, Deborah L.**, None
Tuesday, May 1, 8:15 AM Room 315
306 Retinal Development
- Sternberg, Paul**, None
Monday, April 30, 11:15 AM Ballrooms BC
236 AMD and Anti-VEGF
- Stewart, Jay M.**, Genentech, Achaogen, Merck (C); Moderator: Commercial Relationships Disclosure
Monday, April 30, 11:15 AM Exhibit Hall
247 Diabetic Retinopathy: Clinical
- Stitt, Alan W.**, None
Tuesday, May 1, 3:30 PM Exhibit Hall
373 Diabetic retinopathy - preclinical studies
- Suh, Donny W.**, None
Sunday, April 29, 3:15 PM Room 306AB
145 Neuro-ophthalmology
- Suh, Donny W.**, None
Monday, April 30, 3:30 PM Exhibit Hall
278 Neuro-ophthalmology
- Suhler, Eric B.**, abbvie, aldeyra, clearsides, eyegate, gilead, psvida (F); abbvie, santen, psvida (C); abbvie, psvida, santen (R); Moderator: Commercial Relationships Disclosure
Wednesday, May 2, 8:15 AM Exhibit Hall
421 Clinical Uveitis and Scleritis: Epidemiology, Diagnosis and Outcomes
- Sullivan, Jack M.**, None
Sunday, April 29, 1:00 PM Room 316B
125 Experimental design for optimal animal research in the age of the reproducibility crisis
- Sun, Jennifer K.**, Adaptive Sensory Technologies, Boston Micromachines, Optovue, Zeiss, Heidelberg, Genentech (F); Novartis (C); Novo Nordisk (R); Moderator: Commercial Relationships Disclosure
Sunday, April 29, 3:15 PM Room 311
147 Diabetic Retinopathy Clinical
- Sun, Jennifer K.**, Adaptive Sensory Technologies, Boehringer Ingelheim, Boston Micromachines, Optovue, Zeiss, Heidelberg, Genentech, Kalvista (F); Novartis (C); Novo Nordisk (R); Moderator: Commercial Relationships Disclosure
Monday, April 30, 11:15 AM Exhibit Hall
247 Diabetic Retinopathy: Clinical
- Sun, Jennifer K.**, Adaptive Sensory Technology, Boston Micromachines, Genentech, Kalvista, Optovue (F); Novo Nordisk, Kalvista (R); Moderator: Commercial Relationships Disclosure
Tuesday, May 1, 3:30 PM Exhibit Hall
374 Diabetic Macular Edema Anti-VEGF
- Sundaresan, Periasamy**, None
Thursday, May 3, 11:00 AM Exhibit Hall
538 Potpourri in genetic eye disease
- Susanna, Bianca Nicoletta N.**, None
Tuesday, May 1, 8:15 AM Exhibit Hall
315 IOP
- Swamynathan, Shivalingappa K.**, US patent # 9,132,193 issued on Sep 15, 2015 (P); Moderator: Commercial Relationships Disclosure
Wednesday, May 2, 11:15 AM Exhibit Hall
454 Tear Film, Lacrimal gland, Meibomian Gland
- Swaroop, Anand**, None
Tuesday, May 1, 11:15 AM Room 316C
332 Functional Genomics and Epigenetics in Ocular Disease
- Swenor, Bonnielin K.**, None
Monday, April 30, 8:15 AM Room 316B
210 Implementation science in ophthalmology - Minisymposium
- Swenor, Bonnielin K.**, None
Wednesday, May 2, 11:15 AM Room 316B
437 Impact of vision impairment
- Szalai, Eszter**, None
Tuesday, May 1, 1:30 PM Room 316A
355 Clinician-Scientist Forum: How to become a successful clinician-scientist
- Tankam, Patrice**, None
Tuesday, May 1, 3:30 PM Room 310
361 Corneal Imaging and Topography
- Tankam, Patrice**, None
Thursday, May 3, 8:15 AM Exhibit Hall
517 Corneal Imaging and Topography
- Taylor, Andrew W.**, Palatin Technologies (F); Mallinckrodt Pharmaceuticals, Palatin Technologies (C); Moderator: Commercial Relationships Disclosure
Tuesday, May 1, 3:30 PM Exhibit Hall
376 Epidemiology, Treatments, and Outcomes of Infection

Terry – Yorio

- Terry, Mark A.**, Bausch and Lomb Surgical and also Moria:
Unrestricted Educational Grant support for the EKG breakfast every AAO meeting annually (F); Bausch and Lomb Surgical: Royalties on the instruments I designed for DLEK and DSAEK surgery, but NOT DMEK (P); Moderator: Commercial Relationships Disclosure
Monday, April 30, 11:15 AM Room 312
228 Cornea surgery, non-refractive
- Tong, Louis**, None
Sunday, April 29, 8:15 AM Exhibit Hall
108 Ocular surface health and disease
- Toomes, Carmel**, None
Thursday, May 3, 8:15 AM Exhibit Hall
503 Molecular mechanisms of diabetic retinopathy
- Toris, Carol B.**, Ivantis, Nicox (F); Moderator: Commercial Relationships Disclosure
Tuesday, May 1, 3:30 PM Room 316A
367 Anterior segment, ion channels, IOP
- Toris, Carol B.**, Ivantis, Nicox (F); Moderator: Commercial Relationships Disclosure
Wednesday, May 2, 11:15 AM Exhibit Hall
448 Trabecular Meshwork
- Toth, Cynthia A.**, Emmes (C); Alcon Laboratories, Duke University (P); Moderator: Commercial Relationships Disclosure
Wednesday, May 2, 8:15 AM Room 313A
406 Retinopathy of Prematurity
- Trese, Michael T.**, retinal solutions (I); Moderator: Commercial Relationships Disclosure
Wednesday, May 2, 1:30 PM Room 311
458 Regenerative Medicine Wnt Signaling and Retinal vascular Disease - SIG
- Tsang, Stephen H.**, None
Sunday, April 29, 8:15 AM Exhibit Hall
104 Retinitis pigmentosa (clinical)
- Utheim, Tor P.**, None
Monday, April 30, 3:30 PM Room 312
265 Dry Eye Clinical
- Utheim, Tor P.**, None
Wednesday, May 2, 11:15 AM Exhibit Hall
453 Dry Eye Clinical II
- Uva, Maurizio G.**, None
Monday, April 30, 11:15 AM Exhibit Hall
238 Aqueous humor dynamics, IOP
- Vajzovic, Lejla**, None
Wednesday, May 2, 3:30 PM Ballrooms BC
477 Clinical Posterior Segment Imaging
- van der Aa, Hilde P.**, None
Wednesday, May 2, 8:15 AM Room 306AB
402 Vision Rehabilitation
- Varadaraj, Kulandaiappan**, None
Tuesday, May 1, 11:15 AM Exhibit Hall
334 Lens Biochemistry, Physiology and Biomechanics
- Varadaraj, Varshini**, None
Wednesday, May 2, 3:30 PM Exhibit Hall
486 Healthcare delivery
- Vemuganti, Geeta K.**, None
Wednesday, May 2, 3:30 PM Room 313A
472 Basic Innovations in Oncology
- Vera-Diaz, Fuensanta A.**, None
Monday, April 30, 3:30 PM Room 310
263 Accommodation and Binocular Vision
- Vergara, M Natalia**, None
Monday, April 30, 1:30 PM Room 316C
258 Civic and community engagement for stronger science: Effective communication strategies
- Villani, Edoardo**, None
Sunday, April 29, 1:00 PM Room 316A
124 Biomarkers and Surrogate Endpoints in Ophthalmic Clinical Research - SIG
- Vitale, Susan**, None
Thursday, May 3, 11:00 AM Room 316B
533 AMD Epidemiology and Treatment
- Volpe, Nicholas J.**, Opticent Inc (I); Moderator: Commercial Relationships Disclosure
Monday, April 30, 3:30 PM Exhibit Hall
279 Neuro-ophthalmology Intracranial HTN and papilledema
- Vujosevic, Stela**, None
Sunday, April 29, 1:00 PM Room 316A
124 Biomarkers and Surrogate Endpoints in Ophthalmic Clinical Research - SIG
- Waheed, Nadia K.**, zeiss, optovue, nidek, topcon, regeneron, janssen, heidelberg, genentech (F); ocutyne (I); optovue, zeiss, regeneron, genentech, heidelberg, topcon (C); Moderator: Commercial Relationships Disclosure
Tuesday, May 1, 8:15 AM Ballrooms BC
310 AMD Imaging I
- Waheed, Nadia K.**, Boston Image Reading Center, Tufts Medical Center (F); Ocutyne (I); Optovue, Zeiss, Topcon, Nidek (C); Zeiss, Nidek, Optovue (R); Moderator: Commercial Relationships Disclosure
Tuesday, May 1, 11:15 AM Exhibit Hall
340 AMD imaging
- Wahlin, Karl**, None
Sunday, April 29, 1:00 PM Exhibit Hall
137 New Insights on Retinogenesis from Organoids
- Wang, Mingwu**, None
Monday, April 30, 1:30 PM Room 313BC
254 China-ARVO Networking Forum
- Wang, Ningli**, None
Monday, April 30, 1:30 PM Room 313BC
254 China-ARVO Networking Forum
- Wang, Ningli**, None
Tuesday, May 1, 1:30 PM Room 315
354 Gene therapy of glaucoma - SIG
- Wang, Shusheng**, None
Tuesday, May 1, 3:30 PM Room 315
366 AMD pathogenesis and preclinical studies
- Watanabe, Sumiko**, None
Tuesday, May 1, 8:15 AM Room 315
306 Retinal Development
- Watsky, Mitchell A.**, None
Tuesday, May 1, 8:15 AM Exhibit Hall
321 Genetics of Corneal dystrophies
- Watson, Stephanie L.**, 149. Watson SL, Daniels J, Geerling G, Dart J Pharmaceutical preparations for and treatment of ocular surface and other disorders. International Patent Application No PCT/GB2005/000806 published on 15 September 2005, publication number WO 2005/084635. US Patent Application No. 10/590,859. . Ooi K, Watson SL. Improvements in Tear Film Stability. Synovate, The University of Sydney and NewSouth Innovations Pty Limited. Publication number WO2013113067, publication date 8th August 2013, Application number PCT/AU2013/000087 (P); Moderator: Commercial Relationships Disclosure
Sunday, April 29, 8:15 AM Exhibit Hall
108 Ocular surface health and disease
- Watson, Stephanie L.**, Sydney Medical School Foundation fellowship (F); 149. Watson SL, Daniels J, Geerling G, Dart J Pharmaceutical preparations for and treatment of ocular surface and other disorders. International Patent Application No PCT/GB2005/000806 published on 15 September 2005, publication number WO 2005/084635. US Patent Application No. 10/590,859. 150. Ooi K, Watson SL. Improvements in Tear Film Stability. Synovate, The University of Sydney and NewSouth Innovations Pty Limited. Publication number WO2013113067, publication date 8th August 2013, Application number PCT/AU2013/000087 (P); Moderator: Commercial Relationships Disclosure
Monday, April 30, 8:15 AM Room 312
205 Ocular surface biology, disease, surgery
- Watson, Stephanie L.**, None
Monday, April 30, 3:30 PM Exhibit Hall
283 Trauma
- Webster, Dale**, Google (E); Moderator: Commercial Relationships Disclosure
Monday, April 30, 8:15 AM Ballrooms BC
214 Deep Learning Highlights
- Weiss, Avery H.**, None
Monday, April 30, 3:30 PM Exhibit Hall
277 Eye Movements
- Werner, John S.**, None
Thursday, May 3, 11:00 AM Room 310
526 Visual psychophysics in color and complex vision
- West-Mays, Judith A.**, None
Monday, April 30, 8:15 AM Room 316C
211 Signaling and Cell Biology
- Wildner, Gerhild**, None
Monday, April 30, 3:30 PM Exhibit Hall
291 Inflammatory Disease Processes in Humans and Experimental Models
- Wildsoet, Christine F.**, None
Monday, April 30, 8:15 AM Room 316A
209 Gene therapy
- Wirostko, Barbara**, Jade Therapeutics wholly owned subsidiary of EyeGate Pharmaceuticals, Inc. (I); Moderator: Commercial Relationships Disclosure
Wednesday, May 2, 1:30 PM Room 316C
465 The path from bench to bedside: Professional development and entrepreneurship
- Wohl, Stefanie G.**, None
Sunday, April 29, 1:00 PM Exhibit Hall
138 Retinal Development
- Wollstein, Gadi**, None
Monday, April 30, 3:30 PM Room 313A
266 Highlights of Imaging Technologies
- Wong, Roger**, None
Wednesday, May 2, 3:30 PM Exhibit Hall
487 PVR and Vitreoretinal Interface
- Wong, Tien Yin**, Co-inventor of a Deep System for Retinal Diseases (P); Moderator: Commercial Relationships Disclosure
Monday, April 30, 1:30 PM Room 301AB
249 Telemedicine and Artificial Intelligence using Deep Learning Systems to Screen and Monitor Diabetic Retinopathy, Glaucoma and Age-related Macular Degeneration using Different Imaging Modalities - SIG
- Wong, Wai T.**, None
Sunday, April 29, 1:00 PM Room 301AB
117 Retinal microglia in degenerative diseases: Why function matters - SIG
- Wood, Joanne M.**, None
Tuesday, May 1, 11:15 AM Exhibit Hall
346 Functional Impacts of Vision Impairment
- Wormstone, Michael**, Hoya Surgical Optics, Carl Zeiss Meditec AG (F); Hoya Surgical Optics (C); Hoya Surgical Optics (R); Moderator: Commercial Relationships Disclosure
Monday, April 30, 11:15 AM Room 316C
233 Posterior capsular opacification (PCO)
- Wykoff, Charles C.**, Allergan, Clearside Biomedical, Genentech, Regeneron, Roche (F); Alimera Sciences, Allergan, Bayer, Clearside Biomedical, Genentech, Regeneron, Roche (C); Alimera Sciences, Allergan, Bayer, Clearside Biomedical, Genentech, Regeneron, Roche (R); Moderator: Commercial Relationships Disclosure
Sunday, April 29, 3:15 PM Room 311
147 Diabetic Retinopathy Clinical
- Xu, Benjamin**, None
Thursday, May 3, 8:15 AM Exhibit Hall
523 Imaging: Anterior Segment
- Xu, Heping**, None
Sunday, April 29, 8:15 AM Exhibit Hall
111 AMD
- Xu, Heping**, None
Wednesday, May 2, 3:30 PM Exhibit Hall
488 Retina
- Yamaguchi, Takefumi**, None
Monday, April 30, 8:15 AM Exhibit Hall
218 Corneal Endothelium I
- Yao, Xincheng**, None
Sunday, April 29, 8:15 AM Exhibit Hall
113 OCT - New Biomarkers and Technical Improvements
- Yasuno, Yoshiaki**, Tomey Corp., Nidek, Kao (F); Tomey Corp. (P); Moderator: Commercial Relationships Disclosure
Sunday, April 29, 3:15 PM Exhibit Hall
168 OCT - Clinical Application
- Yasuno, Yoshiaki**, Tomey Corp., Nidek, Kao (F); Tomey Corp. (P); Moderator: Commercial Relationships Disclosure
Monday, April 30, 3:30 PM Room 313A
266 Highlights of Imaging Technologies
- Yin, Jia**, None
Tuesday, May 1, 11:15 AM Exhibit Hall
342 Dry eye non-clinical I
- Ying, Howard S.**, None
Thursday, May 3, 8:15 AM Exhibit Hall
513 Thyroid and orbital diseases
- Yoon, Kyung Chul**, None
Monday, April 30, 3:30 PM Room 312
265 Dry Eye Clinical
- Yorio, Thomas**, None
Wednesday, May 2, 8:15 AM Room 316A
408 Retina II

- You, Yuyi**, None
Monday, April 30, 1:30 PM Room 320
259 Eye and Brain - the interrelationship and pathology - SIG
- Young, Michael J.**, ReNeuron (F); ReNeuron (C); ReNeuron (P);
Moderator: Commercial Relationships Disclosure
Monday, April 30, 3:30 PM Room 315
268 Stem Cells: from retinal organoids to transplantation
- Young, Terri L.**, None
Wednesday, May 2, 11:15 AM Room 316C
438 Novel genes found through methods old and new
- Yu-Wai-Man, Patrick**, GenSight Biologics (C); Moderator:
Commercial Relationships Disclosure
Monday, April 30, 1:30 PM Room 316A
256 Keys to writing manuscripts and determining where to publish
- Zacks, David N.**, None
Monday, April 30, 11:15 AM Room 315
230 Circadian clocks in retinal health and diseases - Minisymposium
- Zangwill, Linda M.**, NEI, Carl Zeiss Meditec Inc., Heidelberg Engineering GmbH, Optovue Inc., Topcon Medical Systems Inc. (F); none (I); none (E); Merck (C); none (P); Optovue, Topcon Medical Systems, Heidelberg Engineering (R); none (S); Moderator: Commercial Relationships Disclosure
Tuesday, May 1, 8:15 AM Exhibit Hall
318 OCT Angiography - Clinical Applications
- Zele, Andrew J.**, None
Monday, April 30, 11:15 AM Room 315
230 Circadian clocks in retinal health and diseases - Minisymposium
- Zele, Andrew J.**, None
Wednesday, May 2, 3:30 PM Exhibit Hall
480 ipRGCs and Circadian Rhythms
- Zhang, Furu**, None
Sunday, April 29, 1:00 PM Exhibit Hall
142 AO, OCT and imaging techniques and applications
- Zhang, Sarah X.**, None
Monday, April 30, 8:15 AM Room 320
212 Biochemistry and Molecular Biology of Diabetic Retinopathy
- Zhang, Wenbo**, None
Tuesday, May 1, 3:30 PM Exhibit Hall
372 Diabetic retinopathy - Cell Biology
- Zhang, Wenlin**, None
Sunday, April 29, 1:00 PM Room 316C
126 Grant writing: How to get your proposals funded
- Zhu, Xiaoying**, None
Wednesday, May 2, 11:15 AM Exhibit Hall
449 High and pathological myopia: characteristics and treatment
- Ziemanski, Jillian F.**, None
Monday, April 30, 11:15 AM Exhibit Hall
241 Contact Lens

Author Index

This Author Index provides access to the titles of abstracts via program numbers. Because only first and sometimes middle initials are used in the index, some entries may include program numbers for the abstracts of several authors with the same last name as well as the same first name and middle initials. The program number/poster board number for a first author is listed in boldface print. Program numbers for participants in the symposia and minisymposia are indicated in boldface and italic print. Poster board numbers are provided where applicable; numbers indicate Exhibit/Poster Hall location; A = Poster Area A, B = Poster Area B.

23andMe Inc., 781

A

- A. Johnston, D., 4487 - A0002
 Aakalu, V. K., 107 - A0270, 3878
 - C0139, **3881 - C0142**, 3882
 - C0143
 Aakre, B., 928 - B0106
 Aapola, U., 5477 - A0146
 Aaronson, J., 2652 - A0379
 Abad, J. C., **4388 - C0436**
 Abadi, M., 117 - B0031
 Abadia, B., 1913 - C0313
 Abalem, M., 1470 - C0032, 3803 -
 C0030, 4835 - C0193
 Abazari, A., 2214 - A0383, **6016**
 Abbaraju, S., 5687 - A0406
 Abbasi, D., 6153 - C0272
 Abbasi, M., 3710 - B0057, 5428 -
 A0097, **6122 - C0241**
 Abbass, I., 2599
 Abbassi, S., **3368 - C0292**
 Abbey, A., 5697 - A0416
 Abbott, C. J., 1946, 3888 - C0354,
 4562 - A0091
 Abbott, J., 5204 - B0317
 Abbott, J., 2302 - B0256
 Abboud, E., 5974
 Abbouda, A., 4492 - A0007
 Abcouwer, S. F., **2594**, 3582 - A0199,
 4964
 Abdala, C. A., 3159 - A0276, **3765**
 - **B0180**
 Abdalla-Elsayed, M. E., **4780 - B0390**
 Abdallah, S. F., 422 - A0240
 Abdel-Rahman, M., 3182 - A0325
 Abdel-Rahman, M. H., 1156, **4958**
 Abdelaziz, M., **3124 - A0241**
 Abdelfattah, N. S., 1454 - C0016,
 1714 - A0235, **3224 - B0323**,
 3245 - B0344
 Abdelgawad, H., **556 - B0171**, 563 -
 B0178, 71 - A0118
 Abdelmaksoud, A., **437 - A0297**
 Abdelrahman, A., 4024 - A0149
 Abdelsaid, M., **3588 - A0205**
 Abdou-Slaybi, A., 3340 - C0182
 Abdshill, H., 993 - B0247
 Abdulla, Y., 714 - C0309
 Abdulrazik, M., **4459**
 Abe, K., **4382 - C0430**
 Abe, K., 435 - A0295
 Abe, M., **2079 - A0137**
 Abe, R. Y., 4463, 5101 - B0090
 Abe, S., **4827 - C0185**
 Abe, T., 800 - A0132
 Abe, T., 5704 - A0423
 Abecasis, G. R., 6025
 Abegão Pinto, L., 2070 - A0128,
 3951, 4478
 Abel, E., 4967
 Abel, L. A., 2168 - A0337, 4413, **5790**
 - **C0077**
 Abel, R., 3599 - A0217
 Abelson, M. B., 2424 - C0090
 Abhary, S., 3017
 Abib, F. C., 1361 - B0121, 1362 -
 B0122, 1752 - B0067, 2894
 - C0191, 2906 - C0203, **2909**
 - **C0206**, 2910 - C0207, 2911
 - C0208
 Abitbol, M. M., **3092 - A0063**
 Ablamowicz, A. F., **3294 - C0088**
 Ablonczy, Z., **4445**
 Ablordepey, R., **2154 - A0288**
 Abooki, S., **361 - A0021**
 Aboobakar, I. F., **4988**
 Abou Shousha, M., 5737 - C0024,
 5742 - C0029
 Abou-Jaoude, M., **5231 - B0344**
 Abou-Slaybi, A., **2244 - B0198**
 Abouhossein, M., 883 - A0215
 Abraham, A., 2849 - B0267, **4105 -**
B0230
 Abraham, A., 406 - A0224
 Abraham, C., 4565 - A0094
 Abraham, J. R., **4232 - C0074**
 Abramoff, M. D., 1677 - A0198, 4649
 - A0291
 Abrams, G. W., 2590, 5988
 Abramson, D. H., 1644 - A0020
 Abramson, J., 4683 - A0325
 Abreu Arbaje, N., 402 - A0102
 Abreu, N., **4254 - C0096**
 Abriola, L., 768
 Absar, F., 3270 - B0369
 Abu Safieh, L., 1628 - A0004
 Abu, S., **4069 - B0064**
 Abu-Amero, K., 743
 Abu-Asab, M. S., **2434 - C0100**
 Abu-Bakra, M., 2042 - A0100
 Abu-Bakra, M. A., **2053 - A0111**
 Abu-Qamar, O., 2795 - B0213
 Abujamra, N. S., 5970
 Abulon, D., **5935 - C0332**, 5942 -
 C0339, 5943 - C0340, 5944
 - C0341
 Aburatani, H., 2284 - B0238
 Acar, D., **3302 - C0096**
 Acera, M., 4648 - A0290
 Acevedo, I., 3657 - A0341
 Ach, T., 2437 - C0103, **3104 - A0112**,
 3237 - B0336, 5857 - C0144,
 5858 - C0145
 Acharya, N., 421 - A0239, 719
 Acharya, S., **5298 - C0231**
 Achberger, K., 567 - B0182
 Achiedo, S., 3963
 ACHM Study Group, 6044 - A0078
 ACHM-001 and CNGA3-001 Study
 Groups, 4992
 Achtemeier, J., 3420 - C0344
 Ackerley, D., 980 - B0234
 Acosta, E., **5803 - C0090**
 Acosta, G., 6172 - C0291
 Acosta, M., 148 - B0062, 154 - B0068,
 155 - B0069, **157 - B0071**, 3309 -
 C0151, 4876 - C0321
 Acosta, M., 3466, 5358 - A0010
 Acosta Suarez, G., **2231 - A0400**
 Acosta Torres, Z., 4552 - A0067, **552**
 - **B0167**
 Acott, T. S., 3530 - A0093, 4722
 - B0146, 4724 - B0148, 4725 -
 B0149, 5907 - C0194
 Acquaviva, A., 2671 - A0398
 Acs, M., 921 - B0099
 Adachi, K., **344 - A0004**
 Adade, S., **4415**
 Adam, M., 1098 - C0133, 4251 -
 C0093
 Adams, C., **1271 - A0306**
 Adams, C. M., 1650 - A0026, 2394
 - C0060
 Adams, K., 792
 Adams, L. D., 1420 - B0339, 1425
 - B0344
 Adamson, P. S., 2920 - C0217, 3022,
 5315 - C0248
 Adamson, S. J., 2773 - B0152
 Adamus, G., 4493 - A0008
 Adán, A., 1427 - B0346, 1907 - C0307,
 2797 - B0215, 2802 - B0220,
 4826 - C0184, 4842 - C0200
 Adan Civera, A., 1095 - C0130, 5951
 Addabbo, G., 1915 - C0315
 Addad, S., 3092 - A0063
 Addis, V., 2125 - A0183
 Adegboro, C. O., **2785 - B0164**
 Adeli, M., 1269 - A0304
 Adelman, R. A., 1807 - B0155
 Adeloef, J., 3040 - A0011
 Aden, I., 6027
 Ader, M., 545 - B0160
 Adesina, O. O., 617 - B0289
 Adeyemo, O., 825 - A0157
 Adhi, M., **2805 - B0223**
 Adhikari, P., 5036 - A0232, **5037 -**
A0233
 Adhikari, S., 4749 - B0250
 Adinanto, F., **185 - B0339**
 Adler, L., **4512 - A0027**
 Adler, W., 2118 - A0176
 Admassu, F., 6164 - C0283
 Adriano Pereira, L. A., **3781 - C0008**
 Adzhemian, N., 941 - B0119
 Affatigato, L. M., 3368 - C0292
 Afifi, A., 4087 - B0082, 5104 - B0093,
 5105 - B0094
 Afrasyab, K., 556 - B0171, **563 -**
B0178
 African Descent and Glaucoma
 Evaluation Study III, 5137 -
 B0160
 Afridi, R., **1675 - A0196**, 1691 -
 A0212, 1909 - C0309, 2825
 - B0243, 410 - A0228, 5581 -
 A0300, 5949
 Afshar, A., 4240 - C0082, 5580 -
 A0299
 Afshar, F., 1469 - C0031, 1471 -
 C0033, **5550 - A0242**, 815
 - A0147, 816 - A0148, 826 -
 A0158, 838 - A0170
 Afshari, N. A., 1360 - B0120, 2204
 - A0373, 2245 - B0199, 3876 -
 C0137, **3914**
 Afsharkhamsheh, N., 4421
 Afzal, R., 1371 - B0131
 Agaoglu, M. N., **2161 - A0330**, 5795
 - C0082
 Agaoglu, S., **5793 - C0080**
 Agar, A., 2081 - A0139, 5064 - B0015
 Agarie, M., 1444 - C0006
 Agarwal, A., 1997
 Agarwal, A., 1425 - B0344
 Agarwal, A., 1509 - C0350
 Agarwal, D. R., **1051 - B0362**
 Agarwal, D., **3940**
 Agarwal, M., **4169 - C0011**
 Agarwal, N., 6169 - C0288
 Agarwal, P., **3282 - C0076**
 Agarwal, R., 2277 - B0231
 Agarwal, T., 1312 - B0019
 Agarwal-Sinha, S., **2746 - B0125**, 2778
 - B0157, 772
 Age-Related Eye Disease Study Group,
 4947
 Agee, J., 3210 - B0309
 Agee, J. M., 3240 - B0339
 AgeHIV study group, 4649 - A0291
 Aggarwal, R., 2201 - A0370
 Aggarwal, S., **1063 - C0076**, 1335 -
 B0042, 4671 - A0313
 Aggio-Bruce, R., 4604 - A0193, 4607
 - A0196
 Agha, B., 1307 - B0014
 AGI Photoreceptor Regeneration,
 991 - B0245
 Aglyamov, S., 4692 - A0334
 Agne, J., 2197 - A0366
 Agnifili, L., 4066 - B0061, 5080 -
 B0031
 Agorogiannis, G., 412 - A0230, 4206
 - C0048
 Agostini, H., 1487 - C0229, 2627 -
 A0132
 Agostinone, J., 1862 - C0166, **2613**
 Agosto, M. A., 4016 - A0141
 Agrahari, V., 1659 - A0035
 Agrawal, R., 1509 - C0350, 272
 - C0173, 349 - A0009, 358 -
 A0018, **3949**, 4159 - C0001,
 4183 - C0025, 5301 - C0234,
 5843 - C0130
 Agron, E., **2381 - C0047**, 2391 -
 C0057, 2422 - C0088, 4947, 5548
 - A0240, 6010, 6013
 Agron, S., 5250 - B0363
 Aguila, M., 4504 - A0019
 Aguilar, E., 1223, 5327 - C0260, 5489
 - A0158, 761
 Aguilar, M. C., 3667 - A0351, 529
 - B0144
 Aguilera Partida, J. A., **1522 - C0363**
 Aguirre, G. K., 1969, 32 - A0063
 Aguirre, G. D., 1438 - B0357, 2347
 - B0336, 4522 - A0037, 4527 -
 A0042, 5318 - C0251, **6006**
 Agustinus Wong, P., 3949
 Ahadizadeh, E., 3529 - A0092
 Aherrahrou, Z., 73 - A0120
 Ahmad, A. M., 1374 - B0134
 Ahmad, I., **3749 - B0096**
 Ahmad, M., 3767 - B0182
 Ahmadi, S., 4442
 Ahmadian, S., 2327 - B0316
 Ahmadi, H., 2327 - B0316, **3087 -**
A0058, 6153 - C0272
 Ahmed, F., 2047 - A0105
 Ahmed, F., 1660 - A0036, 4707 -
 B0131, 4708 - B0132
 Ahmed, I., **3184 - A0327**, 3647 -
 A0308
 Ahmed, I., 2060 - A0118
 Ahmed Naqvi, S., **409 - A0227**
 Ahmed, W., 5066 - B0017
 Ahmed, Z., 2366 - B0376, **2506 -**
C0210, 2615, 4450
 Ahmed, Z. M., **794**
 Ahn, A., 3292 - C0086, 3293 - C0087
 Ahn, B., **1015 - B0269**
 Ahn, C., 1332 - B0039
 Ahn, J., 4654 - A0296
 Ahn, J., **1854 - C0158**, 4556 - A0085
 Ahn, S., 1553, **3770 - B0185**, 4059
 - B0054
 Aho-Giele, S., 3615 - A0233
 AIBL (Australian Imaging Biomarkers
 and Lifestyle) Study, 1123 -
 C0158
 Aiello, F., 1328 - B0035
 Aiello, L. P., 2795 - B0213, 2876 -
 B0294, 3448, 3463, 737, 740
 AIG Study Group, 2126 - A0184
 Aihara, M., **1229 - A0070**, 1232
 - A0073, 1233 - A0074,
 1235 - A0076, 2712 - B0033,
 29 - A0060, 2926 - C0223,
 3046 - A0017, 3089 - A0060,
 3679 - A0363, 373 - A0033,
 3753 - B0168, 4164 - C0006,
 4177 - C0019, 4192 - C0034,
 4227 - C0069, 4295 - C0166, 53 -
 A0084, 6082 - C0201, 87 - A0250
 Aimi, T., 3225 - B0324
 Airaghi, G., **5922 - C0319**
 Airody, A., **798 - A0130**
 Aissati, S., 252 - C0111
 Ait-Ali, N., 3963
 Ait-Ali, N., **3066 - A0037**
 Aitsebaomo, A., **1765 - B0080**, 5526
 - A0218
 Aiu-aree, N., 609 - B0281
 Aizinjeluo, W., 4382 - C0430
 Aizawa, N., 3189 - B0189
 Aizenman, A. M., 5793 - C0080
 Ajlan, R., **401 - A0101**, 4247 - C0089
 Akagi, T., 2735 - B0114
 Akahori, T., 2827 - B0245, 302 -
 C0235
 Akanda, M., 1534 - C0375
 Akdemir, F., 2661 - A0388
 Akduman, E. I., 4675 - A0317
 Akduman, L., **4675 - A0317**
 Akella, S., 3887 - C0148
 Akeo, K., 1429 - B0348
 Åkerström, B., 993 - B0247
 Akhlaq, A., 1802 - B0150, 1806 -
 B0154, **4889 - C0334**
 Akhtar, I., 3128 - A0245
 Akhtar, S., 313 - C0246
 Akhtar, Z., 1509 - C0350
 Akhter, H., 5214 - B0327
 Akhter, M., **4160 - C0002**
 Akhter, S., **5214 - B0327**
 Akiba, H., 509 - B0016, 510 - B0017
 Akiba, M., 1715 - A0236, **1718 -**
A0239, 2079 - A0137, 3225
 - B0324
 Akiba, R., **553 - B0168**
 AKIL, H., 1972, **2865 - B0283**
 Akielwaran, L., 1743 - B0058
 Akiyama, K., 1661 - A0037, **872 -**
A0204
 Akiyama, M., **1426 - B0345**
 Akiyama, R., 4928 - C0373, 87 -
 A0250
 Akiyama, T., 5073 - B0024
 Akoghanian, S., 2190 - A0359
 Akondi, V., 252 - C0111
 Akopian, A., **6141 - C0260**
 Akopyan, V., 1115 - C0150
 Akova-Budak, B., 951 - B0129

- Akram, J., 5383 - A0035
 Aktepe, D., 6027
 Akthar, F., 5021 - A0217
 Akula, J. D., 3570 - A0187, 5512 - A0181, 764
 Akyurek, N., 3675 - A0359
 Al Dawood, A., 1258 - A0099
 Al Diri, I., 3495
 Al Holou, S., 2781 - B0160
 Al Houssien, A., 1258 - A0099
 Al hussan, F., 1258 - A0099
 Al Janabi, H., 1471 - C0033, 826 - A0158, 838 - A0170
 Al Karmi, R., 1411 - B0188, **4345 - C0393**, 4349 - C0397
 Al Mesfer, S., 1628 - A0004
 Al Moujahed, A., **4575 - A0164**
 Al Obthani, M., 294 - C0195
 Al Salman, S., 1258 - A0099
 Al Shahwan, S., 1258 - A0099
 Al Towerki, A., 4422
 Al-Abdullah, A., 4780 - B0390
 Al-Ani, A., 2383 - C0049
 Al-Ani, H., 1261 - A0296
 Al-Aswad, L. A., 2087 - A0145, 2115 - A0173, 3733 - B0080, 5128 - B0117
 Al-Dhibi, H., 5451 - A0120
 Al-Garni, A. E., 5901 - C0188
 Al-Holou, S. N., **2048 - A0106**, 2059 - A0117
 Al-Janabi, A., **407 - A0225**
 Al-Khaled, T., **2750 - B0129**
 Al-moujahed, A., 795
 Al-Muammar, A., 743
 Al-Mugheiry, T., **468 - A0328**
 Al-Qahtani, R. S., 22 - A0053
 Al-Qureshi, S., 1958
 Al-Shabraway, M. A., 1594
 Al-Sheikh, M., 1524 - C0365, 4249 - C0091, 4645 - A0287
 Al-Swailem, S. A., 2922 - C0219
 Alabi, R., **2901 - C0198**
 Alaghaband, P., **1648 - A0024**
 Alais, R., 1735 - A0256
 Alali, A., 3762 - B0177
 Alam, M., **1224**, 1974, 4204 - C0046, 4684 - A0326, 5427 - A0096, 5458 - A0127
 Alam, U., 5719 - C0006, 5721 - C0008
 Alanazi, M., **5805 - C0092**
 Alanis Cabrera, D., **3798 - C0025**
 Alanis-de la O, F., 2702 - B0023
 Alapati, A., 4466, 4468
 Alapure, B. V., 4523 - A0038, **995 - B0249**
 Alarcon, A., 1075 - C0088, 1279 - A0314, 254 - C0113, 2966 - C0288
 Alarcon-Martinez, L., 2613, 3732 - B0079, **4474**
 Albalawi, E., **4325 - C0299**
 Albalawi, F., 3729 - B0076, 6034
 Albert, C., 2097 - A0155, 4063 - B0058, **4084 - B0079**
 Albert, D., 78 - A0125
 Albert, J. S., **3568 - A0185**
 Albert, S., 4503 - A0018, 4532 - A0047
 Alberti, M., 1305 - B0012, **4429**, 5918 - C0315
 Albani, D., 4248 - C0090
 Albini, T. A., 5223 - B0336, 537 - B0152
 Albrect, N. A., 2597
 Albright, C., 374 - A0034, 385 - A0045
 Albuquerque, A., 3181 - A0324
 Albuquerque Laboratory for Ocular Research, 5879 - C0165
 Albuquerque, R., 1798 - B0146, **3273 - C0067**, 5879 - C0165
 Alburquerque Junior, A., 1902 - C0302
 Alcada, N., 3862 - C0123
 Alcaraz, L., 900 - B0078
 Aldaba, M., 2941 - C0263
 Aldairy, Y., **2876 - B0294**, 3448, 737, 740
 Aldana, B. I., 1480 - C0222
 Aldarwesh, A. Q., **22 - A0053**
 Aldave, A., 1315 - B0022, **2924 - C0221**
 Aldave, A. J., 1351 - B0111, 1373 - B0133, 2919 - C0216, 4432
 Alder, J., **1801 - B0149**
 Aldersey, H., 1067 - C0080
 Aldigeri, R., 411 - A0229, 4178 - C0200
 Aldrich, B., 1357 - B0117
 Alé-Chilet, A., **1907 - C0307**, 2797 - B0215, 2802 - B0220
 Aleff, R., 1353 - B0113, 4434
 Aleman, T. S., 1151, 1422 - B0341, 4546 - A0061, **46 - A0077**
 Alemayehu, W., 6164 - C0283
 Alessio, G., 1302 - B0009, 4846 - C0204
 Alevy, J., 2597
 Alexander, D., 722
 Alexander, I., 5165 - B0188, 619 - B0291
 Alexander, J., 1899 - C0299, 2915 - C0212
 Alexander, J. J., 5410 - A0062
 Alexander, N., 3325 - C0167, 3849 - C0110
 Alezzandrinni, A., 5921 - C0318
 Alfano, A., 2431 - C0097
 alfaqawi, F., **4810 - C0168**
 Alfonso, E. C., 3667 - A0351
 Alforja, S., 4826 - C0184, 4842 - C0200
 Alhalwani, A., **4549 - A0064**
 Alhammad, F., **100 - A0263**
 Alhassan, M., 2964 - C0286
 Ali, F., 1160, **3604 - A0222**
 Ali, H., **2230 - A0399**
 Ali, I., 3942
 Ali, M., **107 - A0270**, 3878 - C0139, 3881 - C0142, 3882 - C0143
 Ali, M., **5314 - C0247**
 Ali, M., **5447 - A0116**
 Ali, M., **2883 - B0301**
 Ali, R., 1601
 Ali, Z., 3220 - B0319, **5441 - A0110**
 Ali, Z. C., 2390 - C0056
 Ali-Ridha, A. N., 4771 - B0272, **5207 - B0320**
 Aliahmad, B., 2885 - B0303, 5098 - B0087
 Aliancy, J., 2980, 2981
 Alibhai, A., **1928 - C0328**, 2621, 2798 - B0216, 2886 - B0304, 3229 - B0328, 3922
 Alici, E., 4007 - A0132
 Alizadeh, R., 5106 - B0095
 Alizadeh, S., 5011 - A0082
 Aljied, R., 4099 - B0224, **5245 - B0358**
 Aljohani, A. J., **4330 - C0378**
 Aljohani, S., 5175 - B0198
 Alkatan, H., 1628 - A0004, 4325 - C0299
 Alkozi, H. A., **1664 - A0040**, 4371 - C0419
 Allahdina, A. M., **3136 - A0253**
 Allan-Blitz, L., 1140
 Allemann, N., 2824 - B0242
 Allen, D. M., 4452
 Allen, J., 3389 - C0313, 5902 - C0189
 Allen, J., 1156
 Allen, L., 3554 - A0171
 Allen, M., 4125 - B0288
 Allen, P. J., 4562 - A0091
 Allen, R. S., 3580 - A0197, 5511 - A0180, **5991**
 Allende, A., 330 - C0263
 Aller, T., 2133 - A0267
 Aller, T. A., **4770 - B0271**
 Allergan plc, 6127 - C0246
 Alley, R., 2980, 2981
 Allgeier, S., 3439
 Allikmets, R., 4532 - A0047, 5409 - A0061, 5856 - C0143, 787
 Allingham, R., 4391 - C0439, 743
 Allison, C. L., **5794 - C0081**
 Allison, W., 5156 - B0179
 Allon, G., 3494
 Allums, E., **3739 - B0086**
 Allvin, K., 5201 - B0314
 Almaghribi, F., 720
 Almansa, I., 996 - B0250
 Almazan, A., 1653 - A0029, 1654 - A0030, 492 - A0352
 Almeida-Valdes, P., 6155 - C0274
 Almedawar, S., 545 - B0160
 Almeida, A. M., 613 - B0285
 Almeida, D. R., 4425
 Almeida, G., **2697 - B0018**
 Almeida, G., 3132 - A0249
 Almeida, G. A., **4210 - C0052**
 Almeida Junior, J. N., 4426
 Almeida, M. S., 1110 - C0145, **303 - C0236**
 Almeida, Q., 2964 - C0286
 Almeida, R. C., 4098 - B0223, **5232 - B0345**
 Almuhtaseb, H., **3608 - A0226**
 Almutairi, N., **5175 - B0198**
 Alnahrawy, A., **75 - A0122**
 Alnawaiseh, M., 2850 - B0268
 Alonso-Alonso, M. L., 4226 - C0068
 Alonso-Caneiro, D., **1732 - A0253**
 Alonzo, B., 5057 - B0008
 Alqawlaq, S., **1486 - C0228**, 2614
 Alsaedi, A., **5451 - A0120**
 Alsamarrae, A., **2049 - A0107**, 5224 - B0337
 Alsberge, J. B., **5273 - C0119**
 Alshami, S., **1795 - B0143**
 Alshareef, R., **4252 - C0094**
 Alshehri, J., 4401 - C0449
 Alsheikh, O., 100 - A0263
 Alsufyani, A., **41 - A0072**
 Alsweiler, J., 2144 - A0278
 Altay, L., 2377 - C0043, **3128 - A0245**, 3131 - A0248, 3232 - B0331, 4983
 Alten, F., 2850 - B0268
 Alterini, T., **5865 - C0152**
 Alzheimer, H., 2967 - C0289
 Althnayan, Y., 4327 - C0301
 Altomare, F., 1955, 5209 - B0322
 Alvarado, J. A., 3082 - A0053, **4701 - B0125**, 5401 - A0053
 Alvarado, M., 2526 - C0255
 Alvarez, J., 2423 - C0089, 3136 - A0253
 Alves, B. Q., 390 - A0090, **5921 - C0318**
 Alves, C. H., 4540 - A0055, **4970**
 Alves, D., 2800 - B0218
 Alves, F., 1912 - C0312
 Alves, M. R., 3803 - C0030
 Alves, M., 130 - B0044, 4098 - B0223, 431 - A0291, 931 - B0109
 Alward, W. L., 3731 - B0078
 Alwreikat, A., 3423 - C0347
 Alzahrani, H., 4039 - A0246
 Alzamil, H., **4886 - C0331**
 Amadio, M., 313 - C0246
 Amador, M., 1501 - C0342, **1508 - C0349**, 1846 - B0307, 660 - C0218, 802 - A0134
 Amador, R., 2791 - B0209
 Amalfitano, A., 3002
 Amano, F., 4757 - B0258
 Amanullah, M., 104 - A0267
 Amaral, J., 2530 - C0259, 2615, 546 - B0161, **68 - A0115**
 Amarasingha Ekanayaka, S., 1545
 Amarnani, D., 4219 - C0061
 Amaro, E., 4090 - B0085
 Amaro, M. H., 192 - C0003
 Amato, R., 4523 - A0038
 Amaudruz, J., 4573 - A0102
 Ambade, D., **3759 - B0174**
 Ambade, D. A., 3759 - B0174
 Ambarki, K., 5055 - B0006
 Ambati, B. K., 1449 - C0011, 3572 - A0189, 4392 - C0440, 4393 - C0441, 4454, 5817 - C0104
 Ambati, J., 2456 - C0122, 2459 - C0125, 2475 - C0141, 3473
 Ambati, K., 2456 - C0122, 2459 - C0125, 2475 - C0141
 Ambrosio, A. F., **6077 - A0206**
 Ambrosio, R., 1417 - B0194, 4388 - C0436
 Amedi, A., 5032 - A0228
 Ameen, S., 2047 - A0105
 Amelink, A., 4656 - A0298
 Ameri, H., 1923 - C0323, 1969, 26 - A0057, **31 - A0062**, 32 - A0063, 5454 - A0123, 82 - A0129
 Amescua, G., 3667 - A0351, 3671 - A0355, 4773 - B0383, 529 - B0144
 Amin, R., 5687 - A0406
 Amin, S., **2398 - C0064**, 2778 - B0157, 772
 Amini, N., **2107 - A0165**
 Amini, R., **2016 - A0043**
 Amir, F., 1765 - B0080
 Amirana, O., **76 - A0123**
 Amirkhanian, A. A., **1089 - C0102**
 Amisano, A., 4795 - B0405
 Amitai Lange, A., 3862 - C0123
 Amjadi, S., 2700 - B0021
 Ammar, D. A., 2277 - B0231, **4363 - C0411**, 6106 - C0225
 Ammar, M. J., **1422 - B0341**
 Ammitzboll, T. A., 2254 - B0208
 Amoako, W. M., 1273 - A0308
 Amoon-Monney, S., 2428 - C0094
 Amoozgar, B., 5892 - C0179, **6101 - C0220**, 6102 - C0221, 6108 - C0227
 Amore, F., **5173 - B0196**
 Amorelli, G., 2765 - B0144, 3755 - B0170, 3756 - B0171
 Amorim-de-Sousa, A. I., 2151 - A0285, 3384 - C0308
 amoroso, F., 3156 - A0273, **6198 - C0352**, 6201 - C0355
 Amouyel, P., 5537 - A0229
 Amouzegar, A., 2574, 3316 - C0158, **3323 - C0165**, 3326 - C0168
 Amparo, F., 3853 - C0114
 Amphophruet, A., 2750 - B0129
 Amphophruet, A., **3642 - A0303**
 Amponin, D., 748
 Amram, A. L., **4995**
 Amrane, M., 5572 - A0264, 934 - B0112
 An, D., 1707 - A0228
 An, G., **1715 - A0236**, 1718 - A0239, 2079 - A0137
 An, J. A., **474 - A0334**
 An, S. J., **2073 - A0131**
 An, S., 3473
 An, S., 247 - C0106
 An, S., 3292 - C0086, **3293 - C0087**, 4873 - C0318
 An, W., 2009
 Anand, D., 894 - A0283
 Anand, M., 981 - B0235
 Anand, R., 5987
 Anandula, V., 2759 - B0138
 Anant, P., 366 - A0026, 5646 - A0365
 Ancel, P., 2788 - B0167
 Anchala, A., 2708 - B0029
 Ancona-Lazama, D., 1646 - A0022
 Andaya, R., 216 - C0027, 5828 - C0115
 Andersen, C., 6183 - C0302
 Andersen, J., **1711 - A0232**
 Andersen, J., 1441 - C0003
 Andersen, K., **1567**, 2625, 4511 - A0026
 Andersen, M., 3188 - A0331, 5584 - A0303
 Anderson, A. J., 2106 - A0164, **5117 - B0106**
 Anderson, C., 2449 - C0115
 Anderson, D., **316 - C0249**, **3211 - B0310**
 Anderson, D. M., 3483
 Anderson, G., **2863 - B0281**
 Anderson, H. A., 4753 - B0254
 Anderson, J. R., 5961, 5990
 Anderson, K., 990 - B0244
 Anderson, K. L., 2724 - B0103, 5893 - C0180
 Anderson, K., 78 - A0125
 Anderson, R., 1052 - B0363
 Anderson, R., 5115 - B0104
 Andersson Grönlund, M., 4171 - C0013
 Andino, R. V., 301 - C0234
 Ando, M., 2926 - C0223
 Ando, M., 4181 - C0023
 Ando, S., 3751 - B0098
 Andorf, J. L., 6043 - A0077
 Andorf, J., 3368 - C0292
 Andrade de Jesus, D., 4478, **5074 - B0025**
 Andrade, D., 4901 - C0346
 Andrade, G. C., 1452 - C0014
 Andrade, J. S., 3446
 Andrade Romo, J., 3447
 Andrade Romo, J. S., 1667 - A0188, **4994**
 Andre Costa Brito, F., 4044 - A0251
 Andre, H., **1251 - A0092**, 3575 - A0192, 4020 - A0145
 Andreas, F., 1042 - B0353
 Andreasson, U., 5267 - C0113
 Andreau, M. A., 1840 - B0301
 Andresen, T. L., 5686 - A0405
 Andreu-Fenoll, M., 3157 - A0274
 Andrews, C., 4154 - B0377
 Andrews, C., 5165 - B0188, 619 - B0291
 Andries, L., 1862 - C0166, 5831 - C0118
 Andriessen, E., **2638 - A0143**
 Andru, P., 2747 - B0126
 Aneja, S., 5787 - C0074
 Anera, R. G., 5189 - B0212, 5190 - C0291
 Ang, B., 1782 - B0097, 472 - A0332
 Ang, M., 4381 - C0429, 5362 - A0014
 Ang, M. J., 5281 - C0127, **850 - A0182**
 Ang, S., **5593 - A0312**
 Angadi, P., 2052 - A0110, 6172 - C0291
 Angbue Te, N., 6173 - C0292
 Angeles-Han, S. T., **408 - A0226**
 Angelucci, A., **760**
 Anger, M. D., 1428 - B0347, 4469, 5665 - A0384
 Angermueller, C., 1729 - A0250
 Anglade, E., 5004 - A0075
 Anijeet, D., 3677 - A0361
 Aniridia and Vision, 1514 - C0355
 Anisimova, N., 5647 - A0366
 Anjos-Serrano, R., 2399 - C0065
 Ankri, L. S., **1870 - C0174**
 Annabi, N., 1411 - B0188, 4345 - C0393
 Anonuevo, A., 5710 - A0429
 Ansar, S., **6068 - A0197**
 Ansari, W., 3594 - A0212, **3597 - A0215**, 5630 - A0349
 Ansari, Z., **1453 - C0015**
 Anselm, A., 2373 - C0039
 Anstey, K. J., 1942
 Anstice, N. S., 1076 - C0089, 2957 - C0279
 Antheriou, M., 5070 - B0021, 5895 - C0182

- ç, A., 2020 - A0047
Antonelli, S., 3573 - A0190
Antonetti, D., 3008
Antonetti, D. A., 1671 - A0192, 3002, **3582 - A0199**, 4617 - A0206
Antonini, C., 1952
Antonio-Aguirre, B., **351 - A0011**, 5151 - B0174
Antonucci, M., 4111 - B0274
Antony, B. J., **1226**, 1526 - C0367
Antonyshyn, K., **4423**
Antosova, B., 3115 - A0123
Antunes-Foschini, R. S., **4396 - C0444**
Antwi, D., **4904 - C0349**, 4907 - C0352
Anunike, G., 2694 - B0015
Anwar, K. N., 4360 - C0408
Anyang Childhood Eye Study, 3397 - C0321
Anzures, R., 2750 - B0129
Ao, H., 4740 - B0241
Ao, J. Z., **961 - B0215**
Aoki, H., 296 - C0197
Aoki, T., **4891 - C0336**
Aoyama, Y., **3753 - B0168**, 87 - A0250
Aparicio-Ozores, G., 506 - B0013
Aponte, A., 6023
Appelbaum, T., **2347 - B0336**
Apperson-Hanson, C., 4898 - C0343
Applegate, R. A., 3929, 5800 - C0087
Applied Visual Science, 1031 - B0315
Apponi, L., 5682 - A0401
Appukkuttan, B., 499 - B0006, **5391 - A0043**
Apte, R., **2972**, 5453 - A0122, 5558 - A0250, 977 - B0231
Aptel, F., 3457
Aquavella, J., 1313 - B0020
Aquino, E., 1495 - C0237, 1497 - C0239
Aragona, P., 5572 - A0264
Arai, E., **562 - B0177**, 597 - B0212
Arai, M., 4281 - C0152
Arai, Y., 1730 - A0251, 350 - A0010, 5601 - A0320
Araie, M., **4054 - B0049**, 6082 - C0201
Araim, M. A., 1527 - C0368, **2845 - B0263**
Arakawa, R., 4714 - B0138, 5701 - A0420, 5707 - A0426
Arakawa, S., 1426 - B0345
Araki, F., 6191 - C0345
Araki, S., 4116 - B0279
Aralikatti, D., 4823 - C0181
Aramant, R. B., 544 - B0159, 558 - B0173
Arana, B., 4648 - A0290
Aranda, J., 4009 - A0134
Aranda-Michel, E., 587 - B0202
Arango, T., **2165 - A0334**, 2564, 3889 - C0355
Arango-Rodriguez, M., 1382 - B0142
Aranha dos Santos, V., **271 - C0172**
Arantes, T. E., 1150
Arash Mehr, J. A., **2192 - A0361**
Araújo, M., 5759 - C0046
Araujo, T. G., 6137 - C0256
Aravena, C., 1315 - B0022
Aravind Glaucoma Research Group, 4716 - B0140
Arba Mosquera, S., 5806 - C0093
Arbabi, A., 1923 - C0323, **26 - A0057**, 31 - A0062
Arbel, Y., 1094 - C0129
Arbelo, U., 4330 - C0378
Arboleda, A., 3667 - A0351, 529 - B0144
Arboleda-Velasquez, J. F., **3560 - A0177**, 4219 - C0061
Arceo, R., 5551 - A0243
Archer, B., 1449 - C0011
Arcos, M., **1238 - A0079**
Arcos-Burgos, M. M., 2524 - C0253
Ardalan, A., 1740 - A0261
Ardan, T., 5670 - A0389
Ardila, C., 3527 - A0090
AREDS2 Research Group, 2422 - C0088, 6010
Aref, A., 1574, 2063 - A0121, **4704 - B0128**, 4922 - C0367, 5726 - C0013, 888 - A0220
Arellanes Garcia, M. D., 4201 - C0043
Arellano, I., 5512 - A0181, 990 - B0244
Arellano Martínez, C., **4776 - B0386**
Arenas Archila, E., **93 - A0256**
Arenas, E., 131 - B0045
Arevalo, J., 390 - A0090, **420 - A0238**, 4284 - C0155, 5974
Arevalo, J., 5364 - A0016
Argueso, P., **3846 - C0107**, 3855 - C0116
Arias, J. D., 4229 - C0071
Aribas, Y., 1408 - B0185
Aribindi, K., 4330 - C0378
Arieta, C. E., 431 - A0291
Arietti, M. D., **5046 - A0242**
Arima, M., **5356 - A0008**
Arimura, S., **2064 - A0122**, 2075 - A0133, 4853 - C0211
Arines, J. A., 5803 - C0090
Arita, M., 4331 - C0379
Arita, R., **1965**, 4860 - C0305, 4863 - C0308, 4884 - C0329, 4894 - C0339, 4928 - C0373
Ariza, E., 1149
Armarnik, S., 1094 - C0129, **5853 - C0140**
Armbrecht, A., 2383 - C0049
Armitage, J., 1341 - B0048
Armstrong, J., 479 - A0339
Armstrong, J. J., **2665 - A0392**, 4778 - B0388
Armstrong, L., 1563, 5329 - C0262, 542 - B0157, 565 - B0180
Arndt, V., 5362 - A0014
Arnett, J. J., **1467 - C0029**
Arno, G., 1430 - B0349, 1431 - B0350, 1432 - B0351, **4467**, 6026
Arnold, J., **1461 - C0023**, 330 - C0263, 840 - A0172
Arnould, L., **2885 - B0303**
Aronheim, A., 3763 - B0178
Aronow, M. E., 3623 - A0284, **4301 - C0275**
Aronson, M., 1251 - A0092, 3575 - A0192, 4007 - A0132
Arora, A., 2156 - A0290
Arora, J., **3649 - A0333**
Arpinati, M., 1164
Arranz-Romera, A., **5693 - A0412**
Arrascaue Limo, S., 3159 - A0276
Arrascaue, S., 3765 - B0180
Arredondo, R., 900 - B0078
Arrieta, E., 1157, 3031 - A0002
Arroyo, J. G., 4255 - C0097, 5919 - C0316
Arsenijevic, Y., 2326 - B0315, **3491**, 3984 - A0109, 4583 - A0172
Arshad, A., 3502
Arshad, J., **2913 - C0210**, 4106 - B0231
Arshavsky, V. Y., 1205, 605 - B0277
Arta, A., **5686 - A0405**
Artal, P., 1173, **1992**, 4639 - A0281, **4939**
Arteaga, A., 1316 - B0023, 846 - A0178
Artells de Jorge, N., **1901 - C0301**, 2067 - A0125
Artes, P., 1272 - A0307, 3724 - B0071, 4678 - A0320
Arthirannorapat, N., 4112 - B0275
Arthurs, B., 3636 - A0297
Arumugam, B., **5043 - A0239**, 688 - C0283, 689 - C0284
Arumugham, R., **3287 - C0081**
Arunakiranthan, M., 2047 - A0105
Arya, M., 1928 - C0328, **2798 - B0216**, 2886 - B0304
Aryal, S., **895 - A0284**
Asada, K., 3450
Asada, Y., 344 - A0004, 493 - A0353, **5573 - A0265**
Asai, T., 2019 - A0046
Asanad, S., 1541 - C0382, 2180 - A0349, 2831 - B0249, 306 - C0239, 307 - C0240, 3366 - C0248, **5993**
Asano, H., **1788 - B0103**
Asano, S., 1368 - B0128, 29 - A0060, **4295 - C0166**, 4382 - C0430
Asano, T., 3189 - B0189, 4294 - C0165
Asano, Y., 4262 - C0133
Asaoka, R., 29 - A0060, **3024**, 3753 - B0168, 4295 - C0166, 5118 - B0107, 53 - A0084, 5894 - C0181
Asaria, R., 2739 - B0118, 3616 - A0234
Asatryan, A., **5561 - A0253**
Asbell, P. A., 2659 - A0386, **3676 - A0360**, 3785 - C0012, 4880 - C0325, 919 - B0097, 924 - B0102, 937 - B0115
Ascari, G., **377 - A0037**
Aschard, H., 5144 - B0167
Aseem, M., 2465 - C0131
Aseervatham, J., **3096 - A0104**
Asefa, N., 1814 - B0275
Asejczyk-Widlicka, M., 2110 - A0168
Asero, A., **2668 - A0395**
Asfaw, D., **3419 - C0343**
Ash, J. D., 1186, 2453 - C0119, 2508 - C0212, 2511 - C0215, **3961**, 4449, 991 - B0245, 992 - B0246
Ashander, L. M., 499 - B0006, 5391 - A0043
Ashby, R. S., 676 - C0271, 754
Ashkenazy, N., **406 - A0224**
Ashouri, M., 1484 - C0226
Ashurov, A., 5643 - A0362
Ashwini, V., 1596
Ashworth Briggs, E., **3519 - A0082**
Ashworth, J., 171 - B0325
Askew, B., 1961, **3467**, 5478 - A0147, 76 - A0123
Aslam, S. A., 989 - B0243
Aslam, T. M., 2390 - C0056, 3220 - B0319, 5441 - A0110
Aslanidis, A., 3318 - C0160
Asnagli, L., **1628 - A0004**
Asokan, P., 3029
Asokan, R., 1596, 2736 - B0115
Asoklis, R. S., 2695 - B0016
Asou, K., 4271 - C0142
Asper, L., **2963 - C0285**, 913 - B0091
Aspinall, P., 2383 - C0049
ASPREE Investigator Group, 5539 - A0231
Asquith, M., 2526 - C0255
Assaad, N., 1260 - A0295
Assadi, A. H., **1740 - A0261**
Astakhov, S. Y., 5145 - B0168
Astakhov, Y. S., 5145 - B0168
Astilean, S., 557 - B0172
Astle, W. F., 168 - B0322
Astorga Carballo, A., **1149**
Astroz, P., **3156 - A0273**, 6198 - C0352, 6201 - C0355
Atalay, E., 5124 - B0113
Atchison, D. A., 2960 - C0282, **4667 - A0309**, 5791 - C0078, 5864 - C0151
Athanas-Cramnell, A. J., **1182**
Athanasios, D., **4504 - A0019**
Athersuch, T., 2469 - C0135
Athwal, A., 1221, 1972, 2865 - B0283
Atilano, S., 1462 - C0024, 3268 - B0367, 4005 - A0130, 771
Atiskova, Y., **6073 - A0202**
Atkins, K., 4815 - C0173
Atkins, M., 6150 - C0269
Atkins, S., 1142
Atkinson, D., 3230 - B0329
Atkinson, J., 790
Atkinson, J., 987 - B0241
Atlas, M., 5861 - C0148
Attar, M., 228 - C0039, 244 - C0055
Attia, J., 6008
Attiku, Y., 387 - A0087
Attwood, J., 4243 - C0085, 5847 - C0134
Attwood, J. D., **5530 - A0222**
Au, A., 2851 - B0269
Au, E. D., 4586 - A0175
Au, V., 349 - A0009
Aubin, M., 4099 - B0224, 5245 - B0358
Audo, I. S., 1566, 3895 - C0361, 3896 - C0362, 4030 - A0155, 4526 - A0041, 5415 - A0067
Auffarth, G., 2210 - A0379, 265 - C0124, 266 - C0125, 419 - A0237, 5285 - C0218
Augenzentrum am St. Franziskus Hospital, Muenster, Germany, 3140 - A0257
Augsten, R., 3243 - B0342
Augusteyn, R., 268 - C0127
Augustin, A. J., **4856 - C0214**
Augustin, H. G., 3264 - B0363
Augustin, M., 297 - C0198, 5061 - B0012, **5821 - C0108**, 5826 - C0113
Augustin, S., 5553 - A0245
Augustin, V. A., 1311 - B0018, **1326 - B0033**
Augustine, J., **1211**, 1476 - C0218, 3942
Aujla, M., 4888 - C0333
Aung, K., 5539 - A0231
Aung, T., 1813 - B0274, 1817 - B0278, 1995, 2001, 2028 - A0055, 2037 - A0064, 2721 - B0100, 3500, 3515 - A0078, 3518 - A0081, 4081 - B0076, 5124 - B0113, 5143 - B0166, 5145 - B0168, 5146 - B0169, **5149 - B0172**, 5902 - C0189, 5910 - C0197
Auran, J. D., 2115 - A0173, 3733 - B0080
Auricchio, A., 2488 - C0192
Ausayakhun, S., 5589 - A0308
Austeng, D., 805 - A0137
Austin, A., 1575, 2897 - C0194
Auteri, G., 181 - B0335, 182 - B0336
Authié, C., **5033 - A0229**
Authier, S., 2653 - A0380, 5532 - A0224
Automatic detection of diabetic retinopathy in fundus images, 1692 - A0213
Autorino, R., 5605 - A0324
Auw-Haedrich, C., 4317 - C0291
Avery, R. L., **1474 - C0036**, 1957
Avila, F. J., 3441, 4352 - C0400
Ávila, M., 390 - A0090
Avitabile, T., **3166 - A0309**, 3948
Avrutsky, M., **2572**
Awadalla, M. S., **2700 - B0021**
Awasthi, S., 514 - B0021
Awate, S., 5745 - C0032
Awatramani, G., 1860 - C0164, 1865 - C0169, 1866 - C0170, 1867 - C0171, 1868 - C0172
Awe, M., 5460 - A0129
Awh, C., 3174 - A0317
Awidi, A., **2303 - B0257**
Awuti, M., 3979 - A0104
Awwad, S., **5706 - A0425**
Ayaki, M., 91 - A0254
Ayala, A., 2828 - C0189
Aydin, A., 71 - A0118
Aydin, R., 2115 - A0173, **3213 - B0312**
Ayguaé, E., 1708 - A0229
Aylward, J. W., **6060 - A0189**
Aylward, S. C., 2189 - A0358, 2190 - A0359
Ayoub, S., 3210 - B0309, 6103 - C0222, **6104 - C0223**
Ayres, B., **3637 - A0298**, 5886 - C0173
Ayres, B. D., 1339 - B0046
Ayton, L. N., 1946, **3888 - C0354**
Ayub, G., 931 - B0109
Ayuk Ayuketang, F., 930 - B0108
Ayuso, C., 2322 - B0311, 5407 - A0059
Ayyagari, M., 267 - C0126
Ayyagari, R., 1182, 4466, **4468**, 5137 - B0160, 5383 - A0035
Ayyala, R., 2747 - B0126
Azad, F., **4107 - B0232**
Azar, D. T., 1721 - A0242, 2578, 3331 - C0173
Azar, S. E., **1119 - C0154**
Azario, L., 5605 - A0324
Azevedo, B., **1908 - C0308**
Azimikhorasani, A., **4379 - C0427**
Azimpour, M., **295 - C0196**
Aziz, A., 1475 - C0037, 810 - A0142
Aziz, K., **5221 - B0334**
Azizzadeh Pormehr, L., 2327 - B0316
Azmoon, S. Y., 752
Azuchi, Y., 3348 - C0230
Azuma, K., 4295 - C0166, 53 - A0084
Azuma, M., 3059 - A0030, 572 - B0187
Azuma, M., 509 - B0016
Azuma, N., 5414 - A0066, 572 - B0187
Azuma, S., **3249 - B0348**
Azumi, A., 852 - A0184

B

- B, P., 2841 - B0259
Baar, C., 1234 - A0075
Baba, K., 4014 - A0139, 5044 - A0240, 5305 - C0238, **969 - B0223**
Baba, R., **6184 - C0303**
Baba, S., 914 - B0092, 918 - B0096
Baba, T., **1834 - B0295**, 2487 - C0191, 5592 - A0311, 610 - B0282
Baba, Y., 597 - B0212
Babino, D., **5009 - A0080**
Babiuch, A. S., 4289 - C0160
Baccega, A. T., 4327 - C0301
Bacci, M., 3966
Bacellar-Galdino, M., **5525 - A0217**
Bach, M., **1562**
Bacharach, J., 2715 - B0036
Bachay, G., 586 - B0201
Bacherini, D., 1696 - A0217, **2836 - B0254**, 2838 - B0256
Bachmann, B., 2900 - C0197
Bachmann, L. M., 4386 - C0434
Bachy, R., 5123 - B0112
Baciu, P., 2049 - A0107
Baciu, P., 2461 - C0127, 385 - A0045, **790**
Back, W., 3824 - C0051
Backus, S. P., 3012, **3015**
Baclagon, E., 3782 - C0009, 3859 - C0120, 3863 - C0124, 4358 - C0406
Badalone, V., **2653 - A0380**
Badami, A., **2234 - A0403**
Badawi, A., 5451 - A0120
Badawi, D., **932 - B0110**
Baddam, P., 3111 - A0119
Badea, T. C., 5497 - A0166
Bademci, G., 6048 - A0082
Bader, C., 3311 - C0153
Bader, G. D., 4582 - A0171
Badheka, D., 1579
Badia, A., 2628 - A0133, **58 - A0105**
Badian, R., **928 - B0106**
Badiei, A., 4527 - A0042
Badillo, S., 4715 - B0139

Badler – Beattie

- Badler, J., 1016 - B0300, 4412
 Badr, M., 4070 - B0065, **5892 - C0179**
 Badylak, S., 2252 - B0206
 Bae, H., 2699 - B0020, 5108 - B0097
 Bae, K., **3219 - B0318**, 3222 - B0321, 5448 - A0117
 Bae, S., 2938 - C0260
 Bae, S., 878 - A0210
 Baehr, W., 1978, 2358 - B0368, 3054 - A0025, 3068 - A0039, 4966
 Baek, A., 4608 - A0197
 Baek, J., 360 - A0020
 Baek, S., 2033 - A0060, **2685 - B0006**, 4086 - B0081
 Baek, Y., 3420 - C0344
 Baekelandt, V., 5831 - C0118
 Baenninger, P. B., 4386 - C0434
 Baéz, Y., 402 - A0102
 Bafna, S., 5768 - C0055
 Bagdonaitė-Bejarano, L., **6070 - A0199**
 Bagger, M., 3643 - A0304
 Baghdasaryan, E., 2868 - B0286, **3847 - C0108**, 5065 - B0016
 Bagheri, S., 45 - A0076, **835 - A0167**
 Bagherinia, H., 1512 - C0353, 1684 - A0205, 1727 - A0248, 2833 - B0251, 3880 - C0141, 5071 - B0022, **673 - C0231**
 Baglin, E. K., 2386 - C0052
 Bagnoli, P., 1251 - A0092
 Bahadorani, S., 1833 - B0294, 2705 - B0026, 3127 - A0244, 5443 - A0112
 Baharozian, C., 6054 - A0088
 Bahrami, B., 1477 - C0219, **4000 - A0125**
 Bai, H., 1640 - A0016
 Bai, S., 1213, 5351 - A0003
 Bai, Y., 4567 - A0096
 Baig, A., 2026 - A0053
 Bailey, C., 5441 - A0110
 Bailey, C., 1203
 Bailey, C., 1906 - C0306, 3607 - A0225
 Bailey, J., **1991**
 Bailey, J., 2186 - A0355
 Bailey, M. D., 1757 - B0072
 Bailey, S. T., **2620**, 3145 - A0262
 Bailey-Wilson, J. E., **1823 - B0284**, 1824 - B0285, 1825 - B0286, 702 - C0297
 Bain, C., **1272 - A0307**
 Baird, P. N., 4399 - C0447, 4470
 Baiza-Duran, L. M., 1228 - A0069, **1243 - A0084**
 Bajaj, R. P., **5184 - B0207**
 Bajcsy, P., 555 - B0170
 Bajic, N. N., **264 - C0123**
 Bajor, A., **3334 - C0176**
 Bak-Nielsen, S., **4395 - C0443**, 742
 Bakall, B., 2333 - B0322, **6043 - A0077**
 Bakaraju, R., 1755 - B0070, 1758 - B0073, 1776 - B0091, 1789 - B0104, 1791 - B0106, 1793 - B0108, 3402 - C0326
 Baker, A. N., 5521 - A0213, 6136 - C0255
 Baker, C. W., 5971
 Baker, J., 1721 - A0242
 Baker, K., 321 - A0239
 Baker, K., **1113 - C0148**
 Baker, L., 1893 - C0293
 Baker, R. S., 4103 - B0228
 Baker, R., 4146 - B0369
 Baker, S., **2348 - B0358**
 Baker, T., 5006 - A0077
 Bakhoum, M., **2915 - C0212**
 Bakhsh, S., 3771 - B0186
 Bakke, H. G., 3865 - C0126
 Bakker, B., 4983
 Bakker, R., 194 - C0005
 Bakondi, B., 5010 - A0081, 551 - B0166, **6021**
 Bakri, S., 1036 - B0347
 Bakroon, A., **1286 - A0321**
 Bakshi, S., 4143 - B0366
 Bal, S., **3754 - B0169**
 Balaghali, S., 5011 - A0082
 Balaiya, S., **3109 - A0117**
 Balaji, S., 5175 - B0198
 Balak, C., 1911 - C0311
 Balal, S., 3879 - C0140
 Balaratnasingam, C., 4482
 Balaskas, K., 1034 - B0345, 1469 - C0031, 1471 - C0033, 2390 - C0056, 3216 - B0315, **3220 - B0319**, 5242 - B0355, 5441 - A0110, 5550 - A0242, 798 - A0130, 815 - A0147, 816 - A0148, 826 - A0158, 838 - A0170
 Balasubramani, G. K., 3458
 Balasubramanian, A., 107 - A0270, 3878 - C0139, 3881 - C0142, 3882 - C0143
 Balasubramanian, M., 4703 - B0127, **5066 - B0017**
 Balasubramanian, R., **322 - C0255**
 Balasubramanian, S., 1134 - C0169, 2868 - B0286, 3208 - B0307, **5954**
 Balayan, A., 4358 - C0406
 Balazsi, M., 6015
 Balch, W. E., *J*
 Baldassano, V. D., 3786 - C0013, 5456 - A0125
 Baldeosingh, R., 1481 - C0223, **1483 - C0225**, 3470, 3471
 Baldonado, K., 163 - B0317
 Balducci, C., 241 - C0052
 Baldwin, A., 4115 - B0278
 Balendra, S., 6117 - C0236
 Bales, K., 2360 - B0370, **2361 - B0371**
 Bali, S., 491 - A0351
 Baligova, I., 5408 - A0060
 Bálint, A., **439 - A0299**
 Balk, L., 723
 Balke, M., **2944 - C0266**
 Ball, A. K., 3708 - B0055
 Ball, J., 2512 - C0216
 Ball, S., 5639 - A0358
 Ballarin, B., 3261 - B0360
 Ballesta, M., 5811 - C0098
 Ballesteros Atala, Y., 931 - B0109
 Ballios, B., 293 - C0194
 Ballios, B. G., **4582 - A0171**
 Balne, P. K., 349 - A0009, 5843 - C0130
 Balraj, A., **5518 - A0210**, 600 - B0272
 Baluyot, S., 1675 - A0196, **1691 - A0212**, 410 - A0228
 Baluyot, S. C., 2825 - B0243
 Balzano, S., 5421 - A0073
 Ban, J., 1023 - B0307
 Ban, N., 5558 - A0250, **977 - B0231**
 Ban, Y., **3842 - C0103**
 Banaee, T., 4999 - A0070
 Banda, H., **394 - A0094**
 Banda, N. K., 5559 - A0251
 Banda, Y., 1179
 Bandala-Sanchez, E., 4839 - C0197
 Bande, M., 3178 - A0321
 Bandeen-Roche, K., 4461
 Bandeira, F. B., **2257 - B0211**
 Bando, A. H., **3427 - C0351**
 Bando, H., 1459 - C0021
 Banerjee, A., 5014 - A0210
 Banerjee, D., 2459 - C0125, **2475 - C0141**
 Banerjee, S., 904 - B0082
 Banerjee, S., 706 - C0301
 Banfi, S., 3095 - A0103
 Bang, J., 3502
 Bang, S., 4798 - B0408
 Bahazi, J., 6109 - C0228
 Baniasadani, N., 1101 - C0136, **1105 - C0140**, 1128 - C0163, 5107 - B0096, 5134 - B0123, 6028
 Banik, R., 2832 - B0250
 Banin, E., 1004 - B0258, **2582**, 3494, 5324 - C0257, 5415 - A0067, 5421 - A0073, **77 - A0124**
 Banks, G. T., 1980
 Bantsev, V., 5828 - C0115, **5929 - C0326**, 80 - A0127
 Banu, R., 2567
 Bao, F., **5764 - C0051**
 Bao, J., 3399 - C0323, 3401 - C0325, **5172 - B0195**
 Bao, M., 1456 - C0018
 Bao, X., 5650 - A0369
 Bao, Y., 3359 - C0241, 5282 - C0215
 Bapputty, R. M., **190 - C0001**
 Baptista, F., 6077 - A0206
 Baraas, R. C., 1514 - C0355, **649 - C0207**, 667 - C0225
 Barak, A., 1504 - C0345, 535 - B0150
 Barakat, A., 3565 - A0182
 Barakat, M., **5938 - C0335**
 Barale, P., 3896 - C0362
 Baralle, D., 5784 - C0071
 Barampouti, F., **4139 - B0302**, 4286 - C0157
 Baranov Laboratory, 1989
 Baranov, P., 6130 - C0249, 71 - A0118
 Baranov, P. Y., 1989, 556 - B0171, 566 - B0181
 Barash, A., **4479**
 Barathi, V. A., 1633 - A0009, 195 - C0006, 2001, 4220 - C0062, 5261 - C0107, 5301 - C0234, **5843 - C0130**, 755
 Baratsits, M., **3234 - B0333**, 4483
 Baratz, K. H., 1320 - B0027, 1353 - B0113, **4434**
 Barb, S., 5355 - A0007
 Barbariga, M., 3336 - C0178, 4350 - C0398
 Barbarino, A., 3301 - C0095, 3815 - C0042, 3830 - C0057
 Barbazetto, I. A., **3640 - A0301**
 Barbee, S. A., 4549 - A0064
 Barben, M., **965 - B0219**
 Barber, A. J., **2439 - C0105**
 Barbieri, N., 5331 - C0264
 Barboni, M. T., 5031 - A0227, **628 - C0058**
 Barboni, P., 2180 - A0349, 307 - C0240
 Barbos, O., 557 - B0172
 Barbosa de Araujo, R., **1125 - C0160**, 1908 - C0308, 458 - A0318
 Barbosa, J., 1703 - A0224
 Barbosa, J., 337 - C0270
 Barbosa, L., 2697 - B0018
 Barbosa, T. S., 4426
 Barbosa-Breda, J., 3951, **4478**, 5074 - B0025
 Barbosa-Sabanero, K. Y., 1985, **3078 - A0049**
 Barbot, A., 4941
 Barbur, J. L., 1084 - C0097, **727**
 Barcelona, P. F., 6072 - A0201
 Bardag-Gorce, F., **3868 - C0129**
 Barel, G., 1423 - B0342
 Bargoud, A., **6165 - C0284**
 Barjol, A., 2788 - B0167
 Barker, D., 4623 - A0265
 Barkhordari, T., 2991, 3885 - C0146
 Bando, A. H., 543 - B0158
 Barman, K., 230 - C0041, **5690 - A0409**
 Barman, S. P., 230 - C0041, **238 - C0049**, 5690 - A0409
 Barnard, A. R., 1195, 3493, 4534 - A0049, 4541 - A0056, 4600 - A0189, 4613 - A0202, **5654 - A0373**, 6005, 989 - B0243
 Barnard, L., 401 - A0101
 Barnes, C., 1269 - A0304
 Barnes, C. S., **3408 - C0332**
 Barnes, K., 719
 Barnes, S. A., 564 - B0179
 Barnett, J., 4999 - A0070, 5317 - C0250
 Barnett, M., 921 - B0099
 Barnett, N. L., 1492 - C0234
 Barney, P., 543 - B0158
 Barone MD, S., 3653 - A0337
 Barr, J., 3814 - C0041, 3855 - C0116
 Barr, L., 5934 - C0331
 Barragan-Arevalo, T., 2925 - C0222
 Barraquer Granados, J. I., 1321 - B0028
 Barraquer, R. I., 1387 - B0164
 Barraso, M., 1907 - C0307, **2797 - B0215**, 2802 - B0220
 Barrau, C., 598 - B0270
 Barreiro, S. G., **3988 - A0113**
 Barrera, L., 374 - A0034
 Barrera Rodriguez, R. E., **1321 - B0028**
 Barrett, A., 3588 - A0205
 Barrett, D. A., **617 - B0289**
 Barrett, M., 1597, **5180 - B0203**
 Barrett, R. P., 1545
 Barriga, E., 1689 - A0210, 1709 - A0230, **1887 - C0287**
 Barron, E. A., 1541 - C0382, 306 - C0239, 5993
 Barron, E., **1541 - C0382**, 306 - C0239, 4719 - B0143, 5993
 Barros Centeno, M., 124 - B0038
 Barry, B., 2173 - A0342
 Barry, B., 919 - B0097
 Barry, M. P., **3892 - C0358**, 4568 - A0097
 Barry, R. J., 1138, 160 - B0074, **2302 - B0256**, 403 - A0221
 Barsegian, A., 106 - A0269, **92 - A0255**
 Barsh, S. R., 5984
 Barta, C., 1858 - C0162
 Bartakova, A., 2255 - B0209, **5470 - A0139**
 Bartels, M. C., 1576
 Bartels-Peculis, L., 5223 - B0336
 Barteselli, G., 5929 - C0326, 883 - A0215
 Barth, H., **5941 - C0338**
 Barth, M., 2328 - B0317
 Barthelmes, D., 1463 - C0025, 3616 - A0234, 4249 - C0091, 4380 - C0428, 829 - A0161
 Bartlett, M. B., 3442
 Bartoe, J. T., **2649 - A0154**
 Bartoe, J. T., 5527 - A0219, 5662 - A0381
 Bartol, F., 1913 - C0313
 Bartoli, M., 2492 - C0196, **3003**, 3005, 3553 - A0170, 4024 - A0149, 5381 - A0033, 5486 - A0155, 5515 - A0184
 Bartoszek, P., 5591 - A0310
 Bartsch, D. G., 1501 - C0342, 1846 - B0307, 5916 - C0313, **660 - C0218**
 Bartsch, S., 6073 - A0202
 Bartsch, U., 6073 - A0202
 Bartschat, A., 3439
 Bartuma, H., 4007 - A0132
 Bartuzel, M. M., **5798 - C0085**, 5874 - C0161
 Bartz-Schmidt, K., 2658 - A0385, 2982, 4561 - A0090, 5501 - A0170, 5683 - A0402, 5684 - A0403
 Baruch, A., 2441 - C0107
 Barzelay, A., 1504 - C0345, **535 - B0150**
 Basak, S., 1315 - B0022
 Basak, S., 5776 - C0063
 Basaron, O. B., 5925 - C0322
 Bascom Palmer Eye Institute, Ophthalmology, 498 - B0005
 Baseler, H., 5021 - A0217, 798 - A0130
 Bashar, E., 3967
 Basheer, K., 3216 - B0315, 4073 - B0068
 Bashford, K. P., 2056 - A0114
 Bashir, H., 3110 - A0118
 Basova, L., 2577
 Bassam, H., 1859 - C0163
 Bassett, K., 1601
 Bassi, S., **4843 - C0201**
 Bassilious, K., 1136
 Baskus, A., 2830 - B0248
 Bastia, E., 4707 - B0131
 Basu, B., 1563
 Basu, S., 1572, 3455
 Bata, A. M., 1234 - A0075, 3191 - B0191
 Batawi, H. I., 4687 - A0329
 Batechelor, W. M., **3031 - A0002**
 Batech, M., 1842 - B0303
 Bateman, K., 952 - B0130
 Bates, D., 220 - C0031
 Bates, D. O., 2646 - A0151
 Battle Pichardo, J. F., 402 - A0102
 Batres, L., 4767 - B0268
 Batson, J., **220 - C0031**
 Batsuuri, K., 5502 - A0171
 Batterbury, M., 437 - A0297
 Baudi, F., 4841 - C0199
 Baucum, A., 592 - B0207
 Baudin, F., 2885 - B0303
 Baudouin, C., 3850 - C0111, 5714 - C0001
 Bauer, A. J., 1297 - B0004
 Baulier, E., **1986**
 Baumal, C. R., 1928 - C0328, 2798 - B0216, 3922
 Bauman, W., 1689 - A0210
 Baumann, B., 4598 - A0187, **6079 - A0208**
 Baumann, B., 1975, 2622, 5821 - C0108, 5826 - C0113, 5863 - C0150
 Baumann, B., 3163 - A0280, 6044 - A0078
 Baumann, J. M., 1660 - A0036, 3969
 Baumann, L., 4485
 Baumel, B., 1102 - C0137, 1124 - C0159
 Baumel, B., 618 - B0290
 Baumgart, C., 2142 - A0276
 Baumgarten, D., 3198 - B0198
 Baumhof, P., 5668 - A0387
 Baumritter, A., **2751 - B0130**, 2754 - B0133, 2757 - B0136, 2775 - B0154
 Baur, J., **4249 - C0091**, 4645 - A0287
 Bautista, V. M., 506 - B0013
 Bautista-Hernández, L., 506 - B0013
 Bautzová, T., 4543 - A0058
 Bauwens, M., 4532 - A0047
 Bavinger, J., 6189 - C0308
 Baxi, E. G., 311 - C0244
 Baxter, L. C., 2773 - B0152
 Bayalag, M., 2748 - B0127
 Baydoun, L., 1380 - B0140, **2902 - C0199**
 Bayissasse, B., 6164 - C0283
 Baylis, O. J., 2272 - B0226
 Bazan, H. E., 2285 - B0239, 2369 - B0379, **4368 - C0416**
 Bazan, N. G., 1000 - B0254, 2369 - B0379, 2463 - C0129, 2483 - C0149, 3051 - A0022, 3058 - A0029, 3988 - A0113, 4506 - A0021, 4523 - A0038, 5561 - A0253, 986 - B0240
 Bazeer, S., **1964**, 958 - B0136
 Bazin, R., 2247 - B0201, 4336 - C0384
 Bazinet, L., 1421 - B0340, 234 - C0045
 Beach, K., 5528 - A0220
 Beach, K. M., 1175
 Beam, A., 3440
 Beane, W., 324 - C0257
 Beasley, K. N., 4992
 Beato, J. N., 1405 - B0182
 Beattie, A., 5225 - B0338
 Beattie, U., 2417 - C0083

- Beauchemin, K., 2638 - A0143
 Beaudet, A., 2597
 Beaudry, M., 4340 - C0388
 Beaulieu, N., 2638 - A0143
 Beauregard, A. M., 1065 - C0078
 Beaver Dam Eye Study, 1040 - B0351, 3014
 Beavis, S. D., 2960 - C0282
 Beca, F., 2749 - B0128, **2776 - B0155**
 Becerra, N., 6107 - C0226
 Becerra, S., 2488 - C0192
 Becerra, S., 1382 - B0142
 Becerra-Revollo, C., 1843 - B0304
 Becirovic, E., 3073 - A0044, 4496
 - A0011, **5334 - C0267**, 5663
 - A0382
 Beck, K., 1833 - B0294, 2705 - B0026, 5443 - A0112, **860 - A0192**
 Beck, S., 716, 998 - B0252
 Beck, Y., 1550
 Becker, D., 2347 - B0336
 Becker, E., 6073 - A0202
 Becker, F., 4020 - A0145
 Becker, K., **3895 - C0361**
 Becker, M., 4199 - C0041
 Becker, S., **3586 - A0203**, 5845 - C0132
 Beckers, A., 1862 - C0166
 Beckers, H. J., 3457
 Beckinsale, P., 4380 - C0428
 Beckmann, L., 5820 - C0107
 Beckwith-Cohen, B., **603 - B0275**
 Bedan, A. H., **3132 - A0249**
 Bédard, O., 1505 - C0346
 Bedard, P., **2903 - C0200**
 Bedell, H. E., 1079 - C0092
 Bedgood, P., **2106 - A0164**
 Bedgood, P. A., 2140 - A0274
 Bedolla, A., **1528 - C0369**
 Bedrood, S., 5059 - B0010, 5060 - B0011, 5069 - B0020
 Beech, M., 5719 - C0006, 5721 - C0008
 Beelen, M., 5930 - C0327, 5936 - C0333
 Beenakker, J., 2135 - A0269
 Beer, F., **1975**, 3435, 5727 - C0014, 5863 - C0150
 Beg, M., 1221, 2181 - A0350, 6063 - A0192, 6065 - A0194
 Begaj, T., **3055 - A0026**, 4524 - A0039, 5238 - B0351
 Begley, C. G., 1779 - B0094, 4904 - C0349, 4907 - C0352
 Béguier, F., 5553 - A0245
 Begum, G., 2366 - B0376, **4453**
 Behaegel, J., **2270 - B0224**
 Behalf of the MacTel Study Group4, 1034 - B0345
 Behar-Cohen, F. F., 1191, 3092 - A0063, **388 - A0088**, 3984 - A0109, 5655 - A0374, 5679 - A0398, 5876 - C0163
 Behlau, I., 3663 - A0347
 Behrens, A., **2935 - C0257**
 Behrens, A., 3656 - A0340, **3662 - A0346**, 3666 - A0350
 Behrle, E., 181 - B0335, 182 - B0336
 Beier, C., **1875 - C0179**
 Beight, C., 971 - B0225
 Beijing intracranial and intraocular pressure (ICOP) study, 5052 - B0003
 Beilicke, S., 3304 - C0098
 Beiser, A., 1041 - B0352
 Beit-Yannai, E., 3186 - A0329, 3508 - A0071, **3509 - A0072**, 3985 - A0110
 Bek, T., 3952, 5284 - C0217, 5288 - C0221, 5431 - A0100
 Beka, S., 4814 - C0172
 Bekerman, V., 5972
 Bektetova, T., **443 - A0303**
 Bekker, C., 5380 - A0032
 Bekker, J., 2085 - A0143
 Belair-Hickey, J., 4582 - A0171
 Belalcazar, S., **1719 - A0240**
 Belamkar, A., 5084 - B0035
 Beland, A., 554 - B0169
 Belcastro, M., 4980
 Belen, L., **391 - A0091**, 4445, 5568 - A0260
 Belfort Jr, R., 3356 - C0238, 3366 - C0248, 337 - C0270, 390 - A0090
 Belforte, N. A., 2613, 4474
 Belghith, A., 2090 - A0148
 Beli, E., 5350 - A0002, **6002**
 Belin, M. W., 4388 - C0436
 Belkin, A., 2684 - B0005
 Belkin, M., 1024 - B0308
 Bell, B. A., 2443 - C0109, 2474 - C0140
 Bell, C., 2532 - C0261
 Bell, D. J., 1252 - A0093
 Bell, J. S., **1415 - B0192**, 533 - B0148
 Bell, K., **6143 - C0262**
 Bell, K., 5021 - A0217
 Bell, N., 1798 - B0146, 3273 - C0067, 5879 - C0165
 Bell, N. P., 2050 - A0108
 Bellan, L., 4157 - B0380
 Belle, M., 4699 - A0341
 Belleville, S., 5163 - B0186
 Bellingham, J., 4504 - A0019
 Bello, S., 1527 - C0368, 277 - C0178, 2845 - B0263, **2864 - B0282**
 Belloni, L., 4178 - C0020
 Belmonte, C., 148 - B0062, 155 - B0069, 3309 - C0151, 4876 - C0321
 Belmonte, J., 148 - B0062
 Belmonte, K. C., 763
 Belotti, M., 2419 - C0085, 275 - C0176
 Beltran, M. A., **1465 - C0027**, 5946 - C0343
 Beltran, W. A., 4522 - A0037, **4527 - A0042**, 5318 - C0251, 6006
 Beltran-Agullo, L., 2015 - A0042
 Belville, C., 4362 - C0410
 Belza, I., 2479 - C0145
 Bemme, S., 2884 - B0302
 ben cnaan, R., 535 - B0150
 Ben Cohen, A., 1733 - A0254
 Ben M'Barek, K., 5008 - A0079
 Ben Ner, D., 726
 Ben-Shabat, S., **3985 - A0110**
 Ben-Yaakov, K., 3985 - A0110
 Ben-Yosef, T., 3494, 5421 - A0073
 Benage, M., 3645 - A0306
 Benard, R., 1191, 5655 - A0374, 5679 - A0398
 Benard, Y., **2967 - C0289**
 Benard-Seguin, E., **4340 - C0388**
 Benatti, E., 3253 - B0352
 Benavente-Perez, A., 2154 - A0288, 693 - C0288, 695 - C0290, 696 - C0291, 751
 Bencivengo, L., 5009 - A0080
 Bender, L., 4270 - C0141
 Benedetti, J., 606 - B0278
 Benedetto, M. M., **1006 - B0260**
 Benedi, C., 252 - C0111, 654 - C0212
 Benet-Pages, A., 6047 - A0081
 Benetz, B., **2892 - C0189**
 Benfenati, F., **1993**
 Bengani, L., 5695 - A0414, **5711 - A0430**
 Bengtsson, B., 2124 - A0182, 6031, 6032
 Benhassine, M., **3171 - A0314**
 Benitez Del Castillo, J. M., 3302 - C0096
 Benitez-Garcia, A., 915 - B0093
 Benito, A., 1173
 Benjamin, M., 4794 - B0404
 Benjamin, W. J., 4857 - C0302
 BenMohamed, L., **519 - B0026**, 520 - B0027
 Bennett, J., 1151, 1422 - B0341, 3900 - C0366, 4017 - A0142, 4546 - A0061, 46 - A0077, 985 - B0239
 Bennett, L. D., **4046 - A0253**
 Bennett, M., **1725 - A0246**, 2114 - A0172, 2374 - C0040
 Bennets, B., 5393 - A0045
 Benoit, D., 4585 - A0174
 Benoit, D. G., 5311 - C0244, **5320 - C0253**
 Benowitz, L. I., 2012, 314 - C0247
 Bensaid, N., 1540 - C0381, 731
 Bensinger, E., 4411, 625 - B0297, **648 - C0206**
 Benson, J., **1709 - A0230**, 1887 - C0287
 Benster, T., 5009 - A0080
 Bentaleb, Y., 4751 - B0252
 Bentley, E., 5929 - C0326
 Bentley, S., 437 - A0297
 Bentley, S. A., 3888 - C0354
 Benton, B., 4711 - B0135
 Beranova-Giorgianni, S., 4019 - A0144
 Berardo, F., 5080 - B0031
 Bercauw, E., 4608 - A0197
 Berce, C., 557 - B0172
 Bercezi, O., 4923 - C0368
 Berdia, J., 4045 - A0252, 5410 - A0062
 Berendschot, T., 1576
 Berезovsky, A., 3356 - C0238
 Berg, E., 1963
 Berg, M., **939 - B0117**
 Bergamini, F., 6100 - C0219
 Bergamini, M. V., 4707 - B0131
 Bergandi, F., 4424
 Bergbower, E., 218 - C0029
 Berge, B., 255 - C0114
 Bergen, A. A., 3747 - B0094, 4029 - A0154, 43 - A0074, 6062 - A0191
 Berger, A. R., 1955
 Berger, E. A., 1209, 1548, **3562 - A0179**
 Bergeron, E., 5694 - A0413
 Bergeron, S., **1167**, 3180 - A0323, 3181 - A0324, 5596 - A0315
 Bergersen, L. H., 1480 - C0222
 Berggren, P., 3575 - A0192
 Bergmann, N., **5932 - C0329**, 5934 - C0331
 Bergström, T., 3648 - A0332
 Bergua, A., **2142 - A0276**
 Bergwik, J., 993 - B0247
 Berkenstock, M., **1140**
 Berkowitz, B. A., 3586 - A0203, **959 - B0213**
 Berlinicne, C., 2612
 Berlinicne, C., 1988, 2466 - C0132, 2493 - C0197, 3105 - A0113, 4002 - A0127, 6152 - C0271
 Berman, D., 2186 - A0355
 Berman, J., 3113 - A0113
 Bermúdez, V., 5357 - A0009
 Bernabe, N., 956 - B0134
 Bernabe, N., 4861 - C0306
 Bernabeu, M. O., 2795 - B0213
 Bernardin, D., 1288 - A0323
 Bernardo-Colon, A., 4450, 5514 - A0183
 Berner, D., 3019, 3513 - A0076, **3515 - A0078**
 Bernhard-Kurz, S., 684 - C0279
 Bernhardt, R., 4210 - C0052
 Bernhisel, A. A., **4868 - C0313**
 Berni, A., 2838 - B0256
 Bernier, G., 4582 - A0171
 Bernier, S., **3067 - A0038**
 Bernstein, A. M., **3535 - A0098**
 Bernstein, P., 2888 - C0185
 Bernstein, P. S., 1567, 1568, 2625, **3086 - A0057**, 4511 - A0026, 4513 - A0028, 4514 - A0029, 5363 - A0015, 5402 - A0054, 5840 - C0127
 Bernsten, D. A., **1748 - B0063**
 Bernucci, M., 299 - C0200, 5824 - C0111, 5832 - C0119
 Berri, A. M., 959 - B0213
 Berrocal, A. M., 2771 - B0150
 Berry, J. L., **1637 - A0013**, 1638 - A0014, 1645 - A0021, 1647 - A0023, 3623 - A0284, 3625 - A0286, 3631 - A0292, 4299 - C0273, 5598 - A0317
 Berry, M., 2366 - B0376
 Berta, A., 5723 - C0010
 Bertazzo, S., 2433 - C0099
 Bertelli, A., 663 - C0221
 Bertelli, P., **3554 - A0171**
 Bertelmann, T., 215 - C0026
 Berthiaume, L., 1505 - C0346
 Berthoz, A., 5033 - A0229
 Bertin, S., 5008 - A0079
 Bérubé, J., 3185 - A0328
 Berwick, M., 1439 - C0001
 Beryozkin, A., **5324 - C0257**
 Besch, D., 5199 - B0312
 Besharse, J. C., 1442 - C0004, 4006 - A0131
 Besirli, C., 2451 - C0117
 Besirli, C. G., **1618**, 1629 - A0005, 1631 - A0007, 4287 - C0158, 4448, 4614 - A0203, 4621 - A0263
 Besnard, T., 47 - A0078
 Betancourt, A., 448 - A0308
 Bettio, F., 1254 - A0095
 Betzig, E., 3096 - A0104
 Beuerman, R. W., 3518 - A0081, 371 - A0031, 538 - B0153
 Beutel, M., 5191 - B0214
 Bever, G., 5580 - A0299
 Bevers, J., 246 - C0057
 Bex, P. J., 1074 - C0087, 1280 - A0315, 2165 - A0334, 2564, 4756 - B0257, 4943, 5107 - B0096, 5134 - B0123, 6028
 Beyer, J., 3407 - C0331
 Beykin, G., 1423 - B0342, 356 - A0016
 Bezicau, S., 38 - A0069, 47 - A0078
 Bezlyak, V., 6109 - C0228
 Bezumartea, J., 1427 - B0346, 223 - C0034, 2479 - C0145
 Bezzina, C., 3021
 Bhagat, D., 6027
 Bhagat, N., 4278 - C0149, 4803 - B0413
 Bhalla, M., 1221, 2865 - B0283
 Bhalla, M., 4189 - C0031
 Bhardwaj, M., 3423 - C0347
 Bhardwaj, S., **1052 - B0363**
 Bhargava, A., 437 - A0297
 Bharti, K., 1188, 1985, 3021, 3051 - A0022, 3078 - A0049, 3272 - B0371, **4580 - A0169**, 4663 - A0305, 546 - B0161, 555 - B0170, 68 - A0115
 Bharti, S., 3021
 Bhaskaranand, M., 1666 - A0187
 Bhasker, S. K., 4675 - A0317
 Bhat, L., 839 - A0171
 Bhat, P., 4204 - C0046
 Bhat, S., **1666 - A0187**
 Bhat, S. P., 3064 - A0035
 Bhatia, B., 2051 - A0109
 Bhatt, A., 5213 - B0326
 Bhatt, V. R., 316 - C0249
 Bhattacharjee, S., **3058 - A0029**
 Bhattacharya, S. K., 124 - B0038, 4330 - C0378, 483 - A0343
 Bhattacharya, S., 2253 - B0207
 Bhattacharya, S., **3999 - A0124**
 Bhattarai, D., **5791 - C0078**
 Bhattarai, S., 5657 - A0376
 Bhatti, F. N., 5471 - A0140
 Bhatti, T., 2195 - A0364
 Bhatwadekar, A. D., **3555 - A0172**
 Bhavsar, A. R., **5279 - C0125**
 Bhavsar, K., 4993
 Bhavsar, N. A., 5279 - C0125
 Bhavsar, N. A., 5279 - C0125
 Bhende, M., **387 - A0087**
 Bhisitkul, R., 1249 - A0090
 Bhogal, G., 4888 - C0333
 Bhoopat, T., **4180 - C0022**
 Bhuiyan, A., **3214 - B0313**
 Bhutto, I. A., 2435 - C0101
 Bhutto, I. A., 2448 - C0114, 311 - C0244, **3470**, 3472, 3994 - A0119, 3996 - A0121, 4594 - A0183, 770
 Bhuyan, R., 2396 - C0062
 BI, 3723 - B0070, 5370 - A0022
 Bi, H., 2149 - A0283, **4042 - A0249**
 Biagioni, M., **4601 - A0190**
 Bian, J., 2357 - B0367
 Bianchi, C., 2419 - C0085
 Bianchi, J. I., **4223 - C0065**, 4256 - C0098, 6056 - A0090
 Bianco, G., **709 - C0304**
 Bibi, K., 6078 - A0207
 Bickford, M., 6090 - C0209
 Biel, M., 2982, 4496 - A0011, 4966, 5334 - C0267, 5663 - A0382, 5664 - A0383, 998 - B0252
 Bielory, B., 938 - B0116
 Bielskus, I., **3719 - B0066**, 3721 - B0068, 3998 - A0123, 5078 - B0029, 5096 - B0047
 Bierer, D., 3470
 Bigelow, C. E., 2532 - C0261, 990 - B0244
 Bigelow, C., 2562
 Biggerstaff, K., 4804 - B0414
 Biggs, D., 1123 - C0158
 Biglioli, F., 2274 - B0228
 Bignami, F., 3336 - C0178
 Bigot, K., 1191, **5655 - A0374**, 5679 - A0398
 Birkov, M., **2722 - B0101**, 2723 - B0102, 522 - B0137, 950 - B0128
 Birkova, G., 2487 - C0191, 2723 - B0102, 3373 - C0297, **522 - B0137**
 Bilbao, A., 2282 - B0236
 Bilgihan, K., 1408 - B0185
 Bilirer, M., 1583
 Billard, L., 4690 - A0332, 4691 - A0333
 Billaud, F., 55 - A0086
 Bilonick, R. A., 2660 - A0387
 Bin Abdul Rahim, M., 2945 - C0267, **4885 - C0330**
 Bin Ismail, M., 4159 - C0001
 Bin Yameen, T., **5234 - B0347**
 Binder, C., 3624 - A0285
 Binder, S. W., 3407 - C0331
 Binenbaum, G., 2774 - B0153, 2779 - B0158, 2783 - B0162, **2786 - B0165**, 3110 - A0118, 3754 - B0169, 4270 - C0141, 5211 - B0324, 84 - A0247
 Binet, F., 2638 - A0143
 Binette, F., 2986
 Bing, S., 2542 - C0271
 Bini, V., 1302 - B0009
 Binkley, E., 1679 - A0200, 3368 - C0292
 Binns, A. M., 1290 - A0325, 1446 - C0008, **2425 - C0091**, 3230 - B0329
 Binns, M. A., 1126 - C0161
 Binotti, W., **1670 - A0191**
 Binte Adnan, K., 1375 - B0135
 Binz, H., 1342 - B0055
 Biochemistry and Molecular Biology, 3062 - A0033
 Bioinformatics Analysis of Structural Datasets, 2364 - B0374
 BIOMAT Research Group, 4455
 Biomechanical Engineering, 5006 - A0077

Biomedical Optics Group – Brennan

- Biomedical Optics Group, 5830 - C0117
- Bionics Vision Australia (BVA) Consortium, 4562 - A0091
- Biousse, V., 1883 - C0187
- Birch, D. G., 1568, 2426 - C0092, 28 - A0059, 3898 - C0364, 3899 - C0365, 4046 - A0253, 4472, 4991, 54 - A0085, 788
- Birch, E. E., 178 - B0332, 4148 - B0371, 5796 - C0083, **5959**
- Bird, A. C., 3139 - A0256
- Birkenfeld, J., 1401 - B0178, **1407 - B0184**
- Birkholz, T., **324 - C0257**
- Birnbaum, F., 5446 - A0115
- Birngruber, R., 1440 - C0002, 4484
- Biro, A., 5723 - C0010
- Biró, Z., 439 - A0299
- Birrell, M., 5568 - A0260
- Birsner, A., 1421 - B0340, 234 - C0045
- Birt, C. M., **2744 - B0123**, 3461
- Birtel, J., 1565, 3146 - A0263
- Bisbach, C. M., 988 - B0242
- Bisevac, J., **5647 - A0366**
- Bishop, B., 2300 - B0254
- Bishop, C., 1916 - C0316
- Bishop, R., 4173 - C0015
- Biskup, S., 3163 - A0280
- Bispo, P., 3663 - A0347
- Bissen, K., 4462
- Bissen-Miyajima, H., 2218 - A0387, 2229 - A0398
- Bisson, F., 3869 - C0130
- Biswal, M., **3965**
- Biswas, J., 4169 - C0011
- Biswas, P., 4466, 4468, **5383 - A0035**
- Biswas, S., 4265 - C0136, 5212 - B0325
- Bitrian, E., 2741 - B0120
- Bittner, A. K., 2560, 3126 - A0243, 396 - A0096, 40 - A0071, 50 - A0081, **641 - C0071**, 642 - C0072, 786
- Bittner, M., 643 - C0073
- Bizheva, K. K., 1338 - B0045, **293 - C0194**, 294 - C0195
- Bjelland, T., 1046 - B0357, 1050 - B0361
- Blace, N., 616 - B0288
- Black, A. A., **1289 - A0324**, 1291 - A0326, 1942, 4760 - B0261
- Black, G., 1195, 2322 - B0311, 3898 - C0364, 3899 - C0365, 4991
- Black, J., 2144 - A0278, **2957 - C0279**
- Black, S., 1126 - C0161
- Blackburn, B., **745**
- Blackburn, N. B., 1829 - B0290
- Blackburn, R., 3812 - C0039
- Blackie, C. A., 935 - B0113
- Blackshaw, S., 2511 - C0215, 587 - B0202, **991 - B0245**, 992 - B0246
- Blackwell, C., 5912 - C0199
- Bladen, J. C., **3635 - A0296**
- Blain, D., 2340 - B0329
- Blair, C., 2561
- Blair, N. P., 5848 - C0135
- Blake, A., 3237 - B0336
- Blanch, E., 4826 - C0184, 4842 - C0200
- Blanch, R. J., 2302 - B0256, 2366 - B0376, 4450, 4453
- Blanchard, G. J., 3558 - A0175
- Blanchette, C., 243 - C0054
- Blanchon, L., 4362 - C0410
- Blanco Garavito, R., 6198 - C0352
- Blanco, P., 4326 - C0300
- Blanco, T., 3321 - C0163, **3327 - C0169**
- Blandford, A. D., **5630 - A0349**
- Blangero, J., 1829 - B0290, 2724 - B0103, 5893 - C0180
- Blanks, J. C., 3965
- Blaszyk, R., 3334 - C0176
- Blasi, M., 4321 - C0295, 5605 - A0324
- Blasini, M., 2077 - A0135
- Blasini Torres, M., 1028 - B0312
- Blau, S., 1737 - A0258
- Bleau, A., 5567 - A0259, 925 - B0103
- Bleeker, J. C., 3627 - A0288
- Bleicher, I., **284 - C0185**
- Blenkinsop, T. A., 2477 - C0143, 318 - C0251, **5255 - C0101**
- Blenkinsop, T. A., 499 - B0006, 5260 - C0106
- Blennow, K., 5267 - C0113
- Bliedtner, K., **6094 - C0213**, 6199 - C0353
- Blighe, K., 383 - A0043
- Blitzer, R., 2510 - C0214
- Blixt, F. W., **2641 - A0146**, 2643 - A0148, 2645 - A0150, 5504 - A0173, 5505 - A0174, 6068 - A0197
- Blizzard, C. D., **1245 - A0086**, 1250 - A0091
- Blobner, K., **4174 - C0016**
- Bloch, E., **3152 - A0269**
- Bloch, F., **2224 - A0393**, 2226 - A0395, 4387 - C0435, 4788 - B0398
- Block, A., 551 - B0166
- Block, S. S., **163 - B0317**
- Blodgett, W. R., 5456 - A0125
- Blodi, B. A., 213 - C0024, 2382 - C0048, 2804 - B0222, 5599 - A0024, 4676 - A0318, 5542 - A0234, 5971
- Blond, F., 3963
- Bloom, P., 2047 - A0105
- Bloom, W., 2682 - B0003
- Bloomfield, F., 2144 - A0278
- Bloomfield, S. A., **1856 - C0160**, 6141 - C0260
- Blouin, L., 3901 - C0367, 4530 - A0045
- Blount, C., 4153 - B0376
- Bludau, O., **4597 - A0186**
- Blue, C., 4541 - A0056, 4542 - A0057
- Blumberg, D., 2087 - A0145, 2115 - A0173, 3733 - B0080, 4987, 5128 - B0117
- Blumenfeld, A., 1831 - B0292, 3494, 5415 - A0067
- Blumer, K., 1227, 1729 - A0250
- Bluwol, E., 3457
- Boatright, J. H., 3047 - A0018, 3071 - A0042, 4550 - A0065, 5991
- Boaventura Barcello, R., 1029 - B0313
- Bobadilla Mayorquin, Y., 4205 - C0047
- Bobier, W. R., **1018 - B0302**, 4414, 4755 - B0256
- Boccarra, C., 278 - C0179, 3437
- Bocchero, U., **1014 - B0268**
- Bocheux, R., **5812 - C0099**
- Bochin, E., 3895 - C0361
- Bock, A. S., 1969, 32 - A0063
- Bock, F., **3318 - C0160**, 3330 - C0172, 3342 - C0184
- Bocquet, B., 2334 - B0323
- Bocquet, B., 2322 - B0311
- Bodaghi, B., 4179 - C0021, **4406**
- Boddu, S., 3852 - C0113
- Bodnar, Z., **3424 - C0348**
- Boeck, M., 2627 - A0132
- Boehm, A. E., 653 - C0211
- Boehm, S., **3073 - A0044**, 4496 - A0011, 5663 - A0382
- Boelle, P., 1566
- Boer, E. R., 4463
- Boese, E., 4154 - B0377
- Boesze-Battaglia, K., 1188, 4033 - A0158
- Boettcher, T., 2464 - C0130, 4026 - A0151
- Bogarín, T., 4709 - B0133, **4719 - B0143**
- Bogner, B., 308 - C0241, 317 - C0250, **3201 - B0201**
- Bogunovic, H., **1620**, 2623, 4483, 4485
- Bohan, D., 272 - C0173
- Bohat, R., 2597
- Bohm, K., **1574**, 2749 - B0128
- Böhm, M. R., 3981 - A0106, **3982 - A0107**
- Bohm, M., 938 - B0116
- Bohn, S., **3439**, 5967
- Böhringer, D., 4317 - C0291
- Boisselier, E., 3512 - A0075, 363 - A0023
- Bojic, S., **3862 - C0123**, 5329 - C0262
- Bojikian, K., 482 - A0342
- Bok, D., 1569, 3045 - A0016, 3943, 4502 - A0017
- Bokman, C. L., **5613 - A0332**
- Boland, M. V., 2731 - B0110, 4465, 4988, 5107 - B0096, 5134 - B0123, 6028
- Bolch, S., 3052 - A0023, **3053 - A0024**, 3056 - A0027
- Boldt, K., 4979
- Boles, N., 2477 - C0143, 5260 - C0106
- Bolínches-Amorós, A., **4600 - A0189**, 4613 - A0202
- Bolla, P., 3852 - C0113
- Bollaerts, I., 1862 - C0166
- Bolling, J., **4300 - C0274**
- Bollinger, K. E., **309 - C0242**
- Bolme, S., **805 - A0137**
- Bolognesi, F., 2274 - B0228
- Bolok, Y., 5462 - A0131
- Bolz, H., 1565, 3146 - A0263
- Bolz, M., 4814 - C0172
- Bolz, S., 716
- Bonacci, E., 1330 - B0037, **1336 - B0043**
- Bonanno, G., 1880 - C0184
- Bonanno, J. A., 4432
- Bonanomi, M. B., 4835 - C0193
- Bondarenko, V. A., **2370 - B0380**
- Bonelli, L., 2039 - A0066
- Bonetto, J., 1330 - B0037, 1336 - B0043
- Boneva, S. K., 2627 - A0132, **4317 - C0291**
- Bonfiglio, V., 3948
- Bonham, L., **2099 - A0157**
- Bonhomme, G., 5445 - A0114
- Böni, C., 4249 - C0091
- Bonifazi, F., 1164
- Bonilha, V. L., **2443 - C0109**
- Bonilla Pons, S. A., 548 - B0163
- Bonini, S., 3846 - C0107
- Bonnemajier, P. W., 3015, **5136 - B0159**
- Bonnet, C., 4203 - C0045
- Bonnet, C., 1566
- Bonzano, C., **4403 - C0451**
- Booler, H. S., 2441 - C0107, 5828 - C0115, 5929 - C0326, **80 - A0127**
- Boon, C., 1577, 3128 - A0245, 3134 - A0251, 43 - A0074, 4540 - A0055, 4983, 6062 - A0191, 6075 - A0204
- Boon, M., 4118 - B0281, **4120 - B0283**
- Booth, A., 3724 - B0071, 4678 - A0320
- Borbara, R., 834 - A0166
- Borchman, D., 2367 - B0377, 3812 - C0039
- Borderie, V. M., 5812 - C0099
- Bordet, T., 1191, 5655 - A0374, **5679 - A0398**
- Bordin, P., **1571**, 2058 - A0116
- Bordon, A. F., **5970**
- Bordev, A., 3721
- Borel, N., 2527 - C0256
- Boretzky, A., **1403 - B0180**
- Börgel, M., 3334 - C0176
- Borges, D., 130 - B0044, 931 - B0109
- Borkar, D. S., 3604 - A0222, 4805 - B0415, 5457 - A0126, **6185 - C0304**, 79 - A0126
- Born, I., 43 - A0074, 4503 - A0018, 4532 - A0047
- Borner, F., 6081 - C0200
- Boroah, S., 1846 - B0307, 2383 - C0049, 5383 - A0035
- Borras, T., **3029**
- Borrelli, E., 5860 - C0147
- Borrelli, E., 1517 - C0358, 3217 - B0316, **3223 - B0322**, 4653 - A0295, 4662 - A0304, 5065 - B0016, 5076 - B0027, 5954
- Borrelli, M., 118 - B0032
- Borroni, D., 3328 - C0170, 5197 - B0310, **5719 - C0006**, 5721 - C0008
- Borschel, G., 4423
- Borta, A. C., **194 - C0005**
- Bosch, F., 1174
- Boscia, F., 355 - A0015, 4846 - C0204, 5922 - C0319
- Bose, D., 1188, 3272 - B0371, 4580 - A0169
- Bose, K., 1550
- Bosello, F., **4206 - C0048**
- Boss, J., 1920 - C0320
- Boss, J. D., **1930 - C0330**
- Bosse, B., 4560 - A0089
- Bossie, T., 3788 - C0015
- Boston Keratoprosthesis Laboratory, 2529 - C0258
- Boston Keratoprosthesis Research Group, Massachusetts Eye And Ear Infirmary, 2579
- Bosworth, C., 235 - C0046, 242 - C0053
- Bosworth, H., 5228 - B0341
- Bote, E., 1422 - B0341, 4546 - A0061
- Botfield, H., 4723 - B0147
- Botsford, B., **5445 - A0114**, 875 - A0207
- Botta, S., 3095 - A0103, 378 - A0038, **3966**
- Bottini, A., **5736 - C0023**
- Botzet, G., 3273 - C0067, 5879 - C0165
- Bouari, C., 557 - B0172
- Bouchard, A., 5495 - A0164
- Bouchard, C. S., 152 - B0066, 2063 - A0121, 3823 - C0050
- Bouchard, J., **5495 - A0164**
- Bouche-Pillon, J., 3615 - A0233
- Boucher, N., 3609 - A0227
- Boudreau-Laprise, M., 5522 - A0214
- Bouhenni, R., 503 - B0010
- Bouhout, S., **4771 - B0272**
- Bouhoul, S., 3466, 5358 - A0010
- Boulevard Study Investigators, 1959
- Boulton, M. E., 3589 - A0206, 765
- Bounoutas, G., 385 - A0045
- Bouquet, C., 4531 - A0046, **4537 - A0052**, 5658 - A0377
- Bouremel, Y., **2000**, 2709 - B0030
- Bourkiza, R., **4175 - C0017**
- Bourne, R. R., **5091 - B0042**, 5093 - B0044
- Bousquet, E., 4203 - C0045
- Bousset, L., 5831 - C0118
- Bouthillier, A., **1505 - C0346**
- Bouwman, F., 724
- Bouzidi, N., 4526 - A0041
- Bovenkamp, D., **5343**
- Bowater, R. P., 5639 - A0358
- Bowd, C., 2090 - A0148, 2857 - B0275, 2861 - B0279, 3498, 5075 - B0026, 5116 - B0105
- Bowden, D. W., 5137 - B0160
- Bower, L., 2344 - B0333
- Bowers, N. R., 656 - C0214
- Bowes Rickman, C., 348 - A0008, 3993 - A0118
- Bowin, D., 5720 - C0007
- Bowl, W., 5202 - B0315
- Bowles, D. K., 4334 - C0382
- Bowles, K. E., **599 - B0271**
- Bowman, A. C., 2724 - B0103
- Bowman, K., 5682 - A0401
- Bowman, S. J., **3829 - C0056**, 46 - A0077
- Bowne, S. J., 3062 - A0033, 47 - A0078
- Boxall, N., 6109 - C0228
- Boyce, T., **1460 - C0022**
- Boyd, K. L., 1642 - A0018
- Boyd, P., 991 - B0245, 992 - B0246
- Boyd, R. F., 2649 - A0154, 5527 - A0219, **5662 - A0381**
- Boyd, S. R., 1955
- Boye, S. L., 3002, 3961, 4535 - A0050, 4536 - A0051, 5662 - A0381, 6020
- Boye, S. E., 3961, 4535 - A0050, 4536 - A0051, 5662 - A0381, 6020
- Boyer, D. S., 1960, 1961, 2987, **3620 - A0238**, 76 - A0123, 77 - A0124, 771
- Bozhanova, M., 4179 - C0021
- Bozic, I., 1642 - A0018, 4689 - A0331
- Botker, H., 5284 - C0217
- Braatvedt, G. D., 1809 - B0157
- Brabyn, J. A., 1263 - A0298
- Brad, T., 3273 - C0067
- Bradford, S., 3274 - C0068
- Bradley, A., 3416 - C0340, 4048 - A0255
- Bradley, C., 2563, **4144 - B0367**
- Bradley, E. A., 1795 - B0143
- Bradley, J., 4722 - B0146
- Bradley, P., 1008 - B0262
- Brady, C. J., 1503 - C0344
- Brady, T., 1967, 198 - C0009, 2663 - A0390, 5571 - A0263
- Bragadottir, R., 1514 - C0355, 1828 - B0289, 4246 - C0088
- Braghiroli, M., 665 - C0223
- Braginskaja, E., 2595
- Brahma, A., 4401 - C0449
- Brainard, D. H., 1151, 650 - C0208, 658 - C0216
- Brambilla, M., 1937 - C0337
- Bramblett, G. T., 314 - C0247, 5253 - C0099
- Brand, C., **3902 - C0368**
- Brand, M., 4597 - A0186
- Brandis, A., 715 - C0310
- Brandl, C., **2407 - C0073**, 5271 - C0117
- Brandl, A., 4562 - A0091, 6080 - A0209
- Brandsdorfer, A., **2305 - B0259**
- Branham, K., 4466
- Branham, K. E., 1433 - B0352, 4468, **4472**
- Brantley, M. A., 1180, 1425 - B0344
- Brar, B., 5953
- Brar, V., 4185 - C0027
- Brasili, O. F., 5921 - C0318
- Bräuer, R., 3304 - C0098
- Braun, R. J., 3817 - C0044, 4907 - C0352
- Braverman, R. S., 3767 - B0182
- Bravo Filho, V. T., 1150, 4327 - C0301
- Bravo-Beltrarena, S., **5815 - C0102**
- Bravo-Osuna, I., 5693 - A0412
- Brazhnikova, E., 241 - C0052, 5008 - A0079
- Brazile, B., 1216, **1220**
- Brazitikos, I., **2061 - A0119**
- Breazzano, M. P., **2316 - B0270**, 2317 - B0271
- Brecej, J., 2185 - A0354
- Brecheisen, M., 237 - C0048
- Brecker, M., 594 - B0209
- Brekelmans, J., 715 - C0310
- Brelen, M. E., 4840 - C0198
- Brémond-Gignac, D., 3092 - A0063, 5572 - A0264
- Brennan, K., 3475
- Brennan, N. A., 3388 - C0312, 3927, **4151 - B0374**

- Brennan, R. C., 5982, 5984
 Bresnick, A. R., 1205
 Bressler, N. M., 1060 - B0371, 3250
 - B0349, 3898 - C0364, 3899 -
 C0365, 4948, 4991
 Bressler, S. B., **3613 - A0231**
 Bretana, M. E., 5987
 Brett, J., 6060 - A0189
 Bretz, C. A., **5467 - A0136**, 5469 -
 A0138
 Bretzner, F., 5297 - C0230
 Breukink, M., 4983
 Breunig, M., 3968
 Brezin, A. P., 4203 - C0045
 Brian, F., 4709 - B0133
 BRIAND, F., **3573 - A0190**
 Brichova, M., 2525 - C0254
 Brier, L. W., 1472 - C0034
 Briesen, H. V., 4022 - A0147
 Brigell, M. G., **1252 - A0093**
 Brightwell-Arnold, M., 919 - B0097
 Brignole-Baudouin, F., 3850 - C0111
 Briley, K., 5337 - C0270
 Brill, D., 4245 - C0087, **5224 - B0337**
 Brill, S., 1799 - B0147
 Brindley, D., 3897 - C0363
 Brinkmann, M., **73 - A0120**
 Brinkmann, R., 395 - A0095, 4004
 - A0129, 4831 - C0189, 5855
 - C0142, 6094 - C0213, **6199 -**
C0353, 66 - A0113
 Brinks, J., 1577
 British Isles Congenital Cataract
 Interest Group, 165 - B0319
 Brittain, C., 4948, 5545 - A0237
 Britton, R., 4953
 Broadgate, S., 583 - B0198
 Broadhead, G., 820 - A0152
 Broadway, D. C., 1998, 468 - A0328,
 5302 - C0235, 5304 - C0237
 Brocato, L., **1341 - B0048**
 Brocchini, S., 2000, 2709 - B0030,
 5706 - A0425
 Brock, K., 5851 - C0138
 Brockerhoff, S. E., 988 - B0242
 Brockmann, D., 5460 - A0129, 5643
 - A0362
 Broderick, K., 4335 - C0383
 Brodeur, K. R., **4044 - A0251**
 Brodie, S. E., 1644 - A0020, 5013 -
 A0209, 5015 - A0211
 Brodsky, M., 981 - B0235
 Broemeling, M., 1269 - A0304
 Bron, A. M., 2885 - B0303, 3615 -
 A0233
 Bronstad, P., **637 - C0067**
 Bronstein, R., **5412 - A0064**
 Bronze, C., 5115 - B0104
 Brooks, B. P., 2340 - B0329, 4663 -
 A0305
 Brooks, B. P., 2359 - B0369, 3021
 Brooks, C., **4980**
 Brooks, D., 2294 - B0248
 Brooks, M., 1438 - B0357, 3490, 575
 - B0190
 Brooks, S., **4158 - B0381**
 Brooks, S. E., 2681 - B0002
 Brothers, K., 717
 Brousseau, E., 3573 - A0190
 Browner, N. J., **3627 - A0288**
 Brown, A. J., 620 - B0292
 Brown, A. E., **1129 - C0164**
 Brown, C. J., 3080 - A0051
 Brown, D. M., 1096 - C0131, 1129
 - C0164, 1455 - C0017, **1889 -**
C0289, 4950
 Brown, D., 3084 - A0055
 Brown, D., 3274 - C0068, 3831 -
 C0058
 Brown, E., **2453 - C0119**
 Brown, G., 5217 - B0330
 Brown, J. M., 2762 - B0141, 2764
 - B0143, 2767 - B0146, 2772
 - B0151, 2782 - B0161, 3766 -
 B0181, 3936, 3937, **3938**
 Brown, J., 208 - C0019
 Brown, K. D., **2258 - B0212**
 Brown, L., 3351 - C0233
 Brown, L., 2687 - B0008
 Brown, M. A., 421 - A0239
 Brown, M., 5217 - B0330
 Brown Ophthalmology, 4793 - B0403
 Brown, T., **1939 - C0339**
 Browne, A., 5847 - C0134
 Brownstein, J., 5017 - A0213
 Brownstein, S., 4326 - C0300
 Broyer, R., 2612
 Bruce, B. B., 1883 - C0187
 Bruce, L., 4723 - B0147
 Brücklmayer, C., 2407 - C0073
 Bruckner, D., 308 - C0241, 317 -
 C0250, 3201 - B0201
 Bruetsch, D., 2527 - C0256
 Bruice, T. C., 5438 - A0107
 Bruice, T. W., 5438 - A0107
 Bruinsma, M., 1380 - B0140, 2902
 - C0199
 Brundridge, W., 110 - A0273, 1767
 - B0082
 Brunengraber, H., 5464 - A0133
 Brunette, L., 1350 - B0110, 1358 -
 B0118, 4340 - C0388, 4553
 - A0068
 Brunken, W. J., **586 - B0201**
 Brunner, M., 3328 - C0170
 Brunstetter, T., 722
 Brunton, S., 4624 - A0266
 Bruttini, C., **1662 - A0038**
 Bruyere, E., 5425 - A0094, 6201 -
 C0355
 Bruyseele, A., 2302 - B0256
 Bryan, S. R., 1138, 5130 -
 B0119, **6030**, 6033
 Bryar, P., 5250 - B0363, 5623 - A0342,
 5624 - A0343
 Bu, J., 3283 - C0077, **4926 - C0371**
 Bu, P., 3823 - C0050
 Bubl, K., 2915 - C0212
 Bubela, T., 4158 - B0381
 Bubes, E., 6004
 Bucci, F. A., 251 - C0110, **4796 -**
B0406
 Buch, A., 2719 - B0040
 Buch, H., 2674 - A0401
 Buchanan, A., 2314 - B0268
 Buchanan, N., **990 - B0244**
 Buchanan Ocular Therapeutics Unit,
 Department of Ophthalmology,
 New Zealand National Eye
 Centre, The University of
 Auckland, 5698 - A0417
 Bucher, F., 1223, **5327 - C0260**, 5489
 - A0158
 Buck, H., 3862 - C0123
 Buck, T. M., **4540 - A0055**
 Buckhurst, H., 1390 - B0167, 4885
 - C0330
 Buckhurst, H. D., **1404 - B0181**,
 2201 - A0370, 2945 - C0267,
 2948 - C0270
 Buckhurst, P., 1390 - B0167, 4885
 - C0330
 Buckhurst, P. J., 1404 - B0181, 2201
 - A0370, **2945 - C0267**, 2948
 - C0270
 Bucolo, C., **193 - C0004**
 Buddin, K., 1205, 3488
 Budi, V., 4826 - C0184
 Buehl, W., 1445 - C0007, 1621, 818
 - A0150
 Buehne, K., **4034 - A0159**
 Buehne, K. L., 2461 - C0127
 Buehren, J., **5724 - C0011**
 Bueno, J. M., **3441**, 4352 - C0400
 Buentello, B., 5399 - A0051
 Buff, N., 1245 - A0086, 1250 - A0091
 Buffet, S., 4822 - C0180
 Buggage, R., **1191**, 5655 - A0374,
 5679 - A0398
 Buhrmann, R., 4099 - B0224, 5245
 - B0358
 Bui, B. V., 2106 - A0164, 3696
 - B0043, 3700 - B0047,
 3946, **4473**, 5094 - B0045, 5095 -
 B0046, 5379 - A0031, 5992
 Bui, J. K., 4111 - B0274
 Bui, U., 6086 - C0205
 Buitendijk, G. H., **3012**, 3015
 Bujak, M., 1337 - B0044
 Bujakowska, K. M., 4529 - A0044,
 47 - A0078, 5157 - B0180, 5416
 - A0068
 Bukowiecki, A., **3335 - C0177**
 Bulas, S., 409 - A0227
 Bullimore, M. A., 4151 - B0374
 Bulone, E., 6100 - C0219
 Bumbaca, D., 243 - C0054, 80 - A0127
 Bumcrot, D., 374 - A0034
 Buncic, R., 5206 - B0319
 Büning, H., 1194
 Bunya, Y. Y., 3829 - C0056, 4895 -
 C0340, **937 - B0115**
 Burch, M., **2267 - B0216**
 Burchard, C., 1440 - C0002
 Burdon, K. P., 1177, 3017, **4470**
 Burfield, H., **1175**
 Burford, J., 5848 - C0135
 Burge, M., 4677 - A0319
 Burger, C., 2597
 Burgoyne, C. F., 1215, 2097 - A0155,
 3026, 3496, 3514 - A0077, 3742 -
 B0089, 4063 - B0058, 4993
 Burhan, S., 672 - C0230
 Burian, G., **231 - C0042**
 Burk, L., **453 - A0313**
 Burke, A. E., 417 - A0235
 Burke, J., 2818 - B0236
 Burke, J. A., **1246 - A0087**, 1653
 - A0029, 1654 - A0030, 233
 - C0044, 492 - A0352, 6127 -
 C0246
 Burke, M., 2787 - B0166
 Burke, P., **5277 - C0123**
 Burke, T. A., 5253 - C0099, 5388 -
 A0040
 Burkemper, B., 1597, 1812 - B0273,
 1923 - C0323, 2725 - B0104,
 5059 - B0010, 5060 - B0011,
 5180 - B0203, 6177 - C0296, 778,
 82 - A0129
 Burlitsky, G., 6012
 Burmaster, S., 2715 - B0036
 Burnat, K., **1278 - A0313**
 Burnham, J., 3254 - B0353, 6179 -
 C0298
 Burnier, J. V., 5603 - A0322
 Burnier, M. N., 1167, 3176 - A0319,
 3180 - A0323, 3181 - A0324,
 3636 - A0297, 4327 - C0301,
 5596 - A0315, 5603 - A0322,
 6015
 Burnight, E. R., 5657 - A0376
 Burns, E., 1556
 Burns, M. E., 1011 - B0265, 1978,
 3941
 Burns, O., 4562 - A0091
 Burns, R., **3242 - B0341**
 Burns, S. A., 1152, 4626 - A0268,
 4642 - A0284, 647 - C0205, 654 -
 C0212, **661 - C0219**
 Burr, J., 3504 - A0067
 Burr, M., 4392 - C0440, 4454
 Burstedt, M., **19 - A0050**, 5413 -
 A0065
 Burt, D., 3458
 Burton, B. J., **828 - A0160**
 Burton, M. J., 3690 - A0374, 4685 -
 A0327
 Busbee, B. G., 4948
 Busch, C., **1956**, 2568, 3443, 6001
 Bush, R. A., 5656 - A0375
 Busik, J. V., **3002**, 3556 - A0173, 3558
 - A0175, 3569 - A0186, 5350 -
 A0002, 6002, 6071 - A0200
 Busingye, J., 4774 - B0384
 Buskin, A., 1563
 Busoy, J., 195 - C0006
 Bussato-Filho, G., 5031 - A0227
 Bussieres, M., 2654 - A0381
 Bustkamp, V., 3103 - A0111
 Bustamante, P. R., 3176 - A0319, **5596**
 - **A0315**, 5603 - A0322
 Butler, J. M., 2349 - B0359
 Butler, M. C., 380 - A0040, 4544 -
 A0059, **5665 - A0384**
 Butler, M., 4966
 Butlin, M., 5428 - A0097
 Butori, P., 2807 - B0225
 Butt, G., 160 - B0074, **5851 - C0138**
 Buttner, C., 3330 - C0172
 Butz, M., 1353 - B0113
 Buys, Y. M., 2015 - A0042, **2684**
 - **B0005**, 5181 - B0204, 5215 -
 B0328, 6029
 Buznyk, O., 2265 - B0219
 Buzzacco, D., 4819 - C0177
 Byambajav, M., 4865 - C0310
 Byberg, S., **1055 - B0366**
 Byeon, S., 2402 - C0068, 5560 - A0252
 Byers Eye Institute - Stanford
 University, 1675 - A0196, 1909
 - C0309
 Bykhovskaya, Y., 4391 - C0439,
 4470, 743
 Bylund, R., **3672 - A0356**
 Byon, I., 5272 - C0118, **842 - A0174**
 Byrd, J., 442 - A0302
 Byrd, W., 2262 - B0216
 Byrne, L., 6135 - C0254
 Byrne, M., 3879 - C0140, 6178 -
 C0297
 Byrne, M., **5682 - A0401**
 Bystrom, B., **2249 - B0203**
 Byun, M., **4820 - C0178**
 Byun, Y., 123 - B0037, **1810 - B0158**
 C
 C Arantes, R. C., **4807 - B0417**
 C Caiado, G. C., 2906 - C0203, **2910**
 - **C0207**
 Caan, M., 4649 - A0291
 Cabot, F., 1949, 1950, 2979
 Cabral, T., 5759 - C0046
 Cabrera, A., 4648 - A0290
 Cabrera, A., **3474**
 Cabrera DeBuc, D., 4660 -
 A0302, **4694 - A0336**,
 3681 - A0365, 3778 - C0005
 Cabrera-Aguas, M., **3650 - A0334**,
 3681 - A0365, 3778 - C0005
 Cabrerizo, J., **1305 - B0012**
 Cáceres-del-Carpio, J., 771
 Cackett, P., **2383 - C0049**
 Cadena, E. L., 47 - A0078
 Caffery, B., 3827 - C0054, 921 - B0099
 Cagini, C., 2810 - B0228, 881 - A0213
 Caglar, K., 3675 - A0359
 Cahill, A. L., 1858 - C0162
 Cai, C., 2481 - C0147
 Cai, C., 222 - C0033
 Cai, C., **1132 - C0167**
 Cai, H., **2481 - C0147**, 4588 - A0177,
 768
 Cai, J., 6140 - C0259
 Cai, J., **5161 - B0184**
 Cai, J., 1317 - B0024
 Cai, L., 3864 - C0125
 Cai, Q., 2715 - B0036
 Cai, S., **1060 - B0371**
 Cai, X., 4926 - C0371
 Cai, X., **4471**
 Cai, Y., **5242 - B0355**
 Cai, Z., 61 - A0108
 Caiado, A., 2692 - B0013, **3780 -**
C0007
 Cairns, A., 664 - C0222
 Cakir, B., **2752 - B0131**, 3570 - A0187,
 764, 767
 Calabresi, P., 311 - C0244
 Calabrese, C., 3596 - A0214
 Calabro, K., **4535 - A0050**
 Calandria, J. M., **2463 - C0129**
 Calcutt, M. W., 1642 - A0018
 Calder, V., 2520 - C0249, 2523
 - C0252, 2541 - C0270, **507 -**
B0014
 Caldwell, M., 1767 - B0082
 Calixto, N. S., 464 - A0324
 Calkins, D. J., 2011, 3109 - A0117,
 3537 - A0100, 3714 - B0061
 Callan, T., 1512 - C0353, 2124 -
 A0182, 277 - C0178, 2847
 - B0265, 2864 - B0282, **5111 -**
B0100, 5112 - B0101, 6031, 6032
 Callaway, N. F., 3671 - A0355
 Callagan, M. C., **500 - B0007**
 Callejo, S., 3623 - A0284
 Caltabiano, R., 3166 - A0309
 Calton, M. A., **3576 - A0193**
 Calvert, M. J., 403 - A0221
 Calvillo-Medina, R., 506 - B0013
 Calvo, P., 1913 - C0313
 Camacci, M. L., **6166 - C0285**
 Camacho-Martinez, E., 142 - B0056
 Cambridge Intellectual and
 Developmental Disabilities
 Research Group, 1543 - C0384
 Cameron, D., 1092 - C0105, 6151 -
 C0270
 Cameron, E. G., **1484 - C0226**
 Cameron, M. A., 1488 - C0230, **3099**
 - **A0107**
 camille, G., **3835 - C0062**
 Camilleri, R., 4113 - B0276
 Camino, A., 1971, **2853 - B0271**, 3925
 Cammalleri, M., 1251 - A0092
 Camp, A., 3481, 471 - A0331
 Camp, D., 2094 - A0152, 4057 -
 B0052, 5070 - B0021, 5079
 - B0030, 5084 - B0035, **5895**
 - **C0182**
 Camp, T., 899 - B0077
 Campagna, G., **4804 - B0414**
 Campagno, K., 3729 - B0076, 6034
 Campana, G., 4113 - B0276
 Campbell, C., 5870 - C0157
 Campbell, J., 2620, 2748 - B0127,
 2749 - B0128, 2750 - B0129,
 2755 - B0134, 2761 - B0140,
 2762 - B0141, 2764 - B0143,
 2767 - B0146, 2772 - B0151,
 2780 - B0159, 2782 - B0161,
 3145 - A0262, 3766 -
 B0181, 3936, 3937, 3938, 4947
 Campbell, J., 1051 - B0362
 Campbell, J., 5229 - B0342
 Campbell, M., 1013 - B0267, 3469,
 3475, 3505 - A0068, 3942
 Campbell, M. C., 1582, **4319 - C0293**,
 4320 - C0294, 705 - C0300
 Campbell, P., 1600, 2688 - B0009
 Campigotto, M., **5868 - C0155**
 Campa, C. K., 583 - B0198, **602 -**
B0274
 Campo, J., **4255 - C0097**, 5919 -
 C0316
 Campo, L., 4255 - C0097, 5919 -
 C0316
 Campochiaro, P. A., 1252 - A0093,
 1960, 199 - C0010, 30 - A0061,
 3269 - B0368, 45 - A0076, 5308 -
 C0241, 825 - A0157
 Campos, E. J., 6077 - A0206
 Campos, E. C., 1164, 2274 - B0228,
 6100 - C0219
 Campos, L. A., 172 - B0326

- Campos, M. M., 2434 - C0100, 2530 - C0259, 546 - B0161
- Campos-Casas, B., 3691 - A0375
- Camras, D., **2803 - B0221**
- Cancian, C., 4531 - A0046, 4537 - A0052
- Candida Ribeiro Parisi, M., 931 - B0109
- Candy, T., **3431**
- Canizares, M., 5215 - B0328
- Canner, J., 5221 - B0334
- Cannillo, B., 1937 - C0337
- Canning, P., 5490 - A0159
- Cannon, G. H., 587 - B0202
- Cano, M. D., 1187, **342 - A0002**, 64 - A0111
- Cañola, L., 1399 - B0176, **2021 - A0048**, 4761 - B0262
- Canonica, J., **3984 - A0109**
- Canovas, C., **254 - C0113**, 2966 - C0288
- Cantalamesa, E., **4871 - C0316**, 4887 - C0332
- Cantín, L., 3067 - A0038
- Cantrell, R. A., 2604, 5545 - A0237, **883 - A0215**
- Canuto, H., **2166 - A0335**
- Cao, D., 2283 - B0237
- Cao, D., 1775 - B0090, 1778 - B0093, 5036 - A0232, 5037 - A0233, 846 - A0178
- Cao, J., 2787 - B0166, 406 - A0224
- Cao, J., 1982
- Cao, J., 1447 - C0009, 2534 - C0263, 3050 - A0021, 5461 - A0130, 5482 - A0151, 6134 - C0253
- Cao, S., 347 - A0007, 5259 - C0105, 6063 - A0192, 6065 - A0194
- Cao, Y., 1249 - A0090
- Cao, Z., 1546, **3332 - C0174**
- Capek, K. D., **162 - B0076**
- Capitena Young, C. E., 6106 - C0225
- Caplash, S., **1534 - C0375**, 1536 - C0377, 4187 - C0029
- Capone, A., 1162
- Capone, A., 1532 - C0373, 3758 - B0173, 3771 - B0186, 5434 - A0103
- Capone, A., 739
- Capowski, E. E., 3105 - A0113, 5412 - A0064, 543 - B0158
- Cappellari, L., 5867 - C0154, 5868 - C0155
- Cappello, E., **4845 - C0203**
- Caprara, L., 2836 - B0254
- Capri, J., **2418 - C0084**
- Caprioli, J., 2039 - A0066, 2107 - A0165, 2121 - A0179, 3496, 4087 - B0082, 4986, 5104 - B0093, 5105 - B0094, 5106 - B0095, 5494 - A0163
- Capriotti, K., 3653 - A0337
- Capriotti MD, J., **3653 - A0337**
- Capuano, V., 2807 - B0225
- Caputo, G., 2788 - B0167
- Carapeto, F., 3179 - A0322
- Carass, A., 50 - A0081
- Carbajal, K., **200 - C0011**, 6125 - C0244
- Carballo, M., 5150 - B0173
- Carbonelli, M., 3356 - C0238
- Carbonetti, D., 5292 - C0225
- Carcaboso, A., 1628 - A0004
- Card, K., **3603 - A0221**
- Cardascia, N., **1302 - B0009**
- Cardenas-Gonzalez, S. E., 6155 - C0274
- Cardillo, A., 6015
- Cardillo Piccolino, F., 2810 - B0228
- Cardona, D., 221 - C0032
- Cardoso, E. B., 5921 - C0318
- Cardoso Leal, I., 2070 - A0128
- Care, R., **2996**
- Carecho, R., 6077 - A0206
- Carrelli, V., 3356 - C0238, 3366 - C0248
- Carini, E., 3444
- Carion, T. W., **1548**, 3562 - A0179
- Carkeet, A., **1081 - C0094**
- Carle, C. F., 1893 - C0293, 4136 - B0299, 621 - B0293
- Carley, F., 4401 - C0449
- Carlson, J., 1046 - B0357, **1050 - B0361**
- Carmassi, L., 6100 - C0219
- Carmi, S., 1423 - B0342
- Carmichael Martins, A., **4052 - A0259**, 4759 - B0260
- Carmichael, R., 4202 - C0044
- Carmichael, T. R., 3515 - A0078, 5145 - B0168
- Carmy, T., 5493 - A0162
- Carneiro, A. M., **1405 - B0182**
- Carnevale, C., 5080 - B0031
- Caron, M., 3715 - B0062
- Carotenoids In Age-Related Eye Disease Investigators, 5542 - A0234
- Carotenoids in Age-Related Eye Disease Study Investigators, 4509 - A0024, 5543 - A0235
- Carpena-Torres, C., 4767 - B0268
- Carpenter, B., 3421 - C0345
- Carpenter, J., 3242 - B0341
- Carpentras, D., 5876 - C0163
- Carpio, V., 1719 - A0240, 1741 - A0262
- Carr, A. F., 4018 - A0143, 5313 - C0246
- Carr, A. F., **2469 - C0135**, 2470 - C0136, 2985, 3259 - B0358
- Carr, D. J., 4599 - A0188, 4936
- Carracedo, J., **4767 - B0268**, 5300 - C0233
- Carrara, N., **326 - C0259**
- Carrasco-Zevallos, O., 5741 - C0028
- Carreno, E., **5578 - A0297**
- Carreño, N., 1382 - B0142
- Carreno-Galeano, J. T., **3853 - C0114**
- Carreira, F. A., 155 - B0069
- Carrete-Gonzalez, L., 1349 - B0056
- Carretero Gonzalez, J., 5369 - A0021
- Carricondo, P. C., **1470 - C0032**, 3803 - C0030
- Carrier, P., 2247 - B0201
- Carrigan, M., 2332 - B0321, 4539 - A0054, 5406 - A0058
- Carrillo Aleman, A., 1171, **2155 - A0289**
- Carroll, J., 2849 - B0267
- Carroll, J., 1106 - C0141, 1154, 1526 - C0367, 1667 - A0188, 1737 - A0258, 2156 - A0290, 3446, 3447, 4628 - A0270, 4630 - A0272, 4992, 4994, 5829 - C0116, 5849 - C0136, 652 - C0210, 669 - C0227
- Carroll, J., **3791 - C0018**
- Carroll, L., 1449 - C0011, 3572 - A0189
- Carroll, L. S., **1805 - B0153**
- Carroll, R., **3110 - A0118**
- Carron, M., 5404 - A0056
- Carru, C., 355 - A0015
- Cars, K. J., 4467
- Carter, J., 4616 - A0205, 516 - B0023, **517 - B0024**
- Carter, R., 973 - B0227
- Carter, S., 1317 - B0024, 851 - A0183
- Caruso, E., 2411 - C0077
- Carvajal, C. R., 1719 - A0240, 1741 - A0262, 397 - A0097
- Carvajal, R. D., **3622 - A0283**
- Carvalho, F. U., 1361 - B0121, 1362 - B0122, 2894 - C0191, 2906 - C0203, 2910 - C0207, 2911 - C0208
- Carvalho, L. S., 2328 - B0317, **970 - B0224**
- Casalino, G., 4206 - C0048
- Casals, E., 58 - A0105
- Casanova, A., **6081 - C0200**
- Casanova, C., **2591**
- Casares-Lopez, M., 5188 - B0211, **5189 - B0212**, 5190 - B0213
- Casaroli-Marano, R. P., 1387 - B0164, 2257 - B0211
- Cascone, I., 4699 - A0341
- Casey, J. R., 1350 - B0110, 4433, 4553 - A0068
- Casey, M., 5602 - A0321
- Cashman, S., 1193, 4551 - A0066, 5666 - A0385
- Casillas-Vega, N., 3691 - A0375
- Casiraghi, J. F., 1236 - A0077
- Caspi, A., 3890 - C0356, 3892 - C0358, 4568 - A0097, 4572 - A0101
- Caspi, R. R., 2535 - C0264, 2537 - C0266, 2540 - C0269, 2542 - C0271, 2547 - C0276, 2549 - C0278, 2550 - C0279, 2551 - C0280, 720
- Cassidy, P. S., 3505 - A0068
- Casson, R., 1177, **2650 - A0155**, 2651 - A0156
- Casson, R. J., 2513 - C0217, 6069 - A0198, 961 - B0215
- Casson, R. J., 2618
- Castañeda, R., 2065 - A0123, 485 - A0345
- Castañeda, Y. S., 4148 - B0371
- Castaño-Fernández, A., 5797 - C0084
- Castellarin, A., 1957
- Castelo-Branco, M., **4669 - A0311**
- Castro de Sousa, J., 3085 - A0056
- Castro, J., 931 - B0109
- Castro, J. J., **5188 - B0211**, 5189 - B0212
- Castruccio Castracani, C., 3166 - A0309
- Catapano, J., 4423
- Catarino, C., 3361 - C0243, 3362 - C0244, 3363 - C0245
- Caterson, B., 3858 - C0119
- CATT Research Group, 3252 - B0351
- Caughey, J., **4033 - A0158**
- Cava, J. A., 4992
- Cavalieri, G., **5182 - B0205**
- Cavalieri, G. C., 1066 - C0079, 4096 - B0221
- Cavallerano, J., 740
- Cavet, M. E., 2659 - A0386, 3676 - A0360
- Cayuoto, K. M., **904 - B0082**
- Caywood, L., 1420 - B0339
- Cazal, J., 5811 - C0098
- Cazalot, G., 4705 - B0129
- Ceballos-Diaz, C., 5688 - A0407
- Cebeci, Z., 1956
- Cebotaru, L., **218 - C0029**
- Cebulla, C. M., **1156**, 3182 - A0325, 4958
- Cecchin, E., 4845 - C0203
- Cecelia, L., 1139
- Cécycy, B., 5495 - A0164
- Cehořski, L. J., **3074 - A0045**, 6068 - A0197
- Celano, M., 5196 - B0309
- Celkova, L., 3469
- Cells for Sight, 523 - B0138
- Cen, Q., 3192 - B0192
- Cengiz, F., 6048 - A0082
- Cennamo, G., 5755 - C0042
- Cennamo, G., 5755 - C0042
- Cense, B., 2117 - A0175, **292 - C0193**
- Center for Eye Research, 3867 - C0128
- Center for Translational Ocular Immunology, Department of Ophthalmology, 1802 - B0150
- Centre of Applied Vision Research, 1112 - C0147, 1114 - C0149
- Cepeda, D., 5688 - A0407, **5696 - A0415**
- Cepeda, R., 3544 - A0161
- Cepko, C. L., 2464 - C0130, 3055 - A0026, 3960, 4026 - A0151, 4497 - A0012, 4524 - A0039
- Cepla, V., 2280 - B0234, 3452
- Cepurna, W., 1879 - C0183, 1971, 3697 - B0044, 3698 - B0045, 3707 - B0054, 3738 - B0085, 3740 - B0087, 3925, 5819 - C0106
- Cereda, M., 275 - C0176, 5930 - C0327, 882 - A0214
- Cernichiaro-Espinosa, L., 2771 - B0150
- Cerquaglia, A., 881 - A0213
- Cerrate, M., **1399 - B0176**, 4761 - B0262
- Cervantes, A., 2924 - C0221
- Cervantes, J., 292 - C0193
- Cervantes, P., 5026 - A0222
- Cerviño, A., 1746 - B0061
- Cerwin, J., 1271 - A0306
- Cesar, Q., 3963
- Cesari, J., 4161 - C0003
- Cestari, D. M., 2191 - A0360
- Cetina, Y., 1089 - C0102
- Cha, H., 4341 - C0389
- Cha, S., 1854 - C0158, **4556 - A0085**
- Cha, S., 4058 - B0053, 5432 - A0101, 5626 - A0345
- Chabrier, C., 6194 - C0348
- Chacon, M., 1382 - B0142
- Chacon-Camacho, O., 2925 - C0222, 6056 - A0090
- Chacón-Camacho, Ó., 5398 - A0050
- Chadderton, N., 4539 - A0054
- Chae, J., 1117 - C0152, 360 - A0020
- Chae, J., 1886 - C0286, 3125 - A0242
- Chaglasian, M., 1523 - C0364
- Chai, C., 3689 - A00373
- Chaigne-Delalande, B., 5948
- Chaikittmongkol, V., 1956, **3250 - B0349**
- Chaitankar, V., 3490, 370 - A0030, 6023
- Chakrabarti, M., 4823 - C0181
- Chakrabarti, R., 1054 - B0365
- Chakrabarti, S., **5148 - B0171**
- Chakraborty, A., **4142 - B0305**, 4755 - B0256
- Chakraborty, D., 4535 - A0050
- Chakraborty, R., **1176**
- Chakravarthy, U., 1906 - C0306, 2408 - C0074, 2569
- Chakravarti, S., **2610**, 2922 - C0219, 2923 - C0220
- Chaku, M., 2708 - B0029
- Chalam, K., 3548 - A0165, **5883 - C0170**
- Chalfoun, J., 555 - B0170
- Challa, P., 4715 - B0139
- Chalmers, R. L., 5177 - B0200
- Cham, R., **1944**
- Chamberlain, W., 1325 - B0032, 1575, 2897 - C0194, 3333 - C0175
- Chammas, S. M., 1361 - B0121, **1362 - B0122**
- Champion, M., 6043 - A0077
- Chan, A. K., 4172 - C0014
- Chan, A., 1182
- Chan, A., 2963 - C0285
- Chan, A., **2001**, 5146 - B0169, 5588 - A0307
- Chan, A. M., 2538 - C0267
- Chan, C., 4840 - C0198
- Chan, C., 6098 - C0217
- Chan, C., 3239 - B0338
- Chan, C., 1337 - B0044, 294 - C0195
- Chan, C. K., 5268 - C0114
- Chan, C. S., **3143 - A0260**
- Chan, D., 1486 - C0228, 4702 - B0126
- Chan, E., 3533 - A0096
- Chan, E., 1303 - B0010, 4380 - C0428, 4399 - C0447
- Chan, E., **2694 - B0015**
- Chan, F., 1221
- Chan, H., 5315 - C0248
- Chan, H. H., 3377 - C0301, 3385 - C0309, 361 - A0021, 3700 - B0047
- Chan, H., **3593 - A0211**
- Chan, J., 3380 - C0304
- Chan, J., 235 - C0046, 239 - C0050, 246 - C0057
- Chan, K. C., 1944, **6115 - C0234**
- Chan, K. C., 3502
- Chan, K., 2283 - B0237
- Chan, M. F., **1352 - B0112**, 1472 - C0034, 4338 - C0386
- Chan, M. P., **1998**
- Chan, P., 6098 - C0217
- Chan, R. P., 2762 - B0141, 3766 - B0181, 3936
- Chan, R., 5615 - A0334
- Chan, R. V., 1224, 1574, 2748 - B0127, 2749 - B0128, 2750 - B0129, 2755 - B0134, 2761 - B0140, 2764 - B0143, 2767 - B0146, 2772 - B0151, 2776 - B0155, 2780 - B0159, 2782 - B0161, 3758 - B0173, 3937, 3938, **888 - A0220**
- Chan, S., 5003 - A0074
- Chan, T. L., 2560
- Chan, W., 2173 - A0342
- Chan, Y., **5927 - C0324**
- Chan-Ling, T., **2773 - B0152**, 3589 - A0206
- Chandler, L. C., **6005**
- Chandna, A., **1016 - B0300**
- Chandra, A. J., **5038 - A0234**
- Chandra Babu, K., 4607 - A0196
- Chandra, P., 1900 - C0300
- Chai, C., 3689 - A00373
- Chaigne-Delalande, B., 5948
- Chaikittmongkol, V., 1956, **3250 - B0349**
- Chaitankar, V., 3490, 370 - A0030, 6023
- Chakrabarti, M., 4823 - C0181
- Chakrabarti, R., 1054 - B0365
- Chakrabarti, S., **5148 - B0171**
- Chakraborty, A., **4142 - B0305**, 4755 - B0256
- Chakraborty, D., 4535 - A0050
- Chakraborty, R., **1176**
- Chakravarthy, U., 1906 - C0306, 2408 - C0074, 2569
- Chakravarti, S., **2610**, 2922 - C0219, 2923 - C0220
- Chaku, M., 2708 - B0029
- Chalam, K., 3548 - A0165, **5883 - C0170**
- Chalfoun, J., 555 - B0170
- Challa, P., 4715 - B0139
- Chalmers, R. L., 5177 - B0200
- Cham, R., **1944**
- Chamberlain, W., 1325 - B0032, 1575, 2897 - C0194, 3333 - C0175
- Chammas, S. M., 1361 - B0121, **1362 - B0122**
- Champion, M., 6043 - A0077
- Chan, A. K., 4172 - C0014
- Chan, A., 1182
- Chan, A., 2963 - C0285
- Chan, A., **2001**, 5146 - B0169, 5588 - A0307
- Chan, A. M., 2538 - C0267
- Chan, C., 4840 - C0198
- Chan, C., 6098 - C0217
- Chan, C., 3239 - B0338
- Chan, C., 1337 - B0044, 294 - C0195
- Chan, C. K., 5268 - C0114
- Chan, C. S., **3143 - A0260**
- Chan, D., 1486 - C0228, 4702 - B0126
- Chan, E., 3533 - A0096
- Chan, E., 1303 - B0010, 4380 - C0428, 4399 - C0447
- Chan, E., **2694 - B0015**
- Chan, F., 1221
- Chan, H., 5315 - C0248
- Chan, H. H., 3377 - C0301, 3385 - C0309, 361 - A0021, 3700 - B0047
- Chan, H., **3593 - A0211**
- Chan, J., 3380 - C0304
- Chan, J., 235 - C0046, 239 - C0050, 246 - C0057
- Chan, K. C., 1944, **6115 - C0234**
- Chan, K. C., 3502
- Chan, K., 2283 - B0237
- Chan, M. F., **1352 - B0112**, 1472 - C0034, 4338 - C0386
- Chan, M. P., **1998**
- Chan, P., 6098 - C0217
- Chan, R. P., 2762 - B0141, 3766 - B0181, 3936
- Chan, R., 5615 - A0334
- Chan, R. V., 1224, 1574, 2748 - B0127, 2749 - B0128, 2750 - B0129, 2755 - B0134, 2761 - B0140, 2764 - B0143, 2767 - B0146, 2772 - B0151, 2776 - B0155, 2780 - B0159, 2782 - B0161, 3758 - B0173, 3937, 3938, **888 - A0220**
- Chan, S., 5003 - A0074
- Chan, T. L., 2560
- Chan, W., 2173 - A0342
- Chan, Y., **5927 - C0324**
- Chan-Ling, T., **2773 - B0152**, 3589 - A0206
- Chandler, L. C., **6005**
- Chandna, A., **1016 - B0300**
- Chandra, A. J., **5038 - A0234**
- Chandra Babu, K., 4607 - A0196
- Chandra, P., 1900 - C0300
- Chandramohan, A., **5621 - A0340**
- Chandran, M., **839 - A0171**
- Chandrasekar, S., 2320 - B0309
- Chandrasekaran, S., 2791 - B0209, **2792 - B0210**
- Chandrasekher, G., **2253 - B0207**
- Chang, A., 1081 - C0094
- Chang, A., 4000 - A0125, 6173 - C0292, 820 - A0152, 946 - B0124
- Chang, A. L., 5621 - A0340
- Chang, B., 2337 - B0326
- Chang, B., **2345 - B0334**
- Chang, C., 5746 - C0033
- Chang, E., 1899 - C0299
- Chang, E., 3576 - A0193
- Chang, F., 5363 - A0015, 5840 - C0127
- Chang, H., 2127 - A0185
- Chang, I., **4858 - C0303**
- Chang, J., 4089 - B0084
- Chang, J., **2578**, 3331 - C0173
- Chang, J. S., 3758 - B0173, 6171 - C0290
- Chang, J., 4172 - C0014
- Chang, J. R., 3078 - A0049
- Chang, K., **1855 - C0159**, 982 - B0236
- Chang, K., 2256 - B0210, **2596**, 6110 - C0229
- Chang, L., 2160 - A0329
- Chang, L., **5789 - C0076**
- Chang, L., **836 - A0168**
- Chang, L., 3950, 448 - A0308
- Chang, L., 5183 - B0206
- Chang, M., 2817 - B0235, **3344 - C0226**
- Chang, M., 3241 - B0340
- Chang, M., 2440 - C0106
- Chang, P., 2432 - C0098
- Chang, P., 436 - A0296, 4784 - B0394, **4785 - B0395**, 4791 - B0401, 5642 - A0361

- Chang, Q., 1457 - C0019, 3091 - A0062
- Chang, Q., 1551
- Chang, R., 1241 - A0082, 1705 - A0226, 2045 - A0103, 2086 - A0144, 3407 - C0331, 4782 - B0392, 5249 - B0362, 738
- Chang, R., 5059 - B0010, **5060 - B0011**, 5069 - B0020
- Chang, S., **3851 - C0112**
- Chang, S., 4248 - C0090, 5001 - A0072, 5269 - C0115, 69 - A0116
- Chang, S. S., 3576 - A0193
- Chang, T. C., 6048 - A0082
- Chang, T., 1081 - C0094
- Chang, V., 3783 - C0010, 4786 - B0396
- Chang, X., 1988
- Chang, Y., 4272 - C0143, **830 - A0162**
- Chang, Y., 1370 - B0130
- Chang, Y., 1949, 1950, 2979
- Channa, R., 825 - A0157
- Chansangpetch, S., **1118 - C0153**, 1170, 2728 - B0107, 4070 - B0065
- Chanwimol, K., 1511 - C0352, 1528 - C0369
- Chao, C., 1743 - B0058
- Chao, D., 1501 - C0342, 1846 - B0307, 3894 - C0360, 4622 - A0264, 5916 - C0313
- Chao, D. L., **3118 - A0126**
- Chao De La Barca, J., 755
- Chao, H., 385 - A0045
- Chao, J. R., 2689 - B0010, 4507 - A0022, 5452 - A0121
- Chaon, B., 1534 - C0375, 1536 - C0377, **4212 - C0054**, 4310 - C0284, 5948
- Chaphalkar, R. M., **5294 - C0227**, 5295 - C0228, 5298 - C0231
- Chapin, M. J., 5568 - A0260
- Chapkin, R., 4880 - C0325
- Chappell, J., 3571 - A0188
- Chapron, T., **2788 - B0167**
- Charbaji, A., 4284 - C0155
- Charbel Issa, P., **1565**, 3138 - A0255, 3146 - A0263
- Charles, D. B., 4172 - C0014
- Charles, M. H., 1055 - B0366
- Charles, S., 5311 - C0244, 5320 - C0253
- Charles, S. T., 68 - A0115
- Charles T Campell Microbiology Laboratory, 3674 - A0358
- Charles-Cantú, D., 1340 - B0047
- Charlotte, Y., 4809 - B0419
- Charlson, E. S., **4132 - B0295**
- Charmg, J., 4527 - A0042
- Charnley, A., 5242 - B0355
- Chartois, A., 5008 - A0079
- Chartrand, S. D., 1878 - C0182
- Chasan, J. E., 2760 - B0139
- Chatard-Baptiste, C., **3834 - C0061**
- Chatterjee, N., 6025
- Chattopadhyay, C., **4959**
- Chau, D., 6036
- Chau, D. D., 4111 - B0274
- Chau, F., 1574, **177 - B0331**, 2063 - A0121
- Chau, M., 1267 - A0302
- Chau, Y., 3824 - C0051, 6115 - C0234
- Chaube, A., 5366 - A0018
- Chauca, J. A., 1399 - B0176, 949 - B0127
- Chaudhary, K., 2214 - A0383
- Chaudhry, M., 2541 - C0270
- Chaudhuri, Z., **5787 - C0074**
- Chauhan, B. C., 2097 - A0155, 3496, 4063 - B0058, 4988
- Chauhan, D. S., 2112 - A0170
- Chauhan, K., **1137**
- Chauhan, S., 2554 - C0283, 2574, 3286 - C0080, 3316 - C0158, 3323 - C0165
- Chauhan, T., **2992**, 3782 - C0009, 3860 - C0121
- Chaulk, A., 86 - A0249
- Chaum, E., 3999 - A0124, **4038 - A0163**, 5241 - B0354, 5322 - C0255
- Chaumette, C., **4573 - A0102**
- Chaumillon, R., **1288 - A0323**
- Chaurasia, A., 6114 - C0233
- Chaurasia, S. S., 1498 - C0240, 151 - B0065, **3587 - A0204**, 4359 - C0407, 4962
- Chavan, R., 4810 - C0168, 4823 - C0181
- Chavengsakongkam, P., 3250 - B0349
- Chaves, P. H., 4332 - C0380
- Chavez, C. A., 1829 - B0290
- Chávez Mondragón, E., 3798 - C0025
- Chavez, S., 1739 - A0260
- Che, B., 2636 - A0141
- Che, J., 1635 - A0011
- Che, X., **532 - B0147**
- Chedotal, A., 4699 - A0341
- Chee, C., 3593 - A0211, 4561 - A0090, 5923 - C0320
- Chee, M., 1995, 2603, 2858 - B0276, 4101 - B0226
- Chee, R., 2749 - B0128, **5230 - B0343**
- Chee, S., 4933
- Chee, Y., 2689 - B0010
- Cheema, A., 365 - A0025
- Cheema, D., 1167
- Cheetham, M. E., 3, 3022, 3061 - A0032, 4467, 4504 - A0019
- Chegarnov, E., 1269 - A0304
- Cheja-Kalb, R., 4201 - C0043
- Chekuri, A. K., **4466**, 5383 - A0035
- Chemey, E., 2701 - B0022
- Chemla, Y., 3974
- Chemokines and physiopathology of the eye anterior segment, 3850 - C0111
- Chemtob, S., 2648 - A0153, 321 - C0254, 4279 - C0150, 5332 - C0265, 5495 - A0164, 550 - B0165, 6064 - A0193, 983 - B0237
- Chen, A., 4711 - B0135
- Chen, A., **4627 - A0269**, 640 - C0070
- Chen, B., 3096 - A0104
- Chen, B., 574 - B0189
- Chen, C., 1544
- Chen, C., 5229 - B0342
- Chen, C., 3923, 5452 - A0121
- Chen, C., 2337 - B0326
- Chen, C. J., **3254 - B0353**, 5455 - A0124, 6179 - C0298
- Chen, C. J., 1003 - B0257, 5497 - A0166, **962 - B0216**
- Chen, C., 2181 - A0350, 5166 - B0189
- Chen, C. L., 2602, 3955
- Chen, C., 4510 - A0025, 4512 - A0027
- Chen, C., 980 - B0234
- Chen, C., 748
- Chen, D., **3689 - A0373**
- Chen, D., **4921 - C0366**, 4954
- Chen, D., 3277 - C0071
- Chen, D. F., 1482 - C0224, 1855 - C0159, 1861 - C0165, 2014, 4603 - A0192, 5502 - A0171, 6128 - C0247, 6142 - C0261, 982 - B0236
- Chen, E., 4159 - C0001
- Chen, E., 5697 - A0416
- Chen, F. V., **2771 - B0150**
- Chen, F., 4094 - B0219
- Chen, F., 3057 - A0028
- Chen, G. H., **5499 - A0168**
- Chen, H., **4830 - C0188**
- Chen, H., 3018, 3399 - C0323, 3401 - C0325, 5172 - B0195
- Chen, H. R., 347 - A0007
- Chen, H., 2534 - C0263, 4326 - C0300, **6134 - C0253**
- Chen, H., **575 - B0190**
- Chen, H., 2794 - B0212
- Chen, H., 3808 - C0035, **3809 - C0036**, 975 - **B0229**
- Chen, H., **3883 - C0144**
- Chen, H., 1379 - B0139, 3845 - C0106
- Chen, J., 128 - B0042
- Chen, J., **368 - A0028**
- Chen, J., 1436 - B0355, 3566 - A0183, 536 - B0151, 5377 - A0029, 5556 - A0248, 5557 - A0249, 6111 - C0230, 747
- Chen, J., **3285 - C0079**, 3810 - C0037
- Chen, J., **1064 - C0077**
- Chen, J., 668 - C0226
- Chen, J., 2452 - C0118, 762, 767
- Chen, J. J., 2176 - A0345, **2188 - A0357**, 5439 - A0108, 622 - B0294
- Chen, J., 2960 - C0282
- Chen, J. J., 2125 - A0183, 5281 - C0127, 850 - A0182
- Chen, J. L., **5458 - A0127**
- Chen, J., **2537 - C0266**, 2542 - C0271
- Chen, K. G., **2423 - C0089**, 3136 - A0253
- Chen, K., 1160, 1501 - C0342, 1508 - C0349, 1846 - B0307, 5916 - C0313
- Chen, K. C., **1885 - C0285**
- Chen, L., 2129 - A0263, 4840 - C0198, **5405 - A0057**
- Chen, L., 463 - A0323
- Chen, L., 1988, 3105 - A0113
- Chen, L. W., 1796 - B0144, **3857 - C0118**
- Chen, L., 2415 - C0081
- Chen, L., 1925 - C0325, 312 - C0245, 480 - A0340, 508 - B0015
- Chen, M., **1529 - C0370**
- Chen, M., 1002 - B0256, 1211, 1439 - C0001, 1476 - C0218, 2455 - C0121, **3942**, 5552 - A0244, 5556 - A0248, 5557 - A0249
- Chen, M. H., 2088 - A0146, 2815 - B0233, 2833 - B0251, **2866 - B0284**
- Chen, M. Y., **1231 - A0072**
- Chen, M. Y., 1699 - A0220, 5905 - C0192
- Chen, M., **658 - C0216**
- Chen, M., 1855 - C0159
- Chen, M., **5746 - C0033**
- Chen, M., **2131 - A0265**
- Chen, M., 5429 - A0098
- Chen, N., 5254 - C0100
- Chen, N., 4244 - C0086
- Chen, P., 2337 - B0326
- Chen, P., 4521 - A0036
- Chen, P. P., 440 - A0300, **470 - A0330**, 482 - A0342
- Chen, P., 1081 - C0094
- Chen, Q., **2796 - B0214**
- Chen, Q., 710 - C0305
- Chen, Q., 4001 - A0126, 4031 - A0156, 581 - B0196
- Chen, R., 3079 - A0050
- Chen, R., 5485 - A0154
- Chen, R., 3473
- Chen, R., 1009 - B0263, 2339 - B0328, 2350 - B0360, 5142 - B0165, 5159 - B0182, 5419 - A0071
- Chen, S., 3894 - C0360
- Chen, S., 3510 - A0073, 3522 - A0085, **3728 - B0075**, 4910 - C0355, 6083 - C0202
- Chen, S., **5280 - C0126**
- Chen, S., 1896 - C0296, 4949
- Chen, S., **5047 - A0243**
- Chen, S., 5764 - C0051
- Chen, S., 5336 - C0269
- Chen, S., 3079 - A0050
- Chen, S., 4782 - B0392, **5167 - B0190**, 5249 - B0362
- Chen, T., 1855 - C0159, 2337 - B0326
- Chen, T., 2175 - A0344
- Chen, T. A., 3371 - C0295, 4782 - B0392, **5249 - B0362**
- Chen, T., 3851 - C0112
- Chen, T., 5018 - A0214
- Chen, W., 4902 - C0347
- Chen, W., 2873 - B0291, 3702 - B0049, 3734 - B0081
- Chen, W., **4166 - C0008**
- Chen, W., 1120 - C0155, 139 - B0053, 1794 - B0109, **1796 - B0144**, 3857 - C0118
- Chen, W., 3332 - C0174
- Chen, W., 4031 - A0156
- Chen, W., **5385 - A0037**
- Chen, W., 4999 - A0070
- Chen, W., **1457 - C0019**
- Chen, W., 4089 - B0084
- Chen Wu, D., 1301 - B0008, 1331 - B0038, 2893 - C0190, 4332 - C0380
- Chen, X., 3167 - A0310, 3920, **3935**
- Chen, X., 3192 - B0192
- Chen, X., 3387 - C0311, 3402 - C0326, 3495
- Chen, X., 912 - B0090, 928 - B0106
- Chen, X., 4918 - C0363, **4924 - C0369**, 4954, 6119 - C0238
- Chen, X., **2248 - B0202**
- Chen, X., **2539 - C0268**, 2575
- Chen, X., 3173 - A0316, 5385 - A0037
- Chen, X., 3277 - C0071, 3314 - C0156
- Chen, X., 5035 - A0231
- Chen, X., **359 - A0019**
- Chen, X., **3072 - A0043**
- Chen, X., 534 - B0149
- Chen, X., **4214 - C0056**
- Chen, X., 3396 - C0320, 4744 - B0245
- Chen, Y., 4013 - A0138
- Chen, Y., 3510 - A0073, 3522 - A0085, 3728 - B0075
- Chen, Y., **5164 - B0187**
- Chen, Y., 4817 - C0175
- Chen, Y., 4567 - A0096
- Chen, Y., **2541 - C0270**
- Chen, Y., 392 - A0092, 4200 - C0042, 507 - B0014
- Chen, Y., 5052 - B0003
- Chen, Y., **2554 - C0283**, 2574, 3286 - C0080, 3298 - C0092, 4957
- Chen, Y., 5472 - A0141, 999 - B0253
- Chen, Y. I., 1182, 2755 - B0134, 5137 - B0160
- Chen, Y., 500 - B0007
- Chen, Y., 1625 - A0001, 2537 - C0266
- Chen, Y., **4762 - B0263**, 4763 - B0264
- Chen, Y., 2852 - B0270
- Chen, Y., 3299 - C0093, 534 - B0149
- Chen, Y., 2794 - B0212, 2879 - B0297
- Chen, Y., 2869 - B0287, **3205 - B0205**
- Chen, Y., 962 - B0216
- Chen, Y., **5169 - B0192**
- Chen, Y., **3057 - A0028**
- Chen, Y., 3502
- Chen, Y., 5142 - B0165
- Chen, Y., 1359 - B0119
- Chen, Y., 4574 - A0103
- Chen, Y., 2880 - B0298
- Chen, Z., 2958 - C0280
- Chen, Z., 5010 - A0081
- Chen, Z., 4344 - C0392, 4558 - A0087, 4567 - A0096
- Chen, Z., 5753 - C0040, 5956
- Chen, Z., 4357 - C0405
- Chen, Z., 5835 - C0122
- Chen, Z., 5956
- Chen, Z., 2537 - C0266
- Chen, Z., 680 - C0275
- Cheng, A., 5845 - C0132
- Cheng, A., 5411 - A0063
- Cheng, B., 2571
- Cheng, C., 159 - B0073
- Cheng, C., 1033 - B0344, 1706 - A0227, 1712 - A0233, 1713 - A0234, 1813 - B0274, **1817 - B0278**, 1819 - B0280, 1995, 2028 - A0055, 2091 - A0149, 2600, 2601, 2602, 2603, 2721 - B0100, 3955, 3957, 4074 - B0069, 4101 - B0226, 5143 - B0166, 5166 - B0189, 5902 - C0189, 6009
- Cheng, C., 4574 - A0103
- Cheng, C. W., **5332 - C0265**
- Cheng, G., 5775 - C0062
- Cheng, G., **259 - C0118**
- Cheng, H., 325 - C0258
- Cheng, H., 1412 - B0189
- Cheng, H., 651 - C0209
- Cheng, H., 2260 - B0214
- Cheng, I., 4091 - B0216
- Cheng, J., **1988**, 3105 - A0113, 4002 - A0127, 6152 - C0271
- Cheng, L., **1192**, 4458, 4560 - A0089
- Cheng, L., 3192 - B0192
- Cheng, M., 4574 - A0103
- Cheng, Q., **5102 - B0091**
- Cheng, R., **1126 - C0161**
- Cheng, R., **1184**
- Cheng, S., 5664 - A0383
- Cheng, S., 1534 - C0375, 1536 - C0377, **4187 - C0029**
- Cheng, W., 5775 - C0062, **5781 - C0068**
- Cheng, X., 3388 - C0312, **3927**, 4151 - B0374
- Cheng, Y., 4574 - A0103
- Cheng, Y., 2989
- Cheng-Patel, C., 5796 - C0083
- Cheng-Patel, C. S., 4148 - B0371
- Chenon, G., 255 - C0114
- Cheon, J., 3043 - A0014
- Cheong, A. M., **5965**
- Cheong, S. K., 4088 - B0083
- Cherepanoff, S., **330 - C0263**
- Cherif, H., 5495 - A0164
- Cherny, E., 4428
- Chernyak, D. A., 5751 - C0038
- Cherukuri, A., 6078 - A0207
- Cherwek, H., 1601, 2748 - B0127
- Chesler, K. C., **3580 - A0197**, 5991
- Cheung, C., 2129 - A0263, 4680 - A0322, 5166 - B0189
- Cheung, C. Y., 1706 - A0227, 1926 - C0326, 2181 - A0350, 2801 - B0219, 3445, **4840 - C0198**
- Cheung, C., 195 - C0006, 3239 - B0338
- Cheung, E., 2956 - C0278
- Cheung, E., **5461 - A0130**
- Cheung, G., 1713 - A0234, 2642 - A0147, 3957, 4739 - B0240, 5480 - A0149, 6009
- Cheung, J., **2222 - A0391**
- CHEUNG, K., **2357 - B0367**, 699 - C0294
- Cheung, N., 4996
- Cheung, N., 195 - C0006, 2600, **2603**, 5480 - A0149
- Cheung, S., 1786 - B0101
- Cheung, V., 1893 - C0293
- Cheung, V., 4574 - A0322
- Cheung, Y., 3389 - C0313, 3957
- Chew, E. Y., 1839 - B0300, 2381 - C0047, 2391 - C0057, 2422 - C0088, 2423 - C0089, **2605**, 3136 - A0253, 3139 - A0256, 3215 - B0314, 370 - A0030, 4149 - B0372, 4947, 4948, **5346**, 5548 - A0240, 6010, 6013, 6025
- Chew, H., 1337 - B0044, 1338 - B0045
- Chew, H., 293 - C0194, 294 - C0195
- Chhablani, J., 1113 - C0148, 1513 - C0354, **1674 - A0195**, 1956, 3208 - B0307, 3253 - B0352, 4284 - C0155

- Chhabra, A. K., 4675 - A0317
 Chhabra, R., 5441 - A0110
 Chhoa, J. R., 752
 Chhunchha, B., 3041 - A0012, 5652 - A0371
 Chi, W., 3808 - C0035, 3809 - C0036
 Chi, Y., 4214 - C0056
 Chi, Z., 3736 - B0083
 Chia, A., 3404 - C0328, 3957, 4118 - B0281
 Chia, C., 334 - C0267
 Chia, Y., 883 - A0215
 Chiambaretta, F., 4362 - C0410
 Chiang, A., 4251 - C0093
 Chiang, B., 5236 - B0349
 Chiang, C., 3983 - A0108
 Chiang, J., 2330 - B0319, 5410 - A0062
 Chiang, M. F., 2748 - B0127, 2749 - B0128, 2755 - B0134, 2761 - B0140, 2762 - B0141, 2764 - B0143, 2767 - B0146, 2772 - B0151, 2780 - B0159, 2782 - B0161, 3766 - B0181, 3936, 3937, 3938, 4155 - B0378, 4156 - B0379, 5248 - B0361
 Chiang, P., 2339 - B0328
 Chiang, T., 5218 - B0331
 Chiang, W., 4587 - A0176
 Chiao, C., 4564 - A0093, 5499 - A0168, 5500 - A0169
 Chibante Pedro, J., 2867 - B0285
 Chibel, R., 726
 Chica, M., 5268 - C0114
 Chichagova, V., 1563, 565 - B0180
 Chichkov, B., 3451, 527 - B0142
 Chidambaram, J. D., 3690 - A0374
 Chidambaranathan, G., 4716 - B0140, 4731 - B0155
 Chidlow, G., 2513 - C0217, 2618, 2650 - A0155, 2651 - A0156, 6069 - A0198, 961 - B0215
 Chien, J. M., 2499 - C0203
 Chien, K., 3845 - C0106
 Chien, Y., 2960 - C0282
 Chieregò, C., 1330 - B0037, 1336 - B0043
 Chikama, T., 3660 - A0344, 3668 - A0352
 Childhood Arthritis Prospective Study (CAPS) Group, 171 - B0325
 Chiloyan, A., 2531 - C0260
 Chin, C. W., 2858 - B0276
 Chin, E. K., 4425
 Chin, H., 1451 - C0013, 1317 - A0254, 3503 - A0066
 Chin, J., 5615 - A0334
 chin, K., 3500, 4081 - B0076
 Chin Loy, K., 2236 - A0405
 Chinchore, Y., 3055 - A0026, 4524 - A0039
 Chinese American Eye Study, 5187 - B0210
 Chinese American Eye Study Group, 2725 - B0104
 Chinese-American Eye Study, 3958
 Chinnery, H., 3696 - B0043
 Chinnery, H. R., 3320 - C0162, 3946
 Chino, Y. M., 5955
 Chintala, S. K., 3855 - C0116
 Chintalapudi, S. R., 3018
 Chiodo, V. A., 3002, 4522 - A0037
 Chiorini, J., 4536 - A0051
 Chiou, M., 1893 - C0293
 Chiquita, S., 6077 - A0206
 Chircò, K., 3475
 Chitedze, R., 2701 - B0022, 2703 - B0024
 Chitgupi, U., 5665 - A0384
 Chitranshi, N., 3528 - A0091, 3531 - A0094, 3710 - B0057, 6122 - C0241, 6124 - C0243
 Chiu, B., 1052 - B0363, 2832 - B0250, 5054 - B0005
 Chiu, C., 1289 - A0324
 Chiu, C., 5544 - A0236
 Chiu, C., 1014 - B0268
 Chiu, G. B., 1790 - B0105
 Chiu, K., 5775 - C0062
 Chiu, L., 4688 - A0330
 Chiu, M., 161 - B0075
 Chiu, M., 2337 - B0326
 Chiu, S., 1842 - B0303
 Chiu, S. J., 1106 - C0141
 Chiu, T., 2832 - B0250
 Chiu, Z., 1139
 Cho, B., 4884 - C0329
 Cho, D., 2242 - B0196
 Cho, E., 5626 - A0345
 Cho, H., 1450 - C0012
 Cho, H., 1414 - B0191, 2698 - B0019
 Cho, H., 2828 - B0246
 Cho, H., 3203 - B0203
 Cho, J., 207 - C0018
 Cho, J., 1798 - B0146, 3273 - C0067, 5879 - C0165
 Cho, J., 5842 - C0129
 Cho, K., 1482 - C0224, 1855 - C0159, 1861 - C0165, 2014, 5502 - A0171, 6128 - C0247, 6142 - C0261, 982 - B0236
 Cho, K., 133 - B0047, 4365 - C0413
 Cho, P., 1786 - B0101
 Cho, S. J., 5607 - A0326
 Cho, S., 4680 - A0322
 Cho, S., 1435 - B0354
 Cho, S., 1450 - C0012
 Cho, S. S., 2452 - C0118, 2752 - B0131, 3570 - A0187, 762, 764, 767
 Cho, W., 4609 - A0198
 Cho, W., 5599 - A0318
 Cho, W., 4505 - A0020
 Cho, Y., 1244 - A0085
 Cho, Y., 2299 - B0253
 Choeron, I., 3804 - C0031
 Choeron, I. M., 2888 - C0185, 2889 - C0186, 3887 - C0148
 Chodnicki, K., 2176 - A0345
 Chodosh, J., 1314 - B0021, 1322 - B0029, 2529 - C0258, 2579, 2664 - A0391, 3663 - A0347, 4361 - C0409, 521 - B0028, 526 - B0141
 Choe, T., 1879 - C0183, 3697 - B0044, 3698 - B0045, 3738 - B0085
 Choe, T. E., 3707 - B0054, 3740 - B0087
 Choh, V., 585 - B0200
 Choi, A., 1260 - A0295, 2409 - C0075, 4083 - B0078
 Choi, A., 3126 - A0243
 Choi, A. R., 4801 - B0411
 Choi, B., 944 - B0122
 Choi, B., 2507 - C0211, 6149 - C0268
 Choi, C., 4960, 5611 - A0330
 Choi, C., 4849 - C0207
 Choi, D., 4773 - B0383, 4786 - B0396
 Choi, D., 1104 - C0139, 2938 - C0260
 Choi, D., 3740 - B0087, 3896 - C0362
 Choi, E., 1931 - C0331, 3130 - A0247
 Choi, H., 3745 - B0092
 Choi, H., 5200 - B0313
 Choi, H., 4106 - B0231
 Choi, H., 4059 - B0054
 Choi, H., 1332 - B0039
 Choi, J., 4043 - A0250
 Choi, J., 2480 - C0146
 Choi, J., 4055 - B0050
 Choi, J., 2544 - C0273, 2550 - C0279
 Choi, J., 3288 - C0082
 Choi, J., 5400 - A0052
 Choi, J., 3288 - C0082, 3295 - C0089, 3836 - C0063, 3838 - C0065
 Choi, K., 3377 - C0301, 3385 - C0309, 3700 - B0047
 Choi, K., 1332 - B0039
 Choi, M., 129 - B0043, 1367 - B0127, 197 - C0008
 Choi, N., 5432 - A0101
 Choi, R., 270 - C0171, 4165 - C0007
 Choi, R., 4798 - B0408
 Choi, S., 1332 - B0039, 1756 - B0071, 3821 - C0048
 Choi, S., 5423 - A0092
 Choi, S., 5439 - A0108
 Choi, S., 248 - C0107
 Choi, S., 1805 - B0153, 3572 - A0189
 Choi, S., 5771 - C0058
 Choi, T., 1722 - A0243
 Choi, W., 3288 - C0082
 Choi, Y., 1182
 Choi, Y., 103 - A0266
 Choi, Y., 248 - C0107
 Choi, Y., 5560 - A0252
 Chomsky, A., 3791 - C0018, 5237 - B0350, 5239 - B0352
 Chon, S., 1035 - B0346
 Chong, E. W., 1108 - C0143, 4830 - C0188
 Chong, J. K., 5054 - B0005
 Chong, K., 1145, 5615 - A0334
 Chong, L. X., 2124 - A0182, 6031
 Chong, S. P., 299 - C0200
 Chong, S. A., 585 - B0200
 Chong, W., 2537 - C0266
 Chong, Y., 5146 - B0169
 Choovuthayakorn, J., 3250 - B0349
 Chopra, N., 2307 - B0261
 Chopra, R., 1469 - C0031, 1471 - C0033, 1729 - A0250, 3216 - B0315, 5550 - A0242, 815 - A0147, 816 - A0148, 826 - A0158, 838 - A0170
 Chopra, V., 2120 - A0178, 5065 - B0016, 5076 - B0027
 Choquet, H., 1179
 Chorich III, L., 4819 - C0177
 Chou, A., 4895 - C0340
 Chou, E., 2314 - B0268
 Chou, H., 4808 - B0418
 Chou, T., 2214 - A0383
 Chou, T., 2490 - C0194
 Chou, Y., 5280 - C0126
 Chou, Y., 2337 - B0326
 Chou, Y., 2499 - C0203
 Choudhary, A., 5141 - B0164
 Choudhary, M., 2442 - C0108
 Choudhry, N., 1676 - A0197, 5974
 Choudhury, E., 4804 - B0414
 Choudhury, F., 3958, 5180 - B0203
 Choudhury, S., 4536 - A0051
 Choudhury, T., 6192 - C0346
 Choung, H., 4741 - B0242
 Choupan, J., 1969, 32 - A0063
 Chow, A. H., 5958
 Chow, D., 3824 - C0051
 Chow, J., 1797 - B0145, 1807 - B0155
 Chow, N., 820 - A0152
 Chow, R. H., 232 - C0043, 3976
 Chow, R. L., 2918 - C0215
 Chowdhury, J. M., 4703 - B0127
 Chowers, I., 1423 - B0342, 356 - A0016
 Choy, B. N., 3380 - C0304, 6116 - C0235
 Chrenek, M. A., 3047 - A0018, 4014 - A0139, 5044 - A0240, 750
 Chriqui, E., 2964 - C0286
 Christpell, J. D., 601 - B0273
 Christ, S. L., 4460
 Christakis, P. G., 4947
 Christenbury, J., 1315 - B0022
 Christensen, K., 4509 - A0024, 5542 - A0234, 5543 - A0235
 Christensen, U., 4429
 Christian, B. J., 5658 - A0377
 Christian, L., 2961 - C0283
 Christianakis, S., 3366 - C0248
 Christiansen, A. T., 5918 - C0315
 Christiansen, J., 4198 - C0040
 Christiansen, S. M., 3368 - C0292
 Christie, K., 383 - A0043
 Christie, L., 233 - C0044
 Christoforidis, J. B., 5337 - C0270
 Christopher, M., 1182, 2090 - A0148, 2735 - B0114, 3498, 4476
 Christopher, S., 5124 - B0113
 Chrobok, M., 4007 - A0132
 Chroma and Spectri Study Investigators, 4948
 Chronopoulos, A., 4543 - A0058
 Chrysostomou, V., 2616, 315 - C0248, 3533 - A0096
 Chrzanoska, K., 2324 - B0313
 Chu, B., 1648 - A0024
 Chu, D. S., 4197 - C0039, 427 - A0245, 4803 - B0413
 Chu, E. R., 1833 - B0294, 2705 - B0026
 Chu, H., 139 - B0053, 1794 - B0109, 1796 - B0144, 3857 - C0118
 Chu, S., 121 - B0035, 477 - A0337
 Chu, W., 1145, 1636 - A0012, 476 - A0336
 Chu, Z., 1531 - C0372, 1924 - C0324, 2835 - B0253, 2869 - B0287, 2873 - B0291, 2880 - B0298, 3923, 3926, 5059 - B0010, 5060 - B0011, 5069 - B0020, 739
 Chu-Tan, J. A., 4604 - A0193, 4607 - A0196
 Chua, C., 1168
 Chua, H., 240 - C0051
 Chua, J., 1995, 2858 - B0276
 Chua, M. R., 857 - A0189, 88 - A0251
 Chuang, G. M., 707 - C0302
 Chuang, J., 3991 - A0116, 984 - B0238
 Chuangsuwanich, T., 4477
 Chuchuy, J., 567 - B0182
 Chucky, R. S., 2888 - C0185, 2889 - C0186, 3665 - A0349, 3887 - C0148
 Chue-Sang, J., 5844 - C0131, 6202 - C0356
 Chui, T. Y., 1667 - A0188, 3446, 4994
 Chui, Y. P., 3447
 Chujo, S., 3618 - A0236
 Chukyo Group, 5109 - B0098
 Chulay, J. D., 4992
 Chulunbat, T., 2748 - B0127, 2750 - B0129
 Chulunghuu, C., 2748 - B0127
 Chuluyán, E., 196 - C0007, 201 - C0012
 Chun, L., 2872 - B0290, 2874 - B0292, 2881 - B0299
 Chun, R., 1072 - C0085
 Chun, T., 1142
 Chung, D. C., 3900 - C0366
 Chung, D. D., 1373 - B0133, 2919 - C0216
 Chung, H., 2822 - B0240
 Chung, H., 1117 - C0152, 360 - A0020, 5560 - A0252
 Chung, J., 207 - C0018
 Chung, M., 3960
 Chung, M. J., 2464 - C0130, 4026 - A0151
 Chung, M. M., 4627 - A0269, 4635 - A0277
 Chung, M., 3267 - B0366
 Chung, S., 123 - B0037, 1810 - B0158
 Chung, S., 2478 - C0144, 3987 - A0112
 Chung, S., 5771 - C0058
 Chung, S. T., 2161 - A0330, 5795 - C0082, 630 - C0060, 635 - C0065
 Chung, T., 3840 - C0101
 Chung, T., 1370 - B0130, 2553 - C0282, 3264 - B0363
 Chung, Y., 1244 - A0085
 Chung, Y., 640 - C0070
 Chwa, M., 1462 - C0024, 2468 - C0134, 3268 - B0367, 353 - A0013, 4005 - A0130, 771
 Chwiejczak, K. M., 4265 - C0136
 Cianciolo, L. T., 6050 - A0084
 Ciani, S., 1915 - C0315
 Ciardella, A., 5974
 Ciudad Betegon, P., 5369 - A0021
 Cideciyan, A. V., 1568, 338, 4488 - A0003, 4522 - A0037, 4527 - A0042, 6006, 788
 Ciepielewska, G., 5223 - B0336
 Cifariello, F., 5749 - C0036
 Cilluffo, M., 514 - B0021
 Cimbolini, N., 3573 - A0190
 Cimino, L., 411 - A0229, 4178 - C0020
 Cinelli, L., 3978
 Ciner, E. B., 1823 - B0284, 1824 - B0285, 1825 - B0286, 702 - C0297
 Cintron, N., 1028 - B0312
 Cioffi, G. A., 2115 - A0173, 3733 - B0080, 5128 - B0117
 Ciolino, J. B., 1768 - B0082, 5695 - A0414, 5711 - A0430
 Ciongoli, M., 1908 - C0308
 Cipollini, F., 2836 - B0254
 Cipriani, V., 6026
 Ciren, Q., 1663 - A0039
 Cisarik, P., 2952 - C0274
 Ciffreda, K. J., 651 - C0209
 Ciulla, D., 385 - A0045
 Ciulla, T. A., 1623, 2094 - A0152, 5084 - B0035, 5895 - C0182
 Civan, M. M., 3480
 Cizkova, J., 5670 - A0389
 Claessens, D., 2375 - C0041
 Claessens, F., 4918 - C0363
 Clahsen, T., 3330 - C0172
 Claret, C., 3834 - C0061, 3835 - C0062
 Claret, M., 3834 - C0061, 3835 - C0062
 Clark, A. F., 1214, 1655 - A0031, 3524 - A0087, 3549 - A0166, 3739 - B0086, 4721 - B0145, 6037
 Clark, A., 5514 - A0183
 Clark, A., 2744 - B0123
 Clark, B. S., 587 - B0202
 Clark, C. A., 2138 - A0272, 3426 - C0350
 Clark, D., 1967, 5571 - A0263
 Clark, F., 3705 - B0052
 Clark, G. M., 4700 - B0124
 Clark, J. I., 3037 - A0008
 Clark, M. E., 2036 - A0063
 Clark, M. A., 6163 - C0282, 6168 - C0287
 Clark, P. A., 5388 - A0040
 Clark, R. A., 1552, 2039 - A0066
 Clarke, H., 3606 - A0224
 Clarke, M., 1601
 CLARO - Cataract Lens and Refractive OCT Study Group, 3395 - C0319, 6018
 Clary, D., 2344 - B0333
 Clary, J., 1403 - B0180
 Clay, S. M., 4338 - C0386
 Claypool, D., 4932
 Clayson, K., 1391 - B0168, 1393 - B0170, 1396 - B0173, 1402 - B0179, 2034 - A0061
 Cleasson, M., 1341 - B0048
 Clegg, D. O., 539 - B0154
 Cleland, J., 314 - C0247, 4372 - C0420
 Cleland, J., 221 - C0032, 5710 - A0429
 Clemens, C. R., 2850 - B0268
 Clement, J. G., 2638 - A0143
 Clemons, T., 1034 - B0345
 Clemons, T. E., 1839 - B0300, 2381 - C0047, 2391 - C0057, 2422 - C0088, 2605, 3138 - A0255, 3139 - A0256, 5548 - A0240, 6010, 6013
 Clench, T., 5578 - A0297
 Clendaniel, S., 693 - C0288
 Clerin, E., 3963
 Clermont, A. C., 3463, 3464

- Cleymaet, A. M., **5042 - A0238**
Clifton, J., 5514 - A0183
Cline, H., **1581**
Clinical research Center, 4955
Clinical Research Center, UC Berkeley, 3825 - C0052
Clöre-Gronenborn, K., 1188
Clouston, P., 2341 - B0330, 3493
Clover, J., 2897 - C0194
Coady, P., 2420 - C0086
Coakley, R., 3415 - C0339
Coats, B., 1158, **6178 - C0297**
Cobbs, L., **6158 - C0277**
Coble, D., 5337 - C0270
Coblentz, J., 1167, 3176 - A0319, **3180 - A0323**, 4327 - C0301
Cobrinik, D., 1637 - A0013, 4961
Coburn, C. E., 4914 - C0359
Coburn, P. S., 500 - B0007
Cochener, B., 1726 - A0247, 938 - B0116
Cochereau, I., 1800 - B0148
Cochran, K., 2351 - B0361
Cocijn, F., 4307 - C0281
Cockerham, G., 2314 - B0268
Cockerham, K., 5880 - C0167
Cockrum, P., **2662 - A0389**
Coco, G., 3853 - C0114, **5716 - C0003**
Coco, R. M., 4226 - C0068
Coelius, C., 5855 - C0142
Coffey, P. J., 1494 - C0236, 1495 - C0237, 2469 - C0135, 2984, 2985, 3259 - B0358, 4018 - A0143, 4224 - C0066, 5313 - C0246
Cogliati, T., 3490
Cognasse, F., 4424
Cogne, B., 47 - A0078
Cohen, A., 2179 - A0348
Cohen, A., 1337 - B0044
Cohen, C., 3896 - C0362
Cohen, D., 939 - B0117
Cohen, G. L., 1475 - A0037
Cohen, J., 1643 - A0019
Cohen, L., 2674 - A0401
Cohen, M., 2674 - A0401
Cohen, R., 5903 - C0190
Cohen, S. Y., 2807 - B0225, 3156 - A0273
Cohen, S., 715 - C0310
Coimbra, A., 3241 - B0340
Cole, C., 5230 - B0343
Cole, C., 1134 - C0169
Cole Eye Study Group, 3594 - A0212
Cole, J., 1012 - B0266
Colé, N., 237 - C0048
Coleman, A. L., 2039 - A0066, 2729 - B0108, 2733 - B0112, 4102 - B0227, 4103 - B0228, 4129 - B0292, 4775 - B0385, 5125 - B0114
Coleman, A. L., 4986
Coleman, D., 5900 - C0187, **69 - A0116**
Coles-Brennan, C., 3931
Coletta, N. J., **1091 - C0104**
Colgan, T., 2616, 315 - C0248
Colgan, T. D., **3533 - A0096**
Colijn, J., 3010, 3012, **3013**, 3015, 789
Collado, M., 3178 - A0321
Collantes, E., **5153 - B0176**
Collery, R. F., 4006 - A0131, 5829 - C0116
Collier, A., 4865 - C0310
Collin, G., **2346 - B0335**
Collin, J., 1563, 1984, 542 - B0157, 544 - B0159, 560 - B0175, **570 - B0185**
Collin, R. W., 4503 - A0018, 4532 - A0047, **4979**
Collins, A. V., **1076 - C0089**
Collins, A., 342 - A0002
Collins, K., 2332 - B0321
Collins, M. E., **5531 - A0223**
Collins, M. E., 181 - B0335, 182 - B0336
Collins, M. J., 1732 - A0253, 1786 - B0101, 2139 - A0273, 2141 - A0275, 4940, 659 - C0217
Collins, S., 260 - C0119
Collinson, A., 2948 - C0270
Collinson, N., 2174 - A0343
Colombo, L., 34 - A0065
Colon-Ramos, D., 5842 - C0129
Colorado, L., 149 - B0063, **4903 - C0348**
Colorado, L. H., 1808 - B0156
Colton, S. A., 5527 - A0219
Colucci, A., 34 - A0065
Colwell, R., 3684 - A0368
Colyer, M., 2294 - B0248, 2314 - B0268
Comander, J., 4208 - C0050, **6022**
Comer, G., 1523 - C0364, 3428 - C0352
Comitato, A., 2488 - C0192
Comps-Agrar, L., 235 - C0046, **239 - C0050**, 246 - C0057
Compton, A., 2220 - A0389, 5244 - B0357
Comstock, J., 2705 - B0026
Conatser, L., 3317 - C0159
Concha del Rio, L. E., 4201 - C0043
Cone, C., 5987
Cone-Kimball, E., 1219, 6038
Coney, J., 4816 - C0174
Congdon, N. G., **1601**, 2748 - B0127, 3397 - C0321, 3398 - C0322
Congrove, N. R., 2467 - C0133, 3993 - A0118
Conklin, J., 4800 - B0410
Conley, Y., 1259 - A0294
Connaughton, M., **1881 - C0185**
Connaughton, V. P., 1881 - C0185, **3564 - A0181**
Connell, C. J., 2167 - A0336
Connell, F., 1877 - C0181
Connolly, K., 5712 - A0431
Conner, I., 1944, 3501, 3502, 487 - A0347, 875 - A0207
Connolly, E., 3475
Connolly, J., 349 - A0009
Connor, C. G., **4901 - C0346**, 929 - B0107
Connor, K. M., **3945**, 580 - B0195
Connor, T. B., 1154
Conquest, A., 3746 - B0093
Conrad, F., **3387 - C0311**
Conrad, G., 3366 - C0248
Consejo, A., **2137 - A0271**, 5810 - C0097
Conser, E., 899 - B0077
Consigli, A., 6081 - C0200
Consorcio Mexicano para el Estudio de la Microbiota y del Microbioma Humano, 900 - B0078
Consortium, E., 352 - A0012
Consortium for Refractive Error and Myopia (CREAM), 700 - C0295
Consortium for Refractive Error and Myopia (CREAM) & International Glaucoma Genetics Consortium (IGGC), 1827 - B0288
Constable, I., 1448 - C0010, 5660 - A0379
Constancias, F., 3306 - C0100
Constantin, J. R., 1216
Constantinou, M., 1958
Contact Lens Assessment in Symptomatic Subjects (CLASS) Study Group, 3933
Conti, A., 4543 - A0058
Conti, F., 1917 - C0317, 3594 - A0212, 3597 - A0215, 4277 - C0148, 4289 - C0160, 4618 - A0260, **5538 - A0230**
Contin, M. A., 1006 - B0260
Contractor, D., 166 - B0320
Contreras-Bravo, N. C., 2524 - C0253
Cook, A., 3519 - A0082
Cook Bailey, J., 1181
Cook, C., 5136 - B0159
Cook, C. A., 5669 - A0388, 5814 - C0101
Cook, M., 83 - A0246
Cook, S., 2085 - A0143, 2701 - B0022, 2703 - B0024, 4067 - B0062
Cooke Bailey, J., 1178, 1180, 1743 - B0058, **1818 - B0279**, 5142 - B0165
Cooke, B., 3370 - C0294
Cooley, R., 897 - A0286
Cooley, S. L., 5192 - B0215
Cooley-Themm, C., 3504 - A0067
Coombes, C. E., 1893 - C0293
Cooper, A., 2344 - B0333
Cooper, J., 2133 - A0267
Cooper, M. J., 5310 - C0243
Cooper, M., **2011**, 3714 - B0061
Cooper, M., 3423 - C0347
Cooper, R. F., 1151, **650 - C0208**, 652 - C0210, 658 - C0216
Cooper, S., 4343 - C0391, 4344 - C0392, 531 - B0146
Cooperman, B., 2672 - A0399, 4909 - C0354
Copenhagen Child Cohort 2000 Study Group, 5533 - A0225
Copland, D. A., 5555 - A0247
Coppe, A. M., **2826 - B0244**
Coppess, W., 3183 - A0326
Coppieters, F., 377 - A0037, 5403 - A0055, 5404 - A0056, **5408 - A0060**
Copsel, S., 3311 - C0153
Corapi, F., **1582**, 4319 - C0293, 4320 - C0294
Corbo, J., **3065 - A0036**
Cordeiro, M. F., 1543 - C0384, **1617**, 2494 - C0198, **2587**, 5693 - A0412, 5912 - C0199, 6117 - C0236, 6131 - C0250
Cordero, J. B., **3141 - A0258**
Cordero, R. Y., **780**
Cordonnier, M., 793
Cordova, D., 1140, 5715 - C0002
Cordova, D. W., **3782 - C0009**
Corella, D., 5152 - B0175
Corkery, E., 2382 - C0048, 2790 - B0208, **2804 - B0222**
Cormier, B., 3395 - C0319, 6018
Cornblath, W., 5444 - A0113
Cornea, 1307 - B0014, 2247 - B0201, 3852 - C0113, 907 - B0085
Cornea endothelium, 1361 - B0121
Corneal Research Group, 4344 - C0392, 531 - B0146
Cornelis, S., 4503 - A0018
Cornelissen, F., 3703 - B0050
Cornell, L., **1377 - B0137**
Cornish, E. E., **4847 - C0205**
Corominas, J., 789
Coroneo, M. T., 156 - B0070, 908 - B0086
Corpuz, R., 246 - C0057
Corradetti, G., **5974**
Corrado, G., 1729 - A0250
Corral Serrano, J., 4979
corrales, M. I., 250 - C0109, 4229 - C0071, **489 - A0349**
Correa, A., 4388 - C0436
Correa, F., **5312 - C0245**
Correa, K. D., 4426
Correa, Z. M., 3623 - A0284
Corredor, C., 4225 - C0067
Corso Diaz, X., **3490**, 370 - A0030
Corson, T. W., **1595**, **2580**
Cortes, D. A., 397 - A0097
Cortes Hernandez, N., 2591
Cortés, U., 1708 - A0229
Cortez, D., 3868 - C0129
Cortez, L., 337 - C0270
Cortina, M. S., 1316 - B0023, 1574, 2063 - A0121, 846 - A0178
Cortopassi, G., 1626 - A0002
Corvi, F., **2419 - C0085**, 275 - C0176
Cosma, M., 548 - B0163
Costa, F. F., 2338 - B0327
Costa, V. P., 5101 - B0090
Costa-Cunha, L. F., 613 - B0285
Costagliola, C., 5749 - C0036
Costantino, S., 2025 - A0052, 4553 - A0068, 5694 - A0413
Costela, F., **5179 - B0202**
Costella, L., **4335 - C0383**
Cota, L., 5182 - B0205
Cota, L. S., 1066 - C0079
Cotran, P., 3423 - C0347
Cotsonis, G., 5195 - B0308, 5196 - B0309
Cotter, S. A., 178 - B0332, 1953, 3392 - C0316
Couch, S. M., 101 - A0264
Coucha, M., 3588 - A0205
Coesnon, A., 2170 - A0339
Coughlin, B., **3557 - A0174**
Coughlin, C., 3622 - A0283
Cougnaud-Gregoire, A., 3010, 3013, **5537 - A0229**
Coulbaly, L., 819 - A0151
Coulson-Thomas, V. J., **2988**
Coulter, M. M., 5991
Counter, S., 5384 - A0036
Coupland, S. E., 3184 - A0327, 3630 - A0291, **3647 - A0308**, 4322 - C0296, 5986
Coupland, S. G., 4442, **5017 - A0213**, 5029 - A0225, 5521 - A0213, 6136 - C0255
Coursey, T. G., **4951**
Courtney-Harris, M., **5168 - B0191**
Courtois, Y. G., 5655 - A0374
Courtly, J., 4699 - A0341
Couse, M., 1126 - C0161
Cousins, S. W., 2430 - C0096, 5546 - A0238
Coutinho, F. P., **3466**
Couto, C. A., 1840 - B0301, 420 - A0238
Couture, C., **4336 - C0384**, 4354 - C0402
Couture, R., 1210, 202 - C0013, 3271 - B0370
Couturier, A., 1956
Couvrette, F., 3180 - A0323, 3181 - A0324
Covey, S., 2740 - B0119
Covita, A., 4643 - A0285
Covita, A., 277 - C0178, 5111 - B0100, 5112 - B0101
Covre, J., 2257 - B0211
Coward, J., 4154 - B0377
Coward, M., **4047 - A0254**
Cox, C., 5563 - A0255
Cox, C. I., 4541 - A0056, 4542 - A0057
Cox, I. G., 261 - C0120
Cox, J., 5214 - B0327
Cox, N. J., 1180
Cox, N., 714 - C0309
Coxner, A. S., 2503 - C0207, **2762 - B0141**
Coz, D., 1227
Cozzi, M., 275 - C0176, 3217 - B0316, 3253 - B0352, 3444, 4653 - A0295, **4662 - A0304**
Crabb, D., 1138, 2425 - C0091, 3419 - C0343, 466 - A0326, 5102 - B0091, 5114 - B0103, 5115 - B0104, 5183 - B0206
Crabb, D. P., 1290 - A0325, 1446 - C0008, 1600, 1673 - A0194, 4061 - B0056, 465 - A0325, 4990, 5130 - B0119, 5131 - B0120, 6030, 6033
Crabb, J., 3514 - A0077, 354 - A0014
Crabb, J. W., 3514 - A0077, 354 - A0014
Crabtree, G., **3786 - C0013**
Craford, S. W., 5941 - C0338
Craft, C. M., 26 - A0057, **4499 - A0014**, 4724 - B0148
Craig, J. E., **1177**, 2700 - B0021, 3017, 3020, 4470
Craig, J. P., 3282 - C0076, **4859 - C0304**
Crain, A., 4525 - A0040
Crandall, A. S., 1660 - A0036, 442 - A0302
Crandall, D., 2049 - A0107
Crane, A. B., 4197 - C0039, **427 - A0245**
Crane, E. S., **4197 - C0039**
Craven, C., 3182 - A0325
Crawford, D., 1428 - B0347, 4469
Crawford, F., 5508 - A0177, 5513 - A0182
Crawford, J., 5231 - B0344
Crawley, L., 2047 - A0105
CREAM, 1821 - B0282
CREAM Consortium & UK Biobank Eye and Vision Consortium, 3956
Crean, C., 5710 - A0429
Cree, A., **5138 - B0161**, 5827 - C0114
Cremers, F. P., 1004 - B0258, 2321 - B0310, 2324 - B0313, 43 - A0074, 4503 - A0018, 4532 - A0047
Crepaldi, V., 4113 - B0276
Crespo, C., **3108 - A0116**
Crespo Millas, S., 1901 - C0301, 2067 - A0125
Crespo, S., 2638 - A0143
Crespo-Moral, M., **4371 - C0419**
Creutzberg, C. L., 3627 - A0288
Creutzberger, C. P., 2885 - B0303, 3615 - A0233
Creveling, C. J., **1158**
Crews, K., 5672 - A0391
Crewther, S. G., 1877 - C0181, **2182 - A0351**
Cribbs, B., 5355 - A0007
Crichton, A. C., 2744 - B0123, 3461
Cridle, D., 5141 - B0164
Crim, N., 1161
Crippa, S. V., 4137 - B0300, 4138 - B0301
Crisanti, P., 388 - A0088
Crish, S. D., 3720 - B0067, 3743 - B0090
Cristovam, P., 2257 - B0211
Criswell, L., 4895 - C0340
Croci, D. B., 1679 - A0200
Croci Russo, D. O., 6072 - A0201
Croci, S., 4178 - C0020
Crock, B., **4091 - B0216**
Crockett, E., 3556 - A0173
Croft, M., **1948**
Croissant, C., 2415 - C0081
Crombie, D., 3746 - B0093
Cronemberger, S., **2116 - A0174**, 2691 - B0012, 464 - A0324
Cronin, T., 3719 - B0066, 3721 - B0068, **3998 - A0123**, 5078 - B0029, 5096 - B0047
Crosnoe, K., 4989
Cross, J., **1078 - C0091**
Cross, S. H., 5158 - B0181
Cross, V., 465 - A0325
Crosson, C. E., **1589**, 3750 - B0097
Croteau, S., 222 - C0033
Crowell, E. L., 1140
Crowell, J. A., 1153, 728
Crowell, J. A., 730
Crowell, S., 216 - C0027, **235 - C0046**, 239 - C0050, 242 - C0053
Crowley, M., 990 - B0244

- Crowston, J. G., 2352 - B0362, 2616, 3028, 315 - C0248, 3533 - A0096, 4443, 5126 - B0115, 5127 - B0116
- Croyle, M. J., 2360 - B0370, 2361 - B0371
- Crozier, I., 719
- Cruickshank, F. E., **3383 - C0307**
- Cruickshanks, K. J., 5164 - B0187
- Crutch, S., 1130 - C0165
- Cruz Inigo, Y. J., **2333 - B0322**
- Cruz, N., 150 - B0064, 3701 - B0048, **5085 - B0036**, 5086 - B0037, 614 - B0286
- Cruz, P. R., 2338 - B0327
- Cruz Pimentel, M. N., **402 - A0102**
- Cruz Salomao, R., 4044 - A0251
- Cruzat, A., 1314 - B0021
- Csakany, B., 2949 - C0271
- Csaky, K. G., **1569**, 1653 - A0029, 1654 - A0030, 3442
- Csincsik, L., **1130 - C0165**, 3989 - A0114
- Csufor, N., 2839 - B0257, 2840 - B0258
- Csutak, A., 5723 - C0010
- Ctori, I., 1112 - C0147, 1114 - C0149
- Cuadros, M., **2693 - B0014**, 469 - A0329, 489 - A0349
- Cuadros-Segovia, M. O., 1239 - A0080
- Cubidge, R., 2158 - A0292
- Cuervo-Lozano, E. E., 5756 - C0043
- Cueva Vargas, J., 4474
- Cugley, D. R., **4182 - C0024**
- Cui, D., 1783 - B0098
- Cui, J. Z., 347 - A0007, 5259 - C0105, 6063 - A0192, 6065 - A0194
- Cui, J., 4919 - C0364
- Cui, L., 2946 - C0268, **3406 - C0330**
- Cui, L., 4893 - C0338
- Cui, Q. N., 2125 - A0183
- Cui, R., **3570 - A0187**
- Cui, R., 2873 - B0291
- Cui, R., 1851 - C0155
- Cui, T., 5781 - C0068
- Cui, X., 1573
- Cui, X., 51 - A0082
- Cui, Z., 1436 - B0355, 747
- Cukras, C. A., 1188, 2423 - C0089, 3051 - A0022, 3136 - A0253, 3215 - B0314, 5548 - A0240
- Cull, G., **5094 - B0045**, 5095 - B0046
- Culp, D., 221 - C0032, 2239 - A0408, 225 - C0036, 231 - C0042, **4370 - C0418**, 5687 - A0406
- Cumberland, P., 164 - B0318, 165 - B0319, 1826 - B0287, 775
- Cumming, R., 3009
- Cummins, T., 3555 - A0172, 592 - B0207
- Cunefare, D., 1225, **1737 - A0258**, 1839 - B0300, 4855 - C0213, 5969, 877 - A0209
- Cunha, A., 2515 - C0244, 2532 - C0261, 3544 - A0161
- Cunha de Almeida, R. A., 5232 - B0345
- Cunha, L. P., 1908 - C0308, 3347 - C0229, 5974, **613 - B0285**
- Cunha-Souza, E., 5974
- Cunha-Vaz, J. G., 2800 - B0218
- Cunningham, B., 2124 - A0182, **5112 - B0101**, 6032
- Cunningham, C., 4836 - C0194, **6059 - A0188**
- Curcio, C. A., 1506 - C0347, 2433 - C0099, 2437 - C0103, 2624, 3207 - B0306, 3237 - B0336, 4482, 4993
- Curcio, C. A., 1478 - C0220, 3104 - A0112, 3211 - B0310
- Curion, F., 3095 - A0103
- Curran, E., 2156 - A0290
- Cursiefen, C., 1355 - B0115, 2118 - A0176, 2900 - C0197, 3318 - C0160, 3330 - C0172, 3335 - C0177, 3342 - C0184
- Curtis, T., 1476 - C0218, 3006
- Curtiss, E., **3547 - A0164**
- Custódio, B., 1493 - C0235
- Cutler, N. E., **1098 - C0133**
- Cutolo, C., 4403 - C0451, 4693 - A0335
- Cutsforth-Gregory, J., 2188 - A0357
- Cuzzani, O., 2986, 77 - A0124
- Cvekl, A., **2607**, 582 - B0197
- Cvetkov, Y., 5271 - C0117
- Cwiklik, L., **3279 - C0073**
- Cynader, M. S., 5259 - C0105
- Czajor, K., 2110 - A0168
- Czakó, C., **1932 - C0332**, 1933 - C0333, 1934 - C0334
- Czyz, C., 935 - B0113
- D**
- D, B., 5139 - B0162
- D'Abbraccio, S., 1245 - A0086, 1250 - A0091
- D'Agostino, I., 882 - A0214
- D'Amato, R. J., 1421 - B0340, 234 - C0045
- D'Amico, D. J., 4234 - C0076, 5230 - B0343
- D'Amico Ricci, G., 355 - A0015, 5922 - C0319
- D'Amore, P. A., 5254 - C0100, 5299 - C0232, 5481 - A0150
- D'Antonio, M., 5383 - A0035
- D'Onofrio, P. M., **2507 - C0211**, 6149 - C0268
- D'Souza, Y., 5441 - A0110
- Da Costa, M., 1298 - B0005, 2898 - C0195, 4788 - B0398
- Da Costa Paula, C., 1328 - B0035
- da Silva, C. B., 4787 - B0397, 4807 - B0417
- da Silva Costa, S. M., **2338 - B0327**
- Da Silva-Alvarez, S., 3178 - A0321
- Daas, L., 4385 - C0433
- Daboul, L., 4106 - B0231
- Dacey, D. M., 1478 - C0220, 1506 - C0347, 2586, 2587
- Dachir, S., 2674 - A0401
- Dackiw, C., 5974
- daCruz, L. N., 2984, **2985**, 3152 - A0269, 3259 - B0358, 4018 - A0143
- Dadlani, M., 3684 - A0368
- Daftarian, N., **2327 - B0316**
- Daga, F. B., 5101 - B0090
- Daggett, H., 6059 - A0188
- Dagi Glass, L. R., 2667 - A0394
- Dagneliev, G., 1072 - C0085, 3892 - C0358, 40 - A0071, **4568 - A0097**, 50 - A0081
- Dahal, J., 5990
- Dahanayake, D., 1578
- Dahl, P., 3664 - A0348
- Dahl, R., 5514 - A0183
- Dahl, T. M., **3054 - A0025**
- Dahlgren, J., 5201 - B0314
- Dahlmann-Noor, A. H., 1080 - C0093, 5960
- Dahms, N. M., 6053 - A0087
- Dai, C., **494 - B0001**
- Dai, G. G., **5751 - C0038**
- Dai, J., 681 - C0276, 687 - C0282
- Dai, M., 2518 - C0247
- Dai, T., 3655 - A0339, 3661 - A0345
- Dai, W., 4101 - B0226
- Dai, Y., 2617
- Daibert-Nido, M., 2415 - C0081
- Daich Varela, M., **5535 - A0227**
- Daien, V., 1463 - C0025, 829 - A0161
- Daiger, S. P., 3062 - A0033, 4472, **47 - A0078**
- Dailey, E. M., 151 - B0065
- Dailey, W. A., 4521 - A0036
- Daily, L., 4374 - C0422
- Dakin, B., 2965 - C0287, **2968 - C0290**
- Dal Monte, M., 1251 - A0092
- Dalal, P., **208 - C0019**
- Dalal, R., 1005 - B0259, 3975, 5000 - A0071
- Dalasinaki, K., 5874 - C0161
- Dalia, E. R., **1059 - B0370**
- Dalkara, D., 4526 - A0041, 5708 - A0427, 757
- Dallacasagrande, V., 3284 - C0078
- Dallorto, L., 3197 - B0197
- Dalvin, L. A., **1646 - A0022**, 3638 - A0299, 5593 - A0312, 5600 - A0319, 5602 - A0321
- Daly, S., **5900 - C0187**, 69 - A0116
- Damala, M., 3455
- Damaseno, R., **337 - C0270**
- Damato, B., 3630 - A0291, **5580 - A0299**
- Damgaard, I. B., **5761 - C0048**, 5770 - C0057
- Damico, F., 4835 - C0193
- Damji, K. F., 3461
- Dammeier, S., 352 - A0012, 3989 - A0114
- Damodaran, M., **4656 - A0298**
- Damrauer, S., 1428 - B0347, 4469
- Dan, L., 409 - A0227
- Dana, R., 1411 - B0188, 2554 - C0283, 2574, 3286 - C0080, 3298 - C0092, 3310 - C0152, 3326 - C0168, 3341 - C0183, **340**, 3853 - C0114, 4345 - C0393, 4349 - C0397, 4957, 5716 - C0003
- Dance, S., 2081 - A0139
- Dando, S., 3320 - C0162, **5339 - C0268**
- Dandridge, A., 3935
- Daneman, R., 5470 - A0139
- Danforth, L., 3014
- Dang, D., 211 - C0022, 219 - C0030, 5312 - C0245
- Dang, E., 774
- Danias, J., 3538 - A0101
- Daniel, E., 2396 - C0062, 2757 - B0136, 2775 - B0154, **3252 - B0351**
- Daniele, L. L., 4033 - A0158
- Danielewska, M. E., 2020 - A0047, **2022 - A0049**
- Daniell, M., 2258 - B0212, 3017, 4380 - C0428, 4399 - C0447
- Daniels, A. B., **1642 - A0018**
- Daniels, J. T., 523 - B0138
- Danielson, P., 2290 - B0244
- Danielsson, S. B., 5854 - C0141
- Danis, R. P., 2422 - C0088, 5564 - A0256, 5969, 6010
- Daniszewski, M., **3746 - B0093**
- Dannhausen, K., 5404 - A0056
- Danno, R., 1763 - B0078, 1774 - B0089
- Dans, K., 1501 - C0342
- Dans, K. C., 1508 - C0349, **1846 - B0307**, 660 - C0218, 802 - A0134
- Dansingani, K. K., 5973
- Dantas, A. M., 6137 - C0256
- Danyukova, T., 6073 - A0202
- Daoud, Y. J., 2922 - C0219, 2923 - C0220
- Dapena, I., 1380 - B0140
- Darche, M., **4699 - A0341**
- Dare, E., 4337 - C0385
- Darjatmoko, S., 5487 - A0156
- Darnley, D., 5224 - B0337
- Dart, J. K., 1165
- Dartigues, J., 5537 - A0229
- Dartt, D. A., **1166**, 912 - B0090
- Darvish, M., 3659 - A0343
- Darvizeh, F., 2180 - A0349, 307 - C0240
- Darwich, R., **4553 - A0068**
- Darwish, D., **3651 - A0335**
- Das, A., **1911 - C0311**, 3563 - A0180
- Das, D., 2759 - B0138
- Das, K., **260 - C0119**
- das Neves Almeida Sandrin, L., **4404 - C0452**
- Das, R. G., 1438 - B0357
- Das, S., 716
- Das, S., 6090 - C0209
- Das, V., 1021 - B0305, 1555, 1556, **3434**, 4415
- Dasari, B., 1193, **4551 - A0066**
- Dasari, R., 3032 - A0003
- DaSilva, C., 5410 - A0062
- Dass, A., 6020
- Dastjerdi, M., 4803 - B0413
- Daston, G., 5745 - C0032
- Daszynski, D., 5511 - A0180
- Datta, A., **1777 - B0092**
- Datta, A., 3576 - A0193
- Datta, S., **1626 - A0002**
- Datta, S., **1187**, 342 - A0002
- Datta, S., 4547 - A0062
- Dattilo, M., **1883 - C0187**
- Daubert, J., **4798 - B0408**
- Daubney, J., 220 - C0031
- Dauil, P., 3279 - C0073
- Davancaze, T., 226 - C0037
- Davanzo, J., 4779 - B0389
- Dave, S., 2832 - B0250
- Daveckaite, A., **2109 - A0167**, 5063 - B0014
- Davey, C., 2739 - B0118
- Davey, P. G., 1077 - C0090, 1078 - C0091, 1089 - C0102, **2414 - C0080**, 2428 - C0094, 2956 - C0278, 6151 - C0270
- David, A., 1194
- David, P., 2585
- David, S., 2186 - A0355
- David, S., 4901 - C0346
- David, S., 817 - A0149
- Davidoiu, V., 1507 - C0348, 5983
- Davidorf, F. H., 4958, 5192 - B0215
- Davidorf, F., 1156
- Davidson, A., 2917 - C0214
- Davidson, A. E., 2920 - C0217, **3022**
- Davidson, B., 2957 - C0279
- Davidson, S. L., 4125 - B0288
- Davidson, T., 3564 - A0181
- Davies, B., 110 - A0273, 2300 - B0254
- Davies, L. N., 3303 - C0097, 911 - B0089
- Davies, S. G., 4600 - A0189, 4613 - A0202
- Davies, W. I., 5989
- Dávila Alquisiras, J., 5597 - A0316
- Davila Gonzalez, J., 2883 - B0301
- Davila, J., 1890 - C0290
- Davila, J., 2621
- Davila, N., **4225 - C0067**
- Davin, S., 2526 - C0255
- Davis (McClelland), T., 935 - B0113
- Davis, B., 2494 - C0198, 5693 - A0412, **6117 - C0236**, 6131 - C0250
- Davis, B. A., **2141 - A0275**, 659 - C0217
- Davis, E., 5058 - B0009
- Davis, E. E., 47 - A0078
- Davis, J. L., 417 - A0235, 4199 - C0041
- Davis, K., 5444 - A0113
- Davis, L., 3698 - B0045
- Davis, Q., 2416 - C0082
- Davis, R., 3317 - C0159
- Davis, S., 2510 - C0214
- Davison, S., 6003
- Davoli, K., 2289 - B0243
- Dawson, K., 437 - A0297
- Day, B., 1456 - C0018, 784, 824 - A0156, 836 - A0168
- Day Ghafoori, S., 1048 - B0359, 6187 - C0306
- Day, R. R., 2316 - B0270, **2317 - B0271**
- Day, S., 3623 - A0284
- Day, S., 640 - C0070
- Dayan, C., 5618 - A0337
- de Alba Campomanes, A., 187 - B0341, **2779 - B0158**
- De Alwis, H., 1350 - B0110, 4340 - C0388
- de Alwis Weerasekera, H., 4553 - A0068
- de Araujo, G. D., 458 - A0318
- De Baere, E., 377 - A0037, 4532 - A0047, 5403 - A0055, 5404 - A0056, 5408 - A0060, 6044 - A0078
- de Beaufort, H., 90 - A0253
- De boer, J., 1507 - C0348, 290 - C0191, 4656 - A0298, 5983, 724
- de Boer, J., 3492, 5380 - A0032, 5585 - A0304
- de Bruijn, S., 2321 - B0310
- de Bruin, I., 4029 - A0154
- de Carlo, T. E., **856 - A0188**, 876 - A0208
- De Castro, A., 268 - C0127, 647 - C0205
- De Cilla', S., 1937 - C0337, 4850 - C0208
- De Cogan, F., **1439 - C0001**
- de Crespigny, A., 3241 - B0340
- de Dios Cuadras, U., 1149, 4223 - C0065, 6056 - A0090
- De Dios, U. I., 4256 - C0098
- de Faria, B. M., 458 - A0318
- de Faria, M. A., 458 - A0318
- De Giusti, A., 5867 - C0154, 5868 - C0155
- De Gracia, P., 3379 - C0303, 4040 - A0247, **5809 - C0096**
- De Groef, L., **5831 - C0118**, 6007
- De Groot, V., 2675 - A0402
- De Guzman, E., 5103 - B0092, **5116 - B0105**
- de Hart, G., 6078 - A0207
- De Jaegere, S., 5403 - A0055, 5408 - A0060
- de Jong - Hesse, Y., 290 - C0191
- de Jong, E., 1577, **352 - A0012**, 4983, 6075 - A0204, 789
- De Jong, I., 2652 - A0379
- De Jongh, R., 3951
- De Juan, V., 3352 - C0234, 3353 - C0235
- de Keizer, R. J., 3627 - A0288
- de Klein, A., 3633 - A0294
- de Koning-Baclus, A. P., 3010
- De La Cour, M. D., 1305 - B0012, 4429
- de la Cruz, J., 1316 - B0023, 1574, 3651 - A0335
- de la Fouchardière, A., 3185 - A0328
- De La Huerta, I., 2996
- De Larochehière, E., 456 - A0316
- de Lestrangé, E., **1282 - A0317**, 2130 - A0264
- DE LIMA ABREU, P. H., 2692 - B0013, 3780 - C0007
- de Lima, S., 2012
- De Los Reyes, E. C., 4141 - B0304
- de Loureiro, T. G., 4044 - A0251
- De Moraes, C., 1470 - C0032, 1829 - B0290, 2087 - A0145, 2683 - B0004, 4248 - C0090, **4465**, 4987, 5107 - B0096, 5128 - B0117, 5134 - B0123, 6028
- de Moura, C. R., 2066 - A0124
- De Nadai, K., 52 - A0083
- De Negri, A., 3356 - C0238
- De Oliveira, M. M., 2893 - C0190
- De Paiva, C. S., 3291 - C0085, 3875 - C0136, 4420, **4953**
- de Paula, A., 4078 - B0073, 5120 - B0109

- De Potter, P., 5591 - A0310
 De Pretto, L. R., 1928 - C0328
 de Prisco, N., 3095 - A0103, 378 - A0038, 3966
 De Roach, J., 2330 - B0319
 De Rosa, M., 1251 - A0092
 De Rossi, G., 5474 - A0143
 De Salvo, G., 834 - A0166
 De Silvestri, A., 1662 - A0038
 De Simone, L., 411 - A0229, **4178 - C0020**
 De Sisternes, L., **1512 - C0353**, 1727 - A0248, 2864 - B0282, 3923
 De Smedt, S., 5708 - A0427, 6007
 De Smedt, S. K., **186 - B0340**
 De Smet, M. D., 5930 - C0327, 5936 - C0333
 de Souza, R. G., **3291 - C0085**
 De Stefano, V. S., **1386 - B0163**, 5981, 745
 de Vries, J., 5683 - A0402, 5684 - A0403
 de Vries, L., 5380 - A0032
 De Waard, P. W., 2072 - A0130
 De Zaeytijd, J., 5403 - A0055
 De-La-Torre Cifuentes, A., **2524 - C0253**
 Deak, E., 5723 - C0010
 Deak, G. G., 3468
 Deal, C., 2648 - A0153
 Deal, J. A., 5162 - B0185
 Dean, D. C., 4011 - A0136
 Deaner, J., 1160
 DeAngelis, K., 114 - A0277, 94 - A0257
 DeAngelis, M. M., 2350 - B0360, 5402 - A0054
 Debillon, L., 5425 - A0094
 Debono, M., 5209 - B0322
 DeBruyne, J., 5305 - C0238, 969 - B0223
 DeCaluwe, B., **1313 - B0020**
 DeCarlo, D. K., **2561**
 Decembrini, S., 4583 - A0172
 Decenciere, E., **1735 - A0256**
 DeCicco-Skinner, K., 3564 - A0181
 Decker, D. E., **3504 - A0067**
 Decleuva, D., 5031 - A0227
 DeCory, H., 2659 - A0386, 3676 - A0360
 Dedania, V., **4287 - C0158**
 Dedania, V. S., 4621 - A0263
 DeDionisio, L., 383 - A0043
 Deegan, P., 6190 - C0309
 Deemer, A., **2563**
 Degardin, J., 3963
 Degle, S., 2146 - A0280, 2153 - A0287
 Degli Espositi, S., **1262 - A0297**
 Degli-Espostii, M., 1448 - C0010
 Deguchi, H., 4891 - C0336
 Deguchi, S., 5289 - C0222
 Deiner, M., 3236 - B0335
 Deisseroth, K., 1864 - C0168, 2995
 Deissler, H. L., 5303 - C0236
 Deistler, K., 4610 - A0199
 Deitch Harel, I., **4311 - C0285**
 Deivanayagam, C., 1750 - B0065
 Deiwick, A., 3451
 Dejda, A., 3583 - A0200
 Dejene, R., 3272 - B0371, 4580 - A0169
 DeJkriengkraikul, C., 3250 - B0349
 del Barco, L. J., 5189 - B0212
 Del Hierro, C. E., **485 - A0345**
 Del Mar, N., 2501 - C0205
 Del Pino, R., 4648 - A0290
 Del Priore, L., 2412 - C0078, 2481 - C0147, 4588 - A0177, 5004 - A0075, 768
 Del Rio-Tsonis, K., 3119 - A0127, 573 - B0188
 Delalande, F., 3066 - A0037
 Delamere, N., **3482**
 Delaney, K., 2918 - C0215
 Delaunay, N., 55 - A0086
 DelCourt, C., 3010, 3013, 5537 - A0229
 Delf, K., 1879 - C0183, 3697 - B0044, **3707 - B0054**
 Delgado, S., 721
 Delgado-Tirado, S., 3560 - A0177, **4219 - C0061**
 Dell'Omo, R., 5749 - C0036
 Della Guardia, C., 4845 - C0203
 Della Santina, L., **2010**, 2013
 Delle Fave, M., 3444
 deLong, M. A., **217 - C0028**, 5672 - A0391
 Delori, F., 1314 - B0021
 Delott, L., 5222 - B0335
 Delshad, S., **4940**
 Deltour, J., 55 - A0086
 Deltour, J., **5933 - C0330**
 Delwig, A., **2679 - A0406**
 Delyfer, M., 1922 - C0322, 3010, 5537 - A0229
 Demaine, K., 1725 - A0246, **2114 - A0172**, 2374 - C0040
 Demarais, N. J., 3485
 Demer, J. L., **1552**, 2026 - A0053, 2029 - A0056, 2030 - A0057, 2039 - A0066
 Demers, E., 2355 - B0365
 Demetriades, A. M., **6135 - C0254**
 Demirci, H., 1631 - A0007, 3637 - A0298, 4621 - A0263
 Demirel, S., 2097 - A0155, 3496, 4063 - B0058
 Demirkan, A., 3013
 Demirkaya, N., **4649 - A0291**
 Demirs, J., **3148 - A0265**, 990 - B0244
 Demney, A., 3764 - B0179
 Demonte, N. L., 5360 - A0012
 Dempsey, H., 2332 - B0321
 Demuth, J., 3202 - B0202
 Demuynck, S., 377 - A0037
 Den Braber, A., 627 - B0299
 den Haan, J., **724**
 Den Hollander, A. I., 2377 - C0043, 3013, 3492, 352 - A0012, 4983, **789**
 Den, S., 957 - B0135
 Deng, H., 3625 - A0286
 Deng, H., **4110 - B0273**, 4735 - B0236
 Deng, J., 3374 - C0298
 Deng, L., 3528 - A0091
 Deng, Q., 1723 - A0244
 Deng, R., 3314 - C0156
 Deng, S., 5753 - C0040, **5956**
 Deng, S. X., **2007**, 2992, 3782 - C0009, 3859 - C0120, 3860 - C0121, 3863 - C0124, 4358 - C0406, 5715 - C0002
 Deng, W., **2983**
 Deng, W., 3054 - A0025
 Deng, Y., 1102 - C0137, 1124 - C0159, **4902 - C0347**, 618 - B0290
 Deng, Y., 3406 - C0330
 Dengler-Crish, C. M., 3720 - B0067, 3743 - B0090
 Denham, S., 5527 - A0219
 Deniaud, M., 934 - B0112
 Denius, K., **3075 - A0046**
 Denlinger, B., 3973, **4451**
 Dennis, A., 1241 - A0082
 Denniston, A. K., 1138, 1673 - A0194, 403 - A0221, 4202 - C0044
 Denoyer, A., 3850 - C0111
 Denstedt, J., 2665 - A0392
 Denstedt, J., **479 - A0339**
 Denton, M. L., **4008 - A0133**
 Dentone, P., **2724 - B0103**
 Deobhakta, A., 3673 - A0357, 3694 - A0378, 5170 - B0193, 6188 - C0307
 Department of Ophthalmology and Vision Science, 713 - C0308
 Department of Ophthalmology and Visual Sciences, Texas Tech University Health Sciences Center, Lubbock, TX, USA, 3687 - A0371
 Department of Ophthalmology, Chungbuk National University Hospital, College of Medicine, Chungbuk National University, Cheongju, Korea, 1886 - C0286
 Department of Ophthalmology, Keio University school of Medicine, 4952
 Department of Ophthalmology, QiLu Hospital, Shandong University, 3873 - C0134
 Department of Ophthalmology, University of Florida, Gainesville, FL, 2746 - B0125
 Depreux, F. F., 4523 - A0038
 Derazne, E., 726
 Deremeik, J., 2563
 Deretic, D., **4977**
 Dernay, K., 959 - B0213
 deRosenroll, G., **1865 - C0169**, 1868 - C0172
 Derr, P. H., **5099 - B0088**, 5100 - B0089
 Deruyter, N., 2206 - A0375
 Des Marchais, B., **456 - A0316**
 Des Rosiers, C., 5809 - C0096
 Desai, A., 1245 - A0086, 1250 - A0091
 Desai, A., **896 - A0285**
 Desai, R., 5827 - C0114
 Desai, S., 5445 - A0114
 Desai, T. A., 1249 - A0090
 Desai, U. R., 4245 - C0087
 Deschenes, J., 3659 - A0343, 5629 - A0348
 Descovich, D., 2025 - A0052
 Deshmukh, M., 3616 - A0234
 Deshpande, M., 4521 - A0036
 DesJardins, J., 2295 - B0249
 Desjardins, P., 4336 - C0384, **4354 - C0402**
 Deslandes, J., **38 - A0069**
 DeSouza, P., **4855 - C0213**
 Desrosiers, M., 4526 - A0041
 Detwiler, P. B., **2587**
 Detyna, J., 2020 - A0047
 Deupree, D. M., 398 - A0098
 Deupree, E. W., 398 - A0098
 Deuter, C. M., 4864 - C0309
 Dev Borman, A., **5212 - B0325**
 Dev, P., 2494 - C0198
 Devalaraja, S., 5383 - A0035
 Devalla, S., 4081 - B0076
 Devalla, S., **3500**
 Devaprasad, A., 5380 - A0032
 Devarajan, K., 2822 - B0240
 Devesahayam, R., 907 - B0085
 Devenyi, R., 2415 - C0081
 DeVera, C., 4014 - A0139
 Devereux, M., 4411, 625 - B0297
 Devi, S., 5068 - B0019
 Devi, T. S., 3552 - A0169
 Devoldere, J., 5708 - A0427, 6007
 Devries, D., 938 - B0116
 Dewey, D., 5920 - C0317
 Dewitte, H., 6007
 Dey, N., 5858 - C0145
 Dhadwal, H., 6016
 Dhaliwal, D., 2904 - C0201
 Dhaliwal, D. K., 3674 - A0358
 Dhaliwal, S., 5022 - A0218, 5206 - B0319
 Dhaliwal, S., **897 - A0286**
 Dhalla, H., 5883 - C0170
 Dhamdhere, K., 3278 - C0072
 Dhanireddy, S., **426 - A0244**
 Dhar-munshi, S., 798 - A0130
 Dharamdasani, H., 6012
 Dharani, V., 3355 - C0237
 Dharmat, R., **1009 - B0263**, 2350 - B0360
 Dharssi, S., **4149 - B0372**
 Dheer, Y., 3710 - B0057, **6124 - C0243**
 Dhillon, B., 2383 - C0049
 Dhillon, N., **463 - A0323**
 Dhingra, A., 4033 - A0158
 Dhingra, N., 3607 - A0225
 Dhoot, D., 1957, **3592 - A0210**
 Dhopeshwarkar, A., 4374 - C0422
 Di Cecilia, L., **5866 - C0153**
 Di Girolamo, N., **2006**, **2241 - B0195**, 2990
 Di Lorenzo, M., 3868 - C0129
 Di Pilato, L., 1915 - C0315
 Di Polo, A., 1862 - C0166, 2613, 3732 - B0079, 4474
 Di Simplicio, S., **4259 - C0130**
 Di Vito, L., 3356 - C0238
 Diabetic Retinopathy Clinical Research Network, 3613 - A0231, 4824 - C0182, 735
 Diabetic Retinopathy Research Group (DRRG) Vienna, 1927 - C0327
 Diabetic Retinopathy Research Group Vienna, 6195 - C0349
 Diaconu, V., **5089 - B0040**
 Diacou, R., 582 - B0197
 Diamond, S., 5594 - A0313
 Dias, A. T., 3180 - A0323, **4327 - C0301**, 5603 - A0322, 6015
 Dias, A. C., 4420
 Dias, J. R., 1452 - C0014
 Dias, L. C., 4420
 Dias, M. S., 6137 - C0256
 Dias Teixeira, K., 3828 - C0055
 Diaz, A. E., 2883 - B0301
 Diaz-Aguilar, S., 1223
 Diaz-Coranguex, M., **4617 - A0206**
 Diaz-Douton, F., 1554, 2941 - C0263, 5811 - C0098, 5865 - C0152
 Diaz-Llopis, M., 420 - A0238
 Diaz-Rohena, R., 2795 - B0026, 5443 - A0112, 860 - A0192
 Diaz-Tahoces, A., **155 - B0069**
 Dibas, M., 3031 - A0002
 Dick, A. D., 5555 - A0247, 5578 - A0297
 Dick, H., 1630 - A0006, 3202 - B0202, 3709 - B0056, 4500 - A0015, 5501 - A0170, 6144 - C0263
 Dicker, A., 3575 - A0192
 Dickman, M. M., 1341 - B0048, **1576**
 Dickmann, L., 226 - C0037
 Didiano, D., 3101 - A0109
 Didier, R., 4877 - C0322
 Diebold, Y., 4371 - C0419
 Diec, J., 137 - B0051, **1776 - B0091**, 1789 - B0104, 1791 - B0106, 1793 - B0108
 Dieckmann, G., 138 - B0052, 1670 - A0191, 1802 - B0150, **1806 - B0154**
 Diedrichs-Moehring, M., **2548 - C0277**
 Diedrichs-Möhning, M., 2536 - C0265
 Diehl, L., 5551 - A0243, 5563 - A0255
 Diehl, N., 2071 - A0129
 Dienes, L., **4876 - C0321**
 Diep, M., 1078 - C0091
 Diebert, G., 4172 - C0014
 Dietlein, T. S., 2118 - A0176
 Dietrich, J., **4929 - C0374**
 Dietzel, A., **1692 - A0213**
 Diez, I., 4648 - A0290
 Diez-Alvarez, L., 3352 - C0234, 3353 - C0235
 Dijkman, G., 3134 - A0251
 Dike, S., 342 - A0002
 Dilda, P., 241 - C0052
 Dillehay, S. M., **2133 - A0267**
 Dillinger, A. E., 3968
 Dillion, D. G., 4951
 Dillon, L., 5184 - B0207, 5185 - B0208
 DiLoreto, C., 3187 - A0330
 Dimaras, H., **1641 - A0017**
 Dimitskovski, M., 4734 - B0235
 Dimitriou, C., **2051 - A0109**
 Dimitropoulos, C., 1366 - B0126
 Dimonaco, S., 2174 - A0343
 Dimopoulos, I., 4505 - A0020
 Dinah, C., 4821 - C0179
 Dinculescu, A., **3052 - A0023**, 3053 - A0024
 Dine, K., 3351 - C0233
 Diner, B., 374 - A0034
 Ding, C., 4923 - C0368
 Ding, G., 4128 - B0291
 Ding, H., 3872 - C0133, 5979
 Ding, J., 200 - C0011, **205 - C0016**
 Ding, L., 2206 - A0375, 2689 - B0010
 Ding, L., 1285 - A0320
 Ding, X., **4965**, 4966, 974 - B0228
 Ding, X., 175 - B0329, **3382 - C0306**, 646 - C0204, 703 - C0298
 Ding, X., 436 - A0296, **4784 - B0394**, 4791 - B0401, 5642 - A0361
 Ding, Y., 3957
 Ding, Y., 5395 - A0047, 5396 - A0048
 Dinh, B., 874 - A0206
 Dinh, K., **2528 - C0257**
 Dinh, L., 149 - B0063, 4903 - C0348
 Dimiz-Filho, A., 2691 - B0012, **4463**
 Dion, M., 242 - C0053
 Dionisio, R. G., **6097 - C0216**
 Dirani, A., 4247 - C0089, 859 - A0191
 Discipola, M., 4771 - B0272
 DISCOVER, 2896 - C0193
 Diskin, J., **1929 - C0329**
 Dismuque, W., 6039
 DiVincenti, L., 1155
 Divoux, T., 1314 - B0021
 Diwischek, F., 3612 - A0230
 Dix, R. D., 4616 - A0205, 516 - B0023, 517 - B0024
 Dixon, A., 4710 - B0134
 Dixon, M., 634 - C0064
 Dixon, M. W., 1393 - B0170, **2076 - A0134**
 Dixon, M. A., 5379 - A0031
 Dizhoor, A. M., 4488 - A0003, **4489 - A0004**, 4490 - A0005
 Djalilian, A. R., 2063 - A0121, 2989, **3310 - C0152**, 3454, 4360 - C0408, 4375 - C0423, 4421, 4704 - B0128, 4922 - C0367
 Djerada, Z., 5714 - C0001
 Djougarian, A., 5099 - B0088, 5100 - B0089
 Do, B., 2835 - B0253, 4211 - C0053, 82 - A0129
 Do, C., 3385 - C0309, 3480
 Do, D. V., 1619, 2830 - B0248, 3424 - C0348, 415 - A0233, 5949, **5950**, 675 - C0233, 783
 Do, J., **471 - A0331**
 Do, K., **2483 - C0149**, 4506 - A0021
 Do, K., 6027
 Do, M., 1176
 Doan, A., 4690 - A0332, 4691 - A0333
 Doan, S., 1800 - B0148, **5572 - A0264**
 Doan, T., 334 - C0267
 Doblhammer, G., 2727 - B0106
 Dobrota, S., 3424 - C0348
 Docherty, G., 1221, 1972
 Dockery, A., 2332 - B0321, **5406 - A0058**
 Dockias, J. A., 4951
 Doctor, P., 4204 - C0046
 Dodd, R., 549 - B0164
 Dooda, S., 1787 - B0102
 Doddapaneni, R., 4552 - A0067, 4960, 5609 - A0328, 5611 - A0330
 Dods, E., 4250 - C0092
 Dodo, Y., 5378 - A0030
 Doebley, A., **4525 - A0040**, 5962
 Doersam, S., 2210 - A0379
 Dogra, M., **214 - C0025**

- Dogru, M., 3833 - C0060, 5566 - A0258, **957 - B0135**
- Dohlman, C. H., 1314 - B0021, 2529 - C0258, 2579, 2664 - A0391, 3663 - A0347, 4361 - C0409, 526 - B0141
- Dohse, M., 5551 - A0243
- Doi, S., 2882 - B0300, 4268 - C0139, **4269 - C0140**, 5914 - C0311, 5915 - C0312, 670 - C0228, 671 - C0229, 807 - A0139, 847 - A0179
- Dokladal, P., 1735 - A0256
- Dolan, D., 1563
- Dolan, M., 1892 - C0292
- Dolata, J., 2146 - A0280
- Dolezal, L., **331 - C0264**
- Dolinska, M. B., **2359 - B0369**, 4663 - A0305
- Doll, T., 4861 - C0306, **923 - B0101**, 956 - B0134
- Dollin, M., 4186 - C0028
- Dolz-Marco, R., 2433 - C0099, 2624, 3157 - A0274, **4482**
- Domalpally, A., 2382 - C0048, 2422 - C0088, 2790 - B0208, 2804 - B0222, **4676 - A0318**, 6010
- Domene Hickman, J. L., 142 - B0056, 2908 - C0205, **4315 - C0289**
- Domingo, J., 2966 - C0288
- Dominguez, J., 402 - A0102
- Dominguez, M., 5924 - C0321
- Dominguez, M. A., 2524 - C0253
- Domizi, P. D., 549 - B0164
- Domozhrov, A., 2446 - C0112
- Dompieri, R. C., **150 - B0064**
- Donaldson, C., **2965 - C0287**, 2968 - C0290
- Donaldson, K. J., 4550 - A0065, **4982**
- Donaldson, L., 4582 - A0171
- Donaldson, P. J., **3485**, 4698 - A0340, 4975
- Dong, C. Q., **5251 - B0364**
- Dong, C., 1412 - B0189
- Dong, D., 2998
- Dong, F., 4329 - C0377
- Dong, J., 5282 - C0215
- Dong, L., 41 - A0072, 602 - B0274
- Dong, N., 4389 - A0437, 4900 - C0345
- Dong, X., 5354 - A0006
- Dong, Y., 2093 - A0151, **2259 - B0213**, 3225 - B0324
- Dong, Z., 718
- Dong, Z., 5558 - A0250, 977 - B0231
- Dong, Z., 369 - A0029
- Dong, Z., 1591
- Donna, P., 5755 - C0042
- Donnenfeld, E., 938 - B0116
- Donner, R., 1736 - A0257
- Dons-Jensen, A., **5284 - C0217**
- Dooner, J., 6187 - C0306
- Dorairaj, S., **2015 - A0042**, 2016 - A0043
- Dorantes, D., 1058 - B0369
- Dorantes Diez, Y., 2693 - B0014, **469 - A0329**
- Dorantes-Diez, M. A., 469 - A0329
- Dorantes-Diez, Y. Y., 1239 - A0080
- Dorey, C., 2473 - C0139, 3965
- Dorey, M., 3461
- Dorey, T., 798 - A0130
- Dorfman, A., 5030 - A0226, 5207 - B0320
- Dorfman, A. L., **5026 - A0222**
- Dorgau, B., 1984, 5329 - C0262, **561 - B0176**
- Dorr, M., 1074 - C0087, 4943, 5753 - C0040
- Dorransoro, C., 252 - C0111, 654 - C0212
- Dörsam, S., **5285 - C0218**
- Dos Santos, A., **4358 - C0406**
- Dosch, E., **2862 - B0280**, 5056 - B0007, 5062 - B0013
- Dotevall, L., 4171 - C0013
- Dou, C. T., **4089 - B0084**
- Dou, X., 2669 - A0396
- Dou, Y., 571 - B0186
- Douagi, I., 5005 - A0076
- Douar, A., 5658 - A0377
- Doucette, L. P., **6058 - A0187**
- Dougherty, B. E., **5192 - B0215**
- Douglas, K., 5951
- Douglas, L. M., 5240 - B0353
- Dougllass, A., **2168 - A0337**
- Dovich, J., 2062 - A0120
- Dowdall, R. J., 4115 - B0278
- Downes, K., 2901 - C0198
- Downes, S., 1195, 1565, 1698 - A0219, 2341 - B0330, 5091 - B0042, 5093 - B0044, 5165 - B0188, 5387 - A0039, 619 - B0291
- Downey, L., 798 - A0130
- Downie, L. E., 1108 - C0143, **2994**
- Downs, J. C., 1215, 3023
- Dowse, E., 6091 - C0210
- Doycheva, D., 4864 - C0309
- Doyle, S., 3469, **3475**, 3942
- Drack, A. V., 3962
- Draeos, M., **1318 - B0025**, 1342 - B0049
- Drago, F., 193 - C0004
- Dragotto, F., 2836 - B0254
- Drawnel, F. M., **3260 - B0359**
- DREAM© Research Group, 919 - B0097, 924 - B0102
- DREAM© Study Research Group, 1963, 3785 - C0012, 4880 - C0325, 937 - B0115
- Drenser, K. A., 3771 - B0186, 739
- DRESS, 921 - B0099
- Dressen, A., 2432 - C0098
- Drew, T., 3544 - A0161
- Drewns-Botsch, C., 408 - A0226, 5195 - B0308, **5196 - B0309**
- Drexler, W., 297 - C0198
- Driscoll, A., 1245 - A0086, **1250 - A0091**
- Driver, T., **1315 - B0022**
- Drobe, B., 5966
- Drobe, B., 5172 - B0195
- Drobnay, A., 2210 - A0379
- Droettboom, M., 3215 - B0314, 645 - C0203
- Drolet, D. W., 5540 - A0232
- Droop, A., 1563
- Drozдова, G., 1583
- Druce, J., 4182 - C0024
- Drucker, D., **5016 - A0212**, 5034 - A0230
- Druzhkova, T., 1657 - A0033
- Dry eye CO, 4914 - C0359
- Dryden, S., **447 - A0307**
- Dryja, T. P., 2664 - A0391, 3148 - A0265
- Dryjski, O., 4798 - B0408, 5728 - C0015
- DSPV-201, 5953
- Du Bois, J., 2679 - A0406
- Du, D., 3390 - C0314
- Du, H., **2632 - A0137**
- Du, J., 1186, 1477 - C0219, 1492 - C0234, 2458 - C0124, 4507 - A0022, **6000**
- Du, J., 1712 - A0233, 1713 - A0234, 2091 - A0149
- Du, L., 476 - A0336
- Du, L., 1642 - A0018
- Du, L., 3873 - C0134
- Du, W., **4545 - A0060**
- Du, Y., 3538 - A0101, **4729 - B0153**, 4730 - B0154, 4732 - B0156, 4733 - B0157
- Du, Y., **4001 - A0126**, 581 - B0196
- Dua, H., 294 - C0195
- Duan, D., 3428 - C0352, 4112 - B0275
- Duan, J., 2330 - B0319, 5410 - A0062
- Duan, Y., 376 - A0036
- Duan, Y., 3548 - A0165, 5350 - A0002, 6002
- Duan, Y., 1988, 6152 - C0271
- Duan, Z., 1124 - C0159, 618 - B0290, 721
- Duarte, B., **130 - B0044**, 931 - B0109
- Duarte, L., **1936 - C0336**
- Dubald, M., 3834 - C0061, 3835 - C0062
- Douglas, K., 5951
- Dubey, S., 5619 - A0338
- Dubey, S., 386 - A0046
- Dubina, M., 5145 - B0168
- Dubiner, H., 1182, 5137 - B0160
- Dubis, A. M., **1564**, 1717 - A0238, 3139 - A0256, 3216 - B0315, 3231 - B0330, 3233 - B0332
- DuBois, L., 5195 - B0308, 5196 - B0309
- DuBose, T., **5869 - C0156**
- Dubovy, S. R., 1157, 4316 - C0290, 483 - A0343, 529 - B0144, 5604 - A0323
- Dubra, A., 1154, **1616**, 1737 - A0258, 299 - C0200, 4088 - B0083, 4630 - A0272, 4632 - A0274, 4992
- Dubroux, C., 1296 - B0003, 1298 - B0005, 2224 - A0393, **2898 - C0195**, 4788 - B0398
- Dubrue, P., 1378 - B0138
- Duc Nguyen, Q., 2600, 2601, 2721 - B0100, 4074 - B0069
- Duch, S., 5150 - B0173
- Duda, M., **3077 - A0048**, 3094 - A0065
- Dudakova, L., 2917 - C0214, 3022, **328 - C0261**
- Dudley, V., 1479 - C0221
- Dudziak, D., 3453
- Duffy, K., **4121 - B0284**
- Dufour, V., 1438 - B0357, 4522 - A0037, 4527 - A0042, 6006
- Dugel, P. U., **1455 - C0017**, 1464 - C0026, 1624, 739
- Dugel, T. A., 2776 - B0155
- Duggal, A., 947 - B0125
- Duggan, D., 1911 - C0311
- Duggan, M., 1575
- Dugger, D., 3056 - A0027
- Duguay, A., **212 - C0023**, 219 - C0030
- Duh, E. J., **3203 - B0203**, 766
- Duhamel, F., 321 - C0254, 5495 - A0164
- Duijckers, L., 4979
- Duker, J. S., 1928 - C0328, 2798 - B0216, 3922
- Duker, J. S., 2886 - B0304
- Dukles, N., 3596 - A0214
- Dul, M. W., 1523 - C0364, 5123 - B0112
- Dulaurent, T., 4705 - B0129, 5049 - A0245
- Dulchavsky, S., 1133 - C0168
- Dulla, K., 3022, **5315 - C0248**
- Duman, G., 3675 - A0359
- Dumas, L., 2975
- Dumoulin, S., 5032 - A0228
- Dunaief, J. L., 2396 - C0062, 2454 - C0120, 2460 - C0126, 4598 - A0187, 6079 - A0208
- Dunbar, J., 4131 - B0294
- Duncan, J. L., 1540 - C0381, 1542 - C0383, 3236 - B0335, 4468, 4472, 4634 - A0276
- Duncan, K., 111 - A0274, **5627 - A0346**
- Duncan, L., 516 - B0023, 517 - B0024
- Duncan, L., **4616 - A0205**
- Duncan, M. K., 1602, **1607**
- Duncan, T., 5382 - A0034
- Dunkel, I., 1644 - A0020
- Dunker, S., 1576
- Dunkley, B., 4142 - B0305
- Dunlap, C., 5667 - A0386
- Dunn, C., 2818 - B0236
- Dunn, E. N., 5534 - A0226
- Dunn, F., 2996
- Dunn, J., 1133 - C0168
- Dunn, R., 1372 - B0132
- Dunn, R. C., 1720 - A0241
- Duong, H., 1315 - B0022
- Duong, J., 51 - A0082
- Dupps, W. J., 1386 - B0163, 745
- Duque-Chica, G. L., 4090 - B0085, 5031 - A0227
- Duran, R., 2452 - C0118, 2752 - B0131, 3570 - A0187, 762, 764, 767
- Durani, Z., **6036**
- Durbin, A., 5682 - A0401
- Durbin, M., 4643 - A0285
- Durbin, M. K., 1512 - C0353, 1684 - A0205, 1724 - A0245, 1731 - A0252, 2088 - A0146, 2124 - A0182, **2800 - B0218**, 2833 - B0251, 2864 - B0282, 3880 - C0141, 3923, 5060 - B0011, 5071 - B0022, 5112 - B0101, 6032, 673 - C0231
- Durkee, H. A., 3667 - A0351, 529 - B0144
- Durmaz Engin, C., **2115 - A0173**, 3213 - B0312
- Durox, M., 2788 - B0167
- Durus, A., 6109 - C0228
- Dutta, D., 1766 - B0061
- Dutta, S., 1012 - B0266
- Dutz, S., 3198 - B0198
- Duval, R., 2025 - A0052
- Duvilio B Andreolli, J., **5903 - C0190**
- Duvoisin, R. M., 2503 - C0207
- Duwel, S., 1839 - B0300
- Dvorak, R., 3695 - B0042
- Dvoriantchikova, G., 2009, **2490 - C0194**, 4552 - A0067, 5493 - A0162, 552 - B0167
- Dvorishyna, M., **3263 - B0362**
- Dwight, J., **4659 - A0301**
- Dwyer, B., 5929 - C0326
- Dy, J., 2764 - B0143, 2767 - B0146, 2772 - B0151, 2782 - B0161, 3766 - B0181, 3936, 3937, 3938
- Dye, P. K., 1309 - B0016, 2901 - C0198
- Dyer, M., 3495
- Dyer, R., 5790 - C0077
- Dyka, F. M., 3052 - A0023, 3053 - A0024, **4533 - A0048**
- Dyrdin, T., 4350 - C0398

E

- e-ROP Cooperative Group, 2757 - B0136, 2775 - B0154
- e-ROP Research Group, 2754 - B0133
- e-ROP Study Group, 2751 - B0130
- E3 consortium, EYE-RISK consortium, 3013
- Eade, K., **4584 - A0173**, 5409 - A0061, 5517 - A0186
- Eamegdool, S., **5411 - A0063**
- Eames, I., 2000
- Eandi, C. M., **2436 - C0102**, 2810 - B0228
- Ear, J., 5383 - A0035
- Eastlake, K., **1494 - C0236**, 1495 - C0237, 1496 - C0238, 1497 - C0239
- Easton, J., 3495
- Eaton, A., 5703 - A0422
- Eaves, S., 463 - A0323
- Eberhardt, S., 2743 - B0122
- Eberhart, C., 1628 - A0004, 64 - A0111
- Eberlein, G., 1535 - C0376
- Ebert, D., 1133 - C0168, 1134 - C0169
- Eblimit, A., 1009 - B0263
- Ebraheem, A., **1454 - C0016**, 5860 - C0147
- Ebrahimi, A., 5926 - C0323
- Eccoffier, T., 784
- Echalier, L. L., 2427 - C0093
- Echeagaray, J., 4779 - B0389
- Eckert, G., 2094 - A0152, 5079 - B0030
- Eckmann-Hansen, C., **4750 - B0251**
- Ecoffier, T., 783
- Eesedy, M., 1932 - C0332, 1933 - C0333, 1934 - C0334, 628 - C0058
- Edelsten, C., 171 - B0325
- Edgar, D. F., 1600
- Edler, M., 592 - B0207
- Edman, M. C., 2672 - A0399, 3305 - C0099, 5677 - A0396
- Edmunds, B., 490 - A0350, 5057 - B0008, 5058 - B0009
- Edvinsson, L., 2641 - A0146, 2643 - A0148, 2645 - A0150, 5504 - A0173, **5505 - A0174**, 6068 - A0197
- Edward, D. P., 100 - A0263, **1258 - A0099**, 1628 - A0004, 5901 - C0188
- Edwards, D., **1961**, 76 - A0123
- Edwards, K., **149 - B0063**, 1808 - B0156, 4903 - C0348
- Edwards, L., **1600**, 2425 - C0091
- Edwards, M. L., **1481 - C0223**, 1483 - C0225, 2435 - C0101, 3470, 3471
- Edwards, P. A., 1929 - C0329, 3591 - A0208, 5479 - A0148
- Edwards, S., 3467, 5478 - A0147
- Edwards, S., 2344 - B0333
- Edwards, T. L., 1195, **5936 - C0333**
- Edwards, W., 3187 - A0330
- Efstathiou, N., 769
- Egan, C., 1034 - B0345, 1262 - A0297, 3138 - A0255, 3154 - A0271, 4628 - A0270
- Egan, D., 5807 - C0094
- Egan, J., 2314 - B0268
- Eggenschwiler, L., 5772 - C0059
- Eghbalmia, H., 1740 - A0261
- Eghrari, A. O., 4173 - C0015, 5728 - C0015
- Eguchi, H., 102 - A0265, **3688 - A0372**
- Egwuagu, C. E., 2544 - C0273, 2545 - C0274, 2550 - C0279
- Ehara, T., 1650 - A0026
- Ehlers, J., 1917 - C0317, 1920 - C0320, 2896 - C0193, 3596 - A0214
- Ehlers, J. P., 1930 - C0330, 4232 - C0074
- Ehlers, K., 4484
- Ehmann, D., 4251 - C0093
- Ehrenstein, M., 2520 - C0249
- Ehrismann, C., 598 - B0270
- Ehrlich, J., 4948, 5545 - A0237
- Ehrlich, J. R., 4154 - B0377, **4462**, 640 - C0070
- Ehrmann, K., **137 - B0051**, 261 - C0120
- Ehsaei, A., 4379 - C0427
- Eibenberger, K., 1445 - C0007, 818 - A0150
- Eichenbaum, D. A., **824 - A0156**
- Eichinger, S., 5250 - B0363, 5623 - A0342, 5624 - A0343
- Eiden, S., 2133 - A0267
- Eidet, J., **2516 - C0245**, 3865 - C0126
- Eilken, H., 64 - A0111
- Eiseman, A., 4335 - C0383
- Eisenbarth, W., **5884 - C0171**, 643 - C0073
- Eisenstat, D., 3111 - A0119
- Eizenman, M., **6029**
- Ejerdervik Lindblad, B., 3678 - A0362
- Ejstrup, R., 3643 - A0304, **5584 - A0303**
- Ekart, A., 1695 - A0216
- Ekawadhani, S., 244 - C0055
- Ekdahl, K. N., 5562 - A0254
- Ekici, A., 3019
- Eklund, A., 5055 - B0006

- El Alami, H., 2334 - B0323
 El Dabagh, Y. S., 3952
 El Defrawy, S., 1337 - B0044
 El Gammal, M., 4823 - C0181
 El Hamdaoui, M., 2143 - A0277, 708 - C0303
 El Nokrashy, A., 407 - A0225
 El sanharawi, M., 5714 - C0001
 EL-Annari, J., 6183 - C0302
 El-Baz, A., 1685 - A0206, 1710 - A0231
 El-Dairi, M., 2195 - A0364
 El-Darzi, N., 224 - C0035
 El-Haddad, M., 289 - C0190, 4689 - A0331
 El-Haig, W., 420 - A0238
 El-Hay, T., 1047 - B0358
 El-Malahi, O., 2118 - A0176
 El-Nimri, N., 1578
 Elaahi, K., 3820 - C0047
 Eladawi, N., 1710 - A0231
 Elakkiya, S., 3690 - A0374
 Elalfy, M., 5772 - C0059
 Elatfy, M., 5440 - A0109
 Elbarky, A., 1905 - C0305
 Eldred, J. A., 5635 - A0354, 5638 - A0357
 Elefant, D., 1579
 Eleff, T., 616 - B0288
 Eleftheriadis, H., 3607 - A0225
 Eleftheriadou, M., 2399 - C0065, 3244 - B0343
 Eleuteri, A., 3630 - A0291
 Elfandi, S., 2397 - C0063
 Elgart, G. W., 5604 - A0323
 Elghazi-Cras, L., 2594
 Elhayek, R. F., 245 - C0056, 3465
 Eliasdotir, T. S., 4658 - A0300
 Elikhis, A., 535 - B0150
 Elimimian, E. B., 5600 - A0319, 5602 - A0321
 Eliott, D., 1162, 5004 - A0075, 6177 - C0296
 Elisseeff, J. H., 1345 - B0052
 Elkeeb, A., 4995
 Elkhamary, S., 4325 - C0299
 Ellant, J., 5906 - C0193
 Eller, A. W., 4999 - A0070, 5445 - A0114, 875 - A0207
 Ellingson, C., 3672 - A0356, 4813 - C0171
 Ellingson, P., 2043 - A0101
 Elliot, D., 560 - B0175
 Elliott, D. B., 4464, 4760 - B0261
 Elliott, G. W., 5370 - A0022
 Elliott, M. H., 3477, 4599 - A0188
 Elliott, R., 3029
 Ellis, D. Z., 5296 - C0229, 5298 - C0231
 Ellis, M., 393 - A0093
 Ellis, N., 2981
 Elman, M. J., 4950
 Elmasry, K., 1594
 Elmasry, M., 737
 Elmasry, M. A., 2876 - B0294, 3448, 740
 Elmelik, D., 4503 - A0018
 Elmogly, M., 1710 - A0231
 Elpeleg, O., 5415 - A0067
 Elsayy, A., 5737 - C0024, 5742 - C0029
 Elshaer, S. L., 2501 - C0205, 2640 - A0145
 Elshafey, S., 1594
 Elsheikh, A., 1415 - B0192, 5764 - C0051
 Elshein, R., 4865 - C0310
 Elsherbiny, N., 1594
 Elsherbiny, S., 1439 - C0001, 4810 - C0168, 4823 - C0181
 Elsner, A. E., 1152, 2138 - A0272, 3426 - C0350
 Elstrott, J., 2432 - C0098, 3241 - B0340, 5551 - A0243, 5563 - A0255
 ElTanboly2, A., 1685 - A0206
 Eltony, A. M., 1400 - B0177, 746
 Elwes, F., 2383 - C0049
 Elze, T., 1101 - C0136, 1105 - C0140, 1128 - C0163, 1947, 4072 - B0067, 4465, 5107 - B0096, 5134 - B0123, 5769 - C0056, 6028
 Elzer, B., 3436
 Emami, A., 1997
 Emami-naeini, P., 1160, 2817 - B0235, 283 - C0184, 877 - A0209
 Emeriewen, K., 83 - A0246
 EMI, K., 1459 - C0021
 Eming, S. A., 3335 - C0177
 Empselidis, T., 798 - A0130
 Emptage, L., 1582, 4319 - C0293, 4320 - C0294
 Emri, E., 3989 - A0114
 Emrich, D. P., 5990
 Enayati, S., 1482 - C0224
 Encampira, E. O., 2992, 3860 - C0121
 Endermann, T., 5362 - A0014
 Enders, P., 2118 - A0176, 2377 - C0043, 3232 - B0331
 Endo, T., 1031 - B0315, 3410 - C0334, 4555 - A0084
 Engel, A. L., 4507 - A0022
 Engel, C., 1101 - C0136, 1105 - C0140, 1128 - C0163
 Engel, K., 3947
 Engel, S., 4572 - A0101
 Engelbert, M., 1940 - C0340, 5278 - C0124
 Engelhart, K. C., 5048 - A0244
 Engelke, J., 1916 - C0316
 Enghild, J. J., 2254 - B0208, 2264 - B0218
 Engle, E., 1580, 2173 - A0342
 English, W., 5476 - A0145
 Ennis, S., 5138 - B0161, 5784 - C0071
 Enoki, T., 5554 - A0246
 Enomoto, N., 2092 - A0150
 Enright, S., 2980, 2981
 Enriquez, A., 4225 - C0067
 Enriquez-Algeciras, M., 124 - B0038, 483 - A0343
 Enthoven, C., 700 - C0295
 Enzenauer, R., 3767 - B0182
 Enzenbach, C., 1101 - C0136
 Eom, Y., 248 - C0107, 3296 - C0090
 EPIPAGE-2 Writing Group, 2788 - B0167
 Epitropoulos, A., 935 - B0113
 Epitropoulos, A. T., 257 - C0116
 Epp, S., 4562 - A0091
 Eppenstein, D., 1052 - B0363
 Eppig, T., 3436
 Ellis, N., 2981
 Epstein, R., 1294 - B0001
 Epstein, R., 1294 - B0001
 Erb, C., 5081 - B0032
 Erba, S., 3253 - B0352
 Erbsloh, A., 4566 - A0095
 Erdman, J. W., 327 - C0260
 Erdogmus, D., 2764 - B0143, 2767 - B0146, 2772 - B0151, 2782 - B0161, 3766 - B0181, 3936, 3938
 Erenler, F., 835 - A0167
 Erginay, A., 1726 - A0247, 1735 - A0256
 Erickson, P., 261 - C0120
 Erickson, S. R., 5929 - C0326
 Ericsson, M., 3037 - A0008
 Eriksson, E., 4342 - C0390
 Eris, E., 3760 - B0175
 Erkelens, I., 1018 - B0302, 4414
 Erker, L. R., 1269 - A0304, 2849 - B0267, 3896 - C0362
 Ernest, J., 827 - A0159
 Ernst, M., 5539 - A0231
 Errera, M., 4213 - C0055
 Esaki, Y., 2718 - B0039
 Escaf, L. C., 250 - C0109, 4229 - C0071
 Eshghi Fallah, A., 6153 - C0272
 Eskandarpour, M., 2541 - C0270, 507 - B0014
 Eslah, E., 1648 - A0024
 Eslami, A., 287 - C0188
 Eslami, M., 2989, 3310 - C0152, 3454, 4360 - C0408, 4421, 4704 - B0128, 4922 - C0367
 Esmail, K., 4244 - C0086
 Esmatjes, E., 2802 - B0220
 Esparza-Garcia, E., 6056 - A0090
 Espeland, M. A., 4053 - B0048
 Espinhosa, C. T., 5921 - C0318
 Espino Icazbalceta, R., 1027 - B0311
 Espino, K., 2426 - C0092
 Esporcatte, B. L., 2066 - A0124
 Esposito, E., 3636 - A0297
 Esposito, N., 4502 - A0017
 Esquivia, G., 3006
 Esser, G., 2967 - C0289
 Essex, R., 1893 - C0293
 Essex, R. W., 1463 - C0025, 4604 - A0193
 Essilfie, J., 3150 - A0267
 Estacia, C., 1902 - C0302
 Esteban-Pérez, S., 5693 - A0412
 Estes, K., 1032 - B0316
 Esteve-Rudd, J., 2493 - C0197, 3470
 Esteves, J., 1405 - B0182
 Estiarte, M., 3576 - A0193
 Estrada, M., 5783 - C0070
 Estrada, T., 1709 - A0230
 Estrada-Mena, F. J., 351 - A0011, 5151 - B0174
 Etemadi, M., 3226 - B0325
 Eter, N., 2447 - C0113, 2850 - B0268
 Ethier, C. R., 1217, 2024 - A0051, 3970, 5907 - C0194
 Etminan, M., 3787 - C0014
 Eton, E., 4805 - B0415
 Etzel, J., 2439 - C0105
 Eugui, P., 5826 - C0113
 European Glaucoma Research Training Program, 1814 - B0275
 Evans, C. J., 2917 - C0214
 Evans, D., 1077 - C0090, 918 - B0096
 Evans, D. J., 1544, 1549, 501 - B0008, 505 - B0012, 902 - B0080
 Evans, P., 1180
 Evans, S., 2678 - A0405
 Evans-Molina, C., 6002
 Everett, L., 6161 - C0280
 Everett, M. J., 2148 - A0282
 Evers, C., 4176 - C0018
 EVICT Study Investigator Group, 719
 Ewen, A., 1040 - B0351
 Eye and Vision Research Group, 4678 - A0320
 Eye Disease in Cognition Study, 4105 - B0230
 Eye group, 3861 - C0122
 Eye Research Group Oxford, 619 - B0291
 EYE-RISK CONSORTIUM, 3010
 eyeGENE(R) Working Group, 2340 - B0329
 eyeGENE® Working Group, 2331 - B0320
 Eyes of Africa Consortium, 1183
 Eyley, S., 1086 - C0099
 Eyre, J. J., 3546 - A0163
 Eysteinson, T., 4020 - A0145, 4658 - A0300, 5854 - C0141
 Fadli, Z., 1759 - B0074, 1769 - B0084
 Fadoo, J. M., 4452
 Fadous, R., 4340 - C0388
 Fagerholm, P., 2251 - B0205, 2265 - B0219, 3452
 Fague, L., 3744 - B0091
 Fahim, A. T., 1433 - B0352
 Fahrenfort, L., 2585
 Fairbanks, A., 2176 - A0345
 Fairbrother-Crisp, A., 1597, 5180 - B0203
 FairchildBaranowski, A. N., 311 - C0244
 Fairless, E., 1045 - B0356
 Faissner, A., 1630 - A0006, 3727 - B0074, 4439
 Fajardo, D., 4535 - A0050, 4536 - A0051, 6020
 Fajnkuchen, F., 2859 - B0277, 3619 - A0237, 4822 - C0180
 Fakin, A., 2185 - A0354, 4030 - A0155
 Falcao, M., 1405 - B0182, 1912 - C0312, 2867 - B0285
 Falcao-Reis, F., 1405 - B0182, 1912 - C0312
 Falck, A., 1692 - A0213
 Falk, D., 3387 - C0311
 Falk, T., 3993 - A0118
 Fallico, M., 3948
 Fallon, J. B., 1946
 Fallon, J., 2111 - A0169, 2113 - A0171, 3501
 Fallon, R., 1223, 4584 - A0173, 5409 - A0061, 5517 - A0186
 Falsini, B., 5549 - A0241
 Fam, H., 430 - A0290
 Famili, A., 235 - C0046
 Famulski, J., 2593, 326 - C0259, 3523 - A0086
 Fan, B., 3020, 5135 - B0158, 5153 - B0176
 Fan, F., 779
 Fan, J., 1499 - C0241
 Fan, J., 1589, 3750 - B0097
 Fan, K., 4196 - C0038
 Fan, K. C., 498 - B0005
 Fan, L., 3566 - A0183
 Fan, L., 4574 - A0103
 Fan, N., 2267 - B0221
 Fan, S., 2717 - B0038
 Fan, S., 2518 - C0247
 Fan, W., 1524 - C0365, 1914 - C0314, 1939 - C0339
 Fan, X., 1304 - B0011
 Fan, X., 2932 - C0254, 5985
 Fan, X., 1207, 4972
 Fan, Y., 5110 - B0099
 Fan, Z., 5904 - C0191
 Fang, L., 175 - B0329
 Fang, L., 1225, 896 - A0285
 Fang, L., 4578 - A0167
 Fang, M., 4735 - B0236
 Fang, W., 579 - B0194
 Fang, W., 5860 - C0147
 Fang, Y., 4603 - A0192, 547 - B0162
 Fann, H., 2598
 Fanous, A., 5030 - A0226
 Fantucci, M. Z., 4420
 Farah, J. L., 1452 - C0014
 Farah, M. E., 1452 - C0014, 390 - A0090
 Farah, N., 3974, 4565 - A0094
 Farajzadeh, M., 3153 - A0270, 3235 - B0334, 4283 - C0154, 5712 - A0431
 Farber, D. B., 1986, 3116 - A0124, 3122 - A0130
 Fard, A., 1684 - A0205, 3880 - C0141, 5060 - B0011, 5071 - B0022, 673 - C0231
 Fard, M., 310 - C0243
 Farecki, M., 3140 - A0257, 3218 - B0317
 Fares, N. T., 5887 - C0174, 5889 - C0176, 5890 - C0177
 Farhangi, M., 4196 - C0038
 Farhat, B., 5251 - B0364
 Faria, S., 1681 - A0202
 Farid, M., 1317 - B0024, 1335 - B0042, 6019
 Faridpooya, K., 5930 - C0327
 Farinelli, B., 1356 - B0116
 Fariss, R. N., 2530 - C0259
 Farjo, R., 4951
 Farjood, F., 2472 - C0138
 Farkas, M. H., 4586 - A0175
 Farley, N., 4245 - C0087, 78 - A0125, 865 - A0197
 Farmand, G., 18 - A0049, 3151 - A0268
 Farmer, J., 4326 - C0300
 Farmer, P., 719
 Farmer, R., 4529 - A0044
 Farmery, A., 5936 - C0333
 Farnoodian, M., 1188
 Farnoodian-Tedrick, M., 1985
 Faro, R., 1059 - B0370
 Faron, N., 3165 - A0282
 Farrar, G. J., 2332 - B0321, 5406 - A0058
 Farrar, J. G., 1013 - B0267, 4539 - A0054
 Farsiu, S., 1106 - C0141, 1225, 1342 - B0049, 1659 - A0035, 1737 - A0258, 1839 - B0300, 2605, 4855 - C0213, 5869 - C0156, 5969, 877 - A0209, 896 - A0285
 Farzad, S., 2837 - B0255, 4651 - A0293, 5848 - C0135
 Fasler, K., 1469 - C0031, 1471 - C0033, 3216 - B0315, 5242 - B0355, 5550 - A0242, 815 - A0147, 816 - A0148, 826 - A0158, 838 - A0170
 Fatehi, N., 2107 - A0165, 2121 - A0179, 4087 - B0082, 4986, 5104 - B0093, 5105 - B0094
 Faubert, J., 1288 - A0323
 Faure, C., 4213 - C0055
 Fauser, S., 2377 - C0043, 3128 - A0245, 3131 - A0248, 3232 - B0331, 352 - A0012, 4983, 789, 858 - A0190
 Fautsch, M. P., 1353 - B0113, 3915, 4434
 Favey, T., 3984 - A0109
 Fawke, J., 3934
 Fawzi, A., 3226 - B0325, 3227 - B0326, 3365 - C0247, 4264 - C0135, 5820 - C0107
 Fawzy, S., 5904 - C0191
 Fayazi, Z., 380 - A0040, 4544 - A0059
 Fayed, A., 3227 - B0326
 Fayzrahmanov, R., 2722 - B0101, 2723 - B0102, 3373 - C0297, 950 - B0128
 Fazio, M. A., 1215, 2036 - A0063, 709 - C0304
 Fazio, S., 4066 - B0061
 Fearn, S., 2433 - C0099
 Féart, C., 3010
 Feder, R., 5739 - C0026
 Federoff, H., 3268 - B0367
 Fedorchak, M. V., 111 - A0274, 5627 - A0346
 Fedtke, C., 137 - B0051, 1755 - B0070
 Fedulov, V., 2641 - A0146, 2643 - A0148, 2645 - A0150, 5504 - A0173, 5505 - A0174, 6068 - A0197
 Fee, T. L., 6029
 Feener, E. P., 3463, 3464
 Feenstra, H. M., 2341 - B0330
 Fei, P., 3772 - B0187
 Fei, S. S., 3740 - B0087
 Feig, R., 2416 - C0082
 Feigenbaum, D., 4909 - C0354

Feigl – Freeman

- Feigl, B. K., **10**, 5036 - A0232, 5037 - A0233
- Feiler, D., **1679 - A0200**
- Feinstein, M., 5885 - C0172, 6101 - C0220, 6102 - C0221
- Feiveson, A., 1134 - C0169
- Fekrat, S., 2818 - B0236, 5446 - A0115, 5447 - A0116, 5459 - A0128
- Felberer, F., 297 - C0198
- Felder-Schmittbuhl, M., 4029 - A0154
- Feldhaus, B., **1832 - B0293**, 23 - A0054
- Feldkaemper, M. P., **684 - C0279**, 685 - C0280, 686 - C0281, 697 - C0292
- Feldman, K., 5625 - A0344
- Feldman, R. M., 1182, 2050 - A0108, 5137 - B0160
- Feldon, S. E., 1143, 725
- Felemban, M., **1984**, 561 - B0176
- Felfeli, T., 1955, **5215 - B0328**
- Felgate, M., **5302 - C0235**
- Felisky, J., 4521 - A0036
- Felix, C. M., **2180 - A0349**
- Fell, D., 2832 - B0250
- Felsch, M., 858 - A0190
- Felszeghy, S., 2455 - C00121
- Feltgen, N., 2884 - B0302, 4726 - B0150
- Feneck, E., 533 - B0148
- Feneck, E. M., **5722 - C0009**
- Fenerty, C., 5212 - B0325
- Feng, B., 3057 - A0028
- Feng, J., **1897 - C0297**
- Feng, M. M., **4718 - B0142**
- Feng, S. S., 1712 - A0233, 2091 - A0149
- Feng, W., 4547 - A0062
- Feng, Y., 4615 - A0204
- Feng, Y., 1203
- Fenlason, A., 939 - B0117
- Fenner, M. D., 5988
- Fenwick, E., 1033 - B0344, 2601, 2602, 3912, 3913, 4145 - B0368, 4146 - B0369, **5166 - B0189**, 5178 - B0201, 6009
- Feola, A., **1217**, 5511 - A0180, 5991
- Feraille, L., 3573 - A0190
- Ferdi, A., **4380 - C0428**, 5178 - B0201
- Ferdina Marie Sharmila, P., 5135 - B0158
- Ferdous, S., **1627 - A0003**, 4550 - A0065
- Ferency, S. R., 5972
- Ferguson, C., 1133 - C0168
- Ferguson, I., 4010 - A0135
- Ferguson, M. E., **2473 - C0139**
- Ferguson, R. D., **4640 - A0282**, 5512 - A0181, 5873 - C0160
- Ferguson, S., 2023 - A0050
- Ferguson, T. A., 4222 - C0064
- Fergusson, J., 3230 - B0329
- Feria, J., 2491 - C0195
- Fernandes, A., 4098 - B0223, **4122 - B0285**
- Fernandes Cunha, G., 4375 - C0423
- Fernandes, M., **2477 - C0143**, 5255 - C0101, 5260 - C0106
- Fernandes, P., 3384 - C0308
- Fernandes, R. D., 2697 - B0018
- Fernandes, V. A., 1912 - C0312
- Fernandes-Cunha, G., 2268 - B0222, 2293 - B0247
- Fernandez, E. J., 4639 - A0281
- Fernandez, E., 4961
- Fernandez, F. M., **210 - C0021**
- Fernandez, I., 5773 - C0060
- Fernandez, K., 3829 - C0056
- Fernandez, M., 1340 - B0047
- Fernandez, P., 1427 - B0346, **223 - C0034**, 2479 - C0145
- Fernandez-Bueno, I., 4226 - C0068, **540 - B0155**
- Fernández-Carbonell, A., 996 - B0250
- Fernandez-Godino, R., **791**
- Fernandez-Muñoz, E., 2213 - A0382
- Fernandez-Ruiz, M., **5213 - B0326**
- Fernandez-Vega, A., 1574
- Fernando, N., 3475, 4606 - A0195, **4607 - A0196**
- Fernando, O., 3456
- Ferrara, D., 2624, 4948
- Ferrara, L., 1650 - A0026
- Ferrara, N., 5470 - A0139
- Ferrari, G., **3336 - C0178**, 34 - A0065, 4350 - C0398
- Ferraz, D. A., 4835 - C0193
- Ferrazza, M., 5080 - B0031
- Ferreira, B. G., **431 - A0291**, 931 - B0109
- Ferreira de Souza, B., 2628 - A0133, 58 - A0105
- Ferreira, T., 2988
- Ferreras, A., **1913 - C0313**
- Ferreya, H., 5916 - C0313
- Ferrier, T., 3180 - A0323
- Ferrier, T., **3181 - A0324**
- Ferriere, M., 2394 - C0060
- Ferrington, D. A., **1609**, 2, 2455 - C0121, 341 - A0001, 345 - A0005, 370 - A0030, 6025
- Ferris, F. L., 2423 - C0089, 4947, 6010
- Ferronato, M., 5197 - B0310
- Ferucci, J., 4756 - B0257
- Fertig, E. J., 587 - B0202
- Fest Parra, S., **4519 - A0034**
- Fettes, P., 236 - C0047
- Feucht, N., 2809 - B0227, 281 - C0182, 2821 - B0239, 5274 - C0120, 5450 - A0119, 5884 - C0171
- Feuer, W., 4660 - A0302, 4694 - A0336, 4783 - B0393
- Fialová, S., 5821 - C0108
- Ficarrotta, K., **3479**
- Fichna, P., 2793 - B0211
- Fickweiler, W., 2795 - B0213
- Fidalgo Broncano, MD, FEBO, A., 1388 - B0165
- Fidilio, A., 193 - C0004
- Fieguth, P., 1338 - B0045
- Field, B., 2957 - C0279
- Fields, M. A., 2481 - C0147, 4588 - A0177, 768
- Figues, D., 3983 - A0108
- Figliuzzi, B., 1735 - A0256
- Figueiredo, C., 3334 - C0176
- Figueiredo, E. A., 613 - B0285
- Figueiredo, F., 1334 - B0041, 3862 - C0123
- Figueiredo, F. C., 2272 - B0226, 934 - B0112
- Figueiredo, G., 3862 - C0123
- Figueiredo, G. S., **2272 - B0226**
- Figueiredo, N. A., **3596 - A0214**
- Figueras-Roca, M., 2802 - B0220, **4826 - C0184**, 4842 - C0200
- Figueroa, A., 2467 - C0133, **3993 - A0118**
- Figuerola, I., 242 - C0053, 2441 - C0107, **246 - C0057**
- Figus, M., 1913 - C0313, 4066 - B0061, 5080 - B0031
- Fili, C., 6003
- Filipe, H., **4455**
- Filkorn, T., 2949 - C0271
- Filutowski, O., 5606 - A0325
- Fina, M. E., 2998
- Findl, O., 1279 - A0314
- Findlay, A., **973 - B0227**
- Finger, R. P., 1054 - B0365, 2384 - C0050, 2777 - B0156, **3414 - C0338**, 3888 - C0354, 3913
- Fingeret, M., 1523 - C0364
- Fingerle, J., 2454 - C0120
- Fingert, J. H., 3731 - B0078, 5402 - A0054
- Fini, M., 3855 - C0116, 4724 - B0148
- Fink, M., 278 - C0179, 3437, 5861 - C0148
- Fink, M. K., 151 - B0065, 4334 - C0382, 4359 - C0407, 474 - A0334
- Fink, W., 1271 - A0306, **4133 - B0296**
- Finlay, M. E., 4115 - B0278
- Finlayson, M., 1067 - C0080
- Finn, A., 4996
- Finn, P., 5731 - C0018
- Finnemann, S. C., 4502 - A0017
- Finocchio, L., 1696 - A0217, 2836 - B0254, **2838 - B0256**
- Fiorani Junior, M., 6137 - C0256
- Fiore, T., **881 - A0213**
- Fiorello, M., 207 - C0018
- Fischer, A. J., 4596 - A0185, 4610 - A0199, 991 - B0245
- Fischer, A., 992 - B0246
- Fischer, C., **2040 - A0067**, 4726 - B0150
- Fischer, D., 1683 - A0204
- Fischer, G., 2123 - A0181, 4065 - B0060
- Fischer, G., 2275 - B0229
- Fischer, J., 1523 - C0364, 1525 - C0366
- Fischer, K., 2656 - A0383, **2716 - B0037**, 3282 - C0076
- Fischer, M., 2658 - A0385, **2982**, 3898 - C0364, 3899 - C0365, 4991
- Fischer, N., 169 - B0323
- Fischer, O. G., **399 - A0099**
- Fischer, W. S., 725
- Fishbaugh, J., 1682 - A0203, **2103 - A0161**
- Fisher, A. M., 5512 - A0181
- Fisher, A. C., 1241 - A0082, 4782 - B0392, 5249 - B0362
- Fisher, A., 3630 - A0291
- Fisher, C. R., **345 - A0005**
- Fisher, J., 4472
- Fisher, K., 3558 - A0175
- Fisher, N., 301 - C0234
- Fishman, G. A., 4992
- Fitoui, S., 4531 - A0046
- Fitzgerald, M. E., 4044 - A0251
- Fitzmaurice, B., 2345 - B0334
- Fitzmorris, T., 5112 - B0101
- Fitzpatrick, D., 5850 - C0137
- Fitzpatrick, K. R., 1148
- Fladd, J., **2295 - B0249**
- Flake, A., 3110 - A0118
- Flanagan, E., 622 - B0294
- Flanagan, J. G., 2124 - A0182, 2614, 6031, 6032, 6126 - C0245
- Flanagan, J., 4875 - C0320
- Flanders, M., 2931 - C0253
- Flannery, J. G., 5667 - A0386, 6135 - C0254
- Flavahan, P., 3677 - A0361
- Flaxel, C. J., 1460 - C0022, 2620, 6182 - C0301
- Fleckenstein, M., 2421 - C0087, 3221 - B0320, 4945
- Fleishhacker, T., 3113 - A0121
- Fleiszig, S. M., 1544, 1549, 501 - B0008, **505 - B0012**, 902 - B0080
- Fleming, A., 3448, 4681 - A0323, 737
- Fleming, G., 2682 - B0003
- Fleming, J. C., 94 - A0257
- Flemming, B., 5877 - C0164
- Fletcher, A., 3799 - C0026
- Fletcher, E., 3696 - B0043
- Fletcher, E. L., 2411 - C0077, 5379 - A0031, 6080 - A0209
- Flick, M., 4488 - A0003
- Fliesler, S., 4469
- Fliesler, S. J., **4586 - A0175**, 5511 - A0180
- Fligor, C., 568 - B0183
- Flotsos, M. J., **5728 - C0015**
- Flockerzi, E., **4385 - C0433**
- Flodin, S. M., **1017 - B0301**
- Flood, V., 3009, 3011, 6008
- Florea, D., **1034 - B0345**
- Flores, T., **3975**, 3977
- Florijn, R., 43 - A0074
- Fluet, H., 4796 - B0406
- FLUID Study Investigators, 1461 - C0023
- Flynn, H. W., 1157, 1453 - C0015, 4236 - C0078, 498 - B0005, 529 - B0144, 537 - B0152
- Flynn, M., 199 - C0010
- Flynn, W., 1231 - A0072
- Foell, D., 3492
- Foeller, P. E., **2969 - C0291**
- Fogagnolo, P., 4061 - B0056, 5131 - B0120, 6030, 6033
- Fogerty, J., 4006 - A0131, **6050 - A0084**, 960 - B0214
- Fogt, J. S., 1760 - B0075, 1768 - B0083, 1775 - B0090, 1778 - B0093, **3814 - C0041**
- Fogt, N., **2163 - A0332**, 3814 - C0041
- Foley, B. E., 205 - C0016, 6125 - C0244
- Folk, J. C., 1679 - A0200
- Folletstad, T., 805 - A0137
- Fomin, A. V., 5050 - B0001
- Fondahn, E., 1894 - C0294
- Fondi, K., 1234 - A0075, 3191 - B0191, 3193 - B0193
- Fong, D. S., 1842 - B0303, **3381 - C0305**
- Fong, H., 966 - B0220
- Fonseca, D. J., 2524 - C0253
- Fontaine, O., **3271 - B0370**
- Fontaine, V., **241 - C0052**
- Fontana, L., 411 - A0229, 4178 - C0020
- Fonteyne, P., 3336 - C0178
- Fontrudona, L., 2628 - A0133, 58 - A0105
- Foot, K. G., **1540 - C0381**, 4634 - A0276
- Footz, T., 3020, **5140 - B0163**, 5156 - B0179
- for the VA Million Veteran Program, 1428 - B0347
- Forbes, N., 1162
- Forcier, P., 5089 - B0040
- Ford, B., 3461
- Ford, C., **2688 - B0009**
- Ford, M. R., 1386 - B0163, 745
- Forest-Smith, L., 2889 - C0186, 3887 - C0148
- Formica, R., **3269 - B0368**, 5308 - C0241
- Forooghian, F., 1955
- Forster, S., 6160 - C0279
- Forsythe, E., 2319 - B0308
- Fort, P. E., **1208**, 2594, **5997**
- Fort, E. L., 2561
- Fortin, E., 2191 - A0360
- Fortinberry, H., **910 - B0088**
- Fortmann, S., 5308 - C0241
- Fortun, J., 1425 - B0344, **5881 - C0168**
- Fortune, B., 2097 - A0155, 2108 - A0166, **3026**, 3496, 3742 - B0089, 4063 - B0058, 4084 - B0079, 4473
- Fortuny, C., **5667 - A0386**
- Fosci, M., 3722 - B0069
- Foss, A. J., 3263 - B0362
- Foss, S., 1441 - C0003
- Fossarello, M., 3722 - B0069, 665 - C0223
- Fossas, J. E., 2077 - A0135
- Fostad, I. G., 2516 - C0245
- Foster, C. S., 426 - A0244, 5951
- Foster, J. W., 2922 - C0219, 2923 - C0220
- Foster, P. J., 1178, 1998, 775
- Foster, R. E., 4284 - C0155
- Foster, R., 2653 - A0380, 5532 - A0224
- Foster, R., 1980, 5041 - A0237, 5091 - B0042, 5093 - B0044, 5165 - B0188, 619 - B0291
- Fotis, K., 1054 - B0365
- Foulds, W., 755
- Foulk, J., 1134 - C0169
- Foulsham, W., 1411 - B0188, **3286 - C0080**, 3316 - C0158
- Fourmaux, E., 5924 - C0321
- Fournie, M., 241 - C0052
- FouzdarJain, S., **2781 - B0160**
- Fovet, C., 5008 - A0079
- Fowler, B. J., 2456 - C0122, 2459 - C0125, 2475 - C0141
- Fowler, B., 114 - A0277, **94 - A0257**
- Fox, J., 4671 - A0313
- Fox, M., 1850 - C0154
- Foxton, R. H., **237 - C0048**, 3260 - B0359
- FPRC Diabetic Retinopathy Evaluation Group, 4676 - A0318
- FPRC OCTA and DR Color Evaluation Groups, 2804 - B0222
- Fradow, V., 604 - B0276
- Fraile Maya, J., **5369 - A0021**
- Framme, C., 3334 - C0176, 5460 - A0129, 5643 - A0362
- Francis, B., 3460
- Francis, J. H., 1644 - A0020
- Francis, M., 1395 - B0172, 5980
- Franco, J., **5519 - A0211**
- Franco, M., 3948
- Franco, O. H., 3010, 3015
- Franco, P., 210 - C0021, 4161 - C0003, 5535 - A0227
- Francone, A. A., 3153 - A0270, 3235 - B0334, **4283 - C0154**, 5712 - A0431
- Frank, C., 5274 - C0120
- Frank, M. H., 2287 - B0241, 2288 - B0242
- Frank, N., 2287 - B0241, 2288 - B0242
- Frank, V., 3202 - B0202
- Frankfort, B. J., **2193 - A0362**, 5159 - B0182
- Frankfort, B. J., 5142 - B0165
- Franklin, K. J., **3391 - C0315**
- Frantz, N., 3569 - A0186
- Franz, E. S., 5512 - A0181
- Frare, E. Z., 1066 - C0079, 5182 - B0205
- Fraser, C., 2179 - A0348
- Fraser, K., 3187 - A0330
- Fraser, S., 4457, 4961
- Fraser-Bell, S., 1956, 4847 - C0205
- Fratini, A., 3303 - C0097
- Fraunfelder, F. T., 4313 - C0287
- Fraunfelder, F. W., **4313 - C0287**
- Frausto, R. F., **1373 - B0133**, 2924 - C0221, 4432
- Frazier, H., 4343 - C0391
- Frazier, H. E., **4344 - C0392**, 531 - B0146
- Frazier, K., 4466, 4468, 5383 - A0035
- Frazier-Abel, A., 792
- Frazier, H., 3598 - A0216
- Frech, S., **2727 - B0106**
- Frederick, J. M., 3068 - A0039, 5840 - C0127
- Freedman, A. C., **3420 - C0344**
- Freedman, B. I., 5137 - B0160
- Freedman, K., 1026 - B0310
- Freedman, S., 3935, 4996
- Freeman, E. E., **4099 - B0224**, 5163 - B0186, 5245 - B0358
- Freeman, P. D., 1475 - C0037, 810 - A0142
- Freeman, W. M., 3477, 974 - B0228
- Freeman, W. R., 1192, 1501 - C0342, 1508 - C0349, 1535 - C0376, 1846 - B0307, 1885 - C0285, 4215 - C0057, 4458, 4560 - A0089, **5916 - C0313**, 660 - C0218, 802 - A0134

- Freire, D., 4909 - C0354
 Freire, L. A., 2893 - C0190, **4332 - C0380**
 Freire, V., 2282 - B0236
 Freitas, D., 5759 - C0046, 5889 - C0176, 5890 - C0177
 French, A., 185 - B0339, 3376 - C0300, **3959**
 French, C., **4266 - C0137**
 Frenkel, J., 2747 - B0126
 Frenkel, S., 1643 - A0019, **3186 - A0329**
 Freude, K., 1480 - C0222
 Freund, K., 2433 - C0099, 2624, 2915 - C0212, 3237 - B0336, 3240 - B0339, 4482, 4993, 5973, 5974
 Freytag, A., 1731 - A0252
 Frezzotti, P., 4066 - B0061
 Frick, K. D., 1598, 181 - B0335
 Fridman, G., **2335 - B0324**, 2336 - B0325
 Friedland, A., 374 - A0034
 Friedlander, M., 1223, 2605, 3154 - A0271, 4584 - A0173, 5327 - C0260, 5409 - A0061, 5489 - A0158, 5517 - A0186, 761
 Friedman, D. S., 1598, 1599, 181 - B0335, 182 - B0336, 1945, 2099 - A0157, 4152 - B0375, 4988, 5135 - B0158
 Friedman, D. L., 1642 - A0018
 Friedmann, E., **2210 - A0379**, 5285 - C0218
 Friemel, T. D., **1848 - C0152**
 Friesenhahn, M., 3241 - B0340
 Friling, R., 4311 - C0285
 Frishman, L. J., 599 - B0271
 Fritsche, L., 6025
 Froehler, M. T., 1642 - A0018
 Froelich, B., 2592
 Frost, S., **1123 - C0158**, 1693 - A0214
 Frousiakis, S., **3366 - C0248**
 Frueh, B. E., **2205 - A0374**
 Fruttiger, M., 3138 - A0255, 3154 - A0271, 3551 - A0168, 4628 - A0270, 5306 - C0239, 5468 - A0137
 Fruttini, D., 2810 - B0228
 Fry, A. N., **1082 - C0095**
 Fry, L., **3493**
 Fu, A., 5281 - C0127
 Fu, A. D., 850 - A0182
 Fu, C., 809 - A0141
 Fu, D., 2459 - C0125, 2475 - C0141
 Fu, D., **5509 - A0178**
 Fu, H., 1421 - B0340, 234 - C0045, 2405 - C0071
 Fu, H., 5766 - C0053
 Fu, J., 2024 - A0051
 FU, Q., 1204, **2608**, 5645 - A0364
 Fu, S., 1285 - A0320
 Fu, X., 376 - A0036
 Fu, Y., **132 - B0046**
 Fu, Y., 2193 - A0362, **346 - A0006**
 Fu, Z., 2452 - C0118, 3570 - A0187, **764**
 Fuchs, P., 2122 - A0180, 2123 - A0181
 Fuchs, V., 5967
 Fuchshofer, R., 3709 - B0056, **3968**
 Fuchsjäger-Mayrl, G., **3193 - B0193**
 Fuchsluger, T. A., **4438**
 Fuerst, N. M., 1347 - B0054
 Fuerte-Flores, B., 5398 - A0050
 Fuest, M., 4381 - C0429
 Fuisting, B., 4188 - C0030
 Fujihara, E., 3506 - A0069
 Fujihara, J., 3506 - A0069
 Fujii, K., **4162 - C0004**
 Fujii, M., 4054 - B0049
 Fujii, M., 1987
 Fujii, N., 3042 - A0013
 Fujii, S., 4998 - A0069
 Fujii, Y., 4290 - C0161
 Fujikado, T., 1031 - B0315, 3410 - C0334, 3891 - C0357, **4555 - A0084**, 4557 - A0086, 4559 - A0088, 4652 - A0294, 4688 - A0330, 5420 - A0072
 Fujiki, K., 3841 - C0102
 Fujimoto, J. G., 1928 - C0328, 2111 - A0169, 270 - C0171, 2886 - B0304, 3922
 Fujimoto, K., **3307 - C0149**, 3308 - C0150, 943 - B0121
 Fujimoto, M., 1056 - B0367, 3595 - A0213, 5378 - A0030
 Fujimura, N., 3115 - A0123
 Fujinami, K., 1429 - B0348, 1430 - B0349, **1431 - B0350**, 1432 - B0351
 Fujinami, Y., 1430 - B0349, 1431 - B0350, **1432 - B0351**
 Fujino, T., 2758 - B0137
 Fujino, Y., 350 - A0010, 371 - A0031, 4163 - C0005, 4164 - C0006, 4177 - C0019, 5579 - A0298
 Fujino, Y., **5894 - C0181**
 Fujioka, J., 1641 - A0017
 Fujisawa, K., 1426 - B0345
 Fujishima, H., **5565 - A0257**, 5566 - A0258
 Fujita, A., **4378 - C0426**
 Fujita, K., 4688 - A0330
 Fujita, K., 6138 - C0257
 Fujita, Y., **5373 - A0025**
 Fujiwara, A., **2882 - B0300**, 4268 - C0139, 4269 - C0140, 5914 - C0311, 5915 - C0312, 670 - C0228, 671 - C0229, 807 - A0139, 847 - A0179
 Fujiwara, K., 21 - A0052, **33 - A0064**, 863 - A0195
 Fujiwara, K., **1071 - C0084**, 2563, 3409 - C0333
 Fujiwara, S., 1968
 Fukagawa, K., 5565 - A0257, 5566 - A0258
 Fukami, M., 5414 - A0066
 Fukuchi, T., 4082 - B0077
 Fukuda, K., 889 - A0278
 Fukuda, K., 120 - B0034
 Fukuda, R., **2306 - B0260**
 Fukuda, S., **2456 - C0122**, 2459 - C0125, 2475 - C0141
 Fukuda, S., 4952
 Fukuhara, J., 2459 - C0125, 2475 - C0141
 Fukuhara, M., 296 - C0197
 Fukui, M., 1661 - A0037, 872 - A0204
 Fukui, Y., **4394 - C0442**
 Fukukita, H., 5262 - C0108
 Fukuma, Y., 872 - A0204
 Fukumishi, A., **1668 - A0189**, 2808 - B0226
 Fukuoka, S., **4894 - C0339**
 Fukuoka, Y., 5289 - C0222
 Fukushima, A., 120 - B0034
 Fukushima, H., 4184 - C0026
 Fukushima, M., **3089 - A0060**, 4436
 Fukushima, Y., **2758 - B0137**
 Fuller, A. W., 3038 - A0009
 Fuller, D., 5987
 Fuller, G. G., 1761 - B0076, 3932
 Fuller, N. J., 2856 - B0274
 Fuller, R. D., 3001
 Fuller, T., 5987
 Fuller-Carter, P., 2328 - B0317, 970 - B0224
 Fulton, A. B., 5512 - A0181, 6070 - A0199
 Fuma, S., 5430 - A0099
 Funaki, T., 3308 - C0150
 Funari, V. A., 2991, 3885 - C0146
 Funato, M., 3751 - B0098, 6129 - C0248
 Funatsu, J., 21 - A0052, 33 - A0064
 Funatsu, R., **5265 - C0111**
 Functional OCT, 672 - C0230
 Fundacion Oftalmologica Nacional, 397 - A0079
 Funderburgh, J., **2004**, 2252 - B0206, 2289 - B0243, 2291 - B0245, **3455**, 4358 - C0406
 Funderburgh, M. L., 2252 - B0206, 2289 - B0243, **2291 - B0245**, 4358 - C0406
 Fung, A. T., 1956
 Fung, C., 4337 - C0385
 Fung, T., **4683 - A0325**
 Furashova, O., 5435 - A0104
 Furfine, E., **60 - A0107**
 Furino, C., **4846 - C0204**
 Furtado, J., 2551 - C0280
 Furuse, T., 2936 - C0258
 Furuya, S., 1492 - C0234
 Furuya, T., 3467, **5478 - A0147**
 Fusco, R., 374 - A0034
 Fuss, I. J., 720
 Fust, A., 4870 - C0315
 Fuwa, M., **2717 - B0038**
 Fuzzell, D., 1420 - B0339, 1818 - B0279
 Fuzzell, S., 1420 - B0339, 1818 - B0279
 Fyfe, M., 947 - B0125
 Fylan, F., **4464**
 Fynes, K., 2984, 2985
 Gallagher, C., 5957
 Gallagher, D. S., 1467 - C0029
 Gallagher, J., **1888 - C0288**
 Gallant-Behm, C. L., **5316 - C0249**
 Gallar, J., 148 - B0062, **154 - B0068**, 155 - B0069, 157 - B0071, 3309 - C0151, 4876 - C0321
 Gallego-Muñoz, P., 3441, 4346 - C0394, **4347 - C0395**, 4352 - C0400
 Gallego-Pinazo, R., 1936 - C0336, **3157 - A0274**, 4284 - C0155
 Gallemore, E., 81 - A0128
 Gallemore, R., 81 - A0128
 Gallerani Pacheco, G., **2692 - B0013**, 3780 - C0007
 Galles, D., 54 - A0085
 Galli, A., 6081 - C0200
 Gallie, B. L., 1639 - A0015, 4142 - B0305
 Gallo, J. E., 196 - C0007, **201 - C0012**
 Gallotta, C., 391 - A0091
 Galloway, C., 4585 - A0174
 Galloway, J., 1309 - B0016
 Galor, A., 3783 - C0010, 4196 - C0038, 4687 - A0329, 4892 - C0337, 5730 - C0017, 904 - B0082, 942 - B0120, 946 - B0124
 Galstyan, A., 3205 - B0205
 Galvaon, J., 1484 - C0226, 6131 - C0250, 6150 - C0269
 Galveston TEN Investigators, 162 - B0076
 Galvis, E. A., 1648 - A0024
 Galvis, V., 1382 - B0142, 250 - C0109, 489 - A0349, 5595 - A0314
 Galy, A., 4531 - A0046, 4537 - A0052
 Gama, I., 3157 - A0274
 Gamaon, E. R., 1180
 Gambicorti, E., 803 - A0135
 Gambino, F., **3823 - C0050**
 Gambino, L., 1252 - A0093
 Gandra, E., 252 - C0111
 Gambriel, J. A., **2437 - C0103**
 Gameiro Filho, A., 1902 - C0302
 Gameiro, G. R., **3803 - C0030**
 Gamlin, C., 2996
 Gamlin, P. D., 4535 - A0050, 6020
 Gamm, D. M., 1196, 3105 - A0113, 4583 - A0172, 5412 - A0064, 543 - B0158, 568 - B0183
 Gamsky, S., 5434 - A0103
 Gamundi, M., 5150 - B0173
 Gan, A., **6009**
 Gan, A. T., 1033 - B0344, 2601, 2602, 5166 - B0189
 Gandolfi, S. A., **3459**
 Ganesan, S., 2890 - C0187
 Gangakhedkar, S., 4284 - C0155
 Gangalum, R. K., **3064 - A0035**
 Gangaputra, S., 4187 - C0029, 4212 - C0054, 4310 - C0284
 Gangaraju, R., 2501 - C0205, 2640 - A0145, 4595 - A0184, 554 - B0169, 6066 - A0195
 Gange, W., 4307 - C0281
 Gangnon, R., 3014
 Ganguly, R. S., 5902 - C0189
 Ganiel, M., 1423 - B0342
 Ganjawala, T. H., 2590, 2995, **5988**
 Gann, D., 2143 - A0277
 Ganss, C., 2287 - B0241
 Gant, N., **2167 - A0336**
 Gantner, M., 4584 - A0173, 5409 - A0061, **5517 - A0186**
 Gantz, L., 4130 - B0293
 Ganzen, L., **5335 - C0268**
 Gao, B., 3168 - A0311
 Gao, F., 1857 - C0161
 Gao, F., 3093 - A0064, 5644 - A0363
 Gao, H., 1929 - C0329, 3591 - A0208, 5479 - A0148, 865 - A0197
 Gao, H., 1740 - A0261
 Gao, J., 4186 - C0028, 4442
 Gao, J., **347 - A0007**
 Gao, J., **3820 - C0047**
 Gao, K., 5119 - B0108, 5897 - C0184, **5911 - C0198**
 Gao, L., 3740 - B0087
 Gao, M., 2983, 569 - B0184
 Gao, N., **4333 - C0381**, 4348 - C0396
 Gao, N., **3277 - C0071**, 3314 - C0156
 Gao, Q., **2296 - B0250**, 2297 - B0251
 Gao, R., 1632 - A0008
 Gao, S., 3735 - B0082
 Gao, S. S., **3241 - B0340**
 Gao, S., 369 - A0029
 Gao, W., 500 - B0007
 Gao, X., 1816 - B0277, **779**
 Gao, X., 743
 Gao, X., **5457 - A0126**, 6185 - C0304, 79 - A0126
 Gao, Y., 371 - A0031
 Gao, Y., 4916 - C0361
 Gao, Z., 2495 - C0199
 Gapsis, B. C., **6090 - C0209**
 Garanto, A., 4503 - A0018, **4532 - A0047**, 4979
 Garaszczuk, L., **1746 - B0061**, 1749 - B0064
 Garces, F., **367 - A0027**
 Garcia, A., 5671 - A0390
 Garcia Arzate, L., 5946 - C0343
 Garcia Aurora, S., 1239 - A0080, **2084 - A0142**, 5176 - B0199
 Garcia, C. A., **5526 - A0218**
 Garcia, C. A., 2446 - C0112
 Garcia de Alba Graue, P., 3181 - A0324, **5603 - A0322**
 Garcia Franco, R., 1058 - B0369
 Garcia Garcia, M., **2147 - A0281**
 Garcia Garrido, M., 998 - B0252
 Garcia, G. A., **89 - A0252**
 Garcia, K., 4133 - B0296
 Garcia Llorca, A., **4020 - A0145**, 5854 - C0141
 Garcia, M., 4380 - C0428
 Garcia, P., 4479, 5054 - B0005
 Garcia, P., 2832 - B0250
 Garcia Rodriguez, O., 1418 - B0337, **1425 - B0344**
 Garcia-Alonso, I., 5287 - C0220
 Garcia-Arumi, J., 2628 - A0133, 58 - A0105
 Garcia-Caballero, T., 3178 - A0321
 Garcia-Carmona, K. P., 1349 - B0056
 Garcia-Feiño, J., 3457
 Garcia-Garcia, L., 223 - C0034
 Garcia-Garrido, M., 716
 Garcia-Gasulla, D., 1708 - A0229
 Garcia-Gutierrez, M., 4226 - C0068, 540 - B0155
 Garcia-Herranz, D., 5693 - A0412
 Garcia-Layana, A., 1427 - B0346, 223 - C0034, 2479 - C0145
 Garcia-Marin, N., 3157 - A0274
 Garcia-Medina, J. J., 5152 - B0175, 5364 - A0016
 Garcia-Sandoval, B., 5407 - A0059
 Garcia-Santesteban, R., 4619 - A0261
 Garcia-Suarez, L., 4942, **5964**
 Garcia-Vazquez, R., 5243 - B0356, 948 - B0126
 Garcia-Vazquez, R., 5597 - A0316
 Gardiner, K. L., **5318 - C0251**
 Gardiner, S. K., 2097 - A0155, 2108 - A0166, 3496, 3514 - A0077, 4063 - B0058, 4084 - B0079
 Gardner, J. C., **2325 - B0314**
 Gardner, T., 4854 - C0212
 Gardner, T. W., 1618, 1890 - C0290, 1891 - C0291, 1904 - C0304, 2594
 Garg, A., 4073 - B0068, **6091 - C0210**
 Garg, E., **3150 - A0267**
 Garg, P., 5691 - A0410
 Garg, S., 1335 - B0042, 6019

Garg – Goldberg

- Garg, S., 3604 - A0222, 4251 - C0093, 5457 - A0126, 5697 - A0416, 6185 - C0304
- Gargeya, R., 1705 - A0226, 1716 - A0237
- Garhofer, G., 1234 - A0075, 1445 - C0007, 271 - C0172, 3191 - B0191, 3193 - B0193, 3199 - B0199, **941 - B0119**
- Garibay-Velazquez, B., 2213 - A0382
- Garipey, H., 5935 - C0332, **5942 - C0339**, 5943 - C0340, 5944 - C0341
- Garmo, V., 2599
- Garnavi, R., 1226
- Garnier, A., 3834 - C0061, 3835 - C0062
- Garoon, R., **4236 - C0078**
- Garred, O., 4323 - C0297
- Garreis, F., 319 - C0252, 3304 - C0098
- Garrigue, J., 3279 - C0073, 934 - B0112
- Garrison, J., 3962
- Garrity, J., 2176 - A0345, 5622 - A0341
- Garrity, S., **1131 - C0166**, 5973
- Garry, R., 719
- Garufis, C., 1088 - C0101
- Garvey, S. L., **1935 - C0335**, 4651 - A0293
- Garvin, M. K., 2196 - A0365, 2197 - A0366
- Garway-Heath, D. F., 5102 - B0091, 5114 - B0103, 5115 - B0104, 6030, 6033, 6036
- Garza, I., 3478
- Garza-Leon, M. A., **3811 - C0038**
- Garza-Briones, A., 5756 - C0043
- Garza-Leon, M., 948 - B0126
- Garzon, J. J., **4862 - C0307**
- Garzón, M., 3798 - C0025
- Garzon, N., 252 - C0111
- Gaska, J., 4043 - A0250
- Gasmi, M., 5688 - A0407, 5696 - A0415
- Gasperini, J., 1938 - C0338
- Gast, T., **4626 - A0268**, 4642 - A0284
- Gatinel, D., 2232 - A0401, **2975**, 4135 - B0298
- Gatti, V., 1937 - C0337, 4850 - C0208
- Gatziofias, Z., **5772 - C0059**
- Gaudreault, J., 231 - C0042
- Gauer, B., 1263 - A0298
- Gaur, P., 3186 - A0329
- Gaurisankar, Z. S., **2135 - A0269**
- Gautier, J., 1554
- Gauvin, M., 1505 - C0346, 5026 - A0222, 5030 - A0226
- Gavalakis, J., 1622
- Gavin Herbert Eye Institute, 1419 - B0338
- Gavrilescu, M., 2168 - A0337
- Gawish, A., 1338 - B0045
- Gayet, J., 1853 - C0157
- Gaynes, B. I., 3823 - C0050
- Gaynon, M. W., **2763 - B0142**
- Gazeau, G., 2859 - B0277
- Gazzard, G., 2055 - A0113, 6091 - C0210
- Gdih, G., 491 - A0351
- Ge, J., 4591 - A0180
- Ge, P., 1649 - A0025
- Ge, Z., 3406 - C0330
- Gealy, D., **5631 - A0350**
- Geary, M., 2289 - B0243
- Gebreselassie, D., 2544 - C0273
- Gedam, M., 1481 - C0223, 1483 - C0225, 3470, 3471
- Gee, J., 658 - C0216
- Gee, K., 2924 - C0221
- Geerling, G., 118 - B0032, 1801 - B0149, 2250 - B0204, 4929 - C0374
- Geerlings, M., 789
- Geffen, N., 5853 - C0140
- Gehlbach, P. L., 5926 - C0323
- Gehlsen, U., 5576 - A0268
- Gehring, A., 2942 - C0264, **2950 - C0272**
- Gehring, A. M., 1082 - C0095
- Gehrke, S., 5908 - C0195
- Gehrs, K., 5542 - A0234
- Geiger, M. D., **4230 - C0072**
- Geimer, T., 3922
- Geisert, E., 5155 - B0178, 5506 - A0175
- Geisert, E. E., **1181**, 1627 - A0003, 3018
- Gekeler, F., 4561 - A0090
- Gelfand, B., 2456 - C0122, 2459 - C0125, 2475 - C0141, **3473**
- Gelfand, J., 625 - B0297
- Gelfand, L., 1314 - B0021
- Gelfman, C., 4445
- Gelinas, N., **5210 - B0323**
- Gelize, E., 388 - A0088
- Geller, H. M., 3723 - B0070
- Gellermann, W., 4513 - A0028, 4514 - A0029
- Gelormini, A., 1245 - A0086, 1250 - A0091
- Gemenetzi, M. K., 3244 - B0343
- Gendron, S., 1358 - B0118
- Gene Therapy of Retina Degeneration, 2590
- Genetics, 4466, 5383 - A0035
- Genetics Research of Strabismus, 2932 - C0254
- Geng, J., **2094 - A0152**
- Genova, R., **4376 - C0424**
- Gensheimer, W., 3438
- Gensler, L., 421 - A0239
- Gensure, R. H., 1567, 2625, **4511 - A0026**
- Gentile, R., 1049 - B0360
- Gentili, F., 2684 - B0005
- Gentleman, S., 4518 - A0033
- Gentry, J., 2501 - C0205, 6066 - A0195
- Gentry, R., 3859 - C0120, 3863 - C0124
- George, A., 6067 - A0196
- George, A., 1188, **3021**, 4663 - A0305
- George, E., 5840 - C0127
- George, M., 5619 - A0338
- George, P., 4172 - C0014
- George, R. J., **1596**, 2736 - B0115, 5135 - B0158, 5901 - C0188
- George-Weinstein, M., 5641 - A0360
- Georges, P., 907 - B0085
- Georgeson, S., 1050 - B0361
- Georgevsky, D., 5087 - B0038
- Georgiadis, O., **2984**, 2985, 3152 - A0269
- Georgiev, G. A., 1751 - B0066
- Georgiou, M., **4630 - A0272**, 669 - C0227
- Gepp, M. M., 4022 - A0147
- Geraci, F., 193 - C0004
- Geranurimi, A., 5332 - C0265
- Gerbi, L., 4565 - A0094
- Gerendas, B., 1620, **1621**, 1677 - A0198, 1736 - A0257, 1738 - A0259, 2623, 3468, 819 - A0151
- Gerges, P., 3185 - A0328
- Gerhart, J. V., **5641 - A0360**
- Gerig, G., 1682 - A0203, 2103 - A0161
- Gerkin, R., 5845 - C0132
- Gerlach, M., 5967
- Germain, L., 2247 - B0201, 3869 - C0130, 4336 - C0384, 4354 - C0402
- German, O. L., 6097 - C0216
- Germano, R., 2697 - B0018
- Gerstner, C. D., 3054 - A0025
- Gervasio, K., 2307 - B0261
- Gervasio, K. A., 332 - C0265, **99 - A0262**
- Gery, I., 2537 - C0266
- Geschwind, M., 5020 - A0216
- Gess, L., 719
- Gesualdo, C., 3095 - A0103, 378 - A0038, 3966
- Getts, R., 5641 - A0360
- Gez, R., 2674 - A0401
- Ghabcha, M., 907 - B0085
- Ghaffarieh, A., 5401 - A0053
- Ghahari, E., 2735 - B0114, 2857 - B0275, 2861 - B0279, 3498, 4476, **5075 - B0026**
- Ghandi, N. B., 181 - B0335
- Ghanekar, A., 2599, 836 - A0168
- Ghanshani, R., 4909 - C0354
- Gharahkhani, P., 1177, 1827 - B0288
- Ghosh, R., 4280 - C0151, 4288 - C0159
- Ghasia, F. F., **5957**
- Ghate, D. A., 2048 - A0106, 2059 - A0117, 5219 - B0332
- Ghazi Mroué, D., 5201 - B0314
- Ghazi, N., 5974
- Gherdaoui, F., 3156 - A0273, 6198 - C0352
- Gherghel, D., 1695 - A0216
- Ghergherechi, L., 2764 - B0143
- Ghiam, B. K., **5397 - A0049**
- Ghiam, S., 551 - B0166
- Ghiassi, H., 514 - B0021, 515 - B0022
- Ghosh, A., 3526 - A0089
- Ghosh, A., **358 - A0018**, 3730 - B0077
- Ghosh, A., 1498 - C0240, 1633 - A0009, 3534 - A0097, 358 - A0018, 3730 - B0077, 4402 - C0450, **4962**, 5980, 744
- Ghosh, F. K., 5941 - C0338, 993 - B0247
- Ghosh, K., 3474
- Ghosh, P., 5383 - A0035
- Ghosh, S., 3169 - A0312, **3472**, 3994 - A0119, 4594 - A0183
- Ghosh, S., 364 - A0024
- Ghosn, C., 1246 - A0087, **6127 - C0246**
- Ghuman, T., 5971
- Giaconi, J., 2039 - A0066, 4775 - B0385
- GiACTA Investigators, 2174 - A0343
- Giampietro, B., **172 - B0326**
- Giancarolo, C., 4445
- Gianchetti, L., 5186 - B0209
- Giancipoli, E., 1956, **355 - A0015**, 3722 - B0069, 5922 - C0319
- Gianfagna, P. A., 3374 - C0001
- Giani, A., 5930 - C0327
- Giannaccare, G., **1164**, 2274 - B0228, 6100 - C0219
- Giannoukos, G., 385 - A0045
- Giaschi, D., 5958, 5959
- Giasin, O., **2207 - A0376**
- Giavedoni, L. R., 1955
- Gibbons, A., 3783 - C0010, 4786 - B0396, **942 - B0120**
- Gibbs, P., 2168 - A0337
- Gibin, E., 6081 - C0200
- Giblin, F. J., 3043 - A0014
- Giblin, M., **3567 - A0184**
- Gibson, A., 1619
- Gibson, C. R., 722
- Gibson, J., 5138 - B0161, 5784 - C0071
- Gibson, P., 4568 - A0097
- Gidday, J., 3120 - A0128, **763**
- Gierhart, D. L., 2414 - C0080, 2428 - C0094
- Gierow, J., **3826 - C0053**
- Giese, A. P., 794
- Gieseke Guevara, J. G., **772**
- Giessl, A., 3073 - A0044
- Gifford, K., **2959 - C0281**
- Gifford, P., **5732 - C0019**
- GIGA study group, BioMe, Eyes of Africa Genetic Consortium, South London POAG case-control cohort, NEIGHBORHOOD Consortium, 5136 - B0159
- Gil, J., 4946
- Gilbert, A. L., 2191 - A0360
- Gilbert, H., 2012
- Gilbert, R., 2520 - C0249, 2523 - C0252
- Gilbert, T., 5539 - A0231
- Gilger, B. C., 221 - C0032, 2239 - A0408, 225 - C0036, 231 - C0042, 2677 - A0404, **3317 - C0159**, 4370 - C0418, 5687 - A0406
- Gilhooley, M. J., **1007 - B0261**
- Gilissen, C., 2324 - B0313
- Gill, K., 985 - B0239
- Gill, M., 208 - C0019, 3227 - B0326, 4264 - C0135
- Gillam, M., **1111 - C0146**
- Gillespie, B. W., 1999
- Gillette, T. B., 1845 - B0306, **5577 - A0296**
- Gillies, M. C., 1003 - B0257, 1461 - C0023, 1463 - C0025, 1477 - C0219, 1492 - C0234, 3017, 3253 - B0352, 3616 - A0234, 4000 - A0125, 4380 - C0428, 4578 - A0167, 4847 - C0205, 5290 - C0223, 829 - A0161, **840 - A0172**
- Gilmanshin, T., 2723 - B0102
- Gilmartin, B., 2150 - A0284, 3383 - C0307
- Gilmore, J., **3687 - A0371**, 453 - A0313, 5244 - B0357
- Gilmore, M. S., 3663 - A0347
- Gilson, S. J., 649 - C0207, 667 - C0225
- Gim, H., 4700 - B0124
- Jimeno-Hernández, R., 996 - B0250
- Gitmer, L. G., 297 - C0198, 5061 - B0012, **5862 - C0149**
- Giocanti Auregan, A., **2859 - B0277**, 3619 - A0237, 4822 - C0180
- Giorgi-Sandoval, L. A., 1239 - A0080, 2084 - A0142
- Giorgianni, F., **4019 - A0144**
- Giovinnazzo, J. V., **3673 - A0357**, 3694 - A0378, 6188 - C0307
- Giovingo, M., 3721 - B0068, 5078 - B0029, 5096 - B0047, 6097 - C0216
- Girach, A., 1513 - C0354, 1680 - A0201, 3898 - C0364, 3899 - C0365, 4991
- Girard, B., **2170 - A0339**
- Girard, M. J., 2028 - A0055, 2037 - A0064, 2101 - A0159, 2221 - A0390, 3500, **4081 - B0076**, 4477, 5910 - C0197
- Girardot, P., 3047 - A0018
- Giraud, M., 38 - A0069
- Girbardt, J., 1128 - C0163
- Giri, S., 4935
- Girkin, C. A., 1182, **1215**, 2036 - A0063, 3496, 4637 - A0279, 5137 - B0160, 5235 - B0348, 708 - C0303
- Girling, B., 4175 - C0017
- Girman, S., 5010 - A0081, 551 - B0166, 6021
- Giro, C., 1682 - A0203
- Gisbert Martinez, S., **694 - C0289**
- Gise, R., 2305 - B0259
- Gitzinger, S. H., **4217 - C0059**
- Giuliana, L., 2826 - B0244
- Giuliano, E. A., 151 - B0065, 4359 - C0407
- Giust, J. M., **1957**
- Giusto, N. M., 5357 - A0009
- Giyanani, J., 4912 - C0357
- Gizzi, C., 3879 - C0140
- Gkaragkani, E., 1328 - B0035
- Gkatziofias, Z., 1328 - B0035
- Gkotsi, D., 6036
- Glacet-Bernard, A., 5425 - A0094
- Gladstone, G., 113 - A0276
- Glare perception study group, 3413 - C0337
- Glassauer, S., 4486 - A0001
- Glassman, A. R., **4824 - C0182**
- Glaucoma and Retinal Degenerative Disease Research Group, Institute of Ophthalmology, University College London, 6131 - C0250
- Glaucoma Epidemiology, 2726 - B0105
- Glaucoma group, 466 - A0326
- Glaucoma Research Network, 4465
- Glaucoma study group, 2058 - A0116
- Glavac, D., 2185 - A0354
- Gleadle, J., 3017
- Glendenning, A., **5672 - A0391**
- Glia laboratory, 3472
- Gliem, M., 1565, 3146 - A0263
- Glittenberg, C. G., **2878 - B0296**
- Global Education Network for Retinopathy of Prematurity (GEN-ROP), 2748 - B0127, 2750 - B0129
- Gloskowski, S., 6020
- Glösmann, M., 5826 - C0113
- Glucksberg, M., 2041 - A0068
- Glynn, R., 4150 - B0373
- Gnalian, J., 3325 - C0167, 3849 - C0110
- Gnanasekaran, S., 4839 - C0197
- Go, C., 4380 - C0428
- Go, J., 5213 - B0326
- Go, Y., 4013 - A0138
- Goba, A., 719
- Gobin, Y. P., 1644 - A0020
- Gocho, K., 1429 - B0348, **1519 - C0360**
- Godat, T., 2589
- Godinho, J., **2911 - C0208**
- Goduni, L., 117 - B0031, **4253 - C0095**
- Godwin, C., 194 - C0005
- Goebel, A., 5012 - A0208
- Goei, A., 272 - C0173
- Goel, R., 5366 - A0018
- Goerlitz-Jessen, M., **5459 - A0128**
- Goetz, C., 1296 - B0003, 1298 - B0005, 2224 - A0393, 2226 - A0395, 2898 - C0195, 4387 - C0435, 441 - A0301, 4788 - B0398
- Goetz, K. E., 2331 - B0320
- Gofas Salas, E., 4641 - A0283, 6194 - C0348, **644 - C0202**
- Goff, L. A., 3105 - A0113, 587 - B0202, 6024
- Gogate, P., 1601
- Gogi, K., 374 - A0034
- Gogola, A., 1216
- Gogte, P., 1160
- Goh, J., 272 - C0173
- Goh, R., 1712 - A0233, 1713 - A0234, 2091 - A0149
- Gohto, Y., 3506 - A0069, 4513 - A0028, **4514 - A0029**
- Gokhale, S., 2465 - C0131
- Gokoffski, K. K., 32 - A0063
- Gokoffski, K. K., 1969, **3752 - B0099**
- Golan, O., **5780 - C0067**
- Golas, L., 2872 - B0290, 2874 - B0292
- Golczak, M., 369 - A0029, 4978
- Goldbaum, M., 4426
- Goldbaum, M. H., 2090 - A0148, 2875 - B0293, 3187 - A0330, 5116 - B0105
- Goldberg, J. L., 1241 - A0082, 1484 - C0226, 1581, 2255 - B0209, 2256 - B0210, 2596, 314 - C0247, 4088 - B0083, **5028 - A0224**, 5905 - C0192, 6110 - C0229, 6150 - C0269

- Goldberg, R. A., 2847 - B0265, **782**
 Goldberg, Z., 6004
 Goldblum, D., 5772 - C0059
 Goldenberg, D., 1094 - C0129, 5853 - C0140
 Goldenberg, D., 2398 - C0064
 Goldenmerry, Y. L., 5321 - C0254
 Goldhardt, R., 4196 - C0038, **4687** - **A0329**, 4783 - B0393
 Goldman, D., 5224 - B0337
 Goldschmidt, Y., 1047 - B0358
 Goldsmith, Z. K., 3168 - A0311, 3174 - A0317, 3175 - A0318, 3183 - A0326, 4592 - A0181, **5984**
 Goldstein, I., 4155 - B0378, **4156** - **B0379**, 5248 - B0361
 Goldstein, J., 1061 - C0074, **1201**, 3910, **3913**
 Goldstein, L. E., 3037 - A0008, **5512** - **A0181**, 5640 - A0359
 Goldstein, M. H., 1245 - A0086, 1250 - A0091, 245 - C0056, 3465
 Goldstein, M., 1956, 5705 - A0424
 Golebiowski, B., **913** - **B0091**
 Golestaneh, N., **365** - **A0025**
 Goletz, P., 4510 - A0025, 4512 - A0027, 4520 - A0035
 Gologorsky, D., 6188 - C0307
 Golovleva, I., 19 - A0050, 5413 - A0065
 Golshani, C., **5013** - **A0209**
 Golston, A., 1541 - C0382, 306 - C0239, 5993
 Goltz, H. C., 1954, 5035 - A0231
 Golzan, M., 3726 - B0073, 5064 - B0015, **5087** - **B0038**, 5428 - A0097
 Golzarri, M. F., **4201** - **C0043**
 Gombos, J., 3629 - A0290
 Gomes, J. A., 2257 - B0211, 3329 - C0171
 Gomes, P. J., 5568 - A0260, **5571** - **A0263**
 Gomez Bastar, A., 5752 - C0039
 Gomez Caride, G., **5331** - **C0264**
 Gomez Correa, J., 1739 - A0260
 Gomez, K., 2203 - A0372
 Gomez, M. L., 1885 - C0285
 Gomez, N., 1846 - B0307
 Gomez-Caraballo, M., 5446 - A0115
 Gomez-Dantes, H., 4100 - B0225
 Gomez-Elizondo, D. E., 3794 - C0021
 Gómez-Esteban, J., 4648 - A0290
 Gomez-Garcia, D., 1349 - B0056
 Gomez-Villafruentes, R., 5300 - C0233
 Gomi, F., 3343 - C0225, 4233 - C0075
 Goncalves, A., **3008**
 Goncalves, M. B., **390** - **A0090**, 5921 - C0318
 Gondos, A., 6109 - C0228
 Gondouin, P., 5655 - A0374, 598 - B0270
 Gong, A., 2751 - B0130
 Gong, B., **6045** - **A0079**
 Gong, C., **4624** - **A0266**
 Gong, D., **6171** - **C0290**
 Gong, H., 3476, 3478
 Gong, J., 2481 - C0147, **4588** - **A0177**, 768
 Gong, J., 3203 - B0203, 766
 Gong, L., 134 - B0048, 926 - B0104
 Gong, L., 3581 - A0198
 Gong, L., **1038** - **B0349**
 Gong, Q., **704** - **C0299**
 Gong, S., 3761 - B0176
 Gong, X., 4010 - A0135, **4974**, 892 - A0281
 Gong, Y., 3570 - A0187, 764, 767
 Gonsalvez, G., 309 - C0242
 Gontier, B., 1922 - C0322
 Gontijo, A. D., 150 - B0064
 Gontijo, L. C., 150 - B0064
 Gontijo, L. C., 150 - B0064
 Gonzales, A., 2746 - B0125
 Gonzales, J. A., 1697 - A0218, 4180 - C0022, **4895** - **C0340**
 Gonzalez, A., 2978
 Gonzalez, A., 4767 - B0268
 González, A., **2282** - **B0236**
 Gonzalez Andrades, M., **1314** - **B0021**
 Gonzalez, A., **2778** - **B0157**, 772
 Gonzalez Barlatay, J. M., 5614 - A0333
 Gonzalez, C., 4008 - A0133
 Gonzalez, F. A., 1719 - A0240, 1741 - A0262
 Gonzalez, G., 2288 - B0242
 Gonzalez Garcia, A., 5099 - B0088, 5100 - B0089
 Gonzalez, J. M., 4724 - B0148
 Gonzalez, L., 3811 - C0038
 Gonzalez, L. A., **3674** - **A0358**
 Gonzalez Mendoza, E., 4384 - C0432, 5758 - C0045
 Gonzalez, M., 335 - C0268
 Gonzalez, P., 104 - A0267
 Gonzalez Ramos, A. E., **1028** - **B0312**
 Gonzalez, S., **3859** - **C0120**, 3863 - C0124
 Gonzalez, T., 1058 - B0369
 Gonzalez, V. H., 1039 - B0350, 1252 - A0093, 2789 - B0207, 4261 - C0132, **4848** - **C0206**
 Gonzalez, V., 2634 - A0139, **5567** - **A0259**, 925 - B0103
 Gonzalez, V., 1537 - C0378, 3605 - A0223
 Gonzalez-Andrades, M., 1409 - B0186, 4361 - C0409, 526 - B0141
 Gonzalez-Arocha, C., 1340 - B0047
 Gonzalez-Castellano, M., 124 - B0038
 Gonzalez-Fernandez, F., 4510 - A0025, 4512 - A0027
 Gonzalez-H.Leon, A., 1161, 2769 - B0148, **2770** - **B0149**
 Gonzalez-Lomeli, M., **2702** - **B0023**
 Gonzalez-Mejome, J., 2151 - A0285, **3384** - **C0308**
 Gonzalez-Salinas, R., 1465 - C0027, 2065 - A0123, 2769 - B0148, 3070 - A0041, **3280** - **C0074**, 4225 - C0067, 5243 - B0356, 948 - B0126
 Goo, Y., 1854 - C0158, 4556 - A0085
 Good, J., 226 - C0037
 Gooding, P., 5920 - C0317
 Goodkin, M., 1231 - A0072
 Goodkin, M. L., 1699 - A0220
 Goodluck, A., 75 - A0122
 Goodman, J., 79 - A0126
 Goodwill, V., **5020** - **A0216**
 Goody, R. J., **1253** - **A0094**
 Göös, H., 3088 - A0059
 Gopal, K., 3733 - B0080
 Gopinath, B., **3011**, 6012
 Gorantla, V., 314 - C0247
 Gorbatyuk, M. S., **3048** - **A0019**
 Gorbet, M., 1770 - B0085, **2657** - **A0384**
 Gorchs, L., 4007 - A0132
 Gordon, G. M., 1474 - C0036, 1957, 3603 - A0221, 4837 - C0195
 Gordon, H. B., 2592
 Gordon, L. K., 2538 - C0267
 Gordon, M., 3788 - C0015
 Gordon, M. O., 115 - B0029, **3025**
 Gordon, M. K., **4377** - **C0425**
 Gordon, P., 5994
 Gordon Shaag, A., 4130 - B0293
 Gordon, W. C., 1000 - B0254, **986** - **B0240**
 Gore, A., 2674 - A0401
 Gore, P., 2889 - C0186, **3887** - **C0148**
 Gorin, M. B., 1259 - A0294, 3045 - A0016, 47 - A0078
 Gormley, J., 612 - B0284
 Gorusupudi, A., 3086 - A0057, **5363** - **A0015**
 Goseki, T., 3343 - C0225
 Goshe, J. M., 2896 - C0193
 Gospe, S. M., 2195 - A0364
 Goswami, D., 2277 - B0231, 4363 - C0411
 Goswami, M., 1011 - B0265, 5825 - C0112
 Gothwal, V., 3913
 Goto, H., 3256 - B0355, 4162 - C0004, 4235 - C0077, 4324 - C0298, 502 - B0009, 511 - B0018, 5582 - A0301, 5583 - A0302, 5951, 6184 - C0303, 62 - A0109
 Goto, K., 4116 - B0279
 Goto, S., **304** - **C0237**
 Gottlieb, C., 416 - A0234, 4186 - C0028, 4442
 Gottlob, I., 2173 - A0342, 3934, 4416, 4417, 5204 - B0317, 5205 - B0318, 5788 - C0075, 612 - B0284
 Gottschalk, H., 2854 - B0272
 Gou, Z., 2297 - B0251
 Gould, C., 3564 - A0181
 Gould, L., 491 - A0351
 Gouras, P., **6061** - **A0190**
 Goureau, O., 5008 - A0079, 793
 Gouw, A., 5021 - A0217
 Govetto, A., 4993
 Govindaiah, A., 3214 - B0313
 Govindaraju, V., **5434** - **A0103**
 Gow, J., 3241 - B0340
 Gower, E. W., **6164** - **C0283**
 Goyal, A., **96** - **A0259**
 Goyal, A., 96 - A0259
 Goyal, A., 2734 - B0113, 4107 - B0232, 4802 - B0412, 6095 - C0214
 Goyal, A., 5709 - A0428
 Goyal, V., **4014** - **A0139**
 Goz, A., **715** - **C0310**
 Gozawa, M., 2064 - A0122, 4851 - C0209, 4852 - C0210, 4853 - C0211
 Grabow, N., 2710 - B0031, 4976
 Gracitelli, C. P., 3427 - C0351, 4463, 5607 - A0326, 5887 - C0174, 5889 - C0176, 5890 - C0177
 Gracitelli, C. P., **4090** - **B0085**
 Gradstein, L., 3494
 Graf, D., 3111 - A0119
 Gräfe, M. G., **290** - **C0191**, 5983
 Graff-Radford, J., 2188 - A0357
 Gragoudas, E. S., 3626 - A0287, 4301 - C0275
 Graham, S. L., 1177, 3354 - C0236, 3528 - A0091, 3531 - A0094, 3710 - B0057, 5428 - A0097, 6122 - C0241, 6124 - C0243, 615 - B0287, 976 - B0230, 979 - B0233
 Grajewski, A., 6048 - A0082
 Gramlich, O. W., 194 - C0005, 2186 - A0355, 3731 - B0078, **620** - **B0292**
 Granger, A., 4462
 Grant, C., 391 - A0091
 Grant, M., **1587**, 3548 - A0165, 3556 - A0173, 3589 - A0206, 5350 - A0002, 6002, 765
 Grant, P., **3889** - **C0355**
 Grassi, M., 4846 - C0204
 Graue Wiechers, F., 1100 - C0135, 1149
 Graue-Hernandez, E. O., **1343** - **B0050**, 1344 - B0051, 1570, 2054 - A0112, 2309 - B0263, 2925 - C0222, 3793 - C0020, 4100 - B0225, 4384 - C0432, 5752 - C0039, 5758 - C0045, 6155 - C0274, 900 - B0078, 915 - B0093
 Graue-Wiechers, E., 900 - B0078
 Grauslund, J., 1711 - A0232, 2376 - C0042, 2646 - A0151, 3255 - B0354, 5913 - C0310
 Gray, B., 2237 - A0406
 Gray, E., 208 - C0019
 Gray, G. P., 2227 - A0396
 Gray, H., 232 - C0043, 3976
 Gray, J. M., 2473 - C0139
 Gray, J., 1268 - A0303
 Gray, J. H., 2994
 Gray, J., 216 - C0027, 235 - C0046
 Gray, S., 4948
 Greaves, G., **5778** - **C0065**
 Greb, O., 5643 - A0362
 Grebe, R., 311 - C0244
 Green, A., 4411, 625 - B0297
 Green, C. R., 3466, 5358 - A0010
 Green, E. K., **171** - **B0325**
 Green, J., 2466 - C0132, 3269 - B0368
 Green, K., 642 - C0072
 Green, K. M., **1924** - **C0324**, 4299 - C0273
 Green, S., 1638 - A0014
 Greenberg, G., **3804** - **C0031**
 Greenberg, P. B., 1428 - B0347, 2413 - C0079, 4469, 4775 - B0385, 4801 - B0411, 6163 - C0282, 6168 - C0287
 Greenberg, R. J., 3892 - C0358
 Greene, R., 2684 - B0005
 Greene, W., **5253** - **C0099**, 5388 - A0040
 Greene, W., **225** - **C0036**
 Greenfield, D. S., 2126 - A0184, 3020
 Greenwald, S. H., **4529** - **A0044**
 Greenwood, J. A., 1080 - C0093, 5960
 Greer, C., **5598** - **A0317**
 Greferath, U., 5379 - A0031
 Gregerson, D. S., **1490** - **C0232**
 Gregor, A., 5225 - B0338
 Gregor, E., 2458 - C0124
 Gregori, G., 1949, 1950, **274** - **C0175**, 2880 - B0298, 2979, 3923, 721
 Gregori, N., 4660 - A0302, 4694 - A0336, 4783 - B0393, 5004 - A0075
 Gregorian, F., 2339 - B0328
 Gregory Evans, C., 3967, 4581 - A0170
 Gregory-Evans, C., 5319 - C0252
 Gregory-Evans, K., 4581 - A0170, 5319 - C0252
 Gregory-Ksander, M. S., **6139** - **C0258**
 Greiner, J. V., 924 - B0102
 Greiner, M. A., 1357 - B0117, 3645 - A0306
 Grelscheid, S., 1563
 Grenell, A. B., **2458** - **C0124**
 Gresores, N., 2705 - B0026, 3127 - A0244
 Gresores, N. J., **664** - **C0222**
 Greve, M., 1622
 Greven, M., **1159**, 1705 - A0226
 Grevys, A., 1441 - C0003
 Grewal, A., 2660 - A0387
 Grewal, D. S., 1160, 2818 - B0236
 Grewe, A., 2434 - C0100
 Grey, A., 3485
 Grgic, L., 2494 - C0198
 Griebenow, E., 3365 - C0247
 Griego, M., 6172 - C0291
 Griepentrog, G., 1086 - C0099
 Grieve, D., 3006
 Grieve, K., 278 - C0179, 3437, 4641 - A0283, 6194 - C0348, 644 - C0202
 Griffey, S., 2344 - B0333
 Griffin, J., 896 - A0285
 Griffith, G. L., **4342** - **C0390**
 Griffith, M., 2265 - B0219, 2280 - B0234, 3452
 Griffiths, H., 5138 - B0161
 Grigera, D., 1236 - A0077
 Grigg, J. R., 49 - A0080, 5393 - A0045
 Grigoriadou, M., 3141 - A0258, 780
 Grigorian, A., **4119** - **B0282**
 Grigorian, F., **3145** - **A0262**
 Grigshy, D., 348 - A0008
 Grillenberger, R., 2656 - A0383
 Grillo, M. A., 1878 - C0182
 Grimaldi, G., **4321** - **C0295**
 Grimes, D., 1126 - C0161
 Grimm, C., 2454 - C0120, 2460 - C0126, 4447, 965 - B0219
 Grimm, E., 4959
 Grimmer, T., 1583
 Grimsey, N., 4587 - A0176
 Grinton, M., **821** - **A0153**
 Grippo, T. M., 6107 - C0226
 Grebe, R., 311 - C0244
 Grisafe, D., 2725 - B0104
 Grisanti, S., 2471 - C0137, 2860 - B0278, 5303 - C0236, 5855 - C0142, 73 - A0120
 Grise, K., 4582 - A0171
 Grob, S. R., 5625 - A0344
 Groelle, M., 348 - A0008
 Groenborg, T. K., 4395 - C0443
 Gronert, K., 2540 - C0269, 2614, **2973**, 6126 - C0245
 Gronlund, M. A., 1017 - B0301, **5201** - **B0314**
 Grönroos, P., 4579 - A0168
 Gross, A. K., **2360** - **B0370**, 2361 - B0371
 GROSS, C., **4362** - **C0410**
 Groß, J., **3036** - **A0007**, 5818 - C0105
 Gross, J. M., 3995 - A0120, 5386 - A0038
 Grossenbacher, T., 3260 - B0359
 Grosser, M., 902 - B0080
 Grosser, M. R., **501** - **B0008**
 Grossetta Nardini, H., 2412 - C0078
 Grossi, F., 72 - A0119
 Grosskreutz, C. L., 2394 - C0060
 Grossman, G. H., 5218 - B0331
 Grossmann, E., **2153** - **A0287**
 Grossniklaus, H., 1627 - A0003, 3175 - A0318, 3633 - A0294, 4982
 Grotegut, P., 4500 - A0015
 Groth, S. L., 1241 - A0082
 Grover, D., 2056 - A0114, 2570
 Grover, S., **3611** - **A0229**
 Grover, W., 2236 - A0405
 Gruartmoner Roura, N., 5404 - A0056
 Grüb, M., 3612 - A0230
 Grubbs, B. H., 4961
 Grubbs, R. H., 232 - C0043, 3976
 Gruber, A. D., 2678 - A0405
 Gruber, M., 1487 - C0229
 Gruber, S., 237 - C0048
 Grulkowski, I., **279** - **C0180**
 Grune, T., 2447 - C0113
 Grunert, U., 1871 - C0175, 2588, 2997, 5038 - A0234
 Grunin, M., **1423** - **B0342**, 356 - A0016
 Grunwald, J. E., 2396 - C0062, 3252 - B0351
 Grupchev, D., 906 - B0084
 Grupcheva, C. N., **906** - **B0084**
 Grus, F. H., 6143 - C0262
 Gruska, A., 5684 - A0403
 Grytz, R., 2143 - A0277, **708** - **C0303**, 709 - C0304
 Gu, B., **4636** - **A0278**, 4637 - A0279, 733
 Gu, D., 5250 - B0363
 Gu, J., **536** - **B0151**, 747
 Gu, J., 3091 - A0062
 Gu, L., **5494** - **A0163**
 Gu, L., 5956
 Gu, L., 6174 - C0293, 6190 - C0309
 Gu, M., 1081 - C0094
 Gu, S., 745
 Gu, X., 809 - A0141
 Guadagni, V., 4601 - A0190
 guagnini, A., 5591 - A0310
 Gualqui, V. H., 3284 - C0078, **4418**
 Gualdi, F., 5120 - B0109
 Gualix, J., 5300 - C0233

- Guallar, E., 1599
 Guan, B., 2340 - B0329
 Guan, H., **1820 - B0281**, 2014
 Guan, Y., 5142 - B0165
 Guangming, J., **4809 - B0419**
 Guarino, A., 4756 - B0257
 Guber, I., 5772 - C0059
 Guberski, D., 4445
 Gubitosi-Klug, R. A., 190 - C0001
 Guduric-Fuchs, J., 3554 - A0171
 Gudwin, E., 1601
 Guedes de Araujo, V., 5661 - A0380
 Guekht, A., 1657 - A0033
 Guell, J., 2257 - B0211
 Guenther, G., **267 - C0126**
 Guerin, C., 377 - A0037
 Guérin, L., **2247 - B0201**
 Guérin, S., 2247 - B0201, 3869 - C0130, 4336 - C0384, 4354 - C0402
 Guerra, A., 2634 - A0139, 5567 - A0259
 Guerrero, J., **3793 - C0020**
 Guerrero-León, A., **174 - B0328**
 Guerrero-Martinez, A., 142 - B0056
 Guerriero, M., 2431 - C0097
 Guevara-Torres, A., 1973
 Guex-Crosier, Y., 3147 - A0264
 Guex-Crosier, Y. J., **5951**
 Guggenheim, J. A., **3956**, 776
 Guggino, W., 218 - C0029
 Guha, N., 4962
 Guha, S., **3116 - A0124**
 Gui, S., 5779 - C0066
 Gui, W., **3644 - A0305**, 4686 - A0328
 Guibout, L., 241 - C0052
 Guido, M., 1006 - B0260
 Guidoboni, G., 1656 - A0032, **1665 - A0041**, 4475
 Guidolin, F., **4795 - B0405**
 Guidry, J. J., 3120 - A0128
 Guillon, M., **1780 - B0095**
 Guillonneau, X. P., 2436 - C0102, 351 - A0011, 5553 - A0245
 Guindolet, D., 4424
 Guizie, E., 4173 - C0015
 Gulati, S., 856 - A0188, **876 - A0208**
 Gulati, V., 2023 - A0050, 2048 - A0106, 2059 - A0117
 Gullias-Cañizo, R., 1465 - C0027, 3070 - A0041, 3280 - C0074, 4619 - A0261, 5243 - B0356, 948 - B0126
 Gulyaeva, N., 1657 - A0033
 Gum, G. G., **2719 - B0040**
 Gumerson, J., 41 - A0072
 Gunasekaran, P., **2179 - A0348**
 Gundry, R. L., 2362 - B0372
 Gune, S., 4481, 784
 Gunnemann, F., **3140 - A0257**, 3218 - B0317
 Günther, C., 4323 - C0297
 Günther, F., 2407 - C0073
 Gunzinger, J., 4645 - A0287
 Guo, C., **5256 - C0102**
 Guo, C., 4971
 Guo, C., 4214 - C0056
 Guo, C., 5904 - C0191
 Guo, G. N., **4413**
 Guo, H., 2672 - A0399, **3275 - C0069**, 5677 - A0396
 Guo, H., 3461
 Guo, J., 61 - A0108
 Guo, L., 2494 - C0198, 5693 - A0412, 6117 - C0236, **6131 - C0250**
 Guo, P., **2160 - A0329**, 5789 - C0076
 Guo, R., **734**
 Guo, S., 5354 - A0006
 Guo, S., 3438
 Guo, S., 6128 - C0247
 Guo, S., 2211 - A0380, 4803 - B0413
 guo, T., **3517 - A0080**
 Guo, X., **3348 - C0230**
 Guo, X. Q., **1369 - B0129**, 2279 - B0233
 Guo, X., 4501 - A0016
 Guo, X., **472 - A0332**
 Guo, X., **1061 - C0074**, 175 - B0329, 182 - B0336, 4105 - B0230
 Guo, X., 1182, 5137 - B0160
 Guo, Y., 747
 Guo, Z., 1677 - A0198
 Guo, Z., 4132 - B0295
 Gupta, A., 4437
 Gupta, A., **2832 - B0250**
 Gupta, A. S., **1716 - A0237**
 Gupta, B., 3606 - A0224
 Gupta Elera, G., **4777 - B0387**
 Gupta, I., 2694 - B0015
 Gupta, K., **3766 - B0181**, 3937
 Gupta, M., 1049 - B0360, 1160, 1529 - C0370
 Gupta, M., 3758 - B0173, 4234 - C0076
 Gupta, O., 1162, 4251 - C0093
 Gupta, P., 1033 - B0344, 1995, 2601, **2602**, 5166 - B0189, 6009
 Gupta, P., 3313 - C0155
 Gupta, R., 1780 - B0095
 Gupta, S., 5058 - B0009
 Gupta, S., 6114 - C0233
 Gupta, S., **151 - B0065**, 4334 - C0382, 4359 - C0407, 474 - A0334
 Gupta, S., 5236 - B0349
 Gupta, V., 5127 - B0116, **6114 - C0233**
 Gupta, V., 4668 - A0310
 Gupta, V., 3354 - C0236, **3528 - A0091**, 3531 - A0094, 3710 - B0057, 6122 - C0241, 6124 - C0243, 976 - B0230, 979 - B0233
 Gurevich, E., 3062 - A0033, 3063 - A0034
 Gurevich, M., 77 - A0124
 Gurevich, V. V., **2354 - B0364**, 3062 - A0033, 3063 - A0034
 Gurley, J., **4599 - A0188**
 Gurova, E., 1115 - C0150
 Guru, A. A., 4466, 4468
 Gustavsson, M., 4171 - C0013
 Gutenberg Health Study, 5191 - B0214
 Guter, M. A., 3968
 Guttfleisch, M., 3218 - B0317
 Guthoff, R. F., 2710 - B0031, 2727 - B0106, 3439, 4976, 5846 - C0133
 Guthoff, R. F., 5967
 Guthrie, D., 1068 - C0081
 Guthrie, S., 1753 - B0068
 Guthrie, S., **3677 - A0361**
 Gutierrez, C., **3119 - A0127**, 573 - B0188
 Gutierrez, G., 203 - C0014
 Gutierrez, J., 2441 - C0107
 Gutierrez Ruiz, G., **4825 - C0183**, 887 - A0219
 Gutkind, N. E., **2125 - A0183**
 Gutman, E., 3895 - C0361
 Gutman, H., 2674 - A0401
 Gutsaeva, D., 2492 - C0196, 3003, 3005, **3553 - A0170**, 5486 - A0155, 5515 - A0184
 Guttha, S., 4598 - A0187
 Guy, J., 3964, 4140 - B0303, 4538 - A0053
 Guy, K., 5322 - C0255
 Guylene, L., **55 - A0086**
 Guymet, C., 2513 - C0217, **2618**
 Guymet, R. H., 1461 - C0023, 2386 - C0052, 2411 - C0077, 3154 - A0271, 3244 - B0343, 3888 - C0354, 5539 - A0231, 6080 - A0209, 840 - A0172
 Guzewicz, K. E., **4522 - A0037**, 5857 - C0144, 5858 - C0145
 Guzman, E., 4521 - A0036
 Guzman, J., 4527 - A0042
 Guzman-Arangué, A. I., 5300 - C0233
 Gwanzura, L., 5594 - A0313
 Gyawali, R., 180 - B0334
 H
 Ha, A., 2098 - A0156
 Ha, L., 2980
 Ha, S., 149 - B0063, 4903 - C0348
 Ha, S., **6092 - C0211**
 Ha, Y., 2644 - A0149, 4612 - A0201, 5473 - A0142
 Haagdorens, M., 2270 - B0224, 2280 - B0234, 2675 - A0402, **3452**
 Haamedi, N., 6131 - C0250
 Haan, M. N., 4053 - B0048
 Haanes, K., 2641 - A0146, 5504 - A0173, 5505 - A0174
 Haanes, K., **2643 - A0148**, 2645 - A0150, 6068 - A0197
 Haapaniemi, A. M., 2631 - A0136, 2673 - A0400
 Haar, M., 3334 - C0176
 Haasnoot, A., **3492**
 Habeeb, M., 1577
 Haberman, I., 1388 - B0165, 6158 - C0277, 6167 - C0286
 Habib, M., 817 - A0149
 Habib, M. S., 4817 - C0175
 Habib, S., **5304 - C0237**
 Habet-Wilner, Z., 4311 - C0285
 Hach, J., 3596 - A0214
 Hachana, S., **202 - C0013**, 3271 - B0370
 Hacibekiroglu, S., 3261 - B0360
 Hackam, A. S., 5493 - A0162
 Hacker, V., 5061 - B0012
 Haddad, N., 616 - B0288
 Haddock, L. J., 5881 - C0168
 Haderspeck, J., **567 - B0182**
 Hadi, T., 1428 - B0347, 4469
 Hadid, M. G., 1399 - B0176, 4761 - B0262, 949 - B0127
 Hadjout, N., 6074 - A0203
 Hadlich, S., 5846 - C0133
 Hadoux, X., 3028, 4443
 Hadrian, K., **3981 - A0106**, 3982 - A0107
 Haegerstrom-Portnoy, G., 1263 - A0298
 Hafed, Z., 5792 - C0079
 Hafezi, F., 1385 - B0162, 1388 - B0165, 1389 - B0166, 4400 - C0448, 5743 - C0030
 Hafezi, N. L., 1385 - B0162, 4400 - C0448, 5743 - C0030
 Hafezi-Moghadam, A., **3565 - A0182**
 Haford Tear, N., 2920 - C0217, 3022
 Hafner, B. P., 39 - A0070
 Hafner, J., **741**
 Hagag, A. M., **2842 - B0260**, 3921
 Hagan, K., 5869 - C0156
 Hagan, P., 1549
 Hagan, S., **4865 - C0310**
 Hagel, C., 6073 - A0202
 Hageman, G. S., 2625
 Hager, H., 4448
 Haggerty, B. P., 1152, 3426 - C0350
 Haghghi, A., **3631 - A0292**
 Hagstrom, S. A., 2396 - C0062, 2443 - C0109
 Hahn, R. A., 4377 - C0425
 Haider, K. M., 5401 - C0053
 Haines, J., 1418 - B0337, 1425 - B0344
 Haines, J. L., 1420 - B0339, 1743 - B0058, 1818 - B0279, 3208 - B0307, 5135 - B0158, 5144 - B0167
 Haines, L., **1338 - B0045**
 Hainsworth, D. P., 3587 - A0204
 Haist, M., 1314 - B0021
 Haj Najeeb, B., **3468**
 Haj Yahia, S., 726
 Hakkarainen, J. J., 2673 - A0400
 Halasz, E., **4221 - C0063**
 Halasz, K., 1458 - C0020, **1473 - C0035**
 Haldenby, S., 4322 - C0296
 Halder, N., 3257 - B0356
 Haldin, C., 1479 - C0221
 Haley, J., **5674 - A0393**
 Halford, S., 583 - B0198, 602 - B0274
 Halilovic, A., **198 - C0009**, 2663 - A0390
 Halim, M. S., 1675 - A0196, 1691 - A0212, 1909 - C0309, **2825 - B0243**, 410 - A0228, 5581 - A0300, 5949
 Halioua-Haubold, C., **3897 - C0363**
 Hall, A. J., **1139**, 2308 - B0262, 4168 - C0010, 6170 - C0289
 Hall, A., 4445
 Hall, G., 330 - C0263
 Hall, K., 6132 - C0251
 Hall, K., 5542 - A0234
 Halladay, C., 4469
 Halladay, C. W., 1428 - B0347
 Hallak, J., **1721 - A0242**, 2748 - B0127, 4053 - B0048
 Hallam, D., 3862 - C0123, **5329 - C0262**, 561 - B0176, 565 - B0180
 Hallberg, P., 5055 - B0006
 Halldórsson, G. H., 1690 - A0211
 Haller, J. A., 6154 - C0273
 Halleran, C., 4861 - C0306, 923 - B0101, 956 - B0134
 Halperin, E., 1423 - B0342
 Halsor, C., 5292 - C0225
 Halsteinli, V., 805 - A0137
 Ham, D., **1533 - C0374**
 Hamada, K. U., 3427 - C0351
 Hamada, S., 5772 - C0059
 Hämäläinen, A., 1068 - C0081
 Hamasaki, I., **1019 - B0303**, 2929 - C0251
 Hamburg, A., 726
 Hamel, C., 2322 - B0311, 38 - A0069
 Hamel, P., 2648 - A0153
 Hamid, M., 2049 - A0107
 Hamieh, A., 4012 - A0137, **6074 - A0203**
 Hamill, E. B., 1044 - B0355
 Hamilton, D., 6003
 Hamilton, J., 4442
 Hamilton, P., 2657 - A0384
 Hamilton, R., 3600 - A0218, 4745 - B0246
 Hamilton, R. D., **1468 - C0030**
 Hamm, L., 5687 - A0406
 Hamm-Alvarez, S., 2286 - B0240, 2672 - A0399
 Hamm-Alvarez, S. F., 26 - A0057, 3275 - C0069, 3305 - C0099, **4909 - C0354**, 5677 - A0396
 Hammamji, K., 859 - A0191
 Hammel, N., 1227, 1720 - A0241
 Hammer, A., 448 - A0308
 Hammer, D., 3215 - B0314
 Hammer, M., 1567, 2625, 3207 - B0306, **3243 - B0342**, 4511 - A0026, 4661 - A0303, 5857 - C0144, 5858 - C0145
 Hammer, S. S., 3556 - A0173, 3558 - A0175, 6071 - A0200
 Hammond, C. J., 1178, 1261 - A0296, 1821 - B0282, 1826 - B0287, 1962, 1964, 2696 - B0017, 4073 - B0068, 5136 - B0159, 5154 - B0177, 775, 777, 781, 958 - B0136
 Hammond, G. M., **3858 - C0119**
 Hammond, M. M., 1077 - C0090, 1089 - C0102
 Hamouie, J., 4421
 Hampton, C., **3272 - B0371**, 4580 - A0169
 Hampton, S. L., 3464
 Hamrah, P., 136 - B0050, 138 - B0052, 1670 - A0191, **1733 - A0254**, 1802 - B0150, 1806 - B0154, 2244 - B0198, 3309 - C0151, 3315 - C0157, 3321 - C0163, 3327 - C0169, 3340 - C0182, 3440, 4437, 4889 - C0334
 Hamula, C., 3664 - A0348
 Hamuro, J., 3450
 Hamwood, J., 1732 - A0253
 Hamzah, H., **4074 - B0069**
 Hamze, H., 6117 - C0236
 Han, A. H., 4025 - A0150
 Han, C., 1951
 Han, C., **891 - A0280**
 Han, D. P., 1086 - C0099, **1442 - C0004**
 Han, D., 897 - A0286
 Han, F., 6119 - C0238
 Han, G. K., 1151, 658 - C0216
 Han, G., 63 - A0110
 Han, I., 6059 - A0188
 Han, I. C., 1132 - C0167, 1679 - A0200, 3368 - C0292, 4650 - A0292, **5657 - A0376**
 Han, J., **2202 - A0371**
 Han, J., 1268 - A0303
 Han, J., 2553 - C0282, 3840 - C0101
 Han, J., 3866 - C0127, 4878 - C0323
 Han, J., **5400 - A0052**
 Han, J. Y., **2474 - C0140**
 Han, J., 2856 - B0274
 Han, J., 2027 - A0054
 Han, K., 2578
 Han, K., 916 - B0094
 Han, K., **3331 - C0173**
 Han, L., **2299 - B0253**
 Han, M., 5538 - A0230
 Han, M. M., 3594 - A0212, 3597 - A0215, **4289 - A0160**
 Han, R., **1268 - A0303**
 Han, S., 879 - A0211
 Han, S., 5400 - A0052
 Han, S., **878 - A0210**
 Han, T., 5754 - C0041
 Han, W., 3480
 Han, X., 2639 - A0144
 Han, X., 2730 - B0109, **4792 - B0402**, 703 - C0298
 Han, Y., 4095 - B0220, 6101 - C0220, 6102 - C0221
 Han, Y. S., **5059 - B0010**
 Han, Y., 2484 - C0150, **2526 - C0255**
 Han, Z., 4692 - A0334
 Han, Z., **1632 - A0008**
 Hanany, M., 3494
 Hanauer, D., 4154 - B0377
 Hancock, S., **301 - C0234**
 Handa, J. T., 1187, 2442 - C0108, 3169 - A0312, 342 - A0002, 4672 - A0314, **64 - A0111**, 825 - A0157
 Handa, T., 2943 - C0265
 Handa, T., 2823 - B0241, 4231 - C0073
 Hanebuchi, M., 1688 - A0209, 5872 - C0159
 Hanes, J., 980 - B0234
 Haney, J., 3719 - B0066, 3721 - B0068, 3998 - A0123, 5078 - B0029, **5096 - B0047**
 Hanke-Gogokhia, C., 3068 - A0039
 Hankins, M. W., 1007 - B0261, 1980, 5039 - A0235, 5989
 Hann, K., 4172 - C0014
 Hanna, E., 2312 - B0266
 Hanna, N., 5018 - A0214
 Hanna, S., 5687 - A0406
 Hannan, S., 3395 - C0319, 5748 - C0035, 5757 - C0044, 5978, 6018
 Hanneken, A. M., 4520 - A0035
 Hannig, G., 1649 - A0025
 Hannon, B., **2024 - A0051**
 Hanona, P., 865 - A0197
 Hanovice, N. J., 3995 - A0120
 Hansen, B., 2612

- Hansen, B. S., 2466 - C0132, 2493 - C0197, 3105 - A0113
- Hansen, C., 233 - C0044
- Hansen, J., 5674 - A0393
- Hansen, M. H., 1172, 4750 - B0251
- Hansen, R. M., 6070 - A0199
- Hansen-Pupp, I., 2752 - B0131
- Hanson, L., 1866 - C0170
- Hanyang University Guri Hospital, 2828 - B0246
- Hanyuda, A., 3418 - C0342
- Hao, F., 5356 - A0008
- Hao, Q., 2515 - C0244
- Hao, Y., 1304 - B0011
- Haq, S. U., 3594 - A0212, 3597 - A0215
- Haq, W., 2491 - C0195, 567 - B0182
- Haq, Z., 4794 - B0404
- Haque, R., 2465 - C0131
- Hara, H., 3751 - B0098, 5430 - A0099, 6129 - C0248
- Harada, C., 3348 - C0230
- Harada, T., 3348 - C0230
- Harada, Y., 405 - A0223
- Harasymowycz, P., 4340 - C0388
- Harbinski, F., 374 - A0034
- Hardarson, S. H., 1690 - A0211, 3209 - B0308, 4657 - A0299, 4658 - A0300
- Hardcastle, A. J., 2325 - B0314, 2917 - C0214, 2920 - C0217, 3022, 3061 - A0032
- Harder, J., 6135 - C0254
- Hardin, C., 2097 - A0155, 3026, 3496, 4063 - B0058
- Harding, J., 2144 - A0278
- Harding, S., 2569
- Harding, S. P., 612 - B0284
- Hardy, P., 222 - C0033
- Hargens, A., 1133 - C0168, 1134 - C0169
- Hargrove, P., 2598
- Harimoto, K., 4207 - C0049
- Hariprasad, A. S., 2418 - C0084
- Hariri, A. H., 1513 - C0354, 1680 - A0201, 2401 - C0067, 2426 - C0092, 4991
- Haritoglou, C., 3612 - A0230, 5274 - C0120
- Hariya, T., 4294 - C0165
- Hark, L. A., 2737 - B0116, 6154 - C0273
- Harkin, K., 1002 - B0256, 1476 - C0218, 5556 - A0248
- harkins-perry, S., 4584 - A0173, 5409 - A0061
- Harley, U., 4674 - A0316
- Harlow, S., 4097 - B0222
- Harman, G., 1265 - A0300, 2842 - B0260, 668 - C0226
- Harman, J. C., 3120 - A0128, 763
- Harmening, N., 4543 - A0058
- Haro Zuno, C. A., 2068 - A0126
- Harper, C. A., 1048 - B0359, 6187 - C0306
- Harper, D. J., 5821 - C0108, 5826 - C0113
- Harper, J., 3892 - C0358
- Harper, M., 4376 - C0424
- Harper, R., 3911
- Harrabi, O., 211 - C0022, 219 - C0030
- Harrington, P., 4626 - A0268
- Harris, A., 1656 - A0032, 1665 - A0041, 2094 - A0152, 2109 - A0167, 4057 - B0052, 4060 - B0055, 4475, 5063 - B0014, 5070 - B0021, 5079 - B0030, 5084 - B0035, 5895 - C0182
- Harris, D. L., 2244 - B0198, 3321 - C0163, 3340 - C0182, 4437
- Harris, I., 4132 - B0295
- Harris, J., 314 - C0247
- Harris, L., 314 - C0247
- Harris, M., 3616 - A0234
- Harrison, F., 5514 - A0183
- Harrison, K., 913 - B0091
- Harrison, W. W., 1916 - C0316, 5720 - C0007
- Harrop, A., 5628 - A0347
- Hart, C., 4167 - C0009, 4168 - C0010
- Hart, N., 2328 - B0317
- Hart, S. L., 3456
- Harthan, J. S., 115 - B0029, 1760 - B0075, 1775 - B0090, 1778 - B0093, 3788 - C0015, 4861 - C0306, 921 - B0099, 923 - B0101, 956 - B0134
- Hartjen, N., 3304 - C0098
- Hartleben Matkin, C., 174 - B0328, 467 - A0327
- Hartman, M. H., 48 - A0079
- Hartmann, E., 5195 - B0308
- Hartmann, K., 1535 - C0376
- Hartnett, J., 719
- Hartnett, M., 1135, 2639 - A0144, 5467 - A0136, 5469 - A0138, 5845 - C0132, 669 - C0227
- Hartwick, A., 115 - B0029, 3788 - C0015, 5040 - A0236
- Hartwig, A., 3379 - C0303, 3819 - C0046, 4888 - C0333
- Haruishi, K., 4116 - B0279
- Harun, S., 5093 - B0044
- Harutyunyan, S., 4748 - B0249
- Harwerth, R. S., 1652 - A0028, 2104 - A0162
- Hasan, A., 4833 - C0191
- Hasan, B., 2849 - B0267
- Hasan, F., 4726 - B0150
- hasan, N., 3684 - A0368
- Hasecall, V., 2988
- Hase, K., 5372 - A0024
- Hasebe, S., 1019 - B0303, 2929 - C0251, 2936 - C0258
- Hasegawa, A., 3790 - C0017
- Hasegawa, E., 769
- Hasegawa, M., 102 - A0265
- Hasegawa, N., 1066 - C0079, 3378 - C0302, 4093 - B0218, 5182 - B0205
- Hasegawa, T., 1730 - A0251
- Hasegawa, T., 24 - A0055
- Hasegawa, Y., 2217 - A0386
- Hasenstab, K., 1501 - C0342, 2735 - B0114, 2856 - B0274, 2857 - B0275, 2861 - B0279, 3498, 4476, 5075 - B0026
- Hasenzahl, M., 530 - B0145
- Hashemi, N., 617 - B0289
- Hashida, N., 3639 - A0300
- Hashiguchi, M., 509 - B0016
- Hashiguchi, T., 1987, 541 - B0156
- Hashimoto, C. Y., 1029 - B0313
- Hashimoto, K., 4294 - C0165
- Hashimoto, R., 4271 - C0142
- Hashimoto, S., 5122 - B0111
- Hashmani, N., 2870 - B0288, 5747 - C0034
- Hashmani, S., 2870 - B0288, 5747 - C0034
- Hashmanis Group, 5747 - C0034
- Haskett, S., 385 - A0045
- Haskova, Z., 2174 - A0343, 784
- Hass, P., 226 - C0037, 243 - C0054, 63 - A0110
- Hassall, M., 989 - B0243
- Hassan, H. G., 5136 - B0159
- Hassan, M., 1675 - A0196, 1691 - A0212, 1909 - C0309, 2825 - B0243, 410 - A0228, 5581 - A0300, 5949
- Hassan, N., 3622 - A0283
- Hassan, O., 4126 - B0289
- Hassan, S. E., 3426 - C0350, 4462, 640 - C0070
- Hassan, S., 2570
- Hassanalay, S., 1316 - B0023
- Hassenrik, R., 2421 - C0087, 4945
- Hastings, G. D., 3929, 5800 - C0087, 5804 - C0091
- Hastings, M., 4523 - A0038
- Hata, M., 2397 - C0063
- Hatami-Marbini, H., 1397 - B0174, 2192 - A0361
- Hatanaka, M., 1908 - C0308, 2683 - B0004, 2697 - B0018
- Hatano, M., 1686 - A0207, 4003 - A0128
- Hatch, K., 5769 - C0056
- Hatch, W., 1126 - C0161, 1337 - B0044, 1338 - B0045
- Hathaway, M., 2343 - B0332
- Hatsukawa, Y., 2758 - B0137
- Hatsusaka, N., 3796 - C0023, 3797 - C0024
- Hatt, S. R., 1557, 4148 - B0371, 864 - A0196
- Hattar, S., 7
- Hatton, K., 4023 - A0148
- Hatton, M., 4921 - C0366, 4954
- Hattori, T., 502 - B0009
- Hauelsen, J., 4661 - A0303
- Hauer, A., 2458 - C0124
- Hauritz, H., 4454
- Hausser, C., 1583
- Hausser, K., 1318 - B0025, 1342 - B0049
- Hausser, M. A., 1183, 4391 - C0439, 5136 - B0159, 743
- Hausser, W., 938 - B0116
- Hauswirth, S. G., 4861 - C0306
- Hauswirth, W. W., 3002, 3052 - A0023, 3053 - A0024, 3054 - A0025, 4522 - A0037, 4527 - A0042, 4533 - A0048, 4992, 6006, 6137 - C0256
- Hautala, N., 1692 - A0213
- Havens, S., 2048 - A0106, 2059 - A0117
- Havstam Johansson, L., 1090 - C0103
- Hawkins, H. K., 162 - B0076
- Hawley, D., 2286 - B0240
- Hawlina, M., 2185 - A0354, 2899 - C0196
- Haworth, K. M., 4908 - C0353
- Hayashi, A., 153 - B0067
- Hayashi, M., 3324 - C0166
- Hayashi, R., 889 - A0278
- Hayashi, R., 1353 - B0113
- Hayashi, S., 889 - A0278
- Hayashi, T., 5414 - A0066
- Hayashi, T., 1319 - B0026, 428 - A0288, 5763 - C0050
- Hayashi, T., 2934 - C0256
- Hayashi, Y., 5592 - A0311
- Hayashida, M., 2753 - B0132, 852 - A0184
- Hayat, S., 1998
- Hayden, P., 158 - B0072
- Hayek, B., 719
- Hayek, G., 1296 - B0003, 1298 - B0005, 2224 - A0393, 2226 - A0395, 4387 - C0435, 441 - A0301
- Hayes, J. R., 2820 - B0238
- Hayes, K., 3565 - A0182
- Hayes, M., 4968
- Hayes, S., 1415 - B0192, 533 - B0148
- Haynes, B., 3119 - A0127
- Hayoun, S., 1423 - B0342, 356 - A0016
- Hazim, R. A., 3980 - A0105
- Hazlett, L. D., 1545
- He, C., 2304 - B0258, 2313 - B0267
- He, C., 2571, 3561 - A0178
- He, C., 5926 - C0323
- He, F., 4016 - A0411
- He, G., 63 - A0110
- He, H., 1157
- He, H., 3300 - C0094
- He, H., 135 - B0049, 3300 - C0094
- He, J. C., 2977
- He, J., 2676 - A0403
- He, J., 1966
- He, J., 4952
- He, J., 2285 - B0239, 2369 - B0379, 4368 - C0416
- He, J., 2043 - A0101
- He, K., 2983
- He, L., 2465 - C0131, 750
- He, L., 249 - C0108
- He, L., 5974
- He, M., 5979
- He, M., 1054 - B0365, 175 - B0329, 2086 - A0144, 2730 - B0109, 3382 - C0306, 3795 - C0022, 4094 - B0219, 4792 - B0402, 5126 - B0115, 5127 - B0116, 703 - C0298, 738
- He, S., 1593, 5291 - C0224, 5294 - C0227, 5296 - C0229
- He, S., 4114 - B0277
- He, S., 497 - B0004
- He, W., 3082 - A0053, 333 - C0266, 4701 - B0125
- He, W., 5586 - A0305
- He, W., 2131 - A0265
- He, X., 3374 - C0298, 3375 - C0299
- He, X., 532 - B0147
- He, Y., 3748 - B0095
- He, Y., 738
- He, Y., 3890 - C0356, 4572 - A0101
- He, Y., 5835 - C0122
- He, Y., 3442, 5321 - C0254
- He, Y., 4035 - A0160
- He, Y., 50 - A0081
- He, Z., 3696 - B0043, 3946, 4473
- He, Z., 2955 - C0277
- He, Z., 4424
- He, Z. J., 1951
- Head, R., 2668 - A0395
- Heah, T. G., 1242 - A0083
- Healey, P. R., 1177
- Healy, C., 1078 - C0091
- Healy, R. J., 2520 - C0249
- Heap, J., 5561 - A0253
- Hearne, E. G., 2520 - C0249
- Heatley, G. A., 1948
- Heckenlively, J., 4466, 4468
- Heckenlively, J. R., 1433 - B0352
- Heczko, J., 2981
- Hedge, A., 227 - C0038
- Heegaard, S., 2646 - A0151, 3188 - A0331, 5584 - A0303, 5587 - A0306, 5918 - C0315, 5986
- Heemskerk, M., 1341 - B0048
- Heeren, T. F., 1262 - A0297, 3138 - A0255, 4628 - A0270
- Heersink, M., 2062 - A0120
- Heersink, M., 2062 - A0120
- Hegarty, S., 2737 - B0116
- Hegde, K. R., 3084 - A0055
- Heger, L., 3453
- Hegy, P., 4923 - C0368
- Heiberg, T., 804 - A0136
- Heid, I. M., 2407 - C0073
- Heidelberg, R., 1872 - C0176
- Heiduschka, P., 2447 - C0113
- Heier, J. S., 1960, 1961, 3229 - B0328, 4948, 76 - A0123, 782
- Heiferman, M. J., 5250 - B0363
- Heijl, A., 2124 - A0182, 6031, 6032
- Heikka, T. J., 2117 - A0175
- Heil, S., 4334 - C0382
- Heiligenhaus, A., 3492, 3981 - A0106
- Heilshorn, S., 2268 - B0222, 2293 - B0247
- Heilweil, G., 5004 - A0075
- Heimann, H., 3630 - A0291
- Hein, A., 5228 - B0341
- Hein, T. W., 1008 - B0262, 997 - B0251
- Heindl, L. M., 1355 - B0115, 2118 - A0176, 2900 - C0197
- Heinen, S. J., 1016 - B0300
- Heinrich, D., 2809 - B0227
- Heinrich, R., 3763 - B0178
- Heinrich, V., 6026
- Heinzelmann, S., 4176 - C0018
- Heisel, C., 2172 - A0341
- Heisel, C. J., 1144
- Heisler, M., 5227 - B0340
- Heisler, M., 1221, 1972, 2865 - B0283, 5822 - C0109, 879 - A0211
- Heisler-Taylor, T., 1156
- Heissigerova, J., 2525 - C0254
- Heitmar, R., 2158 - A0292, 4266 - C0137, 4679 - A0321
- Hejazi, M., 3111 - A0119
- Hejtmancik, J., 5383 - A0035
- Hejtmancik, J. F., 2932 - C0254
- Helbig, H., 2407 - C0073, 5271 - C0117
- Held, K. S., 147 - B0061
- Helft, Z., 3973, 4451
- Helisalmi, S., 2392 - C0058
- Heller, J. A., 3226 - B0325
- Hellgren, G., 2752 - B0131
- Hellman, J., 4153 - B0376
- Hellstrom, A., 2752 - B0131, 3570 - A0187, 764
- Helms, R., 1701 - A0222, 1702 - A0223, 2694 - B0015
- Helmy, O., 1685 - A0206, 1710 - A0231, 5238 - B0351
- Hemarrat, K., 334 - C0267
- Hematti, P., 3310 - C0152, 3454, 4421
- Hemert, J., 5432 - A0101
- Hemmati, R. T., 3929
- Hemo, Y., 77 - A0124
- Henaou, M., 5268 - C0114
- Henderson, R., 3757 - B0172
- Hendicott, P. L., 2959 - C0281
- Hendrick, A., 5355 - A0007, 843 - A0175, 868 - A0200
- Hendricks, R. L., 4934
- Hendrix, J. F., 4936
- Henein, C., 2000, 2709 - B0030
- Heng, J. S., 6024
- Heng, K., 3559 - A0176
- Henle, A. M., 3177 - A0320
- Henle, S., 4006 - A0131
- Henn, I., 3974
- Hennein, L., 187 - B0341
- Hennes-Bean, E., 3525 - A0088
- Hennessey, E., 4529 - A0044
- Hennessey, M. P., 2081 - A0139
- Hennings, C., 3616 - A0234
- Hennriksen, B., 4155 - B0378
- Henriquez, M., 1399 - B0176, 2021 - A0048, 4761 - B0262, 949 - B0127
- Henry, A., 2862 - B0280
- Henry, C. R., 4199 - C0041
- Henry, D., 3230 - B0329
- Henry, D., 2606
- Henry, J., 3006
- Henry, M., 433 - A0293
- Henry, S., 2107 - A0165, 2121 - A0179, 4986
- Henry, S., 1253 - A0094
- Henshaw, J., 6078 - A0207
- Henshaw, W., 3817 - C0044
- Henson, H., 3114 - A0122
- Heo, J., 3529 - A0092
- Heo, M., 2888 - C0185
- Heon, E., 4522 - A0037, 669 - C0227
- Herault, Y., 2344 - B0333
- Heravian Shandiz, J., 4379 - C0427
- Herber, R., 1383 - B0160, 1384 - B0161, 1395 - B0172, 2018 - A0045, 452 - A0312
- Hereu, M., 1095 - C0130
- Hergert, U., 232 - C0043
- Hergunsel, G. O., 3760 - B0175
- Heringer, J. F., 3803 - C0030
- Hermann, M., 2118 - A0176, 3232 - B0331
- Hermann, M., 4429
- Hermida, A., 4466, 4468
- Hermreck, M., 4969

Hermes – Hosoda

- Hermes, F., 5501 - A0170
Hermesen, J., 5214 - B0327
Hernandez Alba, G., 1058 - B0369
Hernandez Bogantes, E., 1295 - B0002, 5815 - C0102
Hernandez, C., 309 - C0242
Hernandez, E., 1058 - B0369
Hernandez Gauna, G., 5614 - A0333
Hernandez, J., **3388 - C0312**
Hernandez, J., 721
Hernandez, L., 1465 - C0027, **3070 - A0041**, 4225 - C0067
Hernandez, M., **1427 - B0346**, 223 - C0034, 2479 - C0145
Hernandez, M., 1095 - C0130, 4842 - C0200
Hernandez Morato, I., 1579
Hernandez, T., 1907 - C0307, 2797 - B0215, 2802 - B0220
Hernandez Vargas, J., **1103 - C0138**
Hernández, Moreno, L., 1070 - C0083, **3411 - C0335**
Hernández-Barry, H., 239 - C0050
Hernandez-Camarena, J. C., 142 - B0056, 2908 - C0205
Hernandez-Jimenez, S., 6155 - C0274
Hernandez-Quintela, E., 1161, 1570, 3811 - C0038, 948 - B0126
Hernández-Rabaza, V., 996 - B0250
Hernández-Zimbrón, L. F., 3280 - C0074
Herndon, D. N., 162 - B0076
Herndon, L., 2073 - A0131
Herold, T., 3602 - A0220, 3614 - A0232
Herrera, A., 5519 - A0211
Herrera-Bond, A., 4380 - C0428
Herrera-Juarez, K. J., 1161, 2770 - B0149, 5243 - B0356
Herrero, B., 5287 - C0220
Herrero-Pérez, C., 4346 - C0394, 4347 - C0395
Herrero-Vanrell, R., 3302 - C0096, 5693 - A0412
Herrmann, A., 5683 - A0402, 5684 - A0403
Herrmann, E., 5724 - C0011
Herrmann, J., 5244 - B0357
Hertle, R. W., 1082 - C0095, 5018 - A0214
Hertz-Fowler, C., 4322 - C0296
Herzlich, A., 117 - B0031
Herzog, S. A., 3199 - B0199
Hesemann, N., 151 - B0065, 4334 - C0382, 4359 - C0407, 474 - A0334
Hess, R., 2954 - C0276, 2955 - C0277, 4115 - B0278
Hesser, J., 5806 - C0093
Hessler, P., **2146 - A0280**, 2153 - A0287
Hetling, J. R., **5023 - A0219**, 5025 - A0221
Heukamp, A., 5293 - C0226
Heur, J. M., 1364 - B0124, 1365 - B0125
Heuss, N. D., 1490 - C0232
Hewitt, A., 2352 - B0362, 4578 - A0167
Hewitt, A. W., 1177, 2732 - B0111, 3519 - A0082, 3746 - B0093, 3954, 4470
Hewitt, P., 5329 - C0262
Hewlett, S., 1263 - A0298
Heymann, H., 5623 - A0342, 5624 - A0343
Heynen, M., 3827 - C0054
Hibbert, P., 6156 - C0275
Hickenbotham, A., 2962 - C0284, 2965 - C0287, 2968 - C0290, 4765 - B0266, 4766 - B0267
Hickey, D., 5039 - A0235, **5989**
Hickey, D. G., 1007 - B0261
Hickey, M., 2732 - B0111
Hickey, M., **5342**
Hicks, D., 5046 - A0242
Hicks, J., 1637 - A0013
Hicks, M., 4466
Hicks, N., 1300 - B0007
Hicks, T., 4901 - C0346
Hicks, W. L., 2346 - B0335
Hida, L., 4769 - B0270
Hida, R. Y., 1301 - B0008, 1331 - B0038, 1361 - B0121, 1362 - B0122, 150 - B0064, 2893 - C0190, 2894 - C0191, 2906 - C0203, 2909 - C0206, 2910 - C0207, 2911 - C0208, 3654 - A0338, 4332 - C0380, 4769 - B0270, 4787 - B0397, 4807 - B0417, 5744 - C0031
Hida, Y., 5430 - A0099
Hidaka, H., 1781 - B0096
Hidaka, Y., 2784 - B0163, 862 - A0194
Hiddingh, S., 3492, 5380 - A0032
Higa, K., 2278 - B0232, 2905 - C0202, **4356 - C0404**
Higgins, B. P., 2156 - A0290
Higgins, E., 4800 - B0410
High, K., 3900 - C0366
Highsmith, E. W., 1353 - B0113
Higuchi, H., 872 - A0204
Higuchi, J. W., 5953
Higuchi, J., 4356 - C0404
Higuchi, W. I., 5953
Hijazi, B., **1726 - A0247**
Hikage, F., **1142**
Hikichi, T., **1444 - C0006**
Hilal, S., 2602, 3955, 5166 - B0189
Hileeto, D., 294 - C0195
Hileman, K., 1075 - C0088
Hilge, F., 672 - C0230
Hilgen, G., 1563, 5329 - C0262, 560 - B0175
Hill, A., **3527 - A0090**
Hill, D., **4800 - B0410**
Hill, J., 3721 - B0068, 5096 - B0047
Hill, L., 1475 - C0037, 3592 - A0210, 783, 810 - A0142
Hill, L. J., **4723 - B0147**, 5851 - C0138
Hillarby, M. C., 4401 - C0449
Hillard, C., 4374 - C0422
Hillard, J., **5909 - C0196**
Hillenkamp, J., 3104 - A0112
Hillier, R., 1955
Hillmann, D., 300 - C0201, 672 - C0230
Himali, J. J., 1041 - B0352
Himori, N., **3725 - B0072**
Hing, S., 4120 - B0283
Hinton, D. R., 2457 - C0123, 26 - A0057, 4036 - A0161, 558 - B0173
Hipp, S., 3163 - A0280
Hirabayashi, K., **4257 - C0128**
Hirabayashi, K., **5978**
Hirabayashi, K., **1255 - A0096**, 1256 - A0097, 1257 - A0098
Hirabayashi, Y., 1492 - C0234
Hirahara, S., **2459 - C0125**, 2475 - C0141
Hirai, F., 3329 - C0171
Hirakata, A., 1687 - A0208, 1834 - B0295, 5697 - A0416, 848 - A0180
Hirakata, T., 344 - A0004, **5575 - A0267**
Hirami, Y., 1715 - A0236, 291 - C0192, 5002 - A0073
Hirano, A. A., 2502 - C0206
Hirano, A., 4262 - C0133
Hirano, M., 5914 - C0311, 5915 - C0312, 670 - C0228, 807 - A0139, 847 - A0179
Hirano, T., **1511 - C0352**, 1524 - C0365, 1528 - C0369, 1939 - C0339, 4681 - A0323
Hirano, Y., 4682 - A0324, 800 - A0132
Hiraoka, T., 1788 - B0103, 2217 - A0386, 4242 - C0084, 4275 - C0146, 4757 - B0258, 5648 - A0367, **5801 - C0088**, 5802 - C0089
Hirasawa, M., 2218 - A0387
Hirastuka, Y., 943 - B0121
Hirata, C., 172 - B0326, 422 - A0240
Hirata, H., 3284 - C0078
Hirata, N., **3195 - B0195**
Hirayama, K., 395 - A0095, **4831 - C0189**
Hirbo, J., **1180**
Hirianna, S., 4528 - A0043, 5656 - A0375
Hirji, N., 4630 - A0272
Hirschall, N., 1279 - A0314
Hirohara, Y., 1031 - B0315, 5648 - A0367
Hirooka, K., 3133 - A0250, 3706 - B0053, **461 - A0321**, 5510 - A0179, 811 - A0143
Hirose, H., **3413 - C0337**
Hirose, M., 102 - A0265
Hiroshi Aoki, R. A., 5232 - B0345
Hirota, L., **1110 - C0145**, 303 - C0236
Hirota, M., **1031 - B0315**, 3891 - C0357
Hirsch, K., **2158 - A0292**
Hirsch, M., 3317 - C0159
Hirsch-Reinshagen, V., 1582, 6063 - A0192
Hirst, A., 421 - A0239
Hirunpotravong, P., 5106 - B0095
Hisatomi, T., 21 - A0052, 33 - A0064, 4290 - C0161, 5915 - C0312, **863 - A0195**
Hisand, M., 2173 - A0342
Hiscott, P., 5258 - C0104
Hissink-muller, P., 3492
Hita, E., 5188 - B0211
Hitzenberger, C. K., 1975, 2622, 298 - C0199, 3435, 4065 - B0060, 5727 - C0014, 5821 - C0108, 5826 - C0113, **5863 - B0106**
Hjortdal, J., **1299 - B0060**, 1341 - B0048, 4395 - C0443, 4790 - B0400, 5761 - C0048, 742
Ho, A., 1568, 3143 - A0260
Ho, A., 3604 - A0222, 4291 - C0162, 5457 - A0126
Ho, A., 1949, 1950, **261 - C0120**, 268 - C0127, 2978, 2979
Ho, C., **774**
Ho, C., 5143 - B0166
Ho, D., **2233 - A0402**
Ho Ee Hua, C., 755
Ho, E., **3977**
Ho, H., 2688 - B0009
Ho, K., **6156 - C0275**
Ho, L., 6115 - C0234
Ho, L., **4715 - B0139**
Ho, Q., 1699 - A0220
Ho, S., 4183 - C0025
Ho, S., **2642 - A0147**
Ho, T., **4611 - A0200**, 6080 - A0209
Ho, T., 2260 - B0214, 2267 - B0221
Ho, Y., **2216 - A0385**
Hoang, B., **5710 - A0429**
Hoang, D. C., 2179 - A0036
Hoang, Q. V., 2815 - B0233, 2866 - B0284, 3957, **4739 - B0240**, 712 - C0307
Hoang, T., 2511 - C0215, 991 - B0245, 992 - B0246
Hobbs, S., 1176
Hobby, A. E., **1446 - C0008**
Hodapp, E., 6048 - A0082
Hodge, C., 2179 - A0348, 4343 - C0391, 4344 - C0392, 531 - B0146
Hodge, D., 2176 - A0345, 2188 - A0357
Hodge, W., **3461**, 4778 - B0388
Hodges, J., 2427 - C0093, 2756 - B0135
Hodges, R., 1166
Hodgson, L., 5539 - A0231
Hoeijmakers, J. H., 3260 - B0359
Hoekel, J., 3165 - A0282
Hoerauf, H., 2854 - B0272, 2884 - B0302, 4726 - B0150
Hoerster, R., **1355 - B0115**, 2373 - C0039, 3131 - A0248
Hoffman, J. J., **4685 - A0327**
Hoffmann, G., 3713 - B0060
Hoffmann, T. J., 1179
Hofmann, E., 5398 - A0050
Hofstetter, S., **5032 - A0228**
Hof, R., 3868 - C0129
Hogg, J., 4259 - C0130
Hogg, J., **934 - B0112**
Hogg, R., 1273 - A0308, 2408 - C0074
Hoggarth, A., 1868 - C0172
Hogle, R., 3889 - C0355
Hohberger, B., 2142 - A0276, **2720 - B0041**
Hohenadl, C., 5931 - C0328
Hohmann, T. C., 233 - C0044
Höhn, A., 2447 - C0113
Hoischen, A., 2324 - B0313
Hoja, U., 3513 - A0076, 3515 - A0078
Holbach, L., 3870 - C0131
Holdbrook, J. A., 417 - A0235
Holdbrook, M., 914 - B0092, 918 - B0096
Holden, R., 4683 - A0325
Holekamp, N., 5545 - A0237
Holicki, C., 5210 - B0323
Holinski-Feder, E., 6047 - A0081
Hollamby, K., 5209 - B0322
Holland, A., 1543 - C0384
Holland, D., 3304 - C0098
Holland, E., 2895 - C0192
Holland, G. N., 1140, 4102 - B0227
Holland, S., 294 - C0195
Hollander, D., 1967, 2424 - C0090, 391 - A0091, 4445, 5568 - A0260, 5571 - A0263, 914 - B0092
Hollar, R. A., 725
Holliday, E., 6008
Hollingsworth, T., 2501 - C0205
Holloway, E. E., **1200**
Hollyfield, J. G., 2443 - C0109, 354 - A0014
Holm, F., **5587 - A0306**, 5986
Holmberg, M., 5413 - A0065
Holmes, J. M., **1557**, 178 - B0332, 4148 - B0371, 864 - A0196
Holms, J., 1606
Holmskov, U., 2646 - A0151
Holstein, S. A., 316 - C0249
Holt, A., 4342 - C0390
Holt, D., **314 - C0247**
Holton, S., 2493 - C0197
Holve, K., 5202 - B0315
Holz, F., 2421 - C0087, 2777 - B0156, 4945, 4948
Holz, F. G., 1624, 3036 - A0007, 3221 - B0320, 3898 - C0364, 3899 - C0365, 4991, 5818 - C0105
Holzchuh, R., **1361 - B0121**, 1362 - B0122, 2894 - C0191, 2906 - C0203, 2909 - C0206, 2910 - C0207, 2911 - C0208
Holzer, S., 3435, 4065 - B0060, 5061 - B0012, 5727 - C0014
Holzhausen, L., 1863 - C0167, 603 - B0275
Hom, M. M., 136 - B0050, 4861 - C0306, 4880 - C0325, 923 - B0101, 956 - B0134
Homma, K., **1983**
Homme, R. P., 6067 - A0196
Hommel, A. B., **1234 - A0075**, 2122 - A0180, 3191 - B0191
Honda, N., **1688 - A0209**, 5082 - B0033, 5872 - C0159
Honda, S., **395 - A0095**
Honda, S., 1424 - B0343, 1921 - C0321
Hondur, A., **3675 - A0359**, 5001 - A0072
Hong, A., 1393 - B0170
Hong, G., **4837 - C0195**
Hong, H., 1510 - C0351, 3924
Hong, H., 1406 - B0183
Hong, H., 3590 - A0207
Hong, J., 1573, **3886 - C0147**
Hong, J., 2858 - B0276
Hong, J., 1304 - B0011
Hong, J., 1837 - B0298
Hong, K., 1456 - C0018
Hong, S., **1244 - A0085**
Hong, S., 2127 - A0185, **3496**
Hong, S., **1682 - A0203**, 2103 - A0161
Hong, T., 820 - A0152
Hong, W., 195 - C0006, 2642 - A0147, 5480 - A0149
Hong, X., 260 - C0119
Hong, Y., 2852 - B0270
Hongisto, H., 4579 - A0168, 538 - B0153
Honigberg, L., 4948
Honjo, M., 1232 - A0073, 2712 - B0033, 3046 - A0017, 373 - A0033
Honkanen, R. A., 2214 - A0383, 3820 - C0047, **3837 - C0064**
Honma, Y., 2489 - C0193
Honore, B., 3074 - A0045, 6068 - A0197
Hood, D. C., 2087 - A0145, 2089 - A0147, 28 - A0059, 4064 - B0059, 4068 - B0063, 4071 - B0066, 4465, **4987**, 5128 - B0117, 5269 - C0115
Hoogendoorn, A. D., 4979
Hoogewoud, F., **4203 - C0045**
Hooper, M., **2508 - C0212**, 2511 - C0215, 4449
Hooten, C., 2374 - C0040
Hooton, J., **1300 - B0007**
Hoppe, G., 5462 - A0131, 5464 - A0133
Horai, R., 2540 - C0269, **2542 - C0271**, 2547 - C0276
Horai, R., 2209 - A0378, 3413 - C0337, 5109 - B0098
Horeweg, N., 3627 - A0288
Hori, J., 425 - A0243, 509 - B0016, 510 - B0017
Hori, S., 943 - B0121
Hori, Y., 3685 - A0369, 3686 - A0370, 4896 - C0341, 5465 - A0134
Horie, T., 2485 - C0189, 4263 - C0134
Horiguchi, H., 1852 - C0156
Horikoshi, K., 291 - C0192
Horinek, A., 2917 - C0214
Horn, F., 5859 - C0146
Horne, A., 2430 - C0096, 5546 - A0238
Horneman, H., 505 - B0012
Hornemann, T., 2454 - C0120
Horowitz, J., 2780 - B0159, 3758 - B0173
Horstmann, J., 3342 - C0184
Horswill, M. S., 1942
Horváth, H., 1932 - C0332, **1933 - C0333**, 1934 - C0334
Horvath, J., 5929 - C0326
Horwitz, V., **2674 - A0401**
Hos, D., 3335 - C0177
Hose, S. L., 2448 - C0114, 311 - C0244, 3472, 3994 - A0119, 3996 - A0121, **4594 - A0183**
Hoseini-Yazdi, H., **2139 - A0273**
Hoshino, A., 2586
Hoskins, R., 5691 - A0410
Hoskins, Z., 6085 - C0204
Hosoda, Y., 1817 - B0278, **1819 - B0280**

- Hosogi, M., 2882 - B0300, **4268** - C0139, 4269 - C0140, 5914 - C0311, 5915 - C0312, 670 - C0228, 671 - C0229, 807 - A0139, 847 - A0179
- Hosokawa, M., 2882 - B0300, 4268 - C0139, 4269 - C0140, 5914 - C0311, 5915 - C0312, 670 - C0228, 671 - C0229, **807** - A0139, 847 - A0179
- Hosono, K., 20 - A0051, **5414** - A0066
- Hosoya, O., 6051 - A0085
- Hosseinaee, Z., 293 - C0194, 294 - C0195
- Hossen, M. A., 3483
- Hosten, L. O., **140** - B0054
- Hostetter, I., **4671** - A0313
- Hotaling, N., **555** - B0170
- Hotta, F., **102** - A0265, 3688 - A0372
- Hotta, Y., 20 - A0051, 5414 - A0066
- Hou, A., **1168**, 3306 - C0100
- Hou, A., **865** - A0197
- Hou, C., 4808 - B0418
- Hou, C., **4117** - B0280
- Hou, F., 1275 - A0310, 5753 - C0040, 5956
- Hou, H., **2735** - B0114, 2857 - B0275, 2861 - B0279, 3498, 4476, 5075 - B0026
- Hou, I. W., **3545** - A0162
- Hou, J. H., 2903 - C0200
- Hou, K. K., **2851** - B0269
- Hou, L., 909 - B0087
- Hou, L., 1437 - B0356
- Hou, M., **5650** - A0369
- Hou, P., 368 - A0028
- Hou, R., 376 - A0036
- Hou, Y., **3342** - C0184
- Hougham, K., 1641 - A0017
- Hounscome, B., 2569
- Houot, G., 3895 - C0361
- House, R., 4996
- Housman, M., 4616 - A0205, 517 - B0024
- Houston, S., 3233 - B0332
- Hovaten, K., 5929 - C0326
- Hovis, J. K., 2964 - C0286
- Howard, D., 1527 - C0368, 2845 - B0263
- Howard, E. P., 5527 - A0219
- Howarth, J., 5878 - C0166
- Howat, T., 4446
- Howell, G. R., 3711 - B0058
- Howlett, M., 1977
- Howson, A., 640 - C0070
- Hoyama, E., 1066 - C0079, 3378 - C0302, **4093** - B0218, 5182 - B0205
- Hoynig, C. C., 2321 - B0310, 2377 - C0043, 352 - A0012, 3898 - C0364, 3899 - C0365, 43 - A0074, 4532 - A0047, 4983, 4991, 789
- Hoyos, A. T., 4229 - C0071
- Hozumi, K., **3891** - C0357, 4555 - A0084, 4688 - A0330
- Hrarat, L., 2859 - B0277, **4822** - C0180
- Hrdina, J., **4941**
- Hrbar, M., 4155 - B0378, 4156 - B0379, **5248** - B0361
- Hristodorov, D., 2493 - C0197
- Hsia, Y. C., 5885 - C0172
- Hsiang, G., 2468 - C0134
- Hsiao, C., 1910 - C0310
- Hsiao, C., 4808 - B0418, 945 - B0123
- Hsieh, D., 4394 - C0442
- Hsieh, M., 5280 - C0126
- Hsiung, R., 1582, 6063 - A0192
- Hsu, C., 2597
- Hsu, C., 4920 - C0365
- Hsu, C., 3381 - C0305
- Hsu, F., 4574 - A0103
- Hsu, H., 3838 - C0065
- Hsu, H., **1910** - C0310, 2337 - B0326
- Hsu, H., 4686 - A0328
- Hsu, H. Y., 3847 - C0108
- Hsu, J., 3604 - A0222, 4251 - C0093, 4291 - C0162, 5457 - A0126, 5972, 6185 - C0304, **736**, 866 - A0198
- Hsu, K., 3991 - A0116
- Hsu, S., 1347 - B0054, 285 - C0186, **4996**
- Hsu, S., 1129 - C0164
- Hsu, W., 1706 - A0227, 4074 - B0069
- Hsu, Y., **3962**
- Hsueh, J., **4277** - C0148
- Hsueh, Y., 1379 - B0139, **3845** - C0106
- Htoon, H. M., 3955
- Hu, D., **3170** - A0313, 3173 - A0316
- Hu, F., 1457 - C0019
- Hu, F., **3652** - A0336
- Hu, F., 1794 - B0109, 504 - B0011
- Hu, H., **4735** - B0236
- Hu, J., 3045 - A0016, 4502 - A0017
- Hu, J. Q., **2204** - A0373, 2245 - B0199
- Hu, J. Y., **1782** - B0097
- Hu, J., 3224 - B0323
- Hu, J., 4095 - B0220
- Hu, J., 2811 - B0229, 3123 - A0240
- Hu, J. Y., 2888 - C0185, 2889 - C0186
- Hu, J., 4567 - A0096
- Hu, L., **5779** - C0066
- Hu, M., 481 - A0341, **5147** - B0170
- Hu, M., 3596 - A0214
- Hu, M., 3105 - A0113, 4002 - A0127
- Hu, N., **2922** - C0219
- Hu, P., **3589** - A0206
- Hu, S., 379 - A0039
- Hu, V. H., 4685 - A0327
- Hu, W., 3734 - B0081, **6121** - C0240
- Hu, W., **5483** - A0152
- Hu, X., 710 - C0305
- Hu, Y., 3712 - B0059, **5429** - A0098, 5968
- Hu, Y., 132 - B0046, 3079 - A0050
- Hu, Y., **175** - B0329, 1783 - B0098
- Hu, Y., 2534 - C0263, 6134 - C0253
- Hu, Y., 4329 - C0377
- Hu, Y., 5311 - C0244
- Hu, Z., **5254** - C0100
- Hu, Z., **1714** - A0235, 1939 - C0339, 3245 - B0344
- Hu, Z., 1925 - C0325
- Hua, A., **2445** - C0111
- Hua, N., 4128 - B0291
- Hua, X., 3314 - C0156
- Hua, X., 2844 - B0262
- Huang, A., **1134** - C0169, **1614**, 1653 - A0029, 3460, 4709 - B0133, 4719 - B0143, 5908 - C0195
- Huang, A. J., 3806 - C0033
- Huang, B., 4468
- Huang, C., **3558** - A0175
- Huang, C., 4916 - C0361
- Huang, C., **139** - B0053, 1796 - B0144, 2504 - C0208, 3857 - C0118
- Huang, D., 1971, 2119 - A0177, 2126 - A0184, 2620, 270 - C0171, 2824 - B0242, 2837 - B0255, 2842 - B0260, 2844 - B0262, 2849 - B0267, 2853 - B0271, 3333 - C0175, 3921, 3925, 5057 - B0008, 5058 - B0009, 5734 - C0021
- Huang, D., 5280 - C0126
- Huang, D., **2337** - B0326
- Huang, F., 753
- Huang, G., **1785** - B0100
- Huang, H., **3566** - A0183, 536 - B0151
- Huang, H., 1816 - B0277
- Huang, I., 5280 - C0126
- Huang, J., **4303** - C0277
- Huang, J., **5247** - B0360
- Huang, J., 5779 - C0066
- Huang, J., **955** - B0133
- Huang, J., 3712 - B0059
- Huang, J., **3403** - C0327
- Huang, L. C., **675** - C0233
- Huang, L., 4001 - A0126, 4095 - B0220, 581 - B0196
- Huang, L. C., **2237** - A0406
- Huang, L., 3820 - C0047, 3837 - C0064
- Huang, L., **1849** - C0153
- Huang, L., **362** - A0022
- Huang, L., 5782 - C0069
- Huang, M. J., **2904** - C0201
- Huang, N., **3890** - C0356, 4572 - A0101
- Huang, P., 2012, 3463, **5628** - A0347
- Huang, P., 430 - A0290
- Huang, P., 1550, 3460
- Huang, Q., 2515 - C0244, 2532 - C0261, 3544 - A0161
- Huang, S. J., 2486 - C0190
- Huang, S., **2499** - C0203
- Huang, S., **2452** - C0118
- Huang, T., 2534 - C0263
- Huang, T., 162 - B0076
- Huang, T. W., 3975, 3977
- Huang, W., 3820 - C0047
- Huang, W., 1523 - C0364, **1525** - C0366
- Huang, W., 2093 - A0151
- Huang, W., 5979
- Huang, X., **3741** - B0088
- Huang, X., 211 - C0022, 219 - C0030, 5312 - C0245
- Huang, X., **3172** - A0315
- Huang, X., 5299 - C0232
- Huang, X., 2323 - B0312
- Huang, X., 1113 - C0148
- Huang, X., 256 - C0115, **5680** - A0399, 5713 - A0432
- Huang, Y., 3007
- Huang, Y., **3669** - A0353
- Huang, Y., **2504** - C0208
- Huang, Y., 2248 - B0202
- Huang, Y., 3399 - C0323, 3401 - C0325
- Huang, Z., 2571
- Huarachi, D., 931 - B0109
- Hubatsch, D., 6109 - C0228
- Hubbard, G., 5355 - A0007
- Hubbell, W. L., 2354 - B0364
- Huber, B. R., 5512 - A0181
- Hubschman, J., 3153 - A0270, 3235 - B0334, 4283 - C0154, 4993, 5004 - A0075, 5712 - A0431
- Huckenpahler, A. L., 5829 - C0116
- Huckfeldt, R. M., **39** - A0070, 4208 - C0050
- Hudson, C., 1126 - C0161
- Hudson, N., **3469**
- Hudspeth, K., 5839 - C0126
- Huecker, J., 115 - B0029, 3025, 3788 - C0015
- Huelnhagen, T., 5877 - C0164
- Hufendiek, K., 5460 - A0129, **5643** - A0362
- Hufendiek, K., **5460** - A0129, 5643 - A0362
- Huffman, J. A., 4549 - A0064
- Huffman, K., 1192, **4458**, 4560 - A0089
- Hufnagel, R. B., 2331 - B0320, **2340** - B0329
- Hufnagel, T., 5778 - C0065
- Hughes, A., 4464
- Hughes, A., 3065 - A0036
- Hughes, B., 1386 - B0163
- Hughes, B., 2734 - B0113, 4802 - B0412, 6095 - C0214
- Hughes, P., 1904 - C0304
- Hughes, S., 1007 - B0261, **5039** - A0235, 5989
- Huh, M., 1406 - B0183
- Hui, F., 3028, **4443**
- Hui, Y., 3864 - C0125
- Huisingh, C., 2624, 5235 - B0348
- Huisingh, C. E., 2437 - C0103
- Huk, A., **3430**
- Huleihel, L., 2252 - B0206
- Hull, S., **2293** - B0247
- Hulleman, J. D., **4547** - A0062
- Hulliger, E., 1194
- Hulshof, M. C., 3627 - A0288
- Humans, 75 - A0122
- Humayun, M. S., 1997, 232 - C0043, 3976, 4457, 539 - B0154, 558 - B0173, 5669 - A0388, 5814 - C0101, 5835 - C0122, 5882 - C0169, 6177 - C0296, 82 - A0129
- Hummel, T., 1565
- Humphries, M. M., 1013 - B0267, 3505 - A0068
- Humphries, P., 1013 - B0267, 3505 - A0068
- Hung, B., 5028 - A0224
- Hung, J., 5536 - A0228
- Hung, L., 5043 - A0239, **688** - C0283, 689 - C0284
- Hung, P., 5910 - C0197
- Hung, S., 4578 - A0167
- Hunt, D., 5785 - C0072
- Hunt, D. M., **2328** - B0317, 970 - B0224
- Hunt Jr, A. J., **1872** - C0176
- Hunt, N., 1984
- Hunt, P., 5564 - A0256
- Hunt, S., 2708 - B0029
- Hunter, A., 1673 - A0194
- Hunter, D. D., 586 - B0201
- Hunter, D. G., 3037 - A0008, 5512 - A0181
- Hunter, J. J., 1155, 666 - C0224
- Hunter, M., 3370 - C0294, 3954
- Huntjens, B., 1112 - C0147, **1114** - C0149, 1446 - C0008
- Hunyor, A., 1461 - C0023, 330 - C0263, 840 - A0172
- Hunziker, W., 195 - C0006, 2363 - B0373, 3593 - A0211
- Huo, S., **4312** - C0286
- Huo, W., 3999 - A0124, 4038 - A0163, 5322 - C0255
- Hupy, M. L., **5633** - A0352
- Hura, A., **935** - B0113
- Hurley, J., 1492 - C0234, 2458 - C0124, 4507 - A0022, 988 - B0242
- Hurst, J., **5501** - A0170, 5683 - A0402, 5684 - A0403, 5931 - C0328
- Hurtenbach, C., 2382 - C0048, 2790 - B0208
- Hury, L., 645 - C0203
- Husain, D., 2619, **4944**, 4946, 580 - B0195
- Husain, R., 5124 - B0113, 5143 - B0166
- Husain, S., **1592**
- Huss, C., 3415 - C0339
- Hussain, F., 2215 - A0384, 4802 - B0412
- Hussain, R., 5258 - C0104
- Hussaindeen, J. R., 4146 - B0369
- Hussein, K., 1594
- Husseiny, R., 4568 - A0097
- Husvot, L., **2886** - B0304, 3922
- Hutcheon, A. E., 1369 - B0129, **2779** - B0233
- Hutcheson, G., **4372** - C0420
- Hutchings, N., 585 - B0200
- Hutfilz, A., 5855 - C0142, 6199 - C0353
- Hutnik, C. M., 2744 - B0123, 3461, 4718 - B0142
- Hutnik, C. M., 2665 - A0392, 4367 - C0415, 4778 - B0388, 479 - A0339
- Hutnik, K., 4969
- Huttmann, G., **300** - C0201
- Huttmann, G., 1440 - C0002, 4484, 672 - C0230
- Hutto, R., **988** - B0242
- Huynh, C., 1240 - A0081
- Huynh, N., **5639** - A0358
- Hwang, C. J., 5630 - A0349
- Hwang, C. K., **4620** - A0262
- Hwang, D. G., 1352 - B0112, 508 - B0015
- Hwang, E., **5402** - A0054
- Hwang, E., 5774 - C0061, 5780 - C0067
- Hwang, E. S., **4397** - C0445
- Hwang, E., 3969
- Hwang, H., 248 - C0107, 258 - C0117, **3274** - C0068
- Hwang, H., 4884 - C0329
- Hwang, H., 1371 - B0131, 6118 - C0237
- Hwang, J., 2933 - C0255, 4134 - B0297, **608** - B0280, 611 - B0283
- Hwang, J., 1370 - B0130
- Hwang, N., **2478** - C0144, 3987 - A0112
- Hwang, S., 2484 - C0150
- Hwang, S., 1553, **2828** - B0246
- Hwang, T. S., 2620, 2844 - B0262, 3921
- Hwang, Y., 945 - B0123
- Hwang, Y., **123** - B0307
- Hyde, C., 5016 - A0212, 5034 - A0230
- Hyde, D. R., 4602 - A0191, 594 - B0209, 991 - B0245, **992** - B0246
- Hyde, R. A., 846 - A0178
- Hyeck-Soo, S., 265 - C0124
- Hykin, P. G., **2569**
- Hyon, J., 4883 - C0328, 933 - B0111
- Hyrich, K., 171 - B0325
- Hysi, P. G., 1178, 1821 - B0282, 1826 - B0287, 1962, 3022, 775, 777, 781
- Hyung, S., 1886 - C0286
- Iaccheri, B., 881 - A0213
- Iacob, C., 3673 - A0357, 3694 - A0378, 4326 - C0300, 6188 - C0307
- Iafe, N., **4297** - C0271
- Iannaccone, A., 4045 - A0252, 5317 - C0250, **5410** - A0062
- Ibanez, P., 4276 - C0147
- Ibares-Frias, L., 4352 - C0400
- Ibarretxe, N., 4648 - A0290
- Ibrahim, A. S., 1594
- Ibrahim, D. G., **478** - A0338, 6146 - C0265
- Ibrahim, M., 48 - A0079
- Ibrahim, M. A., 788
- Ibrahim, M. M., 5681 - A0400
- Ibuki, H., 5073 - B0024
- Ichihashi, T., 1965, 4863 - C0308
- Ichikawa, K., 3337 - C0179, 3338 - C0180, **4419**
- Ichikawa, K., 2209 - A0378, 3251 - B0350, 3413 - C0337, 3790 - C0017, 5109 - B0098
- Ichikawa, M., 2717 - B0038
- Ichikawa-Shindo, Y., 4257 - C0128
- Ichinohasama, K., 5082 - B0033
- Ichinohe, S., 4184 - C0026
- Ichio, A., 3618 - A0236
- Iejima, D., 3751 - B0098
- Ieki, Y., 4116 - B0279
- Iesato, Y., 4257 - C0128
- Iester, M. M., 1913 - C0313, 4693 - A0335
- Iezzi, R., **864** - A0196
- Ifegwu, I., 4314 - C0288
- Itikhar, M., **30** - A0061, 45 - A0076, 825 - A0157
- Ifimia, N., 4640 - A0282, 5873 - C0160
- Igarashi, R., 4082 - B0077
- Igarashi, T., 1429 - B0348, 1519 - C0360, 4548 - A0063
- Igbinoba, R., **987** - B0241
- Igelman, A., 1460 - C0022

- Igelman, A. D., **6182 - C0301**
 Iglesias, A., **1827 - B0288**, 5136
 - B0159, 5144 - B0167, 700 -
 C0295
 Iglesias, B., **1447 - C0009**, 5482 -
 A0151
 Iglesias, E., 942 - B0120
 Iglesias, M., **1387 - B0164**
 Igllicki, M., 1956, 3443, **6001**
 Igllicky, M., 5331 - C0264
 Igo, R. P., 1178
 Igo, R. P., 1360 - B0120, 1428 -
 B0347, **4469**
 Iguchi, A., 1788 - B0103
 Ihalainen, T., 1189, 4579 - A0168
 Ihlenburg, C., 2275 - B0229
 Ii, A., 444 - A0304
 Iida, M., 253 - C0112
 Iida, T., 4949
 Iida, Y., 4280 - C0151, 4288 - C0159
 Iida-Miwa, Y., 4280 - C0151, 4288
 - C0159
 IIHTT Study Group, 725
 Iikawa, R., **4082 - B0077**
 Ikawa, M., 890 - A0279
 Ikeda, S., 2145 - A0279, 677 - C0272
 Ikeda, T., 1459 - C0021
 Ikeda, T., 2485 - C0189, 4263 - C0134,
 4881 - C0326
 Ikeda, Y., 21 - A0052, 33 - A0064,
 3410 - C0334, 4290 - C0161,
 5376 - A0028, 863 - A0195
 Ikeda, Y., 2128 - A0186, **2912 - C0209**,
 4085 - B0080, 484 - A0344
 Ikeda, Y., 3506 - A0069
 Ikram, A., 2567
 Ikuno, Y., 2019 - A0046, 3249 - B0348
 Ilango, M., **3376 - C0300**
 Ilmarinen, T., 2281 - B0235, 3861
 - C0122, 4579 - A0168, **538 -**
B0153, 5685 - A0404
 Iltis, J., 860 - A0192
 Iltis, J. M., **1240 - A0081**, 2705 -
 B0026
 Im, M., 4554 - A0083
 Im, S., 3821 - C0048
 Imaging & Informatics in Retinopathy
 of Prematurity (i-ROP), 2764 -
 B0143, 2767 - B0146, 3938
 Imaging & Informatics in Retinopathy
 of Prematurity (i-ROP) research
 consortium, 2755 - B0134, 2772 -
 B0151, 2782 - B0161, 3937
 Imaging and Informatics in
 Retinopathy of Prematurity
 (i-ROP) Research Consortium,
 2761 - B0140
 Imai, A., 4394 - C0442
 Imai, H., 852 - A0184
 Imai, K., 2128 - A0186, **4085 - B0080**,
 484 - A0344
 Imai, S., 4714 - B0138
 Imam, A., 3961
 Imam, F., 3118 - A0126
 Imami, N., 2049 - A0107
 Imamura, Y., 4273 - C0144, 855 -
 A0187
 Imanaka, T., 4874 - C0319
 Imaohji, H., 3688 - A0372
 Imazeki, M., **5582 - A0301**
 Imhof, S., **512 - B0019**, 5380 - A0032
 Impagnatiello, F., **4707 - B0131**
 Imperial College Ophthalmic Research
 Group (ICORG), 4189 - C0031
 Imperial College Ophthalmology
 Research Group (ICORG), 2047
 - A0105
 In 't Veld, E., 6095 - C0214
 Inaba, T., **690 - C0285**
 Inaba, T., 336 - C0269
 Inada, M., 319 - C0252, **3206 - B0206**,
 4927 - C0372
 Inafuku, S., 3945
 Inagaki, K., 6199 - C0353
 Inagaki, S., **3751 - B0098**, 6129 -
 C0248
 Inamdar, S., 2348 - B0358
 Inao, Y., 296 - C0197
 Inatani, M., 2064 - A0122, 2075 -
 A0133, 4851 - C0209, 4852
 - C0210, 4853 - C0211, 5145
 - B0168
 Inatomi, T., **1308 - B0015**, 3775 -
 C0002
 Inbal, A., 375 - A0035
 Inchauspe, S., 4250 - C0092
 Inga, M., **4161 - C0003**
 Ingels, J., 3018
 Inger, H. E., 4141 - B0304
 Ingolotti, M., 1522 - C0363, 2816 -
 B0234
 Inigo-Portugues, A., 3309 - C0151
 Inoda, S., 1730 - A0251, 350 - A0010
 Inomata, T., 3307 - C0149, 3308
 - C0150, 3326 - C0168, **943 -**
B0121
 Inooka, D., 25 - A0056, **27 - A0058**,
 5529 - A0221
 Inoue, H., 296 - C0197
 Inoue, M., 1687 - A0208, 848 - A0180
 Inoue, R., 3042 - A0013
 Inoue, R., 1459 - C0021
 Inoue, T., 4714 - B0138
 Inoue, T., 29 - A0060, 3089 - A0060,
 3753 - B0168, 4227 - C0069,
 4295 - C0166, 4382 - C0430,
 53 - A0084
 Inoue, Y., 102 - A0265
 Inoue, Y., 350 - A0010
 Inoue, Y., 2753 - B0132
 Inoue, Y., 5430 - A0099, 6129 - C0248
 Institut de la Rétine CHU Nantes,
 5933 - C0330
 Institute, 1344 - B0051
 Instituto de Oftalmología. Tecnológico
 de Monterrey, 4799 - B0409
 Interdonato, A., 1164
 International Retina Group, 1956, 3443
 Inuzuka, H., 462 - A0322
 Invernizzi, A., **3253 - B0352**, 330 -
 C0263, 3443, 49 - A0080
 INVeST, 1695 - A0216
 Inzerillo, D., 3606 - A0224
 Ioannidis, S., 2764 - B0143, 2767
 - B0146, 2772 - B0151, 2782
 - B0161, 3766 - B0181, 3936,
 3937, 3938
 Iomini, C., 2243 - B0197, 3449
 Iordachita, I., 5926 - C0323
 Iovino, C., **665 - C0223**
 Ip, M. S., 1568, 1680 - A0201, 1914
 - C0314, 1939 - C0339, 213
 - C0024, 2401 - C0067, 2426
 - C0092, 3143 - A0260, 3247
 - B0346, 3898 - C0364, 3899 -
 C0365, 4991, **5971**
 Ipek, T., 3303 - C0097, **3819 - C0046**
 Iqbal, O., **4872 - C0317**
 IRD study group, 5404 - A0056
 Iribarren, G., 6107 - C0226
 Irlmeier, R. T., 3806 - C0033
 Iros, M., 5945 - C0342
 Irsch, K., 5812 - C0099
 Irvine, A., 3175 - A0318
 Irvine, J., 4686 - A0328
 Irving, E. L., 1083 - C0096, **2964 -**
C0286, 705 - C0300
 Irwin, K., **577 - B0192**, 589 - B0204,
 593 - B0208
 Irwin, S., 4108 - B0233
 Isaac, M., **3762 - B0177**
 Isaacoff, E., 4302 - C0276
 Isanta, C., 1913 - C0313
 Isard, P., 4705 - B0129
 Isard, P., **5049 - A0245**
 Isaza, G., 5225 - B0338
 Iseda, H., 957 - B0135
 Iselin, K. C., **4386 - C0434**
 Ishibashi, T., **5132 - B0121**
 Ishibashi, T., 1426 - B0345, 33
 - A0064, 4003 - A0128, 4290 -
 C0161, 4949, 863 - A0195
 Ishibazawa, A., 2814 - B0232
 Ishida, A., 3585 - A0202
 Ishida, H., 125 - B0039, 3797 - C0024,
 444 - A0304, 5636 - A0355
 Ishida, K., 3610 - A0228
 Ishida, M., 4273 - C0144, 855 - A0187
 Ishida, S., 2519 - C0248, 5372 -
 A0024, 56 - A0103
 Ishida, W., 120 - B0034
 Ishida, Y., 2829 - B0247
 Ishihara, A., **1873 - C0177**
 Ishihara, K., 1565, 24 - A0055, 769
 Ishihara, T., 4331 - C0379
 Ishii, H., 5073 - B0024
 Ishii, H., 4382 - C0430
 Ishii, M., 1982
 Ishii, M., 5289 - C0222
 Ishikawa, H., 1248 -
 A0089, **1615, 1672 - A0193**, 1682
 - A0203, 2032 - A0059, 2096
 - A0154, 2103 - A0161, 2111
 - A0169, 2113 - A0171, 3412
 - C0336, 3501, 4076 - B0071,
 5077 - B0028
 Ishikawa, H., **3343 - C0225**, 4233 -
 C0075
 Ishikawa, H., 3343 - C0225
 Ishikawa, K., 4036 - A0161, 4290 -
 C0161, **5376 - A0028**, 65 - A0112
 Ishikawa, S., **5735 - C0022**
 Ishiko, S., 2814 - B0232
 Ishikura, M., 2848 - B0266, 4274 -
 C0145, **4625 - A0267**
 Ishimura, M. E., 1452 - C0014
 Ishizaki, Y., 1500 - C0242
 Isidor, B., 38 - A0069, 47 - A0078
 Iskander, D., 1700 - A0221, 1746
 - B0061, 1749 - B0064, 2020
 - A0047, 2110 - A0168, 5797
 - C0084, 5798 - C0085, **5891**
 - **C0178**
 Islam, M., **3233 - B0332**
 Islam, M., 1314 - B0021, **4361 -**
C0409, 526 - B0141
 Islam, M., 3452
 Islamaj, E., **2072 - A0130**, 2907 -
 C0204
 Ismail, D., 5572 - A0264, 934 - B0112
 Ismail, M. B., 4183 - C0025
 Ismail, R., **801 - A0133**
 Isobe, Y., 4331 - C0379
 Isogai, N., 1688 - A0209, 2209 -
 A0378, 5872 - C0159
 Israel, L., 3872 - C0133
 Issar, T., 1811 - B0159
 Issarti, I., **5810 - C0097**
 Itakura, T., **4724 - B0148**
 Ito, H., 5262 - C0108
 Ito, K., 1688 - A0209, **5872 - C0159**
 Ito, M., 319 - C0252, 4925 -
 C0370, **4927 - C0372**, 5554
 - A0246
 Ito, M., 2338 - B0327
 Ito, Y., 27 - A0058, 2827 - B0245,
 302 - C0235, **5262 - C0108**,
 823 - A0155
 Ito, Y., **848 - A0180**
 Itoh, K., 4884 - C0329
 Itoi, M., **3775 - C0002**
 Itokawa, T., 3685 - A0369, 4896 -
 C0341, 5465 - A0134
 Itou, M., 3206 - B0206
 Itthipanichpong, R., **3910**
 Itty, S., 739
 Iuvone, P., 3580 - A0197, 4014 -
 A0139, 5044 - A0240, 5045
 - A0241, 5048 - A0244, 5355 -
 A0007, 750, 8, 969 - B0223
 Ivakhnitskaia, E., **3284 - C0078**
 Ivan, M., 765
 Ivanchenko, D., **5792 - C0079**
 Ivanov, D. V., 2490 - C0194, 4552
 - A0067, 5493 - A0162, 552 -
 B0167
 Ivarsen, A., 4395 - C0443, 5761 -
 C0048
 Ivert, L., 6061 - A0190
 Iwabe, S., 4522 - A0037, 4527 -
 A0042, 6006
 Iwabuchi, S., **4262 - C0133**
 Iwagami, M., 943 - B0121
 Iwamoto, N., 5682 - A0401
 Iwamoto, S., 344 - A0004, 493 -
 A0353, **5574 - A0266**
 Iwamura, R., 2717 - B0038, 2718 -
 B0039
 Iwanishi, H., 2626 - A0131, **2637 -**
A0142, 3337 - C0179, 4353
 - C0401
 Iwasaki, K., 2064 - A0122, **2075 -**
A0133
 Iwasaki, N., 4233 - C0075
 Iwasaki, T., 2926 - C0223, 3256 -
 B0355, 3679 - A0363
 Iwase, A., 2124 - A0182, 4054 - B0049,
 6031, 6032, 6082 - C0201
 Iwase, T., **2827 - B0245**, 302 - C0235,
 3194 - B0194, 3195 - B0195,
 5307 - C0240
 Iwata, A., 1229 - A0070, 1233 - A0074,
 1235 - A0076
 Iwata, A., **435 - A0295**
 Iwata, T., 1429 - B0348, 1430 - B0349,
 1431 - B0350, 1432 - B0351,
 3751 - B0098, 4494 - A0009,
 5659 - A0378, 6076 - A0205
 Iwata, W., 478 - A0338
 Iwersen, M., 3612 - A0230
 IWOS Study Group, 4191 - C0033
 Iyengar, R., 2510 - C0214
 Iyengar, S. K., 1360 - B0120, **1428 -**
B0347, 4469
 Iyer, P., **5600 - A0319**
 Iyer, R. M., 1893 - C0293
 Iyer, R., 5740 - C0027
 Izabel Tentes Cortes, M., 4044 - A0251
 Izatt, J., 285 - C0186, 288 - C0189
 Izatt, J. A., 1318 - B0025, 1342 -
 B0049, 1347 - B0054, 2195
 - A0364, 273 - C0174, 284
 - C0185, 3920, 5741 - C0028,
 5869 - C0156
 Izawa, H., 4163 - C0005, 4192 - C0034
 Izquierdo, J., 2021 - A0048
 Izquierdo, L., 1399 - B0176, 2021
 - A0048, 4761 - B0262, 949 -
 B0127
 Izsvak, Z., 223 - C0034
- J**
 J-CREST (Japan Clinical Retina Study
 Group), 4233 - C0075
 J-CREST Group, 1057 - B0368, 1895
 - C0295, 2301 - B0255, 2306 -
 B0260, 2311 - B0265
 J-CRESTgroup, 2310 - B0264
 J.K. Wyles, E., 3805 - C0032
 Jabari, M., 2509 - C0213, 3695 -
 B0042
 Jabbari, J., 4578 - A0167
 Jabbour, P., 1646 - A0022
 Jaber, V., 3016
 Jablonski, M., 3018, 5160 - B0183
 Jablonski, M. M., 3174 - A0317, 3183 -
 A0326, **5681 - A0400**
 Jabs, D. A., 417 - A0235, **5564 - A0256**
 Jaccard, N., 2080 - A0138
 Jackman, C., 59 - A0106
 Jackson, A., 4969, 5316 - C0249
 Jackson, C. J., 3865 - C0126, **3884**
 - **C0145**
 Jackson, C., 629 - C0059
 Jackson, D. C., 2994
 Jackson, E., 1602
 Jackson, L., 973 - B0227
 Jackson, M., 3913
 Jackson, M., 560 - B0175
 Jackson, S., 5618 - A0337
 Jackson, T. L., 4561 - A0090
 Jackson, W., **1472 - C0034**
 Jackson-Atogi, M., 284 - C0185, 3920,
 5741 - C0028
 Jacobi, C., 3304 - C0098, **4869 -**
C0314
 Jacobs, R. J., 1076 - C0089
 Jacobson, N., 1046 - B0357
 Jacobson, R. D., 211 - C0022, **219 -**
C0030, 5312 - C0245
 Jacobson, S. G., **339**, 4488 - A0003,
 4522 - A0037, 4527 - A0042,
 6006
 Jacoby, J., 3000
 Jaddoe, V., 2136 - A0270
 Jadera, R., 3003, 3005, 4024 -
 A0149, **5381 - A0033**, 5486
 - A0155
 Jaedicke, V., 4633 - A0275
 Jaeger, C., 3490
 Jaepel, C., 2018 - A0045
 Jaffe, G., 4034 - A0159
 Jaffe, G. J., 1225, **1624**, 1839 - B0300,
 2461 - C0127, 2605, 3252
 - B0351, 417 - A0235, 4855 -
 C0213
 Jagannath, A., 5041 - A0237
 Jager, L., 543 - B0158
 Jager, M. J., 3627 - A0288, 3633 -
 A0294, **4409**, 6142 - C0261
 Jahn, A., 5767 - C0054
 Jahn, W., 3553 - A0170
 Jaillon, F., 291 - C0192
 Jain, A., **4721 - B0145**
 Jain, N., 2526 - C0255
 Jain, N., 5355 - A0007
 Jain, S., 3287 - C0081, 3292 - C0086,
 3293 - C0087, **4873 - C0318**
 Jain, S., 387 - A0087
 Jain, S., 5366 - A0018
 Jain, V., 1866 - C0170, **1867 - C0171**,
 1868 - C0172
 Jaishankar, D., 4931
 Jaiswal, A., **1067 - C0080**
 Jakob, A., 4483
 Jakobs, T. C., 2008, 3735 - B0082,
 3737 - B0084, 3745 - B0092
 Jakobsen, D. B., 2376 - C0042, 3255
 - B0354
 Jakobsen, K., 5184 - B0207, 5185 -
 B0208
 Jakobsson, G., 5267 - C0113
 Jalali, J., 5728 - C0015
 Jalbert, I., 6156 - C0275
 Jalili, J., 310 - C0243
 Jalilian, I., 1398 - B0175, **4369 -**
C0417, 524 - B0139
 Jamal, K., 2398 - C0064
 Jamali, A., 136 - B0050, 138 - B0052,
 1670 - A0191, 2244 - B0198,
 3315 - C0157, **3321 - C0163**,
 3327 - C0169, 3340 - C0182,
 4889 - C0334
 Jamali, N., **5487 - A0156**
 James, A., **323 - C0256**
 James, D., 5483 - A0152
 Jamieson, M., 3028
 Jamieson, R., 5393 - A0045
 Jamieson, R. V., 49 - A0080, 5411 -
 A0063
 Jamison, J. A., 5525 - A0217
 Jammal, A., **5101 - B0090**

- Jammal, A. A., 1996, 4062 - B0057, 4985, 5113 - B0102
- Jamshidi, F., **5416 - A0068**
- Jan, C., 1601, 3397 - C0321, **3398 - C0322**
- Jan, N., 1216
- Jana, S., 1674 - A0195
- Janet, B., 4335 - C0383
- Jang, B. K., 2875 - B0293, 2877 - B0295, 3876 - C0137
- Jang, E., 133 - B0047
- Jang, G., 3514 - A0077, **354 - A0014**
- Jang, H., 1117 - C0152, 360 - A0020
- Jang, I., 2690 - B0011
- Jang, I., 2100 - A0158
- Jang, J., 4228 - C0070
- Jang, J., 2242 - B0196
- Jang, M., **5436 - A0105**
- Janga, S. R., 2286 - B0240, 2672 - A0399, 3305 - C0099, 4909 - C0354, 5677 - A0396
- Jangamreddy, J., 3452
- Janicot, M., **236 - C0047**, 5702 - A0421
- Janjic, N., 5540 - A0232
- Janowski, M., 704 - C0299
- Jansen, M., 3673 - A0357, 3694 - A0378, **6188 - C0307**
- Jansonius, N. M., 1814 - B0275, 2117 - A0175, 3703 - B0050, 3747 - B0094
- Januleviciene, I., 2109 - A0167, 2631 - A0136, 5063 - B0014
- Januschowski, K., 5931 - C0328
- Janusz, J., 2719 - B0040
- Janz, R., 1872 - C0176
- Jaouni, T., 77 - A0124
- Japan Exfoliation Syndrome Genetics Consortium, 5145 - B0168
- Japanese Retina and Vitreous Society Registry Committee, 1834 - B0295
- Japiassu, R. M., 5921 - C0318
- Jaramillo, L., 2231 - A0400
- Jarc-Vidmar, M., 2185 - A0354
- Jardi, F., 4918 - C0363
- Jarocki, M., 1630 - A0006
- Jaros, R., 4136 - B0299
- Jarosz, J., **255 - C0114**
- Jarrar, Z., **4073 - B0068**
- Jarraya, M., 5008 - A0079
- Jarrett, P. K., 245 - C0056, **3465**
- Jarrett, T., 245 - C0056, 3465
- Jarry, J., 3908
- Jarry, Z., 4677 - A0319
- Jarstad, J., 1413 - B0190
- Jarvinen, T., 5477 - A0146
- Järvinen, T. A., 5474 - A0143
- Jasani, K., 6060 - A0189
- Jasani, K. M., **1530 - C0371**
- Jasek, M. C., 2662 - A0389
- Jasien, J. V., **3023**
- Jaskulski, M. T., **2152 - A0286**
- Jasti, S., 249 - C0108
- Jastrzebska, B., **369 - A0029**
- Jauregui, R., **51 - A0082**
- Javaheri, M., 400 - A0100
- Jaworski, C., 5382 - A0034
- Jay, G., 3827 - C0054
- Jayadev, C., 4681 - A0323
- Jayagopal, A., 2448 - C0114, 3260 - B0359
- Jayantha, G., 2363 - B0373
- Jayapal, J., **5360 - A0012**
- Jayaram, H., 3697 - B0044, 3698 - B0045, **3738 - B0085**, 3740 - B0087
- Jayaundera, T., 1433 - B0352, 4854 - C0212
- Jayyosi, C., 748
- Jean, Y., 2572
- Jeanne, M., 2432 - C0098, 4590 - A0179
- Jee, K., **2570**
- Jefferies, H., 1593
- Jeffrey, B., 599 - B0271
- Jegal, U., **3322 - C0164**, 5700 - A0419
- Jehangir, N., 2175 - A0344
- Jelin, E., **804 - A0136**
- Jelino, S., **2766 - B0145**
- Jeng-Miller, K., 5697 - A0416
- Jenkins, A., 1893 - C0293
- Jenkins, D., 3143 - A0260
- Jenkins, H. M., 2314 - B0268
- Jenkins, K., 408 - A0226
- Jenkins, M., 745
- Jennelle, R., 3623 - A0284, 3625 - A0286
- Jennifer, C. N., 2427 - C0093, 2756 - B0135, 2760 - B0139, 3767 - B0182, 5540 - A0232
- Jennings, D., 3026
- Jensen, A., 2774 - B0153, 2779 - B0158
- Jensen, J., **114 - A0277**, 447 - A0307, 94 - A0257
- Jensen, O. E., 3263 - B0362
- Jensen, P., **5288 - C0221**
- Jensson, M., 5283 - C0216
- Jenu Chudgbuk National University Study Group, 1838 - B0299
- Jeon, H., 2171 - A0340, 5200 - B0313
- Jeon, H., 4883 - C0328, 933 - B0111
- Jeon, N., 1635 - A0011, **3267 - B0366**
- Jeon, S., 3832 - C0059
- Jeong, A., 4058 - B0053
- Jeong, H., 3290 - C0084, 3821 - C0048
- Jeong, K., 1635 - A0011
- Jeong, S., 3855 - C0116
- Jeong, W., 247 - C0106, 5426 - A0095, 5700 - A0419
- Jeong, Y., 853 - A0185
- Jeoung, J., 2033 - A0060, 2098 - A0156, 2105 - A0163, 2685 - B0006, 4086 - B0081
- Jeoung, S., 1414 - B0191, 2698 - B0019
- Jeppesen, S. K., **5431 - A0100**
- Jergensen, T., 1240 - A0081, 860 - A0192
- Jerkins, G., 918 - B0096
- Jessen, Z., 3000
- Jester, J. V., 3274 - C0068, 3831 - C0058
- Jesus, D., 5891 - C0178
- Jeung, J., 1371 - B0131
- Jeyarajan, S., **3043 - A0014**
- Jha, A., 1568
- Jha, K., **2501 - C0205**, 554 - B0169
- Jhanji, V., **127 - B0041**, 2283 - B0237, 4402 - C0450
- Ji, H., 980 - B0234
- Ji, J., 1925 - C0325
- Ji, M. H., 2765 - B0144, 3755 - B0170, **3756 - B0171**
- Ji, M., **2014**
- Ji, S., **6111 - C0230**
- Ji, W., 3864 - C0125
- Ji, X., 5022 - A0218, **5206 - B0319**
- Ji, X., **2464 - C0130**, 3960, 4026 - A0151
- Ji, Y., 3266 - B0365
- Ji, Y., **4228 - C0070**
- Jia, C., 532 - B0147
- Jia, H., 6046 - A0080
- Jia, L., 4222 - C0064
- Jia, M., **4602 - A0191**
- Jia, R., 5985
- Jia, W., 5259 - C0105
- Jia, X., 3752 - B0099
- Jia, Y., 1971, 2620, 2842 - B0260, 2844 - B0262, 2849 - B0267, 2853 - B0271, 3333 - C0175, 3921, 3925, 5057 - B0008, 5058 - B0009
- Jia, Y., **5019 - A0215**
- Jia, Y., **2999**, 6148 - C0267
- Jian, Y., 1221, 1972, 2865 - B0283
- Jiang, A., **1920 - C0320**, 1930 - C0330
- Jiang, B., 2981
- Jiang, C., 359 - A0019
- Jiang, C., 575 - B0190
- Jiang, C., 1676 - A0197, **5233 - B0346**
- Jiang, D., **2486 - C0190**
- Jiang, D., 2597
- Jiang, H., 385 - A0045
- Jiang, H., 1102 - C0137, 1124 - C0159, 4902 - C0347, 5994, 618 - B0290, **721**
- Jiang, J., 1607
- Jiang, J., 1030 - B0314
- Jiang, J., **1744 - B0059**, 909 - B0087
- Jiang, K., 6063 - A0192
- Jiang, L., **2220 - A0389**
- Jiang, L., 463 - A0323
- Jiang, L., **3350 - C0232**
- Jiang, L., 1578
- Jiang, M., **539 - B0154**
- Jiang, N., 365 - A0025
- Jiang, P., 568 - B0183
- Jiang, S., 2440 - C0106
- Jiang, T., **3864 - C0125**
- Jiang, T., 1457 - C0019, 1499 - C0241, **3091 - A0062**
- Jiang, X., 3979 - A0104
- Jiang, X., 2145 - A0279, 677 - C0272
- Jiang, X., 4051 - A0258, 5962, **655 - C0213**
- Jiang, X., 1597, 1812 - B0273, 1924 - C0324, 1935 - C0335, 2725 - B0104, 4075 - B0070, 5180 - B0203, 5187 - B0210, 739, **778**
- Jiang, Y., **1323 - B0030**
- Jiang, Y., 1897 - C0297
- Jiang, Y., **5472 - A0141**
- Jiang, Y., 3633 - A0294, 880 - A0212
- Jiang, Y., **3540 - A0157**, 3541 - A0158, 3547 - A0164
- Jiang, Y., **2730 - B0109**
- Jiang, Y., **1636 - A0012**, 692 - C0287
- Jiang, Z., 4502 - A0017
- Jiao, C., 5657 - A0376
- Jiao, H., 4604 - A0193
- Jiao, X., 2932 - C0254
- Jiao, Y., **1551**, 6046 - A0080
- Jiawan, D., 5917 - C0314
- Jie, M., **1053 - B0364**
- Jimenez, A., 2634 - A0139, 5567 - A0259, **925 - B0103**
- Jimenez, J., 3381 - C0305, 5198 - B0311
- Jiménez, J. R., 5188 - B0211
- Jimenez Roman, J., 2065 - A0123, 2068 - A0126, 485 - A0345
- Jimenez-Chaidez, S., 5151 - B0174
- Jimenez-Collado, D., 351 - A0011, **5151 - B0174**
- Jimenez-Corona, A., 1343 - B0050, 1570, 3793 - C0020, **4100 - B0225**, 5752 - C0039, 6155 - C0274
- Jimenez-Sierra, J., 1844 - B0305
- Jimenez-Villar, A., 279 - C0180
- Jim, C., 3093 - A0064, **4576 - A0165**, 5644 - A0363
- Jim, E., **3773 - B0188**
- Jim, H., 3772 - B0187, 5928 - C0325
- Jim, J., 4125 - B0288
- Jim, K., 4927 - C0372
- Jim, L., **4011 - A0136**
- Jim, L., 247 - C0106
- Jim, M., 4516 - A0031
- Jim, N., 2585
- Jim, Q., **5134 - B0123**
- Jim, R., 3836 - C0063, 3838 - C0065
- Jim, S., 247 - C0106
- Jim, Y., 1337 - B0044, 2684 - B0005, **5181 - B0204**, 5215 - B0328
- Jim, Y., **2037 - A0064**
- Jin, Z., 2323 - B0312, 2983, 3072 - A0043, 4471, 4629 - A0271, 569 - B0184
- Jing, R., 1603, 1605, **5632 - A0351**
- Jing, Y., 5878 - C0166
- Jing, Z., 5124 - B0113
- Jing, Z., **2916 - C0213**
- Jinno, A., **1669 - A0190**
- Jiri Eye Study, 2724 - B0103
- Jittayasothorn, Y., 2535 - C0264, 2542 - C0271, 2547 - C0276
- Jizhang, Y., 2178 - A0347
- Jnawali, A., **5528 - A0220**
- Jo, D., **1635 - A0011**
- Joachim, N., **6012**
- Joachim, S. C., 1630 - A0006, 3202 - B0202, 3709 - B0056, 3727 - B0074, 4439, 4500 - A0015, 5501 - A0170, **6144 - C0263**
- Joachimsthaler, A., 4441
- Jobling, A. L., 3696 - B0043, **5379 - A0031**, 6080 - A0209
- Jochner, M., **4593 - A0182**
- Jodelka, F., 4523 - A0038
- Joe, A., 5014 - A0210
- Joe, M., 4528 - A0043
- Joe, S., 3246 - B0345
- Johannesson, G., 5055 - B0006
- Johansson, J. K., **1189**
- Johar, K., **5326 - C0259**
- John, J., 5787 - C0074
- John, S. W., 3018, 4497 - A0012, 4700 - B0124, 5158 - B0181, 6135 - C0254
- Johnen, S., 223 - C0034, 4566 - A0095, 4570 - A0099
- Johnson, A., 1292 - A0327, 643 - C0073
- Johnson, A., 4584 - A0173
- Johnson, A., 4342 - C0390, 4355 - C0403
- Johnson, C. A., 3025, 6030, 6033
- Johnson, C., 6087 - C0206, **6088 - C0207**, 6096 - C0215
- Johnson, C., 1563
- Johnson, D., 5839 - C0126
- Johnson, E. C., 1879 - C0183, 3697 - B0044, 3698 - B0045, 3707 - B0054, 3738 - B0085, 3740 - B0087, 5819 - C0106
- Johnson, E., 5542 - A0234
- Johnson, E. E., 327 - C0260
- Johnson, H., 3579 - A0196
- Johnson, J. R., 4951
- Johnson, K., 4217 - C0059
- Johnson, K., 2818 - B0236
- Johnson, M., **2041 - A0068**
- Johnson, M. W., 5444 - A0113
- Johnson, M. P., 1039 - B0350, 1829 - B0290, 2724 - B0103, **5893 - C0180**
- Johnson, N. A., 4330 - C0378
- Johnson, S., 115 - B0029, 3788 - C0015
- Johnson, T. V., **2738 - B0117**
- Johnson, W. M., 5161 - B0184
- Johnson, Z., 3715 - B0062
- Johnson-Tong, L., 921 - B0099
- Johnston, J. M., 3023
- Johnston, J., **166 - B0320**
- Johnston, T., 3579 - A0196
- Johnstone, M. A., **5907 - C0194**
- Jolitkov, K., 4854 - C0212
- Jolly, J., 1698 - A0219, 3897 - C0363
- Jolly, J. K., 1195, 1268 - A0303, 5509 - A0178, 6060 - A0189
- Jolly, N., 5168 - B0191
- Jolitkov, K., 1890 - C0290
- Joly, F., 1566, 3895 - C0361
- Joly, S., **3583 - A0200**, 5297 - C0230, 5522 - A0214
- Jonas, J. B., 1817 - B0278, 2031 - A0058, 2037 - A0064, 2038 - A0065, 2722 - B0101, 2723 - B0102, 3373 - C0297, 3499, 4081 - B0076, **950 - B0128**
- Jonas, K., 2748 - B0127, 2750 - B0129, 2761 - B0140, 2762 - B0141, 2780 - B0159, 3758 - B0173, 888 - A0220
- Jones, A., 346 - A0006
- Jones, B. W., 1212, 3018, 5990, 6024
- Jones, C., 3230 - B0329
- Jones, C., **4908 - C0353**
- Jones, D. P., 4013 - A0138
- Jones, E., 5419 - A0071
- Jones, G., 1341 - B0048
- Jones, K., 1300 - B0007, 2895 - C0192
- Jones, L., **465 - A0325**
- Jones, L. S., 2052 - A0110
- Jones, L., 1753 - B0068, 1770 - B0085, 3827 - C0054
- Jones, L. W., 3933, 4337 - C0385
- Jones, M. A., 3005, **4024 - A0149**, 5381 - A0033
- Jones, M., 1341 - B0048, 6008
- Jones, M., 5010 - A0081
- Jones, M. K., **574 - B0189**
- Jones, P., 1290 - A0325, 1673 - A0194, 3419 - C0343
- Jones, S., 3564 - A0181
- Jones, S., 4665 - A0307
- Jones, Y., 4587 - A0176
- Jones-Jordan, L. A., 3392 - C0316, 3403 - C0327, 4109 - B0234
- Jonet, L., 3092 - A0063, 388 - A0088
- Jong, H. D., 1507 - C0348
- Jong, M., 137 - B0051, 1776 - B0091, 1789 - B0104, **1791 - B0106**, 1793 - B0108, 689 - C0284
- Jongrak, S., 2082 - A0140
- Jonnal, R. S., 295 - C0196
- Jönsson, B. A., 1690 - A0211
- Jonsson, F., 19 - A0050, 5413 - A0065
- Jonuschait, S., 4865 - C0310
- Joo, A., **1695 - A0216**
- Joo, C., 1810 - B0158, 2921 - C0218, **3578 - A0195**
- Joo, J., 5823 - C0110
- Joo, K., **1430 - B0349**, 1431 - B0350, 1432 - B0351
- Joondeph, B. C., **413 - A0231**
- Joos, K. M., 1180, 286 - C0187, 4428
- Joesse, M., 4123 - B0286
- Jordaan-Kuip, C. P., 2072 - A0130
- Jordan, C., 5186 - B0209
- Jordan, D., 4326 - C0300
- Jordan, L., 3933
- Jordan, M. W., **5871 - C0158**
- Jordan, N., 2314 - B0268
- Jorgenson, E., 1179
- Jorstad, N., **1485 - C0227**
- Joseph, A., **1973**, 732
- Joseph, C., 3710 - B0057, **976 - B0230**, 979 - B0233
- Joseph, D., 1162
- Joseph, R., 240 - C0051
- Joseph Susaimanickam, P., 1985
- Joshi, V. S., **4677 - A0319**
- Josiah, S., 2714 - B0035
- Josiah, S. T., 2713 - B0034
- Jost, L., 391 - A0091
- Jost, R. M., 5796 - C0083, 5959
- Joubert, R., 4362 - C0410
- Joung, J., 5733 - C0020
- Jouvan, A. M., 423 - A0241
- Jovanovic, K., **3061 - A0032**
- Jovin, T. G., 5445 - A0114
- Joy, L. J., **3657 - A0341**
- Joye, A., **1697 - A0218**
- Jørgensen, M. E., 1055 - B0366
- Jorstad, Ø. K., 1441 - C0003, 2516 - C0245
- Ju, D., 1063 - C0076
- Ju, H., 3288 - C0082

- Ju, M., 1221, **1972**, 2865 - B0283
 Ju, R., 4001 - A0126, 4031 - A0156, 581 - B0196
 Ju, Y., **3305 - C0099**
 Juan, A., 402 - A0102
 Juberías Sánchez, J., 1901 - C0301, 2067 - A0125
 Jubran, R., 1638 - A0014, 1647 - A0023
 Juel, W. K., 1711 - A0232
 Juennemann, A. G., 1683 - A0204, 2273 - B0227, 4869 - C0314
 Juett, D., 2862 - B0280, 5062 - B0013
 Juhasz, E., **2949 - C0271**
 Jujo, T., 785, 870 - A0202
 Jumper, J. M., 5273 - C0119
 Jun, A., 1368 - B0128, 2922 - C0219, 2923 - C0220, **3918**
 Jun, B., 2369 - B0379, **3051 - A0022**
 Jun, G., 207 - C0018
 Jun, H., 3360 - C0242
 Jun, I., **3822 - C0049**
 Jun, R., 916 - B0094
 Jun Sang, P., **4882 - C0327**
 Junaid, N., 45 - A0076
 Juncal, V., **1955**
 Jung, B., **2403 - C0069**
 Jung, C., 2807 - B0225
 Jung, E., **1364 - B0124**, 1365 - B0125, 1969, 32 - A0063
 Jung, E., **1025 - B0309**, 2939 - C0261
 Jung, H., 3215 - B0314, **4638 - A0280**, 645 - C0203
 Jung, H., 5259 - C0105
 Jung, H., 2206 - A0375
 Jung, J., 3893 - C0359, 638 - C0068, **639 - C0069**
 Jung, J., 1020 - B0304, **2171 - A0340**, 5200 - B0313
 Jung, J. L., 169 - B0323, 2756 - B0135, 3767 - B0182
 Jung, J. J., 1512 - C0353, **2815 - B0233**, 2833 - B0251, 2864 - B0282, 2866 - B0284
 Jung, K., 386 - A0046
 Jung, M., 4433
 Jung, R., 545 - B0160
 Jung, S., **3069 - A0040**, 3289 - C0083
 Jung, S., 85 - A0248
 Jung, S., 1450 - C0012
 Jung, S., **5097 - B0086**
 Jung, S., **1451 - C0013**
 Jung, S., **5599 - A0318**
 Jung, S., **6064 - A0193**
 Jung, S., 1406 - B0183
 Junge, J., **631 - C0061**
 Junghans, B. M., **1287 - A0322**
 Junior, N. K., 150 - B0064
 Júnior, O. M., 390 - A0090, 5921 - C0318
 Junk, A. K., 483 - A0343
 Junker, B., 5460 - A0129
 Jurkunas, U. V., 1356 - B0116, 1359 - B0119, 2269 - B0223, **3917**, 4436, 5769 - C0056
 Jurkute, N., **3345 - C0227**
 Justice, A., 2662 - A0389
 Justice, M., 2597
 Justin, G., 2294 - B0248
 Justis, B. M., 4914 - C0359
 Jusuf, P., 3696 - B0043, 5992
 Jutley, G., 2047 - A0105
 Juturu, V., **2661 - A0388**
 Juul, E., 1055 - B0366
 Juzych, M. S., 2734 - B0113, 4107 - B0232, 4802 - B0412, 6095 - C0214
 Jylha, A., 5477 - A0146
- K
 K, M., 5139 - B0162
 Kaakour, A., **1638 - A0014**
 Kaalberg, E. E., 5657 - A0376
 Kaamiranta, K., **1588**, 2392 - C0058, 2455 - C0211, 313 - C0246
 Kabat, A., 1283 - A0318, 1284 - A0319
 Kabat, A. G., **905 - B0083**
 Kabra, M., 5148 - B0171
 Kaburaki, T., 4163 - C0005, 4164 - C0006, 4177 - C0019, 4191 - C0033, **4192 - C0034**, 5579 - A0298
 Kabuth, B., 672 - C0230
 Kacker, S., **1599**
 Kacz, L., 3826 - C0053
 Kadar, T., 2674 - A0401
 Kadasi, L., **112 - A0275**
 Kaden, T. R., **5278 - C0124**
 Kader, M. A., 5139 - B0162
 Kadhumi, A., **4123 - B0286**
 Kadosono, K., 1426 - B0345, 1834 - B0295
 Kador, P. F., 5511 - A0180
 Kadouri, D. E., 717
 Kady, N., 3002, **3045 - A0016**
 Kaehler, K., **1884 - C0188**
 Kafri, T., 5467 - A0136, 5469 - A0138
 Kaga, T., 3251 - B0350, 3790 - C0017
 Kageyama, Y., 3573 - A0190
 Kahana, A., 1142, 1144, **1147**, 2172 - A0341
 Kahle, N., 2982
 Kahn, E., 245 - C0056, 3465
 Kahook, M., 1242 - A0083
 Kahook, M. Y., 6106 - C0225
 Kai, D., 5003 - A0074
 Kaidonis, G., 3017, **5263 - C0109**
 Kaidzu, S., 3516 - A0079
 Kailasam, L., 4016 - A0141
 Kainz, V., 2515 - C0244, 2532 - C0261
 Kaiphe, H., 4007 - A0132
 Kaiser, P. K., 1960, 1961, 4950, 76 - A0123
 Kaiser, R., 6185 - C0304
 Kaizu, Y., 5356 - A0008, 65 - A0112
 Kaja, S., 236 - C0047, 2631 - A0136, **2673 - A0400**, 3204 - B0204, 3287 - C0081, 3526 - A0089
 Kaji, H., 5704 - A0423
 Kakazu, A. H., 2285 - B0239, **2369 - B0379**, 4368 - C0416
 Kakehashi, A., 1730 - A0251, 1804 - B0152, 3574 - A0191
 Kakiuchi, N., 1107 - C0142, 2132 - A0266, **276 - C0177**, 5265 - C0111
 Kakkasery, V., **1630 - A0006**
 Kakrana, A., 894 - A0283
 Kakuk, J., 2839 - B0257, 2840 - B0258
 Kakulavarapu, S., 1162
 Kala-Bhattacharjee, S., 2463 - C0129
 Kalaga, P., 5214 - B0327
 Kalaga, S., 2597
 Kalaiselvan, P., **1766 - B0081**
 Kalari, K. R., 4434
 Kalbag, N., 2707 - B0028
 Kalesnykas, G., 236 - C0047, 2631 - A0136, 2673 - A0400, 3204 - B0204, 3287 - C0081
 Kalhapure, R., 3852 - C0113
 Kaliki, S., 1634 - A0010
 Kalirai, H., 3184 - A0327, 3630 - A0291, 3647 - A0308, 4322 - C0296
 Kalitzeos, A., 4628 - A0270, 4630 - A0272, 669 - C0227
 Kallamata, E., 4937
 Kallman, A., **3105 - A0113**
 Kalloniatis, M., 1260 - A0295, 1267 - A0302, 1270 - A0305, 2081 - A0139, 2409 - C0075, **4083 - B0078**, 5247 - B0360
 Kalmann, R., 5585 - A0304
 Kalmodia, S., 107 - A0270, 3878 - C0139, 3881 - C0142, **3882 - C0143**
 Kalnitsky, J., 3313 - C0155
 Kalosza, B., 2307 - B0261
 Kalpadakis-Smith, A. V., **5960**
 Kalpathy-Cramer, J., 2762 - B0141, 2764 - B0143, **2767 - B0146**, 2772 - B0151, 2782 - B0161, 3766 - B0181, 3936, 3937, 3938
 Kalthof, B., 64 - A0111
 Kaluzhny, Y., **158 - B0072**
 Kaluzny, B., 279 - C0180
 Kalyam, K., 101 - A0264
 Kam, K., 127 - B0041, 2129 - A0263
 Kam, W., 4921 - C0366, 4924 - C0369, 4954
 Kamami-Levy, C. J., **5425 - A0094**
 Kamao, H., **5325 - C0258**
 Kamat, S., 4154 - B0377
 Kamath, A., 235 - C0046, 242 - C0053, 246 - C0057
 Kambhampati, S., 3470, **4422**, 4920 - C0365, 770
 Kamei, A., **2183 - A0352**
 Kamei, M., 1669 - A0190, 2813 - B0231, 2823 - B0241, 2829 - B0247, 4231 - C0073, 861 - A0193
 Kamei, T., 1668 - A0189, **2808 - B0226**
 Kammersman, M., 1977, 5046 - A0242
 Kameya, S., **1429 - B0348**, 1519 - C0360, 4548 - A0063
 Kamimura, D., 2519 - C0248
 Kamins, T., 3975, 3977
 Kaminski, L., 238 - C0049
 Kamio, H., 690 - C0285
 Kamiya, T., **3196 - B0196**
 Kamiyoshi, A., 4257 - C0128
 Kammer, J., 4428
 Kammer, R., **2134 - A0268**, 633 - C0063
 Kammerdeiner, L., 6090 - C0209
 kamo, J., 3410 - C0334
 Kamoshita, M., 2784 - B0163, 862 - A0194
 Kamphuis, S., 3492
 Kanagasasingam, Y., 1123 - C0158, 1693 - A0214, 1694 - A0215, 1707 - A0228
 Kanakamedala, A., 1044 - B0355
 Kanda, A., 2519 - C0248, 5372 - A0024, 56 - A0103
 Kanda, H., 1031 - B0315, 3891 - C0357, 4555 - A0084, 4557 - A0086, **4559 - A0088**, 4563 - A0092, 4688 - A0330
 Kanda, K., 4207 - C0049
 kanda, S., **4227 - C0069**
 Kandachar, V., 4977
 Kandel, H., 4145 - B0368, **4147 - B0370**
 Kane, S., 2904 - C0201
 Kane, S. A., 2681 - B0002
 Kane, T., 4628 - A0270
 Kaneko, H., 3751 - B0098, 6129 - C0248
 Kaneko, H., 1093 - C0128, 302 - C0235, 4218 - C0060, 5257 - C0103, 5262 - C0108, **5307 - C0240**, 5541 - A0233, 576 - B0191
 Kaneko, K., 833 - A0165
 Kaneko, K. N., **5439 - A0108**
 Kaneko, T., 4262 - C0133
 Kaneko, Y., 282 - C0183
 Kanenobu, C., 422 - A0240
 Kanesa-thasan, A., **1339 - B0046**
 Kanewska, A., **319 - C0252**
 Kang, B., 4365 - C0413
 Kang, B., 3296 - C0090
 Kang, E., 885 - A0217
 Kang, H., 1324 - B0031
 Kang, H., 1332 - B0039
 Kang, H., 5830 - C0117
 Kang, H., 2202 - A0371
 Kang, H., 2484 - C0150
 Kang, J. H., 5144 - B0167, 5544 - A0236
 Kang, J. M., **6102 - C0221**
 Kang, J., **3438**
 Kang, K., 2761 - B0140, **5726 - C0013**
 Kang, K., 1371 - B0131, 3069 - A0040, **6118 - C0237**
 Kang, M., **3397 - C0321**
 Kang, M., 3529 - A0092
 Kang, M., 2550 - C0279
 Kang, P., 2963 - C0285, **693 - C0288**
 Kang, Q., 372 - A0032
 Kang, S., 2484 - C0150
 Kang, S., 4742 - B0243, **5088 - B0039**
 Kang, S., 1005 - B0259, 5000 - A0071
 Kang, S., 3807 - C0034
 Kang, S., 4973
 Kang, T., 3289 - C0083
 Kang, Y., 4609 - A0198
 Kang-Mieler, J. J., 1926 - C0326, 3262 - B0361, **3265 - B0364**
 Kannan, M. A., 2318 - B0272
 Kannan, R., 2455 - C0121, 2457 - C0123, **4036 - A0161**
 Kanner, E., 447 - A0307
 Kanno, J., 5073 - B0024
 Kanokkaptapong, J., **5611 - A0330**, 5742 - C0029
 Kansal, V., **2060 - A0118**
 Kansara, V., 2532 - C0261, 3544 - A0161
 Kant, R., 2277 - B0231, 4363 - C0411
 Kantungane, A., 5029 - A0225
 Kantungane, L., 5017 - A0213
 Kanu, L., **880 - A0212**
 Kanwar, M., 2734 - B0113
 Kanwar, N., 1599
 Kanzaki, Y., 2882 - B0300, 4268 - C0139, 4269 - C0140, 5914 - C0311, 5915 - C0312, **670 - C0228**, 807 - A0139, 847 - A0179
 Kao, T., **1120 - C0155**
 Kao, W. W., **4329 - C0377**, 4419, 534 - B0149
 Kapiloff, M., 1484 - C0226, 6150 - C0269
 Kaplan, E., 2510 - C0214
 Kaplan, H. J., 2805 - B0223, 4011 - A0136, 729
 Kaplan, R., 1160, 1529 - C0370
 Kaplowitz, K., 3820 - C0047
 Kapoor, B., **412 - A0230**
 Kapoor, N., 6131 - C0250
 Kapoulea, V., 2579, **2664 - A0391**
 Kapphahn, R. J., 341 - A0001, 6025
 Kapupara, K., 2499 - C0203, **3346 - C0228**
 Kapusta, M., 3601 - A0219
 Kar, D., **2820 - B0238**
 Karageozian, H., 1465 - C0027
 Karageozian, H. L., 1960
 Karageozian, L., 1960
 Karageozian, V. H., 1465 - C0027, 1960
 Karaiskou, E., **5450 - A0119**
 Karakawa, A., 5579 - A0298
 Karamat, A. N., **2868 - B0286**
 Karamian, P., 31 - A0062, **5848 - C0135**
 Karamichos, K., 4328 - C0376, 742
 Karampelas, M., 4139 - B0302, **4286 - C0157**
 Karanjia, R., **3356 - C0238**, 3366 - C0248, 5017 - A0213, 5029 - A0225
 Karantonis, M., 4483
 Karas, F., 846 - A0178
 Karas, F. I., **2063 - A0121**
 Karas, R., 2168 - A0337
 Karasawa, Y., 319 - C0252, 4925 - C0370, 4927 - C0372, 5373 - A0025, 5554 - A0246
 Karasik, A., 1047 - B0358
 Karatsai, E., **4815 - C0173**
 Karcioglu, Z., 5606 - A0325
 Kardon, R. H., 1903 - C0303, 2186 - A0355, 2196 - A0365, 2197 - A0366, 620 - B0292
 Karim, S., 448 - A0308
 Karimi, S., 6153 - C0272
 Karl, M., 3103 - A0111
 Karl, M., 545 - B0160
 Karlen, S. J., 3941, 5822 - C0109
 Karlin, J., **2187 - A0356**
 Karlsson, R. A., 4658 - A0300
 Karlsson, R. A., **1690 - A0211**
 Karlstetter, M., 3203 - B0203, 3318 - C0160, 5390 - A0042, 5404 - A0056, 64 - A0111
 karnes, S., 2449 - C0115
 Karouta, C., **676 - C0271**, 754
 Karp, C., 3783 - C0010, 5730 - C0017
 Karsaliya, G., 1048 - B0359
 Karsolia, A., **1556**, 4112 - B0275
 Karst, S., 1927 - C0327, **6195 - C0349**, 741
 Karumbayaram, S., 3045 - A0016
 Karunathilake, N., 1087 - C0100
 Karvonen-Gutierrez, C., 4097 - B0222
 Kasaby, H., 2201 - A0370
 Kasahara, N., 3701 - B0048, 5085 - B0036, 5086 - B0037, 5121 - B0110, 5903 - C0190, **614 - B0286**
 Kasaragod, D., **2102 - A0160**
 Kaser-Eichberger, A., 308 - C0241, 317 - C0250, 3201 - B0201
 Kasetti, R., 3704 - B0051, 4728 - B0152, **6035**
 Kashani, A. H., 1724 - A0245, 1924 - C0324, 1969, 2835 - B0253, 2869 - B0287, 32 - A0063, 3205 - B0205, 4299 - C0273, 5669 - A0388, 5814 - C0101, 739, 82 - A0129
 Kashina, A., 2998
 Kashiwa, K., **2374 - C0040**
 Kashyap, R. K., 3064 - A0035
 Kasi, S., 4251 - C0093
 Kasiliani, M., 4628 - A0270
 Käsmann-Kellner, B., 2263 - B0217, 3870 - C0131
 Kasraie, N., 4901 - C0346, 929 - B0107
 Kass, M. A., 3025
 Kassa, E., **3634 - A0295**
 Kassarlow, J., 1601
 Kassem, I. S., 1442 - C0004, 2362 - B0372, **6053 - A0087**
 Kasthurirangan, S., **1088 - C0101**, 5725 - C0012, 5751 - C0038
 Katada, Y., 3585 - A0202
 Katagiri, S., 5414 - A0066
 Kataja, M., 5477 - A0146
 Kataoka, K., 302 - C0235, 5262 - C0108, 576 - B0191, 823 - A0155
 Kataoka, T., 4231 - C0073
 Kataria, P., 1417 - B0194
 Katashiba, Y., 296 - C0197
 Katayama, S., 263 - C0122
 Katayama, Y., 5860 - C0147
 Katbamna, B., **1097 - C0132**
 Katibeh, M., 6153 - C0272
 Kato, A., 3577 - A0194, 4682 - A0324, **800 - A0132**
 Kato, F., 800 - A0132
 Kato, H., 1751 - B0066, 4866 - C0311, **4879 - C0324**, 4881 - C0326, 4890 - C0335
 Kato, K., 2145 - A0279, 3189 - B0189
 Kato, K., 4267 - C0138
 Kato, M., 690 - C0285
 Kato, N., 1319 - B0026, **4390 - C0438**, 5735 - C0022, 5763 - C0050
 Kato, R. T., 2824 - B0242
 Kato, R., 4273 - C0144
 Kato, S., 6191 - C0345, 636 - C0066
 Kato, Y., **1687 - A0208**

- Kato, Y., 3164 - A0281, 3238 - B0337, **4282 - C0153**, 4285 - C0156
- Katowitz, J. A., 84 - A0247, 88 - A0251
- Katowitz, W., 84 - A0247
- Katowitz, W. R., 88 - A0251
- Katsanis, N., 47 - A0078
- Katschke, K. J., 2441 - C0107, **5563 - A0255**
- Katsman, D., 3122 - A0130
- Katsuta, O., 2718 - B0039
- Katsuyama, A., **1921 - C0321**, 269 - C0170
- Katta, K., 4323 - C0297
- Katta, M., 2739 - B0118
- Katyal, K. D., 3892 - C0358
- Katz, B., 3901 - C0367, 4530 - A0045, **4531 - A0046**
- Katz, D., 3672 - A0356
- Katz, L., 2737 - B0116, 6154 - C0273
- Katz, M., 6078 - A0207
- Katz, M. S., 3155 - A0272, 4832 - C0190, **6192 - C0346**
- Katz, R., 1047 - B0358
- Katz, S., 535 - B0150
- Kaufeld, J., 5460 - A0129
- Kauffman, M. J., 3929
- Kauffman, A. H., 409 - A0227
- Kauffman, P. L., 1948, 4716 - B0140
- Kaufman, S. C., **3664 - A0348**
- Kaufmann, C., 4386 - C0434
- Kaukonen, M., **6042 - A0076**
- Kaul, N., 4549 - A0064
- Kauppinen, A., 2455 - C0121
- Kaur, G., 3992 - A0117
- Kaur, I., 5148 - B0171
- Kaur, K., 332 - C0265
- Kaur, R., 45 - A0076
- Kaushansky, N., 1870 - C0174
- Kaushik, A. M., 1988, 3105 - A0113
- Kaushik, S., 488 - A0348
- Kautzmann, M. I., 1000 - B0254, 2483 - C0149, **4506 - A0021**, 5561 - A0253
- Kavanagh, D., 790
- Kavanagh, A. S., 2528 - C0257
- Kavehpour, H., 5712 - A0431
- Kawai, M., 3196 - B0196
- Kawai, S., **3768 - B0183**
- Kawakami, R., **1459 - C0021**
- Kawakami, Y., 3797 - C0024
- Kawamori, T., **2943 - C0265**
- Kawamura, T., 119 - B0033
- Kawamura, Y., 1431 - B0350, 6076 - A0205
- Kawasaki, A. K., 1903 - C0303, 4137 - B0300, 4138 - B0301
- Kawasaki, R., 1834 - B0295
- Kawase, K., 3751 - B0098
- Kawashima, H., 1730 - A0251, 350 - A0010, 371 - A0031, 5601 - A0320
- Kawashima, M., 4930 - C0375
- Kawashima, R., **3098 - A0106**, 4652 - A0294
- Kawata, H., 1229 - A0070, 1233 - A0074, 1235 - A0076
- Kawate, H., 4257 - C0128
- Kawiecki, R. M., 4060 - B0055, 5070 - B0021, 5079 - B0030
- Kawulok, E., **1773 - B0088**
- Kay, C. N., 4992
- Kay, E., **160 - B0074**
- Kay, J., 2351 - B0361
- Kaya, K. D., 575 - B0190
- Kayama, T., 2567
- Kayazawa, T., 5133 - B0122
- Kaye, S. B., 3328 - C0170, 5719 - C0006, 5721 - C0008
- Kayser, M., 781
- Kazakbaeva, G., 2722 - B0101, **3373 - C0297**, 522 - B0137, 950 - B0128
- Kazaryan, S., **5187 - B0210**
- Kazemi, A., 1218, **1237 - A0078**, 2023 - A0050
- Kazemi, M., 228 - C0039
- Ke, B., 710 - C0305
- Ke, L., 5875 - C0162
- Ke, M., **705 - C0300**
- Ke, M., **6119 - C0238**
- Ke, Y., 5208 - B0321
- Kean, J., 5091 - B0042, 5093 - B0044
- Keane, P., 1471 - C0033, 1671 - A0192, 1729 - A0250, 4623 - A0265, 5550 - A0242, 826 - A0158, 838 - A0170
- Keane, P. A., 1138, 1469 - C0031, 1673 - A0194, 3216 - B0315, 3345 - C0227, 4202 - C0044, 4276 - C0147, 5242 - B0355, 815 - A0147, 816 - A0148
- Keane Research Group, 1469 - C0031
- Keaney, J., 1013 - B0267
- Kearns, L., 2352 - B0362
- Keay, L. J., 5184 - B0207, **5185 - B0208**
- Kecik, M., 4543 - A0058
- Kedar, S., 2184 - A0353, 316 - C0249
- Kedhar, S., 1335 - B0042
- Kee, C., 2027 - A0054, 2083 - A0141
- Kee, C., 1282 - A0317, 2130 - A0264
- Kee, F., 2408 - C0074
- Kee, H., **611 - B0283**
- Keeffe, J., 3888 - C0354
- Keegan, D. J., 5406 - A0058
- Keel, S., 2086 - A0144, **738**
- Keeley, P. W., 588 - B0203, **595 - B0210**
- Keeling, E., **4487 - A0002**
- Keen, J., 4836 - C0194
- Keenan, J. D., 1697 - A0218
- Keenan, T., 6013
- Keenan, T. D., **6010**
- Kefalov, V. J., 4440, 4490 - A0005
- Keil, J., 3008
- Keino, H., 4181 - C0023
- Keir, N. J., 1779 - B0094
- Keirstead, H. S., 544 - B0159, 558 - B0173
- Kelbsch, C., 5199 - B0312
- Kelleher Davis, R., **4917 - C0362**
- Keller, B., 1318 - B0025, **1342 - B0049**, 1347 - B0054
- Keller, K. E., **4720 - B0144**, 4722 - B0146
- Kelley, B., 216 - C0027, 239 - C0050, 242 - C0053
- Kelley, M. J., 3530 - A0093
- Kelley, R., 226 - C0037, 243 - C0054
- Kellner, S., 18 - A0049, **3151 - A0268**
- Kellner, U., 18 - **A0049**, 3151 - A0268
- Kellogg, C., 4995
- Kellout, I., 3092 - A0063
- Kelly, I., 1103 - C0138
- Kelly, J., 4587 - A0176
- Kelly, J. P., 2169 - A0338, 4624 - A0266, **5783 - C0070**
- Kelly, K. R., **5796 - C0083**, 5959
- Kelly, K., 4838 - C0196
- Kelly, M. P., 4996
- Kelly, R. S., 4946
- Kelly, R. M., 1147
- Kelly, S. J., **1458 - C0020**
- Kelly, S. R., 1138, **5130 - B0119**
- Kelly, U. L., 1649 - A0025, 348 - A0008
- Keltner, J. L., 3025, 3344 - C0226
- Kemmer, J., 334 - C0267
- Kempaiah, P., 3563 - A0180
- Kempe, A., 3103 - A0111
- Kemper, A., 2751 - B0130
- Kempf, M., 1516 - C0357
- Kempton, J., 2420 - C0086
- Kendra, K., 4958
- Kendrick, B. T., 4522 - A0037
- Kenna, P., 1013 - B0267
- Kenna, P. F., **2332 - B0321**, 5406 - A0058
- Kennedy, B., 113 - A0276
- Kennedy, M., 907 - B0085
- Kenney, C. M., 1419 - B0338, 1462 - C0024, 2468 - C0134, 3268 - B0367, 353 - A0013, 3986 - A0111, 4005 - A0130, **771**
- Kenner Chapman, R., 3629 - A0290
- Kenny, J., 4322 - C0296
- Kenrick, C., 953 - B0131
- Kenrick, M., 226 - C0037
- Kensington Eye Institute CXL Working Group, 1338 - B0045
- Kent, M., **3101 - A0109**
- Kent-Gasiorowski, A., 3423 - C0347
- Kenyon, B. M., 3321 - C0163
- Keppel, T., 2362 - B0372
- Keravala, A., **5688 - A0407**, 5696 - A0415
- Kerdran, Y., 4380 - C0428
- Kergoat, H., 2964 - C0286
- Kergoat, M., 5163 - B0186
- Kermany, D., 1240 - A0081, 1833 - B0294, 2705 - B0026, 5443 - A00112
- Kermorvant-Duchemin, E., 2788 - B0167
- Kern, C., 3602 - A0220, 3614 - A0232
- Kern, D., 4754 - B0255
- Kern, J. R., 1780 - B0095
- Kern, K., **4004 - A0129**
- Kern, T. S., **3581 - A0198**, 3582 - A0199
- Kerner, J., 5682 - A0401
- Kerr, K., 1699 - A0220
- Kerr, M., 4708 - B0132
- Kerr, N., 5317 - C0250
- Kerstein, P. C., **590 - B0205**
- Kersten, D., 3421 - C0345
- Kersten, E., 2377 - C0043, 3013, 352 - A0012
- Kertes, P., **1622**, 1955
- Kerur, N., 2456 - C0122, 2459 - C0125, 2475 - C0141
- Keshav, V., **6054 - A0088**
- Kessel, L., 1172
- Kessler, M., 1649 - A0025
- Ketner, D. S., 399 - A0099
- Ketterling, J., 4673 - A0315, 5841 - C0128, 6197 - C0351
- Keuken, A., **1084 - C0097**
- Keun, H., 2469 - C0135
- Keunen, J., 4983
- Keuthan, C., 3961, **4449**
- Kevany, B. M., 3983 - A0108
- Keyeutat Tondji, M., 456 - A0316
- Kezuka, T., 3343 - C0225, 4162 - C0004
- Kha, C., 324 - C0257
- Khabou, H., 5708 - A0427
- Khadka, J., **35 - A0066**, 3912, 4145 - B0368, 4146 - B0369, 4147 - B0370
- Khajavi, M., **1421 - B0340**
- Khaksari, B., 138 - B0052
- Khalaf, H., 1039 - B0350, **2789 - B0207**, 4261 - C0132
- Khaled, M. L., 4391 - C0439, **743**
- Khalifa, Y., 5236 - B0349
- Khalili, S., 4582 - A0171
- Khalimov, A., 522 - B0137
- Khamar, P., 442 - C0450, **5980**
- Khan, A., 4667 - A0309
- Khan, A., **1010 - B0264**
- Khan, A., 5181 - B0204
- Khan, A., 5207 - B0320
- Khan, H., 4202 - C0044
- Khan, H., 162 - B0076
- Khan, K., 3154 - A0271
- Khan, K., 5446 - A0115
- Khan, M., **4503 - A0018**, 4532 - A0047
- Khan, M., **1392 - B0169**, 256 - C0115
- Khan, M. I., 1004 - B0258, 2324 - B0313
- Khan, N. W., **1890 - C0290**
- Khan, N. M., **4734 - B0235**
- Khan, R., 40 - A0071, 641 - C0071, **642 - C0072**
- Khan, S. Y., 5383 - A0035
- Khanam, S., 1012 - B0266
- Khanani, A., 1252 - A0093, **1475 - C0037**, 1833 - B0294, 810 - A0142
- Khandaker, I., **2252 - B0206**, 2289 - B0243, 2291 - B0245, 4358 - C0406
- Khandekar, R., 100 - A0263, 1258 - A0099, 4780 - B0390
- Khandelwal, N., 272 - C0173, 349 - A0009, 3949, 5843 - C0130
- Khandelwal, S., 4398 - C0446, 4804 - B0414
- Khandzhyan, A., 4748 - B0249
- Khankan, R., **3428 - C0352**
- Khanna, C., 2071 - A0129
- Khanna, H., 5148 - B0171, 981 - B0235
- Khanna, R. C., 5148 - B0171
- Khanna, S., 5250 - B0363
- Khansari, M., 1935 - C0335, 2837 - B0255
- Khateb, S., 356 - A0016, 375 - A0035, 5324 - C0257
- Khatib, T., **3716 - B0063**, 6132 - C0251
- Khatiri, M., 4675 - A0317
- Khattab, M., 2040 - A0067
- Khavari, T., 1241 - A0082
- Khaw, K., 1998
- Khaw, P. T., 1494 - C0236, 1496 - C0238, 2000, 2709 - B0030, 3456, 5706 - A0425, 775
- Khawaja, A., 775
- Khawaja, A. P., **1178**, 1826 - B0287, 1998
- Khazaeni, L., 4131 - B0294
- Kheir, W., 4045 - A0252, 5410 - A0062
- Kheiri, B., 6153 - C0272
- Kheirkhah, A., 1411 - B0188, 4345 - C0393, 5716 - C0003
- Khera, A., **3536 - A0099**
- Kherani, A., 4157 - B0380, 4252 - C0094
- Kherani, F., **4157 - B0380**, 5628 - A0347
- Kherani, S. A., 45 - A0076, **825 - A0157**
- Khetan, V., 2890 - C0187, **3641 - A0302**
- Khine, A., 5772 - C0059
- Kho, A. M., 299 - C0200, **5832 - C0119**
- Kho, D., 137 - B0051, 1793 - B0108
- Khoche, A., 2996
- Khodzhabekyan, N., 4748 - B0249
- Khoja, Z., 6064 - A0193
- Khoop, P., 3276 - C0070, 3681 - A0365, **3778 - C0005**
- Khooyar, A., 4457
- Khor, C., 1813 - B0274, 1817 - B0278, 1819 - B0280, 3515 - A0078, 5143 - B0166, 5145 - B0168, 5146 - B0169, 5149 - B0172
- Khorammia, R., **419 - A0237**
- Khourai, A. S., 1918 - C0318, 2707 - B0028, 2803 - B0221, 4647 - A0289, 4803 - B0413, 6165 - C0284
- Khourri, P., 2791 - B0209, 2792 - B0210
- Khristov, V., 1985, 546 - B0161
- Khuc, E., 1352 - B0112
- Khullar, M., 3536 - A0099
- Khun, D., 3282 - C0076
- Khundkar, T., 1532 - C0373
- Khunsonkiet, P., 3250 - B0349
- Khurana, M., **5901 - C0188**
- Khurana, R. N., 1096 - C0131, 836 - A0168
- Khurana, T. S., 5048 - A0244
- Khushzad, F., 3364 - C0246
- Khuu, S., 1260 - A0295, 1267 - A0302, 1270 - A0305, 1287 - A0322, 4039 - A0246, 4083 - B0078
- Khuu, T., 4507 - A0022
- Khwarog, S., 1025 - B0309
- Kiang, A., **1013 - B0267**
- Kiang, L., 2620
- Kiatos, E., **4778 - B0388**
- Kicinska, A., 2022 - A0049
- Kida, T., 2485 - C0189, **4263 - C0134**
- Kieft-de Jong, J. C., 3010, 3015
- Kiehl, T., 2477 - C0143
- Kielbasa, S., 1577
- Kiemeny, L., 4983
- Kieselbach, G., **2395 - C0061**
- Kifley, A., 3009, 3011
- Kiilgaard, H., 3643 - A0304
- Kiilgaard, J. F., **3643 - A0304**, 5918 - C0315
- Kikawa, T., 1718 - A0239, 2079 - A0137, 2093 - A0151, 4054 - B0049
- Kikkawa, D., 3187 - A0330
- Kikkawa, D., 2298 - B0252
- Kikuchi, S., 1429 - B0348, 1519 - C0360
- Kikuchi, Y., 4184 - C0026
- Kiland, J. A., 3525 - A0088, 5908 - C0195
- Kilburn, T. C., 5838 - C0125
- Kilgore, K., **2071 - A0129**, 2188 - A0357
- Kilic, E., 3633 - A0294
- Kilin, F., 4021 - A0146
- Killingsworth, M., 330 - C0263
- Kilpatrick, C., 514 - B0021
- Kilpatrick, D., **6179 - C0298**
- Kiluk, K., 4049 - A0256
- Kim, B. J., 3252 - B0351
- Kim, B., **4318 - C0292**, 4746 - B0247
- Kim, B., 5514 - A0183
- Kim, B., 1156
- Kim, B., 878 - A0210
- Kim, B. T., 633 - C0063
- Kim, B., 1533 - C0374
- Kim, B., 2493 - C0197
- Kim, C., **3807 - C0034**, 3832 - C0059
- Kim, C., 2215 - A0384, 2734 - B0113, 4802 - B0412, 6095 - C0214
- Kim, C. Y., 2699 - B0020, 5108 - B0097
- Kim, C., 1244 - A0085
- Kim, C., 2711 - B0032, **457 - A0317**
- Kim, C., 5515 - A0184
- Kim, C. U., **2492 - C0196**
- Kim, C., 1450 - C0012
- Kim, C., **2894 - C0191**
- Kim, C., 580 - B0195
- Kim, D., **954 - B0132**
- Kim, D., 5836 - C0123, 954 - B0132
- Kim, D., 1406 - B0183
- Kim, D., **4131 - B0294**
- Kim, D., **5024 - A0220**
- Kim, D., 1406 - B0183
- Kim, D., 1838 - B0299, 1886 - C0286, **3125 - A0242**, 6186 - C0305
- Kim, D., 3800 - C0027
- Kim, D., 3804 - A0035
- Kim, D., 3545 - A0162
- Kim, E., **2089 - A0147**, 4064 - B0059, 4068 - B0063, 4987
- Kim, E., 6158 - C0277, 6167 - C0286
- Kim, E., 4197 - C0039
- Kim, E., **1758 - B0073**
- Kim, E. L., 3126 - A0243
- Kim, E., 4973
- Kim, E., 2891 - C0188
- Kim, E., 3822 - C0049

Kim – Kohanim

- Kim, E., 1035 - B0346, 1919 - C0319, 3219 - B0318, 3222 - B0321, 3590 - A0207, **5448 - A0117**
- Kim, E., **3800 - C0027**
- Kim, F., **1647 - A0023**
- Kim, G., 443 - A0303
- Kim, G., 1289 - A0324
- Kim, G., 3962
- Kim, G., 1618, 2451 - C0117
- Kim, H., 1022 - B0306
- Kim, H., 126 - B0040
- Kim, H., 1816 - B0277
- Kim, H., 1722 - A0243
- Kim, H., 1406 - B0183
- Kim, H., 1332 - B0039
- Kim, H., 1874 - C0178, 5097 - B0086
- Kim, H., 5856 - C0143
- Kim, H., **4134 - B0297**
- Kim, H., **2242 - B0196**
- Kim, H., 248 - C0107, 3296 - C0090
- Kim, H., 3822 - C0049
- Kim, H., 1244 - A0085
- Kim, H., 1370 - B0130, 954 - B0132
- Kim, H., 1117 - C0152
- Kim, H., **1324 - B0031**
- Kim, H., **4884 - C0329**
- Kim, H., 1332 - B0039
- Kim, H., 4341 - C0389
- Kim, I., 1874 - C0178, 5097 - B0086
- Kim, I., **4058 - B0053**, 5432 - A0101
- Kim, I., 2619, 3626 - A0287, 4301 - C0275, 4944, 4946
- Kim, J., 129 - B0043, **1367 - B0127**
- Kim, J., 5836 - C0123
- Kim, J., 2937 - C0259
- Kim, J., **1035 - B0346**, 1919 - C0319, 3219 - B0318, 3222 - B0321, 3590 - A0207, 5448 - A0117
- Kim, J., 4858 - C0303
- Kim, J., 1348 - B0055, 4973
- Kim, J., 1886 - C0286, 248 - C0107
- Kim, J., 2553 - C0282, **3264 - B0363**
- Kim, J., 3800 - C0027
- Kim, J. S., **5446 - A0115**
- Kim, J., 4197 - C0039
- Kim, J., 3269 - B0368
- Kim, J., 1249 - A0090
- Kim, J., **197 - C0008**
- Kim, J. M., **4309 - C0283**
- Kim, J., 1635 - A0011, 3267 - B0366, 3360 - C0242
- Kim, J., **2101 - A0159**
- Kim, J., **1406 - B0183**
- Kim, J., 5805 - C0092
- Kim, J., 5104 - B0093, 5105 - B0094, 5106 - B0095
- Kim, J., **1886 - C0286**, 3125 - A0242, 4859 - C0304
- Kim, J., **2035 - A0062**
- Kim, J., **4087 - B0082**
- Kim, J., 1635 - A0011, 3360 - C0242
- Kim, J., **1722 - A0243**
- Kim, J., 2685 - B0006
- Kim, J., **596 - B0211**
- Kim, J., **1838 - B0299**, 1886 - C0286, 3125 - A0242, 5436 - A0105, 6186 - C0305
- Kim, J., **4086 - B0081**
- Kim, J., 5072 - B0023
- Kim, J., **103 - B0066**
- Kim, J., 5580 - A0299
- Kim, J., 1722 - A0243
- Kim, J. W., 1637 - A0013, 1638 - A0014, 1645 - A0021, 1647 - A0023, 3625 - A0286, 3631 - A0292
- Kim, J., 1332 - B0039
- Kim, J., 1450 - C0012
- Kim, J., **1510 - C0351**
- Kim, J., 4884 - C0329
- Kim, J., **2389 - C0055**, 5108 - B0097
- Kim, J., 4981
- Kim, J., 176 - B0330
- Kim, J. E., 1097 - C0132
- Kim, J., 248 - C0107
- Kim, J., 3503 - A0066
- Kim, J., 575 - B0190
- Kim, J., 812 - A0144
- Kim, K., 3322 - C0164, 5700 - A0419
- Kim, K., 1035 - B0346, **1919 - C0319**, 3219 - B0318, 3222 - B0321, 3590 - A0207, 5448 - A0117
- Kim, K., 3770 - B0185, **4059 - B0054**
- Kim, K., 3822 - C0049
- Kim, K., 3135 - A0252
- Kim, K., 1854 - C0158
- Kim, K., 3807 - C0034
- Kim, K., 1367 - B0127
- Kim, K., 3069 - A0040, **3289 - C0083**
- Kim, K., 2711 - B0032, 457 - A0317
- Kim, L. A., 3126 - A0243, 3560 - A0177, 4219 - C0061
- Kim, M., 3665 - A0349, **4717 - B0141**, 4741 - B0242
- Kim, M., 1332 - B0039, 1756 - B0071, 3290 - C0084, **3821 - C0048**
- Kim, M., **6145 - C0264**
- Kim, M., 1931 - C0331
- Kim, M., 927 - B0105
- Kim, M., **5194 - B0307**
- Kim, M., 4341 - C0389
- Kim, N., **3503 - A0066**
- Kim, N. J., 4057 - B0052
- Kim, P., 1533 - C0374
- Kim, P., 3924
- Kim, R., 5987
- Kim, S., 5547 - A0239
- Kim, S., **2755 - B0134**, 2761 - B0140, 2762 - B0141, 2764 - B0143, 2767 - B0146, 2772 - B0151, 2780 - B0159, 2782 - B0161, 3766 - B0181, 3937, 3938
- Kim, S., 1009 - B0263, 5159 - B0182
- Kim, S., **5142 - B0165**
- Kim, S., 3949
- Kim, S., **3663 - A0347**
- Kim, S., **3137 - A0254**
- Kim, S., 1650 - A0026
- Kim, S. D., 6166 - C0285
- Kim, S., 1635 - A0011
- Kim, S., 3822 - C0049
- Kim, S., **2432 - C0098**, 4590 - A0179
- Kim, S., 4741 - B0242
- Kim, S., **5836 - C0123**
- Kim, S., 247 - C0106
- Kim, S., 1722 - A0243
- Kim, S., 1025 - B0309, 2939 - C0261
- Kim, S., 2812 - B0230
- Kim, S., **1348 - B0055**
- Kim, S., 1324 - B0031, 1837 - B0298
- Kim, S., 6193 - C0347
- Kim, S., 1015 - B0269
- Kim, S., **2891 - C0188**
- Kim, S., **188 - B0342**, 189 - B0343
- Kim, S., **126 - B0040**
- Kim, S., 2598
- Kim, S., 1398 - B0175, 3265 - B0364, 3854 - C0115, 4373 - C0421, **524 - B0139**
- Kim, S. J., 4428
- Kim, S., **1371 - B0131**, 3069 - A0040, 6118 - C0237
- Kim, S., 2891 - C0188
- Kim, S., **3831 - C0058**
- Kim, S., 5599 - A0318
- Kim, S., 1722 - A0243
- Kim, T., 916 - B0094
- Kim, T., 3822 - C0049
- Kim, T., 3069 - A0040
- Kim, T., 2035 - A0062, 2101 - A0159, 2698 - B0019
- Kim, T., 4621 - A0263
- Kim, W., **2711 - B0032**, 457 - A0317
- Kim, Y., 6193 - C0347
- Kim, Y., **4622 - A0264**
- Kim, Y., 2635 - A0140
- Kim, Y., 3894 - C0360
- Kim, Y., 6092 - C0211
- Kim, Y., **4981**
- Kim, Y., **2033 - A0060**
- Kim, Y., **3924**
- Kim, Y., **6109 - C0228**
- KIM, Y., 1837 - B0298, 5432 - A0101
- Kim, Y., 2033 - A0060, 2098 - A0156, 2685 - B0006, 4086 - B0081
- Kim, Y., 2459 - C0125, 2475 - C0141
- Kim, Y., 1553, 1756 - B0071
- Kim, Y., **5733 - C0020**, 5836 - C0123
- Kim, Y., 1878 - C0182
- KImble, J., 3237 - B0336
- Kimchi, A., 1831 - B0292, 3494, **5415 - A0067**, 5421 - A0073
- Kimler, V. A., 3043 - A0014
- Kimlin, J., **1291 - A0326**
- Kimura, A., **5616 - A0335**
- Kimura, A., 3348 - C0230
- Kimura, I., **5073 - B0024**
- Kimura, K., 1686 - A0207, 4003 - A0128
- Kimura, M., 5701 - A0420, **5707 - A0426**
- Kimura, S., 5132 - B0121
- Kimura, S., 2882 - B0300, 4268 - C0139, 4269 - C0140, 5914 - C0311, 5915 - C0312, 670 - C0228, 671 - C0229, 807 - A0139, **847 - A0179**
- Kimura, T., 541 - B0156
- Kinarty, Y., **375 - A0035**
- Kincaid, W., 4674 - A0316
- King, B., 3174 - A0317, 3175 - A0318, 3183 - A0326, **5982**, 5984
- King, B., 4626 - A0268, **4642 - A0284**
- King, E., 374 - A0034
- King, P. J., 2785 - B0164
- King, R., 1181, 5155 - B0178, 5506 - A0175
- King-Smith, P. E., 3814 - C0041, 4907 - C0352
- Kink, J., 3310 - C0152
- Kinoshita, J., 2474 - C0140
- Kinoshita, N., 1804 - B0152, 3574 - A0191
- Kinoshita, S., 108 - A0271, 109 - A0272, 116 - B0030, 1308 - B0015, 1394 - B0171, 141 - B0055, 1751 - B0066, 1968, **2003**, 2128 - A0186, 2912 - C0209, 2993, 3450, 3842 - C0103, 4085 - B0080, 4879 - C0324, 4890 - C0335
- Kinter, M., 764
- Kinuthia, M., 158 - B0072
- Kinzer, E., 2962 - C0284
- Kircher, K., 3357 - C0239
- Kircher, N. E., 4137 - B0300, **4138 - B0301**
- Kirchner, I., 4307 - C0281
- Kirchner, I. D., **874 - A0206**
- Kiri, G., 5508 - A0177, **5513 - A0182**
- Kirk, C., 6087 - C0206, 6088 - C0207, **6096 - C0215**
- Kirk, D., **1026 - B0310**, 3687 - A0371, 5244 - B0357, 899 - B0077
- Kirkeby, S., 3074 - A0045
- Kirker, A., 4248 - C0090
- Kirschner, P., 6071 - A0200
- Kirshner, M., 5228 - B0341
- Kirsten, T., 1101 - C0136
- Kiryu, J., 4116 - B0279, 5325 - C0258
- Kish, P. E., 1144, 1147, **2172 - A0341**
- Kishimoto, T., **120 - B0034**
- Kishino, A., 541 - B0156
- Kisilak, M., 705 - C0300
- Kiss, H., **4870 - C0315**, 4876 - C0321
- Kiss, S., 4234 - C0076
- Kisselev, O., 4980
- Kita, D. B., 3576 - A0193
- Kita, M., 3796 - C0023, 444 - A0304
- Kitahashi, M., 5592 - A0311
- Kitaiichi, N., 2519 - C0248
- Kitamoto, K., 1368 - B0128, 4436
- Kitamura, Y., **2487 - C0191**
- Kitano, M., 5517 - A0186, 761
- Kitano, M., **4163 - C0005**
- Kitano, S., 1057 - B0368, 1895 - C0295
- Kitaoaka, T., 4258 - C0129, 4260 - C0131
- Kitaoaka, Y., **623 - B0295**, 624 - B0296, 626 - B0298
- Kitaura, N., 1876 - C0180
- Kitayama, K., **5125 - B0114**
- Kitazawa, K., **2993**, 4435
- Kitazawa, S., 3891 - C0357
- Kitchens, J. W., 4813 - C0171
- Kitor, M., 1582, 4320 - C0294
- Kitso, G., 3141 - A0258, 780
- Kittredge, A., **5336 - C0269**
- Kiuchi, G., 5801 - C0088, **5802 - C0089**
- Kiuchi, K., **3683 - A0367**
- Kiuchi, Y., 3660 - A0344, 3668 - A0352, 405 - A0223, 451 - A0311, 478 - A0338, **5898 - C0185**, 6146 - C0265
- Kivanc, S., **951 - B0129**
- Kivinen, N., **2455 - C0121**
- Kiyama, T., 5497 - A0166, 962 - B0216
- Kiyokawa, E., 125 - B0039, 5636 - A0355, 890 - A0279
- Kiyota, N., 3189 - B0189, **5082 - B0033**
- Kizhatil, K., 4497 - A0012, **4700 - B0124**, 5158 - B0181
- Kizy, B., 865 - A0197
- Kjær, T. W., 5918 - C0315
- Kjelleberg, S., 3306 - C0100
- Kjems, J., 5685 - A0404
- Klaas, J., **5274 - C0120**
- Klaic, L., 554 - B0169
- Klar, N., 3461
- Klassen, H. J., 2468 - C0134, 2987
- Klausner, M., 158 - B0072
- Klaver, C. C., 1821 - B0282, 1827 - B0288, 2136 - A0270, 2927 - C0224, 3010, 3012, 3013, 3015, 3953, 43 - A0074, 5136 - B0159, 700 - C0295, 789
- Klearman, M., 2174 - A0343
- Klee, K., 2454 - C0120, **2460 - C0126**
- Klee, S., 3198 - B0198, 4661 - A0303, 4695 - A0337, **4696 - A0338**
- Klein, B. E., **1040 - B0351**, 2567, 3014, 4053 - B0048, 6011
- Klein, J. B., 6140 - C0259
- Klein, K., 2527 - C0256
- Klein, K., 2333 - B0322
- Klein, M., 4046 - A0253, **54 - A0085**
- Klein, M. L., 4509 - A0024, 4947, 6010
- Klein, P., 3022
- Klein, R., 1040 - B0351, 1046 - B0357, 1050 - B0361, 2567, **3014**, 3958, 6008, 6011
- Kleinbans, S., 5724 - C0011
- Kleinlogel, S., **1194**
- Kleinman, H., 3807 - C0034
- Kleinman, M. E., **386 - A0046**
- Kleinstein, R. N., 3392 - C0316
- Klemm, M., **4661 - A0303**
- Klemp, K., 3643 - A0304
- Klettner, A. K., 66 - A0113
- Klimova, A., 2525 - C0254
- Klimscha, S., **819 - A0151**
- Kling, S., 1385 - B0162, 1389 - B0166
- Klingam, W., **2672 - A0399**, 3305 - C0099, 5677 - A0396
- Klipfel, L., **793**
- Klisovic, D., 1156
- Klistorner, A., 3354 - C0236, 615 - B0287
- Kloek, C. E., 4805 - B0415
- Kloppstock, T., 3361 - C0243, 3362 - C0244, **3363 - C0245**
- Klose, F., 3989 - A0114
- Klose, R., 5846 - C0133
- Klufas, M., 1160, 4251 - C0093
- Kluth, A., 2287 - B0241
- Kn, S., 343 - A0003
- Knapp, A., 4521 - A0036
- Knell, R., 3006
- Knepper, P. A., 3719 - B0066, 3721 - B0068, 3998 - A0123, **5078 - B0029**, 5096 - B0047
- Knezevic, A., **5623 - A0342**, 5624 - A0343
- Knight, D., 3395 - C0319, 4671 - A0313, 6018, 6019, **851 - A0183**
- Knight, K., 4507 - A0022
- Knight, K. M., 2473 - C0139
- Knobloch, R., 5202 - B0315
- Knopman, D., 2188 - A0357
- Knopp, M. V., 5337 - C0270
- Ko, B., 1443 - C0005, **927 - B0105**
- Ko, J., 3660 - A0344, 3668 - A0352, 478 - A0338, 6146 - C0265
- Ko, R., **3324 - C0166**
- Ko, Y., 1510 - C0351
- Ko, Y., **4080 - B0075**
- Kobashi, H., 5695 - A0414, 5711 - A0430
- Kobashi, R., 2936 - C0258
- Kobayashi, A., 1310 - B0017, 3841 - C0102, **5760 - C0047**
- Kobayashi, H., 1394 - B0171
- Kobayashi, M., 4548 - A0063
- Kobayashi, M., 3133 - A0250, 3706 - B0053, 5510 - A0179, 811 - A0143
- Kobayashi, M., 1686 - A0207, 4003 - A0128
- Kobayashi, M., 1804 - B0152, 3574 - A0191
- Kobayashi, M., 3195 - B0195
- Kobayashi, M., **3059 - A0030**
- Kobayashi, T., 3685 - A0369, **3686 - A0370**
- Kobayashi, Y., 4290 - C0161, 5376 - A0028
- Kobayashi, Y., 1686 - A0207, **4003 - A0128**
- Kocab, A. J., 6139 - C0258
- Kocak, E. D., **2308 - B0262**
- Koch, D., 3709 - B0056
- Koeh, J., 2627 - A0132
- Koeh, K., 4488 - A0003
- Koeh, L., 3451, 527 - B0142
- Koeh, M., 2493 - C0197
- Koeh, P., **1440 - C0002**, 4484
- Kochik, S., **691 - C0286**
- Koichi, M., 1475 - C0037, **810 - A0142**
- Kocyla-Karczmarewicz, B., 2324 - B0313
- Kodama-Takahashi, A., 528 - B0143
- Kodati, S., 1534 - C0375, 4212 - C0054, 4310 - C0284
- Kodeboyina, S., 1213, 5351 - A0003
- Kodjikian, L., 3615 - A0233
- Koerberle Group, 2507 - C0211
- Koerberle, P. D., 2507 - C0211, 6149 - C0268
- Koelman, B., 4983
- Koenekoop, R. K., 48 - A0079
- Koenig, K. A., 4665 - A0307
- Koegnigsacker, T., 3149 - A0266
- Koeller, B., 1752 - B0067
- Kogachi, K., 2835 - B0253, 3623 - A0284, **739**
- Kogo, J., 5433 - A0102, **785**, 870 - A0202
- Koh, A. C., 1624, **831 - A0163**
- Koh, G., 3264 - B0363
- Koh, H., 885 - A0217
- Koh, J., **3844 - C0105**
- Koh, J., 2480 - C0146
- Koh, S. K., 3518 - A0081
- Koh, V. T., **2721 - B0100**
- Kohane, D. S., 1767 - B0082, 5695 - A0414, 5711 - A0430
- Kohanim, S., **3789 - C0016**

- Kohen, M., 2694 - B0015, **6180 - C0299**
- Kohl, S., 1516 - C0357, 1565, 1832 - B0293, 23 - A0054, 2982, 3163 - A0280, 5205 - B0318, **6044 - A0078**, 669 - C0227
- Köhler, B., 3439
- Kohly, R. P., 1955
- Kohnen, T., 1307 - B0014, 5724 - C0011, 938 - B0116
- Kohno, T., 395 - A0095, 4831 - C0189
- Koide, N., 291 - C0192
- Koike, N., 502 - B0009
- Koilkonda, R. D., **3964**
- Koizner, S. O., 4484, 66 - A0113
- Koirala, D., 4019 - A0144
- Koivusalo, L., **2281 - B0235**, 3451
- Koizumi, M., 91 - A0254
- Koizumi, N., 1353 - B0113, 1354 - B0114, 2128 - A0186, 4394 - C0442, 4435
- Kojic, L., 5259 - C0105
- Kojima, H., 461 - A0321
- Kojima, K., 3074 - A0045, 336 - C0269
- Kojima, T., **2209 - A0378**, 3413 - C0337, 3790 - C0017, 3833 - C0060
- Kok, F., 5419 - A0071
- Kokame, G. T., 5439 - A0108, **833 - A0165**
- Kokame, K., 833 - A0165
- Kokotas, H., 3141 - A0258, 780
- Kokozinski, R., 4566 - A0095, 4570 - A0099
- Kokroo, A., **4076 - B0071**
- Kokubun, T., 3725 - B0072
- Kolandavelu, S., 2458 - C0124
- Kolar, P., 827 - A0159
- Kolar, R., 5859 - C0146
- Kolavali, R., **4668 - A0310**
- Kolawole, O. U., **4634 - A0276**
- Kole, C., 5516 - A0185
- Kolesnikov, N. N., **4440**
- Kolesnitchenko, V., 257 - C0116, 262 - C0121, 267 - C0126, 5925 - C0322, 5932 - C0329, **5934 - C0331**
- Kolessov, A., 4043 - A0250
- Kolic, M., 4839 - C0197
- Kolisang, L., 1068 - C0081
- Kolko, M., 1480 - C0222, **5998**
- Kollbaum, E., **3416 - C0340**
- Kollbaum, P. S., 3416 - C0340
- Kolli, A., 5071 - B0022
- Kolli, H., **4823 - C0181**
- Kolli, S., 4888 - C0333
- Kolomeyer, A. M., **2385 - C0051**
- Kolomeyer, N. N., **2737 - B0116**
- Komae, K., 4177 - C0019
- Komar, K. P., **4049 - A0256**
- Komar, T., 2839 - B0257, **2840 - B0258**
- Komaromy, A. M., 4522 - A0037
- Komati, R., **4245 - C0087**, 78 - A0125
- Komatsu, C., 4999 - A0070
- Kombo, N., 6160 - C0279
- Kominami, T., 25 - A0056, 27 - A0058, **37 - A0068**, 5529 - A0221
- Komiya, Y., 855 - A0187
- Komizo, T., 1232 - A0073
- Kommana, S., 4647 - A0289
- Komori, Y., **1353 - B0113**
- Kompella, U. B., 4216 - C0058
- Komuro, A., **4866 - C0311**, 4881 - C0326, 4890 - C0335
- Kon, O., 4189 - C0031
- Konar, G., **3169 - A0312**
- Konda, S., **4393 - C0441**
- Kondapi, A. K., 1634 - A0010
- Kondo, H., 5414 - A0066
- Kondo, J., 800 - A0132
- Kondo, M., 1109 - C0144, 1430 - B0349, 1432 - B0351, 3618 - A0236, 4233 - C0075, 4267 - C0138, 5529 - A0221, 5990
- Kondo, S., 2145 - A0279
- Konduri, V., 5135 - B0158
- Kong, D., 2594
- Kong, G., 2182 - A0351
- Kong, J., 3250 - B0349, 5395 - A0047, 5396 - A0048
- Kong, L., 191 - C0002, 3550 - A0167
- Kong, L., 3764 - B0179, 897 - A0286
- Kong, M., 1533 - C0374
- Kong, X., 334 - C0267, 4296 - C0167
- Kong, X., 3520 - A0083
- Kong, X., 1568, 2849 - B0267, 4105 - B0230, **4108 - B0233**
- Kong, Y., 2386 - C0052, **5126 - B0115**, 5127 - B0116
- Konichi da Silva, N., **1249 - A0090**
- Konicki, E., 1428 - B0347
- Konicki, P. E., 4469
- König, J., 2447 - C0113
- König, S., 3982 - A0107
- Konijn, C., 1341 - B0048
- Konijnenberg, E., 627 - B0299
- Konno, A., **2814 - B0232**
- Kono, M., **4520 - A0035**
- Konstantakopoulou, E., 6091 - C0210
- Konstantinou, E., 4575 - A0164, 835 - A0167
- Kontos, G., **5387 - A0039**
- Koo, E. B., **4786 - B0396**
- Koo, E. B., 170 - B0324
- Koo, K., 1854 - C0158
- Koo, Y., **258 - C0117**
- Kooi, I., 1637 - A0013
- Koopman, B., 3030 - A0001
- Koos, D., 4961
- Koozekanani, D. D., 3890 - C0356, 4572 - A0101
- Kopczynski, C., 1242 - A0083, 200 - C0011, 205 - C0016, 217 - C0028, 5672 - A0391, 6125 - C0244
- Kopp, F., **2710 - B0031**
- Koppen, C., 1378 - B0138, 2270 - B0224, 2276 - B0230, 2675 - A0402
- Korb, D. R., **4857 - C0302**
- Korbmacher, B., 2658 - A0385, 5702 - A0421
- Kornblau, I., **6183 - C0302**
- Kornfield, J., 1960
- Korobelnik, J., **1922 - C0322**, 3010, 5537 - A0229
- Korobkina, E., 2287 - B0241
- Koronyo, Y., 1123 - C0158
- Koronyo-Hamaoui, M., 1123 - C0158
- Korot, E., **1671 - A0192**
- Korte, S., 2658 - A0385
- Kortenhorn, E., 3202 - B0202
- Kortleben, M., 2040 - A0067
- Kortuem, K. U., 1469 - C0031, 1471 - C0033, 3216 - B0315, 3602 - A0220, 3614 - A0232, 4623 - A0265, 5242 - B0355, 5550 - A0242, 815 - A0147, 816 - A0148, 826 - A0158, **838 - A0170**
- Kortum, K., 1671 - A0192
- Koschak, A., 1884 - C0188
- Koseoglu, D., 138 - B0052, 1733 - A0254, 1802 - B0150
- Koseoglu, N., 1806 - B0154, **3440**
- Koskelainen, A., 1976
- Kossler, A., 5621 - A0340, 5880 - C0167
- Koster, C., **6062 - A0191**
- Kostic, C., **4137 - B0300**, 4138 - B0301, 4583 - A0172
- Kostic, M., 5994
- Kostka, D., 5386 - A0038
- Kotagiri, A., 817 - A0149
- Kotake, O., 62 - A0109
- Kotamarthi, V., 2400 - C0066
- Kothari, N., **4304 - C0278**
- Kothari, P., **2203 - A0372**
- Kotliar, K. E., **1583**, 5081 - B0032
- Kotmala, A., **3257 - B0356**
- Koto, T., 1834 - B0295, 5697 - A0416
- Koulen, P., **3579 - A0196**
- Koulisis, N., 4805 - B0415, 5434 - A0103, 6177 - C0296, **82 - A0129**
- Koulouri, I., 835 - A0167
- Kousal, B., 2325 - B0314
- Kousha, O., **3444**
- Kousoulas, K. G., 514 - B0021
- Koutalos, Y., 4510 - A0025, 4512 - A0027
- Kovach, M., 503 - B0010
- Kovach, J., 1425 - B0344
- Kovacs, I., 1932 - C0332, 1933 - C0333, **1934 - C0334**, 2949 - C0271, 4876 - C0321
- Kovler, I., 1733 - A0254
- Kowal, T. J., 3082 - A0053, 4701 - B0125
- Kowalczyk, L., 3984 - A0109, 5876 - C0163
- Kowalski, B., 4632 - A0274
- Kowalski, R. P., **2660 - A0387**, 3658 - A0342, 3674 - A0358
- Kowalski, T., **5899 - C0186**
- Kowluru, R. A., **1608, 3542 - A0159**, 3543 - A0160
- Kowtharapu, B. S., 2273 - B0227
- Koyanagi, Y., 33 - A0064
- Kozak, A., 1278 - A0313
- Kozak, I., **5670 - A0389**
- Kozak Ljunggren, M., 2280 - B0234, 3452
- Kozareva, D., 1261 - A0296, 2696 - B0017
- Kozawa, M., 4267 - C0138
- Kozhekbaeva, Z., 2009
- Kozlova, K., 1657 - A0033
- Kozlowski, M. R., 5361 - A0013
- Kozmik, Z., **3115 - A0123**
- Kozyreff, A., 5591 - A0310
- Kracht, D. J., 1548, 3562 - A0179
- Kraft, C., 1276 - A0311
- Kraft, C., 719
- Kraft, K., 6026
- Kraker, R., 178 - B0332
- Kralinger, M., 2395 - C0061
- Kralj, O., 1338 - B0045
- Krambeer, C., 2705 - B0026, **5443 - A0112**
- Kramer, G., 1899 - C0299
- Kramer, L., 722
- Kramer, M., 4311 - C0285
- Kramer, R. H., 1863 - C0167, 3973, 4451, 603 - B0275
- Kramer, W., 2677 - A0404
- Kramerov, A. A., **3872 - C0133**
- Krampert, M., 5702 - A0421
- Kranemann, C., 1337 - B0044, 2744 - B0123
- Kranitz, K., 2949 - C0271
- Kraszewska, O., **2416 - C0082**
- Kraus, C., 2303 - B0257
- Kraus, M. F., 3922
- Krause, J., 1227
- Krauthammer, M., 5780 - C0067
- Krawec, P., 2864 - B0282
- Krawitz, B. D., 3446, 3447
- Krebs, M. P., 2346 - B0335
- Krefit, D., 2727 - B0106
- Kreilkamp, L., 3243 - B0342
- Kreitzer, M. A., 1863 - C0167
- Krejci, E., 3092 - A0063
- Kremer, F., 5906 - C0193
- Kremer, H., 2321 - B0310
- Kremers, J. J., **4441**, 5031 - A0227, 5037 - A0233
- Krespan, K., **5750 - C0037**
- Kretz, A. M., **181 - B0335**, 182 - B0336
- Kreymerman, A., 6052 - A0086
- Krieger, A., 3438
- Krieger, D., 3622 - A0283
- Krishnadas, R., 4716 - B0140
- Krishnaji, S., 1421 - B0340
- Krishnamoorthy, R. R., **1593, 5294 - C0227**, 5295 - C0228
- Krishnan, A., 6139 - C0258
- Krishnan, A., 1811 - B0159
- Krishnan, A. K., 1274 - A0309, **5795 - C0082**
- Krishnan, S., 1637 - A0013
- Kristiansen, M., **5055 - B0006**
- Kristov, V., 68 - A0115
- Krizaj, D., 1212, 1500 - C0242, 1660 - A0036, 3713 - B0060, 3939, **3969**
- Kroeger, H., **4587 - A0176**
- Kroesser, S., **2656 - A0383**, 2716 - B0037, 3282 - C0076, 941 - B0119
- Krohn, J., 5590 - A0309
- Krohne, T. U., 2777 - B0156
- Kroken, A., **1544**, 1549, 505 - B0012, 902 - B0080
- Kromer, R., 4188 - C0030, 5460 - A0129
- Kromus, M., 1234 - A0075
- Kron, M., 5951
- Kronschlaeger, M., 3036 - A0007
- Kropp, M., 223 - C0034, **4543 - A0058**
- Kroth, J., 173 - B0327
- Krueger, J., 2962 - C0284
- Krueger, P., 2534 - C0263
- Krueger, R. R., **5981**
- Kruh, J. N., 5251 - B0364
- Kruse, A., 3074 - A0045
- Kruse, F. E., 1311 - B0018, 1326 - B0033, 1353 - B0113, 1354 - B0114, 3019, 3453, 3513 - A0076, 3515 - A0078, **3870 - C0131**, 4435, 4438
- Kruszewski, K., 3715 - B0062
- Krystof, M. R., 5231 - B0344
- Krytantek PF Study Group, 1228 - A0069
- Krzyszollik, M., 2413 - C0079
- Krzysztyńska-Kuleta, O., 3077 - A0048, **3094 - A0065**, 3997 - A0122
- Krzyżanowska-Berkowska, P., **2110 - A0168**, 5891 - C0178
- Ksander, B., **2287 - B0241**, 2288 - B0242
- Kubach, S., 2846 - B0264, **2847 - B0265**, 2864 - B0282
- Kubena, T., 2917 - C0214
- Kubo, E., 125 - B0039, 3041 - A0012, 3796 - C0023, 3797 - C0024, 444 - A0304, 5636 - A0355, 5652 - A0371, **890 - A0279**
- Kubo, Y., **4290 - C0161**, 5376 - A0028
- Kubota, D., 1429 - B0348, 1519 - C0360
- Kubota, M., 5592 - A0311
- Kubota, T., 4170 - C0012, 5145 - B0168
- Kubota, Y., 3264 - B0363
- Kuchan, M., 327 - C0260
- Kuchenbecker, J., **4050 - A0257**, 5961, 655 - C0213
- Küchenhoff, H., 2407 - C0073
- Kuchtye, J., 3705 - B0052
- Kuchtye, R. W., 3705 - B0052, 4428
- Kudish, M., 334 - C0267
- Kudo, H., 1876 - C0180
- Kudsieh, B., 1387 - B0164
- Kuehlewein, L., 1516 - C0357, 1565, **4561 - A0090**
- Kuehn, M. H., 194 - C0005, **3731 - B0078**, 4721 - B0145
- Kuehn, S., **4500 - A0015**, 5501 - A0170
- Kuehne, A., 5877 - C0164
- Kuenty, L., 2236 - A0405, **90 - A0253**
- Kuester, S., 632
- Kuhn, P., 1637 - A0013
- Kuiper, J., 3492, 5380 - A0032, 5585 - A0304
- Kuizina, G., 406 - A0224
- Kuklinski, E., **4880 - C0325**, 919 - B0097, 937 - B0115
- Kulenkamp, J., 2872 - B0290, 2874 - B0292
- Kulesh, B., **588 - B0203**
- Kulkarni, A., 2042 - A0100, 2053 - A0111
- Kulkarni, M., 2991, 3874 - C0135, **3885 - C0146**
- Kulkarni, M., 3052 - A0023, 3053 - A0024
- Kulothungan, V., 2890 - C0187
- Kumakura, S., 502 - B0009
- Kumar, A., 5862 - C0149
- Kumar, A., **272 - C0173**, **4732 - B0156**, 4733 - B0157
- Kumar, A., 585 - B0200
- Kumar, A., **2970**, 4935
- Kumar, A., 1900 - C0300, 3257 - B0356
- Kumar, B., **3032 - A0003**
- Kumar, B., **5666 - A0385**
- Kumar, B., 60 - A0107
- Kumar, D. K., 5098 - B0087
- Kumar, K., 5337 - C0270
- Kropp, M., 223 - C0034, **4543 - A0058**
- Kumar, M., 4675 - A0317
- Kumar, N., **4097 - B0222**
- Kumar, N., 5980, 744
- Kumar, N., 4245 - C0087
- Kumar, P., 5007 - A0078
- Kumar, R., 3534 - A0097
- Kumar, S., 2193 - A0362, 346 - A0006, 6141 - C0260
- Kumar, S., 1126 - C0161
- Kumar, S., 3799 - C0026
- Kumar, T., 4323 - C0297
- Kumar, V., **3559 - A0176**
- Kumar Verma, N., 1633 - A0009
- Kumari, P., 1900 - C0300, 2223 - A0392, 438 - A0298
- Kumar, V., 3799 - C0026
- Kumar-Singh, R., 1193, 384 - A0044, 4551 - A0066, 5666 - A0385
- Kumaran, N., 4630 - A0272
- Kumaran, S., 4145 - B0368, **4146 - B0369**
- Kumarasamy, A., 3043 - A0014
- Kumaratilake, J., 1579
- Kumari Bhaskar, N. K., **2600**
- Kumari, N., 2601
- Kumari, S. S., 3486
- Kumon, R. E., 1631 - A0007
- Kunavisarut, P., 3250 - B0349
- Kung, J. W., **5471 - A0140**
- Kung, P., 3820 - C0047
- Kunikata, H., **3189 - B0189**, 3725 - B0072, 5082 - B0033, 6105 - C0224
- Kunimi, H., 3585 - A0202
- Kunimoto, D. Y., 2398 - C0064
- Kunishige, T., 510 - B0017
- Kuniyoshi, K., 4238 - C0080
- Kunz, E., 5467 - A0136, 5469 - A0138
- Kunze, R., 2720 - B0041
- Kunzevitzyk, N. J., 2255 - B0209, 2256 - B0210
- Künzi, M., 5876 - C0163
- Kuo, A. N., 1318 - B0025, 1342 - B0049, 1347 - B0054, 2195 - A0364, 273 - C0174, 288 - C0189, 3955, 5741 - C0028, 5869 - C0156
- Kuo, B., **143 - B0057**
- Kuo, J., 1894 - C0294
- Kuo, L., 1008 - B0262, 997 - B0251
- Kuppamuthu, D., 5360 - A0012
- Kuppel, L., 2210 - A0379
- Kupper, C., 1366 - B0126

- Kuppermann, B. D., 1462 - C0024, 1960, **2987**, 3268 - B0367, 3986 - A0111, 4005 - A0130, 771, 851 - A0183
- Kuppusswamy Parthasarathy, M., **1277** - A0312, 1678 - A0199
- Kurata, K., **20** - A0051, 5414 - A0066
- Kure, K., 3753 - B0168, 4295 - C0166
- Kurian, A., 5483 - A0152, 5530 - A0222
- Kuribayashi, H., 597 - B0212
- Kurihara, T., **2784** - B0163
- Kurihara, T., 1430 - B0349, 1431 - B0350, 2145 - A0279, 2784 - B0163, 3585 - A0202, **677** - C0272, 862 - A0194
- Kurimoto, H. Y., 5744 - C0031
- Kurimoto, Y., 1715 - A0236, 291 - C0192, 3610 - A0228, 5002 - A0073
- Kurioka, T., 4262 - C0133
- Kuriyan, A. E., **1157**, 4660 - A0302, 4694 - A0336, 537 - B0152
- Kuroda, M., 1368 - B0128
- Kurokawa, K., 1153, **728**, 730
- Kurosawa, T., 4394 - C0442
- Kurose, T., 2489 - C0193
- Kurtenbach, S., 2009
- Kurukuti, N., 638 - C0068
- Kuryshcheva, N. I., **5050** - B0001
- Kurz, J. K., 4869 - C0314
- Kurz, M., 73 - A0120
- Kusaba, K., **4231** - C0073
- Kusabara, A., 5121 - B0110
- Kusabara, I., 4306 - C0280
- Kusaka, S., 102 - A0265, 3688 - A0372, **4238** - C0080, 435 - A0295
- Kuscha, V., 4597 - A0186
- Kuse, Y., 6129 - C0248
- Kusibati, R., 1156
- Kusne, Y., 2398 - C0064
- Kusnyerik, A., 4021 - A0146, 4561 - A0090
- Kustermann, S., 5329 - C0262
- Kusuhara, S., 1921 - C0321, 269 - C0170
- Kusumoto-Utsui, K., 2626 - A0131, **3337** - C0179
- Kutty, R. K., 5382 - A0034
- Kutzner, L., 672 - C0230
- Kuwahara, A., 541 - B0156
- Kuwahara, T., 3688 - A0372
- Kuze, M., **91** - A0254
- Kuzmenko, O., **2255** - B0209, 2256 - B0210
- Kvale, M. N., 1179
- Kvanta, A. P., 1251 - A0092, 3575 - A0192, 4007 - A0132, 5005 - A0076, 5007 - A0078
- Kverka, M., 2525 - C0254
- Kwak, J., 1348 - B0055
- Kwai, N., 1811 - B0159
- Kwak, J., **2127** - A0185
- Kwak, J., **916** - B0094
- Kwan, J., 5387 - A0039
- Kwan, J., 2159 - A0293, 3933, **4861** - C0306
- Kwan, K., **2592**
- Kwapong, W., 2819 - B0237
- Kwiatkowski, A., 5884 - C0171
- Kwicklis, M., 6025
- Kwon, H., 4654 - A0296, 842 - A0174
- Kwon, J., **1020** - B0304, 2171 - A0340
- Kwon, J. W., 2888 - C0185
- Kwon, J., 3292 - C0086, 3293 - C0087
- Kwon, J., 4829 - C0187, **5374** - A0026
- Kwon, M., **2565**
- Kwon, O., 6193 - C0347
- Kwon, S., **5860** - C0147
- Kwon, Y. H., 3731 - B0078
- Kynast, J., 1128 - C0163
- Kyo, A., 395 - A0095
- Kyouko, T., 945 - B0123
- Kyryllou, R., 456 - A0316
- Laing, S. T., **216** - C0027, 2652 - A0379
- Lains, I., 1515 - C0356, 2619, 3126 - A0243, 4944, **4946**, 786
- Laird, J., 2348 - B0358
- Laird, O. S., 5310 - C0243
- Laiseca, A., 1387 - B0164
- Lajos Csinsiki, 1130 - C0165
- Lake, D., 5772 - C0059
- Lake, M., 4363 - C0411
- Lake, S., 4363 - C0411
- Lakis, N., 112 - A0275
- Lakk, M., **3713** - B0060, 3939
- Lakkaraju, A., 3992 - A0117, 4028 - A0153
- Lakkis, C., 1743 - B0058
- Lako, M., **1563**, 1984, 2272 - B0226, 3862 - C0123, 5329 - C0262, 542 - B0157, 544 - B0159, 560 - B0175, 561 - B0176, 565 - B0180, 570 - B0185
- Lakra, R., 3641 - A0302
- Lakshmanan, Y., **3700** - B0047
- Lakshminarayanan, R., **1633** - A0009, 4220 - C0062
- Lakshminarayanan, V., 1277 - A0312, 1286 - A0321, 1678 - A0199
- Lal, M., 3078 - A0049
- Lalane, R., 3598 - A0216
- Lalitha, P., 3690 - A0374
- Lalla, S., 1505 - C0346
- Lallemand, F., 55 - A0086
- Lally, S., 5600 - A0319, 5602 - A0321
- Lalonde, M. R., **5029** - A0225
- Lalonde, M. K., 1082 - C0095, **2942** - C0264, 2950 - C0272
- Lam, A., 4984
- Lam, B. L., 3898 - C0364, **3899** - C0365, 4460, 4991, 4992, 5004 - A0075
- Lam, C. S., **3400** - C0324
- Lam, C., 1721 - A0242
- Lam, C., 3478
- Lam, H., 5965
- Lam, J., 6080 - A0209
- Lam, J., 272 - C0173
- Lam, J., **2689** - B0010
- Lam, P., 2262 - B0216
- Lam, P., 3119 - A0127, **573** - B0188
- Lam, T., 2357 - B0367, 699 - C0294, 710 - C0305
- Lam, V., 1176
- Laman, M. S., 3627 - A0288
- Lamard, M., 1726 - A0247
- Lamb, W. D., **1496** - C0238
- Lambert, A., 346 - A0006
- Lambert, A. J., 5864 - C0151
- Lambert, A. J., 5791 - C0078
- Lambert, J., 5537 - A0229
- Lambert, M., **363** - A0023
- Lambert, N., **1325** - B0032
- Lambert, S. R., **5195** - B0308
- Lambert, S. R., 2928 - C0250, 408 - A0226, 5196 - B0309
- Lambert, W. S., 3109 - A0117, 3537 - A0100, 3714 - B0061
- Lambiasse, A., 34 - A0065
- Lamboule, A., 4362 - C0410
- Lambrechts, L., 5404 - A0056
- Lambros, M. L., 4951
- Lamey, T., 2330 - B0319
- Lamin, A., 1717 - A0238, **3231** - B0330, 3233 - B0332
- Lammer, J., **3435**, 5727 - C0014
- Lammer, R., 2720 - B0041
- Lamotho, P., 5089 - B0040
- Lamoureux, E., 4101 - B0226, 4146 - B0369, 5124 - B0113
- Lamoureux, E. L., 1033 - B0344, **2601**, 3912, 3913, 4145 - B0368, 5166 - B0189
- Lampen, S., 1914 - C0314
- Lampen, S. I., **1096** - C0131
- Lampi, K. J., **3044** - A0015
- Lamprecht, P., 2568
- Lamrani, M., 4705 - B0129
- Lamson, T., 2214 - A0383
- Lamy, R., 1472 - C0034, 334 - C0267, 4025 - A0150, **4338** - C0386
- Lan, W., 2958 - C0280, **3393** - C0317, 3394 - C0318
- Lan, Z., **3734** - B0081
- Land, C., 500 - B0007
- Landers, J., 1177, 2700 - B0021
- Landis, E., 678 - C0273, **750**
- Landman, J., 618 - B0290
- Landowski, M., **348** - A0008
- Landreville, S., 3185 - A0328
- Landsend, E. C., **1514** - C0355, 667 - C0225
- Lane, A., 3061 - A0032
- Lane, A. M., 3626 - A0287, 4301 - C0275
- Lane, B., 5141 - B0164
- Lane, C. J., 3818 - C0045
- Lane, G., 5268 - C0114
- Lane, K. J., 2424 - C0090
- Laner, A., 6047 - A0081
- Lanerius Pusineri, L., 2065 - A0123, 485 - A0345
- Lang, A., 1126 - C0161
- Lang, G. E., 1455 - C0017
- Lang, P., **4398** - C0446, 4400 - C0448
- Lang, P. Z., 1388 - B0165
- Lang, P., 3415 - C0339
- Lang, R. A., 5306 - C0239
- Lang, S., 85 - A0248
- Lange, C., 1487 - C0229, 2627 - A0132, 4317 - C0291
- Langella, F., 5744 - C0031
- langenbacher, A., 2261 - B0215, 3436
- Langer, K., 568 - B0183
- Langford, M. P., 2262 - B0216, 2528 - C0257
- Langh, J., 1245 - A0086, 1250 - A0091
- Langlo, C. S., 1737 - A0258, 4630 - A0272, 4992, 652 - C0210, 669 - C0227
- Langmann, T., 2460 - C0126, 3318 - C0160, 5390 - A0042, 5404 - A0056
- Langner, S., 5846 - C0133
- Langs, G., 1736 - A0257
- Langsdon, S. E., 3168 - A0311
- Lani, R., **6137** - C0256
- Lankford, C., 2348 - B0358
- Lanner, F., 4007 - A0132, 5005 - A0076, 5007 - A0078, 5562 - A0254
- Lanoe, V. R., 2097 - A0155
- Lansingh, V. C., 1058 - B0369, **4104** - B0229
- Lanson, N. A., 3120 - A0128, 763
- lantz, K., **2962** - C0284
- Lanza, A., 5605 - A0324
- Lanza, R., 5004 - A0075
- Lanzagorta, A., 1174
- Lanzetta, P., 3217 - B0316, 4653 - A0295, 4662 - A0304, 52 - A0083, 6030, 6033
- Lanzl, I., 1583
- Lapajne, L., 2185 - A0354, 2899 - C0196
- Lapenna, L., **2671** - A0398
- Lapeyre, M., 5924 - C0321
- Lapierre-Landry, M., **5829** - C0116
- Lapin, B., 1051 - B0362
- Lapointe, A., 158 - B0072
- Larbee, J., 4173 - C0015
- Larbi, A., 4933
- Lard, M., 1493 - C0235
- Lardner, E., 3575 - A0192, 4007 - A0132
- Larin, K., **4692** - A0334
- Larner, R. L., 4115 - B0278
- LaRocca, F., 4633 - A0275, 5869 - C0156
- Laroche, L., 5812 - C0099
- Larrea Gonzalez, J., **250** - C0109, 4229 - C0071
- Larsen, A., 3188 - A0331
- Larsen, M., 1172, 4750 - B0251, 5449 - A0118, **5533** - A0225
- Larsen, P., 2777 - B0156
- Larson, A., 5157 - B0180
- Larsson Cohen, M., 2714 - B0035
- Larumbe, E., 2220 - A0389
- Laryukhin, M., 2365 - B0375
- Lasave, A. F., 420 - A0238
- Lashkari, K., **2417** - C0083, 2445 - C0111, 3270 - B0369, 4834 - C0192
- Lasiste, J. M., 1167, **3176** - A0319, 5596 - A0315, 6015
- Lasky-Su, J., 4946
- Lasloides, M., 298 - C0199
- Lasowski, F., **1190**
- Lass, J. H., 2892 - C0189
- Lastou, A., **1153**, 730
- Laston, S., 2724 - B0103, 5893 - C0180
- Latasiewicz, M., 5936 - C0333
- Latchney, L., 4635 - A0277
- Latham, K., 1070 - C0083
- Lathrop, K. L., 4999 - A0070
- Latkany, P., 2314 - B0268
- Latta, L., **2263** - B0217, 3870 - C0131
- Lattrell, Z., 245 - C0056, 3465
- Latuszek, A., 2534 - C0263, 6134 - C0253
- Latypova, X., 47 - A0078
- Lau, J. K., **1786** - B0101
- Lau, L., 1896 - C0296
- Laude, A., **1264** - A0299
- Lauderdale, J. D., 577 - B0192, 589 - B0204
- Lauderdale, J. D., **593** - B0208
- Lauer, A., 2620, 3896 - C0362
- Lauermaier, J. L., **2850** - B0268
- Lauermaier, P., **2884** - B0302
- Launer, D., 2239 - A0408
- Laura, D., **4196** - C0038
- Lauren, C., 2160 - A0329
- Laurie, G. W., 3323 - C0165, **3828** - C0055, 4914 - C0359
- Laurie, S., **1133** - C0168, 1134 - C0169, 722
- Laux, R., 1420 - B0339, 1425 - B0344, 1818 - B0279
- LaVail, M. M., 1008 - B0262
- Lavaque, E., **5945** - C0342
- Laver, N. V., 112 - A0275
- Lavergne, M., 4362 - C0410
- Lavezzo, M. M., **422** - A0240
- Lavia, C., 3197 - B0197
- Lavigne, Q., 255 - C0114
- Laville, V., 5144 - B0167
- Lavinsky, F., 2111 - A0169, **2113** - A0171, 3501
- Law, A., 5615 - A0334, 692 - C0287
- Law, C., 2964 - C0286
- Law, E., **2201** - A0370
- Law, M., 1969, 32 - A0063
- Law, S., 2039 - A0066, 4986
- Lawatsch, M., 1307 - B0014
- Lawhon, W., 5018 - A0214
- Lawler, T. P., **5542** - A0234, 5543 - A0235
- Lawrence, M. S., 1253 - A0094, 4243 - C0085, 5483 - A0152, 5530 - A0222, 5847 - C0134
- Lawson, F., 3635 - A0296
- Lawton, A., **2740** - B0119
- Lay, B., **1763** - B0078, 1774 - B0089
- Layden, B., 3878 - C0139
- Lazar, A. J., 3179 - A0322
- Lazar, E., 178 - B0332
- Lazarov, O., 3090 - A0061
- Lazcano-Gomez, G., 6102 - C0221
- Lazendic, M., 237 - C0048
- Lazzara, F., 193 - C0004
- Lazzaro, D., 6167 - C0286

- Lazzaro, D. R., 3649 - A0333
 Le, A., **2026 - A0053**, 2039 - A0066
 Le, B. A., 1637 - A0013, **3625 - A0286**, 3631 - A0292
 Le, B., 4690 - A0332, 4691 - A0333
 Le Cain, A., 3399 - C0323, 3401 - C0325
 Le, H., 293 - C0194, 294 - C0195
 LE, H., **3083 - A0054**
 Le, H. T., 4264 - C0135
 Le, J., 1289 - A0324
 Le, K., 2787 - B0166
 Le Meur, G., 38 - A0069
 Le, N. T., 5240 - B0353
 Le, P., 1454 - C0016
 Le, Q., 1163, 2992, 3782 - C0009, 3860 - C0121, **5715 - C0002**
 Le Roux, C., **4067 - B0062**
 Le, T., 5452 - A0121
 Le, T. D., 3478
 Le, V., 3342 - C0184, **5717 - C0004**
 Le, Y., **2505 - C0209**
 Le-Bel, G., 2247 - B0201, **3869 - C0130**
 Leach, L. L., **3995 - A0120**
 Leahy, C., **1724 - A0245**, 1727 - A0248, 2148 - A0282, 277 - C0178
 Leahy, M. T., 2649 - A0154
 Leal, S., 4949
 Leal-Fonseca, M., 5031 - A0227
 Leaman, R., 4149 - B0372
 Leang, R., 2237 - A0406
 Leão, A. F., 5887 - C0174
 Leat, S., 5965
 Leat, S. J., **1083 - C0096**
 Leavitt, J., 2176 - A0345, 2188 - A0357, 622 - B0294
 LEAVO Study Group, 2569
 LeBlanc, M., 3266 - B0365, **5481 - A0150**
 Lebranchu, P., 55 - A0086
 Lebreton, O., 5933 - C0330
 Lechanteur, Y., 352 - A0012
 Ledesma Gil, J., **2054 - A0112**
 ledezma, J., 5524 - A0216
 Ledoux, D. M., 3037 - A0008
 Ledsam, J., 1729 - A0250
 Lee, A. Y., 1222, 1223, 2312 - B0266, 5174 - B0197
 Lee, A., 913 - B0091
 Lee, B., 349 - A0009
 Lee, B., 2812 - B0230
 Lee, B. W., **156 - B0070**
 Lee, B., **3947**
 Lee, B., 3267 - B0366, **3360 - C0242**
 Lee, B., 1553, 3770 - B0185
 Lee, B., 270 - C0171, 3922
 Lee, C. S., 1222, 1223, 5174 - B0197
 Lee, C., **5677 - A0396**
 Lee, C., 4080 - B0075
 Lee, C., 5047 - A0243
 Lee, C., 945 - B0123
 Lee, C., 2389 - C0055, **3130 - A0247**
 Lee, C., 3593 - A0211
 Lee, C., 4166 - C0008
 Lee, C., 3246 - B0345, 3289 - C0083
 Lee, C., 5485 - A0154
 Lee, D., 978 - B0232
 Lee, D., **1526 - C0367**, 2737 - B0116
 Lee, D. H., 4005 - A0130
 Lee, D. J., **2552 - C0281**
 Lee, D. J., **4460**
 Lee, D., **515 - B0022**
 Lee, D., 400 - A0100
 Lee, D., 2033 - A0060
 Lee, D., 1450 - C0012
 Lee, E., 4115 - B0278
 Lee, E. J., 2549 - C0278, **2551 - C0280**
 Lee, E., 2035 - A0062, 2101 - A0159, 2698 - B0019, 5051 - B0002
 Lee, E., 4499 - A0014
 Lee, E., **2027 - A0054**
 Lee, E., 5436 - A0105
 Lee, G. C., 1727 - A0248, 2088 - A0146, 2124 - A0182, 5060 - B0011, 5111 - B0100, 5112 - B0101, 6031, **6032**
 Lee, G., 2035 - A0062
 Lee, G., 2101 - A0159
 Lee, H., **2939 - C0261**
 Lee, H., **5692 - A0411**
 Lee, H., 5788 - C0075
 Lee, H. H., 5827 - C0114
 Lee, H., 1414 - B0191, 2698 - B0019
 Lee, H., 5575 - A0267
 Lee, H., **3832 - C0059**
 Lee, H., 3290 - C0084
 Lee, H., 1289 - A0324
 Lee, H., **2268 - B0222**, 2293 - B0247, 2989, 4375 - C0423
 Lee, H., 3770 - B0185
 Lee, H., 1332 - B0039
 Lee, H., 2202 - A0371, 3822 - C0049
 Lee, H., 1117 - C0152
 Lee, H. J., 6054 - A0088
 Lee, H., 2544 - C0273, **2545 - C0274**
 LEE, J., **4654 - A0296**, 853 - A0185
 Lee, J., 2921 - C0218, 3578 - A0195
 Lee, J., **4554 - A0083**
 Lee, J., **176 - B0330**
 Lee, J., 6134 - C0253
 Lee, J., 1364 - B0124, **1365 - B0125**
 Lee, J., 608 - B0280
 Lee, J. E., 4654 - A0296, 5272 - C0118, 842 - A0174, 853 - A0185
 Lee, J., 5097 - B0086
 Lee, J., 2389 - C0055
 Lee, J., 2888 - C0185, 3804 - C0031
 Lee, J., **4341 - C0389**
 Lee, J., 3924
 Lee, J., **1232 - A0073**, 2208 - A0377
 Lee, J., 4077 - B0072, **5072 - B0023**
 Lee, J. Y., 4892 - C0337
 Lee, J. T., **404 - A0222**
 Lee, J. O., 162 - B0076
 Lee, J. S., 432 - A0292
 Lee, J., 927 - B0105
 Lee, J., 769
 Lee, J., 1829 - B0290
 Lee, J., 5700 - A0419
 Lee, J., 6101 - C0220, 6102 - C0221, **6108 - C0227**
 Lee, J., 5099 - B0088, 5100 - B0089
 Lee, J., 5948
 Lee, J., **189 - B0343**
 Lee, J., **2402 - C0068**
 Lee, J., 5432 - A0101
 Lee, K., **1790 - B0105**
 Lee, K. R., **3893 - C0359**
 Lee, K., **4932**
 Lee, K., 3116 - A0124
 Lee, K. E., 1040 - B0351, 3014, 6011
 Lee, K., **5850 - C0137**
 Lee, K., **4741 - B0242**
 Lee, K., 1406 - B0183
 Lee, K., 1677 - A0198
 Lee, K., **885 - A0217**
 Lee, M., **5146 - B0169**
 Lee, M., 939 - B0117
 Lee, M. D., **4782 - B0392**, 5249 - B0362
 Lee, M. N., 99 - A0262
 Lee, M., 103 - A0266, **3297 - C0091**
 Lee, M., 421 - A0239
 Lee, M., **1117 - C0152**
 Lee, M., **5423 - A0092**
 Lee, M., 1706 - A0227, 4074 - B0069
 Lee, M., 4105 - B0230, **5162 - B0185**
 Lee, M., 1874 - C0178, 5097 - B0086
 Lee, O. L., 4686 - A0328
 Lee, P. S., **4348 - C0396**
 Lee, P., 3385 - C0309
 Lee, P. P., 2737 - B0116, 5227 - B0340
 Lee, R., **1645 - A0021**
 Lee, R. K., 4316 - C0290
 Lee, R. M., 2000, 2709 - B0030
 Lee, R. W., 412 - A0230, 5578 - A0297, 5618 - A0337
 Lee, R., 2125 - A0183
 Lee, R., 3297 - C0091
 Lee, S., **2732 - B0111**, 3954
 Lee, S. C., **2588**, 5038 - A0234
 Lee, S., 103 - A0266
 Lee, S., **2699 - B0020**, 5108 - B0097
 Lee, S., **1756 - B0071**, 4957
 Lee, S., **5830 - C0117**
 Lee, S., 5436 - A0105
 Lee, S. S., 1512 - C0353
 Lee, S., 5498 - A0167
 Lee, S., **4064 - B0059**, **845 - A0177**
 Lee, S., 1414 - B0191, **2698 - B0019**
 Lee, S., **2387 - C0053**, 2933 - C0255
 Lee, S., 5272 - C0118, 916 - B0094
 Lee, S., 5767 - C0054
 Lee, S., 5400 - A0052
 Lee, S., 1790 - B0105
 Lee, S., 2999
 Lee, S., **1412 - B0189**
 Lee, S., 3239 - B0338, 4739 - B0240, 5261 - C0107, 5362 - A0014, 5660 - A0379
 Lee, S., 2635 - A0140
 Lee, S., 1221, **2181 - A0350**, 6063 - A0192, 6065 - A0194
 Lee, S., 6092 - C0211
 Lee, S., 1003 - B0257, 1492 - C0234
 Lee, S., 3267 - B0366
 Lee, S., 1367 - B0127
 Lee, S., **1022 - B0306**, 867 - A0199
 Lee, S., 3438
 Lee, S., 1133 - C0168, 1134 - C0169, 722
 Lee, S., 2389 - C0055
 Lee, S. S., **1653 - A0029**, 1654 - A0030, 2056 - A0114, 492 - A0352, 5905 - C0192
 Lee, T., 5830 - C0117
 Lee, T., 977 - B0231
 Lee, T., 3822 - C0049
 Lee, T. C., 1637 - A0013, 1638 - A0014, 3160 - A0277, 844 - A0216
 Lee Torp, T., **2376 - C0042**, 3255 - B0354
 Lee, V., 3110 - A0118, 3148 - A0265, 4620 - A0262
 Lee, W., 4660 - A0302, 4694 - A0336
 Lee, W., **5104 - B0093**
 Lee, W., 4664 - A0306, 5856 - C0143, 69 - A0116, **787**
 Lee, W., 1553
 Lee, W., 2403 - C0069, **4949**
 Lee, W., 457 - A0317
 Lee, Y., **1104 - C0139**, 2938 - C0260
 Lee, Y., 3832 - C0059
 Lee, Y., 3848 - C0109
 Lee, Y., 927 - B0105
 Lee, Y., **1443 - C0005**
 Lee, Y., **933 - B0111**
 Leeburg, K. C., 289 - C0190
 Leehy, B., 2532 - C0261, 4009 - A0134, 990 - B0244
 Leeman, S., **5238 - B0351**
 Lefevre, E., 5831 - C0118
 Leffer, H., 3332 - C0174
 Leffler, C., 4185 - C0027
 Leffler, J., 590 - B0205
 Legargasson, J., 4751 - B0252
 Legault, G., 1767 - B0082
 Legeai-Mallet, L., 47 - A0078
 Legendre, C., 1911 - C0311
 Leger, H. M., **3097 - A0105**
 Legge, G. E., 1281 - A0316, 2562, 3420 - C0344, 3421 - C0345, 4572 - A0101
 Legras, R., **4697 - A0339**, 4768 - B0269
 Lehane, C., 643 - C0073
 Lehman, J. C., 4758 - B0259
 Lehmann, F., **2384 - C0050**
 Lehmann, O. J., 3020, 5140 - B0163, 5156 - B0179
 Lehoang, P., 4179 - C0021
 Lehoux, S., 3846 - C0107
 Lei, B., 5323 - C0256, **5328 - C0261**
 Lei, D., 6123 - C0242
 Lei, F., **2529 - C0258**, 2664 - A0391
 Lei, H., 1861 - C0165, 5254 - C0100, 5299 - C0232
 Lei, J., 2433 - C0099, 2855 - B0273, 2868 - B0286, **2887 - B0305**
 Lei, Q., **3421 - C0345**
 Lei, S., **5035 - A0231**
 Lei, X., 3975, 3977
 Lei, X., 2323 - B0312, 2983
 Lei, X., 1723 - A0244
 Lei, Y., **1651 - A0027**
 Leibold, C. M., 3407 - C0331
 Leibovitch, I., 535 - B0150
 Leiby, B., 2737 - B0116
 Leiderman, Y., 1574, 4204 - C0046
 Leikert, K., 865 - A0197
 Leinonen, H. O., **1591**, 1869 - C0173
 Leisy, H., **2315 - B0269**
 Leitao, M., 1070 - C0083
 Leite, S., 2737 - B0116
 Leitgeb, R., 297 - C0198, 5862 - C0149
 Leitgeb, R. A., **5061 - B0012**
 Lek, M., 5416 - A0068
 Lelli, G. J., 99 - A0262
 Leloup, A., 5428 - A0097
 Lemberg, V. G., **5766 - C0053**
 Lemij, H. G., 2072 - A0130, **2907 - C0204**, 4056 - B0051, 5136 - B0159
 Lemke, J., **2377 - C0043**
 Lemmens, K., 1862 - C0166
 Lemmens, S., 5074 - B0025
 Lemming, L., 3025
 Lemp, J. M., 1768 - B0083
 Lemus, M., 45 - A0076
 Leng, T., 1159, **1705 - A0226**, 1716 - A0237, 5263 - C0109
 Lengyel, L., 1130 - C0165, 2433 - C0099, 3989 - A0114
 Lenis, T. L., **4502 - A0017**
 Lenk, J., **3129 - A0246**
 Lennikov, A., 2251 - B0205, 3566 - A0183
 Lentz, J. J., 2343 - B0332, **4523 - A0038**, 48 - A0079, 995 - B0249
 Lentz, S. I., 1300 - B0007
 Lenzetti, C., **1696 - A0217**, 2836 - B0254, 2838 - B0256
 Leo, E., 236 - C0047
 Leo, L., **4017 - A0142**
 Leo, L. H., 4477
 Leon Roldan, C. R., 1321 - B0028
 Leonard, A., 792
 Leonard, B., 2344 - B0333, **4373 - C0421**
 Leonard, A., 5572 - A0264
 Leong, B., 1141, 5278 - C0124
 Leong, B. C., **5973**
 Leong, D., 2418 - C0084
 Leontieva, E., 1126 - C0161
 LePham, Y., 5539 - A0231
 Lepore, D., 2765 - B0144, **3755 - B0170**, 3756 - B0171
 Lerner, F., 6107 - C0226
 Lerner, K., 1853 - C0157
 Lerner, N., 3509 - A0072
 Leroy, B. P., 5403 - A0055, 5404 - A0056, 5408 - A0060
 Leroy, J., 3092 - A0063
 Leshno, A., 1504 - C0345
 Lesk, M. R., 2025 - A0052, 3271 - B0370
 Leske, D. A., 1557, **4148 - B0371**, 864 - A0196
 Lesmes, L. A., **1073 - C0086**, 1074 - C0087, 1266 - A0301, 1275 - A0310, 3126 - A0243, 4943, 786
 Lesser, E., 2176 - A0345, 2188 - A0357
 Lessieur, E. M., 960 - B0214
 Lesuna, T., 5817 - C0104
 Leszczynska, A., 2991, **3874 - C0135**, 3885 - C0146
 Leszczynska, A., **5090 - B0041**
 Leth-Møller, K., **3255 - B0354**
 Letourneau, A., 2286 - B0240
 Lettboer, S. J., 4979
 Leu, A., 2998
 Leube, A., **1085 - C0098**, 1276 - A0311, 4754 - B0255
 Leung, C., 2124 - A0182
 Leung, C. K., **3497**, 4498 - A0013, 4984, 6031, 6098 - C0217, 6115 - C0234
 Leung, D., **1523 - C0364**, 1525 - C0366
 Leung, H., 4120 - B0283
 Leung, I., 3139 - A0256
 Leung, K., 4153 - B0376
 Leung, L., 1159
 Leung, M., **2144 - A0278**
 Leung, T., 1282 - A0317, **2130 - A0264**, 3385 - C0309
 Leung, Y., 5335 - C0268
 Leveccq, X., 297 - C0198
 Leveillard, T., 3963
 Leveillard, T. D., 3066 - A0037, **5999**, 6074 - A0203, 793
 Levi, D. M., 4111 - B0274, 5793 - C0080
 Levi, S., 1423 - B0342, 356 - A0016
 Levin, A., 1644 - A0020
 Levin, M., 4932
 Levine, B., 4833 - C0191
 Levine, E. M., 3109 - A0117
 levine, J., 2680 - B0001
 Levine, J., 4833 - C0191
 Levinger, N., 1643 - A0019
 Levinson, R. D., 2538 - C0267
 Levis, H. J., 3546 - A0163
 Levitan, M., 1048 - B0359, 6187 - C0306
 Levitsky, Y., 3569 - A0186, **6071 - A0200**
 Levitt, R., 3783 - C0010, 942 - B0120, 946 - B0124
 Levy, A. M., 708 - C0303, 709 - C0304
 Levy, J., 396 - A0096
 Levy, R., 2416 - C0082, **3311 - C0153**
 Lévy, V., 2859 - B0277
 Lew, M., 4909 - C0354
 Lewandowski, D., 2020 - A0047
 Lewczuk, K., 2022 - A0049
 Lewin, A. S., 2453 - C0119, 3965
 Lewin-Kowalik, J., 313 - C0246
 Lewin-Smith, M., 2314 - B0268
 Lewis, D. R., **1303 - B0110**
 Lewis, D., **1825 - B0286**
 Lewis, G. P., 4224 - C0066
 Lewis, J. W., 4762 - B0263, 4763 - B0264
 Lewis, L., 1638 - A0014
 Lewis, P., 3411 - C0335
 Lewis, P. N., **2265 - B0219**, 5722 - C0009
 Lewis, R. A., 1242 - A0083
 Lewis, W., **2846 - B0264**, 2847 - B0265
 Lewke, B., 5855 - C0142
 Leydolt, C., 4789 - B0399
 Leys, M. J., 1437 - B0356, 1952, 3415 - C0339
 Leysen, I., 2270 - B0224
 Leyton, D., 3560 - A0177
 LHYON Study Group, 3901 - C0367, 4530 - A0045
 Lhuillier, L., 1296 - B0003, 2226 - A0395, 2898 - C0195, 4387 - C0435, 4788 - B0398
 Li, A., **5309 - C0242**
 Li, A., 1885 - C0285
 Li, A., 1896 - C0296

- Li, A. J., 2857 - B0275, 2861 - B0279, 4476, 5075 - B0026
- Li, A., 693 - C0288
- Li, B. Z., 4111 - B0274
- Li, B., 1436 - B0355, **1640 - A0016**
- Li, B., 4999 - A0070
- Li, B., 4511 - A0026, **5840 - C0127**
- Li, B., 1650 - A0026
- Li Calzi, S., 6002, **765**
- Li, C., **1169**
- Li, C., 5615 - A0334
- Li, C., 230 - C0041, 5690 - A0409
- Li, C., 2653 - A0380, **5532 - A0224**
- Li, C., 2537 - C0266
- Li, C., 3923
- Li, C., 2219 - A0388, 496 - B0003
- Li, D., 325 - C0258
- Li, D., 3530 - A0093
- Li, D., 3277 - C0071, **3314 - C0156**, 3871 - C0132
- Li, D., 1101 - C0136, 1105 - C0140, 1128 - C0163, 5107 - B0096, 5134 - B0123, **6028**
- Li, D., 2873 - B0291
- Li, E., **2420 - C0086**
- Li, E., **6200 - C0354**
- Li, F., 4239 - C0081
- Li, F., 4910 - C0355, **5119 - B0108**, 5888 - C0175, 5897 - C0184, 5911 - C0198
- Li, F., 2597
- Li, G., 5163 - B0186
- Li, G., 312 - C0245, 480 - A0340, 508 - B0015
- Li, G., **4124 - B0287**, 734
- Li, G., **1659 - A0035**, 3970
- Li, H., 3748 - B0095
- Li, H., 4391 - C0439
- Li, H., 3522 - A0085, **4910 - C0355**
- Li, H., **5377 - A0029**
- Li, H., 646 - C0204
- Li, H., 1872 - C0176
- Li, H., 1430 - B0349, 1431 - B0350, 1432 - B0351, 2532 - C0261, 4009 - A0134
- Li, I., 3485
- Li, J., 2777 - B0156
- Li, J., 1001 - B0255
- Li, J., 5429 - A0098, 5968
- Li, J., **2745 - B0124**
- Li, J., 5904 - C0191
- Li, J., 3950
- Li, J., **4239 - C0081**, 6045 - A0079
- Li, J., **5083 - B0034**
- Li, J., 2676 - A0403
- Li, J., 1803 - B0151, 372 - A0032
- Li, J., 5753 - C0040, 5956
- Li, J., 891 - A0280
- Li, J., **4270 - C0141**
- Li, J., 4214 - C0056
- Li, J., **6087 - C0206**, 6088 - C0207, 6096 - C0215
- Li, J., 4499 - A0014
- Li, K., 4591 - A0180
- Li, K., 4591 - A0180
- Li, K. Z., **1941 - C0341**
- Li, K., 2222 - A0391
- Li, K., 2357 - B0367, 699 - C0294
- Li, K., 5680 - A0399
- Li, L., 3393 - C0317, **3394 - C0318**
- Li, L., 5147 - B0170
- Li, L., **2932 - C0254**
- Li, L., 2601
- Li, L., 2983
- Li, L., 981 - B0235
- Li, L., 3406 - C0330
- Li, L., 5296 - C0229, 5298 - C0231
- Li, L., **5976**
- Li, L., 3795 - C0022
- Li, M., 3143 - A0260
- Li, M., 2571, 4010 - A0135
- Li, M., **2871 - B0289**
- Li, M., 2433 - C0099, **2624**, 4482
- Li, M., 710 - C0305
- Li, M., **2946 - C0268**, 3406 - C0330
- Li, M., 3316 - C0158, 3323 - C0165
- Li, M., 3940
- Li, M., 445 - A0305
- Li, N., **1030 - B0314**
- Li, P., 2843 - B0261
- Li, P., 2633 - A0138
- Li, P., 1822 - B0283
- Li, P., **2843 - B0261**
- Li, Q., **1520 - C0361**
- Li, Q., 571 - B0186
- Li, Q., 3946
- Li, Q., 1823 - B0284, 1824 - B0285
- Li, R., 1282 - A0317, 4111 - B0274, 5965
- Li, S., 3385 - C0309, 3700 - B0047
- Li, S., 5453 - A0122
- Li, S., 2091 - A0149
- Li, S., 3398 - C0322
- Li, S., 3397 - C0321
- Li, S., 2515 - C0244
- Li, S., 36 - A0067, **42 - A0073**
- Li, S. L., **5018 - A0214**
- Li, S., **4516 - A0031**
- Li, S. K., **3480**
- Li, S., 4339 - C0387
- Li, T., 41 - A0072
- Li, T., 67 - A0114
- Li Volti, G., 3166 - A0309
- Li, W., 3402 - C0326
- Li, W., 1169, **135 - B0049**, **2512 - C0216**, **3266 - B0365**, 3283 - C0077, 4893 - C0338, 4926 - C0371, 532 - B0147, 534 - B0149, 5484 - A0153
- Li, W., 3093 - A0064, 4734 - B0235, 4838 - C0196, 5359 - A0011
- Li, W., **4905 - C0350**
- Li, X., **144 - B0058**
- Li, X., 3393 - C0317, 3399 - C0323, 3401 - C0325
- Li, X., 3296 - C0090
- Li, X. Q., 1172, 5533 - A0225
- Li, X., 2755 - B0134, 4470
- Li, X., 2958 - C0280
- Li, X., 5208 - B0321
- Li, X., 2219 - A0388
- Li, X., 3773 - B0188, 4545 - A0060
- Li, X., 3748 - B0095
- Li, X., **3530 - A0093**
- Li, X., 5395 - A0047, 5396 - A0048
- Li, X., **2630 - A0135**, 4001 - A0126, 4031 - A0156, 5485 - A0154, 581 - B0196
- Li, Y., 2396 - C0062
- Li, Y., 270 - C0171, 2824 - B0242, **3333 - C0175**
- Li, Y., 2342 - B0331, 238 - C0049, **5422 - A0074**
- Li, Y., **5833 - C0120**
- Li, Y., 5001 - A0072
- Li, Y., 4916 - C0361
- Li, Y., 1360 - B0120
- Li, Y., 546 - B0161, **5523 - A0215**
- Li, Y., 2873 - B0291
- Li, Y., 1181, 3288 - C0082, 3295 - C0089, 3836 - C0063, **3838 - C0065**, 4128 - B0291, 4893 - C0338, 5155 - B0178, **5506 - A0175**
- Li, Y., **1861 - C0165**
- Li, Y., **2012**
- Li, Y., 2495 - C0199, 2633 - A0138, 5503 - A0172, **999 - B0253**
- Li, Y., 5764 - C0051
- Li, Y., **195 - C0006**
- Li, Y., 4112 - B0275
- Li, Y., 3258 - B0357, 869 - A0201
- Li, Y., 5203 - B0316, **5819 - C0106**
- Li, Y., 1929 - C0329, 3591 - A0208, **5479 - A0148**
- Li, Y., 1009 - B0263, 2339 - B0328, 2350 - B0360, 5142 - B0165
- Li, Y., 534 - B0149
- Li, Z., 4124 - B0287, 734
- Li, Z., 436 - A0296, 4784 - B0394, **4791 - B0401**, 5642 - A0361
- Li, Z., 2457 - C0123, 4590 - A0179
- Li, Z., **3377 - C0301**
- Li, Z., 5143 - B0166
- Li, Z., **4893 - C0338**
- Li, Z., 1873 - C0181
- Li, Z., 3581 - A0198
- Li, Z., 2086 - A0144, 3123 - A0240, 738
- Li, Z., 5948
- Li, Z., 6111 - C0230
- Li, Z., 1704 - A0225
- Li, Z., 1241 - A0082, **3407 - C0331**
- Li, Z., **5904 - C0191**
- Li, Z., 1783 - B0098
- Li, Z., 5923 - C0320
- Li, Z., **6148 - C0267**
- Liakopoulos, S., 215 - C0026
- Liam, A., 3356 - C0238
- Lian, L., 1744 - B0059
- Lian, R., **1360 - B0120**
- Liang, A., 1488 - C0230
- Liang, C., 2528 - C0257
- Liang, C., **4308 - C0282**
- Liang, D., 2539 - C0268, 2543 - C0272, 2575, 5484 - A0153
- Liang, E., 1317 - B0024
- Liang, G. Y., 3078 - A0049
- Liang, H., 2352 - B0362
- Liang, H., 209 - C0020, **211 - C0022**, 212 - C0023, 219 - C0030, 5312 - C0245, 5714 - C0001
- Liang, J., 4615 - A0204
- Liang, L., 4910 - C0355, 903 - B0081
- Liang, X., 3712 - B0059, 5429 - A0098, 5968
- Liang, Y., 1551, **6046 - A0080**
- Liang, Y., 1966
- Liang, Y., 3406 - C0330, **651 - C0209**
- Liang, Y., 1551, 6046 - A0080
- Liang, Y., 2954 - C0276
- Liao, C., **4094 - B0219**, 703 - C0298
- Liao, S., 990 - B0244
- Liao, X., 534 - B0149
- Liao, Y. J., 2175 - A0344, 3559 - A0176, 549 - B0164
- Liao, Y., **3990 - A0115**
- Libby, R. T., 3711 - B0058
- Lichorowic, C., 217 - C0028
- Lichtengegger, A., 5826 - C0113
- Lichter, M., **4092 - B0217**, 5233 - B0346, 5234 - B0347
- Lichter, P. R., 1999
- Lichtinger, A., 1570, 5752 - C0039
- Lichtman, J. W., 1478 - C0220
- Lid and Meibomian Gland Working Group, 4884 - C0329
- Liddell, S., 220 - C0031
- Liddie, S., **5847 - C0134**
- Lie, A. L., **4698 - A0340**, 4975
- Lie, S., 499 - B0006
- Liebau, S., 567 - B0182
- Lieberman, R. L., 5
- Liebermann, L., 1557, 4148 - B0371
- Liebmann, J. M., 1182, 2115 - A0173, 3496, 3733 - B0080, 4465, 4987, 5128 - B0117, 5137 - B0160
- Liechty, J., 6166 - C0285
- Liegl, R., 2752 - B0131, 3570 - A0187, 3602 - A0220, 3614 - A0232, 764
- Lietman, T., 1697 - A0218, 2897 - C0194, 4895 - C0340
- Lieu, P., 4621 - A0263
- Lievens, C., **1283 - A0318**, 1284 - A0319, 1768 - B0083
- Liew, G., 3011, 6012, 6156 - C0275
- LiGHT Trial Study Group, 6091 - C0210
- Lightbourn, C., 3311 - C0153
- Lightman, S., 1141, 1717 - A0238, 2520 - C0249, 2523 - C0252, 2541 - C0270, 3158 - A0275, 3231 - B0330, 392 - A0092, 407 - A0225, 4193 - C0035, 4200 - C0042, 4745 - B0246
- Likht, N., 3484
- Likova, L., 4444, **4670 - A0312**
- Liles, N. W., **5222 - B0335**
- Lill, J., 2441 - C0107
- Lim, B., 472 - A0332
- Lim, B., 1371 - B0131
- Lim, D., 5560 - A0252
- Lim, D., **2553 - C0282**, 3840 - C0101
- Lim, E., 3370 - C0294
- Lim, E., 5966
- Lim, G., 1706 - A0227, 4074 - B0069
- Lim, H., 1553, 5733 - C0020
- Lim, H., 2033 - A0060
- Lim, H., **3027**
- Lim, J. I., 1224, 1574, 2837 - B0255, 4204 - C0046, 4293 - C0164, 5427 - A0096, 5437 - A0106, 5458 - A0127, **846 - A0178**
- Lim, J. K., 3696 - B0043, **3946**, 5992
- Lim, J. C., 3485
- Lim, K., 1648 - A0024, 2688 - B0009
- Lim, L. S., **2157 - A0291**, 3955
- Lim, L., 1941 - C0341
- Lim, L. L., 1139, **1958**, 404 - A0222, 4167 - C0009, 4168 - C0010, 4182 - C0024, 4830 - C0188, 4839 - C0197, 4847 - C0205, 6170 - C0289, 774
- Lim, M. C., 4153 - B0376
- Lim, P., 472 - A0332
- Lim, P., **1498 - C0240**, 3587 - A0204, 4962
- Lim, R. P., 4309 - C0283
- Lim, S., 3955
- Lim, S., 4058 - B0053
- Lim, S., 2352 - B0362
- Lim, T. H., 1264 - A0299, **4480**
- Lim, W., 4159 - C0001
- Lim, X., 2157 - A0291
- Lim, X., 4933
- Lima, A. S., 3329 - C0171
- Lima, F., 5223 - B0336
- Lima, L., 4284 - C0155
- Lima Ramos, P., **1069 - C0082**, 3411 - C0335
- Lima Rheder, J., 5232 - B0345
- Lima, V. A., 5232 - B0345
- Lima, V., **4096 - B0221**
- Limb, A., 1497 - C0239, 5006 - A0077
- Limb, G., 1494 - C0236, 1495 - C0237, 1496 - C0238, 771
- Limoli, C., **3422 - C0346**
- Limoli, C. S., 17 - A0048, 1880 - C0184
- Limoli, P. G., **17 - A0048**, 1880 - C0184
- Limoli, P., 3422 - C0346
- Lin, A., **2206 - A0375**
- Lin, A., 4868 - C0313
- Lin, B., 4611 - A0200
- Lin, C., 2038 - A0065
- Lin, C., **695 - C0290**, 696 - C0291
- Lin, C., 2337 - B0326
- Lin, C. C., 1575, 2897 - C0194, 4782 - B0392, 5249 - B0362
- Lin, C., 4617 - A0206
- Lin, C., 200 - C0011, 205 - C0016, 217 - C0028, 5672 - A0391, **6125 - C0244**
- Lin, C., 3008, 3582 - A0199
- Lin, C., 1855 - C0159
- Lin, C., **5500 - A0169**
- Lin, D., 2518 - C0247
- Lin, D., 1392 - B0169, 256 - C0115, 5680 - A0399, 5713 - A0432
- Lin, F., 3480
- Lin, F., **307 - C0240**
- Lin, F., 1550
- Lin, H., 4575 - A0164, **795**
- Lin, H., 3593 - A0211
- Lin, H., **179 - B0333**
- Lin, H., 1120 - C0155
- Lin, H., 1456 - C0018, 5545 - A0237
- Lin, H., **4920 - C0365**
- Lin, J., 3381 - C0305
- Lin, J., 4665 - A0307
- Lin, J., 1038 - B0349
- Lin, J., 2219 - A0388, **496 - B0003**
- Lin, J., **5558 - A0250**, 977 - B0231
- Lin, J. H., 3187 - A0330, 4587 - A0176, 5020 - A0216, 5594 - A0313, 669 - C0227
- Lin, J. B., 5558 - A0250
- Lin, J., 4809 - B0419
- Lin, K., 1754 - B0069
- Lin, L., 4785 - B0395
- Lin, L., **2198 - A0367**, 5177 - B0200
- Lin, L., **5211 - B0324**
- Lin, L., **4558 - A0087**
- Lin, M., **5106 - B0095**
- Lin, M. C., 1754 - B0069, **3825 - C0052**, 4880 - C0325, 4905 - C0350, 4955, 920 - B0098, 937 - B0115
- Lin, M., **1923 - C0323**
- Lin, M., 1139
- Lin, M., 232 - C0043, 3976
- Lin, P., 270 - C0171, 3145 - A0262
- Lin, P., 4272 - C0143
- Lin, Q., **305 - C0238**
- Lin, R., 5328 - C0261
- Lin, R., **4629 - A0271**
- Lin, S., 2728 - B0107
- Lin, S. C., 1118 - C0153, 1170, 4070 - B0065, 5885 - C0172, 5892 - C0179, 6108 - C0227
- Lin, S., 1375 - B0135
- Lin, S., 3406 - C0330, 651 - C0209
- Lin, S., 5837 - C0124
- Lin, T., **5835 - C0122**, 5882 - C0169, 739
- Lin, T., 159 - B0073, 901 - B0079
- Lin, T., 1501 - C0342, 1508 - C0349, 1846 - B0307, 4560 - A0089, 660 - C0218, **802 - A0134**
- Lin, T., 963 - B0217
- Lin, T., **1970**
- Lin, V., 2636 - A0141, 695 - C0290, 696 - C0291
- Lin, V., 1081 - C0094
- Lin, W., 2500 - C0204
- Lin, W., **2498 - C0202**
- Lin, W., 841 - A0173
- Lin, W., 2955 - C0277
- Lin, W., 5713 - A0432
- Lin, X., **475 - A0335**
- Lin, X., 955 - B0133
- Lin, X., **713 - C0308**
- Lin, X., 3692 - A0376, 4558 - A0087, 6175 - C0294
- Lin, X., 1703 - A0224, 2787 - B0166, 4160 - C0002
- Lin, Y., 3096 - A0104, 987 - B0241
- Lin, Y., **2897 - C0194**
- Lin, Y., **1124 - C0159**
- Lind, A., 5201 - B0314
- Lindau, B., 18 - A0049
- Lindblad, A. S., **2318 - B0272**
- Lindén, C., 5055 - B0006
- Linden, R., 5661 - A0380, 6137 - C0256
- Linderman, R. E., 1667 - A0188, 3446, 3447, 4994
- Lindfield, D., 2051 - A0109
- Lindner, M., 2421 - C0087
- Lindner, T., 4976, **5846 - C0133**
- Lindsay, S., 1984, 561 - B0176
- Lindsey, J., 3791 - C0018, **5237 - B0350**, 5239 - B0352
- Linehan, C. M., 5961
- Ling, B., **6099 - C0218**
- Ling, G., 5365 - A0017

- Ling, J., **2050 - A0108**, 3789 - C0016
 Ling, J., 1231 - A0072, 2056 - A0114
 Ling, J., 1601
 Ling, Y., **1219**
 Ling, Y., **2517 - C0246**
 Lingam, G., 2363 - B0373, 3641 - A0302, **4220 - C0062**, 5923 - C0320
 Lingam, V., 1596, **2736 - B0115**
 Lingham, G., **3370 - C0294**, 3954
 Linhares, J., 1070 - C0083
 Linhares, J., 3411 - C0335
 Link, B. A., 4006 - A0131, 5829 - C0116
 Link, D., 3198 - B0198, 4661 - A0303, **4695 - A0337**, 4696 - A0338
 Link, S., 2193 - A0362
 Linke, G., 5214 - B0327
 Linke, S., 930 - B0108
 Linkroum, K., 5153 - B0176
 Linn, C., **559 - B0174**
 Linn, C. L., 3504 - A0067
 Linn, D., **6147 - C0266**
 Linn, D. M., 3504 - A0067
 Linova, M., **2670 - A0397**
 Linton, J., 2458 - C0124
 Linz, M. O., 1132 - C0167, 4650 - A0292
 Liow, S., 5923 - C0320
 Lip, P., 4810 - C0168, 4823 - C0181
 Lippard, S., 2012
 Lippestad, M., 1166
 Lira, R. P., 1150, 431 - A0291
 Lira-Romero, E., 351 - A0011
 Lisa, O., 5528 - A00220
 Lisi, B., 4527 - A0042
 Liskova, P., 2325 - B0314, **2917 - C0214**, 2920 - C0217, 3022, 328 - C0261
 Liszka, A., 2280 - B0234
 Litke, A. M., **2918 - C0215**
 Liton, P. B., **4710 - B0134**
 Litt, J., 3576 - A0193
 Little, J. M., 1505 - C0346, 5026 - A0222
 Little, J., 2953 - C0275, **5649 - A0368**
 Little, K., **5552 - A0244**
 Little, N., 2739 - B0118
 Little, N., 3622 - A0283
 Littlejohn, M., **3764 - B0179**, 5244 - B0357
 Litts, K. M., 4628 - A0270, **4992**
 Litwin, A., 3635 - A0296
 Liu, B., **4740 - B0241**, 869 - A0201
 Liu, B., 2597
 Liu, C., **1356 - B0116**
 Liu, C., 1896 - C0296, 4080 - B0075
 Liu, C., **2162 - A0331**, 4684 - A0326
 Liu, C., 476 - A0336
 Liu, C., 2452 - C0118, 3570 - A0187, **762**, 764, 767
 Liu, C., 2246 - B0200, 2266 - B0220, 4366 - C0414, 4419
 Liu, C., **892 - A0281**
 Liu, C., **1761 - B0076**
 Liu, D., 2178 - A0347, 3266 - B0365
 Liu, D., 149 - B0063, 4903 - C0348
 Liu, E., **3017**
 Liu, F., **5975**
 Liu, F., 5395 - A0047, 5396 - A0048
 Liu, F., 2412 - C0078
 Liu, G., 270 - C0171
 Liu, H., **4912 - C0357**
 Liu, H., 305 - C0238
 Liu, H., **2095 - A0153**, 5639 - A0358
 Liu, H., 5395 - A0047, 5396 - A0048
 Liu, H., 3356 - C0338, **5022 - A0218**, 5206 - B0319
 Liu, H., 242 - C0053, 4114 - B0277, 4367 - C0415, 4718 - B0142, 682 - C0277, 80 - A0127
 Liu, H., 5875 - C0162
 Liu, H., 2614, **6126 - C0245**
 Liu, H., 2644 - A0149, 4612 - A0201, **5473 - A0142**
 Liu, H., 3823 - C0050, 569 - B0184
 Liu, J., **1894 - C0294**
 Liu, J., 4582 - A0171
 Liu, J., 4264 - C0135
 Liu, J., 1797 - B0145, 1807 - B0155, 2078 - A0136, 459 - A0319
 Liu, J., 5904 - C0191
 Liu, J., 3750 - B0097
 Liu, J., 1589, 3750 - B0097, 5555 - A0247, **5556 - A0248**
 Liu, J., 3215 - B0314, 4638 - A0280, 645 - C0203
 Liu, J., 5632 - A0351
 Liu, J., 5395 - A0047, 5396 - A0048
 Liu, J., **4816 - C0174**
 Liu, J. H., 1133 - C0168, 1134 - C0169
 Liu, J., 2162 - A0331
 Liu, J., 1391 - B0168, 1393 - B0170, **1396 - B0173**, 1402 - B0179, 2034 - A0061
 Liu, J. L., 191 - C0002
 Liu, K., 833 - A0165
 Liu, K., 6101 - C0220, 6102 - C0221
 Liu, K., 2842 - B0260
 Liu, L., 2162 - A0331
 Liu, L., 3540 - A0157, **3541 - A0158**, 3547 - A0164
 Liu, L., 2844 - B0262, 2853 - B0271, **5057 - B0008**, 5058 - B0009
 Liu, L., **229 - C0040**
 Liu, L., **5775 - C0062**
 Liu, L., **5485 - A0154**, 581 - B0196
 Liu, L., 704 - C0299
 Liu, L., 239 - C0050
 Liu, M., 1988, 3105 - A0113
 Liu, M. M., 4002 - A0127
 Liu, M., 1248 - A0089, 2111 - A0169, 2113 - A0171, 3501
 Liu, P., **5536 - A0228**
 Liu, P., 226 - C0037
 Liu, Q., 5442 - A0111
 Liu, Q., **1491 - C0233**
 Liu, Q., 218 - C0029
 Liu, Q., 3449
 Liu, Q., **1925 - C0325**, 5852 - C0139
 Liu, Q., 334 - C0267
 LIU, Q., 1803 - B0151, 372 - A0032
 Liu, Q., 5762 - C0049, 5765 - C0052, 5975
 Liu, Q., 2243 - B0197
 Liu, R. G., 4578 - A0167
 Liu, R., 2565, **4666 - A0308**
 Liu, R., 4916 - C0361, 5719 - C0006, 5721 - C0008
 Liu, R., 682 - C0277
 Liu, R., **5703 - A0422**
 Liu, S., 4239 - C0081
 Liu, S., 2222 - A0391
 Liu, S., **6051 - A0085**
 Liu, S., 3718 - B0065
 Liu, S., 747
 Liu, S., 615 - B0287
 Liu, S. Y., 5181 - B0204
 Liu, S., 2669 - A0396, 497 - B0004
 Liu, T., **3215 - B0314**, 4638 - A0280, 645 - C0203
 Liu, T., 2029 - A0056
 Liu, T., **2754 - B0133**
 Liu, T., 1797 - B0145, 1807 - B0155
 Liu, T., 4650 - A0292, 4672 - A0314, 5974
 Liu, T., 3787 - C0014
 Liu, T., 1187, 342 - A0002
 Liu, W., **681 - C0276**
 Liu, W., 2806 - B0224, 3258 - B0357, 442 - A0302, **4612 - A0201**, **582 - B0197**
 Liu, W., **3262 - B0361**, 3265 - B0364
 Liu, W., 5275 - C0121
 Liu, X., 2571
 Liu, X., 5083 - B0034
 Liu, X., 1432 - B0351, **3144 - A0261**, 4343 - C0391, 4344 - C0392
 Liu, X., **366 - A0026**, 5646 - A0365
 Liu, X., 2548 - C0277
 Liu, X., **2405 - C0071**, 4292 - C0163
 Liu, X., 313 - C0246
 Liu, X., 1872 - C0176
 Liu, X., **1138**
 Liu, X., 175 - B0329, 2406 - C0072, **5417 - A0069**
 Liu, X., 718
 Liu, X., 2533 - C0262
 Liu, X., **1127 - C0162**
 Liu, X., **4103 - B0228**
 Liu, X., 901 - B0079
 Liu, X., 4035 - A0160
 Liu, X., 3002
 Liu, Y., 2571, 4910 - C0355, 903 - B0081
 Liu, Y., 2647 - A0152, 3050 - A0021, **3549 - A0166**, 366 - A0026, 3739 - B0086, 4917 - C0362, 4918 - C0363, 4921 - C0366, 4924 - C0369, **4954**, 5296 - C0229, 5646 - A0365
 Liu, Y., 80 - A0127
 Liu, Y., 1046 - B0357, 1050 - B0361, 4509 - A0024, 5542 - A0234, 5543 - A0235
 Liu, Y., **3510 - A0073**, 3522 - A0085, 3728 - B0075
 Liu, Y., 5187 - B0210
 Liu, Y., **56 - A0103**
 Liu, Y., 1124 - C0159, **618 - B0290**
 Liu, Y., 1970, 3566 - A0183, 3806 - C0033, **5839 - C0126**
 Liu, Y., 4916 - C0361
 Liu, Y., 2482 - C0148, 3167 - A0310, 5651 - A0370
 Liu, Y., **1712 - A0233**, 1713 - A0234, 2091 - A0149
 Liu, Y., 4011 - A0136
 Liu, Y., 5745 - C0032, 5770 - C0057, **5875 - C0162**
 Liu, Y., 5594 - A0313
 Liu, Y., 4076 - B0071
 Liu, Y., 2497 - C0201, **5870 - C0157**
 Liu, Y., 199 - C0010
 Liu, Y., 4591 - A0180
 Liu, Y., 5651 - A0370
 Liu, Y., 2152 - A0286
 Liu, Y., 5395 - A0047, 5396 - A0048
 Liu, Y., 5878 - C0166
 Liu, Y., **4391 - C0439**, 5161 - B0184, 743
 Liu, Z., 2363 - B0373, 4220 - C0062, 5003 - A0074, 538 - B0153, **5923 - C0320**
 Liu, Z., **2271 - B0225**, 3277 - C0071
 Liu, Z., 4389 - C0437, 4900 - C0345
 Liu, Z., 4509 - A0024, 5542 - A0234, **5543 - A0235**
 Liu, Z., 3215 - B0314, 728, 730
 Liu, Z., 1169, 135 - B0049, 3283 - C0077, 3299 - C0093, 3300 - C0094, 3339 - C0181, 4389 - C0437, 4893 - C0338, 4900 - C0345, 4926 - C0371, 534 - B0149, 955 - B0133
 Liva, C. D., **1840 - B0301**
 Livengood, H., **3412 - C0336**
 Liverpool Ocular Oncology Research Group, 3184 - A0327, 3647 - A0308, 4322 - C0296
 Livesay, T., 2889 - C0186, 3887 - C0148
 Livingston, E., 3056 - A0027
 Livne-bar, I., 1486 - C0228, **2614**
 Ljubimov, A. V., 2991, 3872 - C0133, 3885 - C0146, 514 - B0021, 551 - B0166
 Ljubimova, J. Y., 3872 - C0133
 Ljubojevic, N., **1366 - B0126**
 Ljubic, B., 3862 - C0123
 Llaca-Diaz, J., 3691 - A0375
 Llacsahuanga-Alleca, L., 351 - A0011
 Llado, M., 2488 - C0192
 Lledó, V., 1664 - A0040
 Llerena, H., 1238 - A0079
 Lloren, J., 2194 - A0363
 Llorenç, V., 1095 - C0130
 Llorens Quintana, C., **1700 - A0221**, 4911 - C0356
 Lloria, X., **3361 - C0243**, 3362 - C0244, 3363 - C0245
 Lloyd, H. O., 4673 - A0315, **5841 - C0128**, 5900 - C0187, 69 - A0116
 Lloyd, I. C., 2319 - B0308
 Lloyd, K., 2344 - B0333
 Lloyd, M., 3045 - A0016, 4502 - A0017
 Lo, A. C., 206 - C0017, 5466 - A0135
 Lo, C., 4578 - A0167
 Lo, C., 6167 - C0286
 Lo, D. M., **857 - A0189**, 88 - A0251
 Lo Faro, V., 3747 - B0094
 Lo Giudice, G., **4113 - B0276**
 Lo, J., 334 - C0267, 4025 - A0150
 Lo, T., **6170 - C0289**
 Lob, F., 3361 - C0243, 3363 - C0245
 Lobanova, E., **3060 - A0031**
 Lobell, M., 2493 - C0197, 3203 - B0203
 Lobo, A., 3651 - A0335, 4204 - C0046, **513 - B0020**
 Lobo, E., 2990
 Lobo, G. P., 2368 - B0378, **4508 - A0023**
 LoBue, S. A., **5937 - C0334**
 LoBue, T., 2235 - A0404
 Lock, J., 755
 Lockard, R., 2503 - C0207
 Locke, J., 5022 - A0218
 Locke, K. G., **28 - A0059**
 Lockery, J., 5539 - A0231
 Locri, F., 1251 - A0092
 Loeffler, J., 1366 - B0126
 Loeffler, M., 1101 - C0136, 1105 - C0140, 1128 - C0163
 Loesch, F., 2716 - B0037
 Loevestam-Adrian, M., 2379 - C0045
 Loewen, N. A., 111 - A0274
 Loewenstein, A., 1956, 3443, 535 - B0150, 6001, 806 - A0138
 Loewenstein, I., 5705 - A0424
 Lofqvist, C., 2752 - B0131, 764
 Loftfield, K., 2740 - B0119
 Loftness, P., 5937 - C0334
 Logan, A., 2366 - B0376, 4453, 4723 - B0147
 Logan, N. S., **2150 - A0284**, 3383 - C0307, 3391 - C0315
 Logan, P. T., 3176 - A0319
 Logendran, M., 808 - A0140
 Loh, X., 2363 - B0373, 4220 - C0062, 5003 - A0074, 5923 - C0320
 Lohi, H., 6042 - A0076
 Lohmann, C. P., 2809 - B0227, 281 - C0182, 2821 - B0239, 287 - C0188, 4174 - C0016, 5274 - C0120, 5884 - C0171, 5939 - C0336
 Lohmann, T. K., **4566 - A0095**, 4570 - A0099
 Loi, T., 5411 - A0063
 Lombardi, L., 5058 - B0009
 Lombardo, K., 112 - A0275
 Lommatzsch, A., 3140 - A0257, 3218 - B0317
 Lomoio, S., 3321 - C0163
 Loncaric, S., 1221
 Londregan, A., 3848 - C0109
 Long, J., 913 - B0091
 Long, K., 1825 - B0286
 Long, W., **1783 - B0098**
 Long, Y., 5497 - A0166
 Longhitano, L., 3166 - A0309
 Longo, A., **3948**
 Longyu, J., **5700 - A0419**
 Longgi, M., 5954
 Loo, C. Y., 2383 - C0049
 Loo, J., **1225**
 Looby, R., 5682 - A0401
 LOORG, 3630 - A0291
 Loos, R., 5136 - B0159
 Lopes, V., 539 - B0154
 Lopez - Star, E. M., 4104 - B0229
 Lopez, A., 5223 - B0336
 Lopez, A., 3292 - C0086, 3293 - C0087
 Lopez Beauchamp, C., **2236 - A0405**
 López, E., 196 - C0007, 201 - C0012
 Lopez, F. J., 1699 - A0220, 2417 - C0083, 4834 - C0192
 López Gálvez, M., 1901 - C0301, 2067 - A0125
 Lopez García Tinajero, A., **4205 - C0047**
 Lopez, I., 48 - A0079
 Lopez, J., **3680 - A0364**
 López, J., 1058 - B0369
 Lopez, M. J., **138 - B0052**, 3321 - C0163, 3327 - C0169, 4437
 Lopez, N., 5844 - C0131
 Lopez, N. N., 1655 - A0031
 Lopez, N. N., **3524 - A0087**
 Lopez, P., 142 - B0056, 2908 - C0205
 Lopez, P., 6202 - C0356
 Lopez Ramos, S., 2900 - C0197
 Lopez Rubio, S., 1100 - C0135
 Lopez Sanchez, I., **2352 - B0362**
 Lopez, Y., 5604 - A0323
 López, Y., 900 - B0078
 López-Alemany, A., 4862 - C0307
 Lopez-Bausili, S., 2941 - C0263
 López-Cano, J. J., 3302 - C0096
 Lopez-Cervantes, R., 2816 - B0234
 Lopez-Galvez, M., 5364 - A0016
 López-García, A., 4371 - C0419
 Lopez-Gil, N., 2152 - A0286, 4048 - A0255
 López-Montero, M. C., 4799 - B0409
 López-Moreno, D., 5398 - A0050
 Lopez-Pedrajas, R., 996 - B0250
 Lopper, S., 409 - A0227
 Lorach, H., 1005 - B0259, 3975, 3977, **5000 - A0071**
 Lorch, A. C., 4805 - B0415
 Lorenc, V. E., 3269 - B0368, **5308 - C0241**
 Lorenz, B., **5202 - B0315**
 Lorenz, G., 2018 - A0045
 Lorenzo Corrales, Y., **3867 - C0128**
 Lorenzo, E., 3441
 Lorenzo-Martin, E., **4346 - C0394**, 4347 - C0395, 4352 - C0400
 Lorget, F., 216 - C0027, 242 - C0053, **2652 - A0379**, 5828 - C0115, 80 - A0127
 Lorusso, M., 1915 - C0315
 Lorusso, M., 1915 - C0315
 Loshin, D. S., 4042 - A0249
 Loskill, P., 567 - B0182
 Lotery, A., 1195, 1906 - C0306, 2569, 3606 - A0224, 3608 - A0226, 4487 - A0022, 5138 - B0161, 5827 - C0114
 Lott, L. A., **1263 - A0298**
 Lou, B., **3692 - A0376**, 4558 - A0087
 Lou, W., 1126 - C0161
 Lou, Z., 2714 - B0035
 Loudon, P., 2985
 Loudon, S. E., 4123 - B0286
 Loughner, C., 3325 - C0167
 Louie, S., **4009 - A0134**
 Louise, W., 6156 - C0275
 Loukouara, S., **3088 - A0059**
 Loureiro, R. R., 2257 - B0211
 Louro, L. A., 3559 - A0176
 Lousas, M., 390 - A0090
 Lovatt, M., 1372 - B0132
 Lovatt, M., 1375 - B0135
 Lovell, J., 5665 - A0384

Low – Mahabole

Lovicu, F. J., 1202, 1203, 893 - A0282
 Low, K., **1813 - B0274**
 Low, L., 2521 - C0250, **2522 - C0251**
 Low, R., **4159 - C0001**
 Low Vision Research Group at the
 Ophthalmology department of the
 VU University Medical Centre,
 3909
 Low Vision Research Network, 3910
 Lowe, M., 4665 - A0307
 Lowe, T. L., **6003**
 Lowery, R. S., 2935 - C0257
 Lowry, E., **2728 - B0107**, 3369 - C0293
 Loya, D., **142 - B0056**, 2908 - C0205
 Loyet, K., 216 - C0027, 235 - C0046,
 239 - C0050, 243 - C0054, 246
 - C0057
 Loyet, K. M., **226 - C0037**
 Lozada Sierra, R. A., **6084 - C0203**
 Lozano, D. C., 1879 - C0183, 3697
 - B0044, 3698 - B0045, 3707
 - B0054, 3738 - B0085, **3740 -**
B0087, 5819 - C0106
 Lozano Garza, R. I., **2069 - A0127**
 Lozano, J., 1887 - C0287
 Lozano-Giraldo, **5399 - A0051**
 Lu, B., 3390 - C0314
 Lu, B., 5010 - A0081, **551 - B0166**,
 6021
 Lu, C., 270 - C0171
 Lu, C., 3406 - C0330
 Lu, D., 1221
 Lu, F., 1127 - C0162, 1539 - C0380,
 1744 - B0059, 2796 - B0214,
 2819 - B0237, 2954 - C0276,
 2955 - C0277, 4629 - A0271,
 5779 - C0066, 909 - B0087
 Lu, F., **2647 - A0152**
 Lu, F., 1229 - A0070, 1233 -
 A0074, **1235 - A0076**
 Lu, H., 2517 - C0246, 2533 - C0262,
 5699 - A0418
 Lu, J., 211 - C0022, 219 - C0030, 5312
 - C0245
 Lu, J., 2983
 Lu, J., 999 - B0253
 Lu, J., 4636 - A0278, **5492 - A0161**,
 733
 Lu, K., 2211 - A0380
 Lu, L., **5128 - B0117**
 Lu, L., 3123 - A0240, 4740 - B0241,
 5492 - A0161, 646 - C0204, **808 -**
A0140, 869 - A0201
 Lu, L., 3093 - A0064, 3979 - A0104,
 4576 - A0165, 5359 - A0011,
 5644 - A0363
 Lu, L., **459 - A0319**
 Lu, L., 3018, **5016 - B0183**
 Lu, M., 3386 - C0310
 Lu, M., 3390 - C0314
 Lu, Q., **2590, 5988**
 Lu, Q., 5306 - C0239
 Lu, R., **1625 - A0001**, 97 - A0260
 Lu, S., 5405 - A0057
 Lu, T., 5047 - A0243
 Lu, W., **1723 - A0244, 2298 - B0252**
 Lu, W., **3729 - B0076**, 6034
 Lu, X., 3712 - B0059, 5429 -
 A0098, **5968**
 Lu, X., **3877 - C0138**, 4357 - C0405
 Lu, X., 967 - B0221
 Lu, Y., 2795 - B0213, 4640 - A0282
 Lu, Y., 3921
 Lu, Y., **1285 - A0320**
 Lu, Y., 2131 - A0265, 3035 - A0006
 Lu, Y., 1974, **606 - B0278**
 Lu, Y., 5927 - C0324
 Lu, Z., 2636 - A0141
 Lu, Z., 4149 - B0372
 Lu, Z., 1074 - C0087, 1266 - A0301,
 1275 - A0310, **4943, 5753 -**
 C0040, 5956
 Luan, C., 2502 - C0206
 Lubell, W., 5332 - C0265, 983 - B0237
 Luben, R., 1998
 Lubniewski, A., 1393 - B0170
 LUC, M., 1298 - B0005, 2224 - A0393,
 2226 - A0395, 4387 - C0435, 441
 - A0301, **4788 - B0398**
 Luca, F., 3097 - A0105
 Lucas, G., 3609 - A0227
 Lucas, O., 4648 - A0290
 Lucas, R. J., **9**
 Lucas, R. M., 3370 - C0294
 Lucas, S., 4470
 Luccarelli, S., 4887 - C0332
 Lucentini, S., 4887 - C0332
 Lucio-Alvarez, J. A., 1646 - A0022
 Lucius, R., 66 - A0113
 Lück, S., 4566 - A0095
 Luck, T., 1128 - C0163
 Luckett, J. P., 1888 - C0288
 Luey, K., 1248 - A0089, **2032 - A0059**,
 2096 - A0154, 2111 - A0169,
 2113 - A0171, 3501
 Ludlow, J., 2980, 2981
 Ludwig, A., 543 - B0158
 Ludwig, C., 1705 - A0226
 Ludwig, C. A., 2380 - C0046, **3371 -**
C0295, 4430, 886 - A0218
 Ludwig, F., 2627 - A0132
 Ludwig-Kubinski, A., 4006 - A0131
 Luehrmann, R., 1563
 Luensmann, D., 1753 - B0068
 Luft, V., 4439
 Lugtenberg, D., 4503 - A0018
 Luhmann, U. F., 2430 - C0096, 3260 -
 B0359, 5546 - A0238
 Luhrs, K., 233 - C0044
 Lui, X., 4322 - C0296
 Luis, J., **1497 - C0239**
 Luisi, J., 1882 - C0186, **4605 - A0194**
 Lujan, B. J., 1526 - C0367, **2849 -**
B0267, 3145 - A0262, 3896
 - C0362
 Luk, K., 706 - C0301
 Lukassen, M., **2264 - B0218**
 Lukats, A., 4021 - A0146
 Luke, S., 897 - A0286
 Lükken, L., 3198 - B0198
 Lukic, M., 3152 - A0269, **3600 - A0218**
 Lukiw, W. J., **3016**
 Lum, E., **1764 - B0079**
 Lum, F., 2604, 4103 - B0228, 4775
 - B0385
 Lumini, C., **1254 - A0095**
 LUMINOUS, 2566, 3617 - A0235,
 3902 - C0368, 837 - A0169
 Lumsden, A., 5391 - A0043
 Luna Garcia, C., 154 - B0068, 155 -
 B0069, 3309 - C0151
 Luna Pinto, J. D., 6072 - A0201
 Lunasco, L., 3596 - A0214
 Lund, B., 1377 - B0137, 4372 - C0420
 Lund-Andersen, H., 1055 - B0366,
 5449 - A0118
 Lundmark, P. O., 2944 - C0266, **5246**
- B0359
 Lundström, L., 4938, 5808 - C0095
 Lundström, M., 1341 - B0048, 4790
 - B0400
 Lunning, M., 316 - C0249
 Luo, C., 5556 - A0248, **5557 - A0249**
 Luo, F., 5650 - A0369
 Luo, G., 3425 - C0349, 982 - B0236
 Luo, G., 3173 - A0316
 Luo, H., **2097 - A0155**, 3496, 4063
 - B0058
 Luo, J., 3258 - B0357
 Luo, J., 5417 - A0069
 Luo, L., **6112 - C0231**
 Luo, L., 3205 - B0205, 4499 - A0014
 Luo, L., 891 - A0280
 Luo, N., 4701 - B0125
 Luo, Q., 3555 - A0172
 Luo, S., 589 - B0204, 593 - B0208
 Luo, S., 5692 - A0411
 Luo, S., 4389 - C0437, 4900 - C0345
 Luo, S., 1855 - C0159
 Luo, T., 4626 - A0268, 4642 - A0284,
 647 - C0205, 661 - C0219
 Luo, X., **903 - B0081**
 Luo, X., 3718 - B0065
 Luo, X., 4615 - A0204, 67 -
 A0114, **967 - B0221**
 Luo, Y., **4736 - B0237**, 5492 - A0161
 Luo, Y., 4418
 Luo, Y., 2984
 Luo, Z., 2633 - A0138
 Luo, Z., **4591 - A0180**
 Luong, T., 1842 - B0303, 3381 - C0305
 Lupidi, M., 1956, **2810 - B0228**, 881
 - A0213
 Lupo, M., 378 - A0038, 3966
 Luraas, K., 5246 - B0359
 Lusardi, L., 6147 - C0266
 Luscher, B., 514 - B0021
 Luse, M., 3368 - C0292
 Lusk, S., 2592
 Lusk, S., 3186 - A0329
 Lustbader, J. M., 5750 - C0037
 Luth, K., 3687 - A0371, 899 - B0077
 Luths, C., 81 - A0128
 Lütjen-Drecoll, E., 1948, 3505 - A0068
 Luttrell, I., 2689 - B0010
 Luttig, G. A., 1481 - C0223, 1483 -
 C0225, **2435 - C0101**, 3470,
 3471, 3472, 770
 Lutz, A., 3117 - A0125
 Luu, A., 149 - B0063, 4903 - C0348
 Luu, C. D., **2411 - C0077**, 3888 -
 C0354, 4118 - B0281, 4120
 - B0283, 4562 - A0091, 4578
 - A0167
 Luu, K., **3149 - A0266**
 Luyten, G. P., 2135 - A0269, 3627 -
 A0288
 Luznik, Z., 2899 - C0196
 Lv, J., 2323 - B0312
 Lv, S., **968 - B0222**
 Lwigale, P. Y., 3449
 Ly, A., 2081 - A0139
 Lydic, T., 3002, 6071 - A0200
 Lye, W., 2567
 Lynch, A., 1439 - C0001
 Lynch, A. M., 105 - A0268, 2427
 - C0093, 2756 - B0135, 2760
 - B0139, 3767 - B0182, 4230
 - C0072, 4797 - B0407, **5540**
- A0232
 Lynch, G., 1667 - A0188, 3447
 Lynn, M. N., 2001
 Lynn, S., **5827 - C0114**
 Lyons, G., 2990
 Lyu, D., **1204, 5645 - A0364**
 Lyu, J., **2768 - B0147**
 Lyu, J., 133 - B0047
 Lyu, Y., 3979 - A0104
 Lyubarsky, A., 1422 - B0341, **4546**
- A0061
 Lyuboslavsky, P., 5044 - A0240, **5045**
- A0241
 Labuz, G., **265 - C0124**, 266 - C0125

M

M Endo, C., **4306 - C0280**
 M Khansari, M., **4651 - A0293**
 m.bosscha@vumc.nl, M. B., 5983
 Ma, A., 5393 - A0045
 Ma, B., **4916 - C0361**, 5719 - C0006,
 5721 - C0008
 Ma, B., **1603**, 1605, 5632 - A0351
 Ma, D., 4746 - B0247
 Ma, D. H., **1379 - B0139**, 3845 -
 C0106
 Ma, E., 3548 - A0165
 Ma, H., 5291 - C0224
 Ma, H., 4965, 4966, **974 - B0228**
 Ma, J., **1436 - B0355**, 5377 - A0029
 Ma, J., **5739 - C0026**
 Ma, J. A., 3576 - A0193
 Ma, J., 1184, 5330 - C0263, 5371 -
 A0023
 Ma, J., 731
 MA, J., **646 - C0204**
 Ma, J., **2449 - C0115**, 2462 - C0128,
 5488 - A0157
 Ma, J., 3142 - A0259
 Ma, K., 1379 - B0139
 Ma, L., 2664 - A0391
 Ma, T., 2095 - A0153
 Ma, W., 869 - A0201
 Ma, W., **2530 - C0259**, 3944
 Ma, Y., 1391 - B0168, 1393 -
 B0170, **1402 - B0179**, 2034
 - A0061
 Ma, Y., 1581
 Ma, Y., 499 - B0006, 5391 - A0043
 Ma, Z., 2299 - B0253
 Maa, A., 5236 - B0349
 Maaswinkel, L. M., 3909
 Maberley, D., 4248 - C0090
 Macarov, M., 1831 - B0292, 5415 -
 A0067
 MacArthur, D., 5416 - A0068
 Macchi, I., 3948
 Macchi, I., 3829 - C0056
 MacCumber, M., 1099 - C0134, 832
 - A0164
 MacDonald, I. M., 3142 - A0259, 3898
 - C0364, 3899 - C0365, 4505 -
 A0020, 4991, 6058 - A0187
 MacDonald, L., 4585 - A0174
 MacDonald, M., **3636 - A0297**, 5603
 - A0322
 Macdonald, S., 198 - C0009, **2663 -**
A0390
 Macedo, A. F., 1069 - C0082, **1070 -**
C0083, 3411 - C0335
 Macedo-de-Araújo, R. J., 3384 - C0308
 Maceo Heilman, B., 268 - C0127, 2978
 MacEwen, C. J., 2302 - B0256
 Macfadden, W., 2566, 3617 - A0235,
 3902 - C0368, 814 - A0146,
 837 - A0169
 MacGregor, S., 1177, 1827 - B0288,
 4470
 Machado, L., 5890 - C0177
 Machado, L. F., 5887 - C0174
 Machan, C., 2964 - C0286
 Machen, L., **2100 - A0158**, 2690 -
 B0011, 846 - A0178, 888 - A0220
 Machida, S., 2378 - C0044, 889 -
 A0278
 Machiraju, P., 3534 - A0097, 3730
 - B0077
 Macias, B., 1133 - C0168, 1134 -
 C0169, **722**
 Macis, M., 1599
 Maciulaitiene, R., **2631 - A0136**
 Mack, W., 4909 - C0354
 MacKay, J., 2457 - C0123, 3275 -
 C0069, 5677 - A0396
 MacKeen, L., 2748 - B0127, 5206
 - B0319
 MacKenzie, A., 80 - A0127
 MacKenzie, G., 1601
 Mackenzie, I., 1582, 6063 - A0192
 Mackey, A., 2629 - A0134, 70 - A0117
 Mackey, D., 1177, 2352 - B0362, 2732
 - B0111, 3370 - C0294, **3954**,
 5144 - B0167
 Mackin, A. G., **2756 - B0135**
 Mackin, R., **3106 - A0114**
 Mackus, E., 4332 - C0380
 MacLaren, R., 2329 - B0318
 MacLaren, R. E., **1195**, 1268 - A0303,
 1530 - C0371, 1565, 1698 -
 A0219, 2341 - B0330, 3493,
 382 - A0042, 3897 - C0363, 3898
 - C0364, 3899 - C0365, 4534
 - A0049, 4541 - A0056, 4542
 - A0057, 4561 - A0090, 4600 -
 A0189, 4613 - A0202, 4991, 5387
 - A0039, 5509 - A0178, 5654
 - A0373, 5936 - C0333, 5989,
 6005, 6060 - A0189, 989 - B0243
 MacLean, K., 1833 - B0294, 2705 -
 B0026, **3127 - A0244**
 Macleod, D., 3690 - A0374
 MacMillan, A., 4414
 MacNicoll, K. H., 5158 - B0181
 Maconachie, G., 2173 - A0342
 Macphree, R., 4276 - C0147
 MacPherson, T., 1447 - C0009
 MacTel Study Group, 1225, 1262 -
 A0297, 3138 - A0255, 3139
 - A0256
 Macular Telangiectasia Type 2 - Phase
 2 CNTF Research Group, 1839
 - B0300
 Macular Telangiectasia Type 2 -Phase 2
 CNTF Research Group, 2605
 Maczkó, M., 628 - C0058
 Maczynska, E., 279 - C0180
 Maddala, R., **1205**, 3488
 Madden, L., 4886 - C0331
 Madden, N., 181 - B0335, 182 - B0336
 Maddess, T., 1893 - C0293, **4136 -**
B0299, 621 - B0293
 Maddineni, P., **3704 - B0051**, 4728 -
 B0152, 6035
 Madeira, T. C., 1912 - C0312
 Madekurozwa, M., 1648 - A0024, 3971
 Mader, T., 722
 Madi, H. A., **4817 - C0175**
 Madigan, M. C., 1477 - C0219, 330 -
 C0263, 4604 - A0193
 Madison, E., 60 - A0107
 Madrigal-Ruiz, P., 1522 - C0363, 2816
 - B0234
 Madu, A., 6167 - C0286
 Maeda, A., 4978, 562 - B0177
 Maeda, M., 2718 - B0039
 Maeda, N., 2019 - A0046
 Maeder, M., 385 - A0045, 6020
 Maeng, M., 3889 - C0355, **629 - C0059**
 Maeng, M. M., **2667 - A0394**
 Maeng, S., 4341 - C0389
 Maeno, T., **4271 - C0142**
 Maerker, D., 5271 - C0117
 Maestre, G. E., **1829 - B0290**
 Maestre-Mesa, J., 3667 - A0351, 3670 -
 A0354, 3684 - A0368
 Maetschke, S., 1226
 Maezawa, T., **4682 - A0324**
 Magan, T., **2739 - B0118**
 Maggio, E., **4841 - C0199**
 Magno, A., 1448 - C0010
 Magnusdottir, S., 3074 - A0045
 Magnusson, B., 2172 - A0341
 Magnusson, G., **167 - B0321**
 Magone, T., 2236 - A0405, 4310 -
 C0284
 Magrath, G., 2295 - B0249
 Maguire, A. M., 1151, 1422 - B0341,
 3900 - C0366, 4546 - A0061,
 46 - A0077
 Maguire, E., 5539 - A0231
 Maguire, J., 5004 - A0075
 Maguire, L. J., 4434
 Maguire, M., 4150 - B0373
 Maguire, M. G., 2396 - C0062,
 2892 - C0189, 3252 - B0351,
 3785 - C0012, 4880 - C0325,
 5048 - A0244, 919 - B0097, 924 -
 B0102, 937 - B0115
 Maguluri, G., 4640 - A0282
 Mahabole, M., 1157

- Mahadevan, S., 1759 - B0074, 1769 - B0084
 Mahajan, A., 2372 - C0038
 Mahajan, S., 4438
 Mahajan, V. B., 2830 - B0248
 Mahale, A., 1628 - A0004, 2922 - C0219
 Mahalingam, K., 6114 - C0233
 Maharana, P. K., 1312 - B0019, 1346 - B0053
 Mahdavi, P., **4832 - C0190**
 Maher, M., 5416 - A0068
 Mahil, A. S., 5649 - A0368
 Mahmood, S., **2390 - C0056**, 4812 - C0170, 5441 - A0110
 Mahmoud, A. M., 2682 - B0003
 Mahmoodi Nezhad, G., **5103 - B0092**, 5116 - B0105
 Mahmouzdadeh, S., 526 - B0141
 Mahomed, M., 1472 - C0034
 Mahoney, J., 1046 - B0357, 1050 - B0361
 Mahroo, O. A., **1261 - A0296**, 1446 - C0008, 4073 - B0068
 Mahsood, Y. J., 6029
 Mai, E., 246 - C0057
 Mai, K., 2010
 Mai, Y., 5323 - C0256
 Maia, A., 390 - A0090, 5921 - C0318
 Maia, M., 390 - A0090, 5921 - C0318
 Maidana, D., 5711 - A0430, 769
 Maienschein-Cline, M., 107 - A0270
 Maier, A. K., 2886 - B0304, 3922
 Maier, M., 1898 - C0298, 2809 - B0227, 281 - C0182, 2821 - B0239, 287 - C0188, 4174 - C0016, 5274 - C0120, 5450 - A0119, 5939 - C0336
 Mainali, L., **3033 - A0004**, 3034 - A0005
 Maione, N., 4414
 Maiz, A., **4204 - C0046**
 Majcher, C., 2862 - B0280, **5056 - B0007**, 5062 - B0013, 6086 - C0205
 Majewska, M., 5891 - C0178
 Majjitia, S., 4101 - B0226
 Majmudar, P., **5015 - A0211**
 Majmudar, P., 1294 - B0001
 Majoie, C., 4649 - A0291
 Majoore, J. E., **4056 - B0051**
 Majumdar, S., 1345 - B0052
 Majumder, A., 6067 - A0196
 Mak, H. K., **4498 - A0013**
 Mak, M. Y., 1955
 Makabe, K., 4998 - A0069
 Makarenkova, H. P., 2286 - B0240, **5577**
 Makaron, L., 1422 - B0341, 4546 - A0061
 Makedonsky, K., **2088 - A0146**, 3880 - C0141
 Makeyeva, G., 5539 - A0231
 Makhlof, R., **396 - A0096**
 Maki, K., **3817 - C0044**
 Maki, P. M., 4053 - B0048
 Makihira, T., 296 - C0197
 Makino, A., 2655 - A0382
 Makino, T., 1852 - C0156
 Makita, S., 2102 - A0160, 2852 - B0270, 3249 - B0348, 3256 - B0355, 6200 - C0354
 Makkouk, F., 4995
 Makrynioti, D., **1762 - B0077**
 Maktabi, A., 100 - A0263, 1628 - A0004, 4325 - C0299
 Makupa, W., 4685 - A0327
 Malacara Hernandez, D., 1103 - C0138, 1739 - A0260
 Malaguamera, G., 6117 - C0236
 Malato, Y., 5563 - A0255
 Malbin, B., **1703 - A0224**
 Malchow, R. P., **1863 - C0167**
 Maldonado, C., 1399 - B0176, 2021 - A0048, 4761 - B0262, 949 - B0127
 Maldonado, M., 2573, 899 - B0077
 Maldonado, M. J., 5773 - C0060
 Maldonado, R. S., **2391 - C0057**
 Maldonado-Codina, C., 3931
 Malek, G., 2442 - C0108
 Maleki, A., 2825 - B0243, **5581 - A0300**
 Males, J., 4380 - C0428
 Malet, J., 2975
 Malhotra, D., **4433**
 Malhotra, R., 3635 - A0296
 Malienko, A., 5026 - A0222
 Maliha, A., 5501 - A0170
 Malik, A., 4125 - B0288
 Malik, A., 5778 - C0065
 Malik, D., 771
 Malik, G., 3110 - A0118
 Malik, R., 4780 - B0390, 5901 - C0188
 Malik, S., 5778 - C0065
 Malkin, A. G., **1062 - C0075**, 2560
 Mallios, J., 2681 - B0002
 Mallipatna, A., 4962
 Maloca, P., 3345 - C0227
 Malone, J., 289 - C0190, **4689 - A0331**
 Maloney, D. M., **4539 - A0054**
 Malvankar, M., 4778 - B0388
 Malyugin, B., 5647 - A0366
 Mamalis, N., 2980, 2981, 5641 - A0360
 Mameletzi, E., 2061 - A0119
 Mammia, K., 3261 - B0360
 Maminishkis, A., 2349 - B0359, 3475, 546 - B0161, 68 - A0115
 Mammo, Z., 1221, 2865 - B0283, **4248 - C0090**
 Mammone, T., 2513 - C0217, **6069 - A0198**
 Mamodaly, S., 4361 - C0409
 Mamou, J., 6197 - C0351, **712 - C0307**
 Man, J., 2469 - C0135
 Man, R., **1033 - B0344**, 2601, 2602, 5166 - B0189, 6009
 Man, X., **5886 - C0173**
 Manabe, S., 811 - A0143
 Manabe, S., 5145 - B0168
 Manalastas, P. C., 2735 - B0114, 2856 - B0274, 2857 - B0275, 2861 - B0279, 3498, **4476**, 5075 - B0026
 Manche, E. E., 5977
 Mancini, R., 86 - A0249
 Manda, C., 612 - B0284
 Mandai, K., 3098 - A0106
 Mandai, M., 1715 - A0236, 1987, 291 - C0192, 5002 - A0073, 541 - B0156, 553 - B0168
 Mandal, A., 3482
 Mandal, A. K., 5148 - B0171
 Mandal, N. A., **1012 - B0266**, 3141 - A0258, 4328 - C0376, 4892 - C0337, 780
 Mandal, S., 94 - A0257
 Mandava, N., 2427 - C0093, 4230 - C0072, 5540 - A0232
 Mandel, Y., **3974**, 4565 - A0094
 Mandelcorn, E., 1126 - C0161
 Mandell, K. J., **1247 - A0088**
 mandikian, D., 242 - C0053
 Mandl, M., 73 - A0120
 Manduchi, R., **635 - C0065**
 Manera, M., 1662 - A0038
 Manes, G., **2322 - B0311**
 Manescu, P., 555 - B0170
 Manethoua, K., 827 - A0159
 Mangani, A. S., 3710 - B0057, **979 - B0233**
 Mangano, J., 1245 - A0086, 1250 - A0091
 Mangel, S. C., **1982**
 Mangold, E., 3146 - A0263
 Mangunkusumo, E., 3593 - A0211
 Mani, B., 2028 - A0055, 4074 - B0069, 5124 - B0113, 5902 - C0189, **5910 - C0197**
 Mani, J., 3355 - C0237
 Manivannan, N., 1689 - A0210
 Mankowska, A., 798 - A0130
 Mankowski, J., 1799 - B0147
 Manktelow, B., 3934
 Manley, T., 4711 - B0135
 Mann, B., 5689 - A0408, 5692 - A0411
 Mann, P., **5594 - A0313**
 Manna, S., **4515 - A0030**, 5822 - C0109, 5825 - C0112, 5832 - C0119
 Manni, G., 4066 - B0061, 5080 - B0031
 Manning, C., 2416 - C0082
 Manning, S., 5917 - C0314
 Mannis, M. J., 1343 - B0050
 Manns, F., 1949, 1950, 268 - C0127, **2978**, 2979, 3031 - A0002, 5737 - C0024
 Manny, R. E., 178 - B0332, 3392 - C0316, 4753 - B0254
 Mano, H., 2718 - B0039, 4874 - C0319
 Manohar, A., 343 - A0003
 Manookin, M. B., 5961
 Mansberger, S. L., 2108 - A0166
 Mansfield, B. C., 4472
 Mansfield, J., 2562
 Manson, M., 4507 - A0022
 Mansour, A., 4284 - C0155
 Mansour, H., 4284 - C0155
 Mansour, T., 1034 - B0345
 Mansouri, K., 2015 - A0042, 5068 - B0019
 Mansukhani, S. A., 1237 - A0078
 Mansure, J. J., 3180 - A0323, 6015
 Mantelli, F., 3846 - C0107
 Mantry, S., 3677 - A0361, 4674 - A0316
 Manwani, S., 2747 - B0126
 Manzanas Leal, L., 1901 - C0301, 2067 - A0125
 Manzanera, S., 4939
 Manzano, R. P., 1110 - C0145, 303 - C0236
 Mao, C., **5497 - A0166**, 962 - B0216
 Mao, C., 2517 - C0246, 2533 - C0262
 Mao, F., 571 - B0186
 Mao, J., 2977
 Mao, J., **2240 - A0409**, 3228 - B0327
 Mao, L., 3192 - B0192
 Mao, L., 3828 - C0055
 Mao, X., 909 - B0087
 Mao, Y., 135 - B0049
 Mapani, A., 1468 - C0030
 Marahrens, L., **1042 - B0353**
 Maram, J., **3208 - B0307**
 Marazzi, F., 5866 - C0153
 Marc, R. E., 5990, 6024
 Marc, V., **4768 - B0269**
 Marcell, A., 5809 - C0096
 Marcella, P., 3722 - B0069
 Marchetti, C., 2274 - B0228
 Marchi, S., 411 - A0229, 4178 - C0020
 Marchini, G., 1330 - B0037, 1336 - B0043
 Marco, E., 385 - A0045
 Marconi, S., 38 - A0069, 55 - A0086
 Marcos, S., 1407 - B0184, 252 - C0111, 268 - C0127, **654 - C0212**
 Marcovich, A., 715 - C0310
 Marcus, D. M., **3598 - A0216**
 Marcus, V., 3598 - A0216
 Marczuk, P., 5967
 Mardin, C. Y., 3496
 Mardis, P., 1162
 Marechal, C., 5008 - A0079
 Marek, V., **3850 - C0111**
 Mares, J. A., 2381 - C0047, 4509 - A0024, **5345**, 5542 - A0234, 5543 - A0235
 Margaron, P., 3619 - A0237
 Margines, J. B., **4129 - B0292**
 Margolin, E., 1126 - C0161
 Margolis, M., 115 - B0029, 3788 - C0015
 Margolis, T. P., 1894 - C0294
 Margrain, T., **3230 - B0329**
 Mari, J., 3500
 Maria, D. N., 5681 - A0400
 Maria Jose, B., 4711 - A0321
 Maria Oliveira Bonci, D., 4044 - A0251
 Mariani, S., **2274 - B0228**
 Mariappan, I., **2005**
 Marie, C., 223 - C0034
 Marie, D., **1296 - B0003**
 Marie, M., **598 - B0270**
 Marigo, V., **2488 - C0192**
 Marin Garcia, J., 3353 - C0235
 Marin-Franch, I., 1272 - A0307, 4069 - B0064
 Marinho, F. P., 1438 - B0357
 Marinkovic, M., 3627 - A0288
 Marino, L., **5197 - B0310**
 Marino, M. J., **4665 - A0307**
 Marion, K., 2815 - B0233, 2866 - B0284, 3847 - C0108, 5860 - C0147
 Mariussi, M., 3443
 Markand, S., **3071 - A0042**, 4550 - A0065
 Markel, D., 1891 - C0291, 1904 - C0304
 Markey, C., 1461 - C0023
 Markoulli, M., **1808 - B0156**, 1811 - B0159, 4875 - C0320
 Markova, K., **3612 - A0230**
 Markowitz, S. N., 2415 - C0081
 Marks-Ohana, D., 77 - A0124
 Markus, A., 3974
 Marlow, E., 99 - A0262
 Marmalidou, A., **3126 - A0243**
 Marmor, M. F., 3162 - A0279
 Marola, O. J., **3711 - B0058**
 Maroofian, R., 5404 - A0056, 701 - C0296
 Maros, M., 5602 - A0321
 Marques, D., 2894 - C0191
 Marques, D. L., **5744 - C0031**
 Marques, I. P., 2800 - B0218
 Marques, J., **1892 - C0292**
 Marques, M., 4946
 Marra, K. V., 1223, 5327 - C0260, **5489 - A0158**
 Marrocco, E., 3095 - A0103, 378 - A0038, 3966
 Marsack, J. D., 3929, 5800 - C0087, 5804 - C0091
 Marschall, S., 1338 - B0045
 Marsh-Armstrong, B., 295 - C0196
 Marsh-Armstrong, N., 3514 - A0077, 3744 - B0091
 Marshak, D. W., 5961
 Marshall, B., 718
 Marstal, K., 2136 - A0270
 Martel, J., 1467 - C0029, 2235 - A0404, 875 - A0207
 Martemyanov, K. A., 4724 - B0148
 Martens, R., 1221, 1972, 2865 - B0283, 4248 - C0090
 Martin Calderon, C., 4414
 Martin, C., 4137 - B0300, 4138 - B0301
 Martin, D. F., 2396 - C0062, 3252 - B0351
 Martin, J., 4948
 Martin, J., 3050 - A0021
 Martin, K. R., 3716 - B0063, 3723 - B0070, 5126 - B0115, 5127 - B0116, 6132 - C0251, 6133 - C0252
 Martin, L., 4189 - C0031
 Martin, L., 47 - A0078
 Martin, L. M., 4359 - C0407
 Martin, P. M., 2492 - C0196, 3003, 3005, 4024 - A0149, 5381 - A0033, 5486 - A0155, 5515 - A0184
 Martin, P., 1769 - B0084
 Martin, P. R., 2588, 2997, **759**
 Martin, S. F., 5503 - A0172
 Martin-Merida, I., 5407 - A0059
 Martinez, A., 5524 - A0216
 Martinez, J. D., **529 - B0144**
 Martinez, J. A., 1048 - B0359, 6187 - C0306
 Martinez, J. L., 4639 - A0281
 Martinez, J., 3205 - B0205, **5669 - A0388**
 Martinez, J., 1549
 Martinez López-Corell, P., 3157 - A0274
 Martinez Sanchez, E., **5752 - C0039**
 Martinez, T., 2634 - A0139, 5567 - A0259, 925 - B0103
 Martinez, U. I., **4256 - C0098**
 Martinez-Camarillo, J., 5814 - C0101
 Martinez-Castellanos, M., **2769 - B0148**, 2770 - B0149
 Martinez-de-la-Casa, J. M., 3457
 Martinez-Enriquez, E., **268 - C0127**
 Martinez-Fernandez Dela Camara, C., 4541 - A0056, **4542 - A0057**, 4613 - A0202
 Martinez-Finkelshtein, A., **5797 - C0084**
 Martinez-Garcia, C. M., **4352 - C0400**
 Martinez-Garcia, M., 3441, 4346 - C0394, 4347 - C0395
 Martinez-Lopez-Portillo, A., 3691 - A0375
 Martinez-Osorio, H., 4780 - B0390
 Martinez-Roda, J., 5811 - C0098
 Martini, E., 4066 - B0061
 Martiniello, N., **643 - C0073**
 Martino, F., 5188 - B0211
 Martins, A. R., 614 - B0286
 Martins, G., 1452 - C0014
 Martins, M., 3637 - A0298
 Martins Machado, N., 2070 - A0128
 Martins, R., 1123 - C0158
 Martins, T., 1059 - B0370
 Martire, J., 2165 - A0334, **2564**
 Martiskainen, H., 2673 - A0400
 Martz, T., 5606 - A0325
 Marubayashi, A., 3768 - B0183
 Marunaka, Y., 336 - C0269
 Maruo, T., 3098 - A0106
 Maruotti, J., 4002 - A0127
 Maruyama, K., 3639 - A0300
 Maruyama, Y., 2912 - C0209
 Marx, S., 3933
 Marx, S., 419 - A0237
 Marx-Gross, S., **173 - B0327**
 Mary, D., 2597
 Mas-Ramirez, A., 6095 - C0214
 Masahara, H., 4271 - C0142
 Masaki, T., 1310 - B0017, 3841 - C0102, 5760 - C0047
 Masanganis, R., 5594 - A0313
 Masarini, K., 4447
 Masayuki, H., 2882 - B0300, 4268 - C0139, 4269 - C0140, **671 - C0229**
 Masellis, M., 1126 - C0161
 Mashayekhi, A., 4302 - C0276
 Masino, B., 2980
 Masis, M., 5885 - C0172, 5892 - C0179
 Masli, S., **2555 - C0284**, 6054 - A0088
 Maslova, E. V., 5050 - B0001
 Masoero, L., 1937 - C0337, 4850 - C0208
 Mason, M., 233 - C0044
 Masood, J., 3879 - C0140
 Masri, R. A., 1871 - C0175, **2997**, 5038 - A0234
 Massae, P., 4685 - A0327

- Massaro-Giordano, M., 3829 - C0056
 Massarollo, D. B., 3654 - A0338
 Masse, F., **3512 - A0075**
 Masse, H., 5933 - C0330
 Masselos, K., 2081 - A0139, 5247 - B0360
 Massengill, J. B., 4958
 Massey, S. C., 2585, 5497 - A0166
 Massimo, G., 4841 - C0199
 Massin, P., 3615 - A0233
 Massof, R. W., 1062 - C0075, 1071 - C0084, 1072 - C0085, 2563, **3409 - C0333**, 3910, 3913, 4144 - B0367
 Mast, N., 224 - C0035
 Mastey, R., 4628 - A0270, 4992, **669 - C0227**
 Mastrangelo, C. H., **1990**
 Mastrofilippo, V., 411 - A0229, 4178 - C0020
 Mastromonaco, C., 3176 - A0319, 5596 - A0315, 5603 - A0322, **6015**
 Mastronardi, C. A., 2524 - C0253
 Mastrosopqua, L., 3223 - B0322
 Mastrotta, K., 4861 - C0306
 Masuda, K., 2993
 Masuda, Y., 1852 - C0156, 3343 - C0225
 Mata, R., **2065 - A0123**
 Matak, N., 6082 - C0201
 Matei, V. M., **5321 - C0254**
 Mateos, M. V., **5357 - A0009**
 Mathai, A., 1003 - B0257, 1492 - C0234
 Mathan, J., 2957 - C0279
 Mathenge, L., 2073 - A0131
 Matherne, B., **1000 - B0254**
 Mathers, J. M., 403 - A0221
 Mathes, K., 3682 - A0366
 Mathew, R., 3313 - C0155
 Mathew, S., 839 - A0171
 Mathew, S., 4057 - B0052, 5084 - B0035
 Mathews, S., 5740 - C0027
 Mathias, M. T., 2427 - C0093, 3767 - B0182, 4230 - C0072, 5540 - A0232
 Mathieson, K., 3975, 3977
 Mathis, N., **685 - C0280**
 Mathur, R., 3239 - B0338
 Matos Neto, C., **458 - A0318**
 Matovelle, V., 1238 - A0079
 Matsubara, H., 1109 - C0144, 3618 - A0236, 4267 - C0138
 Matsubara, J. A., 347 - A0007, 5259 - C0105, 6063 - A0192, 6065 - A0194
 Matsuda, A., 344 - A0004, **493 - A0353**, 5573 - A0265, 5574 - A0266, 5575 - A0267
 Matsuda, F., 1817 - B0278, 1819 - B0280
 Matsuda, J., 4177 - C0019, 5579 - A0298
 Matsuda, M., 4655 - A0297
 Matsugi, T., 2717 - B0038, 2718 - B0039, 4874 - C0319
 Matsui, H., 4466, 4468, 5383 - A0035
 Matsui, R., 1100 - C0135, 4223 - C0065, 4256 - C0098, 4519 - A0034, **6056 - A0090**
 Matsui, T., 5729 - C0016
 Matsui, Y., **1109 - C0144**, 4267 - C0138
 Matsumiya, W., 1424 - B0343, 1921 - C0321, **269 - C0170**
 Matsumoto, C., 5122 - B0111, 5132 - B0121, 5133 - B0122
 Matsumoto, D., 4394 - C0442
 Matsumoto, H., 1500 - C0242
 Matsumoto, J. A., 5608 - A0327
 Matsumoto, K., 117 - B0031, C0197
 Matsumoto, K., 4353 - C0401
 Matsumoto, K., 1852 - C0156, 3343 - C0225
 Matsumoto, M., 4258 - C0129, **4260 - C0131**
 Matsumoto, T., **5465 - A0134**
 Matsumoto, T., 502 - B0009
 Matsumura, S., **3955**
 Matsumura, T., 2064 - A0122, 4851 - C0209, 4852 - C0210, 4853 - C0211
 Matsuno, C. A., **4787 - B0397**
 Matsuo, T., 1066 - C0079, 3378 - C0302, 4093 - B0218, 5182 - B0205
 Matsuo, T., 6051 - A0085
 Matsushita, K., 541 - B0156
 Matsushita, K., 3098 - A0106, **4652 - A0294**
 Matsushita, K., 2567
 Matsuura, M., 5894 - C0181
 Matsuura, T., 1093 - C0128, 5307 - C0240, **5541 - A0233**, 576 - B0191
 Matsuyama Hoyos, T., 553 - B0168
 Matsuyama, T., **1981**, 1987
 Matsuzaki, M., 291 - C0192, **5002 - A0073**
 Mattapallil, M., 2544 - C0273, 2551 - C0280
 Mattapallil, M. J., **2535 - C0264**, 2550 - C0279
 Matthaei, M., 1355 - B0115, 2900 - C0197
 Matthe, E., 3129 - A0246, **5435 - A0104**
 Matthias, J., 1156
 Matthysen, S., **2276 - B0230**
 Mattia, J., 719
 Mattia, J., 4172 - C0014
 Matuoka, M., 3701 - B0048, 5085 - B0036, **5086 - B0037**, 614 - B0286
 Maturi, R. K., **414 - A0232**
 Matsushita, D. A., 5232 - B0345
 Matynia, A., 3045 - A0016
 Maugeais, C., 2448 - C0114, 2454 - C0120
 Maugéri, I. L., 1452 - C0014
 Maugeuen, A., 1644 - A0020
 Maumense, I. H., 177 - B0331, **3489**
 Maupin, E., 3615 - A0233
 Mauri, A. G., 1656 - A0032
 Mauro, S., 4841 - C0199
 Mauro, V., 3573 - A0190
 Maury, I., 38 - A0069
 Maver, A., 2185 - A0354
 Maxwell, A., 2567
 Maxwell, C., 294 - C0195
 May, A., 2636 - A0141
 May, O., 2275 - B0229
 May, P., 4992
 Mayer, A. K., 6044 - A0078
 Mayer, C., 4174 - C0016, 5271 - C0117
 Mayers, M., 4772 - B0382
 Mayko, Z., 3682 - A0366
 Maynard, J., 1709 - A0230
 Mayne, J., 3983 - A0108
 Mayorquin, M., 1739 - A0260, 4619 - A0261
 Mayorquin-Ruiz, M., 1843 - B0304
 Mazlin, V., 278 - C0179, **3437**
 Mazzaferri, J., 2025 - A0052, 5694 - A0413
 Mazzilli, J., **2446 - C0112**
 Mazzini, C., **4305 - C0279**
 Mazzoli, L., 5121 - B0110
 Mazzoli, R. A., **2314 - B0268**
 Mazzolini, M., 1014 - B0268
 Mbagwu, M., 5623 - A0342, **5624 - A0343**
 Mbefo, M. K., **2326 - B0315**, 3491
 Mbekeani, J., 117 - B0031, C0197
 Mbekeani, J., 2906 - B0258, 2305 - B0259, 2313 - B0267
 McAllister, B., 1089 - C0102
 McAllister, F. M., **1652 - A0028**, 2104 - A0162
 McAllister, I., 1461 - C0023, 4847 - C0205, 840 - A0172
 McAlpine, C., 3622 - A0283
 McAnany, J., 5023 - A0219, 5025 - A0221
 McAuley, A., 4839 - C0197
 McAuley, W., 83 - A0246
 McCafferty, C., 2365 - B0375
 McCafferty, S. J., **2680 - B0001**
 McCall, M. A., 729
 McCanna, D. J., 4337 - C0385
 McCannel, T., 3644 - A0305, 4297 - C0271, 4303 - C0277, 4304 - C0278, 4312 - C0286, **4410**
 McCarron, M., 1799 - B0147
 McCartney, D., 2220 - A0389, 2573, 3687 - A0371, 897 - A0286, 899 - B0077
 McCary, B., **5925 - C0322**, 5932 - C0329, 5934 - C0331
 McClard, C. K., 5240 - B0353
 McClatchy, D., 1581
 McClellan, M. E., 3477
 McClellan, S. A., 1545
 McClements, M., 2329 - B0318, 382 - A0042, 4534 - A0049, 989 - B0243
 McClure, L. A., 4460
 McCluskey, P. J., 1141, 404 - A0222, 6173 - C0292
 McColl, E., 4343 - C0391, 4344 - C0392
 McComish, B., 3017, 4470
 McConnell, K., 207 - C0018
 McConnell, S. A., 1148
 McCormack, G. L., **4756 - B0257**
 McCourt, E. A., 169 - B0323, 2756 - B0135, 2760 - B0139, 3767 - B0182
 McCoy, K., 1300 - B0007, 2895 - C0192
 McCracken, C., 408 - A0226
 McCray, K. L., 1077 - C0090
 McCulloch, D. L., 4142 - B0305
 McCulloch, J., 4454
 McCullough, K., 4535 - A0050, 4536 - A0051, **6020**
 McDaniel, J., 1377 - B0137, 4342 - C0390, **4355 - C0403**
 McDaniel, L., 1413 - B0190, 151 - B0065, **4334 - C0382**, 474 - A0334
 McDermott, A. M., 3312 - C0154
 McDermott, M., 4802 - B0412
 McDevitt, D., 1848 - C0152
 McDonagh, B., 5141 - B0164
 McDonald, H., 4244 - C0086
 McDonald, J. P., 1948
 McDonald, L., **5183 - B0206**
 McDonald, M., 938 - B0116
 McDonell, B., **5944 - C0341**
 McDonnell, F., **6039**
 McDonnell, J. F., 1032 - B0316
 McDowell, C. M., 1214, 4712 - B0136, **4713 - B0137**
 McEwen, M. W., 3175 - A0318
 McFadden, S. A., 712 - C0307, **714 - C0309**
 McFarland, D. M., 3556 - A0173
 McFarland, M. R., 2044 - A0102
 McGahon, M., 3006
 McGaughey, D., 2340 - B0329
 McGee, T., 2532 - C0261, 3544 - A0161
 McGeown, G., 3006
 McGhee, C. N., 1374 - B0134, 1799 - B0147, 1809 - B0157
 McGill, T. J., 327 - C0260, 3474, 3589 - A0206, 4517 - A0032, 546 - B0161, 5840 - C0127
 McGill University, Department of Ophthalmology, 5629 - A0348
 McGowan, C., 4562 - A0091
 McGowan, M., 1928 - C0328
 McGrady, N., **3537 - A0100**
 McGrady, N. R., 1593
 McGregor, J. E., **2589**
 McGroeger, M. K., 2189 - A0358
 McGuinness, C., 5229 - B0342
 McGuinness, M., 1054 - B0365
 McGuire, P., 1911 - C0311, 3563 - A0180
 McGwin, G., 2561, 4637 - A0279
 Mchaourab, H. S., 3038 - A0009, 3487
 McIlwain, K., 3076 - A0047
 McIntosh, A., **1680 - A0201**
 McKay, B. S., 2467 - C0133, 3993 - A0118
 McKay, G., 2567
 McKay, M., 4805 - B0415
 McKean-Cowdin, R., **1597**, 1812 - B0273, 2725 - B0104, 3958, 5180 - B0203, 5187 - B0210, 778
 McKechnie, K., 220 - C0031
 McKellar, J. B., **1112 - C0147**, 1114 - C0149
 Mckelvie, J., 4339 - C0387
 McKendrick, A. M., 1108 - C0143, 2106 - A0164, 2140 - A0274, 5129 - B0118, **6027**, 6030, 6033
 McKenna, M., 821 - A0153
 McKenzie, A., 216 - C0027, 242 - C0053, 5828 - C0115
 McKenzie, D., 221 - C0032
 McKenzie, M., 2352 - B0362
 McKeown, A., 1675 - A0196
 McKeown, S., **5490 - A0159**
 Mckie, L., 973 - B0227
 McKinnon, T., 4623 - A0265
 Mcknight, B., 3460
 McKown, R. L., 3323 - C0165, 3828 - C0055, **4914 - C0359**
 McLaren, T., 2330 - B0319
 McLaughlin, J. P., **3155 - A0272**, 874 - A0206
 McLaughlin, M., 2417 - C0083
 McLaurin, E., 1231 - A0072
 McLean, R., 2173 - A0342, 4416, 5205 - B0318
 McLellan, G. J., 3525 - A0088, **5908 - C0195**
 McLelland, B. T., 544 - B0159, 558 - B0173
 McLeod, D. S., 2435 - C0101
 McLeod, D., 1510 - C0351
 McLeod, H., 2418 - C0084
 McLeod, S., 3470, 770
 Meleod, S., 2897 - C0194
 McLoon, L. K., **1148**
 McLoon, S. C., **2444 - C0110**
 McMahon, D., **1584**, 5442 - A0111, 607 - B0279
 McMahon, J., 1815 - B0276
 McManus, A., 3817 - C0044
 McMaster, C. R., 3113 - A0121
 McMenamin, P. G., 3320 - C0162
 McNabb, R., 288 - C0189
 McNabb, R. P., 1347 - B0054, **2195 - A0364**, 273 - C0174, 5741 - C0028
 McNaught, A. I., 1272 - A0307, **466 - A0326**
 McNaughton, L., 5807 - C0094
 McNeil, J., 5539 - A0231
 McNeill, H., 659 - C0217
 McNeill, H., 3021
 McNutt, S., 5490 - A0159
 McPeck, R., 1847 - C0151, 2166 - A0335
 McPherson, S. W., 1490 - C0232, **364 - A0024**
 Mdzomba, J. B., **5297 - C0230**, 5522 - A0214
 Mead, B., **2615**, 5516 - A0185
 Meadows, D. C., **1039 - B0350**
 Meadway, A., **4631 - A0273**
 Meana, A., 1382 - B0142
 Mécè, P., 4641 - A0283, **6194 - C0348**, 644 - C0202
 Mechouam, H., 5415 - A0067
 Medda, E., 5922 - C0319
 Medeiros, F., 1996, 4062 - B0057, 4463, 4985, 5101 - B0090, 5113 - B0102, 5905 - C0192
 Medeiros, F. A., **4405**
 Medic, V., 1097 - C0132
 Medina, F. M., **1902 - C0302**, 4835 - C0193
 Medina, R., 3554 - A0171, 5490 - A0159
 Medisoft audit study group, 1906 - C0306
 Meek, K. M., 1415 - B0192, 2265 - B0219, 533 - B0148, 5722 - C0009
 Meekins, L. C., 2195 - A0364
 Meenink, T., 5930 - C0327, 5936 - C0333
 Meester, M. A., 3013, 3015
 Megaw, R., 2687 - B0008
 Meguro, A., 1819 - B0280, **6049 - A0083**
 Mehdi-zadeh, M., 1693 - A0214
 Mehner, L. C., **2760 - B0139**, 3767 - B0182
 Mehrabyan, E., 1523 - C0364
 Mehravar, S., 4129 - B0292
 Mehrotra, S., 5412 - A0064
 Mehta, A., 5127 - B0116
 Mehta, A., 110 - A0273, 2300 - B0254
 Mehta, A., **4772 - B0382**
 Mehta, A., **817 - A0149**
 Mehta, A., 5198 - B0311
 Mehta, H., 3616 - A0234, 4847 - C0205
 Mehta, J., 5875 - C0162
 Mehta, J. S., 1165, 1372 - B0132, 1375 - B0135, 4381 - C0429, 5745 - C0032, 5770 - C0057
 Mehta, M. C., 6019, **633 - C0063**, 851 - A0183
 Mehta, M. C., 1063 - C0076, 1419 - B0338, 3395 - C0319, 4671 - A0313, 6018, 873 - A0205
 Mehta, N. S., **3694 - A0378**, 4681 - A0323, 6188 - C0307
 Mehta, P., 5619 - A0338
 Mehta, S., 4251 - C0093
 Mei, F., 4802 - B0412, **6095 - C0214**
 Mei, H., 3859 - C0120
 Meier, D., 6094 - C0213
 Meijer, O., 1577
 Mejjome, T., **4598 - A0187**
 Meimon, S., **4641 - A0283**, 6194 - C0348, 644 - C0202
 Mein, C., 1833 - B0294, 5268 - C0114
 Meiner, V., 5415 - A0067
 Meister, C., 5981
 Meijeyppen, S., 4125 - B0288
 Meizner, D., 1844 - B0305, 4225 - C0067
 Mejaddam, A., 3110 - A0118
 Mejdoub, L., 4340 - C0388
 Mejia, P., 3442, 54 - A0085
 Mejias, S. J. A., **949 - B0127**
 Meka, J., 6159 - C0278
 Melander, F., 5686 - A0405
 Melcerova, A., 3279 - C0073
 Mélega, M. V., 431 - A0291
 Melendez, R. F., **6172 - C0291**
 Meléppat, R., 5822 - C0109, **5834 - C0121**
 Meleppatta, R., 5825 - C0112, 5832 - C0119
 Melgarejo, J. D., 1829 - B0290
 Melia, M., 178 - B0332

- Mélik-Parsadaniantz, S., 3850 - C0111
 Melin, Y. O., **3575 - A0192**
 Melki, R., 5831 - C0118
 Melkonyan, H., 3981 - A0106
 Mellano, S., 3197 - B0197
 Mellen, R., 4536 - A0051
 Meller, D., 3207 - B0306, 3243 - B0342
 Meller, R., 4899 - C0344
 Melles, G., 2902 - C0199
 Melles, G., 1380 - B0140
 Melles, R., 1179
 Mello, L., 5759 - C0046
 Mellon, J., 2576
 Mellough, C. B., 1984, 542 - B0157, 544 - B0159, **560 - B0175**, 561 - B0176, 570 - B0185
 Melo, A., **464 - A0324**
 Melo, M. B., 2338 - B0327
 Melotte, D., 3230 - B0329
 Melsbach, E., 2270 - B0224, 3452
 Melton, D., 5671 - A0390, 5673 - A0392
 Membreno, R., 1240 - A0081, 1833 - B0294, 5443 - A0112, 860 - A0192
 Menapace, R., 4789 - B0399
 Mendel, T., **4428**
 Mendes, L., 2800 - B0218
 Mendez, N., **2707 - B0028**
 Mendez-Gonzalez, J., 252 - C0111
 Méndez-Hernández, C. D., 3457
 Mendis, K., 813 - A0145
 Mendonça, A., 1681 - A0202
 Mendonca, L., **1681 - A0202**
 Menduni, F., **3303 - C0097**
 Menegay, H., 2892 - C0189
 Meneses Galicia, C., 1901 - C0301, **2067 - A0125**
 Meng, C., 4569 - A0098
 Meng, K., **1727 - A0248**
 Meng, W., 738
 Meng, X., **2715 - B0036**
 Mengxuan, L., 2882 - B0300
 Menke, D. B., 577 - B0192, 589 - B0204, 593 - B0208
 Menna, F., **5755 - C0042**
 Menolascina, L., 4795 - B0405
 Menon, G., 1906 - C0306, 839 - A0171
 Menon, N. R., **2681 - B0002**
 Mentek, M., **4705 - B0129**, 5049 - A0245
 Merani, R., 330 - C0263
 Merayo-Lloves, J., 1382 - B0142
 Mercado, C., **170 - B0324**, 2175 - A0344
 Mercado, C., **5353 - A0005**
 Merezhinskaya, N., 2314 - B0268
 Mergler, S., 1366 - B0126
 Merida, S., 1174
 Merigan, W. H., 2589
 Merino, M., **148 - B0062**
 Merkle, C. M., 5824 - C0111, 5832 - C0119
 Merkley, K. H., 162 - B0076
 Merkley, M., 1767 - B0082
 Merkur, A., 4248 - C0090
 Merkuri, F., 4711 - B0135
 Merle, B. M., **3010**, 3013, 5537 - A0229
 Merriam, S., 2125 - A0183
 Merriman, D. K., 5849 - C0136
 Mertineit, C. L., 4004 - A0129
 Mertsch, S., 118 - B0032, **2250 - B0204**, 4929 - C0374
 Mertz, J. L., 4002 - A0127
 Merula, R. V., **2691 - B0012**
 Merz, P., 2210 - A0379
 Merz, T., 1330 - B0037, 1336 - B0043
 Mesa Rosselló, D., 402 - A0102
 Mesentier-Louro, L. A., **549 - B0164**
 Meshi, A., **1501 - C0342**, 1508 - C0349, 1846 - B0307, 1885 - C0285, 660 - C0218, 802 - A0134
 Mesquida, M., 1095 - C0130
 Mesquita, G., **2979**
 Mesquita, J., **3085 - A0056**
 Messenger, W., **5437 - A0106**
 Messenio, D., 1656 - A0032
 Messinger, J. D., 2437 - C0103, 2624, **3237 - B0336**
 Messinger, J., 2433 - C0099, 3211 - B0310, 4482
 Messner, L. V., 2418 - C0084
 Mestre, C., **1554**
 Metallo, C., 4584 - A0173, 5517 - A0186
 Mete, M., **2431 - C0097**
 Metruccio, M., 1549, 501 - B0008, 505 - B0012, 902 - B0080
 Metz, G., 4046 - A0253
 Metzinger, J., 1245 - A0086, 1250 - A0091, 245 - C0056, 3465
 Meuer, S. M., 1040 - B0351, 3014, 3958, 4053 - B0048, **6011**
 Meunier, I., 2322 - B0311, **2334 - B0323**, 38 - A0069
 Meunier, M., 4553 - A0068, 5694 - A0413
 Mexican American Glaucoma Genetic Study Group, 1816 - B0277
 Meyer, A., 2706 - B0027, 455 - A0315
 Meyer, C., 1452 - C0014
 Meyer, D., 3416 - C0340
 Meyer, J. S., **568 - B0183**, 592 - B0207
 Meyer, J., **5818 - C0105**
 Meyer, L., 3036 - A0007
 Meyer-Hilberg, L., **1527 - C0368**
 Meyerle, C. B., 825 - A0157
 Meza Anguiano, A., 203 - C0014, 4825 - C0183, 887 - A0219
 Meza-Zepeda, L., 4323 - C0297
 Mezhibovsky, E., 2381 - C0047
 Mezu-Ndubuisi, O. J., **3761 - B0176**
 Mi, H., 4159 - C0001, **4183 - C0025**
 Mi, L., 922 - B0100
 Mi, X., **5286 - C0219**
 Mian, S. I., 1300 - B0007
 Mian, U., 1835 - B0296
 Miao, H., 549 - A0096
 Miao, H., **3396 - C0320**
 Miao, J., 5315 - C0248
 Miao, Z., 5782 - C0069, **5947 - C0344**
 Micelli Ferrari, L., 1915 - C0315
 Micelli Ferrari, T., **1915 - C0315**
 Michael, K. B., 5507 - A0176
 Michael, M. Z., 5391 - A0043
 Michael, R., 98 - A0261
 Michaelides, M., 1568, 2325 - B0314, 4276 - C0147, 4467, 4628 - A0270, 4630 - A0272, 5404 - A0056, 669 - C0227
 Michaels, J., 1288 - A0323
 Michaels, L., 5785 - C0072
 Michal, M., 5191 - B0214
 Michalakakis, S., 2658 - A0385, 2982, 4966, 5663 - A0382, 5664 - A0383, 998 - B0252
 Michalek, B., **251 - C0110**
 Michalek, B., 251 - C0110, 4796 - B0406
 Michaud, L., **3776 - C0003**
 Micheal, S., 3747 - B0094
 Michel, U., 3612 - A0230
 Michelessi, M., **4066 - B0061**, 5080 - B0031
 Michelson, G., 5871 - C0158
 Michiels, C., 4526 - A0041
 Michihito, I., 945 - B0123
 Mick, P., 1068 - C0081
 Microbiology Immunology, 2514 - C0243
 Middlebrooks, C., **702 - C0297**
 Middleton, L., 806 - A0138
 Middleton, L., **584 - B0199**
 Middleton, L., 584 - B0199
 Middett, D., 1219
 Midgley, K., **6157 - C0276**
 Mieler, W. F., **1926 - C0326**, 3262 - B0361, 3265 - B0364, 856 - A0188, 876 - A0208, 880 - A0212
 Mielke, M., 2188 - A0357
 Mieno, H., **336 - C0269**
 Mier, J., 4825 - C0183
 Miere, A., **2807 - B0225**, 3156 - A0273, 5425 - A0094, 6198 - C0352
 MIETH, A., **131 - B0045**, 93 - A0256
 Miettinen, S., 2281 - B0235, 3451
 Migacz, J. V., 295 - C0196
 Mighion, L., 5410 - A0062
 Migita, H., 119 - B0033
 Miglior, S., 4066 - B0061
 Migliori, M., 112 - A0275, 4793 - B0403, 5631 - A0350
 Migneco, M., **115 - B0029**, 3788 - C0015
 Migone, T., 225 - C0036, 231 - C0042
 Mihailovic, A., 1943, **1945**, 2099 - A0157, 4152 - B0375
 Mihara, R., 3256 - B0355
 Mihashi, T., **5648 - A0367**
 Mikaelian, G., 4043 - A0250
 Mikail, M., 1190
 Mikhail, M., 2750 - B0129, **3771 - B0186**
 Mikhail, M., **1676 - A0197**
 Miki, A., 1424 - B0343, **2753 - B0132**, 852 - A0184
 Miki, A., **4116 - B0279**, 5325 - C0258
 Miki, A., 2019 - A0046
 Mikkelsen, L. H., **3188 - A0331**, 5584 - A0303, 5587 - A0306, 5986
 Mikoshiba, Y., 3194 - B0194
 Mikula, E. R., 3274 - C0068
 Mikut, R., 3439
 Milano, G., 1662 - A0038
 Milea, D., **5124 - B0113**, 755
 Milhomens, E., 464 - A0324
 Miličević, N., **4029 - A0154**
 Militello, F., 4795 - B0405
 Miljanich, G., 2679 - A0406
 Milla, E., **5150 - B0173**
 Millán, V., 1058 - B0369
 Millar, J., **1655 - A0031**, 2713 - B0034, 4728 - B0152, 6037
 Millay, D., 4063 - B0058
 Millen, A. E., 3774 - C0001, 4509 - A0024, 5542 - A0234, 5543 - A0235
 Miller, C. G., **106 - A0269**
 Miller, C., 3230 - B0329
 Miller, D. M., 1156
 Miller, D., 3667 - A0351, 3670 - A0354, 3671 - A0355, 3684 - A0368, 498 - B0005, 529 - B0144, 904 - B0082
 Miller, D. G., 4816 - C0174
 Miller, D. T., 1153, 728, 730
 Miller, E. B., **1011 - B0265**
 Miller, F. C., 500 - B0007
 Miller, G., 6136 - C0255
 Miller, J. J., 6053 - A0087
 Miller, J., **4032 - A0157**
 Miller, J. W., 2619, 4944, 4946, 769, 795
 Miller, J. B., 1515 - C0356, **2619**, 3126 - A0243, 4944, 4946, 786
 Miller, J. W., **2196 - A0365**
 Miller, K., 194 - C0005, 4793 - B0403
 Miller, M. R., **4999 - A0070**
 Miller, N. R., **2294 - B0248**
 Miller, P. E., 5658 - A0377, 5929 - C0326, 80 - A0127
 Miller, S., 4374 - C0422, 6040
 Miller, S. S., 1188, 1985, 3051 - A0022, 546 - B0161
 Miller, V. J., **4797 - B0407**
 Miller, W., 1765 - B0080, 4901 - C0346, 929 - B0107
 Millet-puel, G., 3963, 6074 - A0203
 Millette, M., 3067 - A0038
 Milliken, C., **4510 - A0025**
 Millington-Ward, S., 4539 - A0054
 Millis, B. A., 3109 - A0117
 Mills, B., 2987
 Mills, J., 4017 - A0142, 985 - B0239
 Mills, R. A., 4380 - C0428, 4470
 Mills, S. A., 5379 - A0031, 6080 - A0209
 Mills, S. L., 5497 - A0166
 Mills, Z., **6187 - C0306**
 Milosavljevic, N., 3099 - A0107
 Milroy, C., 1725 - A0246, 2114 - A0172, 2374 - C0040
 Mimica, L., 1452 - C0014, 3654 - A0338, 4787 - B0397, 4807 - B0417
 Mimouni, M., 3372 - C0296, 5853 - C0140
 Mimura, O., 3343 - C0225
 Mimura, T., **5570 - A0262**
 Minaeva, O., **3037 - A0008**, 5512 - A0181, 5640 - A0359
 Minami, K., 2208 - A0377, 2218 - A0387, 2229 - A0398, 253 - C0112
 Minami, S., **862 - A0194**
 Minami, T., **636 - C0066**
 Minassian, D., 1165
 Minckler, D. S., 3693 - A0377, 4314 - C0288
 Minden, K., 3492
 Minegishi, Y., **4494 - A0009**
 Minehart, J., 6023
 Miner, C., 5453 - A0122
 Miner, J., 5453 - A0122
 Mines, M. J., 2314 - B0268
 Ming, C., 376 - A0036
 Mingsong, H., **4567 - A0096**
 Minkowski, J., **832 - A0164**
 Minkus, C. L., **2708 - B0029**
 Minnaert, A., 5708 - A0427
 Minnella, A. M., **5549 - A0241**
 Mino, T., 3256 - B0355
 Minoshima, S., 5414 - A0066
 Miquilini, L., 4044 - A0251
 Mir, T. A., 5459 - A0128
 Mira, X., 1058 - B0369
 Miranda, C., 5508 - A0177, 5513 - A0182
 Miranda de Sousa Dias, M., 4526 - A0041
 Miranda, M., 5114 - B0103
 Miranda, M. A., 5115 - B0104
 Miranda, M., 2491 - C0195, **996 - B0250**
 Miranda Santiago, M., 1058 - B0369
 Miras-Portugal, M. T., 5300 - C0233
 Mircheff, A. K., **3818 - C0045**
 Mireskandari, K., 3762 - B0177
 Mirhajianmoghdam, H., **4749 - B0250**
 Mirkia, H., 1740 - A0261
 Miron, A., 1380 - B0140, 2902 - C0199
 Mirsaedi, M., 4196 - C0038
 Mirza, M., 1067 - C0080
 Mirza, R., 3227 - B0326
 Mirzaei, M., 3528 - A0091, **3531 - A0094**, 3710 - B0057
 Mishima, A., **122 - B0036**
 Mishima, H., 525 - B0140, 528 - B0143
 Mishima, K., **6082 - C0201**
 Mishra, B., **2466 - C0132**
 Mishra, M., 3542 - A0159, **3543 - A0160**
 Mishra, R., 3090 - A0061
 Mishra, S., 2438 - C0104
 Mishra, S., 3038 - A0009
 Mishra, S., 4172 - C0014
 Mishra, S., **3038 - A0009**
 Mishra, S., 3169 - A0312
 Mishulin, A., **113 - A0276**
 Miskimen, K., 1418 - B0337, 1420 - B0339
 Misra, M., 329 - C0262
 Misra, S., 1799 - B0147, 1809 - B0157, **4339 - C0387**
 Missel, P., **2057 - A0115**
 Missiakas, D., 4360 - C0408
 Missotten, T. O., 6075 - A0204
 Mills, R. A., 4380 - C0428, 4470
 Mills, S. A., 5379 - A0031, 6080 - A0209
 Mills, S. L., 5497 - A0166
 Mills, Z., **6187 - C0306**
 Milosavljevic, N., 3099 - A0107
 Milroy, C., 1725 - A0246, 2114 - A0172, 2374 - C0040
 Mimica, L., 1452 - C0014, 3654 - A0338, 4787 - B0397, 4807 - B0417
 Mimouni, M., 3372 - C0296, 5853 - C0140
 Mimura, O., 3343 - C0225
 Mimura, T., **5570 - A0262**
 Minaeva, O., **3037 - A0008**, 5512 - A0181, 5640 - A0359
 Minami, K., 2208 - A0377, 2218 - A0387, 2229 - A0398, 253 - C0112
 Minami, S., **862 - A0194**
 Minami, T., **636 - C0066**
 Minassian, D., 1165
 Minckler, D. S., 3693 - A0377, 4314 - C0288
 Minden, K., 3492
 Minegishi, Y., **4494 - A0009**
 Minehart, J., 6023
 Miner, C., 5453 - A0122
 Miner, J., 5453 - A0122
 Mines, M. J., 2314 - B0268
 Ming, C., 376 - A0036
 Mingsong, H., **4567 - A0096**
 Minkowski, J., **832 - A0164**
 Minkus, C. L., **2708 - B0029**
 Minnaert, A., 5708 - A0427
 Minnella, A. M., **5549 - A0241**
 Mino, T., 3256 - B0355
 Minoshima, S., 5414 - A0066
 Miquilini, L., 4044 - A0251
 Mir, T. A., 5459 - A0128
 Mira, X., 1058 - B0369
 Miranda, C., 5508 - A0177, 5513 - A0182
 Miranda de Sousa Dias, M., 4526 - A0041
 Miranda, M., 5114 - B0103
 Miranda, M. A., 5115 - B0104
 Miranda, M., 2491 - C0195, **996 - B0250**
 Miranda Santiago, M., 1058 - B0369
 Miras-Portugal, M. T., 5300 - C0233
 Mircheff, A. K., **3818 - C0045**
 Mireskandari, K., 3762 - B0177
 Mirhajianmoghdam, H., **4749 - B0250**
 Mirkia, H., 1740 - A0261
 Miron, A., 1380 - B0140, 2902 - C0199
 Mirsaedi, M., 4196 - C0038
 Mirza, M., 1067 - C0080
 Mirza, R., 3227 - B0326
 Mirzaei, M., 3528 - A0091, **3531 - A0094**, 3710 - B0057
 Mishima, A., **122 - B0036**
 Mishima, H., 525 - B0140, 528 - B0143
 Mishima, K., **6082 - C0201**
 Mishra, B., **2466 - C0132**
 Mishra, M., 3542 - A0159, **3543 - A0160**
 Mishra, R., 3090 - A0061
 Mishra, S., 2438 - C0104
 Mishra, S., 3038 - A0009
 Mishra, S., 4172 - C0014
 Mishra, S., **3038 - A0009**
 Mishra, S., 3169 - A0312
 Mishulin, A., **113 - A0276**
 Miskimen, K., 1418 - B0337, 1420 - B0339
 Misra, M., 329 - C0262
 Misra, S., 1799 - B0147, 1809 - B0157, **4339 - C0387**
 Missel, P., **2057 - A0115**
 Missiakas, D., 4360 - C0408
 Missotten, T. O., 6075 - A0204
 Mills, R. A., 4380 - C0428, 4470
 Mills, S. A., 5379 - A0031, 6080 - A0209
 Mills, S. L., 5497 - A0166
 Mills, Z., **6187 - C0306**
 Milosavljevic, N., 3099 - A0107
 Milroy, C., 1725 - A0246, 2114 - A0172, 2374 - C0040
 Mimica, L., 1452 - C0014, 3654 - A0338, 4787 - B0397, 4807 - B0417
 Mimouni, M., 3372 - C0296, 5853 - C0140
 Mimura, O., 3343 - C0225
 Mimura, T., **5570 - A0262**
 Minaeva, O., **3037 - A0008**, 5512 - A0181, 5640 - A0359
 Minami, K., 2208 - A0377, 2218 - A0387, 2229 - A0398, 253 - C0112
 Minami, S., **862 - A0194**
 Minami, T., **636 - C0066**
 Minassian, D., 1165
 Minckler, D. S., 3693 - A0377, 4314 - C0288
 Minden, K., 3492
 Minegishi, Y., **4494 - A0009**
 Minehart, J., 6023
 Miner, C., 5453 - A0122
 Miner, J., 5453 - A0122
 Mines, M. J., 2314 - B0268
 Ming, C., 376 - A0036
 Mingsong, H., **4567 - A0096**
 Minkowski, J., **832 - A0164**
 Minkus, C. L., **2708 - B0029**
 Minnaert, A., 5708 - A0427
 Minnella, A. M., **5549 - A0241**
 Mino, T., 3256 - B0355
 Minoshima, S., 5414 - A0066
 Miquilini, L., 4044 - A0251
 Mir, T. A., 5459 - A0128
 Mira, X., 1058 - B0369
 Miranda, C., 5508 - A0177, 5513 - A0182
 Miranda de Sousa Dias, M., 4526 - A0041
 Miranda, M., 5114 - B0103
 Miranda, M. A., 5115 - B0104
 Miranda, M., 2491 - C0195, **996 - B0250**
 Miranda Santiago, M., 1058 - B0369
 Miras-Portugal, M. T., 5300 - C0233
 Mircheff, A. K., **3818 - C0045**
 Mireskandari, K., 3762 - B0177
 Mirhajianmoghdam, H., **4749 - B0250**
 Mirkia, H., 1740 - A0261
 Miron, A., 1380 - B0140, 2902 - C0199
 Mirsaedi, M., 4196 - C0038
 Mirza, M., 1067 - C0080
 Mirza, R., 3227 - B0326
 Mirzaei, M., 3528 - A0091, **3531 - A0094**, 3710 - B0057
 Mishima, A., **122 - B0036**
 Mishima, H., 525 - B0140, 528 - B0143
 Mishima, K., **6082 - C0201**
 Mishra, B., **2466 - C0132**
 Mishra, M., 3542 - A0159, **3543 - A0160**
 Mishra, R., 3090 - A0061
 Mishra, S., 2438 - C0104
 Mishra, S., 3038 - A0009
 Mishra, S., 4172 - C0014
 Mishra, S., **3038 - A0009**
 Mishra, S., 3169 - A0312
 Mishulin, A., **113 - A0276**
 Miskimen, K., 1418 - B0337, 1420 - B0339
 Misra, M., 329 - C0262
 Misra, S., 1799 - B0147, 1809 - B0157, **4339 - C0387**
 Missel, P., **2057 - A0115**
 Missiakas, D., 4360 - C0408
 Missotten, T. O., 6075 - A0204
 Mills, R. A., 4380 - C0428, 4470
 Mills, S. A., 5379 - A0031, 6080 - A0209
 Mills, S. L., 5497 - A0166
 Mills, Z., **6187 - C0306**
 Milosavljevic, N., 3099 - A0107
 Milroy, C., 1725 - A0246, 2114 - A0172, 2374 - C0040
 Mimica, L., 1452 - C0014, 3654 - A0338, 4787 - B0397, 4807 - B0417
 Mimouni, M., 3372 - C0296, 5853 - C0140
 Mimura, O., 3343 - C0225
 Mimura, T., **5570 - A0262**
 Minaeva, O., **3037 - A0008**, 5512 - A0181, 5640 - A0359
 Minami, K., 2208 - A0377, 2218 - A0387, 2229 - A0398, 253 - C0112
 Minami, S., **862 - A0194**
 Minami, T., **636 - C0066**
 Minassian, D., 1165
 Minckler, D. S., 3693 - A0377, 4314 - C0288
 Minden, K., 3492
 Minegishi, Y., **4494 - A0009**
 Minehart, J., 6023
 Miner, C., 5453 - A0122
 Miner, J., 5453 - A0122
 Mines, M. J., 2314 - B0268
 Ming, C., 376 - A0036
 Mingsong, H., **4567 - A0096**
 Minkowski, J., **832 - A0164**
 Minkus, C. L., **2708 - B0029**
 Minnaert, A., 5708 - A0427
 Minnella, A. M., **5549 - A0241**
 Mino, T., 3256 - B0355
 Minoshima, S., 5414 - A0066
 Miquilini, L., 4044 - A0251
 Mir, T. A., 5459 - A0128
 Mira, X., 1058 - B0369
 Miranda, C., 5508 - A0177, 5513 - A0182
 Miranda de Sousa Dias, M., 4526 - A0041
 Miranda, M., 5114 - B0103
 Miranda, M. A., 5115 - B0104
 Miranda, M., 2491 - C0195, **996 - B0250**
 Miranda Santiago, M., 1058 - B0369
 Miras-Portugal, M. T., 5300 - C0233
 Mircheff, A. K., **3818 - C0045**
 Mireskandari, K., 3762 - B0177
 Mirhajianmoghdam, H., **4749 - B0250**
 Mirkia, H., 1740 - A0261
 Miron, A., 1380 - B0140, 2902 - C0199
 Mirsaedi, M., 4196 - C0038
 Mirza, M., 1067 - C0080
 Mirza, R., 3227 - B0326
 Mirzaei, M., 3528 - A0091, **3531 - A0094**, 3710 - B0057
 Mishima, A., **122 - B0036**
 Mishima, H., 525 - B0140, 528 - B0143
 Mishima, K., **6082 - C0201**
 Mishra, B., **2466 - C0132**
 Mishra, M., 3542 - A0159, **3543 - A0160**
 Mishra, R., 3090 - A0061
 Mishra, S., 2438 - C0104
 Mishra, S., 3038 -

Miyata – Mudgil

- Miyata, K., 1232 - A0073, 2208 - A0377, 253 - C0112, 2926 - C0223, 3410 - C0334, 3679 - A0363, 6082 - C0201
- Miyata, M., 24 - A0055
- Miyata, R., 1109 - C0144, 3618 - A0236, **4267 - C0138**
- miyauchi, A., 3585 - A0202
- Miyauchi, M., **4194 - C0036**, 4195 - C0037
- Miyazaki, A., 3343 - C0225
- Miyazaki, C., 102 - A0265, 3685 - A0369
- Miyazaki, K., 2943 - C0265
- Miyoshi, T., 1031 - B0315, 4557 - A0086, 4559 - A0088
- Mizerska, K., 154 - B0068, 3284 - C0078
- Mizobuchi, K., 5414 - A0066
- Mizoguchi, A., 3098 - A0106
- Mizoguchi, T., 6129 - C0248
- Mizoguchi, T., 5145 - B0168
- Mizota, A., 1429 - B0348, 5570 - A0262, 591 - B0206
- Mizukami, M., **6146 - C0265**
- Mizuki, N., 1319 - B0026, 1742 - B0057, 1784 - B0099, 1819 - B0280, 6049 - A0083
- Mizuki, Y., 1742 - B0057, 1784 - B0099
- Mizuno, Y., 1661 - A0037
- Mizuno, Y., **451 - A0311**
- Mizutani, M., 1398 - B0175
- Mo, S., 3446, 3447
- Moarefi, M., **5768 - C0055**
- Moats, R., 4457, 4961
- Mocan, M. C., 2100 - A0158, **2690 - B0011**, 4126 - B0289
- Mochizuki, M., 4170 - C0012, **4191 - C0033**, 4194 - C0036, 4195 - C0037
- Mock, D., 3064 - A0035
- Modabber, M., **2931 - C0253**
- Modarelli, A., 4061 - B0056, 4990, **5131 - B0120**
- Moderiano, D., 1176
- Modi, Y., 1052 - B0363
- Modjtahedi, B., 1842 - B0303, 3381 - C0305
- Modulo, C., 4420
- Moe, M. C., 2516 - C0245, 3867 - C0128, 804 - A0136
- Moe, M. C., 1441 - C0003, 1514 - C0355
- Moe, M. C., 4323 - C0297, 527 - B0142, 5647 - A0366
- Moein, H., 3321 - C0163, 3327 - C0169, **4437**
- Moeller, A., 5081 - B0032
- Moeller, K., 470 - A0330
- Moer, N., 5310 - C0243
- Mofly, H., 22 - A0053
- Moghadam, M., 2577
- Moghadaszadeh, S., 5163 - B0186
- Moghimi, A., 1527 - C0368, 2845 - B0263
- Moghimi, S., 2735 - B0114, 2857 - B0275, 2861 - B0279, **3498**, 4476, 5075 - B0026
- Moghul, I., 1673 - A0194
- Mogi, M., 1650 - A0026
- Mogianesi, P., 1926 - C0326
- Mohabati, D., **6075 - A0204**
- Mohamed, A., 268 - C0127, 2978
- Mohamed, M., 1462 - C0024, 3986 - A0111
- Mohamed, S., 4840 - C0198
- Mohamed, Y. H., **3779 - C0006**
- Mohamed-Garza, M., 3691 - A0375
- Mohamed-Hamsho, J., 1340 - B0047, 3691 - A0375, 5756 - C0043
- Mohamed-Noriega, K., 1340 - B0047, **3691 - A0375**, 5756 - C0043
- Mohamedy, I., 5935 - C0332, 5942 - C0339
- Mohamedy, I., **5943 - C0340**
- Mohammadi, S., **1770 - B0085**, 2657 - A0384
- Mohammed, H., 2434 - C0100
- Mohammed, I., **4383 - C0431**
- Mohammed, T., **5857 - C0144**, 5858 - C0145
- Mohan, R. R., 1498 - C0240, 151 - B0065, 3587 - A0204, 4334 - C0382, **4359 - C0407**, 4402 - C0450, 474 - A0334, 744
- Mohand-Said, S., **1566**, 3895 - C0361, 3896 - C0362
- Mohand-Said, S., 793
- Mohi, A., 73 - A0120
- Mohla, A., **3239 - B0338**
- Mohlin, C., **5562 - A0254**
- Mohr, S., 3557 - A0174
- Moilanen, J., 4906 - C0351
- Moinuddin, O., 3771 - B0186
- Moiseyev, G. P., **5330 - C0263**
- Moisseiev, E., **5705 - A0424**
- Moisseiev, J., 5705 - A0424
- Mojab, N., 1721 - A0242
- Mok, J., 1810 - B0158, **2921 - C0218**, 3578 - A0195
- Mokhtar Elhelbawi, M., 3151 - A0268
- Mokwa, W., 4566 - A0095, 4570 - A0099
- Molday, L., 5392 - A0044, 605 - B0277
- Molday, L. L., **5394 - A0046**
- Molday, R. S., 367 - A0027, **5392 - A0044**, 5394 - A0046, 605 - B0277
- Moldovan, L., 5350 - A0002, 6002, 765
- Molenberghs, G., 4478
- Molgo, J., 2170 - A0339
- Molina, S., **900 - B0078**
- Molina-Martinez, I., 5693 - A0412
- Molina-Martinez, I. T., 3302 - C0096
- Molina-Reyes, J., 4040 - A0247
- Molins, B., 1427 - B0346, 4826 - C0184, 4842 - C0200
- Moll, A., 5983
- Molle, F., 2765 - B0144, 3755 - B0170, 3756 - B0171
- Molleh, B., 4172 - C0014
- Möller, P. T., 2421 - C0087, 4945
- Molliex, N., 255 - C0114
- Molokhia, S., 4392 - C0440, **4454**
- Moloney, M., 4075 - B0070
- Momeni Moghaddam, H., 4379 - C0427
- Momozawa, Y., 1426 - B0345
- Monahan, P., 5920 - C0317
- Monarvarfeshani, A., 1850 - C0154
- Moncaster, J. A., 3037 - A0008, 5512 - A0181, **5640 - A0359**
- Mondal, A., 575 - B0190
- Mondesire-Crump, I., 1644 - A0020
- Mones, J., 5545 - A0237
- Monestam, E., **4781 - B0391**
- Monhart, M., 6032
- Monickaraj, F., 1911 - C0311, **3563 - A0180**
- Monnet, D., 4203 - C0045
- Monnier, V. M., **4972**
- Monsalve, P., **4316 - C0290**, 483 - A0343, 529 - B0144, 5604 - A0323, 5994
- Montagne, P., 5655 - A0374
- Montalbano, M., 1882 - C0186
- Montali, M., 4795 - B0405
- Montalto, D., 3820 - C0047
- Montalvo, M., **1376 - B0136**, 4315 - C0289
- Montana, C., 3628 - A0289
- Montanaro, B., 1662 - A0038
- Montaner, S., 2570
- Monteiro, B. C., 5970
- Monteiro, E., 241 - C0052
- Monteiro, M. L., 1125 - C0160, 1908 - C0308, 3347 - C0229, 613 - B0285
- Monteiro, S. A., 3764 - B0179
- Monteiro, S., 2634 - A0139, 5567 - A0259
- Monteiro-Grillo, M., 1940 - C0340
- Montepara, A., 4846 - C0204
- Montero, J., 5572 - A0264
- Monterosso, G., 4795 - B0405
- Montesano, G., 1673 - A0194, 4061 - B0056, **4990**, 5131 - B0120, 6030, 6033
- Monteserin-Rodriguez, M., 157 - B0071
- Montezuma, S. R., 341 - A0001, 345 - A0005, 3890 - C0356, 3947, 4572 - A0101, 6025
- Montgomery, C., 3579 - A0196
- Montgomery, M., 2612
- Montorio, D., 5755 - C0042
- Montoya-Silva, J., 2213 - A0382
- Montuoro, A., 2622
- Monville, C., **5008 - A0079**
- Moorkiah, M., 1264 - A0299
- Moolani, H. V., 5558 - A0250
- Moon, H., 1414 - B0191
- Moon, J., **2108 - A0166**
- Moon, K., 596 - B0211
- Moon, M., 3288 - C0082
- Moon, N., 1044 - B0355
- Moon, S., **1023 - B0307**
- Moons, L. K., **1862 - C0166**, 5831 - C0118, 6007
- Moore, A. T., 4467, 6026, 669 - C0227
- Moore, B., 2344 - B0333
- Moore, B. A., **1398 - B0175**
- Moore, C., 5987
- Moore, D. B., 5231 - B0344
- Moore, D. J., 403 - A0221
- Moore, L., 200 - C0011
- Moore, M., 4521 - A0036
- Moore, S., 3737 - B0084
- Moore, T. C., 383 - A0043
- Moore, W., 2319 - B0308
- Moosajee, M., 1564, **4492 - A0007**, 4968, 5314 - C0247
- Mora, M., 4070 - B0065, 5885 - C0172
- Moraes, C. G., 2089 - A0147, 4064 - B0059
- Moraes Filho, M., 3356 - C0238, 3366 - C0248
- Morales, E., 5524 - A0216
- Morales, E., 2573, 899 - B0077
- Morales, E., 4087 - B0082, 4986, 5104 - B0093, **5105 - B0094**, 5106 - B0095
- Morales, J., 11794
- Morales, J. C., 4388 - C0436
- Morales, M. U., 1273 - A0308, 17 - A0048
- Morales, N., **2309 - B0263**
- Morales-Canton, V., 2769 - B0148, 2770 - B0149, 5946 - C0343
- Morales-Mancillas, N. R., **3794 - C0021**
- Morales-Tirado, V. M., 3018, 3168 - A0311, **3174 - A0317**, 3175 - A0318, 3183 - A0326, 4592 - A0181, 5984
- Morales-Villelas, M., 157 - B0071
- Morales-Wong, F., **1340 - B0047**, 3691 - A0375, 5756 - C0043
- Moran, R., **616 - B0288**
- Morand, N., 5008 - A0079
- Morando, A., 226 - C0037
- Morato, R. M., 3780 - C0007
- Morcos, M., 1899 - C0299, 2915 - C0212
- Mordmueller, B., 716
- Moreira, P., 6077 - A0206
- Moreira-Neto, C., 2440 - C0106
- Morel, D., **6048 - A0082**
- Moreno Andrade, A., **1100 - C0135**
- Moreno Andrade, A., 1100 - C0135
- Moreno, J., 1708 - A0229
- Moreno, M., 1427 - B0346, 2479 - C0145
- Moreno, N., **5595 - A0314**
- Moreno Perdomo, N., 3411 - C0335
- Moreno, R., 424 - A0242
- Moreno, T. A., **286 - C0187**
- Moreno-Moral, A., 61 - A0108
- Morescalchi, F., 803 - A0135
- Moret-Pot, M., 5380 - A0032
- Moretin, C., 115 - B0029, 1815 - B0276, 3788 - C0015
- Morgan, A., 5121 - B0110
- Morgan, D., 5402 - A0054
- Morgan, I., 3398 - C0322, 3959
- Morgan, J., 3911
- Morgan, J. I., **1151**, 1422 - B0341, 1969, 32 - A0063, 4546 - A0061, 650 - C0208, 658 - C0216
- Morgan, P., 3931
- Morgan, S. R., 533 - B0148
- Morgans, C. W., 2503 - C0207
- Morgenthien, E., 4481
- Mori, D., 2489 - C0193
- Mori, H., 5648 - A0367
- Mori, K., 2128 - A0186, 2912 - C0209, 4085 - B0080, **484 - A0344**, 5145 - B0168
- Mori, K., 2145 - A0279, 677 - C0272
- Mori, N., **4874 - C0319**
- Mori, N., 1310 - B0017, 3841 - C0102, 5760 - C0047
- Mori, T., 3413 - C0337
- Mori, Y., **2208 - A0377**, 2926 - C0223
- Moriarty, E., **1257 - A0098**, 5906 - C0193
- Moriarty, E., 3636 - A0297
- Morikawa, S., 2301 - B0255, 2306 - B0260, 2310 - A0264, 2311 - B0265, 4233 - C0075, 4275 - C0146
- Morimoto, A., 226 - C0037
- Morimoto, T., 1031 - B0315, 3410 - C0334, 3891 - C0357, 4555 - A0084, 4559 - A0088, **4688 - A0330**, 5420 - A0072
- Morin, A., 4203 - C0045
- Morioka, M., **4851 - C0209**, 4852 - C0210, 4853 - C0211
- Morisawa, S., 2936 - C0258
- Morishige, N., 1965, 4884 - C0329, **5729 - C0016**
- Morishima, K., 3042 - A0013
- Morishima, S., 5648 - A0367
- Morita, C., 422 - A0240
- Morita, H., 3577 - A0194, 800 - A0132
- Moritz, O. L., 1014 - B0268, 4977, 978 - B0232
- Morzane, Y., 2882 - B0300, 4268 - C0139, 4269 - C0140, 5697 - A0416, 5914 - C0311, 5915 - C0312, 670 - C0228, 671 - C0229, 807 - A0139, 847 - A0179
- Morjaria, R., 4202 - C0044
- Morken, T. S., 805 - A0137
- Morland, A., 5021 - A0217, 798 - A0130
- Morlet, N., 4380 - C0428
- Morley, J. W., 3099 - A0107
- Moroi, S., 4097 - B0222, 5886 - C0173
- Moroi, S. E., **2023 - A0050**, 640 - C0070
- Morozumi, W., 3751 - B0098, 6129 - C0248
- Morrell, A. P., 2433 - C0099
- Morris, A. C., 3114 - A0122
- Morris, J., 220 - C0031
- Morris, L. M., 4951
- Morrison, A. M., **4764 - B0265**
- Morrison, J. C., 1879 - C0183, 1971, **3697 - B0044**, 3698 - B0045, 3707 - B0054, 3738 - B0085, 3740 - B0087, 3925, 490 - A0350, 5057 - B0008, 5058 - B0009, 5819 - C0106
- Morrow, N., **3645 - A0306**
- Morse, A. R., 3429 - C0353
- Morse, L. S., 2604, 283 - C0184, 3149 - A0266, 393 - A0093, 5370 - A0022, 877 - A0209
- Morselli, S., 4795 - B0405, 4845 - C0203
- Mortensen, Z., 2220 - A0389, **5244 - B0357**
- Moscardelli, F., 1164
- Moschos, M. M., 4284 - C0155
- Moseley, P., 583 - B0198
- Moser, C., 5876 - C0163
- Mosher, A., 1040 - B0351
- Moshfeghi, A., 32 - A0063
- Moshfeghi, A. A., 1969, **2599**, 3609 - A0227, 82 - A0129
- Moshfeghi, D. M., 1159, 2380 - C0046, 3371 - C0295, 4430, 886 - A0218
- Moshiri, A., **2344 - B0333**, 283 - C0184, 3149 - A0266, 393 - A0093, 877 - A0209
- Moskowitz, A., 6070 - A0199
- Moss, H. E., 2192 - A0361, 3364 - C0246, **725**
- Moss, S. E., 4015 - A0140
- Motamedi, M., 1882 - C0186, 4605 - A0194, 4612 - A0201
- Motheral, L., 899 - B0077
- Mothersbaugh, E., **5226 - B0339**
- Motlik, J., 5670 - A0389
- Motohashi, R., **62 - A0109**
- Mott, K., 514 - B0021
- Motta, A., 1902 - C0302, **4835 - C0193**
- Motta, F., 1830 - B0291
- Motta, M., 1902 - C0302
- motta, M., 1398 - B0175
- Mottaleb, M. A., 5737 - C0024, 5742 - C0029
- Mutalsky, E., 274 - C0175, 3923
- Motz, C., 3580 - A0197, **5511 - A0180**, 5991
- Mouallem, A., 5425 - A0094
- Moulin, A., 388 - A0088
- Moult, E., 1928 - C0328, 2886 - B0304, 3922
- Mountford, J. K., 2328 - B0317
- Moura, B. D., **1150**
- Moura, L., 4090 - B0085
- Moura, R., 390 - A0090
- Mouriaux, F., 3185 - A0328
- Mourizoukos, S., 4818 - C0176
- Moussavi, M., 1746 - B0061, **1749 - B0064**
- Moussavi, S., 2327 - B0316
- Mousavi-Jalali, M. S., 5964
- Moussa, K., **4209 - C0051**
- Moussalli, M., **44 - A0075**
- Moustafa, G. A., **4805 - B0415**
- Movahedan, A., **2881 - B0299**
- Moy, V., 3484
- Moya-Sanchez, E. U., 1708 - A0229
- Moysidis, S. N., 1923 - C0323, 5434 - A0103, **6177 - C0296**, 82 - A0129
- Mozafari, H., 6174 - C0293, 6190 - C0309
- Mozaffari, S., **4633 - A0275**
- Mozaffari-Jovin, S., 1563
- Mroczkowska, S., 3724 - B0071, **4678 - A0320**
- Mruthyunjaya, P., **3624 - A0285**, 4997
- Msoa, J., 2701 - B0022, 2703 - B0024
- Mucciolo, D., 2836 - B0254
- Mucciolo, D., 2838 - B0256
- Muchnik, A., 6071 - A0200
- Mudaliar, K., 152 - B0066
- Muddana, S. K., **4392 - C0440**, 4454
- Mudgil, P., **146 - B0060**

- Mudumba, S., 415 - A0233
Muehlfriedel, R., 716
Muehlfriedel, R. L., **998 - B0252**
Mueller, A. J., 1535 - C0376
Mueller, P., 2421 - C0087
Muench, G., 1488 - C0230
Muenst, M., 1440 - C0002
Muether, P., 2373 - C0039
Muftuoglu, I., 1501 - C0342
Mughal, M., **1899 - C0299**
Mugisho, O. O., **5358 - A0010**
Mugnier, L., 6194 - C0348, 644 - C0202
Muhammad, F. Y., 2552 - C0281
Muhtaseb, M., 2207 - A0376
Muhundhakumar, D., **2047 - A0105**
Muir, K., 5228 - B0341
Muirhead, B. B., **4456**
Mujat, M., 4640 - A0282, 5512 - A0181, **5873 - C0160**
Mukai, A., 3450
Mukai, M., 1398 - B0175
Mukai, R., **580 - B0195**
Mukai, S., 5299 - C0232
Mukherjee, B., **5620 - A0339**
Mukherjee, D., 896 - A0285
Mukherjee, H., 2051 - A0109
Mukherjee, M., 181 - B0335, **182 - B0336**
Mukherjee, N., 5446 - A0115
Mukherjee, P. K., 3988 - A0113, **4027 - A0152**
Mukherjee, R., 798 - A0130
Mukherjee, S., **2140 - A0274**
Mukherji, D., 1839 - B0300
Mukhija, R., **1312 - B0019**
Mukhopadhyay, A., 5787 - C0074
Mukkamala, L., 3149 - A0266, **877 - A0209**
Mukwaya, A., 2251 - B0205
Mulatya, C., 2318 - B0272
Mulcahy, J., 2679 - A0406
Mulfaul, K., 3475
Mulholland, P., 5115 - B0104
Müller, H., 1719 - A0240, 1741 - A0262
Muller, M. S., **3426 - C0350**
Müller, M., 3602 - A0220, 3614 - A0232
Muller Morales, C., **1065 - C0078**
Muller, P. L., 3146 - A0263
Müller-Bühl, C., 4439
Mulligan, M., 3018
Mullins, R. F., 3475, 5657 - A0376
Mulumba, D., 983 - B0237
Mumby, P., 1032 - B0316
Muminovic, I., **2928 - C0250**
Mumm, J. S., 1628 - A0004, 64 - A0111, 980 - B0234
Mun, C., **3292 - C0086**, 3293 - C0087, 4873 - C0318
Mun, Y., **2098 - A0156**
Munakata, M., 4294 - C0165
Munch, I. C., 1172, 4039 - B0251, 5533 - A0225
Mundhenk, L., 2678 - A0405
Mundlos, S., 6026
Muni, R. H., 1955
Munir, W., 4383 - C0431
Muniz Castro, H., 6019
Munk, M. R., **2415 - C0081**
Munoz, B. E., 1568, 4108 - B0233
Munoz Negrete, F. J., 3352 - C0234, **3353 - C0235**
Muñoz-Villegas, P., 1228 - A0069
Münzel, T., 5191 - B0214
Munzer, G., 3372 - C0296
Muppala, S., 4369 - C0417
Mura, M., 4780 - B0390
Muraca, A., **1937 - C0337**, 4850 - C0208
Murad, M., 2521 - C0250, 2522 - C0251
Murakami, A., 3307 - C0149, 3308 - C0150, 3841 - C0102, 4127 - B0290, 5574 - A0266, 5575 - A0267, 562 - B0177, **597 - B0212**, 6076 - A0205, 943 - B0121
Murakami, J., 525 - B0140, 528 - B0143
Murakami, M., 2519 - C0248
Murakami, R., 2993
Murakami, S., 514 - B0021
Murakami, T., 1056 - B0367, **3595 - A0213**, 4280 - C0151, 4288 - C0159, 5378 - A0030
Murakami, T., **4242 - C0084**, 4275 - C0146
Murakami, Y., **21 - A0052**, 33 - A0064, 3410 - C0334, 5376 - A0028, 769, 863 - A0195
Muraleedharan, C., 1545
Murali, K., 5669 - A0388
Murali, N., **6160 - C0279**
Muramatsu, D., **1895 - C0295**
Muraoka, Y., **2848 - B0266**, 4274 - C0145, 4280 - C0151, 4288 - C0159, 4625 - A0267
Murashima, A. A., 4420
Murata, H., 3024, 4295 - C0166, **5118 - B0107**, 5894 - C0181
Murata, M., 56 - A0103
murata, T., **4207 - C0049**
Murata, T., 1724 - A0245, 4257 - C0128
Murataeva, N., **4374 - C0422**
Muratani, S., 5701 - A0420, 5707 - A0426
Murati, F., 1829 - B0290
Murawska, J., 2324 - B0313
Murayama, N., 6138 - C0257
Murgai, R., 1923 - C0323
Murgia, F., 1823 - B0284, 1824 - B0285, 1825 - B0286, 702 - C0297
Murgiano, L., 1438 - B0357, 2347 - B0336
Murillo, C., 1027 - B0311
Murillo Valle, A., **2401 - C0067**
Murinello, S., 5489 - A0158, **761**
Muro, E., 4690 - A0332, 4691 - A0333
Murphree, A. L., 1637 - A0013, 1638 - A0014
Murphy, C., 39 - A0070
Murphy, C. J., 1398 - B0175, 2292 - B0246, 2344 - B0333, 4369 - C0417, 4373 - C0421, 524 - B0139
Murphy, C., 6057 - A0091
Murphy, C. C., 1299 - B0006
Murphy, D., 3065 - A0036
Murphy, G. C., 3888 - C0354
Murphy, J., 2204 - A0373
Murphy, J., 2458 - C0124
Murphy, M. C., 6115 - C0234
Murphy, M. J., **1877 - C0181**
Murphy, P. J., 1764 - B0079, 3930
Murphy-Baum, B., 1865 - C0169, **1868 - C0172**
Murray, H., **5476 - A0145**
Murray, M. C., 3548 - A0165
Murray, P. I., 1136, 2521 - C0250, 2522 - C0251, 403 - A0221, 4202 - C0044
Murray-Dunning, C., 1494 - C0236, 1495 - C0237
Murrell, D. F., 156 - B0070
Murrell, K., 295 - C0196
Murro, V., 2836 - B0254
Mursch-Edlmayr, A., 4814 - C0172
Murta, J. N., 1892 - C0292, **446 - A0306**, 4946
Murthy, A., 5018 - A0214
Murthy, D., 4216 - C0058
Murthy, N., **4765 - B0266**
Murrueta-Goyena Larranaga, A., **4648 - A0290**
Murugan, S., 2914 - C0211, 4216 - C0058, **5709 - A0428**
Murugan, S., 2749 - B0128, 2776 - B0155
Murugesan, N., 3463, **3464**
Musch, D., 4097 - B0222
Musch, D. C., **1999**, 2023 - A0050, 640 - C0070
Musetti, D., 4403 - C0451
Mushatq, B., 4823 - C0181
Mushatq, B., 4810 - C0168
Musial, G., 4749 - B0250
Musil, L., **1604**
Musilova, L., **1079 - C0092**
Muske, J., 3177 - A0320
Musolf, A., 1823 - B0284, **1824 - B0285**, 1825 - B0286, 702 - C0297
MUST Research Group, 417 - A0235
Mustafi, D., 2835 - B0253, **4211 - C0053**, 4239 - C0273
Mustafic, N., **49 - A0080**
Müther, P., 858 - A0190
Muthukkaruppan, V., 4716 - B0140, 4731 - B0155
Muthuramalingam, N., 5175 - B0198
Muthusamy, K., **2920 - C0217**, 3022
Mutti, D. O., 3388 - C0312, **3392 - C0316**, 3403 - C0327, 4764 - B0265
Myers, A., **5508 - A0177**, 5513 - A0182
Myers, D., 2804 - B0222
Myers, J., **380 - A0040**, 4544 - A0059, 5665 - A0384
Myers, J. S., 2737 - B0116, 4465, 5107 - B0096, 5134 - B0123, 6028, 6154 - C0273
Myers, K., 748
Myers, L. A., 5534 - A0226
Myers, S., **5154 - B0177**
Myers, S., 3519 - A0082
Mysona, B., 309 - C0242
Myung, D., 2268 - B0222, 2293 - B0247, 2989, 4375 - C0423
N/A, 4217 - C0059, 6052 - A0086
NA, 1777 - B0092, 4756 - B0257
Na, H., **5051 - B0002**
Na, K., **4375 - C0423**, 954 - B0132
Naaseh, A., 334 - C0267
Nachmani, B., **318 - C0251**
Nachmani, B. A., 5255 - C0101, 5260 - C0106
Nada, R., 488 - A0348
Nadal, J., 3221 - B0320, 4945
Nadal, J., 1387 - B0164
Nadal-Nicolas, F. M., 2512 - C0216
Nadelmann, J. B., **4234 - C0076**
Nadelson, A., 5881 - C0168
Nadiamykh, O., **5983**
Nadler, Z., 2096 - A0154
Naduvilath, T., 3402 - C0326
Naduvilath, T. J., 3387 - C0311, 4875 - C0320
Naem, M. A., 5383 - A0035
Naert, T., 377 - A0037
Naessens, S., 4532 - A0047, **5403 - A0055**, 5404 - A0056
Nagahara, M., 4747 - B0248, 5194 - B0307
Nagai, N., **5704 - A0423**
Nagai, N., **5289 - C0222**
Nagai, N., 2784 - B0163, 862 - A0194
Nagamoto, T., **1661 - A0037**
Nagar, S., 1653 - A0029, 1654 - A0030, **492 - A0352**
Nagaraj, R. H., 4797 - B0407, 5295 - C0228, **5634 - A0353**
Nagasaka, E., 1876 - C0180
Nagasaka, S., 263 - C0122
Nagasaka, Y., **5257 - C0103**
Nagasaki, T., 5409 - A0061, 6061 - A0190, 748
Nagasamy, S., 3355 - C0237
Nagata, K., 336 - C0269, 4891 - C0336
Nagata, M., 1394 - B0171
Nagel, A. M., 5877 - C0164
Nagel-Wolfrum, K., 5324 - C0257
Naggert, J. K., 2346 - B0335
Nagiel, A., 3160 - A0277, 844 - A0176
Nagino, Y., **4281 - C0152**
nagura, K., **5349 - A0001**
Nagy, A., 3261 - B0360
Nagy, B. V., 4090 - B0085, 5031 - A0227, 628 - C0058
Nagy, P., 2839 - B0257, 2840 - B0258
Nagy, P. G., 4595 - A0184, **6066 - A0195**
Nagy, Z., 4876 - C0321
Nagy, Z. Z., 4021 - A0146, 4870 - C0315
Nagy, Z., 1932 - C0332, 1933 - C0333, 1934 - C0334, 2949 - C0271
Nagy Mihály, R., **527 - B0142**
Nagy Mihály, R., 5647 - A0366
Nah, S., 2635 - A0140
Nahmou, M., 1484 - C0226, 6110 - C0229
Nahomi, R. B., 5295 - C0228
Naidu, J., 744
Naik, N., 2841 - B0259
Nair, A., 5621 - A0340
Nair, A. P., 3730 - B0077, 4402 - C0450
Nair, N., 839 - A0171
Nair, R., 820 - A0152
Nair, R. M., 1634 - A0010
Nair, S., 5158 - B0181
Nair, S. K., 1179
Naito, A., 4714 - B0138, 5701 - A0420, 5707 - A0426
Naito, H., 5491 - A0160
Najafi, A., 5053 - B0004, **5067 - B0018**
Najafi, M., 701 - C0296
Najjar, R., 5124 - B0113, **755**
Nakabayashi, S., 3196 - B0196
Nakae, S., 344 - A0004, 5573 - A0265
Nakagawa, H., 502 - B0009
Nakagawa, K., **5816 - C0103**
Nakagawa, S., 1368 - B0128, **2284 - B0238**, 373 - A0033, 4436
Nakagawa, Y., **6113 - C0232**, 6138 - C0257
Nakahara, H., 4163 - C0005, 4164 - C0006, **4177 - C0019**, 4192 - C0034
Nakahara, M., 4435
Nakai, K., 5951
Nakai, S., **1424 - B0343**
Nakajima, E., 3059 - A0030
Nakajima, K., **29 - A0060**, 4295 - C0166
Nakajima, T., **4747 - B0248**, 5194 - B0307
Nakaki, R., 2284 - B0238
Nakakouji, M., 1394 - B0171
Nakakura, S., 5898 - C0185
Nakama, T., 4290 - C0161, 5376 - A0028
Nakamura, G., 246 - C0057
Nakamura, K., 2218 - A0387
Nakamura, M., 1424 - B0343, 1921 - C0321, 269 - C0170, 2753 - B0132, 852 - A0184
Nakamura, M., 636 - C0066
Nakamura, M., 943 - B0121
Nakamura, M., 4874 - C0319
Nakamura, S., 5430 - A0099
Nakamura, T., 108 - A0271, 109 - A0272, 1394 - B0171, 2993
Nakamura, T. J., 4930 - C0375
Nakamura, T., 2209 - A0378
Nakamura, W., 4930 - C0375
Nakanishi, A., 5529 - A0221
Nakanishi, H., 1056 - B0367, 1819 - B0280, 3595 - A0213, 5378 - A0030
Nakanishi, H., 1688 - A0209, 5872 - C0159
Nakano, E., 5759 - C0046
Nakano, M., 1353 - B0113
Nakano, S., **4170 - C0012**, 5145 - B0168
Nakano, S., 2217 - A0386, **4757 - B0258**
Nakano, T., 1852 - C0156, 5414 - A0066
Nakano, Y., **4557 - A0086**, 4563 - A0092, 4571 - A0100
Nakano, Y., **3706 - B0053**, 5510 - A0179
Nakano, Y., 6129 - C0248
Nakao, S., 33 - A0064, 3565 - A0182, 4290 - C0161, 5356 - A0008, 5376 - A0028, 65 - A0112
Nakao, T., 2554 - C0283, 2574, 3286 - C0080, **3326 - C0168**, 4957
Nakashizuka, H., 346 - A0006
Nakatake, S., 21 - A0052, 33 - A0064
Nakatani, M., 2943 - C0265
Nakaya, N., 4494 - A0009, 5516 - A0185, **578 - B0193**
Nakayama, H., 4294 - C0165
Nakayama, M., 4181 - C0023
Nakayama, N., 5566 - A0258
Nakayama, T., 108 - A0271, 109 - A0272
Nakazawa, F., 1876 - C0180
Nakazawa, T., 1718 - A0239, 2079 - A0137, 3189 - B0189, 3725 - B0072, 4294 - C0165, 5082 - B0033, 6105 - C0224, 6113 - C0232, 6120 - C0239, 6138 - C0257
Nakazawa, Y., 5289 - C0222
Nakigozi, G., 4108 - B0233
Nallour Raveendran, R., **1274 - A0309**
Nam, M., 5634 - A0353
Namba, H., 282 - C0183
Namba, K., 2519 - C0248
Namba, R., 5307 - C0240, 5541 - A0233, **576 - B0191**
Namburi, P., 1004 - B0258, 5421 - A0073
Namekata, K., 3348 - C0230
Namiguchi, K., **2686 - B0007**, 2704 - B0025
Namkoong, P., 2655 - A0382, 6093 - C0212, **74 - A0121**
Nan, K., **5676 - A0395**
Nanawati, N., **4803 - B0413**
Nanda, A., **2329 - B0318**
Nanda, T., 4786 - B0396
Nandakumar, N., 4834 - C0192
Nandrot, E. F., 4012 - A0137, 4030 - A0155, 6074 - A0203
Nangia, R. S., 2056 - A0114
Nanji, A., 3333 - C0175
Nankivil, D., **4041 - A0248**, 5869 - C0156
Nanomedicine & Vision Group, 201 - C0012
Nanomedicine and Vision Group, 196 - C0007
Naor, J., 209 - C0020
Napier, R., 2549 - C0278, 2551 - C0280
Napoli, P. E., 665 - C0223
Napolitano, P., 5755 - C0042
Narain, K., 2655 - A0382, 6093 - C0212, 74 - A0121
Narain, S., **6176 - C0295**
Narala, R., **3160 - A0277**
Naranjo Golborne, C., 3320 - C0162
Naranjo, J. D., 2252 - B0206
Narasimhan, S., 5901 - C0188
Narayanan, D., **2424 - C0090**
Narayanan, R., 349 - A0009

- Nittala, M. G., 1113 - C0148, 1418
- B0337, 1513 - C0354, 1666
- A0187, 1680 - A0201, **1914**
- **C0314**, 1938 - C0338,
1939 - C0339, 2120 - A0178,
2401 - C0067, 2426 - C0092,
2433 - C0099, 3208 - B0307,
4681 - A0323, 5065 - B0016,
5076 - B0027
- Niu, L., **4603 - A0192**
- Niu, W., 71 - A0118
- Nivar, C. C., 960 - B0214
- Navison-Smith, L., 1260 - A0295, **2409**
- **C0075**, 4083 - B0078
- Niwa, N., 800 - A0132
- Nixon, P. A., 1048 - B0359, 6187 -
C0306
- Nixon, T. R., **6041 - A0075**
- Niyadurupola, N., 5304 - C0237
- Nizamudheen, V., **3967**, 4581 - A0170
- Nizawa, T., 5592 - A0311
- Niziol, L. M., 1999
- Niziol, L. M., 5227 - B0340
- Njie-Mbye, Y., 4706 - B0130
- Nlebedum, U., 3110 - A0118
- Nnamani, O., 4095 - B0220
- No, 1668 - A0189
- Nobacht, S., 1576
- Noble, C. W., **4310 - C0284**
- Nobrega, P., **482 - A0342**
- Noceo, S., 2531 - C0260
- Nocito-Labad, L., 551 - B0166
- Noda, K., 2519 - C0248, 5372 - A0024,
56 - A0103
- Noda, M., 4928 - C0373, 87 - A0250
- Noda, T., 1661 - A0037, 872 - A0204
- Noecker, R., 6107 - C0226
- Noel, N. C., **3142 - A0259**
- Noer, A., 4323 - C0297, 5647 - A0366
- Noetinger, G., 255 - C0114
- Nofal, N., **859 - A0191**
- nogawa, C., **2823 - B0241**
- Noguchi, A., 5898 - C0185
- Noguchi, Y., 3679 - A0363
- Nogueira, F. A., **1331 - B0038**, 2893
- C0190
- Nogueira, F. A., 1301 - B0008, 4332
- C0380
- Noguez, R., **5524 - A0216**
- Noh, D., 5432 - A0101
- Noh, S., 247 - C0106
- Noh, S., 1035 - B0346, 3219 - B0318,
3222 - B0321, **3590 - A0207**,
5448 - A0117
- Noia, L. D., 5607 - A0326
- Nolan, C., 1893 - C0293
- Nolan, D., 1240 - A0081, 2705 -
B0026, 5443 - A0112
- Nolan, P. M., 1980
- Noll, A., 5237 - B0350
- Nolta, J., 3004
- Noma, H., **389 - A0089**, 62 - A0109
- Nommiste, B., 2984, 2985, 3259 -
B0358, 4018 - A0143, **5313**
- **C0246**
- Nomoto, H., 5122 - B0111, 5132 -
B0121, 5133 - B0122
- None, 1521 - C0362, 1661 - A0037,
1766 - B0081, 2410 - C0076,
3132 - A0249, 3504 - A0067,
3534 - A0097, 3923, 3955, 434
- A0294, 4427, 4872 - C0317,
5838 - C0125, 5845 - C0132,
6125 - C0244, 828 - A0160,
940 - B0118
- Nongpiur, M., **3518 - A0081**
- Nongpiur, M. E., 2028 - A0055, 5143
- B0166, 5149 - B0172, 5902
- C0189
- Noojin, G., 1403 - B0180, 4008 -
A0133
- Noor, A., 6117 - C0236
- Noori, J., 4999 - A0070
- Noori, M., 1076 - C0089
- Noorzi, V., 1721 - A0242
- Norasethadha, L., 5589 - A0308
- Norcia, A., 5028 - A0224
- Nordström, K., 2263 - B0217
- Nork, T., 1948, 5283 - C0216, 5658
- A0377, 5828 - C0115, 5929 -
C0326, 80 - A0127
- Norman, C., 5785 - C0072
- Norman, C. S., **5784 - C0071**
- Normand, B., 2845 - B0263
- Normando, E. M., 1543 - C0384, **5912**
- **C0199**
- Noro, T., 3348 - C0230
- Noronha, G., 5310 - C0243, 5969
- Norrstell, K., 4171 - C0013
- North, L., 839 - A0171
- Northwestern University Feinberg
School of Medicine, 4264 -
C0135
- Nose, R., 1802 - B0150
- Nose, R. M., 1670 - A0191, **5776 -**
C0063
- Noskov, S., 4433
- Notenboom, R., 1577
- notomi, S., 769, 863 - A0195
- Nottebaum, A., 199 - C0010
- Noueihed, B., 4279 - C0150, **550 -**
B0165
- Nour, A., 695 - C0290, 696 - C0291
- Nouri-Mahdavi, K., 2039 - A0066,
2107 - A0165, 2121 - A0179,
4087 - B0082, 4283 -
C0154, **4986**, 5104 - B0093,
5105 - B0094
- Nourinia, R., 6153 - C0272
- Nousome, D., **1812 - B0273**, 778
- Nouvel-Jaillard, C., 5008 - A0079
- Novack, G., 1242 - A0083
- Novakova, K., 973 - B0227
- Novartis Institutes for Biomedical
Research, 2394 - C0060
- Novelli, E., 4601 - A0190, 972 - B0226
- Novo, S., 1607
- Nowak, A., 4249 - C0091
- Nowak, R., 2474 - C0140
- Nowakowski, M., 5874 - C0161
- Nowakowski, S., 4182 - C0024
- Nowinska, A., 2393 - C0059, **5738**
- **C0025**
- Nozaki, M., 3577 - A0194, 4682 -
A0324, 800 - A0132
- Nozato, K., **296 - C0197**
- Nozicka, J., 5056 - B0007, 5062 -
B0013, **6086 - C0205**
- Nørgård Alsing, A., 3074 - A0045
- Nti, A., 84 - A0247
- Ntodie, M., **2953 - C0275**
- Nucci, P., 4871 - C0316, 4887 - C0332
- nudleman, E., 1160, 1501 - C0342,
1846 - B0307, 1885 - C0285,
2875 - B0293, 5470 - A0139,
5916 - C0313
- Nuechter, M., 1101 - C0136, 1105
- C0140
- Nuffield Laboratory of Ophthalmology,
5041 - A0237, 6060 - A0189
- Nuijts, R. M., 1341 - B0048, 1576
- Numa, K., 1308 - B0015, **3450**
- Numa, S., **24 - A0055**
- Numaga, J., 4177 - C0019
- Numata, T., **5122 - B0111**, 5133 -
B0122
- Nunes Cavascan, N., 4122 - B0285
- Núñez, L., 3176 - A0319, 5596 - A0315
- Nunez, M., **5905 - C0192**
- Núñez, M., 1241 - A0082, 4088 -
B0083
- Nunez, S., 2965 - C0287, 2968 - C0290
- Núñez-Méndez, M., 5176 - B0199
- Núñez-Villaveirán, T., 5018 - A0214
- Numn, J., 6162 - C0281
- Numn, M., 507 - B0014
- Nummally, A. H., 1642 - A0018
- Nusbaum, D., 2193 - A0362
- Nusinowitz, S., 1259 - A0294, 3943
- Nussdorf, J., 2740 - B0119
- Nutaitis, M. J., 6090 - C0209
- Nuzzi, R., 3197 - B0197
- Nwanyanwu, K., **1037 - B0348**, 1045 -
B0356, 1807 - B0155
- Nweze, M., **5006 - A0077**
- Nye-Wood, M. G., **4975**
- Nylin, E., 5171 - B0194
- Nymark, S., 1189, 4579 - A0168, 5313
- C0246
- Ocular Surface Disease in Glaucoma
Patients, 5889 - C0176
- Ocular Surface Laboratory, 4859 -
C0304
- Ocular surface, cornea and contact
lens research group "Miguel
Refojo" University of Valencia-
"Visual and Ocular primary care"
University of La Salle, 4862
- C0307
- Occupational Research Group, 4767 -
B0268
- Oda, E. F., 4426
- Oda, K., **2301 - B0255**
- Oda, T., 690 - C0285
- ODAK Project Team, 2668 - A0395
- Odaka, Y., 5306 - C0239
- Odani-Kawabata, N., 1229 - A0070,
1233 - A0074, 1235 - A0076,
2717 - B0038, 2718 - B0039
- Odashiro, A. N., 4327 - C0301
- Oddone, F., 4066 - B0061, 5080 -
B0031, 6030, 6033
- Odel, J., 5269 - C0115
- Odell, K., 1309 - B0016, 2901 - C0198
- Oden, N. L., 5971
- Odenthal, M., 1194
- Odum, J., **1952**, 3415 - C0339
- Odstreilijk, J., 5859 - C0146
- Oehring, D., **1390 - B0167**, 1404 -
B0181
- Oellerich, S., 1380 - B0140, 2902 -
C0199
- Offenhäusser, A., 4566 - A0095
- Ogami, T., 1788 - B0103
- Ogata, A. R., 574 - B0189
- Ogata, N., 1996, 4062 - B0057, 4985
- Ogata, N. G., 5101 - B0090, **5113 -**
B0102
- Ogawa, A., **3816 - C0043**
- Ogawa, M., **4331 - C0379**
- Ogawa, M., **4324 - C0298**, 502 -
B0009
- Ogawa, S., **1852 - C0156**
- Ogawa, Y., 3816 - C0043, 4952
- Oglesby, E., 6038
- Ogmundsdottir, M. H., 4020 - A0145,
5854 - C0141
- Ogura, S., 3470, **3471**
- Ogura, Y., 1426 - B0345, 1455 -
C0017, 1624, 1834 - B0295, 3577
- A0194, 4682 - A0324, 4949,
800 - A0132
- Oh, A., **2175 - A0344**, 3559 - A0176
- Oh, B., 2033 - A0060, 4746 - B0247
- Oh, B., 4115 - B0278
- Oh, D., **2780 - B0159**
- Oh, H., 5626 - A0345
- Oh, J., 2812 - B0230
- Oh, J., 516 - B0023, 517 - B0024
- Oh, J., 3130 - A0247
- Oh, J., 1756 - B0071, 3297 - C0091
- Oh, J., 5836 - C0123
- Oh, S., 4741 - B0242
- Oh, S., 1874 - C0178, 5097 - B0086
- Oh, W., 3264 - B0363, 3924, 5823
- C0110
- Ohana, O., 535 - B0150
- Ohba, M., 5575 - A0267
- Ohgami, T., 1730 - A0251
- Ohia, S. E., **4706 - B0130**
- Ohigashi, Y., 304 - C0237
- Ohji, M., 1834 - B0295
- Ohkoshi, K., 6199 - C0353
- Ohlemacher, S., 568 - B0183, **592 -**
B0207
- Ohlendorf, A., 1085 - C0098, **1276**
- **A0311**, 2147 - A0281, 3386 -
C0310, 4754 - B0255
- Öhman, T., 3088 - A0059
- Ohn, M. T., **799 - A0131**
- Ohn, Y., 2635 - A0140
- Ohno, Y., 4054 - B0049
- Ohno-Matsui, K., 3957, 4194 - C0036,
4195 - C0037
- Ohr, M., 1156
- Ohta, J., 4557 - A0086
- Ohta, T., 1804 - B0152, 3573 - A0190,
3574 - A0191
- Ohtomo, K., 4177 - C0019
- Ohtsuki, H., 1019 - B0303, 2929 -
C0251
- Ohuchi, K., 3751 - B0098
- Okawa, K., **3525 - A0088**, 5908 -
C0195
- Oishi, A., 1565, 2397 - C0063, 24 -
A0055
- Oishi, M., 1056 - B0367, 24 - A0055,
3595 - A0213, 5378 - A0030
- Oishi, N., **425 - A0243**
- Ojaimi, E., 1955
- Ojeda, L., 640 - C0070
- Ojha, S., 4683 - A0325
- Ojima, A., **3164 - A0281**, 3238 -
B0337, 4282 - C0153, 4285
- C0156
- Oka, S., 4184 - C0026
- Okada, A. A., 4181 - C0023
- Okada, E., 1742 - B0057, **1784 - B0099**
- Okada, M., 1956, **4628 - A0270**, 6001
- Okada, N., 5565 - A0257, 5566 -
A0258
- Okada, T., 4548 - A0063
- Okada, Y., 2246 - B0200, **2266 -**
B0220, 2626 - A0131, 3337
- C0179, 3338 - C0180, 4353 -
C0401, 4366 - C0414, 4419
- Okado, S., 27 - A0058, 5529 - A0221
- OKAJIMA, Y., **3685 - A0369**, 3686 -
A0370, 4896 - C0341
- Okamoto, C., 4909 - C0354
- Okamoto, F., 2301 - B0255, 2306
- B0260, 2310 - B0264, **2311**
- **B0265**, 4242 - C0084, 4275 -
C0146, 5648 - A0367
- Okamoto, M., **2930 - C0252**
- Okamoto, R., 3343 - C0225
- Okamoto, Y., 2301 - B0255, 2306
- B0260, 2310 - B0264, 2311 -
B0265, 4242 - C0084
- Okamoto, Y., 2926 - C0223
- Okano, H., 1983
- Okano, M., 3308 - C0150
- Okazaki, T., **5266 - C0112**
- Oke, I., **3784 - C0011**
- Okeagu, C., 1536 - C0377, 4212 -
C0054, 4310 - C0284
- Okinaga, K., 4177 - C0019
- Okita, T., 800 - A0132
- Oku, H., **2485 - C0189**, 4263 - C0134
- Okumichi, H., 478 - A0338, 6146 -
C0265
- Okumura, N., 1353 - B0113, 1354 -
B0114, 2128 - A0186, **3916**, 4394
- C0442, 4435
- Okumura, Y., 3307 - C0149, 3308 -
C0150, 943 - B0121
- Okuno, T., 5575 - A0267
- Okunuki, Y., 580 - B0195
- Okuyama, S., 5122 - B0111, 5133 -
B0122
- Oladipupou, F., 2544 - C0273, 2550
- C0279
- Olafsdottir, O. B., 1690 - A0211,
3209 - B0308, **4657 - A0299**,
4658 - A0300
- Olafsson, J., **912 - B0090**
- Olafsson, S., 912 - B0090
- Olander, K., 1231 - A0072
- Olcaysu, O. O., 951 - B0129
- Olehawa, M., 3077 - A0048, 3094
- A0065, **3997 - A0122**, 4495
- A0010
- Oldham, M., 5470 - A0139
- Oldmeadow, C., 6008
- Olencki, T., 4958
- Olguin, A., **3605 - A0223**

- Oliva, C., 1907 - C0307, 2797 - B0215, 2802 - B0220
- Oliva, J., 3868 - C0129
- Oliva, V., **1344 - B0051**, 5752 - C0039
- Olivar, T., 996 - B0250
- Oliveira Ferreira de Souza, B., 2591
- Oliveira, L. M., 4426
- Oliver, S., 2760 - B0139, 3767 - B0182, 4230 - C0072
- Olivier, G., 2322 - B0311
- Olivotto, I., 1696 - A0217, 2838 - B0256
- Olkhovskiy, V., 5285 - C0218
- Olmieri, C., 1253 - A0094
- Olohan, L., 4322 - C0296
- Olsen, C., 2668 - A0395
- Olsen, E., 4750 - B0251
- Olsen, K., 115 - B0029, 3788 - C0015
- Olsen, M., 5228 - B0341
- Olsen, M., 5455 - A0124
- Olsen, T. W., 5937 - C0334
- Olsen, T. G., **5986**
- Olshkevskaya, E. V., 4488 - A0003, 4489 - A0004, **4490 - A0005**
- Olson, S., **2748 - B0127**, 2749 - B0128, 2780 - B0159
- Olson, W., 3050 - A0021, 6134 - C0253
- Olstad, O. K., 2516 - C0245
- Oltjen, S., 3004
- Oltra, E., 3758 - B0173
- Oluwole, O. A., 2492 - C0196, **5515 - A0184**
- Olver, D., 3587 - A0204
- Olvera Montaña, O., **1228 - A0069**, 1243 - A0084
- Olvera-Ángeles, M., 5803 - C0090
- Olvera-Barrios, A., 1340 - B0047, 3691 - A0375, **5756 - C0043**
- Olzyska, A., 3279 - C0073
- Omari, A., 1890 - C0290, **4854 - C0212**
- Ometto, G., **1673 - A0194**
- Omics Laboratory, Department of Ophthalmology, Stanford University School of Medicine, 2830 - B0248
- Omoba, B., 1106 - C0141
- Omodaka, K., 1718 - A0239, 2079 - A0137, 3725 - B0072, 6113 - C0232
- Omoto, T., **1306 - B0013**
- Omri, S., 2648 - A0153, **983 - B0237**
- Omura, K., 2012
- Onasanya, D., **434 - A0294**
- Onda, M., **462 - A0322**
- Onda, M., **350 - A0010**
- Ondategui, J., 5811 - C0098
- Ondeck, C., 2439 - C0105
- Ondeck, C. L., **4062 - B0057**
- Ong, A. P., 6173 - C0292
- Ong, E., **448 - A0308**
- Ong, H., **1165**
- Ong, H., 983 - B0237
- Ong, J. S., 1827 - B0288
- Ong, S. S., **4997**
- Ong, S., 448 - A0308
- Ong, S., 5261 - C0107, 5362 - A0014
- Ong Tone, S., 1337 - B0044
- Ong-Tone, L., 434 - A0294
- Onishi, A., 1987, 304 - C0237
- Onishi, T., 1354 - B0114
- Ono, A., 3133 - A0250, 3706 - B0053, 5510 - A0179, 811 - A0143
- Ono, H., **4164 - C0006**, 4192 - C0034
- Ono, T., 1232 - A0073, **2926 - C0223**, 3679 - A0363
- Ono, T., 3417 - C0341, 3418 - C0342
- Onodera, H., 3668 - A0352
- Onofaie, F., 3021
- Ontario Neurodegenerative Research Initiative (ONDRIR), 1126 - C0161
- Onur, I. U., 3760 - B0175
- Ooban, H., 296 - C0197
- Ooi, K., 3778 - C0005
- Ooi, K. G., **3276 - C0070**
- Ooi, T., **1951**
- Oommen, O. P., 2281 - B0235
- Oosako, K., 141 - B0055
- Ooto, S., 1668 - A0189, 2397 - C0063, 2808 - B0226, 2848 - B0266, 4274 - C0145, 4280 - C0151, 4288 - C0159, 4625 - A0267
- Opefi, C. A., 4504 - A0019
- Opere, C. A., 4706 - B0130
- Ophoff, R., 3492
- Ophthalmic Research Group, 3303 - C0097, 4266 - C0137, 4679 - A0321
- Ophthalmology-Immunology Group, 5585 - A0304
- Ophthalmogenetics, 3747 - B0094, 6062 - A0191
- Ophthalmology and Visual Sciences, 142 - B0056
- ophthalmology department of Samsung medical center, 3840 - C0101
- Ophthalmology, Yeungnam Univ. Hospital, Daegu, Korea (the Republic of), 4058 - B0053
- Optometry and Vision Science, 2953 - C0275
- Oquindo, C., 3428 - C0352
- Or, C., 1928 - C0328, 2798 - B0216, **3229 - B0328**
- Orazi, L., **2765 - B0144**, 3755 - B0170, 3756 - B0171
- Orban, T., 1591
- Ordoñana, J., 1173
- Ordóñez Campos, A., 204 - C0015
- Ordovás, J. M., 5152 - B0175
- Orduña, P., 900 - B0078
- Orel-Bixler, D. A., 631 - C0061
- Orellana-Rios, J., **3240 - B0339**, 3251 - B0350
- Orengo-Nania, S., 4804 - B0414
- Oresti, G. M., 5357 - A0009
- ORG, 2158 - A0292
- Orge, F., 1701 - A0222, 6180 - C0299
- Orge, F. H., **1702 - A0223**
- Orhan, C., 2661 - A0388
- Orian, J. M., 1877 - C0181
- Orihara, K., **572 - B0187**
- Orilla, W., 1246 - A0087, 1653 - A0029, 1654 - A0030, 492 - A0352
- Orita, T., 1686 - A0207, 4003 - A0128
- Orlans, H. O., **4534 - A0049**, 4613 - A0202
- Orlin, A., 3758 - B0173, 4234 - C0076
- Orlin, S. E., 3829 - C0056
- Orloff, M., 3622 - A0283
- Orozco, G., 987 - B0241
- Orphal, J., **452 - A0312**
- Orr, M. L., 4013 - A0138
- Orr, N., 2280 - B0234
- Ortega, E., 2802 - B0220
- Ortega-Salazar, J., 4040 - A0247
- Orteschi, D., 4321 - C0295
- Ortiz Basso, T., **5614 - A0333**
- Ortiz, C., 5190 - B0213
- Ortiz, G., 5016 - A0212, 5034 - A0230
- Ortiz, G., 196 - C0007, 201 - C0012, **3315 - C0157**
- Ortiz-Peregrina, S., 5188 - B0211, 5189 - B0212, **5190 - B0213**
- Ortiz-Toquero, S., 3352 - C0234
- Ortner, M., 1583
- Örün, C., 2471 - C0137
- Ory, D. S., 5558 - A0250
- Osada, H., 3797 - C0024
- Osaka, R., 3133 - A0250, **811 - A0143**
- Osaka Rosai Hospital ophthalmology, 1459 - C0021
- Osawa, K., 4563 - A0092
- Osawa, S., 601 - B0273
- Osborne, A., 1736 - A0257, 1738 - A0259
- Osborne, A., 3716 - B0063, 6132 - C0251, **6133 - C0252**
- Osei, K., **1750 - B0065**
- Osher, J., 4820 - C0178
- Oshika, T., 1788 - B0103, 2217 - A0386, 2301 - B0255, 2306 - B0260, 2310 - B0264, 2311 - B0265, 4242 - C0084, 4275 - C0146, 4757 - B0258, 5648 - A0367, 5801 - C0088, 5802 - C0089
- Oshima, S., 291 - C0192, 5002 - A0073
- Oshima, T., **1354 - B0114**
- Oshima, Y., 1426 - B0345
- Oshitari, T., 2487 - C0191, 4281 - C0152
- Osman, L., 808 - A0140
- Osmanovic, S., 283 - C0184
- Ossewaarde-van Norel, J., 5380 - A0032
- Ostadimoghaddam, H., 4379 - C0427
- Österman, L., 5413 - A0065
- Osterwald, A., 4715 - B0139
- Ostmo, S., 2748 - B0127, 2755 - B0134, 2761 - B0140, 2762 - B0141, 2764 - B0143, 2767 - B0146, **2772 - B0151**, 2780 - B0159, 2782 - B0161, 3766 - B0181, 3936, 3937, 3938
- Ostrick, R., 5004 - A0075
- Ostrin, E., 4143 - B0366
- Ostrin, E. J., 5159 - B0182
- Ostrin, L. A., 1175, 4143 - B0366, 5043 - A0239, 689 - C0284
- Oswald, J., **1989**
- Oswald, J., 2714 - B0035, 5283 - C0216
- Ota, Y., **2218 - A0387**, 2229 - A0398
- Otake, H., 5289 - C0222
- Otani, S., 6082 - C0201
- Otero Molins, C., 1280 - A0315, 1554, 2941 - C0263, **4937**
- Otero, N., 2257 - B0211
- Otero, O., 2524 - C0253
- Othman, R., **1210**
- Otsu, W., 3991 - A0116, **984 - B0238**
- Otsuka, T., 4714 - B0138
- Otteson, D., 559 - B0174
- Otto, C., 722
- Ottobelli, L., **4061 - B0056**, 5131 - B0120
- Otvos, L., 3838 - C0065
- Ou, J., 2512 - C0216
- Ou, M., 3950
- Ou, Q., 4576 - A0165, 5644 - A0363
- Ou, S., 532 - B0147
- Ou, Y., 2010, 2013, 6089 - C0208
- Quamara, N., 1296 - B0003, 2226 - A0395, 2898 - C0195, 4387 - C0435, 441 - A0301
- Oubraham, H., 3156 - A0273
- Ouellette, M., 3512 - A0075, 363 - A0023
- Ouladi, M., 555 - B0170
- Ousler, G. W., 1967, 3807 - C0034, 918 - B0096
- Ouyang, H., 4001 - A0126
- Overby, D. R., 1217, 1648 - A0024, 3505 - A0068, **3971**, 6039
- Owczarek-Lipska, M., 2275 - B0229
- Owen, L., 2350 - B0360, **442 - A0302**, 5402 - A0054
- Owens, C. M., **374 - A0034**
- Owsley, C., 5235 - B0348
- Oxenreiter, M., **3626 - A0287**, 4301 - C0275
- Oyaizu, K., 296 - C0197
- oyakawa, I., 1319 - B0026
- Oyamada, M. K., 1125 - C0160, 422 - A0240
- Oz, D., 1024 - B0308
- Oza, V., 5546 - A0238
- Ozaki, E., 3475
- Ozaki, K., 5073 - B0024
- Ozaki, M., 3515 - A0078, **5145 - B0168**
- Ozato, N., 1983
- Ozawa, M., 4555 - A0084, 4557 - A0086, 4571 - A0100
- Ozawa, Y., 1983, 2784 - B0163, 862 - A0194
- Ozeki, H., 3577 - A0194
- Ozelo, M. C., 2338 - B0327
- Ozgonul, C., 4287 - C0158
- Ozkan, J., **908 - B0086**
- Ozkurt, Z. G., 1631 - A0007
- Ozobu, L. C., 5534 - A0226
- Ozu, C., 1661 - A0037
- Ozurdex IVOZG Study Group, 396 - A0096
- Palanker, D. V., **1005 - B0259**, 1875 - C0179, 3975, 3977, 5000 - A0071
- Palazzo, I., **4610 - A0199**
- Palczewska, G., 369 - A0029, 4049 - A0256
- Palczewska, K., 1591, 1869 - C0173, 369 - A0029, 3983 - A0108, 4049 - A0256, 4978, 4979
- Palejwala, N. V., 739
- Palepu, S., 3690 - A0374
- Palestine, A. G., 1518 - C0359, 2427 - C0093, 2756 - B0135, 2760 - B0139, 3767 - B0182, 4230 - C0072, 4797 - B0407, 5540 - A0232
- Palexas, G., 5440 - A0109
- Palfi, A., 4539 - A0054
- Palileo, C., 113 - A0276
- Palko, J., **1393 - B0170**, 2076 - A0134
- Palkovits, S., 1279 - A0314
- Pallerla, S. R., **5216 - B0329**
- Palmer, N. D., 5137 - B0160
- Palmhof, M., **3202 - B0202**, 4439
- Palmieri, M., 3223 - B0322
- Palmisano, C., 4846 - C0204
- Paluch, M., 63 - A0110
- Palumaa, T., **5041 - A0237**
- Pan, C., **783**
- Pan, C., 6135 - C0254
- Pan, D., 4629 - A0271, **569 - B0184**
- Pan, D., 3868 - C0129
- Pan, D., 4102 - B0227, 4103 - B0228
- Pan, F., 1856 - C0160, **706 - C0301**
- Pan, H., 4023 - A0148
- Pan, L., 3581 - A0198
- Pan, L., 1168
- Pan, P., 1352 - B0112, 4338 - C0386
- Pan, S., 1425 - B0344
- Pan, S., 569 - B0184
- Pan, S., 2996
- Pan, S., **4647 - A0289**
- Pan, W., 2754 - B0133, 2757 - B0136, **2775 - B0154**, 3252 - B0351, 5048 - A0244, 5211 - B0324
- Pan, X., 4698 - A0340
- Pan, X., 368 - A0028
- Pan, X., 1391 - B0168, 1396 - B0173, 1402 - B0179, 2034 - A0061
- Pan, Z., 4956
- Pan, Z., 2590, 2995, 5988
- Pan-American Collaborative Retina Study Group, 390 - A0090
- Panarelli, J. F., 5054 - B0005
- Pancholy, M., 79 - A0126
- Pandav, S., 3536 - A0099, 488 - A0348
- Pandey, A., 5568 - A0260
- Pandey, N. B., 3269 - B0368
- Pandit, A., 5380 - A0032
- Pahlitzsch, M., 6117 - C0236
- Pahuja, N., **4402 - C0450**
- Pai, R. R., 5360 - A0012
- Paik, D. C., 748
- Paik, D., 3578 - A0195
- paik, J., 5599 - A0318
- Paik, S., 1874 - C0178, 5097 - B0086
- Paille, D., 3399 - C0323, 3401 - C0325
- Paiva, I. B., 1150
- Pajarin, A., 1913 - C0313
- Pajaro, S., **5867 - C0154**
- Pajouhesh, H., 2679 - A0406
- Pajtlar Rosar, A., **3217 - B0316**, 4653 - A0295, 4662 - A0304
- Pak, J. W., **2422 - C0088**, 2790 - B0208, 2804 - B0222, 5564 - A0256
- Pakola, S., 1252 - A0093, 2719 - B0040
- Pal, B., 2399 - C0065
- Pal-Ghosh, S., 3875 - C0136
- Palacio, A. C., **4250 - C0092**
- Palacio-Pastrana, C., 5151 - B0174
- PALADIN study group, 4811 - C0169, 4828 - C0186, 4848 - C0206
- Palfi, A., 4539 - A0054
- Palileo, C., 113 - A0276
- Palko, J., **1393 - B0170**, 2076 - A0134
- Palkovits, S., 1279 - A0314
- Pallerla, S. R., **5216 - B0329**
- Palmer, N. D., 5137 - B0160
- Palmhof, M., **3202 - B0202**, 4439
- Palmieri, M., 3223 - B0322
- Palmisano, C., 4846 - C0204
- Paluch, M., 63 - A0110
- Palumaa, T., **5041 - A0237**
- Pan, C., **783**
- Pan, C., 6135 - C0254
- Pan, D., 4629 - A0271, **569 - B0184**
- Pan, D., 3868 - C0129
- Pan, D., 4102 - B0227, 4103 - B0228
- Pan, F., 1856 - C0160, **706 - C0301**
- Pan, H., 4023 - A0148
- Pan, L., 3581 - A0198
- Pan, L., 1168
- Pan, P., 1352 - B0112, 4338 - C0386
- Pan, S., 1425 - B0344
- Pan, S., 569 - B0184
- Pan, S., 2996
- Pan, S., **4647 - A0289**
- Pan, W., 2754 - B0133, 2757 - B0136, **2775 - B0154**, 3252 - B0351, 5048 - A0244, 5211 - B0324
- Pan, X., 4698 - A0340
- Pan, X., 368 - A0028
- Pan, X., 1391 - B0168, 1396 - B0173, 1402 - B0179, 2034 - A0061
- Pan, Z., 4956
- Pan, Z., 2590, 2995, 5988
- Pan-American Collaborative Retina Study Group, 390 - A0090
- Panarelli, J. F., 5054 - B0005
- Pancholy, M., 79 - A0126
- Pandav, S., 3536 - A0099, 488 - A0348
- Pandey, A., 5568 - A0260
- Pandey, N. B., 3269 - B0368
- Pandit, A., 5380 - A0032
- Pahlitzsch, M., 6117 - C0236
- Pahuja, N., **4402 - C0450**
- Pai, R. R., 5360 - A0012
- Paik, D. C., 748
- Paik, D., 3578 - A0195
- paik, J., 5599 - A0318
- Paik, S., 1874 - C0178, 5097 - B0086
- Paille, D., 3399 - C0323, 3401 - C0325
- Paiva, I. B., 1150
- Pajarin, A., 1913 - C0313
- Pajaro, S., **5867 - C0154**
- Pajouhesh, H., 2679 - A0406
- Pajtlar Rosar, A., **3217 - B0316**, 4653 - A0295, 4662 - A0304
- Pak, J. W., **2422 - C0088**, 2790 - B0208, 2804 - B0222, 5564 - A0256
- Pakola, S., 1252 - A0093, 2719 - B0040
- Pal, B., 2399 - C0065
- Pal-Ghosh, S., 3875 - C0136
- Palacio, A. C., **4250 - C0092**
- Palacio-Pastrana, C., 5151 - B0174
- PALADIN study group, 4811 - C0169, 4828 - C0186, 4848 - C0206
- Palfi, A., 4539 - A0054
- Palileo, C., 113 - A0276
- Palko, J., **1393 - B0170**, 2076 - A0134
- Palkovits, S., 1279 - A0314
- Pallerla, S. R., **5216 - B0329**
- Palmer, N. D., 5137 - B0160
- Palmhof, M., **3202 - B0202**, 4439
- Palmieri, M., 3223 - B0322
- Palmisano, C., 4846 - C0204
- Paluch, M., 63 - A0110
- Palumaa, T., **5041 - A0237**
- Pan, C., **783**
- Pan, C., 6135 - C0254
- Pan, D., 4629 - A0271, **569 - B0184**
- Pan, D., 3868 - C0129
- Pan, D., 4102 - B0227, 4103 - B0228
- Pan, F., 1856 - C0160, **706 - C0301**
- Pan, H., 4023 - A0148
- Pan, L., 3581 - A0198
- Pan, L., 1168
- Pan, P., 1352 - B0112, 4338 - C0386
- Pan, S., 1425 - B0344
- Pan, S., 569 - B0184
- Pan, S., 2996
- Pan, S., **4647 - A0289**
- Pan, W., 2754 - B0133, 2757 - B0136, **2775 - B0154**, 3252 - B0351, 5048 - A0244, 5211 - B0324
- Pan, X., 4698 - A0340
- Pan, X., 368 - A0028
- Pan, X., 1391 - B0168, 1396 - B0173, 1402 - B0179, 2034 - A0061
- Pan, Z., 4956
- Pan, Z., 2590, 2995, 5988
- Pan-American Collaborative Retina Study Group, 390 - A0090
- Panarelli, J. F., 5054 - B0005
- Pancholy, M., 79 - A0126
- Pandav, S., 3536 - A0099, 488 - A0348
- Pandey, A., 5568 - A0260
- Pandey, N. B., 3269 - B0368
- Pandit, A., 5380 - A0032
- Pahlitzsch, M., 6117 - C0236
- Pahuja, N., **4402 - C0450**
- Pai, R. R., 5360 - A0012
- Paik, D. C., 748
- Paik, D., 3578 - A0195
- paik, J., 5599 - A0318
- Paik, S., 1874 - C0178, 5097 - B0086
- Paille, D., 3399 - C0323, 3401 - C0325
- Paiva, I. B., 1150
- Pajarin, A., 1913 - C0313
- Pajaro, S., **5867 - C0154**
- Pajouhesh, H., 2679 - A0406
- Pajtlar Rosar, A., **3217 - B0316**, 4653 - A0295, 4662 - A0304
- Pak, J. W., **2422 - C0088**, 2790 - B0208, 2804 - B0222, 5564 - A0256
- Pakola, S., 1252 - A0093, 2719 - B0040
- Pal, B., 2399 - C0065
- Pal-Ghosh, S., 3875 - C0136
- Palacio, A. C., **4250 - C0092**
- Palacio-Pastrana, C., 5151 - B0174
- PALADIN study group, 4811 - C0169, 4828 - C0186, 4848 - C0206
- Palfi, A., 4539 - A0054
- Palileo, C., 113 - A0276
- Palko, J., **1393 - B0170**, 2076 - A0134
- Palkovits, S., 1279 - A0314
- Pallerla, S. R., **5216 - B0329**
- Palmer, N. D., 5137 - B0160
- Palmhof, M., **3202 - B0202**, 4439
- Palmieri, M., 3223 - B0322
- Palmisano, C., 4846 - C0204
- Paluch, M., 63 - A0110
- Palumaa, T., **5041 - A0237**
- Pan, C., **783**
- Pan, C., 6135 - C0254
- Pan, D., 4629 - A0271, **569 - B0184**
- Pan, D., 3868 - C0129
- Pan, D., 4102 - B0227, 4103 - B0228
- Pan, F., 1856 - C0160, **706 - C0301**
- Pan, H., 4023 - A0148
- Pan, L., 3581 - A0198
- Pan, L., 1168
- Pan, P., 1352 - B0112, 4338 - C0386
- Pan, S., 1425 - B0344
- Pan, S., 569 - B0184
- Pan, S., 2996
- Pan, S., **4647 - A0289**
- Pan, W., 2754 - B0133, 2757 - B0136, **2775 - B0154**, 3252 - B0351, 5048 - A0244, 5211 - B0324
- Pan, X., 4698 - A0340
- Pan, X., 368 - A0028
- Pan, X., 1391 - B0168, 1396 - B0173, 1402 - B0179, 2034 - A0061
- Pan, Z., 4956
- Pan, Z., 2590, 2995, 5988
- Pan-American Collaborative Retina Study Group, 390 - A0090
- Panarelli, J. F., 5054 - B0005
- Pancholy, M., 79 - A0126
- Pandav, S., 3536 - A0099, 488 - A0348
- Pandey, A., 5568 - A0260
- Pandey, N. B., 3269 - B0368
- Pandit, A., 5380 - A0032
- Pahlitzsch, M., 6117 - C0236
- Pahuja, N., **4402 - C0450**
- Pai, R. R., 5360 - A0012
- Paik, D. C., 748
- Paik, D., 3578 - A0195
- paik, J., 5599 - A0318
- Paik, S., 1874 - C0178, 5097 - B0086
- Paille, D., 3399 - C0323, 3401 - C0325
- Paiva, I. B., 1150
- Pajarin, A., 1913 - C0313
- Pajaro, S., **5867 - C0154**

- Pantaneli, S., 6162 - C0281, 6166 - C0285
- Panthi, S., **3928**
- Panthier, C., **2232 - A0401**
- Paolucci, M., 4711 - B0135
- Papa, S., **4408**
- Papa, V., 2668 - A0395
- Papachristou, G. C., **6159 - C0278**
- Papadogiannis, P., 4938, **5808 - C0095**
- Papangkorn, K., **5953**
- Papas, E. B., 4875 - C0320
- Papastefanou, V. P., 1111 - C0146
- Papinski, D., 921 - B0099
- Papke, E. L., 4708 - B0132
- Pappa, C., 2682 - B0003
- Pappas, A., 2008
- Pappas, G., 5258 - C0104
- Pappas, S., 4552 - A0067
- Papworth-Jones, N., 5230 - B0343
- Paques, M., 2436 - C0102, **4213 - C0055**, 4641 - A0283, 4699 - A0341, 5861 - C0148, 6194 - C0348, 644 - C0202
- Paquet-Durand, F., **716**, 998 - B0252
- Paranhos, A., 3427 - C0351, 5887 - C0174, 5889 - C0176, 5890 - C0177
- Paranhos, Jr., A., 4090 - B0085
- Paranjpe, V., **4892 - C0337**
- Parant, J. M., 2360 - B0370
- Paraon, L. I., 2349 - B0359
- Pardeshi, A. A., 5896 - C0183
- Pardo, M., 3178 - A0321
- Pardon, L. P., 1652 - A0028, **2104 - A0162**
- Pardue, M. T., 1217, 2024 - A0051, 3580 - A0197, 5511 - A0180, 5991, 678 - C0273, 750
- Parekh, M., 5197 - B0310
- Parekh, P., 5895 - C0182
- Parel, J. A., 1157, 1949, 1950, 268 - C0127, 2978, 2979, 3031 - A0002, 3667 - A0351, 529 - B0144
- Parent, N., 1358 - B0118
- Parés, F., 1708 - A0229
- Parikh, B. H., 4220 - C0062, **5003 - A0074**
- Parikh, H., 2707 - B0028
- Parikh, S., 2404 - C0070, 2566, 3617 - A0235, 3902 - C0368, 4480, 814 - A0146, 831 - A0163, 837 - A0169
- Park, B., 1406 - B0183
- Park, C., 4055 - B0050
- Park, C., 2699 - B0020
- Park, C., **5108 - B0097**
- Park, C., **3665 - A0349**, 4717 - B0141
- Park, C., 1332 - B0039
- Park, D., 2465 - C0131
- Park, D., **2083 - A0141**
- Park, D., 580 - B0195
- Park, D., 4944
- Park, H., **6193 - C0347**
- Park, H. L., 750, 868 - A0200
- Park, H., 5400 - A0052
- Park, J., 4858 - C0303
- Park, J., **5626 - A0345**
- Park, J., 3264 - B0363, 3924
- Park, J., 4687 - A0329
- Park, J. C., 5023 - A0219, 5025 - A0221
- Park, J., 556 - B0171, 563 - B0178, **71 - A0118**
- Park, J., **2194 - A0363**
- Park, J., **4973**
- Park, J., 5767 - C0054
- Park, J., 878 - A0210
- Park, J., 5767 - C0054
- Park, J. Y., 1465 - C0027, 1960
- Park, J. M., 2484 - C0150, 432 - A0292
- Park, J., 5108 - B0097
- Park, J., **5272 - C0118**
- Park, J., 3665 - A0349
- Park, J., 1838 - B0299, **6186 - C0305**
- Park, J., 2026 - A0053, **2029 - A0056**
- Park, J., 1022 - B0306, **867 - A0199**
- Park, J., 1022 - B0306
- Park, K., **4077 - B0072**, 5072 - B0023
- Park, K., 176 - B0330, 2033 - A0060, 2098 - A0156, 2105 - A0163, 2685 - B0006, 4086 - B0081, 5836 - C0123
- Park, K., 5767 - C0054
- Park, K., 1430 - B0349, 1431 - B0350, 1432 - B0351, 1435 - B0354, 1510 - C0351, 360 - A0020, 3924
- Park, K., 611 - B0283
- Park, L., 3800 - C0027
- Park, M., 2241 - B0195, **2990**
- Park, S., 4228 - C0070, **4742 - B0243**, 5088 - B0039
- Park, S., 5771 - C0058
- Park, S., **2761 - B0140**
- Park, S., 5836 - C0123
- Park, S., 5097 - B0086
- Park, S., 5099 - B0088, 5100 - B0089
- Park, S., **5375 - A0027**
- Park, S., 432 - A0292, 4654 - A0296, 5272 - C0118, **853 - A0185**
- Park, S., 1841 - B0302, 4746 - B0247
- Park, S., 842 - A0174
- Park, S. S., 2817 - B0235, 283 - C0184, 3004, 3149 - A0266, 393 - A0093, 877 - A0209, 883 - A0215
- Park, T., **2635 - A0140**
- Park, U., 1841 - B0302, 4318 - C0292
- Park, U., **4746 - B0247**
- Park, W., **247 - C0106**, 5426 - A0095, 5700 - A0419
- Park, Y. H., **5159 - B0182**
- Park, Y., 5097 - B0086
- Park, Y., **1874 - C0178**
- Park, Y., 3454
- Park, Y., 1886 - C0286, 3125 - A0242, **432 - A0292**
- Park, Y., 3832 - C0059
- Parke, W., 4237 - C0079
- Parker, E., 1269 - A0304
- Parker, M., 346 - A0006
- Parker, M. A., 1269 - A0304, **3896 - C0362**
- Parker, M., 1649 - A0025
- Parker, P. R., 1099 - C0134
- Parkins, K., 1973, 2589
- Parmar, V., 562 - B0177
- Parmeggiani, F., 52 - A0083
- Parmeggiani, M., 4178 - C0020
- Parnell, M., **2042 - A0100**, 2053 - A0111, 5276 - C0122
- Paron, E., 4456
- Parra, C., 3502
- Párraga, D., 3441
- Parrish, E., 3637 - A0298
- Parrish, R., 1032 - B0316
- Parrish, R. K., 5424 - A0093
- parrulli, S., 275 - C0176, 4662 - A0304, **882 - A0214**
- Parsikia, A., 117 - B0031, 2304 - B0258, 2305 - B0259, 2313 - B0267
- Parsons-Wingenter, P. A., **3548 - A0165**
- Parush Shear Yashuv, N., 1047 - B0358
- Parveen, T., 828 - A0160
- Parver, D., 5277 - C0123
- Pasadhika, S., **4644 - A0286**
- Paschalis, E. I., 1314 - B0021, 2529 - C0258, 2579, 2664 - A0391, 4361 - C0409
- Pasha, H., 162 - B0076, 6183 - C0302
- Pashak, G., 5809 - C0096
- Pasinetti, G., 1254 - A0095
- Pasini, S., **3714 - B0061**
- Paskowski, S., 2895 - C0192
- Pasquale, L. R., 1178, 1818 - B0279, 2080 - A0138, 2732 - B0111, 4053 - B0048, 4072 - B0067, 4214 - C0056, 5078 - B0029, 5107 - B0096, 5134 - B0123, **5144 - B0167**, 5157 - B0180, **5347**, 6028
- Pasricha, N. D., **5748 - C0035**
- Passaglia, C. L., **2510 - C0214**
- Passarin, O., **3147 - A0264**
- Passarinha, L., 3085 - A0056
- Passerini, S., 1236 - A0077
- Passo, R., 490 - A0350, **6085 - C0204**
- Passos, J., 3180 - A0323
- Pastor, J., 4226 - C0068, 540 - B0155, 5773 - C0060
- Pastor-Zaplana, J., 157 - B0071
- Pastore, V., 1302 - B0009
- Passutto, F., **3019**, 3513 - A0076, 3515 - A0078
- Patangay, S., 5023 - A0219, **5025 - A0221**
- Patasova, K., **1826 - B0287**
- Pate, K., 4363 - C0411
- Patel, A., **3934**
- Patel, A. K., 2493 - C0197, **2612**, 6152 - C0271
- Patel, A., **5229 - B0342**
- Patel, C., **4243 - C0085**, 5483 - A0152, 5530 - A0222, 5847 - C0134
- Patel, C., 3757 - B0172
- Patel, D. V., 1374 - B0134, **5338**
- Patel, G., 6037
- Patel, J. S., 3080 - A0051
- Patel, K., **2039 - A0066**
- Patel, K., 3874 - A0135, 3885 - C0146
- Patel, K., 418 - A0236
- Patel, K., 1780 - B0095
- Patel, K., 1728 - A0249, 1731 - A0252, **1734 - A0255**
- Patel, L., 1645 - A0021
- Patel, M. D., **3364 - C0246**
- Patel, N. A., **4783 - B0393**
- Patel, N. B., 4749 - B0250, 722
- Patel, N. B., 1175, 1652 - A0028, 2104 - A0162
- Patel, N., 5926 - C0323
- Patel, N., **1904 - C0304**
- Patel, N., **2388 - C0054**, 433 - A0293
- Patel, N., 5018 - A0214
- Patel, P., 3704 - B0051, **4728 - B0152**, 6035
- Patel, P. R., 4060 - B0055
- Patel, P., 850 - A0182
- Patel, P. J., **5281 - C0127**
- Patel, P., 1469 - C0031, 1471 - C0033, 3216 - B0315, 3244 - B0343, 3600 - A0218, 5550 - A0242, 815 - A0147, 816 - A0148, 826 - A0158, 838 - A0170
- Patel, R., 2620
- Patel, R. P., **5507 - A0176**
- Patel, R., **4112 - B0275**
- Patel, S. Y., **86 - A0249**
- Patel, S. N., **3758 - B0173**, 736
- Patel, S. P., **3774 - C0001**
- Patel, S. V., 1320 - B0027, **3919**, 4434
- Patel, S., **3629 - A0290**
- Patel, S. P., 3179 - A0322
- Patel, S., **5333 - C0266**
- Patel, S., 4819 - C0177
- Patel, S. S., **1959**
- Patel, T. P., **4621 - A0263**
- Patel, T., 1780 - B0095
- Patel, V. R., 6165 - C0284
- Patel, V. R., 162 - A0063
- Patel, V. R., **1969**
- Patel, Y., 4284 - C0155, 4820 - C0178
- Patella, V., **6031**
- Paterno, J., **2392 - C0058**, 2455 - C0121
- Paterson, K., 4416
- Pathai, S., 5951
- Pathan, M., 4427
- Patikulsila, D., 3250 - B0349
- Patino, B., 2415 - C0081
- Patkar, P., **2841 - B0259**
- Patnaik, J. L., 105 - A0268, 169 - B0323, 4230 - C0072, 4797 - B0407, 5540 - A0232
- Patnaik, J. L., 1518 - C0359, **2427 - C0093**, 2756 - B0135, 3767 - B0182
- Patniak, J., 2760 - B0139
- Patodia, Y., 2060 - A0118
- Patolia, H., 3571 - A0188
- Paton, K., 3623 - A0284
- Patrianakis, T., 3721 - B0068, 5078 - B0029, 5096 - B0047, 6097 - C0216
- Patrice, P., 1425 - B0344
- Patrício, M. I., 1195, 3493, 4534 - A0049, **4541 - A0056**, 6005, 6060 - A0189
- Patrizi, K., 1087 - C0100
- Patskovsky, S., 4553 - A0068, 5694 - A0413
- Pattabiraman, P. P., 2694 - B0015, **3972**
- Pattar, G., 918 - B0096
- Patterson, C., 2567
- Patterson, E. J., 1737 - A0258, 4992, **652 - C0210**
- Patterson, H., 4414
- Patterson, N. H., 3211 - B0310
- Patterson, S., 4050 - A0257, **5961**, 5962
- Patterson, S. S., 600 - B0272
- Pattison, C., 3504 - A0067
- Pattnaik, B., 2785 - B0164
- Pattnaik, B. R., 1196, 3117 - A0125, **5384 - A0036**
- Patton, J., 3101 - A0109
- Patzner, C., 6085 - C0204
- Pau, S. H., 593 - B0208
- Paudel, N., **180 - B0334**
- Pauer, G. J., 2443 - C0109
- Paul, J., 2616, **315 - C0248**, 3533 - A0096
- Paul, K., 327 - C0260
- Paul, S. K., **6163 - C0282**
- Pauleikhoff, D., 3139 - A0256, 3140 - A0257, 3218 - B0317
- Pauline, R., **1298 - B0005**
- Paulo, D. A., 5607 - A0326
- Paulsen, A. J., 5164 - B0187
- Paulsen, F. P., 2286 - B0240, 319 - C0252, **3304 - C0098**, 4869 - C0314
- Paulus, Y. M., 4621 - A0263, 5833 - C0120, 5852 - C0139
- Pauly-Evers, M., 1959
- Pavesio, C., 412 - A0230, 4175 - C0017, 4206 - C0048
- Paviotti, A., 5867 - C0154, 5868 - C0155
- Pavlatos, E., 1391 - B0168, 1396 - B0173, 1402 - B0179, **2034 - A0061**
- Pavlou, S., 1002 - B0256, 1211, **1476 - C0218**, 3942
- Pavlovic, V., 3898 - C0364, 3899 - C0365
- Pavone, V., 1251 - A0092
- Pawade, J., 5578 - A0297
- Pawar, M., 1629 - A0005, 4448, 4614 - A0203
- Pawar, M. D., **1631 - A0007**
- Pawiroredjo, J., 5917 - C0314
- Pawłowski, M., 4659 - A0301
- Paxman, R. J., 4587 - A0176
- Paz Camacho, S., 203 - C0014, 4825 - C0183, 887 - A0219
- Paz, M., 6072 - A0201
- Pazzucconi, B., 2162 - A0331
- Pe'er, J., **1643 - A0019**, 3186 - A0329
- Peachey, N., 1428 - B0347, 4469, 4967
- Peachey, N. S., 2474 - C0140, 3001
- Peacock, A., 1439 - C0001
- Pears, R. R., 5456 - A0125
- Pearce, I., **2566**
- Pearlman, E., 5851 - C0138
- Pearson, C., **3723 - B0070**
- Pearson, D. J., 46 - A0077
- Pease, M., 1219, 6038
- Pebay, A., 3746 - B0093
- Pecen, P., **1518 - C0359**
- Pecheur, F., 840 - A0172
- Pecold, K., 2793 - B0211
- Peddada, K., **4838 - C0196**
- Peddi, S., 5677 - A0396
- Peddie, C., **382 - A0042**
- pedersen, A., 3332 - C0174
- Pedersen, H., 1514 - C0355, 649 - C0207, **667 - C0225**
- Pedersen, M., 3952
- Pedimilli, A., 3156 - A0273, 6198 - C0352, **6201 - C0355**
- Pedler, M. G., 1206, 5633 - A0352
- Pedro Aguilar, L., **1570**
- Pedrosa Domellof, F., **1146**, 2249 - B0203
- Pedroso, L., 1059 - B0370
- Pedrotti, E., **1330 - B0037**, 1336 - B0043
- Pedrozo Vieira, C., **5350 - A0002**
- Peelman, F., 5403 - A0055
- Peer, N., 243 - C0054
- Pefkianaki, M., 4291 - C0162, **4302 - C0276**
- Pegany, R., 342 - A0002
- Pegouske, D., 6071 - A0200
- Peguda, R., **1771 - B0086**
- Peh, G. S., **1372 - B0132**, 1375 - B0135
- Pei, C., 1603, **1605**, 2271 - B0225, 2855 - B0273, 2887 - B0305, 5632 - A0351
- Pei, X., 3079 - A0050
- Pei, X., 2495 - C0199
- Peinado, G., **1978**, 5822 - C0109
- Peirce-Cotterill, S., 3571 - A0188
- Peirson, S. N., 1980, 5039 - A0235
- Peixoto, E., 3554 - A0171
- Peixoto-de-Matos, S., **2151 - A0285**
- Pelaez, D., 2490 - C0194, **4552 - A0067**, 4960, 552 - B0167, 5609 - A0328, 5611 - A0330
- Pelen, F. M., **4751 - B0252**
- Peli, E., 3893 - C0359, **638 - C0068**, 639 - C0069, 654 - C0212
- Pelinson, A. T., 3781 - C0008
- Pellegrini, M., 1164, 2419 - C0085, 6100 - C0219
- Pelletier MD FACS, J., 3653 - A0337
- Pelletier, W., 3185 - A0328
- Pelligizzi, N., 2295 - B0249
- Pemberton, B., 921 - B0099
- Pemp, B., **3357 - C0239**
- Penalva, R. G., 5557 - A0249
- penaranda, C. F., **5946 - C0343**
- Penas, S., 1681 - A0202
- Peng, C., 896 - A0285
- Peng, J., 5928 - C0325, **5940 - C0337**
- Peng, L., 1227, 1720 - A0241, 1729 - A0250
- Peng, M., **256 - C0115**, 5680 - A0399
- Peng, M., 1249 - A0090, **334 - C0267**
- Peng, X., **3049 - A0020**
- Peng, X., 1520 - C0361, 3652 - A0336
- Peng, Y., 4149 - B0372
- Pengelly, R. J., 5784 - C0071
- Penkova, A. N., **4457**
- Penn, J. S., 3567 - A0184, 5838 - C0125
- Pennesi, M. E., 1001 - B0255, 2339 - B0328, 2486 - C0190, 2496 - C0200, 2503 - C0207, 2842 - B0260, 3145 - A0262, 3896 - C0362, **3898 - C0364**, 3899 - C0365, 4991, 4992, 5333 - C0266, 668 - C0226

- Penteado, R., 2735 - B0114, **2856**
- **B0274**, 2857 - B0275, 2861 -
B0279, 3498, 4476, 5075 - B0026
- Pentecost, M., **554 - B0169**
- Penzner, J., **914 - B0092**
- Pepaj, M., 2516 - C0245
- Pepose, J. S., 2198 - A0367
- Pepperberg, D. R., 3090 - A0061
- Pepple, K., 1222, **1531 - C0372**, 2546 -
C0275, 2880 - B0298
- Peragallo, J., 1883 - C0187
- Peralta-Ildefonso, M. J., 351 - A0011
- Perazzolo, M., 3422 - C0346
- Perdicchi, A., **4078 - B0073**, 5120 -
B0109, 6030, 6033
- Perdomo, O. J., 1719 - A0240, 1741 -
A0262
- Pereira, A. M., 3128 - A0245
- Pereira, I., 2123 - A0181
- Pereira, M., 4669 - A0311
- Perente, I., **3760 - B0175**
- Perepelkina, T., **566 - B0181**
- Perera, S., 5149 - B0172
- Perera, S. A., 2221 - A0390, 5124 -
B0113, 5143 - B0166
- Perera, S., 834 - A0166
- Peretz, G., 5091 - B0042, 5093 - B0044
- Pereyra, F., 5331 - C0264
- Perez, C. I., **4070 - B0065**, 5885 -
C0172
- Perez de Lara, M. J., 5300 - C0233
- Perez Fernandez, V., **1488 - C0230**,
3099 - A0107
- Perez, M., 1493 - C0235
- Perez, M., 3070 - A0041
- Perez Sarriegui, A., 3352 - C0234
- Pérez Solórzano, S., **5398 - A0050**
- Perez Straziota, C. E., **1388 - B0165**
- Perez, T., 1512 - C0353, 1724 -
A0245, **2833 - B0251**, 2846
- B0264, 2847 - B0265, 3880
- C0141
- Perez, V. L., 3311 - C0153, 3313 -
C0155
- Perez-Gonzalez, C. E., 6169 - C0288
- Perez-Merino, P., 268 - C0127
- Perez-Ortiz, A. C., 1116 - C0151, 351 -
A0011, 5151 - B0174
- Perez-Peralta, L., 6155 - C0274
- Perez-Vazquez, J. F., 1349 - B0056,
2769 - B0148, 2770 - B0149,
4225 - C0067, **5243 - B0356**,
948 - B0126
- Periasamy, P., 2320 - B0309
- Pericak-Vance, M. A., 1420 - B0339,
1425 - B0344, 3208 - B0307
- Perkins, B. D., 6050 - A0084, 960 -
B0214
- Perkumas, K. M., 3968, 5161 - B0184
- Perlin, M., 1259 - A0294
- Perlman, I., 3763 - B0178, 5520 -
A0212
- Perlman, J., 152 - B0066
- Perlmutter, T., 3177 - A0320
- Perlroth, D., **209 - C0020**, 211 - C0022,
212 - C0023, 219 - C0030, 5311
- C0244, 5312 - C0245, 5320
- C0253
- Pernet, V., 3583 - A0200, 5297 -
C0230, 5522 - A0214
- Peroglio Deiro, A., 2431 - C0097
- Perone, J., 1296 - B0003, 1298 -
B0005, 2224 - A0393, 2226
- A0395, 2898 - C0195, 4387
- C0435, 441 - A0301, 4788 -
B0398
- Perron, M., 2595
- Perrone, F., 5331 - C0264
- Perry, H., 2915 - C0212
- Perry, J. D., 5630 - A0349
- Perry, N. A., 2354 - B0364
- Pershing, S., 1036 - B0347, 4240 -
C0082, 5167 - B0190
- Persona, E., 3781 - C0008
- Persona, I., 3781 - C0008
- Persson, T., 2163 - A0332
- Persuh, M., **1293 - A0328**
- Pertile, G., 2431 - C0097, 4841 -
C0199, 849 - A0181
- Pertiwi, Y. D., **3668 - A0352**
- Perusek, L., 562 - B0177
- Perwick, R., 3485
- Pesaresi, M., **548 - B0163**
- Peschanski, M., 5008 - A0079
- Peshenko, I. V., **4488 - A0003**, 4489 -
A0004, 4490 - A0005
- Peskin, E., 937 - B0115
- Pestilli, F., 1852 - C0156
- Pesudovs, K., 35 - A0066, 3912, **4145**
- **B0368**, 4146 - B0369, 4147
- B0370, 4790 - B0400, 5179
- B0202
- Petaccia de Macedo, M., 3179 - A0322
- Peterlin, B., 2185 - A0354
- Peters, C., 5569 - A0261
- Peters, F. P., 3627 - A0288
- Peters, H., 1577
- Peters, K. G., 1252 - A0093, **199 -**
C0010, 2719 - B0040
- Peters, S., 4661 - A0303
- Peters, T., **2658 - A0385**, 2982
- Petersen, A., **3040 - A0011**
- Petersen, C. A., **440 - A0300**
- Petersen, L., 3952, 5284 - C0217
- Petersen, M. B., 3141 - A0258, 780
- Petersen, R., 2188 - A0357
- Petersen-Jones, S. M., 2986
- Peterson, E., 4185 - C0027
- Peterson, G., 6147 - C0266
- Peterson, J., 4536 - A0051
- Peterson, J. S., **213 - C0024**
- Peterson, J., 1157
- Peterson, K., 2438 - C0104
- Peterson, T., 2981
- Peterson, W., 221 - C0032, 5710 -
A0429
- Pethen, S. J., 3464
- Petit, C., 6194 - C0348, 644 - C0202
- Petitto, M., 1829 - B0290
- Peto, T., 1034 - B0345, 1130 - C0165,
2376 - C0042, 2408 - C0074,
2569, 3255 - B0354, 3607 -
A0225, 4067 - B0062, 5723
- C0010
- Petoe, M. A., **1946**
- Petrak, M., 2777 - B0156
- Petrarca, R., 2053 - A0111
- Petrash, J., 1206, 2277 - B0231, 5633
- A0352
- Petrikonis, K., 2109 - A0167, 5063
- B0014
- Petrii, B., **5115 - B0104**
- Petroll, M., 320 - C0253
- Petrovic Pajic, S., **2185 - A0354**
- Petrovski, G., 2516 - C0245, 3867
- C0128, 4323 - C0297, 527 -
B0142, 5647 - A0366
- Petrovsky, N., 3017
- Petrs Silva, H., 5661 - A0380, 6137
- C0256
- Petrukhin, K., 5330 - C0263
- Petrus-Reurer, S., **4007 - A0132**,
5005 - A0076, 5007 - A0078,
5562 - A0254
- Petruzzelli, F., 2826 - B0244
- Petsoglou, C., 907 - B0085
- Pettenkofer, M., 281 - C0182, 2821
- B0239
- Petzold, A., 723
- Peynshaert, K., **5708 - A0427**, 6007
- Peyret, A., 1236 - A0077
- Präffle, C., 300 - C0201, **672 - C0230**
- Pfähler, N., 3719 - B0066, **3721**
- **B0068**, 3998 - A0123, 5078 -
B0029, 5096 - B0047
- Pfau, M., **2421 - C0087**, 3221 - B0320,
4945
- Pfeifer, C., 732
- Pfeiffer, B., 3311 - C0153
- Pfeiffer, N., 173 - B0327, 5191 -
B0214, 6143 - C0262
- Pfeiffer, R., **5990**
- Pfister, T., **4663 - A0305**
- Pfleger, C., 2186 - A0355
- Pflugfelder, S. C., 3277 - C0071, 3291
- C0085, 3314 - C0156, 3871 -
C0132, 3875 - C0136, 4953
- Pfommer, B., 3666 - A0350
- Pham, B., **3162 - A0279**
- Pham, D. G., 2009
- Pham, H., 4675 - A0317
- Pham, J., 4017 - A0142
- Pham, J. T., **6151 - C0270**
- Pham, K., **3671 - A0355**
- Pham, R., 74 - A0121
- Pham, R., 1792 - B0107
- Pham, T. L., **2285 - B0239**, 2369 -
B0379, 4368 - C0416
- Pham, V., 2441 - C0107
- Phan, A., **3481**
- Phan, A. T., **5534 - A0226**
- Phan, I., 3623 - A0284
- Phan, R., 1899 - C0299
- Phangtey, B. P., 5360 - A0012
- Pharmacology and Physiology, 1649
- A0025
- Phatak, S., **2399 - C0065**, 412 - A0230
- Phillip, R., 5901 - C0188
- Phillip, S., **5053 - B0004**, 5067 - B0018
- Philipose, H., 2476 - C0142
- Philippin, H., 5136 - B0159
- Phillips, A., 5696 - A0415
- Phillips, J. O., 2169 - A0338, 5783
- C0070
- Phillips, J. B., **4446**
- Phillips, J., **543 - B0158**
- Phillips, M. J., 568 - B0183
- Phillips, N., 1068 - C0081
- Philp, N. J., 2474 - C0140, 2678 -
A0405, 4967
- Phipps, J. A., 5379 - A0031
- Phipps, R. P., **1143**
- Phone, A., 1249 - A0090, **4025 - A0150**
- Phu, J., 1260 - A0295, 1267 -
A0302, **1270 - A0305**, 4083
- B0078
- Phung, J., 5539 - A0231
- Phuong, T., 1660 - A0036, 3969
- Phuong, T. T., 1212
- Pi, S., **1971**, 3925
- Piano, I., 5044 - A0240
- Piazza, C., 193 - C0004
- Picard, E., 5655 - A0374
- Picasso, E., 1254 - A0095
- Picaud, S. A., 598 - B0270, 604 -
B0276
- Piccardi, M., 5549 - A0241
- Piccillo, E., 960 - B0214
- Piccinini, A. L., **5743 - C0030**
- Piche, M., 4553 - A0068
- Piché, M., 1350 - B0110
- Pichi, F., 5974
- Pichora-Fuller, M. K., 1068 - C0081
- Picketts, D., 1859 - C0163
- Piechowicz, M., **2467 - C0133**
- Piedade, W., **2593**
- Pienkowska-Schelling, A., 2275 -
B0229
- Pieper, A., 4376 - C0424
- Pieplow, A., 551 - B0166
- Pier, G., 1546
- Pieramici, D. J., 1957, 3603 - A0221,
4837 - C0195, **4948**
- Pierce, E. A., 39 - A0070, 4529
- A0044, 47 - A0078, 5412 -
A0064, 5416 - A0068, 5822 -
C0109, 6022, 791
- Pierce, J. M., 1642 - A0018
- Pieretti, G., 4305 - C0279
- Piers, P., 1075 - C0088, 1279 - A0314,
254 - C0113, 2966 - C0288, 3030
- A0001
- Pieters, B. R., 3627 - A0288
- Pietraszkiewicz, A., 6025, 792
- Pietrucha-Dutczak, M., 313 - C0246
- Piggott, K., **3628 - A0289**
- Pijewska, E., 5874 - C0161
- Pikuleva, I. A., **224 - C0035**
- Pilarski, R., 1156
- Pilat, A., **5204 - B0317**
- Pilcher, S., 5720 - C0007
- Pilecki, B., **2646 - A0151**
- Pilgrim, M., 2433 - C0099
- Pillers, D. M., 1196, 3117 - A0125,
5384 - A0036
- Pillunat, K. R., 2017 - A0044, **2018**
- **A0045**, 2743 - B0122, 452 -
A0312
- Pillunat, L., 545 - B0160
- Pillunat, L. E., 1383 - B0160,
1384 - B0161, 1395 - B0172,
2017 - A0044, 2018 - A0045,
2743 - B0122, 3129 - A0246,
3190 - B0190, 452 - A0312, 5090
- B0041
- Pilon, A., 257 - C0116, **262 - C0121**,
267 - C0126, 5932 - C0329, 5934
- C0331
- Pimentel, S. G., 1470 - C0032, 4835
- C0193
- Pinazo-Duran, M. D., 1936 - C0336,
5152 - B0175, **5364 - A0016**
- Pineda II, R., 1400 - B0177, 5769 -
C0056, 5776 - C0063, 746
- Pinedo Villanueva, R., 3897 - C0363
- Pineiro, A., 3178 - A0321
- Pineles, S. L., 2883 - B0301
- Piñeros-Hernández, L. B., 2524 -
C0253
- Pinhas, A., **3446**
- Pinheiro Teixeira, L., 1059 - B0370
- Pinkerton, K., 3854 - C0115
- Pinkus Herrera, C., 915 - B0093
- Pinkus, L., **5293 - C0226**
- Pinna, A., 355 - A0015, 5922 - C0319
- Pintelon, I., 2280 - B0234, 3452
- Pinto, A., 5164 - B0187
- Pinto Croker, M., **1844 - B0305**
- Pintor, J. J., 1664 - A0040, 4371 -
C0419, **5300 - C0233**
- Pipe, K., 1618
- Pipe, K. P., 2451 - C0117
- Piqueras, M., 124 - B0038
- Piquet, L., **3185 - A0328**
- Piras, A., 3422 - C0346
- Pircher, M., 1975, 2622, 297 -
C0198, **298 - C0199**, 3435,
4065 - B0060, 5727 - C0014,
5863 - C0150
- Pircher, N., 3435, **5727 - C0014**
- Pirela, R. V., 1829 - B0290
- Piri, N., 5494 - A0163
- Piri, N., **729**
- Pisani, S., 5197 - B0310
- Piscopo, P., 5173 - B0196
- Pisig, A., 737
- Pisig, A. U., 2876 - B0294, **3448**, 740
- Pistilli, M., **924 - B0102**
- Pitale, P. M., 3048 - A0019
- Pitalia, A., 6014
- Pitcher, J. D., 161 - B0075, **3609 -**
A0227
- Pietta, S., 1454 - C0016, 3143 - A0260
- Pitha, I. F., **6038**
- Pitoc, C., 3448
- Pizzo, A., 3948
- Place, E., 39 - A0070, 4208 - C0050,
5416 - A0068
- Placek, M. M., 2022 - A0049
- Plamann, K., 5812 - C0099
- Plancheron, A., 5008 - A0079
- PLANET, 4949
- Platania, C., 193 - C0004
- Plataroti, C., 1840 - B0301
- Plate, L., 4587 - A0176
- Platt, S., **4298 - C0272**
- Plaumann, M. D., 1951
- Plaza Reyes, A., **5005 - A0076**, 5007
- A0078
- Pleet, A., 4704 - B0128
- Pleet, A., **4922 - C0367**
- Plesec, T., 5630 - A0349
- Pleyer, U., 1299 - B0006, 423 - A0241
- Ploner, S. B., **3922**
- Ploski, R., 2324 - B0313
- Ploutz-Snyder, R., 722
- Pluháček, F., 1079 - C0092
- Plumb, K., 3025
- Plyler, E., **3720 - B0067**, 3743 - B0090
- Poblete, A., 2452 - C0118, 2752 -
B0131, 3570 - A0187, 762,
764, 767
- Podkowiński, D., **4814 - C0172**
- Podolsky, R., 959 - B0213
- Podracka, L., 313 - C0246
- Poiff, A., 3038 - A0009
- Poh, E. W., **5617 - A0336**
- Pohl, L. K., **5931 - C0328**
- Pohlmann, D., **423 - A0241**
- Pokharel, R., 180 - B0334
- Polanco, J. R., **341 - A0001**
- Polanco, K., 322 - C0255
- Polascik, B. W., 2818 - B0236
- Polat, J., 487 - A0347
- Polei, S., 4976
- Poletto, P. A., 1301 - B0008, 1331
- B0038, 2893 - C0190, 4332
- C0380
- Poliakov, E., 4518 - A0033
- Polido, J., **5759 - C0046**
- Polis, I., 5517 - A0186
- Polisetti, N., 3453
- Polito, A., 2431 - C0097, 4841 - C0199
- Pollack, A., 3985 - A0110
- Pollack, J. S., 1623, 40 - A0071
- Pollak, K., 3004
- Polling, J., 2136 - A0270, **3953**, 700
- C0295
- Pollock, G., 5731 - C0018
- Pollreisz, A., **1506 - C0347**, 297
- C0198, 3234 - B0333, 3248 -
B0347, 4485
- Polosa, A., 968 - B0222
- Polski, A. A., 5598 - A0317
- Pomerantz, M., 1255 - A0096, 1256 -
A0097, 1257 - A0098
- Pomerleau, D., 4830 - C0188, 774
- Pompoço, C., 5689 - A0408
- Ponce, S., 900 - B0078
- Ponce-Angulo, D., **506 - B0013**
- Pondelis, N., **136 - B0050**, 1806 -
B0154
- Ponnalagu, M., 2759 - B0138, 3730
- B0077
- Pontelli, R., 3781 - C0008
- Pontikos, N., 1469 - C0031, 1471
- C0033, 1673 - A0194, 2917
- C0214, **3216 - B0315**, 5550
- A0242, 6026, 6057 - A0091,
815 - A0147, 816 - A0148, 826 -
A0158, 838 - A0170
- Ponugoti, V., 1205
- Poole, T., 2230 - A0399
- Poolman, P., 2186 - A0355
- Poon, P., 3261 - B0360
- Poor, S. H., **2394 - C0060**, 4009 -
A0134
- Poot, D., 2136 - A0270
- Popa Cherecheanu, A., 3191 - B0191
- Pope, A., 695 - C0290, 696 - C0291
- Pope, J. M., 4667 - A0309
- Popel, A. S., 3269 - B0368
- Popelka, S., 5670 - A0389
- Popiela, M., **2223 - A0392**, 438 -
A0298
- Popkowski, M., 60 - A0107
- Poplawski, M., 3177 - A0320
- Poplin, R., **1729 - A0250**
- Popoff, M., 2170 - A0339
- Popova, L., **1241 - A0082**

- Poppe, T., 2144 - A0278
 Por, E., 314 - C0247
 Porciatti, V., 2490 - C0194, **5994**
 Porco, T., 1540 - C0381, 1542 - C0383, 2897 - C0194, 3236 - B0335, 4070 - B0065, 421 - A0239, 6101 - C0220, 6102 - C0221
 Porcu, T., 355 - A0015
 Porporato, N., **5902 - C0189**
 Portal, C., 2243 - B0197
 Portal, C., **3449**
 Portas, L., 1823 - B0284, 1824 - B0285, 1825 - B0286, 702 - C0297
 Portela, R., 5887 - C0174, **5889 - C0176**, 5890 - C0177
 Porteous, A., 2047 - A0105
 Porter, A., 5329 - C0262
 Porter, J., 4749 - B0250
 Porto, F. B., **5419 - A0071**
 Portuguese Visual Impairment Study Group (PORVIS-GROUP), 1069 - C0082, 1070 - C0083
 Posarelli, C., 4066 - B0061
 Posner, M., 2739 - B0118
 Post-injection RAO study group, 5457 - A0126
 Postnatal Growth and ROP (G-ROP), 2783 - B0162
 Postnikoff, C., 4915 - C0360, 910 - B0088
 Postnikoff, C. K., **147 - B0061**
 Postnikova, O., 365 - A0025, 5382 - A0034
 Pot, S., 2527 - C0256
 Potara, M., 557 - B0172
 Potheary, C. A., 1980, 5039 - A0235
 Potier, S., 5049 - A0245
 Potilinski, M., **196 - C0007**, 201 - C0012
 Potsma, F., 2585
 Potter, P., 973 - B0227
 Potter, V., **3100 - A0108**
 Poueymirou, W., 6134 - C0253
 Poukens, V., 2026 - A0053, 2039 - A0066
 Poulsen, D., 2305 - B0259
 Poulsen, E. T., 2254 - B0208, 2264 - B0218
 Pouncey, A., 2739 - B0118
 Pouw, A. E., 1797 - B0145, **1807 - B0155**, 3366 - C0248
 Powell, D. R., 3933
 Powell, F. L., 3003, **3005**, 4024 - A0149, 5381 - A0033, 5486 - A0155
 Powell, I., 2429 - C0095
 Powers, E., 4587 - A0176
 Powers, J., 5446 - A0115
 Powers, M. A., 3371 - C0295, 4430
 Powers, M. A., **886 - A0218**
 Powner, M., 1114 - C0149, 3154 - A0271
 Poyales, F., 252 - C0111
 Poyten, A., 1811 - B0159
 Pradeep, A., 3292 - C0086, 3293 - C0087
 Pradhan, Z., 5068 - B0019
 Prado-Larrea, C., 2065 - A0123, 485 - A0345
 Prahald, S., 408 - A0226
 Prahs, P., **5271 - C0117**
 Prajna, N. V., 3690 - A0374
 Prakalapakorn, S. G., 183 - B0337
 Prakasam, R., **1683 - A0204**, 3439
 Prakash, E., 4475
 Pras, E., 3494
 Prasad, A., 1524 - C0365, **2120 - A0178**
 Prasad, N., 5312 - C0245
 Prasad, P., **400 - A0100**, 4681 - A0323
 Prasanna, G., **1650 - A0026**, 4711 - B0135
 Prata, T. S., 3427 - C0351, 5887 - C0174, **5889 - C0176**
 Prater, J., **2239 - A0408**, 4370 - C0418
 Praveen, S., 839 - A0171
 Prea, S. M., 5127 - B0116
 Prea, S. M., **2386 - C0052**
 Prefilled Ranibizumab Study Group, 5697 - A0416
 Prem Senthil, M., 35 - A0066, **3912**, 4145 - B0368
 Premceski, A., 3043 - A0014
 Premoli, E. J., 5614 - A0333
 Prendergast, S., 3184 - A0327, 3647 - A0308
 Prener Holtan, J. P., **1828 - B0289**
 Prentasac, P., 1221
 Prentice, H. M., 3965
 Prentiss, M., 2532 - C0261, **3544 - A0161**
 Prescott, C. R., 1329 - B0036
 Presswalla, F., 4032 - A0157
 Preston, E., 815 - A0147, 838 - A0170
 Preston, G., 1468 - C0030
 Preston, G. C., **1469 - C0031**, 1471 - C0033, 5550 - A0242, 816 - A0148, 826 - A0158
 Preti, R. C., 1125 - C0160, 1908 - C0308, 3347 - C0229, 4835 - C0193, 613 - B0285
 PREVAIL study group, 4173 - C0015
 Prevost, T., 2569
 Preziosa, C., 4646 - A0288
 Pri-Chen, S., 6004
 Pribisko, M., **232 - C0043**, 3976
 Price, F., 1359 - B0119
 Price, K., 2862 - B0280
 Price, M., 1359 - B0119
 Pricoupenko, N., 5862 - C0149
 Prieto, S. O., 2338 - B0327
 Priglinger, S., 3602 - A0220, 3614 - A0232
 Priluck, A., **5219 - B0332**
 Primavera, L., 1164
 Prince, J., 50 - A0081
 Prins, D., **3703 - B0050**
 Prinz, C., 1493 - C0235
 Prinz, M., 1487 - C0229, 2627 - A0132
 Prinzi, R., 4198 - C0040
 Priyadarshani, P., **4550 - A0065**
 Pro Albino, 303 - C0236
 Probst, C., 567 - B0182
 ProgStar study group, 1568, 788
 Project Age Study Group, 5119 - B0108
 Promin, A., 2009
 Promin, S., 2687 - B0008
 Propp, S., 5316 - C0249
 Proschogo, N., 3276 - C0070
 Prosen, K., 4711 - B0135
 Proshlyakov, D., **3569 - A0186**, 6071 - A0200
 Prosseda, P. P., 3082 - A0053, 4701 - B0125
 Protosow, K., 2560
 Proudlock, F., 5204 - B0317
 Proudlock, F. A., 2173 - A0342, 3934, **4416**, 4417, 5205 - B0318, 5788 - C0075, 612 - B0284
 Prough, M., 1420 - B0339
 Proulx, S., 1358 - B0118, 1363 - B0123
 proumen, X., **5591 - A0310**
 Providencia Costa, J., 2619
 Provis, J., 4604 - A0193, 4606 - A0195, 4607 - A0196
 Proxima A, 5545 - A0237
 Prud'homme, C., 4475
 Pruksakorn, V., 5589 - A0308
 Prunotto, A., 3491
 Prusakiewicz, J. J., 2714 - B0035, 2716 - B0037, 5929 - C0326
 PSV-FAI-001 and 005 study investigators, 5952
 PSV-FAI-001 Study Investigators, 418 - A0236
 Ptosis, 91 - A0254
 Pucker, A., 4915 - C0360, 910 - B0088
 Pucker, A. D., **3933**
 Puech, B., 6026
 Pugh, E. N., 1011 - B0265, 1978, 4515 - A0030, 5822 - C0109, 5825 - C0112, 5834 - C0121
 Pugliese, T., 4526 - A0041
 Pujol, J., 1554, **2941 - C0263**, 5811 - C0098
 Pulido, J., 4298 - C0272
 Puliit, S., 3492
 Pullela, M., 1556
 Pundlik, S., **3425 - C0349**
 Puentes, V., 58 - A0105
 Purgert, R., 4618 - A0260
 Puri, S., 5528 - A0220
 Purington, C., 1969, 32 - A0063
 Puro, D. G., **3281 - C0075**
 Purohit, R., 2173 - A0342, 5788 - C0075
 Purohit, S., 5351 - A0003
 Purrier, N., 1389 - C0096
 Purslow, C., 1590 - B0167, 1404 - B0181, 2945 - C0267, 2948 - C0270, 4885 - C0330
 Pushina, M., 1366 - B0126
 Pushpoth, S., 821 - A0153
 Puskar, A., 3262 - B0361
 Pusti, D., **1173**
 Puthussery, T., **1853 - C0157**
 Putnam, N. M., **5720 - C0007**
 Putra, I., 2989, 3454, **4360 - C0408**, 4421
 Putri, C., **4844 - C0202**
 Puttaiah, N. K., 5068 - B0019
 Puyol, H., **5861 - C0148**
 Pyatla, G., 5148 - B0171
 Pye, V., 330 - C0263
- Q**
 Qamar, R., 4503 - A0018
 Qasemi, E., 1740 - A0261
 Qaysi, S., 4759 - B0260, **662 - C0220**
 Qi, H., 4916 - C0361, 5719 - C0006, **5721 - C0008**
 Qi, H., 1012 - B0266, 3550 - A0167
 Qi, Z., 5142 - B0165
 Qian, H., 546 - B0161, 5523 - A0215
 Qian, J., 2511 - C0215, 3105 - A0113, 4002 - A0127, 980 - B0234, 991 - B0245, 992 - B0246
 Qian, L., 4449
 Qian, R., **273 - C0174**
 Qian, S., 3539 - A0102
 Qian, T., **3192 - B0192**
 Qian, T., 3886 - C0147
 Qian, X., **4128 - B0291**
 Qian, X., 5835 - C0122, **5882 - C0169**
 Qiao, J., 3741 - B0088
 Qiao, L., 3823 - C0050
 Qiao, S., 1851 - C0155
 Qiao, X., 1929 - C0329, **3591 - A0208**, 5479 - A0148
 Qiao, Y., 5119 - B0108
 Qin, H., 2432 - C0098, **4590 - A0179**
 Qin, J., 1542 - C0383
 Qin, L., 1803 - B0151
 Qin, P., 26 - A0057
 Qin, Q., 2112 - A0170
 Qin, V., **1917 - C0317**
 Qin, W., 3314 - C0156, **3871 - C0132**
 Qin, Y., **4956**
 Qin, Y., **3179 - A0322**, 3629 - A0290
 Qin, Y., 5852 - C0139
 Qin, Z., 5645 - A0364
 Qiu, B., 2642 - A0147, 5476 - A0145, 5480 - A0149
 Qiu, C., **3539 - A0102**
 Qiu, C., 3893 - C0359
 Qiu, H., **169 - B0323**
 Qiu, J., 4949
 Qiu, J., 2148 - A0282, 2845 - B0263
 Qiu, K., 1267 - A0302
 Qiu, M., **2731 - B0110**
 Qiu, W., 3359 - C0241
 Qiu, Y., 5323 - C0256
 Qu, G., 5119 - B0108
 Qu, J., 2954 - C0276, 3406 - C0330, 753
 Qu, J., **2811 - B0229**, 2871 - B0289
 Qu, L., 4179 - C0021
 Qu, X., 3375 - C0299
 Qu, Y., 3871 - C0132
 Qu, Y., 5282 - C0215
 Qu, Y., 5835 - C0122
 Quach, J., 2097 - A0155
 Quadrado, M., 446 - A0306
 Quaggini, S., 208 - C0019
 Quah, J. H., 5902 - C0189
 Quan, Y., 1625 - A0001, **97 - A0260**
 Quan, Y., 1005 - B0259
 Quantock, A. J., 3858 - C0119
 Quaranta, L., 4066 - B0061, 5080 - B0031
 Quax, P., 1577
 Queen, J., 5886 - C0173
 Queen, R., 560 - B0175, 570 - B0185
 Queener, H. M., 4749 - B0250
 Queiros, A., 3384 - C0308
 Queiroz, E., 990 - B0244
 Queiroz, M., 4835 - C0193
 Queiroz, R. M., 4787 - B0397, 4807 - B0417
 Quellec, G., 1726 - A0247
 Querques, G., 3150 - A0267, 3156 - A0273, 3210 - B0309
 Quesada, J., 970 - B0224
 Quezada-Ruiz, C., 2599
 Quhill, F., **1906 - C0306**, 4844 - C0202
 Qui, Y., 1527 - C0368
 Quiambao, A., 4951
 Quigley, H. A., 1219, 2738 - B0117, **3462**, 3496, 6038
 Quigley, J., 765
 Quigley, J. W., 2308 - B0262
 Quigley, M., **2429 - C0095**
 Quillen, D. A., 6166 - C0285
 Quinet, J., **3432**
 Quiniou, C., 321 - C0254, 5332 - C0265
 Quinn, C., 4596 - A0185
 Quinn, G. E., 2751 - B0130, 2754 - B0133, 2757 - B0136, 2774 - B0153, 2775 - B0154, 3755 - B0170
 Quinn, N. B., **2408 - C0074**
 Quinn, P. M., 4540 - A0055
 Quinn, R., 3272 - B0371
 Quinn, R., 4580 - A0169
 Quinodoz, M., 2326 - B0315
 Quiñonez, W., 203 - C0014
 Quiñonez, W., 4825 - C0183, **887 - A0219**
 Quintal, A., 5495 - A0164
 Quintero, H., 2613
 Quirce, S., 154 - B0068
 Quiros, P. A., 3366 - C0248
 Quiroz-Casian, N., **2925 - C0222**
 Quiroz-Mercado, H., 1465 - C0027, **1960**, 2769 - B0148, 2770 - B0149, 3070 - A0041, 3280 - C0074, 4225 - C0067, 4619 - A0261, 5243 - B0356, 948 - B0126
 Quist, M., 2073 - A0131
 Qureshi, A., 5736 - C0023
 Qureshy, Z., 1188
 Qvarlander, S., 5055 - B0006
- R**
 R, K. S., 4731 - B0155, 5139 - B0162
 Ra, E., 2827 - B0245, 3195 - B0195
 Raab, R. W., 4914 - C0359
 Raasch, T. W., **4758 - B0259**
 Rabiah, N. I., **3932**
 Rabiee, B., 3454, 4360 - C0408
 Rabin, J. C., **1087 - C0100**, 4372 - C0420
 Rabinovich, G. A., 6072 - A0201
 Rabinovitch, T., 1337 - B0044
 Rabinowitz, Y., 4391 - C0439, 4470, 743
 Racette, L., 4069 - B0064, 5534 - A0226
 Rachapalle, S., 2914 - C0211, **4216 - C0058**
 Rachitskaya, A. V., 3596 - A0214, 4665 - A0307
 Rachitskaya, A. V., 1051 - B0362, 1917 - C0317
 Rad, A., 701 - C0296
 Rada-Iglesias, A., 2477 - C0143
 Radcliffe, N. M., 6103 - C0222, 6104 - C0223
 Radeck, V., 5271 - C0117
 Radeke, M. J., 2469 - C0135, 4018 - A0143, 4224 - C0066, 5313 - C0246, 5468 - A0137
 Radeva, M. N., 906 - B0084
 Radhakrishnan, H., **4401 - C0449**
 Radhakrishnan, K., 3548 - A0165
 Radia, M., **4821 - C0179**
 Radjenovic, M., 156 - B0070
 Radstake, T., 3492, 5380 - A0032
 Radu, R. A., 1569, 3045 - A0016, 4502 - A0017
 Radwan, M., 2051 - A0109
 Radziwon, A., **4505 - A0020**, 6058 - A0187
 Raeder, S., 912 - B0090, 928 - B0106
 Rafat, M., 1380 - B0140, 2251 - B0205
 Raffa, L., 5201 - B0314
 Raffelberg, P., 4570 - A0099
 Raffi, M., 3422 - C0346
 Rafieetary, S., **5317 - C0250**
 Raga-Cervera, J., 5364 - A0016
 Ragauskas, S., 2631 - A0136, 2673 - A0400, **3204 - B0204**
 Raghu, R., **2895 - C0192**
 Raghunathan, V. K., 4369 - C0417, 524 - B0139
 Raghunathan, V., 4373 - C0421
 Raghuram, A., **1953**
 Raghuram, K., 3762 - B0177
 Rah, S., **2937 - C0259**
 Rahaman, S., 5766 - C0053
 Rahardjo, D., 6156 - C0275
 Rahbar, M., 421 - A0239
 Rahi, J., 164 - B0318, 165 - B0319, 1826 - B0287, 775
 Rahimi, M., 2621
 Rahimi-Oztan, M., 3276 - C0070
 Rahimy, E., 1227, **3621 - A0239**, 4291 - C0162
 Rahman, J., 491 - A0351
 Rahman, M., 4154 - B0377
 Rahman, S., 5022 - A0218
 Rahmani, E., 1423 - B0342
 Rahmatnejad, K., 2737 - B0116
 Rai, B. B., **621 - B0293**
 Rai, D., 2888 - C0185
 Raia, S., 3783 - C0010
 Rajii, V., 4836 - C0194
 Raillard, S., **5311 - C0244**, 5320 - C0253
 Raimundo, M., 446 - A0306
 Rainer, J., 3086 - A0057, 346 - A0006
 Rais, D., 5670 - A0389
 Raikup, F., 1384 - B0161, 1395 - B0172
 Raja, L., 1471 - C0033, 826 - A0158, 838 - A0170
 Rajagopal, K., 235 - C0046
 Rajagopal, R., 1894 - C0294, 3586 - A0203, **5365 - A0017**
 Rajagopalan, L., 1653 - A0029, **1654 - A0300**, 492 - A0352
 Rajaii, F., 587 - B0202
 Rajala, A., 2353 - B0363

Rajala – Rich

- Rajala, R. V., **2353 - B0363**
Rajapakse, D., **2438 - C0104**
Rajasingam, P. V., 2141 - A0275
Rajeeth Savarimuthu, T., 1711 - A0232
Rajendram, R., 3600 - A0218
Rajendram, R., 5618 - A0337
Rajendran, V., **1493 - C0235**
Rajesh Lenin, R., 2501 - C0205, 2640
- A0145, **4595 - A0184**, 554 -
B0169, 6066 - A0195
Rajesh, N., 1144
Rajeshuni, N., **2380 - C0046**
Rajhbeharrysingh, T., 2400 - C0066
Rajpal, S., **2052 - A0110**
Rajshshkar, R., 4064 - B0059, **4068**
- **B0063**, 4071 - B0066, 5269
- C0115
Raju, I., 3292 - C0086, 3293 - C0087,
4873 - C0318
Raju, L. V., 3680 - A0364
Raju, M., **2726 - B0105**
Rakoczy, E., **1448 - C0010**
Rakonczay, Z., 4923 - C0368
Rakshit, A., 4146 - B0369
Rakstyte, A., **2695 - B0016**
Ralfkiaer, E., 5587 - A0306
Rallabandi, R., 3086 - A0057
Ralpchs, J., 5722 - C0009
Ram, J., 3536 - A0099
Ram Sahu, G., 358 - A0018
Rama, P., 3336 - C0178, **34 - A0065**,
4350 - C0398
Ramachandra, C., 1666 - A0187
Ramachandra Rao, S., 4586 - A0175,
5511 - A0180
Ramachandran, S., **1555**
Ramadan, A., 1546
Ramaesh, K., 3677 - A0361, 4674 -
A0316
Ramaia, K., 161 - B0075
Ramakrishnan, C., 1864 - C0168, 2995
Ramakrishnan, H., 1856 - C0160,
6141 - C0260
Ramakrishnan, T., 1469 - C0031, **1471**
- **C0033**, 5550 - A0242, 815
- A0147, 816 - A0148, 826 -
A0158, 838 - A0170
Raman, R., 2890 - C0187, 387 - A0087
Ramanathan, S., 6161 - C0280
Ramani, N., 2602, 5166 - B0189
Ramasamy, K., 5360 - A0012
Ramasubramanian, A., 3812 - C0039,
4963
Rambarran, T., 1190
Ramchandran, R., **1198**
Ramella-Roman, J., 5844 - C0131,
6202 - C0356
Ramesh, N., 138 - B0052
Ramesh, R., 5384 - A0036
Ramesh, S., 3548 - A0165
Ramier, A., 1401 - B0178, 1407 -
B0184
Ramirez, A., 3212 - B0311
Ramirez, K., 5056 - B0007, 5062 -
B0013
Ramirez, P., 1058 - B0369
Ramirez-Davis, N., 1242 - A0083
Ramirez-Miranda, A. J., 1343 - B0050,
2309 - B0263, 4384 - C0432,
5752 - C0039, **5758 - C0045**,
915 - B0093
Ramirez-Sanchez, I., 351 - A0011
Ramm, L., **1383 - B0160**, 1384 -
B0161
Ramo, A., 6147 - C0266
Ramón Concepción, A., 4825 - C0183,
887 - A0219
Ramos Betancourt, N., 2068 - A0126,
3811 - C0038, **5597 - A0316**
Ramos Cadena, M., **3501**
Ramos, C., 3356 - C0238
Rampakakis, E., 1622, 4247 - C0089
Ramsay, M., 3515 - A0078, 5145 -
B0168
Ramsden, C., 1494 - C0236, 2984,
2985, **4018 - A0143**
Ramsey, D. J., **3423 - C0347**
Ramu, J., 2569
Ramulu, P. Y., **1943**, 1945, 2099
- A0157, 2731 - B0110, 2738 -
B0117, 2849 - B0267, 3910, 4105
- B0230, 4152 - B0375, 4988,
5162 - B0185, 5184 - B0207,
5185 - B0208
Ramussen, P., 5587 - A0306, 5986
Ramyaidevi, R., 2749 - B0128, 2776
- B0155
Ran, L., **3702 - B0049**
Rana, P., 3960
Rana, V., 331 - C0264
Rand, G., 2888 - C0185
Rand, G. M., **2889 - C0186**, 3887 -
C0148
Randhawa, S., 5397 - A0049, 6052
- A0086
Randleman, J. B., 1385 - B0162, 1388
- B0165, 1416 - B0193, 4397
- C0445, 4398 - C0446, 4400
- C0448, 5743 - C0030, **5774 -**
C0061, 5780 - C0067
Randolph, K., 629 - C0059
Rangaramanujam, K., 4422, 4920 -
C0365, **770**
Rangasamy, S., 1911 - C0311
Rangasamy, N., 2532 - C0261, 990
- B0244
Rangchian, A., **5712 - A0431**
Rangell, L., 2441 - C0107
Rani, L., **4411**, 625 - B0297
Ranipa, K., **1728 - A0249**, 1731 -
A0252, 1734 - A0255
Ranjbar, M., 2471 - C0137, 2860 -
B0278, **5303 - C0236**, 73 - A0120
Ranjit, P., 463 - A0323
Rao, G., **1199**
Rao, H. L., **5068 - B0019**
Rao, K., 1894 - C0294, 3628 - A0289
Rao, L., 4816 - C0174
Rao, N. A., 2835 - B0253, 4190
- C0032, 4191 - C0033, 4211 -
C0053, 82 - A0129
Rao, P., 5434 - A0103
Rao, P., 518 - B0025
Rao, R. C., 4854 - C0212, **571 - B0186**
Rao, S., 3001
Rao Uppugunduri, S., 1674 - A0195
Rao, V., **3488**, 4715 - B0139
Rao, V. R., 3526 - A0089
Raouf, S., 2832 - B0250
RAPID, 115 - B0029
Rapp, K. D., 5990
Rapp, S. R., 4053 - B0048
Rashad, R., **1802 - B0150**, 4889 -
C0334
Rasheed, M., 1674 - A0195
Rashid, K., **5390 - A0042**
Rashidi, N., 2016 - A0043
Rashidi, S., 5117 - B0106
Rashidzadeh, H., 2714 - B0035
Raskin, E., 4311 - C0285
Rasko, J., 1203
Rasmussen, A., **5449 - A0118**
Rasmussen, C. A., 5828 - C0115
Rassi, T., 1059 - B0370
Rastegar, Z., 1227
rasys, A. M., 577 - B0192, **589 -**
B0204, 593 - B0208
Ratanawongphaibul, K., 145 - B0059
Ratbi, I., 3021
Rathi, S., 5148 - B0171
Rathinam, V., 1546
Rathnasamy, G., 3992 - A0117, **4028**
- **A0153**
Ratliff, C., 1979
Ratnam, K., **656 - C0214**
Ratnapriya, R., 370 - A0030,
6010, **6025**, 792
Ratnayaka, J., 4487 - A0002, 5784 -
C0071, 5827 - C0114
Ratni, H., 2448 - C0114
Ratprasatporn, N., 1170
Rattanakijsumton, K., 4457
Rattner, A., 6024
Rauscher, F. G., 1101 - C0136, 1105 -
C0140, 1128 - C0163
Rautha, Y. V., **4769 - B0270**
Rauz, S., 1165, 2521 - C0250, 2522 -
C0251, 5851 - C0138
Raval, N., 2795 - B0213
Ravichandiran, V., 5301 - C0234
Ravier, M., 1682 - A0203, 2103 -
A0161
Ravikumar, S., 648 - C0206, 731
Ravilla, T., 3799 - C0026
Ravindran, N., 6117 - C0236, 6131
- C0250
Ravn, L., 2646 - A0151
Rawlings, M., 2112 - A0170
Ray, C., 1026 - B0310, 2220 - A0389,
2573, 3687 - A0371, 5244 -
B0357, **899 - B0077**
Ray, M., 3689 - A0373
Ray, T., **2351 - B0361**
Rayborn, M. E., 2443 - C0109
Raychaudhuri, K., **720**
Raychaudhuri, U., 1655 - A0031
Rayess, N., 3625 - A0286, **4291 -**
C0162
Raymond, F. L., 4467
Raymond, T. D., 3278 - C0072
Razavi, S., 1455 - C0017
Razeen, M. M., **4088 - B0083**, 4632
- A0274
Razeghinjad, M., 2737 - B0116
RC, 3552 - A0169, 4527 - A0042
RD-Cure Consortium, 2658 - A0385,
2982, 998 - B0252
RE, 3548 - A0165
Read, A. T., 2024 - A0051, 3970
Read, M. L., **3931**
Read, S. A., 1732 - A0253, 2139 -
A0273, 4940
Read, S., **3911**
Read-Brown, S., 5248 - B0361
Realini, T., **3458**
Rebernick, R., 3490
Rebhun, C., 2621, 3922
Rebola, J. P., 4669 - A0311
Rebolledo, G., **3352 - C0234**, 3353
- C0235
Recalde, S., 1427 - B0346, 223 -
C0034, **2479 - C0145**
Recchimurzo, N., 4846 - C0204
Recchioni, A., **4888 - C0333**
Récsán, Z., 1932 - C0332, 1933
- C0333, 1934 - C0334, 628 -
C0058
Redd, T., **2782 - B0161**
Reddikumar, M., 292 - C0193
Reddy, G., 808 - A0140
Reddy, J., 938 - B0116
Reddy, P., 1601
Reddy, S., 3705 - B0052
Redekop, R., 1582, **4320 - C0294**
Redelmeier, D., 6017
redens, T., 2262 - B0216
Redfern, M., 1944
Redfern, R. L., **1768 - B0083**, 1772 -
B0087, 3312 - C0154
Redmon, S., **3939**
Redmon, S., 3713 - B0060
Redmond, R., 4335 - C0383
Redmond, T., **4518 - A0033**, 5382 -
A0034
Reed, C. R., 1357 - B0117
Reed, D. M., 2023 - A0050, 5886 -
C0173
Reed, D., 2300 - B0254
Reed, D. S., **110 - A0273**
Reed, M., **2358 - B0368**, 3054 - A0025
Reem, R. E., 2190 - A0359
Rees, A., 412 - A0230, 4175 - C0017,
4206 - C0048
Rees, G., 3913
Reese, B. E., 588 - B0203, 595 - B0210
Reese, J., 1920 - C0320, 1930 - C0330,
3596 - A0214, 4232 - C0074
Reeves, M., **4240 - C0082**
Reeves, M., 2331 - B0320, 2340 -
B0329
Reeves, P. J., 4504 - A0019
Refaian, N., 1355 - B0115
Regan, R., 6054 - A0088
Regan, S., 583 - B0198
Rege, A., **5878 - C0166**
Regenfuss, B., 3330 - C0172
Regillo, C., 4291 - C0162, 5004 -
A0075, 79 - A0126
Reginald, A., 5206 - B0319
Regmi, S., 3827 - C0054
Reh, T. A., 1485 - C0227, 2586, 4608
- A0197
Rehak, M., 1956, **2568**
Rehfeldt, F., 2040 - A0067
Rehg, J., 4076 - B0071
Reibaldi, M., 3166 - A0309, 3948
Reich, M., 4176 - C0018
Reich, S., 5906 - C0193
Reichert, K., 3439
Reichhart, N., 5553 - A0245
Reichl, S., 4593 - A0182, 530 - B0145
Reid, C., 6053 - A0087
Reid, T. W., 2573, 3687 - A0371, 899
- B0077
Reiff, J., 5223 - B0336
Reilly, G., 5476 - A0145
Reilly, M. A., 1410 - B0187, 3032 -
A0003
Reimers, J., 4676 - A0318
Reina-Torres, E., 3505 - A0068
Reinach, P. S., 5385 - A0037
Reinach, P. S., 1366 - B0126, 4420
Reinards, T., 3492
Reinehr, S., **3709 - B0056**, 3727 -
B0074, 6144 - C0263
Reiner, A., 2501 - C0205
Reinhard, J., 1630 - A0006, 3727 -
B0074, **4439**
Reinhard, T., 4317 - C0291
Reinherz, B., 4783 - B0393
Reinoso, M., 1888 - C0288, 48 - A0079
Reinoso, R., 5773 - C0060
Reins, R. Y., **3312 - C0154**
Reinsbach, M., 2915 - C0212, 5746
- C0033
Reis, A., 3019, 3330 - C0172, 3515
- A0078
Reis, D., 1405 - B0182
Reiser, B. J., 166 - B0320, **2666 -**
A0393
Reisman, C., 1523 - C0364, 1525
- C0366, **2093 - A0151**, 3225
- B0324
Reiss, P., 4649 - A0291
Reiter, G. S., 3248 - B0347, 4483, **4485**
Reither, C., 5931 - C0328
Reitner, A., 3357 - C0239
Reitsamer, H. A., 308 - C0241, 3201
- B0201
Reitsamer, H. A., 317 - C0250
Rejman, J., **5668 - A0387**
Rekas, M., 2022 - A0049
Relhan, N., 1157, 529 - B0144
Relucio, A., **2043 - A0101**
Remaut, K., 5708 - A0427, **6007**
Remick-Waltman, K., **2956 - C0278**
Ren, C., 1849 - C0153
Ren, D., **5252 - B0365**
Ren, J., **372 - A0032**
Ren, R., **3476**
Ren, S., 5994
Ren, X., **191 - C0002**, 3550 - A0167
Ren, X., 4001 - A0126
Rendon, A., 351 - A0011, 5151 - B0174
Reneker, 3806 - C0033
Reneker, L. W., **3806 - C0033**
Renner, C., 3950
Renner, L., 327 - C0260, 3589 -
A0206, **4517 - A0032**
Rennie, C., 3606 - A0224
Renunkulita, J., **3852 - C0113**
Repetto, R., 1665 - A0041, 3263 -
B0362
Repka, M. X., 181 - B0335, 182 -
B0336
Reppe, S., **3865 - C0126**, 3884 - C0145
Resch, H., **2122 - A0180**, 2123 -
A0181, 4065 - B0060
Research Program for Experimental
Ophthalmology and Glaucoma
Research, 3201 - B0201
Resnicow, K., 5227 - B0340
Restrepo F. C. M., 2524 - C0253
Retina, 2240 - A0409, 3212 - B0311
Retinal cell biology, 1493 - C0235,
1983, 3096 - A0104, 4014 -
A0139
Retinal Development Laboratory, 579
- B0194
Retro-IDEAL study group, 4856 -
C0214
Rettinger, C. L., **3121 - A0129**
Reuben, A., 3179 - A0322
Reubinofo, B., 77 - A0124
Reumüller, A., 297 - C0198
Reuter, P., 1565, 6044 - A0078
Reveille, J. D., 421 - A0239
Revelant, F., 237 - C0048
Revere, K. E., **84 - A0247**
Reverte, C. A., 2257 - B0211
Rex, P., 3598 - A0216
Rex, T. S., 4450, **5514 - A0183**
Reyes Moon, A., 2360 - B0370, 2361
- B0371
Reyes, N., 3313 - C0155
Reynaud, A., 4115 - B0278
Reynaud, J., 1215, 2097 - A0155, 2108
- A0166, 3026, 3514 - A0077
Reynier, P., 755
Reynison, H., 5854 - C0141
Reynolds, A., 179 - B0333
Rezaei, K., 2689 - B0010
Rezaeian, M., **5428 - A0097**
Rezaeikanavi, M., 2327 - B0316, 3087
- A0058, **5011 - A0082**
Rezapour, J., **5191 - B0214**
Rezaz, S., 1445 - C0007, 3193 - B0193,
818 - A0150
Rezende, F., 2025 - A0052, 4247 -
C0089
Reznicek, L., 5884 - C0171
Reznick, L., 5248 - B0361
Reznik, A., 5059 - B0010, 5060 -
B0011, 5069 - B0020
Rhee, D., 486 - A0346
Rhee, D. J., 3529 - A0092
Rhee, J., 3448
Rhee, K., **2502 - C0206**
Rhee, K., 3943
Rhee, M., 1785 - B0100, 3664 - A0348
Rhee, S., 1035 - B0346
Rho, C., **133 - B0047**, 4365 - C0413
Rhodes, L. A., **5235 - B0348**
Rhodes, M., 1916 - C0316
Riascos, R., 722
Riau, A. K., **5770 - C0057**
Riaz, K., 264 - C0123, 4794 - B0404
Riazuddin, S., 4468, 5383 - A0035
Riazuddin, S., 794
Riazuddin, S., 4468, 5383 - A0035
Ribas-Jaimes, R., 506 - B0013
Ribelayga, C., **2585**
Riboulet, W., 3260 - B0359
Rice, D. S., 1650 - A0026, 4711 -
B0135
Rice, J., 5223 - B0336
Rich, B. E., 3007
Rich, C., 3848 - C0109
Rich III, W., 2604

- Richards, A., 6041 - A0075
 Richards, M. D., **1954**
 Richardson, A., 2241 - B0195, 2990
 Richardson, J. R., 3720 - B0067
 Richardson, P. S., 5649 - A0368
 Richardson, R., 4492 - A0007
 Richardson-Wynd, A., 4470
 Richdale, K., **1743 - B0058**
 Richelle, V., 4503 - A0018
 Richert, E., **66 - A0113**
 Richhariya, A., 1674 - A0195
 Richmond, A., 1642 - A0018
 Richter, G., 4075 - B0070, 5059
 - B0010, 5060 - B0011, 5069 -
 B0020, 5187 - B0210
 Rickert, M., 3416 - C0340
 Rico Del Viejo, L., 1700 - A0221
 Ridano, M. E., **6072 - A0201**
 Ridder, W. H., 4112 - B0275
 Ridder, W. H., 3428 - C0352
 Ridilla, M., 3535 - A0098
 Riedel-Heller, S. G., 1128 - C0163
 Riederer, D., 1769 - B0084
 Riedlova, K., 3279 - C0073
 Riedmayr, L. M., **4496 - A0011**, 5334
 - C0267
 Rieger, S., **2281 - B0198**, 4695 - A0337
 Rieke, N., 287 - C0188
 Riemann, C. D., 4820 - C0178
 Riemann, I., 4022 - A0147
 Rieu, Q., **4012 - A0137**
 Rigas, B., 3820 - C0047, 3837 - C0064
 Righetti, N., 6081 - C0200
 Rigo, F., 2343 - B0332, 4523 - A0038
 Rijn, G. A., 2135 - A0269
 Rikard, M., 3571 - A0188
 Rim, J., 5400 - A0052
 Rim, T., 1722 - A0243
 Rimmer, S., 5691 - A0410
 Rincon Frutos, L., 3309 - C0151
 Rincón Montes, V., 4566 - A0095
 Rinella, N., 1540 - C0381, 1542 -
 C0383, **3236 - B0335**, 4634
 - A0276
 Ring, J., 6031
 Ringstad, H., 3865 - C0126
 Rinsky, B., 1423 - B0342, 356 - A0016
 Rio, D., 4768 - B0269, **5804 - C0091**
 Rios Diarte, D., 4205 - C0047
 Rios, G. J., **3599 - A0217**
 Rios, H. A., 1719 - A0240, **1741 -**
A0262
 Rios, R., 2231 - A0400
 Rios-Acosta, N., **491 - A0351**
 Rios-Blancas, M., 4100 - B0225
 Ripa, M., **152 - B0066**
 Ripandelli, G., 2826 - B0244
 Risch, N., 1179
 Rishi, E., 1509 - C0350, 4843 - C0201
 Rishi, P., **1509 - C0350**, 5590 - A0309
 Rising, A., **546 - B0161**
 Risner, M., 3714 - B0061
 Riss, I., 3457
 Ristoldo, F., 49 - A0080
 Ritche, R., 2089 - A0147, 3020,
 310 - C0243, 3535 - A0098,
 4064 - B0059, 4071 - B0066,
 4465, 4987, 5053 - B0004, 5067
 - B0018, 5128 - B0117, 5269
 - C0115
 Ritter, M. K., 3183 - A0326
 Riva, I., 4066 - B0061, 5080 - B0031
 Rivera, D., **6155 - C0274**
 Rivera, J., **4279 - C0150**, 550 - B0165
 Rivera, J. C., 2648 - A0153, 321 -
 C0254, 5332 - C0265
 Rivera, L., 3657 - A0341
 Rivera-Grana, E., 2526 - C0255, **4165**
 - **C0007**
 Rivers, B., 3828 - C0055, 4914 -
 C0359
 Rivlin-Etzion, M., 1590, 1870 - C0174,
 5293 - C0226
 Rivolta, C., 2326 - B0315, 2327 -
 B0316, 3491, 5407 - A0059,
 5421 - A0073
 Rizzo, J. F., 2191 - A0360
 Rizzo, M., 316 - C0249
 Rizzo, R., 4113 - B0276
 Rizzo, S., 1696 - A0217, 2836 - B0254,
 2838 - B0256, 3978, 4305 -
 C0279
 Rizzuti, A. E., 3649 - A0333
 Rizzuto, P. R., 5220 - B0333
 Robaei, D., 3650 - A0334
 Robb, B. M., 2486 - C0190, 2496 -
 C0200
 Robbins, D., 5455 - A0124
 Robert, M., 3092 - A0063
 Roberti, G., 5080 - B0031
 Roberts, A. L., **4712 - B0136**
 Roberts, C. J., 1410 - B0187, **2682**
 - **B0003**
 Roberts, D. K., **1815 - B0276**
 Roberts, E., 3664 - A0348
 Roberts, M. F., 1815 - B0276
 Roberts, P. K., **2622**
 Roberts, R., 959 - B0213
 Roberts, T. L., 1082 - C0095, 2942
 - C0264, 2950 - C0272, **4753**
 - **B0254**
 Robertson, D. M., 4936
 Robertson, G., 3448
 Robeson, R., 5673 - A0392
 Robichaux, M. A., 3100 - A0108, **3102**
 - **A0110**
 Robillard, K. N., 48 - A0079
 Robillard, K. N., **2343 - B0332**
 Robins, J., **5276 - C0122**
 Robinson, A., 4369 - C0417
 Robinson, G., 6078 - A0207
 Robinson, J., 4706 - B0130
 Robinson, M. L., 3119 - A0127
 Robinson, M. L., 573 - B0188
 Robinson, M. R., 1653 - A0029,
 1654 - A0030, **2056 - A0114**,
 492 - A0352
 Robitaille, J. M., 3113 - A0121
 Robman, L. D., **5539 - A0231**
 Robson, P. A., 3464
 Rocco, V., 4628 - A0270
 Rocha, E. M., 3781 - C0008, **4420**
 Rocha Jimenez, L., 2509 - C0213,
 3695 - B0042
 Rocha-Sousa, A. A., 1069 - C0082,
 4478
 Rochet, E., **499 - B0006**
 Rochette, P. J., 1358 - B0118, 357 -
 A0017, 363 - A0023
 ROCKET-2 Study Group, 1242 -
 A0083
 Rockwell, B., 1403 - B0180
 Rockwell, K., 213 - C0024
 Rockwood, E. J., **454 - A0314**
 Roddy, G. W., 1008 - B0262
 Rodger, D. C., **1997**, 2835 - B0253,
 4075 - B0070, 6177 - C0296,
 82 - A0129
 Rodgers, J., 5039 - A0235, 5989
 Rodier, J. T., 4359 - C0407
 Rodrigues, A. P., 4669 - A0311
 Rodrigues, G. A., **233 - C0044**
 Rodrigues, I., 2688 - B0009
 Rodrigues, T., 1470 - C0032
 Rodrigues, T. M., 1892 - C0292
 Rodriguez Agudo, J., **5767 - C0054**
 Rodriguez, A., 4783 - B0393
 Rodriguez, D., 1537 - C0378, **3212 -**
B0311, 3605 - A0223
 Rodriguez, D., 1058 - B0369
 Rodriguez, D., **1295 - B0002**
 Rodriguez Estevez, L., 3029
 Rodriguez, E. E., 422 - A0240
 Rodriguez, F., 1128 - C0163
 Rodriguez, F., 1741 - A0262, 390 -
 A0090, **397 - A0097**
 Rodriguez Garcia, A., 2908 - C0205
 Rodriguez Garcia, M., 1146
 Rodriguez, J. D., 2424 - C0090
 Rodriguez, J., 3859 - C0120, **3863**
 - **C0124**
 Rodriguez, J. R., 223 - C0034
 Rodriguez, L., 3583 - A0200, 5297
 - C0230
 Rodriguez, L., **5522 - A0214**
 Rodriguez Loaliza, J., 1100 - C0135
 Rodriguez, L., **1236 - A0077**
 Rodriguez, M., **1162**
 Rodriguez, M., 330 - C0263
 Rodriguez, N., **1537 - C0378**
 Rodriguez, P., 1956
 Rodriguez, S. M., **1044 - B0355**
 Rodriguez Torres, L., 6109 - C0228
 Rodriguez-Barrientos, C., **1382 -**
B0142
 Rodriguez-Castro, S., 948 - B0126
 Roeck, D., 1042 - B0353
 Roehl, I., 5702 - A0421
 Roehrich, H., 364 - A0024
 Roepman, R., 4979
 Rogal, J., 567 - B0182
 Rogala, M. M., **2020 - A0047**
 Rogan, E., 1359 - B0119
 Röger, C., 2275 - B0229
 Roger, J. E., 1208, **2595**
 Rogers, D. L., 2189 - A0358, 2190 -
 A0359, **4141 - B0304**
 Rogers, G. F., **2989**
 Rogers, J., 1881 - C0185
 Rogers, K., 5184 - B0207, 5185 -
 B0208
 Rogers, S., **2190 - A0359**
 Rogers, S., 1958, 404 - A0222, 4167
 - C0009, 4168 - C0010, 4839
 - C0197
 Rogness, V., 2444 - C0110
 Rognon, G. T., 5840 - C0127
 Roh, S., 3423 - C0347
 Rohan, E., 4136 - B0299, 621 - B0293
 Rohiwal, S., 5670 - A0389
 Röhlrig, M., 1683 - A0204
 Rohrer, B., 5559 - A0251, **792**, 980
 - B0234
 Roider, J., 1440 - C0002, 4484, 4561 -
 A0090, 66 - A0113
 Roig-Melgranados, E., 2816 - B0234
 Roizenblatt, M., **5926 - C0323**
 Rojananuangnit, K., **2082 - A0140**
 Rojanapongpun, P., 1170
 Rojanaporn, D., 4284 - C0155
 Rokem, A., 1222, 1223
 Rolando, M., 4871 - C0316, 4887 -
 C0332
 Roldan, T., 577 - B0192
 Rolius, R., 6166 - C0285
 Rolland, P., 1296 - B0003, 2898 -
 C0195
 Rolle, T., **3197 - B0197**
 Rollins, A., 745
 Romani, S., 437 - A0297
 Romano, C., **5482 - A0151**
 Romano, C., 1447 - C0009, 2534
 - C0263, 3050 - A0021, 5461 -
 A0130, 6134 - C0253
 Romano, J., 3828 - C0055
 Romano, L., 1058 - B0369
 Romano, V., 3328 - C0170, 5719 -
 C0006, 5721 - C0008
 Romanowski, E. G., 2660 - A0387,
 3658 - A0342, 717
 Romanowski, J. E., 2660 -
 A0387, **3658 - A0342**
 Romaschenko, D., **4938**, 5808 -
 C0095
 Romeo, A., 625 - B0297
 Romero Martin, R., 5369 - A0021
 Romero, M., 252 - C0111
 Romero Morales, V. A., **1058 - B0369**
 Rommel, B., **3415 - C0339**
 Rommel, F., **2860 - B0278**
 Romo García, E., 4040 - A0247, 4825 -
 C0183, 887 - A0219
 Romo Sainz, M., 1239 - A0080, 2693 -
 B0014, 469 - A0329
 Romo-Aguas, J., 2770 - B0149
 Romo-Garcia, E., **203 - C0014**
 Ronconi, C., 406 - A0224
 Rondelli, D., 4873 - C0318
 Roney Kilpp Goulart, P., 4044 - A0251
 Rong, A. J., **5424 - A0093**
 Rong, A. J., 3671 - A0355
 Rong, S., **5157 - B0180**
 Rong, X., 4214 - C0056
 Ronning, K., 1978, **3941**
 Rook, C. A., 3037 - A0008
 Rooney, L., 3746 - B0093
 Roongpooapat, V., 5737 -
 C0024, **5742 - C0029**
 Roorda, A., 1540 - C0381, 1542 -
 C0383, 4633 - A0275, 4634
 - A0276, 648 - C0206, 653 -
 C0211, 656 - C0214, 731, **756**
 Roosing, S., **2321 - B0310**
 Rootman, D., 5613 - A0332
 Rootman, D., 1337 - B0044, 1338 -
 B0045
 Ropo, A. M., **1233 - A0074**
 Rosa, A., 446 - A0306
 Rosa, N., 5755 - C0042
 Rosa, R. H., 1008 - B0262, 997 -
 B0251
 Rosales, M., **1185**, 2476 - C0142
 Rosario, P., 860 - A0192
 Rosario, A., 5688 - A0407
 Rosas, V., 1405 - B0182, 1912 - C0312
 Rosati, A., 4078 - B0073, **5120 - B0109**
 Rosdahl, J. A., 5228 - B0341
 Rose, K. A., 185 - B0339, 2179 -
 A0348, 3376 - C0300, 3959, 5064
 - B0015, 5168 - B0191
 Rose-Nussbaumer, J., 1325 - B0032,
 1575, 2897 - C0194, 4895 -
 C0340
 Rosemann, C., 115 - B0029, 3788 -
 C0015
 Rosen, A., 4771 - B0272
 Rosen, L., 5778 - C0065
 Rosen, R. B., 1529 - C0370, 1667
 - A0188, 2832 - B0250, 3170
 - A0313, 3446, **3447**, 3673 -
 A0357, 3694 - A0378, 4479,
 4994, 5054 - B0005, 6188
 - C0307
 Rosen, R., **1075 - C0088**
 Rosen, S., **3526 - A0089**
 Rosenbaum, J. T., 1137, 2526 - C0255,
 270 - C0171, 4165 - C0007, 4644
 - A0286
 Rosenberg, N., 2706 - B0027, **455 -**
A0315
 Rosenberg, P. A., 2012
 Rosenblatt, A., 1094 - C0129, **3372**
 - **C0296**
 Rosenblatt, M., 1721 - A0242, 3284 -
 C0078, 4418, 98 - A0261
 Rosencrans, R., 4523 - A0038
 Rosendall, P. E., 3892 - C0358
 Rosenfeld, P. J., 274 - C0175, 2880 -
 B0298, 3923
 Rosenkranz, P., 2234 - A0403
 Rosenmann, A., 1831 - B0292
 Rosenstein, R. E., 5535 - A0227
 Rosenstiehl, S. M., 397 - A0097
 Rosenzweig, H., **2549 - C0278**, 2551
 - C0280
 Rosier, L., 5924 - C0321
 Rosignol, I., 6143 - C0262
 Rosin, B., **1004 - B0258**
 rosner, B., **4150 - B0373**
 Ross, A., **5695 - A0414**, 5711 - A0430
 Ross, B. X., **4964**
 Ross, B. D., 1629 - A0005
 Ross, K., 2892 - C0189
 Ross, M., 3659 - A0343, 5629 - A0348
 Ross, N., **2560**
 Ross, N. C., 2165 - A0334, 2564
 Ross-Cisneros, F. N., 1541 - C0382,
 2180 - A0349, 2831 - B0249, **306**
 - **C0239**, 307 - C0240, 5993
 Rossato, F., 70 - A0117
 Rossato, F., **2629 - A0134**
 Rossato, M., 5380 - A0032
 Rossee, T., 5408 - A0060
 Rossetti, L. M., 34 - A0065, 4061
 - B0056, 4990, 5131 - B0120,
 6030, **6033**
 Rossi, E. A., 4635 - A0277
 Rossi, F., 4426
 Rossi, G. C., 1254 - A0095
 Rossi, S., 3095 - A0103, 378 - A0038,
 3966
 Rossin, E., **521 - B0028**
 Rossmiller, B. P., **5659 - A0378**
 Rosso, A., 822 - A0154
 Rostami, B., **5217 - B0330**
 Rostamizadeh, M., 2789 - B0207, **4261**
 - **C0132**
 Roszak, K., 6006
 Rossik, J., 3179 - A0322, 4959
 Rotenstreich, Y., **6004**, 726
 Roth, M., 4929 - C0374
 Rothaus, K., 3140 - A0257, 3218 -
 B0317
 Rother, C., 6044 - A0078
 Rotter, J. I., 1182, 2755 - B0134, 4470,
 5137 - B0160
 Roubeix, C., **5553 - A0245**
 Rouger, H., 2322 - A0401, 4135 -
 B0298
 Rouget, R., 321 - C0254
 Rougier, M. B., 1922 - C0322, 5537
 - A0229
 Rountree, C. M., 4569 - A0098
 Rouse, B. T., **2977**
 Rousseau, J., 5163 - B0186
 Rouster-Stevens, K. A., 408 - A0226
 Roux, M. J., 2344 - B0333
 Roux, S., **4030 - A0155**
 Rowai, L., 5866 - C0153
 rowaan, C., 2978
 Rowan, S., **2440 - C0106**
 Rowe, F. J., 5168 - B0191
 Rowe, S., 2414 - C0080, 2428 - C0094
 Rowe, S., 2234 - A0403, 6099 - C0218
 Rowlands, M., **1644 - A0020**
 Rowley, A., 947 - B0125
 Roy, A., 3890 - C0356, 3892 - C0358,
 4568 - A0097, 4572 - A0101
 Roy, M., **4039 - A0246**
 Roy, N. S., **919 - B0097**
 Roy, P., 1286 - A0321, **1678 - A0199**
 Roy, R., 2890 - C0187
 Roy, S., 3545 - A0162
 Roy-Gagnon, M., 5163 - B0186
 Roybal, C., 161 - B0075
 Royer, D. J., **4936**
 Royo, D., 1708 - A0229
 Rozanowska, M. B., **4978**
 Rozé, J., 2788 - B0167
 Rozema, E., 5198 - B0311
 Rozema, J. J., 2137 - A0271, 2270
 - B0224, 2675 - A0402, **4752**
 - **B0253**, 5800 - C0087, 5804 -
 C0091, 5810 - C0097
 Rozenberg, F., 4179 - C0021
 Rozidzki, V., 535 - B0150
 Ruan, Q., 3079 - A0050
 Rubenstein, J., 5580 - A0299
 Rubenstein, J., 1294 - B0001
 Ruberto, F., **5421 - A0073**
 Rubin, D., 1721 - A0242
 Rubin, G. S., 1262 - A0297
 Rubin Panvini, A., **4774 - B0384**
 Rubinstein, N., 5129 - B0118
 Rubio, F., **948 - B0126**
 Rubio-Tijerina, F., 3280 - C0074
 RUBY Study Investigators, 3620 -
 A0238

- Ruchi, F., **1188**
 Rucker, F. J., **679 - C0274**, 683 - C0278, 749
 Ruckert, R., 2415 - C0081
 Rudd, T., 2469 - C0135
 Ruddle, J., 2325 - B0314, 2330 - B0319
 Rudenko, A., 5654 - A0373
 Rudolf, M., 73 - A0120
 Rudolph, G., 3361 - C0243, 3363 - C0245
 Rueda, J., 2084 - A0142
 Rueda-Latorre, D., 2084 - A0142
 Rueff, E., **1757 - B0072**
 Ruf, I., 4715 - B0139
 Rufai, S. R., **5788 - C0075**
 Ruggeri, A., **4350 - C0398**, 5718 - C0005
 Ruggeri, M., 1949, **1950**, 268 - C0127, 2978, 2979, 3031 - A0002, 5737 - C0024
 Rui, Y., 2466 - C0132
 Ruigrok, R. A., 4979
 Ruiz Franco, A. S., **2177 - A0346**
 Ruiz-Garcia, H., 1522 - C0363, **2816 - B0234**
 Ruiz-Moreno, J., 3225 - B0324
 Ruiz-Oliva, F., 3178 - A0321
 Rumkimi, D., 5124 - B0113
 Ruminiski, D., 4049 - A0256
 Rundek, T., 1102 - C0137, 1124 - C0159, 618 - B0290
 Runge, C., 308 - C0241, 317 - C0250, 3201 - B0201
 Runkle, M., **4057 - B0052**
 Rupenthal, I. D., 3282 - C0076, 3466, 5358 - A0010, 5698 - A0417
 Rupp, J. D., 5534 - A0226
 Rushbrooke, L. J., 3464
 Russakoff, D. B., **1717 - A0238**, 1799 - B0147
 Russell, A. J., 4600 - A0189, 4613 - A0202
 Russell, D., 539 - B0154
 Russell, G., 4189 - C0031
 Russell, G., 4091 - B0216
 Russell, J. F., 498 - B0005
 Russell, P., 2292 - B0246
 Russell, S. R., **3900 - C0366**
 Russmann, C., 2854 - B0272
 Russo, A., 3948, **803 - A0135**
 Russo, G., 3166 - A0309
 Russo, S., 5883 - C0170
 Ruster, T. E., 3774 - C0001
 Rusu, I., 3758 - B0173
 Rutar, M., 4604 - A0193, **4606 - A0195**
 Rutgard, J., 376 - A0036
 Ruthel, G., 4522 - A0037
 Rütther, K., 2809 - B0227
 Ruz, V., **2634 - A0139**, 5567 - A0259, 925 - B0103
 Rvl, N., 1634 - A0010
 Rwanda Retinopathy of Prematurity Study Group, 186 - B0340
 Ryals, R. C., 2486 - C0190
 Ryals, R. C., **2496 - C0200**, 5333 - C0266
 Ryan, C., 1162, 4237 - C0079
 Ryan, D., 2294 - B0248, 3828 - C0055
 Ryan, E., 1162, 4237 - C0079
 Ryan, T., 3475
 Rydberg, A., 1017 - B0301
 Ryzdzanicz, M., 2324 - B0313
 Ryoo, N., 1435 - B0354
 Ryu, C., 1923 - C0323, 5454 - A0123
 Ryu, H., **2164 - A0333**
 Ryu, H., 5820 - C0107
 Ryu, J., 3297 - C0091, 3821 - C0048
 Ryu, J., 2484 - C0150
 Ryu, J., **3290 - C0084**
 Ryu, S., 2828 - B0246, 5733 - C0020
 Ryu, W., 1635 - A0011
 Rzeszewska, J., 279 - C0180
 Saeed, H., 1322 - B0029
 Saedi, O., 3200 - B0200, **3950**, 448 - A0308, 5878 - C0166
 Saeiki, Y., **119 - B0033**, 122 - B0036
 Saez, R. C., 2338 - B0327
 Saez-Torres, K., 5481 - A0150
 Safdari, B., 3087 - A0058
 Safi, M., 283 - C0184
 Safi, S., **6153 - C0272**
 Safieh, L., 4325 - C0299
 Safran, A. B., 5033 - A0229
 Safuri, S., 3763 - B0178
 Sagerfors, S., **3678 - A0362**
 Saggere, L., 4569 - A0098
 Saghizadeh, M., **2991**, 353 - A0013, 3872 - C0133, 3874 - C0135, 3885 - C0146
 Sagkriotis, A., 6109 - C0228
 Sagolla, M., 2432 - C0098
 Sagong, M., 4058 - B0053, **5432 - A0101**
 Sago, P., 3862 - C0123
 Saha, S., **1694 - A0215**
 Sahaboglu, A., **2491 - C0195**
 Sahajpal, N. S., **5366 - A0018**
 Sahay, G., 5333 - C0266
 Saheb, H., 2931 - C0253, 3461
 Sahebjada, S., **4399 - C0447**, 4470
 Sahel, J. A., 1566, 241 - C0052, 278 - C0179, 3362 - C0244, 3437, 3895 - C0361, 3896 - C0362, **4530 - A0045**, 4531 - A0046, 4641 - A0283, 5008 - A0079, 5861 - C0148, 598 - B0270, 6194 - C0348, 644 - C0202
 Sahel, J., 604 - B0276
 Sahel, J., 1568, 3963, 4526 - A0041, 4999 - A0070, 5033 - A0229
 Sahhar, L., 5126 - B0115
 Sahin, A., 3304 - C0098
 Sahin, K., 2661 - A0388
 Sahin, N., 2661 - A0388
 Sahle, F., 6003
 Sahler, R., 2980, 2981
 Sahn, J., 5503 - A0172
 Sahn, D., 4185 - C0027
 Sahn, J., 1959
 Sahu, B., 562 - B0177, 729
 Sahu, D., 3606 - A0224
 Sahu, S., 3316 - C0158
 Saijo, S., 5704 - A0423
 Saika, M., 1031 - B0315
 Saika, S., 2266 - B0220, 2626 - A0131, 2637 - A0142, 3337 - C0179, 3338 - C0180, 3843 - C0104, 4353 - C0401, 4419
 Saikia, U., 4668 - A0310
 Sailor, M. J., 4458
 Saini, J., 2477 - C0143
 Sainohira, M., **3410 - C0334**
 Saint-Geniez, M., 1185, **2476 - C0142**, 5481 - A0150
 Saint-Jean, A., **3802 - C0029**
 Sainz De La Maza, M., **1095 - C0130**
 Saito, S., 1661 - A0037
 Saito, T., **4563 - A0092**
 Saito, Y., **1230 - A0071**, 5465 - A0134
 Sajdak, B. S., 1154, **5849 - C0136**
 Sajmani, R., **3783 - C0010**, 942 - B0120
 Saka, V., 2701 - B0022, **2703 - B0024**
 Sakabe, M., 5306 - C0239
 Sakaguchi, H., 304 - C0237, 3639 - A0300, 5266 - C0112, 6196 - C0350, 861 - A0193
 Sakaguchi, T., 3660 - A0344, 3668 - A0352
 Sakai, H., 6082 - C0201
 Sakai, J., 4162 - C0004
 Sakai, O., 5368 - A0020, 5653 - A0372
 Sakai, R., 1751 - B0066, 4879 - C0324
 Sakai, S., 263 - C0122
 Sakai, T., 3647 - A0308
 Sakajiri, Y., 3081 - A0052
 Sakami, S., 4979
 Sakamoto, S., 1730 - A0251, 350 - A0010
 Sakamoto, T., 1057 - B0368, 1107 - C0142, 1834 - B0295, 1895 - C0295, 21 - A0052, 2132 - A0266, 276 - C0177, 3410 - C0334, 4233 - C0075, 461 - A0321, 5265 - C0111
 Sakano, L. Y., **2906 - C0203**, 2910 - C0207
 Sakata, R., 87 - A0250
 Sakata, V. M., 422 - A0240
 Sakaue, Y., 4082 - B0077
 Sakemi Fukuhara, P., **4005 - A0130**
 Sakimoto, S., 5266 - C0012, 5489 - A0158, 761, **861 - A0193**
 Sakirao, D., 3483
 Sakumoto, T. V., **3378 - C0302**, 4093 - B0218
 SAKURA Study Group, 413 - A0231, 414 - A0232
 Sakurada, Y., 3240 - B0339
 Sakurai, T., 4257 - C0128
 Sakurai, Y., 4233 - C0075, **4925 - C0370**
 Sala, L., 1656 - A0032, **4475**
 Sala-Puigdollers, A., 2802 - B0220, 4826 - C0184, **4842 - C0200**
 Salah-Mabed, I., **4135 - B0298**
 Salam, R. A., 2486 - C0190
 Salamah, S. E., **503 - B0010**
 Salas, C., 5190 - B0213
 Salas, M., **297 - C0198**, 298 - C0199, 5862 - C0149
 Salas Torras, A., **2628 - A0133**, 58 - A0105
 Salavatova, V., 2722 - B0101
 Salceda, R., 3568 - A0185
 Salcedo-Villanueva, G., 1843 - B0304, 2770 - B0149
 Saleem, S., 1049 - B0360
 Saleh Al-Salameh, N., 5901 - C0188
 Saleh, G., 83 - A0246
 Saleh, H., 1594
 Saleh, S., 416 - A0234
 Salek, S. S., **868 - A0200**
 Salerni, F., 1665 - A0041
 Sales, A., **1197**
 Sales, C. S., 1309 - B0016, 2901 - C0198
 Salesse, C., **2355 - B0365**, 3067 - A0038
 Salgado-Borges, J., 1936 - C0336
 Salica, J. P., 196 - C0007, 201 - C0012
 Salim, S., 4843 - C0201
 Salimi, A., **3601 - A0219**
 Salimi, S., **4836 - C0194**
 Salinas La-Rosa, C., 4562 - A0091
 Sall, K. N., 1231 - A0072, 2715 - B0036
 Salles, M. V., 1830 - B0291
 Sallo, F. B., **3139 - A0256**
 Sallum, J. M., 1830 - B0291
 Salman, A., **5786 - C0073**
 Salman, C., 2604
 Salmon, A. E., **1154**, 5849 - C0136
 Salmon, J. H., 3317 - C0159, **5687 - A0406**
 Salomao, D., 4298 - C0272, 5622 - A0341
 Salomao, S., 3356 - C0238, 3366 - C0248
 Salomon, R., 3475, 354 - A0014
 Salomone, S., 193 - C0004
 Salvador, G. A., 5357 - A0009
 Salvador, R., **2547 - C0276**
 Salvanos, P., 4246 - C0088
 Salvarani, C., 411 - A0229
 Salvatore, A., 1168
 Salvatore, S., 5578 - A0297
 Salvanesi, G., 2441 - C0107, 2572
 Salvo Ibanez, I., 58 - A0105
 Samaekia, R., **3454**
 Samanta, A., 5324 - C0257
 Samanta, A., 2280 - B0234
 Samaranyake, S. A., **3063 - A0034**
 Samardzija, M., 4447, 965 - B0219
 Sambhara, D., **6162 - C0281**
 Sambhav, K., 3611 - A0229
 Samier, C., 3010
 Sammarco, M., 4321 - C0295
 Sampaio, S. A., 5419 - A0071
 Sampani, K., **2795 - B0213**, 2876 - B0294, 3448
 Sampaolosi, J., 6107 - C0226
 Sampath, A. P., 1979
 Sampson, M., 5569 - A0261
 Sampson, R., 2523 - C0252
 Samson, K., 2549 - C0278, 2551 - C0280
 Samuel, M., **2597**
 Samuel, W., **5382 - A0034**
 Samuels, B. C., 3023, 708 - C0303, 722
 Samuels, I. S., **5361 - A0013**
 Samuels, I. S., 4967
 Samuelson, S., 2918 - C0215
 Samuelsson, S. J., 385 - A0045
 Samy, K. E., 1249 - A0090
 San Cristobal, J., **5287 - C0220**
 Sanches, L., 4090 - B0085
 Sanchez, C. M., 1864 - C0168
 Sanchez, F. G., **6107 - C0226**
 Sanchez, H., 5020 - A0216
 Sanchez, M. C., 6072 - A0201
 Sanchez Martinez, C., **523 - B0138**
 Sanchez, N., 1238 - A0079
 Sanchez, P. J., 1631 - B0075
 Sanchez Tabernero, S., **2228 - A0397**
 Sánchez Tabernero, S., 1901 - C0301, 2067 - A0125
 Sanchez-Bretano, A., **5305 - C0238**, 969 - B0223
 Sánchez-Chávez, G., 3568 - A0185
 Sanchez-Diaz, P., **5388 - A0040**
 Sanchez-Hoil, A., **2213 - A0382**
 Sanchez-Huerta, V., 1570, 5243 - B0356, 948 - B0126
 Sanchez-Pintado, B., 2920 - C0217, 3022
 Sánchez-Romera, J., 1173
 Sánchez-Uzcátegui, M., 2084 - A0142
 Sanchez-Weatherby, J., 1415 - B0192
 Sandahl, M., **5671 - A0390**
 Sandberg, M., 1947, 5179 - B0202
 Sandbichler, A., 1884 - C0188
 Sander, B., 4750 - B0251
 Sanders, E., **168 - B0322**, 4157 - B0380, 5628 - A0347
 Sanderson, J., 5302 - C0235, 5304 - C0237
 Sandford, R., 6041 - A0075
 Sandgren Hochhard, K., 1146
 Sandgren, J., 2253 - B0207
 Sandhina, M., 817 - A0149
 sandholm, K., 5562 - A0254
 Sandhu, H., 1685 - A0206, **1710 - A0231**, 6176 - C0295
 Sandhu, J., 1334 - B0041
 Sandhu, S. S., 1958, 4839 - C0197
 Sandi, F., 5230 - B0343
 Sandinha, T., 4817 - C0175
 Sandler, S. F., 4772 - B0382
 Sandler, D., 3129 - A0246, **545 - B0160**
 Sandor, G., 1932 - C0332, 1933 - C0333, 1934 - C0334, 2949 - C0271, 4876 - C0321
 Sandoval, M., 314 - C0247
 Sandoval, W., 226 - C0037, 63 - A0110
 Saneto, R., 2169 - A0338
 Sanfilippo, C. M., **2659 - A0386**, 3676 - A0360
 Sanfilippo, P., 2732 - B0111
 Sanft, D., 1167, 6015
 Sangeave, A., 4245 - C0087
 Sangermano, R., 4503 - A0018, 4532 - A0047
 Sangi, M., 2160 - A0329, 5789 - C0076

- Sangiovanni, A., 411 - A0229, 4178 - C0020
- SanGiovanni, J. P., 1716 - A0237
- Sangwan, V., 1572, 268 - C0127, 3455
- Sanislo, S., 1159
- Sanjiv, N., 2531 - C0260
- Sankaridurg, P., 3387 - C0311, 3402 - C0326
- Sankila, E. K., 3898 - C0364, 3899 - C0365, 4991
- Sankovic, A., 2913 - C0210
- Sanmugasundram, S., 4847 - C0205
- Sanna, V., 3722 - B0069
- Sano, I., 350 - A0010
- Sano, K., 4930 - C0375
- Sano, M., 1788 - B0103
- Sano, R. Y., 1110 - C0145, 1452 - C0014, 303 - C0236
- Santa Casa, 3701 - B0048
- Santa Casa of Sao Paulo, 4306 - C0280
- Santamaria, J., **2300 - B0254**
- Santana Dias, M., **5661 - A0380**
- Santana, E., 2347 - B0336
- Santana, R., 1069 - C0082, 3411 - C0335
- Santeford, A., 5453 - A0122, 977 - B0231
- Santerre, K., **1363 - B0123**
- Santiago, A., 1126 - C0161
- Santiago, C., 2508 - C0212, **2511 - C0215**, 3961, 4449, 991 - B0245, 992 - B0246
- Santiago, L., 3657 - A0341
- Santiago, M. S., 640 - C0070
- Santiago-Varela, M., **3178 - A0321**
- Santibanez-koref, M., 560 - B0175
- Santo, R. M., 4404 - C0452
- Santo Tomas, C., 2996
- Santorio, F., 3978
- Santoro, N., 4305 - C0279
- Santos, A., 2800 - B0218
- Santos, C., 3657 - A0341
- Santos, D., 1070 - C0083
- Santos, K., **3701 - B0048**, 5085 - B0036, 5086 - B0037, 614 - B0286
- Santos, P., **5811 - C0098**
- Santos, T., 2800 - B0218
- Sanvicente, C., 5186 - B0209
- Sanyal, A., 45 - A0076
- Sanyiwa, A., 5136 - B0159
- Sanz Diez, P., **3386 - C0310**
- Sanz-Gonzalez, S., 5364 - A0016
- Sapieha, M., 2638 - A0143, 3583 - A0200, 5694 - A0413
- Sapieha, P., 4553 - A0068
- Sapin, V., 4362 - C0410
- Sapoznik, K., **1559**, 4626 - A0268, 4642 - A0284, 647 - C0205
- Sarac, O., 621 - B0293
- Saraco, A., **3708 - B0055**
- Saraf, S., **5452 - A0121**
- Saramago, B., 4455
- Sarangapani, R., 2057 - A0115, 249 - C0108
- Sarangapani, S., **2320 - B0309**, 3355 - C0237
- Sarangani, S., 3037 - A0008
- Sarantopoulos, K., 3783 - C0010, 942 - B0120, 946 - B0124
- Sarao, V., 3217 - B0316, **4653 - A0295**, 4662 - A0304, 52 - A0083
- Saraswathy, S., **4709 - B0133**, 4719 - B0143
- Saravia, M. J., 390 - A0090
- Sarayba, M., 1960
- Sardar Pasha, S., 1595
- Sarfara, N., 3438
- Sarfara, S., 5048 - A0244
- Sargent, J., 164 - B0318
- Sargsyan, A., 1134 - C0169, 722
- Sarin, S., 1176
- Saripalli, A., 6071 - A0200
- Sarkar, R., 2204 - A0373
- Sarmad, A., 4810 - C0168
- Sarna, M., 4495 - A0010
- Sarna, T., 3997 - A0122
- Sarna, T. J., 3077 - A0048, 3094 - A0065, **4495 - A0010**
- Saroj, N., 1619, 3229 - B0328, 3609 - A0227, 3621 - A0239
- Sarossy, M., 2885 - B0303, **5098 - B0087**
- Sarraf, D., 1131 - C0166, 1524 - C0365, 2621, 2851 - B0269, 2883 - B0301, 2915 - C0212, 3150 - A0267, **4993**, 5954, 5973, 5974
- Sarrafpour, S., 2832 - B0250, **6103 - C0222**, 6104 - C0223
- Sarthy, V. P., **1479 - C0221**
- Sartore, M., 2431 - C0097
- Sarunic, M., 1121, 1972, 2181 - A0350, 2865 - B0283, 5822 - C0109, 6063 - A0192, 6065 - A0194, 879 - A0211
- Sasagawa, S. M., 4787 - B0397, 4807 - B0417
- Sasaki, C., 1327 - B0034
- Sasaki, H., **4127 - B0290**
- Sasaki, H., 5367 - A0019, 5433 - A0102, 785, **870 - A0202**
- Sasaki, H., 125 - B0039, 3796 - C0023, 3797 - C0024, **444 - A0304**, 5636 - A0355, 890 - A0279
- Sasaki, K., **2934 - C0256**
- Sasaki, K., 2934 - C0256
- Sasaki, T., 4390 - C0438
- Sasaki, T., 3618 - A0236
- Sasaki, T., 102 - A0265
- Sasamoto, Y., **2288 - B0242**
- Sasano, H., 4513 - A0028, 4514 - A0029
- Sasase, T., 1804 - B0152, 3574 - A0191
- Sase, K., 623 - B0295, **624 - B0296**, 626 - B0298
- Sasian, J., 5803 - C0090
- Sasso, P., 5173 - B0196
- Sasso, Y. C., 2116 - A0174
- Sastry, A., **5454 - A0123**
- Sastry, J., 2434 - C0100
- Saszik, S., 5519 - A0211
- Satake, Y., 1333 - B0040, 2278 - B0232, 2905 - C0202, 4356 - C0404
- Satish, S., 2476 - C0142
- Sattipitakul, V., **145 - B0059**, 5716 - C0003
- Sato, A., 3751 - B0098
- Sato, E. T., 1029 - B0313
- Sato, E., 4281 - C0152
- Sato, H., 4294 - C0165
- Sato, H., 5109 - B0098
- Sato, K., 6113 - C0232, 6120 - C0239, **6138 - C0257**
- Sato, M., **4435**
- Sato, M., 5414 - A0066
- Sato, N., 3042 - A0013
- Sato, R., 3189 - B0189
- SATO, S., **5420 - A0072**
- Sato, S., 4490 - A0005, **4655 - A0297**
- Sato, T., **6120 - C0239**
- Sato, T., 4435
- Sato, T., 3622 - A0283
- Sato, T., 4207 - C0049, 5373 - A0025, **5554 - A0246**
- Sato, T., **525 - B0140**, 528 - B0143
- Sato, Y., 296 - C0197
- Satoshi, H., **2519 - C0248**
- SATURN Study Investigators, 5950
- Saucedo Ulloa, M., **2238 - A0407**
- Sauer, L., 1567, **2625**, 3207 - B0306, 3243 - B0342, 4511 - A0026, 4661 - A0303
- Saunders, K. J., 2953 - C0275, 5649 - A0368
- Saunders, L., 1885 - C0285, 2735 - B0114
- Saunier, V., 5537 - A0229
- Sauve, Y., 2918 - C0215, 3111 - A0119, 3261 - B0360
- Savinainen, A., 2713 - B0034, **2714 - B0035**
- Savino, G., 5605 - A0324
- Savol, A., 2008
- Savystka, N., 2491 - C0195
- Saw, S., 1713 - A0234
- Saw, S., 1819 - B0280, **3389 - C0313**, 3955, 3957
- Saw, V. P., **1328 - B0035**
- Sawada, A., 460 - A0320, 462 - A0322
- Sawai, H., 4557 - A0086
- Sawant, O., **3001**
- Sawhney, A., 245 - C0056, 3465
- Sawides, L., 647 - C0205
- Saxena, K., 4604 - A0193
- Saxena, S., 4675 - A0317
- Say, E. A., 844 - A0176
- Sayah, D. N., **2025 - A0052**
- Sayasith, K., 1350 - B0110
- Sayed-Ahmed, I. O., **3667 - A0351**, 5737 - C0024, 5742 - C0029
- Sayegh, R. R., 2913 - C0210, 4898 - C0343
- Saylor, J., 551 - B0166
- Sayo, A., **25 - A0056**, 27 - A0058, 5529 - A0221
- Sayres, R., **1227**
- Saytashev, I., **5844 - C0131**, 6202 - C0356
- Scaille, S., 1137
- Scales, C. W., 1759 - B0074, 1761 - B0076, **1769 - B0084**, 3932
- Scalinci, S., 17 - A0048, **1880 - C0184**, 3422 - C0346
- Scally, A., 1400 - B0177
- Scanlon, P. H., **3607 - A0225**, 3608 - A0226
- Scannell Bryan, M., 3901 - C0367
- Scarcelli, G., 1416 - B0193
- Scaria, A., 5664 - A0383
- Scarino, A., 1622
- Scarpa, F., **5718 - C0005**
- Scarpelli, G., 2116 - A0174
- Scarpello, E., 1695 - A0216
- Schaal, S., 1685 - A0206, 1710 - A0231, 5238 - B0351
- Schachar, I., 1159
- Schachter, S., 4861 - C0306
- Schade, G., 4044 - A0251
- Schaefer, C., 1179
- Schaefer, M., 3203 - B0203
- Schaefer, R. P., 4004 - A0129
- Schaefer, T., **1752 - B0067**
- Schaeffel, F., **1171**, 2155 - A0289, 5792 - C0079, 684 - C0279, 685 - C0280, 686 - C0281, 694 - C0289, 697 - C0292
- Schaeffer, A., 1413 - B0190
- Schaeffer, K., **1413 - B0190**
- Schaffrath, K., 4566 - A0095, **4570 - A0099**
- Schalij-Delofs, N., 3492, 43 - A0074
- Schallek, J., 1973
- Schallek, J. B., **5341**, **732**
- Schaller, M., 4864 - C0309
- Schallhorn, C., **5757 - C0044**
- Schallhorn, J., 2200 - A0369, 3333 - C0175, **4643 - A0285**, 5748 - C0035, 5757 - C0044
- Schallhorn, J. M., 3369 - C0293, 5774 - C0061, 5976, 5978
- Schallhorn, S., 3395 - C0319, 5748 - C0035, 5757 - C0044, 5978, 6018
- Schallhorn, S., **2200 - A0369**
- Schally, A. V., 4316 - C0290
- Schambye, H., 3332 - C0174
- Schanner, C., 1692 - A0213
- Scharffenberg, M., 545 - B0160
- Scharinger, R., 1927 - C0327, 6195 - C0349
- Scharper, P. H., 874 - A0206
- Schartman, J., 4816 - C0174
- Schartmueller, D., 4789 - B0399
- Schatz, P., 4780 - B0390
- Schaub, F., 2118 - A0176
- Schaub, J., 6038
- Schaub, N. J., 555 - B0170
- Scheer, J., 226 - C0037
- Scheffer, A. C., 3623 - A0284, 3624 - A0285, **5987**
- Schell, C., **5906 - C0193**
- Schellevis, R., **4983**
- Scherl, F., 3968
- Scherm, P., **2821 - B0239**
- Schermer, D., 223 - C0034
- Scherr, T., 5214 - B0327
- Scherz, A., 715 - C0310
- Scheschy, U. W., 3193 - B0193
- Schewerle, A., 3496, 419 - A0237
- Schey, K. L., 3211 - B0310, **3483**
- Schiapparelli, L., 1581
- Schicht, M., 2286 - B0240, 3304 - C0098
- Schick, R., 3974
- Schick, T., 2377 - C0043
- Schiefelbein, J., **3602 - A0220**, 3614 - A0232
- Schiesser, C., 2400 - C0066
- Schiff, L., 2477 - C0143, 5255 - C0101, **5260 - C0106**
- Schiffner, A., 1421 - B0340
- Schilham, M., 3492
- Schill, A. W., 4749 - B0250
- Schiller, P., 858 - A0190
- Schillo, C., 391 - A0091, 4445
- Schirok, H., 2493 - C0197, 3203 - B0203, 64 - A0111
- Schiroli, D., 2488 - C0192
- Schlaen, B. A., 1522 - C0363, 420 - A0238
- Schlange, D. G., 5794 - C0081
- Schlanitz, F. G., **4483**, 4485
- Schlatt, S., 3981 - A0106, 3982 - A0107
- Schlecht, A., **1487 - C0229**, 2627 - A0132, 4317 - C0291
- Schleeauf, S., 4561 - A0090
- Schlegel, A., 244 - C0055
- Schlegel, D., **1433 - B0352**
- Schlegel, D., **4486 - A0001**
- Schlegl, T., 2623
- Schleisman, M., 2526 - C0255
- Schlenker, M., 2060 - A0118, **6017**
- Schlesinger, M. D., **1835 - B0296**
- Schlingemann, R. O., 6062 - A0191
- Schlösser, A., 2646 - A0151
- Schlottmann, P. G., 210 - C0021, 5535 - A0227
- Schlotzer-Schrehardt, U., 1353 - B0113, 1354 - B0114, 3019, **3453**, 3513 - A0076, 3515 - A0078, 3870 - C0171, 4435
- Schlunck, G., 1487 - C0229, 2627 - A0132, 4317 - C0291
- Schmack, I., **1307 - B0014**
- Schmaderer, C., 1583
- Schmarbeck, B., 6199 - C0353
- Schmauss, B., 5871 - C0158
- Schmetterer, L., 1234 - A0075, 1712 - A0233, **1995**, 2037 - A0064, 271 - C0172, 2858 - B0276, 3191 - B0191, 3199 - B0199, 4477, 5843 - C0130, 941 - B0119
- Schmid, K. L., 149 - B0063, 2959 - C0281, **2960 - C0282**, 4115 - B0278, 4903 - C0348
- Schmid, M., 3221 - B0320, 4945
- Schmidinger, G., 3435, 5727 - C0014
- Schmidl, D., 1234 - A0075, 1445 - C0007, 271 - C0172, **3191 - B0191**, 3193 - B0193, 941 - B0119
- Schmidt, B. P., 648 - C0206, **653 - C0211**
- Schmidt, G. A., 1357 - B0117
- Schmidt, I., 5315 - C0248
- Schmidt, T. A., **3827 - C0054**
- Schmidt, T. M., **5498 - A0167**
- Schmidt-Erfurth, U., 1445 - C0007, 1506 - C0347, 1620, 1621, 1677 - A0198, 1736 - A0257, 1738 - A0259, 1927 - C0327, 2622, **2623**, 297 - C0198, 3234 - B0333, 3248 - B0347, 3468, 4483, 4485, 5061 - B0012, 6195 - C0349, 741, 818 - A0150, 819 - A0151
- Schmidtmann, I., 5191 - B0214
- Schmitt, C., 3104 - A0112
- Schmitt, M., 5329 - C0262
- Schmitt, S., 2096 - A0154
- Schmitz, K., 2710 - B0031
- Schmitz-Valckenberg, S., 215 - C0026, 2421 - C0087, 3221 - B0320, 4945, 5818 - C0105
- Schmoll, T., 1527 - C0368, 2845 - B0263, 5862 - C0149
- Schmucker, E., 3785 - C0012
- Schnabolk, G., **5559 - A0251**
- Schneck, M. E., 1263 - A0298
- Schneeweis, D. M., 6169 - C0288
- Schnegg, A., 6086 - C0205
- Schneider, A., 3318 - C0160
- Schneider, K., 2468 - C0134, **353 - A0013**, 4003 - A0130, 771
- Schneider, L., 3205 - B0203
- Schneider, S., 1699 - A0220
- Schnepf, A., **2367 - B0377**
- Schmiehels, S., 5501 - A0170, **5683 - A0402**, 5684 - A0403, 5931 - C0328
- Schockemoehl, C., **5569 - A0261**
- Schoenfeld, C., 3036 - A0007
- Schoenfeld, L., **3182 - A0325**
- Schoenhoerster, J., 3761 - B0176
- Scholda, C., 1927 - C0327, 6195 - C0349, 741
- Scholl, H. P., 1568, 3143 - A0260, 45 - A0076, 788
- Schollmayer, P., **2899 - C0196**
- Scholten, A., 4488 - A0003
- Scholz, P., 2900 - C0197, 3128 - A0245, **858 - A0190**
- Schön, C., 5664 - A0383
- Schonbach, E. M., 45 - A0076, **788**
- Schooley, R. T., 5594 - A0313
- Schoonheim, P., 806 - A0138
- Schori, C., 965 - B0219
- Schork, N., 1182, 1911 - C0311
- Schormack, M., 1760 - B0075, 1773 - B0088, 1775 - B0090, 1778 - B0093, **1787 - B0102**, 1795 - B0143
- Schottenhamml, J., 1928 - C0328, 3922
- Schowengerdt, B., 4624 - A0266
- Schrader, S., 118 - B0032, 1801 - B0149, 2250 - B0204, 4929 - C0374
- Schrage, N., 4351 - C0399
- Schreiber-Avisar, S., 3508 - A0071, 3509 - A0072
- Schrittenlocher, S., 2900 - C0197
- Schrödl, F., 317 - C0250, 3201 - B0201
- Schroeder, M., **2379 - C0045**
- Schroeder, T., 3438
- Schroedl, F., **308 - C0241**
- Schroedter, L., 6147 - C0266
- Schroeter, M. L., 1128 - C0163
- Schubert, J., 5967
- Schubert, T., 716
- Schmid, W., 2493 - C0197, 3470
- Schuchard, R. A., 632
- Schuck, N., **879 - A0211**
- Schuele, G., **5920 - C0317**
- Schuetz, C., 2652 - A0379, 5929 - C0326
- Schulkens, I., 5315 - C0248
- Schultheiss, M., 4188 - C0030

- Schultz, R., **3207 - B0306**, 3243 - B0342
- Schulz, A., 4022 - A0147
- Schulz, A., 5191 - B0214
- Schulz, A., 5428 - A0097
- Schulze, M., 1768 - B0083
- Schuman, J., 6158 - C0277, 6167 - C0286
- Schuman, J. S., 1248 - A0089, 1672 - A0193, 1682 - A0203, 2032 - A0059, 2096 - A0154, 2103 - A0161, 2111 - A0169, 2113 - A0171, 2126 - A0184, 3412 - C0336, 3501, 3502, 4076 - B0071, 4999 - A0070, 5077 - B0028, 6115 - C0234
- Schumann, H., 1683 - A0204
- Schunimann, M., 307 - C0240
- Schuster, A. K., 5191 - B0214
- Schuster, I., 970 - B0224
- Schwab, S., 5576 - A0268
- Schwander, L., 3260 - B0359
- Schwartz, D. M., 3236 - B0335
- Schwartz, G. W., **3000**
- Schwartz, L. A., 5099 - B0088, 5100 - B0089
- Schwartz, R., **4276 - C0147**
- Schwartz, S., 4861 - C0306, 923 - B0101, **956 - B0134**
- Schwartz, S. G., 1425 - B0344
- Schwartz, S. D., **5004 - A0075**
- Schwarz, C., 1155
- Schwarz, N., 3061 - A0032
- Schwarz, S., 1768 - B0083
- Schwarzenbacher, L., **4789 - B0399**
- Schwarzshans, F., 2122 - A0180, 2123 - A0181, **4065 - B0060**
- Schwarzkopf, D., 5960
- Schweiger, R., 1423 - B0342
- Schweitzer, D., 4661 - A0303
- Schwiegerling, J., **2976**, 5803 - C0090
- Scianmarello, N., 5669 - A0388, 5814 - C0101
- Scleral, 1765 - B0080
- Scollo, D., 3948
- SCOPE (Scleral Lens in Ophthalmic Practice Evaluation), 1778 - B0093
- SCORE2 Investigator Group, 5971
- Scorolli, L., 1880 - C0184, 3422 - C0346
- Scott, A., 1132 - C0167, **4650 - A0292**, 825 - A0157
- Scott, A., 5468 - A0137
- Scott, D. K., 2243 - B0197
- Scott, D., **3813 - C0040**
- Scott, I. U., 213 - C0024, 4777 - B0387, 5971, 6163 - C0282, 6168 - C0287
- Scott, J., 5827 - C0114
- Scott, L., 5555 - A0247
- Scott, M., 5021 - A0217
- Scott, P. A., 729, 794
- Scott, R., 6014
- Scott, W. N., 1016 - B0300
- Scott, W., 1418 - B0337, 1425 - B0344, 6048 - A0082
- Scott, W. K., 1420 - B0339
- Scott, R., 4403 - C0451, **4693 - A0335**
- Scripsema, N. K., 2832 - B0250, 5054 - B0005
- Seudeller, L., 1254 - A0095
- Seuderi, G., 4078 - B0073, 5120 - B0109
- Scupola, A., 4321 - C0295, 5605 - A0324
- Seabra, M. C., 1195
- Seah, I., 3593 - A0211
- Seah, X., 1375 - B0135
- Seal, J., **244 - C0055**
- Sears, C. M., 1666 - A0187, **4681 - A0323**
- Sears, J. E., 3769 - B0184, 5462 - A0131, 5464 - A0133
- Seavitt, J., 2597
- Sebag, J., 2199 - A0368, 5217 - B0330, 5270 - C0116, 6197 - C0351
- Sebastiani, S., 1164, **6100 - C0219**
- Sebbag, L., 2344 - B0333
- Section of Histopathology, 2434 - C0100
- Sedaghat, M., 4379 - C0427
- Seddon, J., 790
- Seddon, J. M., **5348**
- See, R. F., 1957
- Seeboeck, P., 1736 - A0257
- Seefeldt, E., 2314 - B0268
- Seeliger, E., 5877 - C0164
- Seeliger, M. W., 2982, 716, 998 - B0252
- Seemungal, R., 2490 - C0194
- Seet, L., 477 - A0337
- Seet, L., **121 - B0035**
- Seeun, K., **1837 - B0298**
- Sefiani, A., 3021
- Segal, E., **3763 - B0178**
- Segaut-Prevost, C., 1566
- Ségaut-Prevost, C., 3895 - C0361
- Segerstrom, E. E., 5192 - B0215
- Seguy, C., 5924 - C0321
- Seibel, E., 4624 - A0266
- Seibold, L., **6106 - C0225**
- Seid, J., 574 - B0189
- Seidel, E., 3043 - A0014
- Seidel, G., **3199 - B0199**
- Seidemann, A., 2967 - C0289
- Seider, M., 3624 - A0285
- Seidler Stangova, P., 2525 - C0254
- Seidman, S. A., 4330 - C0378
- Seifert, E., 6094 - C0213
- Seifert, G., 4568 - A0097
- Seifert, P., 2008
- Seigel, G. M., **4592 - A0181**
- Seiler, M. J., **544 - B0159**, 558 - B0173
- Seiler, T., 1400 - B0177, 746
- Seiler, T., 1400 - B0177, 746
- Sein, J., **4284 - C0155**
- Seiple, W. H., **3429 - C0353**, 3889 - C0355, 629 - C0059
- Seitter, H., 1884 - C0188
- Seitz, B., 2261 - B0215, 2263 - B0217, **3436**, 3870 - C0131, 4385 - C0433
- Seitzman, G., 1697 - A0218
- Seiwald, S., 1206
- Sejersens, H., 742
- Sekaran, S., 3548 - A0165
- Sekaran, S., **583 - B0198**, 602 - B0274
- Seki, M., 2217 - A0386
- Seki, Y., 444 - A0304
- Sekiryu, T., 3164 - A0281, 3238 - B0337, 4282 - C0153, 4285 - C0156
- Seko, Y., 5418 - A0070
- Sekundo, W., 1389 - B0166
- Sela, T., 3372 - C0296
- Selesnick, I., 1672 - A0193
- Self, J. E., 5784 - C0071, **5785 - C0072**
- Sella, R., 1360 - B0120, **3876 - C0137**
- Sellam, A., 388 - A0088
- Sellers, J. T., 3047 - A0018, 4014 - A0139, 4982, 5045 - A0241
- Selot, R., 744
- SelvaKumar, A., 3355 - C0237
- Selvam, S., 3154 - A0271, **5468 - A0137**
- Sema, A., 2489 - C0193
- Semanek, S., 594 - B0209
- Semenkovich, C. F., 5365 - A0017
- Semenova, N., **1115 - C0150**
- Semenza, G., 2570
- Semeraro, F., 803 - A0135
- Seminel, M., 4203 - C0045
- Semoun, O., 2807 - B0225
- Sen, H. N., 1536 - C0377, 2535 - C0264, 4173 - C0015, 4187 - C0029, 4310 - C0284, **4407**, 5948
- Sen, H. N., 1534 - C0375, 4212 - C0054
- Sen, P., 2320 - B0309, **5014 - A0210**
- Sen, P., 2569
- Senatoro, A., 3223 - B0322
- Senchyna, M., 914 - B0092, **918 - B0096**
- Sendra, V. G., 3315 - C0157, 3321 - C0163
- Sendtner, M., 3104 - A0112
- Sene, A., 5551 - A0243, 5558 - A0250, 977 - B0231
- Sénéchal, A., 2322 - B0311
- Sengillo, J., 4664 - A0306
- Sengillo, J. D., 2335 - B0324, **2336 - B0325**
- Sengupta, M. B., **5516 - A0185**, 578 - B0193
- Senn, C., **2450 - C0116**
- Sennlaub, F., 2436 - C0102, 5553 - A0245
- Senra, H., 3411 - C0335
- Sensaki, S., 3955
- Senthil, S., 5148 - B0171
- Senthilkumari, S., 3257 - B0356, **4716 - B0140**
- Seo, B., 2480 - C0146
- Seo, E., **2080 - A0138**, 4072 - B0067
- Seo, K., 3822 - C0049
- Seo, L., **5077 - B0028**
- Seo, S., **2484 - C0150**
- Seo, S., 3962
- Seol, B., **2105 - A0163**
- Seol, Y., **5220 - B0333**
- Seong, G., 1244 - A0085, 2699 - B0020, 5108 - B0097
- Seong, H., 2484 - C0150
- Seoung Hyun, A., **5426 - A0095**
- Sepah, Y. J., 1675 - A0196, 1691 - A0212, 1909 - C0309, 2825 - B0243, 410 - A0228, **415 - A0233**, 5518 - A0300, 5949
- Seppatis, A., 3606 - A0224, **4818 - C0176**
- Seregin, S. S., 3002
- Seresirikachorn, K., **5589 - A0308**
- Serge, K., 941 - B0119
- Sergeev, Y., 1188, 2359 - B0369, **2365 - B0375**
- Sergott, R. C., **3901 - C0367**
- Serhan, C., 1166
- Serittrakul, P., **5386 - A0038**
- Serjanov, D., 586 - B0201
- Serle, J. B., **1242 - A0083**, 1255 - A0096, 1256 - A0097, 1257 - A0098, 5906 - C0193
- Sermeno, J., 4369 - C0417
- Serna-Ojeda, J., 1343 - B0050, **1572**, 2309 - B0263, 915 - B0093
- Sernagor, E., 1563, 5329 - C0262, 542 - B0157, 560 - B0175
- Serra, H. M., 124 - B0038
- Serra, R., **3722 - B0069**
- Serrano, P., 5921 - C0318
- Serramito, M., 4767 - B0268
- Serrano Garcia, D., 292 - C0193
- Serrano, L., 46 - A0077
- Serratos, M. E., **3556 - A0173**
- Serro, A., 4455
- Sesay, T., 4172 - C0014
- Seshadri, S., 1041 - B0352
- Sesi, C., 4854 - C0212
- Sessa, M., 1164
- Setabutr, P., 98 - A0261
- Seth, P., 1492 - C0234
- Sethi, C., **4189 - C0031**
- Sethna, S., 794
- Sethu, S., 349 - A0009, 358 - A0018, **3730 - B0077**, 4402 - C0450, 5980, 744
- Sethuramanujam, S., **1860 - C0164**, 1866 - C0170
- Seto, A., 4969
- Seto, C., 4807 - B0417
- Seto, T., 4513 - A0028, 4514 - A0029
- Seven, I., 1386 - B0163
- Severin, T., 5111 - B0100, 5112 - B0101
- Severn, P., 821 - A0153
- Sevilla, N., **6202 - C0356**
- Seydel, K., 612 - B0284
- Seyed Hosseini Fin, N., **3726 - B0073**
- Seyed-Razavi, Y., 1670 - A0191, **3309 - C0151**, 3321 - C0163
- Seyhan Karatepe, A., 951 - B0129
- Seymen, Z., 3760 - B0175
- Sgrignoli, B., 3155 - A0272
- Sgro, M., 5209 - B0322
- Sha, C., 1147
- Sha, J., 1776 - B0091, 1789 - B0104, 1791 - B0106, **1793 - B0108**
- Sha, P., 2088 - A0146, **3880 - C0141**
- Shaarawy, T. M., **3457**
- Shadforth, A. M., 499 - B0006
- Shady, K., 3114 - A0122
- Shaffer, J., 2786 - B0165
- Shafie-Khorassani, F., 959 - B0213
- Shah, A., 2094 - A0152, 4060 - B0055, **5070 - B0021**, 5079 - B0030, 5084 - B0035, 5895 - C0182
- Shah, A., 5682 - A0401
- Shah, A., 1618, 1891 - C0291, 1904 - C0304, 4854 - C0212
- Shah, A. R., 5697 - A0416
- Shah, A. S., 1953, 3784 - C0011
- Shah, A., **2896 - C0193**
- Shah, C., 3395 - C0319, **6018**, 6019
- Shah, D., 107 - A0270, **3878 - C0139**, 3881 - C0142, 3882 - C0143
- Shah, K., 3950
- Shah, M., 3690 - A0374
- Shah, M., 4154 - B0377
- Shah, M., 2016 - A0043
- Shah, M., 2286 - B0240, 2672 - A0399, 3275 - C0069, 4909 - C0354
- Shah, M., 2341 - B0330
- Shah, M. H., 5139 - B0162
- Shah, N., **4307 - C0281**
- Shah, P., 2749 - B0128, 2776 - B0155
- Shah, P., 6117 - C0236
- Shah, P., 2302 - B0256, 465 - A0325
- Shah, P., 3762 - B0177
- Shah, P., 3911
- Shah, P., 2707 - B0028
- Shah, R., 4855 - C0213
- Shah, R., 1600
- Shah, R., **4400 - C0448**
- Shah, R. L., **776**
- Shah, S., 1484 - C0226, 1581, 6150 - C0269
- Shah, S., **5198 - B0311**
- Shah, S., 1647 - A0023, **3623 - A0284**
- Shah, S., 5204 - B0317
- Shah, S. A., **45 - A0076**
- Shahi, P. K., **1196**, 5384 - A0036
- Shahidi, M., 1935 - C0335, 2837 - B0255, 31 - A0062, 4651 - A0293, 5848 - C0135, **5996**
- Shahidullah, M., 3482
- Shahidzadeh, A., **2869 - B0287**, 4299 - C0273, 739
- Shahlae, A., 1098 - C0133
- Shahriyari, L., 4958
- Shaikh, F. R., **1346 - B0053**
- Shajari, M., 1307 - B0014
- Shakespeare, T., 1130 - C0165
- Shakir, O., 2420 - C0086
- Shalchi, Z., 3600 - A0218
- Shalev, V., 1047 - B0358
- Shalom-Feuerstein, R., 3862 - C0123
- Shamambo, L., 2354 - B0364
- Shamdas, M., **1136**, 2521 - C0250, 2522 - C0251
- Shams, F., 3677 - A0361, **3777 - C0004**
- Shams, N. K., 1229 - A0070, 1233 - A0074, 1235 - A0076, 4874 - C0319
- Shams, N. K., 2717 - B0038, 2718 - B0039
- Shamsheer, E., **2494 - C0198**, 5693 - A0412, 6117 - C0236
- Shan, J., **5896 - C0183**
- Shan, S. S., 3480, 361 - A0021
- Shan, X., 3967
- Shan, Y., 1208
- Shanbagh, S., **3534 - A0097**
- Shanbagh, S., **1322 - B0029**
- Shandong Eye Institute, 4364 - C0412
- Shang, J., 4913 - C0358
- Shang, P., 2448 - C0114, 3169 - A0312, 3472, **3994 - A0119**, 3996 - A0121, 5644 - A0363, 64 - A0111
- Shang, X., 3795 - C0022, 4792 - B0402
- Shang, X., 4389 - C0437, 4900 - C0345
- Shanidze, N., **4412**
- Shankar, V., **101 - A0264**, 1894 - C0294
- Shanks, M., 2329 - B0318, 2341 - B0330
- Shanks, R. M., 717
- Shanmugalingam, U., 5521 - A0213
- Shanmugam, K., 2726 - B0105
- Shanmugam, S., 4964
- Shantha, J., 4172 - C0014, **719**
- Shantos, M., 2445 - C0111
- Shao, C., 2554 - C0283, **2574**, 3341 - C0183
- Shao, H., 2297 - B0251
- Shao, P., 1400 - B0177, **746**
- Shao, T., 3866 - C0127, 4878 - C0323
- Shao, Y., **3839 - C0066**
- Shao, Y., 1539 - C0380, **2951 - C0273**
- Shao, Y., 3495
- Shao, Y., 1663 - A0039
- Shao, Y. F., **3632 - A0293**
- Shao, Z., 6123 - C0242
- Shaohua, L., 1712 - A0233
- Shapiro, A., 1997
- Shapiro, A., 2424 - C0090
- Shapiro, A. G., **1558**
- Shapiro, C., 2015 - A0042
- Sharafetdinov, I., 5647 - A0366
- Shariati, A., 2175 - A0344, 3559 - A0176, 549 - B0164
- Sharief, L., **392 - A0092**, 407 - A0225, 4193 - C0035
- Sharif, A. S., **3068 - A0039**
- Sharif, R., **742**
- Sharifi, R., 1314 - B0021, 1409 - B0186, 4361 - C0409, **526 - B0141**
- Sharifpour, F., 5106 - B0095
- Shariflou, S., **5064 - B0015**
- Sharifzadeh, M., 4513 - A0028, 4514 - A0029
- Sharma, A., 3301 - C0095, **3815 - C0042**, 3830 - C0057
- Sharma, A., **5462 - A0131**, 5464 - A0133
- Sharma, A., 3879 - C0140
- Sharma, A., **1213**, 5351 - A0003
- Sharma, N., 1312 - B0019
- Sharma, R., 3021, 3051 - A0022, 4580 - A0169, 4663 - A0305, 555 - B0170
- Sharma, S., **837 - A0169**
- Sharma, S. C., 1579
- Sharma, S., 1766 - B0081
- Sharma, S., 1213, **5351 - A0003**
- Sharma, S., 5124 - B0113
- Sharma, S., 1917 - C0317
- Sharma, T., 2890 - C0187
- Sharma, T. P., **1214**, 4713 - B0137
- Sharmin, N., **2947 - C0269**, 4759 - B0260
- Sharon, D., 1004 - B0258, **3494**, 375 - A0035, 5324 - C0257, 5415 - A0067, 5421 - A0073
- Sharon, Y., 427 - A0245
- Sharoukhov, D., 3027
- Sharp, R., 1188

- Sharpe, A., 561 - B0176
 Sharpe, G., 2097 - A0155, 3496, 4063 - B0058
 Sharpe, R., 2295 - B0249
 Sharpe, R. A., 6090 - C0209
 Shatos, M., 3270 - B0369
 Shatz, W., **243 - C0054**
 Shatz, W. B., 226 - C0037, 242 - C0053
 Shaukat, R., 825 - A0157
 Shaw, A. M., **4013 - A0138**
 Shaw, J., 137 - B0051
 Shaw, J., 1842 - B0303
 Shaw, J., 2567
 Shaw, L. C., 765
 Shaw, M., **1334 - B0041**
 Shaw, P., 2632 - A0137, **2636 - A0141**, 4587 - A0176
 Shawcross, S., 4401 - C0449
 Shawl, A., 3578 - A0195
 Shaya, F., 1437 - B0356, 3161 - A0278
 She, J., 1213, 5351 - A0003
 She, R., 1790 - B0105
 She, X., 967 - B0221
 She, Z., 5043 - A0239, 688 - C0283, **689 - C0284**
 Sheardown, H., 1190, 229 - C0040, 4456
 Shearer, T. R., 3059 - A0030
 Shebanova, O., 1415 - B0192, 533 - B0148
 Shechtman, D., 396 - A0096
 Sheehy, C. K., 4411, **625 - B0297**
 Sheffield, P., 1963
 Sheffield, V., 3962, 4721 - B0145
 Shehadeh, N., 3763 - B0178
 Sheibani, N., 3117 - A0125, 5487 - A0156
 Sheidow, T., 1622
 Sheik, S., 4130 - B0293
 Sheinson, D., 242 - C0053, 2599, 5828 - C0115
 Shekoh, N., **3986 - A0111**
 Shelley, W. C., 765
 Shemesh, E., 1831 - B0292
 Shemonski, N., 1724 - A0245, 1727 - A0248, 2815 - B0233, 2833 - B0251, 2845 - B0263, 2866 - B0284, 5870 - C0157
 Shen, C., 5225 - B0338
 Shen, E. P., **504 - B0011**
 Shen, G., 2193 - A0362, 5955
 Shen, J., **5799 - C0086**, 5807 - C0094
 Shen, J., 199 - C0010, 3269 - B0368
 Shen, J., **228 - C0039**
 Shen, J. H., 286 - C0187
 Shen, J., 922 - B0100
 Shen, J. F., **1963**
 Shen, J., **6130 - C0249**
 Shen, L. L., **2412 - C0078**
 Shen, L., **3228 - B0327**
 Shen, L., 2873 - B0291
 Shen, L. Q., 5107 - B0096, 5134 - B0123, 6028
 Shen, M., 346 - A0006
 Shen, M., 1127 - C0162, 1539 - C0380, 2796 - B0214, **2819 - B0237**, 2946 - C0268
 Shen, M., 4737 - B0238, **809 - A0141**
 Shen, Q., 1038 - B0349
 Shen, Q., 2932 - C0254
 Shen, S., 374 - A0034
 Shen, S., 2356 - B0366, 5699 - A0418
 Shen, S., **5588 - A0307**
 Shen, T., **3354 - C0236**
 Shen, W., 1003 - B0257, 1477 - C0219, **1492 - C0234**, 4000 - A0125, 5290 - C0223
 Shen, X., 3454, 4360 - C0408, 4421
 Shen, X., 2356 - B0366, 5699 - A0418
 Shen, Y., 4913 - C0358
 Shen, Y., 1723 - A0244, **3718 - B0065**
 Shen, Y., 3581 - A0198
 Shen, Y., 3718 - B0065
 Shepherd, R., 4562 - A0091
 Sheppard, J. D., 2662 - A0389, 938 - B0116
 Sher, A., 1875 - C0179
 Sher-Rosenthal, I., 6004, **726**
 Shern, C., 383 - A0043
 Sherpa, M., 6172 - C0291
 Sherwood, J., 1217, 3505 - A0068, 3971
 Sherwood, M., 2706 - B0027, 455 - A0315
 Sheskey, S., 3008
 Shestopalov, V. I., **2009**, 2577, 3684 - A0368
 Sheth, V., 2173 - A0342, **4417**, 5204 - B0317, 5205 - B0318, 612 - B0284
 Shetty, G., **227 - C0038**
 Shetty, R., 2759 - B0138, 3534 - A0097, 4402 - C0450, 5980, 744
 Shetty, T., 1595
 Sheu, M., 4574 - A0103
 Sheu, S., 5169 - B0192, **6181 - C0300**
 Sheybani, A., 2076 - A0134
 Sheykhzade, M., 2643 - A0148
 Shi, B., 625 - B0297
 Shi, C., 1102 - C0137, 721
 Shi, C., 982 - B0236
 Shi, D., 3007
 Shi, H., **1209**, 3562 - A0179
 Shi, H., 3375 - C0299
 Shi, L., **2261 - B0215**, 4762 - B0263, **4763 - B0264**
 Shi, L., **2087 - A0145**
 Shi, M., 480 - A0340, **508 - B0015**
 Shi, R., 1219
 Shi, R. B., 6029
 Shi, W., 4660 - A0302, 4694 - A0336
 Shi, W., 2095 - A0153
 Shi, Y., 481 - A0341
 Shi, Y., **2368 - B0378**
 Shi, Y., 274 - C0175
 Shi, Y., 1969, 32 - A0063
 Shi, Y., 1436 - B0355
 Shi, Y., **1517 - C0358**, 1524 - C0365, 2815 - B0233, 2866 - B0284, 3247 - B0346
 Shiang, T., 3308 - C0150, 943 - B0121
 Shiau, F., 587 - B0202
 Shiau, T. P., 3576 - A0193
 Shiba, D., 3417 - C0341, 3418 - C0342
 Shiba, T., 5465 - A0134
 Shibasaki, K., **1500 - C0242**
 Shibasaki, Y., 957 - B0135
 Shibata, K., 5356 - A0008
 Shibata, K., 1019 - B0303, **2929 - C0251**
 Shibata, M., **4273 - C0144**, 855 - A0187
 Shibata, M., 5583 - A0302
 Shibata, N., **125 - B0039**, 444 - A0304, 5636 - A0355
 Shibata, N., 3024
 Shibata, S., 125 - B0039, **5636 - A0355**
 Shibata, T., 3796 - C0023, 3797 - C0024, 5636 - A0355, 890 - A0279
 Shibata, T., 690 - C0285
 Shiboski, C., 4895 - C0340
 Shibuya, E., **3796 - C0023**, 444 - A0304
 Shichida, Y., 1981
 Shieh, B., 1206, 5633 - A0352
 Shieh, E., **2729 - B0108**
 Shields, C. L., 1502 - C0343, 1646 - A0022, 3623 - A0284, 3638 - A0299, 3646 - A0307, 4302 - C0276, 5593 - A0312, 5600 - A0319, 5602 - A0321, 5972
 Shields, J. A., 4302 - C0276
 Shields, R. A., 3371 - C0295, 886 - A0218
 Shields, R. A., 3424 - C0348, **4430**
 Shiga, Y., 1718 - A0239, 3189 - B0189, 3725 - B0072, 5082 - B0033, 6138 - C0257
 Shigeno, Y., 862 - A0194
 Shih, C., 5778 - C0065
 Shih, K. C., **1043 - B0354**
 Shih, M., 4272 - C0143
 Shihan, M., **1602**, 1607
 Shiihara, H., 1107 - C0142, 276 - C0177, 5265 - C0111
 Shikishima, K., 3343 - C0225
 Shildkrot, Y., 884 - A0216
 Shillingford-Ricketts, H., 3458
 Shim, K., **3135 - A0252**
 Shimada, T., 4394 - C0442
 Shimada, Y., **5027 - A0223**
 Shimazaki, J., 1327 - B0034, 1333 - B0040, **2278 - B0232**, 2905 - C0202, 4356 - C0404, 4390 - C0438, 957 - B0135
 Shimazawa, M., 3751 - B0098, 5430 - A0099, **6129 - C0248**
 Shimizu, E., **4952**, 5565 - A0257, 5566 - A0258
 Shimizu, H., **1093 - C0128**, 302 - C0235, 5307 - C0240, 5541 - A0233, 576 - B0191
 Shimizu, K., 4295 - C0166
 Shimizu, N., 4170 - C0012
 Shimizu, T., 1019 - B0303, 2929 - C0251
 Shimizu, T., **1319 - B0026**, 428 - A0288, 5763 - C0050
 Shimizu, T., 4769 - B0270
 Shimizu, Y., 5898 - C0185
 Shimmura, S., **2002**
 Shimmura-Tomita, M., **1804 - B0152**, 3574 - A0191
 Shimomura, Y., 102 - A0265, 3688 - A0372, 4238 - C0080, 435 - A0295, 5122 - B0111, 5132 - B0121, 5133 - B0122, 525 - B0140, 528 - B0143
 Shimura, M., 1057 - B0368, 1895 - C0295, 389 - A0089, 4233 - C0075, 4235 - C0077, 62 - A0109
 Shin, A., 2029 - A0056
 Shin, D., 1533 - C0374
 Shin, E., 5560 - A0252
 Shin, E., **3840 - C0101**
 Shin, J., 4973, 6145 - C0264
 Shin, J., 2032 - A0059
 Shin, P., **5823 - C0110**
 Shin, S., 2236 - A0405
 Shin, S., 123 - B0037
 Shin, W., 4665 - A0307
 Shin, Y., 1015 - B0269
 Shin, Y., 2828 - B0246
 Shin, Y., **812 - A0144**
 Shin, Y., **1370 - B0130**
 Shin, Y., 5330 - C0263
 Shinde, V., 2922 - C0219, **2923 - C0220**
 Shinder, R., 106 - A0269, 3649 - A0333, 92 - A0255
 Shindler, K. S., 3351 - C0233
 Shindo, T., 4257 - C0128
 Shingledecker, A., 1403 - B0180
 Shinkai, K., 5729 - C0016
 Shinkai, Y., **871 - A0203**
 Shinoda, H., 2784 - B0163, 862 - A0194
 Shinoda, K., 1429 - B0348, 5073 - B0024
 Shinohara, M., 3573 - A0190
 Shinzawa, M., 957 - B0135
 Shioda, H., 296 - C0197
 Shiode, Y., 2882 - B0300, 5914 - C0311, 5915 - C0312, 670 - C0228, 671 - C0229, 807 - A0139, 847 - A0179
 Shiono, A., **5367 - A0019**, 5433 - A0102, 785, 870 - A0202
 Shipley, R. J., 5006 - A0077
 Shiraga, F., 1019 - B0303, 2882 - B0300, 2929 - C0251, 4268 - C0139, 4269 - C0140, 5697 - A0416, 5914 - C0311, 5915 - C0312, 670 - C0228, 671 - C0229, 807 - A0139, 847 - A0179
 Shiragami, C., **3133 - A0250**, 811 - A0143
 Shiraiishi, A., 2686 - B0007, 2704 - B0025
 Shiraiishi, T., 4769 - B0270
 Shirakawa, R., 1306 - B0013, 4378 - C0426, 4382 - C0430, 4436, **4928 - C0373**, 87 - A0250
 Shiraki, A., 3639 - A0300
 Shiraki, K., 395 - A0095, 4831 - C0189
 Shiraki, N., 861 - A0193
 Shiraki, Y., 4231 - C0073
 Shiratori, N., 425 - A0243
 Shiraya, T., **6191 - C0345**
 Shirazaei Sani, E., 4345 - C0393
 Shirinifard, A., 3495
 Shirzaei Sani, E., 1411 - B0188
 Shiu, E., 5186 - B0209
 Shivalila, C., 5682 - A0401
 Shivaram, N., 1734 - A0255
 Shivdasani, M. N., 1946, 4562 - A0091
 Shiyanbola, O., 1046 - B0357
 Shipak, M., 2567
 Sho, J., 1987
 Shoemaker, J., 3527 - A0090
 Shoge, R., 4125 - B0288
 Shoichet, M. S., 3261 - B0360, 4582 - A0171
 Shojaati, G., 2252 - B0206
 Shoji, N., 2943 - C0265
 Shoji, T., 2735 - B0114, 2861 - B0279, 4476, 5073 - B0024, 5075 - B0026
 Shokida, M. F., 5614 - A0333
 Shorter, E., 115 - B0029, 1760 - B0075, **1775 - B0090**, 1778 - B0093, 3788 - C0015
 Shortt, A. J., 3862 - C0123
 Shoseyov, O., 2280 - B0234
 Shou, J., 2184 - A0353
 Shows, A., 1768 - B0083
 Shpak, A. A., **1657 - A0033**
 Shpun, G., 3974
 Shpylchak, L., 4017 - A0142
 Shrestha, B., 180 - B0334
 Shrivastava, A., 1835 - B0296
 Shrutli, L., 3690 - A0374
 Shu, D., **1202**
 Shu, I., **4233 - C0075**
 Shuba, L., 3461
 Shubach, N., 2897 - C0194
 Shue, A., 1797 - B0145
 Shui, Y., 1970, 3806 - C0033
 Shukairy, A., 4802 - B0412
 Shukal, D., 5326 - C0259
 Shukla, D., **4931**, 513 - B0020
 Shulman, S., **1047 - B0358**
 Shum, H., 5927 - C0324
 Shum, M., 4197 - C0039
 Shumard, E., **5800 - C0087**
 Shumate, L., 2307 - B0261
 Shumway, C., **1335 - B0042**
 Shung, K., 5882 - C0169
 Shuster, L., 3985 - A0110
 Shuyi, M., **4497 - A0012**
 Shyr, A., 2026 - A0053
 Sia, R. K., 4914 - C0359
 Siagian, C., 1666 - A0187
 Siak, J. J., 270 - C0171, **4933**, 5745 - C0032
 Siaudvytyte, L., 2109 - A0167, **5063 - B0014**
 Sibbring, J., 4322 - C0296
 Sibug-Saber, M., 4724 - B0148
 Sickenberger, W., 1768 - B0083, 3933
 Siddam, A. D., 894 - A0283, 895 - A0284
 Siddiq, M. M., 2510 - C0214
 Siddiqui, M., 1240 - A0081
 Siderreddy, J., **1747 - B0062**
 Sidorov, J., 1079 - C0092
 Sidhu, C., 750
 Sidhu, R., 5558 - A0250
 Sidiqi, A. M., **6065 - A0194**
 Sidoti, P. A., 5054 - B0005
 Siebelmann, S., **2900 - C0197**, 3342 - C0184
 Sieburth, R. M., **5608 - A0327**, 884 - A0216
 Sieck, E., **105 - A0268**
 Siegel, D., **843 - A0175**
 Siegel, N., 207 - C0018
 Siegfried, C. J., 1970
 Sieluzycski, C., 1700 - A0221, 2110 - A0168
 Sierra Leone EVD Survivor Sequelae Programmatic Cohort Study Group, 4172 - C0014
 Siesky, B., 1656 - A0032
 Siesky, B. A., 2094 - A0152, 4057 - B0052, 4060 - B0055, 4475, 5070 - B0021, **5079 - B0030**, 5084 - B0035, 5895 - C0182
 Sieving, P., 1188, 3051 - A0022, 4466, 4468, 5656 - A0375
 Siewert, S., 2710 - B0031
 Sigal, I. A., **1216**, 1220, 2096 - A0154
 Sigford, D. K., 2805 - B0223
 Sigurdson, C., 5020 - A0216
 Sihem, L., **4877 - C0322**
 Sihota, R., 6114 - C0233
 Sii, F., 2302 - B0256
 Silas, M., 2872 - B0290, **2874 - B0292**
 Siliik, S. A., 2467 - C0133, 3993 - A0118
 Silson, E., 5021 - A0217
 Silva, A. F., 2894 - C0191
 Silva, C., 1452 - C0014
 Silva, C., 2524 - C0253
 Silva, F. Q., 3594 - A0212, 3597 - A0215, 4289 - C0160
 Silva, I. C., 431 - A0291
 Silva, J., 1681 - A0202
 Silva, J. E., 4420
 Silva, L., 5053 - B0004
 Silva, M., 3361 - C0243, **3362 - C0244**, 3363 - C0245
 Silva, M. I., 1912 - C0312
 Silva, M. B., **1066 - C0079**, 3378 - C0302, 4093 - B0218, 5182 - B0205
 Silva Ortiz, J. S., 174 - B0328, 467 - A0327
 Silva, P. S., 2876 - B0294, 3448, 737, 740
 Silva, R. S., **6026**
 Silva, R. A., 3654 - A0338
 Silva, R. M., 1892 - C0292, 2619, 4946
 Silva, R., 1159
 Silver, P. B., 2542 - C0271
 Silverman, N., 92 - A0255
 Silverman, R., 1515 - C0356, 3126 - A0243, 4946
 Silverman, R. F., 2619, **786**
 Silverman, R. H., **4673 - A0315**, 5841 - C0128, 5900 - C0187
 Silverman, S., 2530 - C0259, **3944**
 Silvester, A. J., **6014**
 Silvestri, G., 5406 - A0058
 silvestri, V., 5173 - B0196
 Silveyra, E., 2585
 Sim, D. A., 3602 - A0220, 3614 - A0232, **4623 - A0265**, 5242 - B0355
 Sim, M., 4710 - B0134
 Sim, P., 2383 - C0049, 4139 - B0302
 Sim, X., 6008
 Sim, Y., **4829 - C0187**
 Simao, F., 3463
 Simão, S., 1892 - C0292
 Simcoe, M. J., 1178, 2696 - B0017, 5154 - B0177, **781**

- Simjanoski, E., 3365 - C0247
 Simmang, D., 5683 - A0402
 Simmons, A. B., **5469 - A0138**
 Simmons, B., **335 - C0268**
 Simmons, C., 2755 - B0134
 Simmons, K., 2446 - C0112
 Simmons, M., **5845 - C0132**
 Simmons, P. A., **4899 - C0344**
 Simner, P., 3666 - A0350
 Simoes, R. T., 5419 - A0071
 Simon, C. G., 555 - B0170
 Simon, J., 4677 - A0319
 Simon, L., 6054 - A0088
 Simon, M., 555 - B0170
 Simon, N., 264 - C0123
 Simon-Zoula, S., 2015 - A0042
 Simonelli, F., 3095 - A0103, 378 - A0038, 3966
 Simonett, J., 6182 - C0301
 Simonett, J. M., 2842 - B0260, **3921**
 Simons, D., 3697 - B0044
 Simonsz, H. J., 4123 - B0286
 Simonsz-Tóth, B., 4123 - B0286
 Simonutti, M., 3963
 Simpson, C., 3052 - A0023, 3053 - A0024
 Simpson, C. L., 1823 - B0284, 1824 - B0285, 1825 - B0286, 3141 - A0258, 702 - C0297, 780
 Simpson, E., 5906 - C0193
 Simpson, J., 829 - A0161
 Simpson, T. L., 1779 - B0094, 4904 - C0349
 Sims, C. N., **2410 - C0076**
 Sims, L., **4963**
 Simsek, C., **3833 - C0060**
 Simunovic, M. P., 5936 - C0333, **6173 - C0292**
 Sinacore, J., 1032 - B0316
 Sinai, M. J., 664 - C0222
 Sincich, L., 4631 - A0273
 Sinclair, J., **6078 - A0207**
 Sindt, C. W., 1763 - B0078, **1774 - B0089**
 Singal, N., 1337 - B0044, 1338 - B0045
 Singapore Eye Research Group, 2600
 Singer, C., 3199 - B0199
 Singer, J., 6043 - A0077
 Singer, M., 1240 - A0081, 1833 - B0294, 2705 - B0026, 3127 - A0244, **4811 - C0169**, 5443 - A0112, 664 - C0222, 860 - A0192
 Singh, A., **4779 - B0389**
 Singh, A. D., 3632 - A0293, 4779 - B0389, **5590 - A0309**
 Singh, C., 5462 - A0131, **5464 - A0133**
 Singh, D. P., 3041 - A0012, **5652 - A0371**, 890 - A0279
 Singh, G., 4681 - A0323
 Singh, G., 2236 - A0405
 Singh, H. P., **4961**
 Singh, H., 3598 - A0216
 Singh, H., 5371 - A0023
 Singh, H., 5366 - A0018
 Singh, J. K., 105 - A0268, 169 - B0323, 2756 - B0135, 2760 - B0139, **3767 - B0182**
 Singh, K., 5366 - A0018
 Singh, K., 4782 - B0392, 5249 - B0362
 Singh, L., 3542 - A0159
 Singh, L. P., **3552 - A0169**
 Singh, M., **6067 - A0196**
 Singh, M., 3572 - A0189
 Singh, M. S., 5221 - B0334, 5839 - C0126
 Singh, M., 4692 - A0334
 Singh, N., 3005, 4024 - A0149
 Singh, N., 3632 - A0293
 Singh, N., 4628 - A0270
 Singh, P., **1900 - C0300**
 Singh, P., **4935**
 Singh, P., 5366 - A0018
 Singh, R., 5366 - A0018
 Singh, R., 214 - C0025
 Singh, R. K., **2986**
 Singh, R. P., **1464 - C0026**, 1917 - C0317, 3594 - A0212, 3596 - A0214, 3597 - A0215, 4277 - C0148, 4289 - C0160, 4618 - A0260, 5538 - A0230
 Singh, R. B., **4349 - C0397**
 Singh, R., **4585 - A0174**
 Singh, S., **488 - A0348**
 Singh, S., 1592
 Singh, U., 4668 - A0310
 Singh, V., 3455
 Singhal, P., 374 - A0034
 Singireddy, R. R., **1478 - C0220**
 Singman, E. L., 2738 - B0117
 Sinha, D., **2448 - C0114**, 2455 - C0121, 311 - C0244, 3169 - A0312, 3472, 358 - A0018, 3994 - A0119, 3996 - A0121, 4594 - A0183, 64 - A0111
 Sinha, D., 1196, **1611**
 Sinha, N. R., 4359 - C0407
 Sinha, P. R., 151 - B0065, 4334 - C0382, 474 - A0334
 Sinha, R., 1312 - B0019
 Sinha Roy, A., 1395 - B0172, 1633 - A0009, 5980
 Sinha, S., 3292 - C0086, 3293 - C0087, 4873 - C0318
 Sinha, S., 2759 - B0138, 4681 - A0323
 Sinisi, F., 5755 - C0042
 Sinnakaruppan, M., 3355 - C0237
 Sinnott, L. T., 3388 - C0312, 3392 - C0316
 Sioufi, K., 5457 - A0126, **5972**
 SIPRAD, 195 - C0006
 Sips, H., 1577
 Siringo, F. S., 2427 - C0093, 5540 - A0232
 Sirrell, S., 1262 - A0297
 Sisa, C., 6117 - C0236
 Sisay, A., 6164 - C0283
 Sisk, R., 4284 - C0155
 Sit, A. J., **1218**, 1237 - A0078, 2023 - A0050
 Sit, M., 2161 - A0330
 Sitnilska, V., 2377 - C0043, 3128 - A0245, **3131 - A0248**, 3232 - B0331
 Situ, B. A., **5069 - B0020**
 Situ, P., **1779 - B0094**, 4904 - C0349
 Situnayake, D., 2521 - C0250, 2522 - C0251
 Sivak, J. M., 1486 - C0228, 2614, 4501 - A0016, 4702 - B0126, 6126 - C0245
 Sivak, M., 332 - C0265
 Sivak, O., 5319 - C0252
 Sivaprasad, S., 1717 - A0238, 2569, 3231 - B0330, 3233 - B0332, 4276 - C0147
 Sivarajah, P., 2386 - C0052
 Sivertsen, M., **1441 - C0003**
 Sivyver, B., **1879 - C0183**
 Sivyver, B., 3740 - B0087, 590 - B0205
 Sjapic, S., **5012 - A0208**
 Sjö, L. D., 5587 - A0306
 Skala, M., **1613**, 5829 - C0116
 Skalak, C., **4045 - A0252**
 Skalet, A., 3623 - A0284, 3624 - A0285
 Skalicka, P., 2917 - C0214, 3022, 328 - C0261
 Skandri, L. I., 3092 - A0063
 Skarie, J. M., 1818 - B0279
 Skeie, J. M., **1357 - B0117**
 Skelton, H. M., 4982
 Skelton, L. A., 4586 - A0175
 Skiba, N. P., **605 - B0277**
 Skiljić, D., **4171 - C0013**
 Skinner, R., 2732 - B0111
 Sklar, B., **332 - C0265**
 Skokidis, K. A., 4115 - B0278
 Skondra, D., 2872 - B0290, 2874 - B0292, 2881 - B0299
 Skoog, I., 1090 - C0103
 Skottman, H., 1189, 2281 - B0235, **3451**, 3861 - C0122, 4579 - A0168, 527 - B0142, 538 - B0153, 5685 - A0404
 Skovgaard, A., 4750 - B0251
 Skowronska-Krawczyk, D., **2509 - C0213**, 3695 - B0042
 Skruodyte, J., 2109 - A0167, 5063 - B0014
 Skumatz, C., 1442 - C0004, 2362 - B0372
 Skutnik, D., 3504 - A0067
 Skytt, D. M., 1480 - C0222
 Slade, L., **952 - B0130**
 Sladic, J., 1240 - A0081
 Slagle, G., **473 - A0333**
 Slakter, J. S., 4950
 Slater, J. A., **1809 - B0157**
 Slavi, N., 3039 - A0010, **3584 - A0201**, 695 - C0290
 Slavin, R., 181 - B0335, 182 - B0336
 Slean, G., **2046 - A0104**
 Sledge, S., **3812 - C0039**
 Sledz, E., **161 - B0075**, 6172 - C0291
 Slemann, A., 1685 - A0206
 Sliesoraityte, I., 3163 - A0280
 Slifirski, H., **2112 - A0170**
 Slimani, N., 1631 - A0007
 Slingsby, T. J., 4230 - C0072
 Sloan, K. R., 1478 - C0220, 1506 - C0347, 2437 - C0103
 Sloane, D., 60 - A0107
 Slomovic, A., 1337 - B0044, 1338 - B0045, 293 - C0194, 294 - C0195
 Sloniecka, M., **2290 - B0244**
 Slood, F., 2927 - C0224
 Slowik, S., 3151 - A0268
 Sluch, I., **3684 - A0368**
 Sluch, V., 4711 - B0135, 592 - B0207
 Small, A., 401 - A0101
 Small, K. W., 1437 - B0356, **3161 - A0278**
 Small, L., 3161 - A0278, **946 - B0124**
 Small, R., 2682 - B0003
 Smart, M., 5314 - C0247
 Smedowski, A., **313 - C0246**
 Smeets, F., 5403 - A0055
 Smelkinson, M., 4663 - A0305
 Smewing, L., **3724 - B0071**, 4678 - A0320
 Smid, L., **1507 - C0348**
 Smiddy, W., 4660 - A0302, 4694 - A0336
 Smidt, R., 939 - B0117
 Smidt-Nielsen, L., 3643 - A0304
 Smit, A., 4500 - A0015
 Smit, T., 6062 - A0191
 Smit-McBirde, Z., 3004, **5370 - A0022**
 Smith, A., 5453 - A0122
 Smith, A., **1629 - A0005**, 4448
 Smith, A. J., **5635 - A0354**, 5638 - A0357, 5639 - A0358
 Smith, B., 1549
 Smith, B. T., 394 - A0094
 Smith, B., 1215
 Smith, C., 2872 - B0290, 2881 - B0299
 Smith, C. C., **3056 - A0027**, 772
 Smith, D., 4980
 Smith, D., 2440 - C0106
 Smith, E. L., 5043 - A0239, 5955, 688 - C0283, 689 - C0284
 Smith, E., 2754 - B0133
 Smith, G. W., 3965
 Smith, I., 5091 - B0042, 5093 - B0044
 Smith, J., **5355 - A0007**
 Smith, J., 4817 - C0175, 817 - A0149
 Smith, J. J., **2470 - C0136**
 Smith, J. R., 2551 - C0280, 4191 - C0033, 499 - B0006, 5391 - A0043
 Smith, L. E., 2752 - B0131, 3570 - A0187, **5995**, 764, 767
 Smith, M. A., 2096 - A0154, 3720 - B0067
 Smith, M. A., **3743 - B0090**
 Smith, M., 1046 - B0357, 1050 - B0361
 Smith, N. D., 1290 - A0325
 Smith, P., 5521 - A0213
 Smith, R., 3210 - B0309, 3214 - B0313, 3240 - B0339, 3251 - B0350, 5857 - C0144, 5858 - C0145
 Smith, R. S., 5158 - B0181
 Smith, R., **5977**
 Smith, S. E., 5526 - A0218
 Smith, S., 1618, 1705 - A0226, **2451 - C0117**
 Smith, S., 4217 - C0059
 Smith, T., 1142
 Smith, T., 3237 - B0336
 Smith, T. M., 1071 - C0084, 3409 - C0333
 Smith, T., **1265 - A0300**, 1269 - A0304
 Smith, W., 3052 - A0023, 3053 - A0024, 4535 - A0050
 Smith, W., **4102 - B0227**
 SMW and PS contributed equally, 1736 - A0257
 Sneed, M., 6041 - A0075
 Snider, M., 2314 - B0268
 Snieder, H., 1814 - B0275
 snipas, S., 2572
 Snitzer, J. S., 4230 - C0072
 Snoberger, A., 4980
 Snodderly, M., 5543 - A0235
 Snook, J., 2446 - C0112
 Snow, P., 2549 - C0278, 2551 - C0280
 Snyder, E., **2678 - A0405**
 Snyder, K., 5908 - C0195
 Snyder, K., **2372 - C0038**
 So, K., 5286 - C0219
 So, S., 2046 - A0104
 So, W., 4680 - A0322
 Soares, B., 3028
 Soares de Melo, L., 2066 - A0124
 Soares, G., 5232 - B0345
 Soares, M., 1892 - C0292
 Soares, M. T., 3378 - C0302, 4093 - B0218
 Sobas Abad, E., **5773 - C0060**
 Soberon, S., 2769 - B0148, 5243 - B0356
 Soberón, S., 4225 - C0067, **4619 - A0261**
 Soberon, V., 4225 - C0067
 Sobolewska, B., 4864 - C0309
 Sobrin, L., 1515 - C0356, 4208 - C0050, 4209 - C0051
 Söderquist, B., 3678 - A0362
 Sodhi, A., 2570, 825 - A0157
 Sodhi, S., 45 - A0076, 5839 - C0126
 Sodi, A., 1696 - A0217, 2836 - B0254, 2838 - B0256
 Soejima, Y., 5729 - C0016
 Soeken, T., **1767 - B0082**
 Soetikno, B., **5820 - C0107**
 Soferman, R., 1733 - A0254
 Sofia, M., 3095 - A0103, 378 - A0038, 3966
 Sogbesan, E., 3461
 Soheili, Z., 3087 - A0058
 Sohl, N., 554 - B0169
 Sohn, J., 2705 - B0026, 5443 - A0112, 860 - A0192
 Soiberman, U., 1345 - B0052, 2922 - C0219, 4422
 Sokol, J., 331 - C0264
 Sokolov, M., 4980
 Sokolova, E., 1115 - C0150
 Solanki, K., 1666 - A0187
 Solari, M. G., 4999 - A0070
 Solarte, V., 1382 - B0142
 Soldo, B., 2719 - B0040
 Solebo, A., 164 - B0318, **165 - B0319**, 171 - B0325
 Soliman, A., 1685 - A0206
 Soliman, M. K., **4244 - C0086**
 Soliman, Y., 117 - B0031
 Solis, A., 1537 - C0378, 3605 - A0223
 Soliz, P., 1689 - A0210, 1709 - A0230, 1887 - C0287, 4677 - A0319
 Solomon, E., 5569 - A0261
 Solomon, S. D., 825 - A0157
 Solorio Martinez, F., 3798 - C0025
 Soltero, A., 4493 - A0008
 Somasekhar, G., 3287 - C0081
 Somavarapu, S., 2494 - C0198, 6117 - C0236
 Somayajulu, M., 3552 - A0169
 Someya, H., 5373 - A0025
 Somfai, G. M., **4660 - A0302**, 4694 - A0336
 Somogyi, A., 1933 - C0333
 Son, H., **266 - C0125**
 Son, J., 5432 - A0101, 5626 - A0345
 Son, K., 107 - A0270, 3878 - C0139, 3881 - C0142, 3882 - C0143
 Son, T., **1974**
 Son, W., 5626 - A0345
 Song, A., 3365 - C0247
 Song, A. P., 5951
 Song, A., 774
 Song, B. J., 2080 - A0138, **4072 - B0067**
 Song, D., **2396 - C0062**
 Song, D., 867 - A0199
 Song, E., 5401 - A0053
 Song, H., 5024 - A0220
 Song, H., 2781 - B0160, 6174 - C0293, **6190 - C0309**
 Song, H., 445 - A0305, 4627 - A0269, **4635 - A0277**
 Song, J., **2214 - A0383**
 Song, J., 248 - C0107, **3296 - C0090**
 Song, M., 1651 - A0027
 Song, M., 3272 - B0371, 4580 - A0169
 Song, M., **4737 - B0238**, 4738 - B0239
 Song, P., **960 - B0214**
 Song, S., **5203 - B0316**, 5907 - C0194
 Song, S., 2120 - A0178, 5065 - B0016, **5076 - B0027**
 Song, S., 1970
 Song, W., 5462 - A0131, 5538 - A0230
 Song, W., 3748 - B0095
 Song, X., 445 - A0305
 Song, Y. E., 1818 - B0279
 Song, Y. E., **1418 - B0337**, 1420 - B0339
 Song, Y., 4598 - A0187, 6079 - A0208
 Song, Y., 3295 - C0089
 Song, Y., 3196 - B0196
 Song, Y., 5704 - A0423
 Song, Y. C., 1740 - A0261
 Song, Y., **1553**
 Songra, L., 6133 - C0252
 Sonka, M., **1677 - A0198**
 Sonmez, K., 2755 - B0134
 Sonnie, C., **3769 - B0184**
 Sonobe, H., 2784 - B0163, 862 - A0194
 Sonoda, K., 1426 - B0345, 21 - A0052, 33 - A0064, 4003 - A0128, 4290 - C0161, 5356 - A0008, 5376 - A0028, 5915 - C0312, 65 - A0112, 863 - A0195
 Sonoda, L., 1769 - B0084
 Sonoda, S., 1107 - C0142, 1730 - A0251, 21 - A0052, 276 - C0177, 3410 - C0334, 461 - A0321, 5265 - C0111
 Sonoda, T., 5498 - A0167
 Sonomura, Y., 4866 - C0311, 4881 - C0326, **4890 - C0335**
 Sood, A., **1515 - C0356**
 Soomro, H., 4139 - B0302
 Soorma, T., 1261 - A0296
 Sopen, A., 3704 - B0051
 Sophie, R., 4835 - C0193

- Sorbara, L., 1338 - B0045, 1764
- B0079, 293 - C0194, **294** -
C0195, 3930
- Sorden, S. D., 5658 - A0377
- Sordi, E., 4078 - B0073
- Sorensen, G. L., 2646 - A0151
- Sorensen, K., 2641 - A0146, 2643
- A0148, 2645 - A0150, 5504 -
A0173, 5505 - A0174
- Sorensen, N., 5918 - C0315
- Sorensen, T., 1415 - B0192
- Sorenson, C., 5487 - A0156
- Soria, J., 2231 - A0400, 5099 - B0088,
5100 - B0089
- Soria Viteri, J., 3801 - C0028
- Soritau, O., 557 - B0172
- Sorkin, N., 3372 - C0296
- Sorkio, A., 3451, 4579 - A0168, 527
- B0142
- Sornsute, A., 6117 - C0236
- Sorrentino, D., **487** - **A0347**
- Sosina, K., 6025
- Sosne, G., 2215 - A0384, 3807 - C0034
- Sossa, C., 1382 - B0142
- Sothilingam, V., 998 - B0252
- Sotimehin, A. E., **4152** - **B0375**
- Soto, C., 4585 - A0174
- Soto, J., 4967
- Soto Munoz, J., **4384** - **C0432**
- Sotolongo-Lopez, M., 4452
- Sotozono, C., 108 - A0271, 109 -
A0272, 116 - B0030, 1308
- B0015, 1394 - B0171, 1751
- B0066, 2128 - A0186, 2912 -
C0209, 2993, 336 - C0269, 3450,
3775 - C0002, 3842 - C0103,
4085 - B0080, 484 - A0344, 4866
- C0311, 4879 - C0324, 4881
- C0326, 4890 - C0335, 4891 -
C0336, 871 - A0203
- Souied, E. H., 2807 - B0225, 3156
- A0273, 5425 - A0094, 6198
- C0352, 6201 - C0355, **814** -
A0146
- Soules, K. A., 2875 - B0293, **2877** -
B0295, 3876 - C0137
- Soumitra, N., 5135 - B0158
- Soumyabrata, R., 520 - B0027
- Soundararajan, A., 4716 - B0140
- Sousa, D., **2070** - **A0128**
- Sousa e Silva, A., **1830** - **B0291**
- Sousa, I., 1069 - C0082
- Sousa, S. J., 4396 - C0444
- Southern University Hospital NHS
Trust, 799 - A0131
- Souto, F. S., 172 - B0326
- Souza, B. B., 2338 - B0327
- Souza, G., 4044 - A0251
- Souzeau, E., 1177
- Sorland, R. Ø., 2516 - C0245
- Spaeth, G. L., 5186 - B0209
- Spagnolo, B., 448 - A0308
- Spahr, H., 300 - C0201, 672 - C0230
- Spaniol, K., 118 - B0032
- Spanish Multicenter Genetic Glaucoma
Group, 5150 - B0173
- Sparrow, J. R., 4664 - A0306, **5856** -
C0143, 787
- Sparschu, L., 5171 - B0194
- Speckert, M., 5209 - B0322
- Spector, C., 1438 - B0357
- Spector, M., 71 - A0118
- Spector, T., 777, 781
- Spector, Y. Z., 3741 - B0088
- Spee, C., 2457 - C0123, 26 - A0057
- Spencer, C. N., 3179 - A0322
- Spencer, D., **4215** - **C0057**
- Spencer, E., 2656 - A0383, 2714 -
B0035
- Spencer, F., 3911
- Sperber, L., 6158 - C0277
- Sperber, L. T., 6167 - C0286
- Sperlich, K., 3439, **5967**
- Spiegel, D., 2954 - C0276, **5966**
- Spierer, A., 1024 - B0308
- Spiehl, B., 5199 - B0312
- Spiga, G., 2239 - A0408, 225 - C0036,
4370 - C0418
- Spiller, A., **2774** - **B0153**
- Spindler, L., **5918** - **C0315**
- Spinozzi, D., **1380** - **B0140**, 2902 -
C0199
- Spira-Eppig, C., 3436
- Spirn, M., 5004 - A0075
- Spiru, B., **1389** - **B0166**
- Spital, G., 215 - C0026
- Spitzer, M. S., 5683 - A0402, 5684 -
A0403, 5931 - C0328
- Splith, V., **5663** - **A0382**
- Spoerl, E., 1383 - B0160, 1384 -
B0161, 1395 - B0172, 2017
- A0044, 2018 - A0045, 3190 -
B0190, 5090 - B0041
- Sponsel, W. E., 2701 - B0022, 2703
- B0024, 2862 - B0280, 6086
- C0205
- Sponsel, W. E., 2085 - A0143, 4067 -
B0062, 473 - A0333, **4989**, 5056
- B0007, 5062 - B0013
- Spooner, K., **820** - **A0152**
- Spors, F., 2428 - C0094, 5799 -
C0086, **5807** - **C0094**
- Spraggins, J. M., 3211 - B0310, 3483
- Springer, A., 2682 - B0003
- Sprinzen, D., **607** - **B0279**
- Squires, N., 991 - B0245
- Squirrel, D., 3466, 5358 - A0010
- Srivani, N., 268 - C0127, 2978
- Sredar, N., 4088 - B0083, **4632** -
A0274
- Sreekumar, P. G., **2457** - **C0123**, 4036
- A0161
- Sreelakshmi, K., 3641 - A0302
- Sridhar, A., 592 - B0207
- Sridhar, J., 537 - B0152
- Srimaneekam, D., 2082 - A0140
- Srinivas, M., **3039** - **A0010**, 3584 -
A0201, 695 - C0290
- Srinivas, S. P., 1417 - B0194, **2914**
- **C0211**, 4216 - C0058, 5709
- A0428
- Srinivas, S., **1938** - **C0338**
- Srinivasan, A., 3646 - A0307
- Srinivasan, R., 2477 - C0143
- Srinivasan, S., **2890** - **C0187**
- Srinivasan, S., 3827 - C0054,
3933, **921** - **B0099**
- Srinivasan, V. J., 299 - C0200, **5824** -
C0111, 5832 - C0119
- Sripathi, S., 2466 - C0132
- Sripathi, S. R., **4002** - **A0127**
- Sripriya, S., 5135 - B0158
- Sriram, A., 5067 - B0018
- Srivastava, G. K., **4226** - **C0068**, 540
- B0155
- Srivastava, R., 519 - B0026, 520 -
B0027
- Srivastava, S., 1920 - C0320, 1930
- C0330, 3596 - A0214, 4232
- C0074
- Ssekasanvu, J., 4108 - B0233
- St-Amour, L., **3908**
- St Leger, A., 720
- Stacey, A., **1845** - **B0306**, 5577 -
A0296
- Stachelek, K., 1637 - A0013
- Stachon, T., 2261 - B0215, 2263 -
B0217
- Stachs, O., 1683 - A0204, **2273**
- **B0227**, 3439, 4976, 5846 -
C0133, 5877 - C0164, 5967
- Stackpole, E., **1259** - **A0294**
- Staffetti, J., 5016 - A0212, 5034 -
A0230
- Stage Vergmann, A., 3255 -
B0354, **5913** - **C0310**
- Stagg, B. C., 4462
- Stahl, A., 5327 - C0260
- Stahl, M. C., 1878 - C0182
- Stahnke, T., 2273 - B0227, 2710 -
B0031, **4976**, 5846 - C0133
- Stalmans, I., 3951, 4478, 5074 -
B0025, 5831 - C0118
- Stambolian, D., 1418 - B0337, 1420
- B0339, 1823 - B0284, 1824
- B0285, 1825 - B0286, 1827
- B0288, 2426 - C0092, 3208 -
B0307, 3940, 702 - C0297
- Stamer, W., 1649 - A0025, 1659 -
A0035, 3477, 3505 - A0068,
3968, 3970, 3971, 4391 - C0439,
4708 - B0132, 4724 - B0148,
5161 - B0184, 6039
- Stampoulis, D., **4015** - **A0140**
- Stanchfield, M., 559 - B0174
- Stancombe, C., 5732 - C0019
- Stanford, M., 4189 - C0031
- Stanford, P., 3911
- Stanga, P. E., 4265 - C0136
- Stangos, A., 2061 - A0119
- Stankiewicz, W., 2793 - B0211
- Stankowska, D. L., 1593, 5294 -
C0227, **5295** - **C0228**, 5298
- C0231
- Stanton, G., **1850** - **C0154**
- Stanton, M., 60 - A0107
- Stanwyck, L. K., 1515 - C0356, **4208** -
C0050, 4209 - C0051
- Stanzel, B. V., **4022** - **A0147**, 538 -
B0153
- Stapleton, F., 1743 - B0058, 1777
- B0092, 6156 - C0275, **936** -
B0114
- Stappler, T., **5258** - **C0104**
- Stark, B., 1725 - A0246, 2114 - A0172,
2374 - C0040
- Stark, K. J., 2407 - C0073
- Stark, W., 4422
- Starks, V., 86 - A0249
- Starnes, D., 3598 - A0216
- Starnes, T., **1316** - **B0023**
- Starostik, M., 370 - A0030, 6025
- Starr, C., 3048 - A0019
- Starr, M., **5622** - **A0341**
- Stary, C. M., 5263 - C0109
- State, M., **1279** - **A0314**, 2966 - C0288
- Stathopoulos, C., 1502 - C0343
- Statler, B., **4793** - **B0403**
- Staubli, U., 4112 - B0275
- Staureghin, G., 2419 - C0085,
275 - C0176, 3217 - B0316,
3253 - B0352, 34 - A0065,
4646 - A0288, 4653 - A0295,
4662 - A0304, **5545** - **A0237**,
882 - A0214
- Staverosky, J., 4722 - B0146
- Staverosky, J. A., **4725** - **B0149**
- Stawinski, P., 2324 - B0313
- Stebbins, K., **5241** - **B0354**
- Steel, D., 1984, 4817 - C0175, 5329 -
C0262, 542 - B0157, 561 - B0176
- Steele, S., 3113 - A0121
- Steeple, L. R., 5578 - A0297
- Stefanidakis, M., 374 - A0034, **385**
- **A0045**
- Stefanov, A., **972** - **B0226**
- Stefanova, N., 1884 - C0188
- Stefansson, E., 1690 - A0211, 2376
- C0042, 3209 - B0308, 3255
- B0354, 4657 - A0299, 4658
- A0300
- Stefater, J. A., 1162
- Steger, B., 3328 - C0170
- Stegmann, H., 271 - C0172
- Steidle, M., 277 - C0178
- Stein, J. D., **4154** - **B0377**
- Stein, J., 5285 - C0218
- Stein, M., 545 - B0160
- Stein, N., 3034 - A0005
- Stein, R., 1337 - B0044
- Stein, T., 207 - C0018
- Stein-O'Brien, G., 587 - B0202
- Steinbach-Rankins, J. M., 4963
- Steiner, R., 2454 - C0120
- Steingrimsson, E., 4020 - A0145, 5854
- C0141
- Steinhorst, A., 930 - B0108
- Steinle, J. J., 1209, 3540 - A0157, 3541
- A0158, 3547 - A0164
- Steinle, N., **1619**, 1957
- Steinmair, D., 2205 - A0374
- Steinmann, S., 1463 - C0025
- Steinmetz, M., **2584**
- Stella, C., 80 - A0127
- Stella, S. L., 1010 - B0264, 1848 -
C0152, **1878** - **C0182**
- Stelton, C., 5355 - A0007
- Stem cell biology and Glaucoma
laboratory, 4732 - B0156
- Stem Cell Group-Lako's Lab, 1984
- Stem, M., 3771 - B0186, 4431
- Stenevi, U., 1341 - B0048
- Stenger, M. B., 1133 - C0168, 1134 -
C0169, 722
- Stenkamp, D. L., 1489 - C0231, **3080**
- **A0051**, 3106 - A0114, 3107
- A0115
- Stephens, B., 1952
- Stephenson, K., 5406 - A0058
- Stepicheva, N., 3994 - A0119, **3996**
- **A0121**
- Stepien, K. E., **2790** - **B0208**, 3898 -
C0364, 3899 - C0365
- Stepp, M., **3875** - **C0136**
- Sterling, J., 4598 - A0187
- Sterling, S., 2998
- Stern, J., 2477 - C0143
- Sternberg, P., 5842 - C0129
- Stetkiewicz, P., 385 - A0045
- Stetler, J., 86 - A0249
- Stetson, G., 940 - B0118, **953** - **B0131**
- Stevanovic, M., 539 - B0154
- Steven, P., **5576** - **A0268**
- Steven, S., 4088 - B0083, 4632 -
A0274
- Stevenson, J., 5236 - B0349
- Stevenson, S. R., 5165 - B0188, **619**
- **B0291**
- Stevenson, S. B., 4411, 625 - B0297
- Stewart, E., 220 - C0031
- Stewart, J. M., 334 - C0267, 4025
- A0150, 4296 - C0167, 5929
- C0326, 6101 - C0220, 6102
- C0221
- Stewart, R. M., 1303 - B0010
- Steyn, J. S., 560 - B0175
- Stiegel, L., 3596 - A0214
- Stieger, K., 5202 - B0315
- Stiles, M., 1012 - B0266, 4328 - C0376
- C0119
- Stiles, M. C., 2056 - A0114
- Stiles, N., 1969, 32 - A0063
- Stina, P., 2697 - B0018
- Stingl, K., **1516** - **C0357**, 4561 - A0090
- Stingl, K., 4561 - A0090
- Stinn, M., 2146 - A0280
- Stinnett, S., 183 - B0337, 2430 -
C0096, 4997, 5546 - A0238
- Stinson, M., **4766** - **B0267**
- Stintman, B., 2416 - C0082
- Stippa, N., 5244 - B0357
- Stirland, D., **5689** - **A0408**
- Stirrup, S., 2388 - C0054
- Stitt, A. W., 1002 - B0256, 1211, 1476
- C0218, 3554 - A0171, 3942,
5490 - A0159
- Stockinger, P., 3104 - A0112
- Stoddard, J., 3474, 3589 - A0206, 546 -
B0161, 5840 - C0127
- Stodtmeister, R. P., **3190** - **B0190**
- Stoeger, C., 3682 - A0366
- Stoehr, H., 18 - A0049, 5643 - A0362
- Stoilov, I., 1456 - C0018, 3592 -
A0210, 783, 836 - A0168
- Stokes, L., 5302 - C0235
- Stolz, H., 3439, 5967
- Stone, A., 4812 - C0170, 5441 - A0110
- Stone, E., 6059 - A0188
- Stone, E. M., 3161 - A0278, 3368
- C0292, 5657 - A0376, 6043
- A0077
- Stone, J., 2174 - A0343
- Stone, R. A., **5048** - **A0244**
- Stone, T. W., 4813 - C0171
- STOP-Uveitis Study Group, 5949
- Stoppa, M., 2793 - B0211
- Stopka, W., 4974
- Storch, S., 6073 - A0202
- Storey, P., 5457 - A0126, 5697 - A0416,
6185 - C0304, **79** - **A0126**
- Storm, T., 4600 - A0189, **4613** - **A0202**
- Storti, F., **2454** - **C0120**, 2460 - C0126
- Stoumbos, Z., **449** - **A0309**
- Stout, T., 3896 - C0362
- Stowell, C., **3514** - **A0077**
- Stracke, F., 4022 - A0147
- Straiker, A., 4374 - C0422, **6040**
- Straiko, M. D., 1297 - B0004, 1309
- B0016
- Stranák, Z., 5670 - A0389
- Strand, E., 3562 - A0179
- Strand, V., 2174 - A0343
- Strang, A., **3805** - **C0032**
- Strang, C. E., 4535 - A0050, 6020
- Strasser, T., 2940 - C0262, **5199** -
B0312
- Stratton, I., 3607 - A0225, 3608 -
A0226
- Straub, J., 1527 - C0368, **277** - **C0178**,
2845 - B0263, 2864 - B0282,
5071 - B0022, 5870 - C0157
- Strausberger, S. L., 2314 - B0268
- Strauss, E. C., 3241 - B0340
- Strauss, O., 5553 - A0245
- Strauss, R. W., **1568**, 3143 - A0260,
788
- Strazzeri, J., 2589
- Streckenbach, F., 5846 - C0133
- Streichert, T., 1355 - B0115
- Streit, T., 5828 - C0115, 80 - A0127
- Strenk, L. M., **2211** - **A0380**
- Strenk, S., 2211 - A0380
- Strettoi, E., **1871** - **C0175**, 4601 -
A0190, 972 - B0226
- Strickland, R., **678** - **C0273**, 750
- Strip PCR Project Group, 4170 - C0012
- Strober, W., 720
- Strohla, H., 3190 - B0190
- Strohmaier, C., 308 - C0241, 3201
- B0201
- Strouthidis, N., 2028 - A0055, 3500
- Struble, C. B., 2656 - A0383, 2716 -
B0037, **5283** - **C0216**
- Structural Biophysics Group, 3858
- C0119
- Stiles, M. C., 2056 - A0114
- Stiles, N., 1969, 32 - A0063
- Stina, P., 2697 - B0018
- Stingl, K., **1516** - **C0357**, 4561 - A0090
- Stingl, K., 4561 - A0090
- Stinn, M., 2146 - A0280
- Stinnett, S., 183 - B0337, 2430 -
C0096, 4997, 5546 - A0238
- Stinson, M., **4766** - **B0267**
- Stintman, B., 2416 - C0082
- Stippa, N., 5244 - B0357
- Stirland, D., **5689** - **A0408**
- Stirrup, S., 2388 - C0054
- Stitt, A. W., 1002 - B0256, 1211, 1476
- C0218, 3554 - A0171, 3942,
5490 - A0159
- Stockinger, P., 3104 - A0112
- Stoddard, J., 3474, 3589 - A0206, 546 -
B0161, 5840 - C0127
- Stodtmeister, R. P., **3190** - **B0190**
- Stoeger, C., 3682 - A0366
- Stoehr, H., 18 - A0049, 5643 - A0362
- Stoilov, I., 1456 - C0018, 3592 -
A0210, 783, 836 - A0168
- Stokes, L., 5302 - C0235
- Stolz, H., 3439, 5967
- Stone, A., 4812 - C0170, 5441 - A0110
- Stone, E., 6059 - A0188
- Stone, E. M., 3161 - A0278, 3368
- C0292, 5657 - A0376, 6043
- A0077
- Stone, J., 2174 - A0343
- Stone, R. A., **5048** - **A0244**
- Stone, T. W., 4813 - C0171
- STOP-Uveitis Study Group, 5949
- Stoppa, M., 2793 - B0211
- Stopka, W., 4974
- Storch, S., 6073 - A0202
- Storey, P., 5457 - A0126, 5697 - A0416,
6185 - C0304, **79** - **A0126**
- Storm, T., 4600 - A0189, **4613** - **A0202**
- Storti, F., **2454** - **C0120**, 2460 - C0126
- Stoumbos, Z., **449** - **A0309**
- Stout, T., 3896 - C0362
- Stowell, C., **3514** - **A0077**
- Stracke, F., 4022 - A0147
- Straiker, A., 4374 - C0422, **6040**
- Straiko, M. D., 1297 - B0004, 1309
- B0016
- Stranák, Z., 5670 - A0389
- Strand, E., 3562 - A0179
- Strand, V., 2174 - A0343
- Strang, A., **3805** - **C0032**
- Strang, C. E., 4535 - A0050, 6020
- Strasser, T., 2940 - C0262, **5199** -
B0312
- Stratton, I., 3607 - A0225, 3608 -
A0226
- Straub, J., 1527 - C0368, **277** - **C0178**,
2845 - B0263, 2864 - B0282,
5071 - B0022, 5870 - C0157
- Strausberger, S. L., 2314 - B0268
- Strauss, E. C., 3241 - B0340
- Strauss, O., 5553 - A0245
- Strauss, R. W., **1568**, 3143 - A0260,
788
- Strazzeri, J., 2589
- Streckenbach, F., 5846 - C0133
- Streichert, T., 1355 - B0115
- Streit, T., 5828 - C0115, 80 - A0127
- Strenk, L. M., **2211** - **A0380**
- Strenk, S., 2211 - A0380
- Strettoi, E., **1871** - **C0175**, 4601 -
A0190, 972 - B0226
- Strickland, R., **678** - **C0273**, 750
- Strip PCR Project Group, 4170 - C0012
- Strober, W., 720
- Strohla, H., 3190 - B0190
- Strohmaier, C., 308 - C0241, 3201
- B0201
- Strouthidis, N., 2028 - A0055, 3500
- Struble, C. B., 2656 - A0383, 2716 -
B0037, **5283** - **C0216**
- Structural Biophysics Group, 3858
- C0119
- Stiles, M. C., 2056 - A0114
- Stiles, N., 1969, 32 - A0063
- Stina, P., 2697 - B0018
- Stingl, K., **1516** - **C0357**, 4561 - A0090
- Stingl, K., 4561 - A0090
- Stinn, M., 2146 - A0280
- Stinnett, S., 183 - B0337, 2430 -
C0096, 4997, 5546 - A0238
- Stinson, M., **4766** - **B0267**
- Stintman, B., 2416 - C0082
- Stippa, N., 5244 - B0357
- Stirland, D., **5689** - **A0408**
- Stirrup, S., 2388 - C0054
- Stitt, A. W., 1002 - B0256, 1211, 1476
- C0218, 3554 - A0171, 3942,
5490 - A0159
- Stockinger, P., 3104 - A0112
- Stoddard, J., 3474, 3589 - A0206

- Su, N., 2447 - C0113
 Su, Q., 2197 - A0366
 Su, T., 4649 - A0291
 Su, T., **534 - B0149**
 Su, W., 1855 - C0159
 Su, W., 2543 - C0272, **2575**, 6148 - C0267
 Su, X., **2363 - B0373**, 3593 - A0211, 4220 - C0062, 5003 - A0074, 5923 - C0320
 Su, Y., 2629 - A0134, **70 - A0117**
 Su, Y., 1925 - C0325
 su_ling_ho@tts.com.sg, S. H., 4159 - C0001
 Suarez, M., **124 - B0038**
 Subbaraman, L., 3827 - C0054
 Subbaraman, L. N., **4337 - C0385**
 Subczynski, W. K., 3033 - A0004, **3034 - A0005**
 Subedi, J., 2724 - B0103, 5893 - C0180
 Subirada, P. V., 6072 - A0201
 Subramani, M., 2759 - B0138
 Subramaniam Rajesh, B., **343 - A0003**
 Subramaniam, S., 3268 - B0367
 Subramanian, A., 1084 - C0097
 Subramanian, K., 3641 - A0302, 4220 - C0062
 Subramanian, M., 207 - C0018, 2234 - A0403
 Subramanian, P., 2488 - C0192
 Subramanian, P. S., 310 - C0243
 SUBRET Study Group, 4561 - A0090
 Subrizi, A., **5685 - A0404**
 Suchkov, N., **4639 - A0281**
 Suckert, N., 3140 - A0257
 Sudhakaran, S., 5106 - B0095
 Sudhakar, A., 5326 - C0259
 Sudhir, R. R., 5709 - A0428
 Sudkamp, H., 1440 - C0002, 4484
 Sueiras, V. M., 3484
 Suelves, A. M., **4819 - C0177**
 Suen, T., 5305 - C0238, 969 - B0223
 Sueoka, K., 3660 - A0344, 3668 - A0352
 Suesskind, D., 4727 - B0151
 Suetake, A., 4082 - B0077
 Suga, A., **6076 - A0205**
 Sugai, A., 2489 - C0193
 Sugano, A., **2074 - A0132**, 282 - C0183
 Sugano, E., 1876 - C0180, 2489 - C0193, **3081 - A0052**
 Sugano, Y., 3164 - A0281, **3238 - B0337**
 Sugar, E. A., **417 - A0235**
 Sugar, J., 1574, 3651 - A0335
 Sugimoto, M., 3618 - A0236, 4267 - C0138
 Sugino, I., 4221 - C0063
 Sugio, S., 1500 - C0242
 Sugioka, K., 4238 - C0080, 525 - B0140, **528 - B0143**
 Sugita, I., 800 - A0132
 Sugita, K., 800 - A0132
 Sugita, S., 4170 - C0012, **4998 - A0069**
 Sugita, T., 4262 - C0133
 Sugitani, K., 800 - A0132
 Sugiura, A., 3753 - B0168, 4227 - C0069
 Sugiura, Y., 4242 - C0084, **4275 - C0146**
 Sugiyama, K., 1310 - B0017, 3841 - C0102, 5145 - B0168, 5760 - C0047
 Sugiyama, M., 3042 - A0013
 Sugiyama, S., 291 - C0192, 3256 - B0355, 5002 - A0073
 Suh, D. W., 2781 - B0160, 5214 - B0327, **6174 - C0293**, 6190 - C0309
 Suh, L., 748
 Suh, M., 4505 - A0020
 Suh, S., **2030 - A0057**
 Suheimat, M., 4667 - A0309, 5791 - C0078, **5864 - C0151**
 Suhler, E. B., 270 - C0171, **5952**
 Sui, R., 1430 - B0349, 1431 - B0350, 1432 - B0351
 Sui, X., 715 - C0310
 Sui, X., 1672 - A0193
 Sujirakul, T., 4284 - C0155
 Sukkar, M., 3726 - B0073
 Sukpen, I., 334 - C0267, **4296 - C0167**
 Sulaimankutty, R., **3351 - C0233**
 Sulchek, T., 3970
 Suleiman, J., 5539 - A0231
 Suleiman, K., **2521 - C0250**, 2522 - C0251
 Sulewski, M. E., 3829 - C0056
 Sulfaro, M., 5173 - B0196
 Sullivan, A., 505 - B0012
 Sullivan, B., 939 - B0117
 Sullivan, B. D., 3827 - C0054, **938 - B0116**
 Sullivan, D. A., 4917 - C0362, **4918 - C0363**, 4921 - C0366, 4924 - C0369, 4954
 Sullivan, J. M., 1428 - B0347, 380 - A0040, 381 - A0041, 4544 - A0059, 5665 - A0384
 Sullivan, J. M., 4469
 Sullivan, L. S., 3062 - A0033, 47 - A0078
 Sulpice, T., 3573 - A0190
 Sumaroka, A., 4488 - A0003, 4522 - A0037
 Sumi, K., **1781 - B0096**
 Sumioka, T., 2626 - A0131, 2637 - A0142, 3337 - C0179, 3338 - C0180, 3843 - C0104, **4353 - C0401**
 Sumitomo, A., 3654 - A0338, 4787 - B0397, 4807 - B0417
 Summerfield, M., 6157 - C0276
 Summers, J. A., 308 - C0241, **711 - C0306**
 Sumnicht, A., 2194 - A0363
 Sun, A., **2534 - C0263**
 Sun, A., 2089 - A0147, 4987
 Sun, B., **5612 - A0331**
 Sun, C., 2256 - B0210, 2596
 Sun, C. Q., **6089 - C0208**
 Sun, C., 1489 - C0231, **3107 - A0115**
 Sun, C., **945 - B0123**
 Sun, D., 2008, **3737 - B0084**, 3745 - B0092, 707 - C0302
 Sun, D., 3525 - A0088
 Sun, D., 3565 - A0182
 Sun, D., **3050 - A0021**
 Sun, F., 3172 - A0315
 Sun, G., 5230 - B0343
 Sun, I., 1497 - C0239
 Sun, J. K., 2795 - B0213, 2876 - B0294, 3448, **735**, 737, 740
 Sun, J., 1987
 Sun, L., **4106 - B0231**
 Sun, L., 4740 - B0241
 Sun, L., **495 - B0002**
 Sun, L. M., 191 - C0002
 Sun, M., 254 - C0113, **2966 - C0288**
 Sun, M. M., **2538 - C0267**
 Sun, M., 5110 - B0099
 Sun, M., 2988
 Sun, N., **2497 - C0201**
 Sun, P., 4255 - C0097, 5919 - C0316
 Sun, T., **2342 - B0331**
 Sun, V., 48 - A0079
 Sun, W., 5395 - A0047, 5396 - A0048
 Sun, X., 3655 - A0339, 3661 - A0345, **4615 - A0204**, 4737 - B0238, 4738 - B0239, 67 - A0114, 809 - A0141, 967 - B0221
 Sun, X., **2571**
 Sun, X., 1124 - C0159, 618 - B0290
 Sun, X., 5092, 1651 - A0027, 2617, 3539 - A0102, 4603 - A0192, 5142 - B0165
 Sun, Y., 3082 - A0053, 333 - C0266, 3634 - A0295, 4701 - B0125, 5401 - A0053, 61 - A0108
 Sun, Y., 1192
 Sun, Y., 2452 - C0118, 3570 - A0187, 762, 764, 767
 Sun, Y., 5911 - C0198, **6083 - C0202**
 Sun, Y., 4720 - B0144, 4722 - B0146
 Sun, Y., **2482 - C0148**
 Sun, Y., 5052 - B0003
 SUN, Z., **1411 - B0188**, 4345 - C0393
 Sun, Z., 1926 - C0326, 2801 - B0219, 4840 - C0198
 Sun, Z., **4292 - C0163**
 Sunada, T., 263 - C0122
 Sunagawa, G. A., 1987
 Sunaric-Megevand, G., 2061 - A0119
 Sundaramurthy, S., **3355 - C0237**
 Sundararajan, M., **1049 - B0360**
 Sundararajan, V., 4399 - C0447
 Sundaesan, P., **5139 - B0162**
 Sundaesan, Y., **4731 - B0155**
 Sundeep, C., 6078 - A0207
 Sundin, O., 899 - B0077
 Sundin, O. H., **2573**
 Sundling, V., 928 - B0106
 Sundstrom, J. M., 2439 - C0105
 Sung, C., **3991 - A0116**, 984 - B0238
 Sung, J., 812 - A0144
 Sung, K., 2032 - A0059, 6145 - C0264
 Sunness, J. S., 1568, 788
 Sunshine, S., **3365 - C0247**
 Sunwoo, J., 4973
 Supharatnassitthi, W., **2349 - B0359**
 Supik, M., 345 - A0005
 Suprenant, M. P., 2466 - C0132
 Surace, E., 3095 - A0103, **378 - A0038**, 3966
 Surakiatchanukul, W., **3646 - A0307**
 Surenkhuu, B., 3292 - C0086, 3293 - C0087, 4873 - C0318
 Suresh Babu, V., 1633 - A0009, 4962
 Suresh, T., 600 - B0272
 Suri, F., 3087 - A0058
 Surmacz, E., 3838 - C0065
 Suryakumar, R., 249 - C0108
 Susanna, B. N., **1996**, 2683 - B0004
 Susanna, C., **2683 - B0004**
 Susanna, F., 2683 - B0004
 Susanna, R., 1470 - C0032, 2683 - B0004, 2697 - B0018
 Sustar, M., 2185 - A0354
 Sutariya, V., 1458 - C0020
 Sutphin, J. E., 3785 - C0012
 Suttle, C., 4118 - B0281, 4120 - B0283
 Sutton, G., **4343 - C0391**, 4344 - C0392, 531 - B0146, 907 - B0085
 Suvas, S., **518 - B0025**
 Suwan, Y., 310 - C0243
 Suwanmanee, T., 5467 - A0136, 5469 - A0138
 Suwexda, A., 5535 - A0227
 Suzuki, A., **2829 - B0247**
 Suzuki, A. F., **3347 - C0229**
 Suzuki, A., **5701 - A0420**, 5707 - A0426
 Suzuki, D., 291 - C0192
 Suzuki, H., 591 - B0206
 Suzuki, K., **3577 - A0194**
 Suzuki, M., 957 - B0135
 Suzuki, N., **1333 - B0040**
 Suzuki, N., 4294 - C0165
 Suzuki, S., 5082 - B0033
 Suzuki, T., 4614 - A0203
 Suzuki, T., **4589 - A0178**
 Suzuki, T., 3685 - A0369, 3686 - A0370, **4896 - C0341**
 Suzuki, T., **1968**
 Suzuki, Y., 3685 - A0369
 Suzuma, K., 1056 - B0367, 3595 - A0213, 4258 - C0129, 4260 - C0131, 4280 - C0151, 4288 - C0159, 5378 - A0030
 Suzumura, A., 1093 - C0128, 302 - C0235, 5307 - C0240, 5541 - A0233, 576 - B0191
 Svendsen, C., 551 - B0166, 6021
 SVF Normal Study Group, 4054 - B0049
 Svitova, T. F., 3825 - C0052, **4955**
 Svoboda, K. K., **320 - C0253**
 Svozilkova, P., 2525 - C0254
 Swain, D., 3476
 Swaminathan, M., 4146 - B0369
 Swaminathan, S. S., **483 - A0343**, 5424 - A0093
 Swamy, V., **4432**
 Swamy, V. S., 1373 - B0133
 Swamynathan, S. K., 3325 - C0167, 3849 - C0110
 Swamynathan, S., **3325 - C0167**, 3849 - C0110
 Swan, R., 426 - A0244
 Swan, R., 2755 - B0134, 2762 - B0141
 Swann, C., 2469 - C0135
 Swarbrick, H. A., 1771 - B0086
 Swaroop, A., 1438 - B0357, 2595, **2598**, 3490, 370 - A0030, 575 - B0190, 583 - B0198, 6010, 602 - B0274, 6023, 6025, 792
 Swaroop, M., 575 - B0190
 Swarup, A., **4967**
 Swearingen, R., 1046 - B0357, 1050 - B0361
 Sweeney, A., **2312 - B0266**
 Swendris, R., 6095 - C0214
 Swennes, A. G., 4953
 Swenor, B. K., 1061 - C0074, 1598, 2563, **4461**, 5162 - B0185
 Swiateczak, B., **697 - C0292**
 Swider, M., 4522 - A0037, 6006
 Swiderska, K., 4911 - C0356
 Swigut, T., 2477 - C0143
 Swinkels, D., 4983
 Swirski, S., 2275 - B0229
 Syc-Mazurek, S. B., 3711 - B0058
 Sydney Eye Hospital Vitreoretinal Research Group, 6173 - C0292
 Syed, Z., 5742 - C0029
 Syga, P., 1700 - A0221, 2110 - A0168
 Sylvestre-Bouchard, A., **1350 - B0110**, 4340 - C0388
 Symes, R., 6173 - C0292
 Symons, R. C., 1108 - C0143, 4830 - C0188, 774
 Syx, D., 5403 - A0055
 Szabo, A., 1086 - C0099
 Szabo, A., **4021 - A0146**
 Szabo, D. J., 5647 - A0366
 Szalai, E., **3633 - A0294**, 5723 - C0010
 Szalinski, M., 2324 - B0313
 Szarka, D., 4923 - C0368
 Szczesna-Iskander, D. H., 1749 - B0064
 Szczesna-Iskander, D. H., **4911 - C0356**
 Szczesny, P., 1959
 Szczotka-Flynn, L., 1768 - B0083, 1963, 2892 - C0189
 Szekeres, K., 628 - C0058
 Szel, A., 4021 - A0146
 Szentmáry, N., 2261 - B0215, 2263 - B0217
 Szentmáry, N., 3436
 Szepessy, Z., 628 - C0058
 Szewczyk, G., 4495 - A0010
 Szigiato, A., **5209 - B0322**
 Szirth, B., 1918 - C0318, 2791 - B0209, 2792 - B0210, 2803 - B0221, 4647 - A0289
 szkotak, A., 4505 - A0020
 Szkulmowska, A., 5874 - C0161
 Szkulmowski, M., **5874 - C0161**
 Szlyk, J. P., 3889 - C0355, 629 - C0059
 Szpos, M., 1665 - A0041, 4475
 Szostek, N., **2948 - C0270**
 Szulborski, K., 3423 - C0347
 Szurman, P., 4022 - A0147
 Tabak, S., 3186 - A0329, **3508 - A0071**, 3985 - A0110
 Tabara, Y., 1817 - B0278, 1819 - B0280
 Tabaran, A., 557 - B0172
 Tabata, K., 1876 - C0180, 3081 - A0052
 Taberner, J., 4937
 Tabor, L., 501 - B0008
 Tabuchi, H., 5898 - C0185
 Tacea, F., **2400 - C0066**
 Tachibana, K., 435 - A0295
 Tachibana, T., 21 - A0052, 33 - A0064, 5915 - C0312, 863 - A0195
 Tackett, R., 1631 - A0007
 Tada, T., 263 - C0122
 Tadayoni, R., 3615 - A0233
 Tadesse, D., 6164 - C0283
 Tadvalkar, G., 3875 - C0136
 Tagalakis, A. D., 3456
 Tagliaferri, L., 5605 - A0324
 Tagliatalata, G., 1882 - C0186
 Taha, R., **5520 - A0212**
 Taher, R., 396 - A0096
 Tahiri, H., 2648 - A0153, 983 - B0237
 Tahiri Joutei Hassani, R., 5714 - C0001
 Tahmaz, E., 1355 - B0115, **2373 - C0039**
 Tahvildari, M., 2574, 3326 - C0168, 3341 - C0183
 Tai, E., 2567, 6008
 Tai, Y., 1997, 5669 - A0388, 5814 - C0101
 Tailor, P., 5937 - C0334
 Tailor, V., **1080 - C0093**, 5960
 Taiyab, A., **1606**
 Tajima, K., 502 - B0009
 Tajnik, M., 2185 - A0354
 Takabatake, R., 1686 - A0207
 Takach, S., 245 - C0056, 3465
 Takada, K., 253 - C0112
 takada, N., 1718 - A0239
 Takada, Y., **3843 - C0104**
 Takagi, H., 5367 - A0019, 5433 - A0102, 623 - B0295, 624 - B0296, 626 - B0298, 785, 870 - A0202
 Takagi, R., 1804 - B0152, 3574 - A0191
 Takagi, S., 1715 - A0236, 291 - C0192, 5002 - A0073
 Takagi, S., 4757 - B0258
 Takahashi, A., 1426 - B0345
 Takahashi, A., **1327 - B0034**, 3417 - C0341
 Takahashi, A., 4280 - C0151
 Takahashi, H., 1230 - A0071, 5465 - A0134
 Takahashi, H., 1319 - B0026, **1730 - A0251**, 350 - A0010, 371 - A0031
 Takahashi, H., 1718 - A0239
 Takahashi, H., 1429 - B0348, 1519 - C0360, 4548 - A0063
 Takahashi, J. S., **6**
 Takahashi, K., 1426 - B0345, 5816 - C0103
 Takahashi, K., 4548 - A0063
 Takahashi, K., 2882 - B0300, 4268 - C0139, 4269 - C0140, **5914 - C0311**, 5915 - C0312, 670 - C0228, 671 - C0229, 807 - A0139, 847 - A0179
 Takahashi, M., 1686 - A0207
 Takahashi, M., 1715 - A0236, 1981, 1987, 291 - C0192, 304 - C0237, 4998 - A0069, 5002 - A0073, 541 - B0156, 553 - B0168
 Takahashi, N., **6105 - C0224**
 Takahashi, R., 350 - A0010
 Takahashi, S., 2943 - C0265
 Takahashi, S., **2310 - B0264**
 Takahashi, S., **460 - A0320**

- Takahashi, W. Y., 4835 - C0193
Takahashi, Y., **4714 - B0138**
Takahashi, Y., 1327 - B0034
Takahashi, Y., 5330 - C0263, **5371 - A0023**
Takai, Y., **3516 - A0079**
Takai, Y., **2489 - C0193**
Takai, Y., 3098 - A0106
Takakura, N., 5491 - A0160
Takamoto, M., 4163 - C0005, 4164 - C0006, 4177 - C0019, 4192 - C0034, 5579 - A0298
Takamura, Y., 2064 - A0122, 2075 - A0133, 4233 - C0075, 4851 - C0209, 4852 - C0210, **4853 - C0211**
Takanaga, H., 415 - A0233
Takano, H., 1804 - B0152, 3574 - A0191
Takaoka, A., 748
Takasago, Y., 3133 - A0250, 3706 - B0053, **5510 - A0179**, 811 - A0143
Takase, H., 4170 - C0012, 4191 - C0033, 4194 - C0036, 4195 - C0037
Takase, N., 3577 - A0194, 4682 - A0324
Takashi, C., 4098 - B0223
Takashima, H., 2926 - C0223
Takasu, I., **5264 - C0110**, 5914 - C0311, 670 - C0228, 671 - C0229
Takasu, T., 5264 - C0110
Takata, T., **3042 - A0013**
Takatsuna, Y., 4281 - C0152
Takayama, K., **3072 - C0235**, 4207 - C0049, 5373 - A0025, 5541 - A0233
Takeda, A., 4003 - A0128
Takeda, A., **510 - B0017**
Takeno, K., 296 - C0197
Takeshita, T., 6105 - C0224
Taketani, F., 102 - A0265
Taketani, Y., **3298 - C0092**, 636 - C0066
Takeuchi, H., 6129 - C0248
Takeuchi, J., 5262 - C0108
Takeuchi, M., 1742 - B0057, 1784 - B0099, 6049 - A0083
Takeuchi, M., 319 - C0252, 3206 - B0206, 4207 - C0049, 4925 - C0370, 4927 - C0372, 5373 - A0025, 5554 - A0246
Takeyama, A., 4273 - C0144, **855 - A0187**
Takahara, Y., 2075 - A0133
Takiishi, A. Y., 3329 - C0171
Takita, S., **5418 - A0070**
Takitani, G. E., **4098 - B0223**
Takiuti, J. T., 172 - B0326
Takizawa, G., 4116 - B0279
Taktak, A. F., **3630 - A0291**
Takumi, T., **2092 - A0150**, 854 - A0186
Takusagawa, H., 490 - A0350, 5057 - B0008, **5058 - B0009**
Tal, Y., 2280 - B0234
Talahalli, R., 190 - C0001
Talarmain, P., 38 - A0069
Talele, D., 5709 - A0428
Talenti, A., 4466, 4468
Talib, M., **43 - A0074**
Talie, F., 3481
Talks, J. S., 1906 - C0306, 3607 - A0225
Talla, V., 3964
Talli, P., 1330 - B0037, 1336 - B0043
Tallouzi, M. O., **403 - A0221**
Talreja, D., **1193**, 4551 - A0066
Taluksar, S., 3570 - A0187, 764
Taly, A., 1227
Tam, B., 4977
Tam, B., **978 - B0232**
Tam, B., 1014 - B0268
Tam, J., 3215 - B0314, 4637 - A0279, 4638 - A0280, **645 - C0203**
Tam, K., 1550
Tam, P., 5405 - A0057
Tamai, M., 1876 - C0180, 3081 - A0052
Tamaoki, A., 2209 - A0378, **3790 - C0017**
Tamborski, S., 5874 - C0161
Tamene, F., 3088 - A0059
Tamm, B., **2734 - B0113**
Tampo, H., 1730 - A0251
Tamura, H., 2397 - C0063
Tan, A., 3689 - A0373, 5362 - A0014
Tan, A. C., **2433 - C0099**
Tan, A. G., **3009**, 6008
Tan, B., 293 - C0194
Tan, B., 1754 - B0069
Tan, C. S., 1941 - C0341, **2404 - C0070**, 4480
Tan, D., 3389 - C0313
Tan, F., 2796 - B0214
Tan, G., 1706 - A0227, 1712 - A0233, 195 - C0006, 2600, 2603, 5362 - A0014, 538 - B0153
Tan, G. S., **3445**, 4739 - B0240
Tan, H., 5837 - C0124
Tan, H., 3375 - C0299
Tan, J., 1747 - B0062, 1792 - B0107, 936 - B0114
Tan, J. C., 4709 - B0133, 4724 - B0148
Tan, J., **4167 - C0009**
Tan, J., 156 - B0070, 4380 - C0428, 4892 - C0337
Tan, J. C., **5178 - B0201**
Tan Kok Soon, J., 3949
Tan, L., **3992 - A0117**, 4028 - A0153
Tan, L., 2157 - A0291
Tan, M. C., 5902 - C0189
Tan, M., 4830 - C0188
Tan, M., 5923 - C0320
Tan, N., 1033 - B0344, 1713 - A0234, 1813 - B0274, 2409 - C0075, 2600, 6009
Tan, N. Y., 2721 - B0100, 4101 - B0226
Tan, O., **2119 - A0177**, 2126 - A0184, 2837 - B0255, 3896 - C0362
Tan, R., 2411 - C0077
Tan, R. K., **2221 - A0390**
Tan, S., 4933
Tan, S., 723
Tan, S., 2283 - B0237
Tan, W., 61 - A0108
Tan, W., 6070 - A0199
Tan, X., 350 - A0010
Tanabe, F., 2106 - A0164, 5122 - B0111, **5133 - B0122**
Tanabe, S., 5109 - B0098
Tanabe-Awano, S., 3417 - C0341, 3418 - C0342
Tanaka, A., 153 - B0067
Tanaka, E., 545 - B0160
Tanaka, G., 2046 - A0104
Tanaka, H., 108 - A0271, **109 - A0272**, 1308 - B0015
Tanaka, H., 296 - C0197
Tanaka, J., 4164 - C0006, 4192 - C0034
Tanaka, K., 3790 - C0017
Tanaka, K., 1426 - B0345
Tanaka, M., 4257 - C0128
Tanaka, M., 4257 - C0128
Tanaka, M., 3324 - C0166
Tanaka, M., 4194 - C0036, **4195 - C0037**
Tanaka, R., 4163 - C0005, 4164 - C0006, 4177 - C0019, 4192 - C0034, **5579 - A0298**
Tanaka, S., 3789 - C0016
Tanaka, T., **4426**
Tanaka, Y., 91 - A0254
Tanaka, Y., 1730 - A0251, 1804 - B0152, **3574 - A0191**
Tanaka, Y., 3413 - C0337, **5109 - B0098**
Tanaka, Y., 4054 - B0049
Tandias, R., 4255 - C0097, **5919 - C0316**
Tane, Y., 1429 - B0348, 2934 - C0256
Tang, A., 2963 - C0285
Tang, A., 1792 - B0107
Tang, C., 706 - C0301
Tang, F., 5545 - A0237
Tang, F., **2801 - B0219**, 4840 - C0198
Tang, F., **5484 - A0153**
Tang, G., 1318 - B0025, 1342 - B0049
Tang, J., **1542 - C0383**
Tang, J., **3028**, 4443
Tang, J., 1601
Tang, J., 2991, 3581 - A0198, 3885 - C0146
Tang, K., 2046 - A0104
Tang, L., 4308 - C0282
Tang, L., **3299 - C0093**
Tang, M., 5734 - C0021
Tang, M. L., 1576
Tang, P. H., **2830 - B0248**
Tang, S. C., 1287 - A0322
Tang, S., 1436 - B0355, 3566 - A0183, 536 - B0151, 5377 - A0029, 5556 - A0248, 5557 - A0249, 6111 - C0230, 747
Tang, S., **2129 - A0263**, 692 - C0287
Tang, T., **4326 - C0300**
Tang, W., **2806 - B0224**
Tang, W. C., 3400 - C0324
Tang, X., 4434
Tang, X., 2286 - B0240, 4545 - A0060, 699 - C0294
Tang, Y., 2647 - A0152
Tang, Y., **813 - A0145**
Tang, Z., 1625 - A0001
Tang, Z., 3702 - B0049, 3734 - B0081, 6121 - C0240
Tanga, L., **5080 - B0031**
Tangchittam, S., 5589 - A0308
Taniguchi, H., **509 - B0016**, 510 - B0017
Taniguchi, J., 3815 - C0042
Taniguchi, T., 2717 - B0038, 2718 - B0039
Tanimoto, N., 716, 998 - B0252
Tanimura, N., 3796 - C0023, 3797 - C0024
Tanini, I., 1696 - A0217, 2838 - B0256
Tanito, M., 3024, **3506 - A0069**, 3516 - A0079
Tanna, P. F., 5078 - B0029
Tanner, A. M., 1261 - A0296
Tannir, J., 2215 - A0384, 4802 - B0412
Tannous, E., 1658 - A0034
Tantraworasin, A., 5053 - B0004, 5067 - B0018
Tanzi, R. E., 3037 - A0008
Tao, C., 322 - C0255
Tao, J., 4132 - B0295, 5625 - A0344
Tao, J. P., 89 - A0252
Tao, J., 5551 - A0243, 5563 - A0255
Tao, J., 3050 - A0021
Tao, J., **280 - C0181**
Tao, R., 1180
Tao, W., 2490 - C0194, 4552 - A0067, **4960**, 5609 - A0328, 5611 - A0330
Tao, X., 5955
Tao, Y., 3499
Tao, Y., 1642 - A0018, 286 - C0187, 289 - C0190, 4689 - A0331
Taoka, K., 5579 - A0298
Tapas, D., 334 - C0267
Tappeiner, C., 2205 - A0374
Tappeiner, C., 2527 - C0256
Tara Moore Research Group, 383 - A0043
Taraborelli, D., **5310 - C0243**
Tarakkad Krishnaji, S., **234 - C0045**
Taravati, P., 440 - A0300
Taravella, M., 4797 - B0407
Tarbell, M., 4133 - B0296
Tarchick, M., 5361 - A0013
Tariff, A., 3656 - A0340, 3662 - A0346, **3666 - A0350**
TargetAMD Consortium, 4543 - A0058
TargetAMD Group, 223 - C0034
Tarnowski, K., 3592 - A0210
Tarrant, J., **5725 - C0012**
Tarutta, E., 4748 - B0249
Tashbayev, B., 912 - B0090, 928 - B0106
Tashiro, K., 1353 - B0113
Tasiopoulou, A., 1468 - C0030, **3158 - A0275**
Tassew, N., 2652 - A0379, **5828 - C0115**, 80 - A0127
Tassignon, M., 2270 - B0224, 3452
Tassignon, M. B., 2280 - B0234, 2675 - A0402
Tassy, J., 3143 - A0260
Tat, L., 156 - B0070
Tate, D., 442 - A0302
Tatham, A. J., **2687 - B0008**, 4463
Tatsumi, T., 4281 - C0152
Tatsuya, J., **5433 - A0102**
Tauber, J., 1682 - A0203, **2096 - A0154**
Tauqeer, Z., **5697 - A0416**
Tavakkoli, F., 3455
Tavakoli, B., **1401 - B0178**, 1407 - B0184, 746
Tavares, I. M., 2066 - A0124
Tavassoli, S., **5618 - A0337**
Tavcar, R., 2653 - A0380
Tawarayama, H., 6138 - C0257
Tawfik, A. M., 3852 - C0113
Tay, H., **61 - A0108**
Tay-Kearney, M., 1707 - A0228
Tayeb, S., **98 - A0261**
Tayebi, M., 5992
Taylor, A., 4343 - C0391, 4344 - C0392
Taylor, A., 2440 - C0106, **2974**, 5544 - A0236
Taylor, A. W., **2531 - C0260**
Taylor, C. P., 679 - C0274, 683 - C0278, **749**
Taylor, D., 4302 - C0276
Taylor, D., 2425 - C0091
Taylor, D. J., **1290 - A0325**, 1600
Taylor, H. R., 3954
Taylor, K., 1182, **5137 - B0160**
Taylor, L. T., **993 - B0247**
Taylor, M. J., 4142 - B0305
Taylor, M., **947 - B0125**
Taylor, S. A., 1475 - C0037, 810 - A0142
Taylor, S., 4815 - C0173
Taylor, S., 3766 - B0181, **3937**, 6182 - C0301
Taylor, T., 612 - B0284
Taylor, W. R., 590 - B0205, **758**
Tayyari, F., 2442 - C0108
Tchah, H., 1348 - B0055, 4341 - C0389, 4973
Tchernookova, B. K., 1863 - C0167
Teague, G. C., 2417 - C0083, 2445 - C0111, 3270 - B0369, **4834 - C0192**
Tedford, C., 2415 - C0081
Tedford, S., 2415 - C0081
Tedja, M. S., **1821 - B0282**, 700 - C0295
Tefon, A., 1408 - B0185
Teh, G., 85 - A0248
Tehrani, N. N., 3762 - B0177
Tehrani, S., 1879 - C0183, 3697 - B0044, 3698 - B0045, 3707 - B0054, 3738 - B0085, 3740 - B0077, 490 - A0350, 5057 - B0008, 5058 - B0009, 6085 - C0204
Teitelbaum, B. A., 1815 - B0276
Teixeira, D., 1452 - C0014
Teixeira, I. C., 1361 - B0121, 1362 - B0122, 2894 - C0191, 2910 - C0207, 3654 - A0338, 4769 - B0270, 4787 - B0397, 4807 - B0417, 5744 - C0031
Teixeira, L., 3110 - A0118
Teixeira, L. B., 4373 - C0421
Teixeira, S., 4090 - B0085
Tejwani, S., 3534 - A0097, 3730 - B0077
Tekin, M., 6048 - A0082
Tekinay, A. B., 3675 - A0359
Teles, J. A., 1892 - C0292
Telias, M., 3973, 4451
Tellios, N., 4367 - C0415
Tellios, N., **4367 - C0415**
Tello, A., 1382 - B0142, 250 - C0109
Tello, C., 5099 - B0088, 5100 - B0089
Temple, S., 2477 - C0143
ten Asbroek, A., 3747 - B0094, 4029 - A0154, 6062 - A0191
ten Brink, J., 4029 - A0154, 6062 - A0191
ten Dam-van Loon, N., 5380 - A0032
ten Kate, M., 627 - B0299
Tenconi, P. E., 5357 - A0009
Tenerelli, K., 2256 - B0210
Tauqeer, Z., **5697 - A0416**
Tavakkoli, F., 3455
Tavakoli, B., **1401 - B0178**, 1407 - B0184, 746
Tavares, I. M., 2066 - A0124
Tavassoli, S., **5618 - A0337**
Tavcar, R., 2653 - A0380
Tawarayama, H., 6138 - C0257
Tawfik, A. M., 3852 - C0113
Tay, H., **61 - A0108**
Tay-Kearney, M., 1707 - A0228
Tayeb, S., **98 - A0261**
Tayebi, M., 5992
Taylor, A., 4343 - C0391, 4344 - C0392
Taylor, A., 2440 - C0106, **2974**, 5544 - A0236
Taylor, A. W., **2531 - C0260**
Taylor, C. P., 679 - C0274, 683 - C0278, **749**
Taylor, D., 4302 - C0276
Taylor, D., 2425 - C0091
Taylor, D. J., **1290 - A0325**, 1600
Taylor, H. R., 3954
Taylor, K., 1182, **5137 - B0160**
Taylor, L. T., **993 - B0247**
Taylor, M. J., 4142 - B0305
Taylor, M., **947 - B0125**
Taylor, S. A., 1475 - C0037, 810 - A0142
Taylor, S., 4815 - C0173
Taylor, S., 3766 - B0181, **3937**, 6182 - C0301
Taylor, T., 612 - B0284
Taylor, W. R., 590 - B0205, **758**
Tayyari, F., 2442 - C0108
Tchah, H., 1348 - B0055, 4341 - C0389, 4973
Tchernookova, B. K., 1863 - C0167
Teague, G. C., 2417 - C0083, 2445 - C0111, 3270 - B0369, **4834 - C0192**
Tedford, C., 2415 - C0081
Tedford, S., 2415 - C0081
Tedja, M. S., **1821 - B0282**, 700 - C0295
Tefon, A., 1408 - B0185
Teh, G., 85 - A0248
Tehrani, N. N., 3762 - B0177
Tehrani, S., 1879 - C0183, 3697 - B0044, 3698 - B0045, 3707 - B0054, 3738 - B0085, 3740 - B0077, 490 - A0350, 5057 - B0008, 5058 - B0009, 6085 - C0204
Teitelbaum, B. A., 1815 - B0276
Teixeira, D., 1452 - C0014
Teixeira, I. C., 1361 - B0121, 1362 - B0122, 2894 - C0191, 2910 - C0207, 3654 - A0338, 4769 - B0270, 4787 - B0397, 4807 - B0417, 5744 - C0031
Teixeira, L., 3110 - A0118
Teixeira, L. B., 4373 - C0421
Teixeira, S., 4090 - B0085
Tejwani, S., 3534 - A0097, 3730 - B0077
Tekin, M., 6048 - A0082
Tekinay, A. B., 3675 - A0359
Teles, J. A., 1892 - C0292
Telias, M., 3973, 4451
Tellios, N., 4367 - C0415
Tellios, N., **4367 - C0415**
Tello, A., 1382 - B0142, 250 - C0109
Tello, C., 5099 - B0088, 5100 - B0089
Temple, S., 2477 - C0143
ten Asbroek, A., 3747 - B0094, 4029 - A0154, 6062 - A0191
ten Brink, J., 4029 - A0154, 6062 - A0191
ten Dam-van Loon, N., 5380 - A0032
ten Kate, M., 627 - B0299
Tenconi, P. E., 5357 - A0009
Tenerelli, K., 2256 - B0210
Tauqeer, Z., **5697 - A0416**
Tavakkoli, F., 3455
Tavakoli, B., **1401 - B0178**, 1407 - B0184, 746
Tavares, I. M., 2066 - A0124
Tavassoli, S., **5618 - A0337**
Tavcar, R., 2653 - A0380
Tawarayama, H., 6138 - C0257
Tawfik, A. M., 3852 - C0113
Tay, H., **61 - A0108**
Tay-Kearney, M., 1707 - A0228
Tayeb, S., **98 - A0261**
Tayebi, M., 5992
Taylor, A., 4343 - C0391, 4344 - C0392
Taylor, A., 2440 - C0106, **2974**, 5544 - A0236
Taylor, A. W., **2531 - C0260**
Taylor, C. P., 679 - C0274, 683 - C0278, **749**
Taylor, D., 4302 - C0276
Taylor, D., 2425 - C0091
Taylor, D. J., **1290 - A0325**, 1600
Taylor, H. R., 3954
Taylor, K., 1182, **5137 - B0160**
Taylor, L. T., **993 - B0247**
Taylor, M. J., 4142 - B0305
Taylor, M., **947 - B0125**
Taylor, S. A., 1475 - C0037, 810 - A0142
Taylor, S., 4815 - C0173
Taylor, S., 3766 - B0181, **3937**, 6182 - C0301
Taylor, T., 612 - B0284
Taylor, W. R., 590 - B0205, **758**
Tayyari, F., 2442 - C0108
Tchah, H., 1348 - B0055, 4341 - C0389, 4973
Tchernookova, B. K., 1863 - C0167
Teague, G. C., 2417 - C0083, 2445 - C0111, 3270 - B0369, **4834 - C0192**
Tedford, C., 2415 - C0081
Tedford, S., 2415 - C0081
Tedja, M. S., **1821 - B0282**, 700 - C0295
Tefon, A., 1408 - B0185
Teh, G., 85 - A0248
Tehrani, N. N., 3762 - B0177
Tehrani, S., 1879 - C0183, 3697 - B0044, 3698 - B0045, 3707 - B0054, 3738 - B0085, 3740 - B0077, 490 - A0350, 5057 - B0008, 5058 - B0009, 6085 - C0204
Teitelbaum, B. A., 1815 - B0276
Teixeira, D., 1452 - C0014
Teixeira, I. C., 1361 - B0121, 1362 - B0122, 2894 - C0191, 2910 - C0207, 3654 - A0338, 4769 - B0270, 4787 - B0397, 4807 - B0417, 5744 - C0031
Teixeira, L., 3110 - A0118
Teixeira, L. B., 4373 - C0421
Teixeira, S., 4090 - B0085
Tejwani, S., 3534 - A0097, 3730 - B0077
Tekin, M., 6048 - A0082
Tekinay, A. B., 3675 - A0359
Teles, J. A., 1892 - C0292
Telias, M., 3973, 4451
Tellios, N., 4367 - C0415
Tellios, N., **4367 - C0415**
Tello, A., 1382 - B0142, 250 - C0109
Tello, C., 5099 - B0088, 5100 - B0089
Temple, S., 2477 - C0143
ten Asbroek, A., 3747 - B0094, 4029 - A0154, 6062 - A0191
ten Brink, J., 4029 - A0154, 6062 - A0191
ten Dam-van Loon, N., 5380 - A0032
ten Kate, M., 627 - B0299
Tenconi, P. E., 5357 - A0009
Tenerelli, K., 2256 - B0210
Tauqeer, Z., **5697 - A0416**
Tavakkoli, F., 3455
Tavakoli, B., **1401 - B0178**, 1407 - B0184, 746
Tavares, I. M., 2066 - A0124
Tavassoli, S., **5618 - A0337**
Tavcar, R., 2653 - A0380
Tawarayama, H., 6138 - C0257
Tawfik, A. M., 3852 - C0113
Tay, H., **61 - A0108**
Tay-Kearney, M., 1707 - A0228
Tayeb, S., **98 - A0261**
Tayebi, M., 5992
Taylor, A., 4343 - C0391, 4344 - C0392
Taylor, A., 2440 - C0106, **2974**, 5544 - A0236
Taylor, A. W., **2531 - C0260**
Taylor, C. P., 679 - C0274, 683 - C0278, **749**
Taylor, D., 4302 - C0276
Taylor, D., 2425 - C0091
Taylor, D. J., **1290 - A0325**, 1600
Taylor, H. R., 3954
Taylor, K., 1182, **5137 - B0160**
Taylor, L. T., **993 - B0247**
Taylor, M. J., 4142 - B0305
Taylor, M., **947 - B0125**
Taylor, S. A., 1475 - C0037, 810 - A0142
Taylor, S., 4815 - C0173
Taylor, S., 3766 - B0181, **3937**, 6182 - C0301
Taylor, T., 612 - B0284
Taylor, W. R., 590 - B0205, **758**
Tayyari, F., 2442 - C0108
Tchah, H., 1348 - B0055, 4341 - C0389, 4973
Tchernookova, B. K., 1863 - C0167
Teague, G. C., 2417 - C0083, 2445 - C0111, 3270 - B0369, **4834 - C0192**
Tedford, C., 2415 - C0081
Tedford, S., 2415 - C0081
Tedja, M. S., **1821 - B0282**, 700 - C0295
Tefon, A., 1408 - B0185
Teh, G., 85 - A0248
Tehrani, N. N., 3762 - B0177
Tehrani, S., 1879 - C0183, 3697 - B0044, 3698 - B0045, 3707 - B0054, 3738 - B0085, 3740 - B0077, 490 - A0350, 5057 - B0008, 5058 - B0009, 6085 - C0204
Teitelbaum, B. A., 1815 - B0276
Teixeira, D., 1452 - C0014
Teixeira, I. C., 1361 - B0121, 1362 - B0122, 2894 - C0191, 2910 - C0207, 3654 - A0338, 4769 - B0270, 4787 - B0397, 4807 - B0417, 5744 - C0031
Teixeira, L., 3110 - A0118
Teixeira, L. B., 4373 - C0421
Teixeira, S., 4

- Test, 3390 - C0314
Teuma, E., **2227 - A0396**
Tew, T., 1120 - C0155
Tewari-Singh, N., **2277 - B0231**, 4363 - C0411
Tewkesbury, G. M., 2461 - C0127
Tey, M., 5770 - C0057
Tezel, G., 2115 - A0173, 3733 - B0080, **6140 - C0259**
Tezel, T. H., 2115 - A0173, 3213 - B0312, 3675 - A0359, **5001 - A0072**
Thacker, S., 5240 - B0353
Thai, G., 2961 - C0283
Thai, K. K., 1179
Thai Ocular adnexal lymphoma study group, 5589 - A0308
Thajudeen, B., 438 - A0298
Thakur, A., 180 - B0334
Thakur, S. S., **5698 - A0417**
Tham, C. C., 4840 - C0198
Tham, Y., 1713 - A0234, 1813 - B0274, 1817 - B0278, 1995, 2091 - A0149, 2603, 2721 - B0100, **4101 - B0226**, 6009
Tham, Y., 2042 - A0100, 2053 - A0111
Than, J., 3879 - C0140
Than, J., 5440 - A0109
Than, T., 115 - B0029, 3788 - C0015
Thangavelu, M., 2251 - B0205
Thangmatheswaran, L., **1918 - C0318**, 6165 - C0284
Thanikachalam, S., 6048 - A0082
Thanos, A., **1532 - C0373**, 3771 - B0186, 5397 - A0049
Thanos, S., 3981 - A0106, 3982 - A0107
Thapa, S. S., 2724 - B0103, 5893 - C0180
Thavanesan, N., 5989
Thavikulwat, A. T., **4293 - C0164**
Thaware, O., **5734 - C0021**
The African American Eye Disease Study Group, 1597
The Hashmaney Group, 2870 - B0288
The Leuven Eye Study Research Group, 4478
The Los Angeles Latino Eye Study and the Chinese American Eye Study, 1812 - B0273, 778
The natural history of the progression of choroideremia (NIGHT) study group, 4991
The SAVE-2 Investigators and Study Team, 415 - A0233
The STOP-UIVEITIS Study, 410 - A0228
Thebault, S., 5524 - A0216
Thee, E. F., **6142 - C0261**
Thein, T., 5134 - B0123
Theinert, C., 5090 - B0041
Theissen-Kunde, D., 1440 - C0002, 395 - A0095, 4831 - C0189
Thelma, B., 5787 - C0074
Thenappan, A., 4071 - B0066
Theodoro Gaspar da Silva, F., 4096 - B0221
Theodoropoulou, S., **5555 - A0247**
Theodorou, M., 1080 - C0093
Theophanous, C., 3381 - C0305
Therese, L. K., 4169 - C0011
Theriault, M., **1358 - B0118**
Thermal Pulsation Restoration Study, 935 - B0113
Thiadens, A. A., 2927 - C0224, 43 - A0074, 5136 - B0159
Thibeault, K. C., 3063 - A0034
Thibodeaux, B., 4711 - B0135
Thibos, L., **4048 - A0255**
Thiede, B., 3884 - C0145
Thiel, M. A., 4386 - C0434
Thiele, S., **3221 - B0320**, 4945
Thieme, D., 4438
Thien, P., 4562 - A0091
Thienpont, H., 1378 - B0138
Thiery, A., 4081 - B0076
Thiery, A. H., 3500
Thiery, J., 1101 - C0136, 1105 - C0140
Thipparthi, M., 4802 - B0412
Thirkill, C. E., **2514 - C0243**
Thiruchelvam, D., 6017
Thomas, A. S., 5447 - A0116, 5459 - A0128
Thomas, A., 5446 - A0115
Thomas, A., 4521 - A0036
Thomas, B., 539 - B0154, **558 - B0173**
Thomas, C. N., 2366 - B0376, **4450**
Thomas, H., 2360 - B0370
Thomas, L., 2595
Thomas, M., 3126 - A0243, 5444 - A0113
Thomas, M. G., **2173 - A0342**, 5205 - B0318, 5788 - C0075
Thomas, R., 565 - B0180
Thomas, S., 5785 - C0072
Thomas, S. L., 1255 - A0096, **1256 - A0097**, 1257 - A0098, 5906 - C0193
Thomas, T., 908 - B0086
Thomas, V., 1776 - B0091, 1789 - B0104, 1791 - B0106, 1793 - B0108
Thomas, V., 2016 - A0043
Thomas-Benson, C., 314 - C0247
Thomaschewski, G., **2743 - B0122**
Thomasson, N., 4531 - A0046, 4537 - A0052, 5658 - A0377
Thomas, S. M., 1398 - B0175, 2292 - B0246, 2344 - B0333, 3265 - B0364, **3854 - C0115**, 4369 - C0417, 4373 - C0421, 524 - B0139
Thompson, A. M., **2366 - B0376**
Thompson, A. C., **5546 - A0238**
Thompson, B., 1274 - A0309, 2144 - A0278, 2160 - A0329, 2167 - A0336, 4142 - B0305, 4414, 5789 - C0076, 5958
Thompson, D. A., 4032 - A0157
Thompson, D., 1619, 3621 - A0239
Thompson, D., 2319 - B0308
Thompson, E. A., 2187 - A0356
Thompson, I., 1534 - C0375, **1536 - C0377**, 4187 - C0029, 4212 - C0054, 4310 - C0284, 5496 - A0165, 5948
Thompson, J., 2330 - B0319
Thompson, K., 4711 - B0135
Thomsen, A. S., 4429
Thomson, K., 676 - C0271, **754**
Thomson, W., 171 - B0325
Thong, L. P., **4168 - C0010**
Thoonen, R., 3464
Thoreson, W. B., 1858 - C0162
Thorne, J. E., 1140
Thornton, C., 3973, 4451
Thornton, M. E., 4961
Thornton, S., **4322 - C0296**
Thorogood, S., 4560 - A0089
Thorson, J. A., 3187 - A0330
Thounajom, M., 2492 - C0196, 3003, 3005, 3553 - A0170, 4024 - A0149, 5381 - A0033, **5486 - A0155**, 5515 - A0184
Thøgersen, I. B., 2254 - B0208
Thulasi, P., 4398 - C0446
Thule, P. M., 5991
Thumann, G., 223 - C0034, 4543 - A0058
Thurau, S. R., 2536 - C0265
Thurber, G., 1629 - A0005
Thuret, G., 4424
Thurtell, M., 2196 - A0365
Thyparampil, P., 5623 - A0342
Thys, S., 3452
Tian, B., 4575 - A0164, 795
Tian, H., **3093 - A0064**, 4576 - A0165, 5359 - A0011, 5644 - A0363
Tian, H., 3266 - B0365
Tian, J., 3366 - C0248
Tian, J., **1347 - B0054**, 288 - C0189, 3955, 4996
Tian, J., 5052 - B0003
Tian, J., 2875 - B0293, 2877 - B0295, 4461, 4660 - A0302, 4694 - A0336
Tian, L., 2585
Tian, N., 1864 - C0168, **2995**
Tian, P., 2764 - B0143, 2767 - B0146, 2772 - B0151, 3938
Tian, T., **682 - C0277**
Tian, Y. I., **3538 - A0101**
Tianjin orbital disease institute, 3172 - A0315
Tibullo, D., 3166 - A0309
Tichauer, K. M., 1926 - C0326
Tideman, W., **2136 - A0270**, 3953, 700 - C0295
Tie, W., 5443 - A0112
Tiedemann, A., 5184 - B0207, 5185 - B0208
Tiivas, C., 5619 - A0338
Tilia, D., 137 - B0051, 1776 - B0091, **1789 - B0104**, 1791 - B0106, 1793 - B0108, 4875 - C0320
Tillman, A., 3900 - C0366
Tinajero, M. G., 5176 - B0199
Tinelli, C., 1662 - A0038
Ting, D., **1706 - A0227**, 1712 - A0233, 2858 - B0276, 4074 - B0069
TING, D., 1713 - A0234
Tingle, C., 2172 - A0341
Tinker, L., 5543 - A0235
Tintin, J., 1238 - A0079
Tiosano, L., 356 - A0016
Tirsi, A., 5099 - B0088, **5100 - B0089**
Tiruveedhula, P., 4633 - A0275, 731
Tison, C., 4335 - C0383
Titchener, S. A., 1946
Titalii, K. F., **3114 - A0122**
Tityal, J. S., 1312 - B0019, 1346 - B0053
Tito, S., 2810 - B0228
Titus, H., **1001 - B0255**
Titus, H. E., 2486 - C0190, 2503 - C0207
Tivay, A., 6153 - C0272
Tiwari, A., 3325 - C0167, **3849 - C0110**
Tjahjono, N., 4974, 892 - A0281
Tjan, B., 2211 - A0380
Tjio, G., 1712 - A0233, **2091 - A0149**
Tjoa, A., 5259 - C0105
Tkaczyk, T., 4659 - A0301
Tkatchenko, A. V., 698 - C0293, **751**
Tkatchenko, T. V., **698 - C0293**, 751
Tlaskalova Hogenova, H., 2525 - C0254
To, C., 2357 - B0367, 699 - C0294, 710 - C0305
To, C., 3480, 361 - A0021
To, E., 6065 - A0194
To, W., 209 - C0020, 212 - C0023, 5311 - C0244
Toapanta, H., 1238 - A0079
Toda, I., 4390 - C0438
Toda, M., 3450
Toda, T., **1029 - B0313**
Todaró, J., 2215 - A0384
Todd, L., **4596 - A0185**, 991 - B0245
Todd, S., 3230 - B0329
Tode, J., 4484, 66 - A0113
Todorich, B., 1532 - C0373, 4431, 5697 - A0416
Todorova, M. G., 674 - C0232
Tofoli, D., 2928 - C0250
Toft, P., 3188 - A0331
Togano, T., 4082 - B0077
Toh, L., 121 - B0035, 477 - A0337
Toh, Y., 3399 - C0323, 3401 - C0325
Toho university Ohashi Medical Center group, 2092 - A0150
Toibana, T., 4233 - C0075
Tokko, H., **4802 - B0412**, 6095 - C0214
Tokuda, K., 3225 - B0324
Tokuda, K., 1686 - A0207, 4003 - A0128
Tokuda, S., 2208 - A0377
Tokushige, H., 5368 - A0020, 5653 - A0372
Told, R., **3248 - B0347**, 4483, 4485
Tole, D., 1299 - B0006
Toledo Corral, J., **1462 - C0024**
Tolentino, M. J., 398 - A0098
Tolman, N., **5158 - B0181**
Tom, L., **2441 - C0107**
Toma, C., 4850 - C0208
Tomahawk Study Group, 2910 - C0207
Tomar, N., 1634 - A0010
Tomarev, S. I., 2615, 4494 - A0009, 5516 - A0185, 578 - B0193
Tomaru, Y., 4170 - C0012
Tomatsu, S., **1816 - B0277**
Tomaz, C., 3085 - A0056
Tomida, D., 4356 - C0404
Tomidokoro, A., 6082 - C0201
Tomita, G., 2092 - A0150, 854 - A0186, 855 - A0187
Tomita, H., **1876 - C0180**, 2489 - C0193, 3081 - A0052
Tomita, M., 5465 - A0134
Tomita, R., 3164 - A0281, 3238 - B0337, 4282 - C0153, **4285 - C0156**
Tomita, Y., **3585 - A0202**
Tomkins-Netzer, O., **1141**, 2520 - C0249, 2523 - C0252, 3158 - A0275, 392 - A0092, 407 - A00225, 4193 - C0035, 4200 - C0042, 4745 - B0246
Tomlinson, A., 2849 - B0267
Tomlinson, L., 2774 - B0153, 2779 - B0158, 2783 - B0162, 2786 - B0165, 3754 - B0169
Tomoko, M., 2814 - B0232
Tompson, S., 701 - C0296
Toms, M., 1564, **4968**
Tong, B., 4948, 5545 - A0237
Tong, L., 1168, **3306 - C0100**
Tong, W., 3689 - A0373
Tong, Y., 1723 - A0244
Tong, Y., 2356 - B0366
Tong, Y., 3240 - B0339, 5857 - C0144, **5858 - C0145**
Tonpe, P., 808 - A0140
Tonomura, S., 4769 - B0270
Too, L., 330 - C0263
Tooke, B. P., 6050 - A0084
Toolan, K., 4448, **4614 - A0203**
Toomey, C. B., **3187 - A0330**
Toop, H., 220 - C0031
Toote, S., **3670 - A0354**
Topete, A., 4455
Topley, T., 1650 - A0026
Topping, K., **5880 - C0167**
Torchin, H., 2788 - B0167
Torii, H., **2145 - A0279**, 4769 - B0270, 677 - C0272
Torikai, Y., **2704 - B0025**
Toris, C. B., 2023 - A0050, 2694 - B0015, 2717 - B0038, 3972
Toriyama, Y., 4257 - C0128
Torkildsen, G., 914 - B0092
Tornow, R. P., **5859 - C0146**
Toro, M., 4321 - C0295
Toropainen, E., 313 - C0246
Torre, V., 1014 - B0268
Torrejon, K., 3538 - A0101, 4707 - B0131
Torrejon, K. Y., 1660 - A0036, **4708 - B0132**
Torres, D., 1058 - B0369
Torres, D., 2184 - A0353
Torres, E., 5743 - C0030
Torres, M., 1597, 1812 - B0273, 2725 - B0104, 3958, 4075 - B0070, 5180 - B0203, 5187 - B0210, 778
Torres Netto, E. A., **1385 - B0162**, 4400 - C0448
Torres, R. M., **450 - A0310**
Torres Treviño, L., 1739 - A0260
Torroni, G., 881 - A0213
Torun, N., 2191 - A0360
Torvund, M., 600 - B0272
Toshima, S., 2882 - B0300, 4268 - C0139, 4269 - C0140, 5914 - C0311, **5915 - C0312**, 670 - C0228, 671 - C0229, 807 - A0139, 847 - A0179
Tosini, G., **1586**, 4014 - A0139, 5044 - A0240, 5045 - A0241, 5305 - C0238, 969 - B0223
toslak, D., 1974, **4684 - A0326**
Toso, A., 4795 - B0405
Totani, K., 291 - C0192, 5002 - A0073
Toth, C. A., 1347 - B0054, 2430 - C0096, 284 - C0185, 285 - C0186, 288 - C0189, 3252 - B0351, 3920, 3935, 4996, 4997, 5546 - A0238, 5869 - C0156
Tóth, G., 3342 - C0184
Toth, M., **2055 - A0113**
Toth, N., **5723 - C0010**
Toth-Molnar, E., **4923 - C0368**
Totsuka, K., **373 - A0033**
Tottman, A., 2144 - A0278
Toubouti, Y., 4151 - B0374
Touchard, E., 1191, 5679 - A0398
Touhami, S., **4179 - C0021**
Tourats, T., **1311 - B0018**, 1326 - B0033, 1353 - B0113, 1354 - B0114
Tovar-Vidales, T., 3524 - A0087
Tovell, J., **3259 - B0358**, 523 - B0138
Towler, C., 1650 - A0026
Towne, B., 2724 - B0103, 5893 - C0180
Townes-Anderson, E., 4221 - C0063
Townley, R., 1767 - B0082
Towns, L., 6041 - A0075
Toy, B., **4299 - C0273**
Toychiev, A., 1856 - C0160
Toyoda, F., 1804 - B0152, 3574 - A0191
Toyono, T., 1306 - B0013, **1368 - B0128**, 4378 - C0426, 4382 - C0430, 4436, 4928 - C0373, 87 - A0250
Tonseth, K. A., 3865 - C0126, 3884 - C0145
Trabal, G. J., **2077 - A0135**
Traboulsi, E. I., 1568
Traceswka-Siemiatkowska, A. M., **2324 - B0313**
Tracey, B., 3200 - B0200, 3950
Tracey-White, D., 5314 - C0247
Traebert, E., 4096 - B0221
Traebert, J., 4096 - B0221
Traish, A., 1574, 4126 - B0289
Tran, A., 2010
Tran, A. N., 2960 - C0282
Tran, A., **5609 - A0328**, 5730 - C0017
Tran, D., 255 - C0114
Tran, E. M., **6168 - C0287**
Tran, J., 3366 - C0248
Tran, J., 5186 - B0209
Tran, K. D., **4111 - B0274**
Tran, K. D., 1309 - B0016, 2901 - C0198, **3682 - A0366**, 6085 - C0204
Tran, K. D., 2771 - B0150
Tran, K., 2636 - A0141
Tran, M., 6080 - A0209
Tran, P., 2573, 3687 - A0371, 899 - B0077
Tran, S., 4383 - C0431
Tran, S., **283 - C0184**

Tran, U. L., 2316 - B0270, 2317 - B0271

Tran-Viet, D., 3920, 3935, 5869 - C0156

Trane, R., 2382 - C0048, 2790 - B0208, 2804 - B0222, 3525 - A0088, 4676 - A0318

Trang, S., 149 - B0063, 4903 - C0348

Traustadottir, V. D., **3209 - B0308**

Trauzettel-klosinski, S., 632

Travers, C., 408 - A0226

Traverso, C., 4403 - C0451, 4693 - A0335

Travis, G. H., 4502 - A0017

Treadwell, G., **2059 - A0117**

Treder, M., 2850 - B0268

Treiger Gruppenmacher, A., 130 - B0044, 431 - A0291, **931 - B0109**

Treister, A., **3227 - B0326**

Trejo, J., 4587 - A0176

Trelford, C., 479 - A0339

Trelloggen, J., 907 - B0085

Trese, M. T., 3771 - B0186, 5434 - A0103

Tretiakova, A., 1422 - B0341, 4546 - A0061

Treumann, A., 5329 - C0262

Treumer, F., 4484

Trevaks, R., 5539 - A0231

Trevino, L., 5671 - A0390

Trevino, R., 2862 - B0280, 5056 - B0007, **5062 - B0013**, 6086 - C0205

Trevino, V., 6055 - A0089

Triantafylla, M., **5205 - B0318**

Trichonas, G., 224 - C0035

Trier, S. D., **806 - A0138**

Trifunovic, D., **4447**

Trikha, S., 2042 - A0100, 2053 - A0111, 2080 - A0138

Trinh, M. V., 4230 - C0072

Trinkaus, K., 3628 - A0289

Trinkaus-Randall, V. E., **3848 - C0109**

Tripathi, R., 151 - B0065, 4359 - C0407, 474 - A0334

Tripthy, S., **4264 - C0135**

Tripodis, Y., 3037 - A0008, 6099 - C0218

Trivedi, V., **3502**

Trivizki, O., **1094 - C0129**, 3372 - C0296

Trobenter, T. D., 5361 - A0013

Trocmé, S. D., 162 - B0076

Troelenberg, N., 4561 - A0090

Troilo, D., 2154 - A0288, 693 - C0288, 751

Trokkel, S., 748

Trombley, J., 3154 - A0271

Trope, G., 6029

Trope, G. E., 2015 - A0042, 2684 - B0005, 5181 - B0204

Tropitzsch, A., 1565

Trost, A., 308 - C0241, **317 - C0250**, 3201 - B0201

Trouillet, A., 5000 - A0071

Trounce, I., 2352 - B0362

Trounce, I. A., 2616, **5344**

Troutbeck, R., 1139

Troy, C., 2572

Troy, J. B., **4569 - A0098**

Troyer, E. J., **634 - C0064**

TRP-channels on the ocular surface, 319 - C0252

Trujillo, A. J., **381 - A0041**, 4544 - A0059

Trujillo-Alvarez, M. A., **1843 - B0304**

Truong, L., 5244 - B0357

Truong, P., 3481

Truong, T., 1754 - B0069

Truong, T., 158 - B0072

Truong, T., **2304 - B0258**

Truong, T., 5551 - A0243, 5563 - A0255

Trutoiu, L., 4624 - A0266

Tryggvason, K., 61 - A0108

Trzupek, K., 4472

tsai, B., 5456 - A0125

Tsai, F., **1896 - C0296**

Tsai, J., **3200 - B0200**, 3950

Tsai, L., 1075 - C0088

Tsai, M., 3014

Tsai, M., 5536 - A0228

Tsai, R., 2498 - C0202, 2499 - C0203, 2500 - C0204, 2504 - C0208, 3346 - C0228, **3349 - C0231**

Tsai, S., 1008 - B0262, 997 - B0251

Tsai, Y., 4564 - A0093

Tsamis, E., 4265 - C0136

Tsang, A. C., **4442**

Tsang, D., 5799 - C0086, 5807 - C0094

Tsang, J. J., **4202 - C0044**

Tsang, K., 5269 - C0115

Tsang, K., **5466 - A0135**

Tsang, S., 2830 - B0248, 4587 - A0176

Tsang, S. H., 2915 - C0212, 4664 - A0306, 51 - A0082, 5856 - C0143, 69 - A0116

Tsang, S. H., 2335 - B0324, 2336 - B0325, 3898 - C0364, 3899 - C0365, 4991, 5001 - A0072, 669 - C0227, 787

Tsang, W., 5965

Tsao, S., 851 - A0183

Tsao, Y., 2260 - B0214, 2267 - B0221

Tse, B., 2490 - C0194

Tse, D. T., 2490 - C0194, 4552 - A0067, 4960, 5609 - A0328, 5611 - A0330

Tse, D., 2193 - A0362, 361 - A0021, 699 - C0294

Tse, V., **1754 - B0069**

Tseng, C., 6181 - C0300

Tseng, F., 4394 - C0442

Tseng, H., **3715 - B0062**

Tseng, J. J., 1052 - B0363

Tseng, K., 324 - C0257

Tseng, S. C., 1157

Tseng, Y., 2729 - B0108, **2733 - B0112**, 4775 - B0385

Tsiflidis, C., 1859 - C0163, 4527 - A0042, **5521 - A0213**, 6136 - C0255

Tsim, N. C., **5615 - A0334**

Tsin, A. T., **5352 - A0004**, 5353 - A0005

Tsioros, S., 4778 - B0388

Tsisissos, G., 3119 - A0127

Tso, M., 346 - A0006

Tsokolias, G., 4818 - C0176

Tsolaki, E., 2433 - C0099

Tsonaka, R., 1577

Tsoukalis, P., 1762 - B0077

Tsuboi, K., 1669 - A0190, **2813 - B0231**, 2823 - B0241, 2829 - B0247, 4231 - C0073

Tsubota, K., 1333 - B0040, 1430 - B0349, 1431 - B0350, 1432 - B0351, 1983, 2145 - A0279, 2784 - B0163, 2905 - C0202, 3417 - C0341, 3418 - C0342, 3585 - A0202, 3816 - C0043, 3833 - C0060, 4331 - C0379, 4390 - C0438, 4769 - B0270, 4927 - C0372, 4930 - C0375, 4952, 677 - C0272, 862 - A0194

Tsubota, K., 4162 - C0004, 4324 - C0298, 5582 - A0301, **5583 - A0302**

TSUCHIYA, A., **5763 - C0050**

Tsuda, M., **4181 - C0023**

Tsuda, S., 1718 - A0239

Tsui, C., 5429 - A0098, 5968

Tsui, E., 2832 - B0250, 3680 - A0364, 4253 - C0095, 5054 - B0005, 5736 - C0023, 6158 - C0277, **6167 - C0286**

Tsui, I., 4681 - A0323, 5954

Tsui, J., 873 - A0205

Tsuiki, E., **4258 - C0129**, 4260 - C0131

Tsuji, H., 5579 - A0298

Tsujikawa, A., 1056 - B0367, 1668 - A0189, 1817 - B0278, 1819 - B0280, 2397 - C0063, 24 - A0055, 2808 - B0226, 2848 - B0266, 3595 - A0213, 4274 - C0145, 4280 - C0151, **4288 - C0159**, 4625 - A0267, 5378 - A0030

Tsujikawa, M., 5335 - C0268

Tsujioaka, D., 4238 - C0080, 435 - A0295

Tsukahara, C., 623 - B0295, 624 - B0296, **626 - B0298**

Tsakamoto, M., **108 - A0271**, 109 - A0272

Tsunekawa, T., 1093 - C0128, 302 - C0235, **4218 - C0060**, 5307 - C0240, 5541 - A0233, 576 - B0191

Tsuneyoshi, S., 3753 - B0168, 4227 - C0069, **53 - A0084**

Tsunoda, K., 1429 - B0348, 1430 - B0349, 1431 - B0350, 1432 - B0351, 6076 - A0205

Tsutsumi, A., 6191 - C0345

TT, F., 3536 - A0099

Tu, C., 3406 - C0330

Tu, E., 1574, 5726 - C0013, 856 - A0188, 876 - A0208

Tu, H., **1987**

Tu, Z., 5205 - B0318, **612 - B0284**

Tubtimthong, A., **1170**

Tuccitto, A., 2614, **4501 - A0016**

Tucker, B. A., 5657 - A0376

Tucker, J., 3395 - C0319, 6018, **6019**

Tucker, Y., 726

Tuckwell, K., 2174 - A0343

Tudor, B., 2573, 899 - B0077

Tufail, A., 1469 - C0031, 1471 - C0033, 3345 - C0227, 4948, 5550 - A0242, 815 - A0147, 816 - A0148, 826 - A0158, 838 - A0170

Tuft, S. J., 2917 - C0214, 2920 - C0217, 3022, 523 - B0138

Tulenko, S., 6164 - C0283

Tuli, R., 4244 - C0086

Tully, J., 5671 - A0390, **5673 - A0392**, 5674 - A0393

Tumbarello, D., 4487 - A0002

Turner, A., 5022 - A0218

Tumlinson, A. R., 2863 - B0281, 4643 - A0285

Tummala, S. R., 2998

Tummanapalli, S. S., 1771 - B0086, **1811 - B0159**

Tumminia, S., 2340 - B0329

Tumminia, S. J., **2331 - B0320**

Tun, S., 2001, 5843 - C0130

Tun, T. A., **2028 - A0055**, 3500

Tun, T. A., 5902 - C0189, 5910 - C0197

Tung, C., **917 - B0095**

Tuomi, L., 824 - A0156

Tura, A., **2471 - C0137**

Türkseven, C., 674 - C0232

Turnbull, P., 5183 - B0206

Turner, J. P., 4552 - A0067

Turpie, B., 2555 - C0284

Turpin, A., 2106 - A0164, 2140 - A0274, 5117 - B0106, **5129 - B0118**, 6027, 6030, 6033

Turriff, A., 2340 - B0329

Turunen, T. T., **1976**

Turunen, T., 2445 - C0111, **3270 - B0369**

Turuwhenua, J., 5789 - C0076

Turuwhenua, J., 2160 - A0329

Tuten, W. S., 1151, 650 - C0208

Tuulonen, A., 6031

Tuzcu, M., 2661 - A0388

Tuzhikov, A., 3684 - A0368

Twa, M. D., 4637 - A0279, 4692 - A0334

Twelker, J. D., 3392 - C0316

Tworak, A., **3983 - A0108**

Tworowski, E., 2041 - A0068

Tyagi, S., 6067 - A0196

Tyehsen, L., 2969 - C0291, **3165 - A0282**

Tyler, C., **4444**

Tyler, C. W., 4670 - A0312, 5019 - A0215

Tyring, A. J., 5452 - A0121

Tzamalīs, A., **3328 - C0170**

Tzekov, R., 5508 - A0177

Tzekov, R. T., 5016 - A0212, **5034 - A0230**, 5513 - A0182

Ulate Piedra, R., 1295 - B0002

Ulbig, M., **1898 - C0298**, 5450 - A0119

Ulcinas, A., 2280 - B0234

Ullah Patwary, F., 1696 - A0217

Ullman, E., 4412

Ullmer, C., 237 - C0048, 4715 - B0139, 6144 - C0263

Ulm, F., 1314 - B0021

Ulmer, A. K., **3168 - A0311**

Ulrich, C., 5081 - B0032

Ulrich, W., **5081 - B0032**

Ulrych, B. A., 5232 - B0345

Ulufatu, S., 2441 - C0107

Ulusoy, M., 951 - B0129

Umazume, A., 4162 - C0004

Umazume, K., **4235 - C0077**, 4324 - C0298, 5582 - A0301, 5583 - A0302, 6184 - C0303

Umbelino, C., **5121 - B0110**

Umebara, I., 5132 - B0121

Underhill, K., 840 - A0172

Ung, C., 1532 - C0373

Ungaro, N., 3459

Unigarro Martinez, J. E., **3159 - A0276**, 3765 - B0180

Unit on Ocular and Stem Cell Translational Research, National Eye Institute, 3272 - B0371

United Kingdom Alflibercept Users Group, 3608 - A0226

University of California Clinical Research Center, 4905 - C0350

University of Florida, 2706 - B0027, 455 - A0315

University of Washington, Department of Ophthalmology, 2312 - B0266

Unsbo, P., 4938, 5808 - C0095

Unser, A., 4707 - B0131, 4708 - B0132

Upadhyay, A. K., 3287 - C0081

Upadhyaya, S., **1021 - B0305**

Uppal, S., 4518 - A0033

Ur Rehman, A., **5407 - A0059**

Urbani, C., 5121 - B0110

Urban, A., 628 - C0058

UEF Kuopio Eye Research Center, Urbini, L., 6100 - C0219

Urdapilleta, M., 1027 - B0311

Urich, A., **1731 - A0252**

Urqhart, A., 5686 - A0405

Urrets-Zavalía, J. A., 124 - B0038

Urs, R., 4673 - A0315, 5841 - C0128

Uehara, H., 1449 - C0011, 1805 - B0153, 3572 - A0189, 4392 - C0440, 4454, **5817 - C0104**

Uehara, S., 1804 - B0152, 3574 - A0191

Ueno, M., 2128 - A0186, 2912 - C0209, 3450, 4085 - B0080, 484 - A0344

Ueno, S., 25 - A0056, 27 - A0058, 37 - A0068, **5529 - A0221**

Ueno, T., 119 - B0033

Ueno, Y., **3194 - B0194**

Ueno, Y., 5801 - C0088, 5802 - C0089

Ueta, M., 116 - B0030, **141 - B0055**

Ueta, T., 373 - A0033, **769**

Ugradar, S., 5613 - A0332

Uhles, S., 237 - C0048

Uhlig, C., 2447 - C0113

Uhr, J., 736

Uitdehaag, B., 723

Uji, A., 1524 - C0365, 1668 - A0189, 2397 - C0063, 269 - C0170, 2808 - B0226, 2848 - B0266, **4274 - C0145**, 4625 - A0267

UK Biobank Eye & Vision Consortium, 1178

UK Biobank Eye and Vision Consortium, 776

UK Biobank Eyes and Vision Consortium, 775

UK XEN National Audit Core Group and UK XEN Expert Users Group, 2051 - A0109

Ukegawa, K., 461 - A0321

UKIRDC, 6057 - A0091

Ullrich, C., 5081 - B0032

Ulrich, W., **5081 - B0032**

Ulrych, B. A., 5232 - B0345

Ulufatu, S., 2441 - C0107

Ulusoy, M., 951 - B0129

Umazume, A., 4162 - C0004

Umazume, K., **4235 - C0077**, 4324 - C0298, 5582 - A0301, 5583 - A0302, 6184 - C0303

Umbelino, C., **5121 - B0110**

Umebara, I., 5132 - B0121

Underhill, K., 840 - A0172

Ung, C., 1532 - C0373

Ungaro, N., 3459

Unigarro Martinez, J. E., **3159 - A0276**, 3765 - B0180

Unit on Ocular and Stem Cell Translational Research, National Eye Institute, 3272 - B0371

United Kingdom Alflibercept Users Group, 3608 - A0226

University of California Clinical Research Center, 4905 - C0350

University of Florida, 2706 - B0027, 455 - A0315

University of Washington, Department of Ophthalmology, 2312 - B0266

Unsbo, P., 4938, 5808 - C0095

Unser, A., 4707 - B0131, 4708 - B0132

Upadhyay, A. K., 3287 - C0081

Upadhyaya, S., **1021 - B0305**

Uppal, S., 4518 - A0033

Ur Rehman, A., **5407 - A0059**

Urbani, C., 5121 - B0110

Urban, A., 628 - C0058

UEF Kuopio Eye Research Center, Urbini, L., 6100 - C0219

Urdapilleta, M., 1027 - B0311

Urich, A., **1731 - A0252**

Urqhart, A., 5686 - A0405

Urrets-Zavalía, J. A., 124 - B0038

Urs, R., 4673 - A0315, 5841 - C0128

Uehara, H., 1449 - C0011, 1805 - B0153, 3572 - A0189, 4392 - C0440, 4454, **5817 - C0104**

Uehara, S., 1804 - B0152, 3574 - A0191

Ueno, M., 2128 - A0186, 2912 - C0209, 3450, 4085 - B0080, 484 - A0344

Ueno, S., 25 - A0056, 27 - A0058, 37 - A0068, **5529 - A0221**

Ueno, T., 119 - B0033

Ueno, Y., **3194 - B0194**

Ueno, Y., 5801 - C0088, 5802 - C0089

Ueta, M., 116 - B0030, **141 - B0055**

Ueta, T., 373 - A0033, **769**

Ugradar, S., 5613 - A0332

Uhles, S., 237 - C0048

Uhlig, C., 2447 - C0113

Uhr, J., 736

Uitdehaag, B., 723

Uji, A., 1524 - C0365, 1668 - A0189, 2397 - C0063, 269 - C0170, 2808 - B0226, 2848 - B0266, **4274 - C0145**, 4625 - A0267

UK Biobank Eye & Vision Consortium, 1178

UK Biobank Eye and Vision Consortium, 776

UK Biobank Eyes and Vision Consortium, 775

UK XEN National Audit Core Group and UK XEN Expert Users Group, 2051 - A0109

Ukegawa, K., 461 - A0321

UKIRDC, 6057 - A0091

Ullrich, C., 5081 - B0032

Ulrich, W., **5081 - B0032**

Ulrych, B. A., 5232 - B0345

Ulufatu, S., 2441 - C0107

Ulusoy, M., 951 - B0129

Umazume, A., 4162 - C0004

Umazume, K., **4235 - C0077**, 4324 - C0298, 5582 - A0301, 5583 - A0302, 6184 - C0303

Umbelino, C., **5121 - B0110**

Umebara, I., 5132 - B0121

Underhill, K., 840 - A0172

Ung, C., 1532 - C0373

Ungaro, N., 3459

Unigarro Martinez, J. E., **3159 - A0276**, 3765 - B0180

Unit on Ocular and Stem Cell Translational Research, National Eye Institute, 3272 - B0371

United Kingdom Alflibercept Users Group, 3608 - A0226

University of California Clinical Research Center, 4905 - C0350

University of Florida, 2706 - B0027, 455 - A0315

University of Washington, Department of Ophthalmology, 2312 - B0266

Unsbo, P., 4938, 5808 - C0095

Unser, A., 4707 - B0131, 4708 - B0132

Upadhyay, A. K., 3287 - C0081

Upadhyaya, S., **1021 - B0305**

Uppal, S., 4518 - A0033

Ur Rehman, A., **5407 - A0059**

Urbani, C., 5121 - B0110

Urban, A., 628 - C0058

UEF Kuopio Eye Research Center, Urbini, L., 6100 - C0219

Urdapilleta, M., 1027 - B0311

Urich, A., **1731 - A0252**

Urqhart, A., 5686 - A0405

Urrets-Zavalía, J. A., 124 - B0038

Urs, R., 4673 - A0315, 5841 - C0128

Uehara, H., 1449 - C0011, 1805 - B0153, 3572 - A0189, 4392 - C0440, 4454, **5817 - C0104**

Uehara, S., 1804 - B0152, 3574 - A0191

Ueno, M., 2128 - A0186, 2912 - C0209, 3450, 4085 - B0080, 484 - A0344

Ueno, S., 25 - A0056, 27 - A0058, 37 - A0068, **5529 - A0221**

Ueno, T., 119 - B0033

Ueno, Y., **3194 - B0194**

Ueno, Y., 5801 - C0088, 5802 - C0089

Ueta, M., 116 - B0030, **141 - B0055**

Ueta, T., 373 - A0033, **769**

Ugradar, S., 5613 - A0332

Uhles, S., 237 - C0048

Uhlig, C., 2447 - C0113

Uhr, J., 736

Uitdehaag, B., 723

Uji, A., 1524 - C0365, 1668 - A0189, 2397 - C0063, 269 - C0170, 2808 - B0226, 2848 - B0266, **4274 - C0145**, 4625 - A0267

UK Biobank Eye & Vision Consortium, 1178

UK Biobank Eye and Vision Consortium, 776

UK Biobank Eyes and Vision Consortium, 775

UK XEN National Audit Core Group and UK XEN Expert Users Group, 2051 - A0109

Ukegawa, K., 461 - A0321

UKIRDC, 6057 - A0091

- Uyan, I., 3675 - A0359
 Uyhazi, K. E., 1422 - B0341, 46 - A0077
 Uzyanbaeva, Y., 3373 - C0297, 950 - B0128
-
- V**
- VA Million Veteran Program, 4469
 Vabres, B., 1299 - B0006
 Vadnay, A. I., **2839** - A0357, 2840 - B0258
 Vaghefi, E., 4698 - A0254, 4975
 Vaglienti, M., 6072 - A0201
 Vahätupa, M., **5474** - A0143, 5477 - A0146
 Vahed, H., 519 - B0026
 Vahtel, M., 4677 - A0319
 Vaidya, T., 4402 - C0450, 5980
 Vaino, I., 5313 - C0246
 Vaishnava, P., 1631 - A0007
 Vaishnavi, S., 3253 - B0352
 Vaitkus, A., 2109 - A0167, 5063 - B0014
 Vajaranant, T. S., 1574, 177 - B0331, 2063 - A0121, **4053** - B0048, 4293 - C0164, 5726 - C0013, 5901 - C0188, 846 - A0178
 Vajpayee, R. B., **5731** - C0018
 Vajzovic, L., 2430 - C0096, 3920, 3935, 4996, 4997, 5546 - A0238
 Vakharia, M., 2203 - A0372
 Valapala, M., **4023** - A0148
 Valdez Gonzalez, M. T., 1116 - C0151
 Valdez, J. E., 142 - B0056, **2908** - C0205, 3794 - C0021, 4315 - C0289, 4799 - B0409, 6055 - A0089
 Valdez Lopez, J. V., **2799** - B0217
 Valdrighi, N. Y., 4098 - B0223
 Valencia Study on Diabetic Retinopathy (VSDR), 5364 - A0016
 Valensi, M., 3092 - A0063
 Valente, D., 4759 - B0260
 Valenti, D. A., **5292** - C0225
 Valentine, M., 3495
 Valentini, V., 5605 - A0324
 Valera, D. A., **5193** - B0306
 Valerius, M., 1055 - B0366
 Valikodath, N., **2749** - B0128
 Valiokas, R., 2280 - B0234, 3452
 Valizadegan, H., 3548 - A0165
 Valkanas, E., 5416 - A0068
 Vallabh, N. A., **5141** - B0164
 Valter, K., 4604 - A0193, 4607 - A0196
 Valtink, M., 1366 - B0126
 Valvecchia, G., 5331 - C0264
 van Aarle, R., 5585 - A0304
 Van Acker, S. I., **2675** - A0402
 Van Asselen, M., 4669 - A0311
 Van Asten, F., 2381 - C0047, 3490, **370** - A0030, 6010
 van Atta, A., 4043 - A0250
 Van Bergen, N., 2352 - B0362
 Van Calster, J., 5951
 Van Cauwenbergh, C., 5408 - A0060, 6044 - A0078
 Van, C., 693 - C0288
 van Dam, R. M., 6008
 van de Kreeke, A., 290 - C0191, **627** - B0299, 724
 van de Merbel, A., 1577
 van de Pol, C., 5177 - B0200
 Van de Sompel, S., 5404 - A0056, 5408 - A0060
 van de Vorst, M., 2324 - B0313
 Van Den Berg, T. J., **5813** - C0100
 van den Biggelaar, F. J., 1576
 Van den Bogerd, B., **1378** - B0138
 van den Born, L., 2321 - B0310
 Van den Haute, C., 5831 - C0118
 van der Aa, H. P., **3909**
- van der Kooy, D., 3261 - B0360, 4582 - A0171
 van der Lugt, A., 2136 - A0270
 van der Maarel, S., 1577
 van der Merwe, Y., 6115 - C0234
 Van der Mooren, M., 1279 - A0314
 Van Der Spuy, J., 3083 - A0054
 van Dijk, E., 3134 - A0251
 Van Dijk, E. H., **1577**, 3128 - A0245, 4983
 Van Dooren, B., **2927** - C0224
 Van Dorsselaer, A., 3066 - A0037
 Van Dort, M. E., 1629 - A0005
 van Duijn, C., 1827 - B0288, 3013, 5136 - B0159, 5144 - B0167, 789
 van Duinen, S. G., 3627 - A0288
 Van Dyck, A., 1862 - C0166
 Van Eps, N., 2354 - B0364
 Van Erps, J., 1378 - B0138
 Van Fossan, D., 3118 - A0126, 3894 - C0360
 Van Gelder, R., 1531 - C0372, **1585**, 1743 - B0058, 2546 - C0275, 5009 - A0080
 van Genderen, M. M., 43 - A0074
 Van Gerwen, V., 2276 - B0230
 Van Haalen, F. M., 3128 - A0245
 van hemert, J., 4681 - A0323, 737
 Van Heyningen, V., 6026
 Van Hoorick, J., 1378 - B0138
 Van Horn, A., **1891** - C0291
 Van houcke, J., 1862 - C0166
 Van Keer, K., **3951**, 4478, 5074 - B0025
 Van Krieken, P., 3575 - A0192
 Van Kuijk, E. J., 364 - A0024, 3890 - C0356, 4572 - A0101
 Van Laethem, T., 5408 - A0060
 Van Law, H., 1156
 Van Lookeren Campagne, M., 2441 - C0107, 246 - C0057, 5551 - A0243, 5563 - A0255
 van Meurs, J. C., 5930 - C0327, 6062 - A0191, **849** - A0181
 Van Natta, M. L., 5564 - A0256
 Van Nieuwenhuysen, T., 377 - A0037
 Van Nispen, R. M., 3909
 van Oterendorp, C., 2040 - A0067, **2854** - B0272, 2884 - B0302, 4726 - B0150
 van Overdam, K. A., **5917** - C0314
 van Poppelen, N. M., 3633 - A0294
 van Reeuwijk, J., 4979
 van Rens, G. H., 3909
 van Rijn, R., 723
 van Rijssen, T. J., **3134** - A0251
 van Romunde, S., **5930** - C0327
 van Romunde, S. H., 849 - A0181
 van Saarloos, P., **2212** - A0381
 Van Schil, K., **5404** - A0056, 5408 - A0060
 van Schooneveld, M., 43 - A0074
 Van Toney, M., 2134 - A0268
 Van Vlierberghe, S., 1378 - B0138
 van Wijngaarden, P., 2616, 315 - C0248, 3533 - A0096
 Van Winkle, L., 3854 - C0115
 van Wyk, M., 1194
 van Zeeburg, E. T., 849 - A0181
 van Zyl, T., 115 - B0029
 van Zyl, T., 3788 - C0015
 Van-Dick Sánchez, K., 2054 - A0112
 Vance, E., 2549 - C0278, 2551 - C0280
 Vande Geest, J. P., 3527 - A0090
 Vandenaabeele, M., 5831 - C0118
 Vandenberghe, L., 4529 - A0044
 VandenBosch, L., 1485 - C0227
 Vandembroucke, R., 5403 - A0055
 Vandenhoven, C., 5206 - B0319
 Vander, J., 3604 - A0222
 VanderBeek, B. L., **6189** - C0308
 Vanderbilt Eye Institute, 2316 - B0270
 VanDerMeulen, K., **3523** - A0086
 Vandewalle, E., 3951, 4478
- Vandewouw, M., 4142 - B0305
 Vandy, M. J., **4172** - C0014, 719
 Vangipuram, G., **5174** - B0197
 Vankov, A., 5920 - C0317
 Vann, R., 4715 - B0139
 VanNasdale, D. A., **4109** - B0234
 Vanner, E., 5424 - A0093
 VanVeldhuisen, P. C., 213 - C0024, 5971
 Var, M., 793
 Varadaraj, K., **3486**
 Varadaraj, V., **1598**, 4461, 5162 - B0185
 Varadarajan, A., 1729 - A0250
 Varano, L., 3459
 Vardhan, A., **3799** - C0026
 Vardi, N., **2998**
 vareechon, C., 5851 - C0138
 Vargas, A. J., 4499 - A0014
 Vargas, B., 5567 - A0259, 925 - B0103
 Vargas, G., 1882 - C0186, 4605 - A0194
 Vargas, J., 1027 - B0311
 Vargas Martin, F., 638 - C0068
 Vargas, P., 2881 - B0299
 Vargeese, C., 5682 - A0401
 Vargis, E., 2472 - C0138
 Varikuti, V., 2798 - B0216
 Varin, J., **4526** - A0041
 Varin, M., **5163** - B0186
 Varjosalo, M., 3088 - A0059, 313 - C0246
 Varma, D., 801 - A0133, 817 - A0149
 Varma, D., 2060 - A0118
 Varma, R., 1597, 1812 - B0273, 1935 - C0335, 2126 - A0184, 2725 - B0104, 3958, 4075 - B0070, 5180 - B0203, 5187 - B0210, 5896 - C0183, 778
 Varma, S. D., 3084 - A0055
 Varnas, S. R., 2960 - C0282
 Varsányi, B., 439 - A0299
 Varshtey, A., 2456 - C0122
 Varssano, D., 3372 - C0296
 Vasanth, S., 1356 - B0116, 1359 - B0119
 Vasavada, A., 5326 - C0259
 Vasconcelas, J., 2569
 Vasconcelos, H. M., **2339** - B0328, 3145 - A0262
 Vasiliou, S., 970 - B0224
 Vasilopoulos, P., 1468 - C0030
 Vasquez, J., 4017 - A0142
 Vass, C., 2122 - A0180, **2123** - A0181, 3191 - B0191, 4065 - B0060, 5061 - B0012
 Vasseneix, C. F., 1883 - C0187
 Vasudevan, B., 651 - C0209
 Vathyar, A., 2759 - B0138
 Vattulainen, I., 4906 - C0351
 Vattulainen, M., **3861** - C0122
 Vaucher, E., 1210, 202 - C0013, 3271 - B0370
 Vaudaux, J., 3147 - A0264
 Vavrek, F., 2234 - A0403
 vavrovsky, A., 2395 - C0061
 Vavvas, D., 2619, 4944, 4946, 769
 Vavvas, D. G., 39 - A0070, 4243 - C0085, 4575 - A0164, 5711 - A0430, 795, 835 - A0167
 Vaz-Pereira, S., **1940** - C0340, 3085 - A0056
 Vazquez, A., 5773 - C0060
 Vazquez Botet, R., 1028 - B0312
 VAZQUEZ, M. A., 1058 - B0369
 Vazquez, N., 1382 - B0142
 Vazquez-Chona, F. R., **1212**
 Vazquez-Duran, M., 3793 - C0020
 Vazquez-Maya, L., **1349** - B0056
 Vehige, J. G., 4899 - C0344, 4912 - C0357
 Vehof, J., **1962**, 1964, 5154 - B0177, 958 - B0136
 Veillet, S., 241 - C0052
- Velaga, S., 1113 - C0148, 1680 - A0201, 1939 - C0339, 2401 - C0067, 2426 - C0092
 Velaga, S., **1513** - C0354, 1914 - C0314, 3208 - B0307
 Velagaleti, P., 2677 - A0404
 Velasco Dalesio, M. S., **5496** - A0165
 Velasco, E., 155 - B0069
 Velasco-Ocana, M., 268 - C0127
 Velasque, L., **5924** - C0321
 Velez, F., 2883 - B0301, 5954
 Velez-Montoya, R., **1161**, 2770 - B0149
 Velonias, G., 4937
 Veloso, A. C., 2116 - A0174, 2691 - B0012, 464 - A0324
 Velpandian, T., 3257 - B0356, 6114 - C0233
 Velthoven, M. V., 1507 - C0348
 Vemuganti, G. K., **1634** - A0010
 Venkatapathy, N., 2749 - B0128, 2776 - B0155
 Venkatasrinivasan, V., 2736 - B0115
 Venkateswaran, N., **5730** - C0017
 Venkateswarulu, M., 364 - A0024
 Venkatraman, S., **240** - C0051, 5301 - C0234
 Ventura, D. F., 4044 - A0251, 4090 - B0085, 5031 - A0227, 628 - C0058
 Ventura, G., 4139 - B0302
 Venuganti, V., 5691 - A0410
 Venugopal, J. P., 5068 - B0019
 Ver Hoeve, J. N., 80 - A0127
 Ver Hoeve, J., 5696 - A0415
 Vera-Diaz, F. A., 1091 - C0104, **1280** - A0315, 2941 - C0263, 4047 - A0254, 4937
 Verbakel, S. K., 2321 - B0310
 Verbraak, F. D., 290 - C0191, 4649 - A0291, 5983, 6062 - A0191, 627 - B0299, 724
 Verchinina, L., 1891 - C0291, 1904 - C0304
 Verdes, G., 1913 - C0313
 Verdooner, S., 1123 - C0158
 Vergari, C., 1415 - B0192
 Verghese, P., 4412, 5793 - C0080
 Verhagen, F. H., **5380** - A0032
 Verhoek, M., 4681 - A0323
 Verhoeven, R., 5673 - A0392
 Verhoeven, V. J., 1821 - B0282, 700 - C0295
 Veritti, D., 4653 - A0295, **52** - A0083
 Verkade, A. J., **5240** - B0353
 Verkicharla, P., 4667 - A0309
 Verma, S., **5806** - C0093
 Vermeer, K. A., 1507 - C0348, 2072 - A0130, 2907 - C0204, 5930 - C0327
 Vermeer, K. A., 4056 - B0051
 Vermey, W., 3260 - B0359
 Vermion, J., 2224 - A0393, **2226** - A0395, 4387 - C0435, 441 - A0301, 4788 - B0398
 Vernon, H. J., 6024
 Vermooij, M., 2136 - A0270
 Verschuuren, A., **604** - B0276
 Versura, P., 1164
 Vercichio Vercellin, A., 1662 - A0038, 2094 - A0152, 4057 - B0052, 4060 - B0055, 5070 - B0021, 5079 - B0030, **5084** - B0035, 5895 - C0182
 Verzijden, T., 3010, 3013
 Veselinovic, S., 2135 - A0269
 Vessey, K. A., 5379 - A0031, **6080** - A0209
 Vest, V., 5514 - A0183
 Vestergaard, A. H., 5913 - C0310
 Vestweber, D., 199 - C0010
 Vetrivel, U., **2364** - B0374
 Veys, L., 5831 - C0118
 Vezina, M., **2654** - A0381
- VI, 2589
 Viana, F., 2587
 Viana Wanzeler, A., 130 - B0044
 Vianna, J. R., 2097 - A0155, 4063 - B0058
 Viao, P., 3178 - A0321
 Vicente, A., 1146, 2249 - B0203
 Vickerstaff, V., 6091 - C0210
 Victor, S., 4584 - A0173
 Vidal, K. S., **5031** - A0227
 Vidal, S., 3159 - A0276, 3765 - B0180
 Vidal-Rohr, M., **911** - B0089
 Vidaurre Mora, E. J., **2068** - A0126
 Videla, S., 5773 - C0060
 Viehland, C., 284 - C0185, 288 - C0189, **3920**
 Vieira, M. I., 431 - A0291
 Vienna Clinical Trial Center, 818 - A0150
 Vienna Clinical Trial Center (VTC), 3248 - B0347
 Vienna IOL Study Group, 4789 - B0399
 Vienna Reading Center, 1621, 3468
 VIEW 1 and VIEW 2 study Investigators, 1619
 Vig, V., 5366 - A0018
 Viga, R., 4566 - A0095, 4570 - A0099
 Viggiano, M., **922** - B0100
 Vigh, J., 5042 - A0238
 Vignal Clermont, C., 4531 - A0046
 Vignal-Clermont, C., 4530 - A0045
 Vignaneli, M., 6081 - C0200
 Vigo, R. L., 5614 - A0333
 Viherialä, T., **4579** - A0168
 Vihtelic, T. S., 2649 - A0154, **5527** - A0219, 5662 - A0381
 Viiri, J., 2455 - C0121
 Vij, R., 592 - B0207
 Vijay, A., 1747 - B0062, **1792** - B0107, 3319 - C0161
 Vijaya, L., 5135 - B0158
 Vila, N., 3601 - A0219, **4247** - C0089
 Vilalta, A., 1708 - A0229
 Vilaseca, M., 5811 - C0098, 5865 - C0152
 Villafior, C., 5056 - B0007, 5062 - B0013, 6086 - C0205
 Villafraanca-Baughman, D., **3732** - B0079, 4474
 Villalobos, J., 4562 - A0091
 Villalobos Ojeda, J., 1103 - C0138, **1739** - A0260
 Villamar, Z. D., 2318 - B0272
 Villani, E., 4871 - C0316, **4887** - C0332
 Villani, G. M., **632**
 Villanueva, A. L., 4468
 Villanueva, M., 3478
 Villar, S., 5093 - B0044
 Villar, V., 1174
 Villarreal jr, G., 5974
 Villarreal M?ndez, G., 1340 - B0047, 3691 - A0375, 5756 - C0043
 Villasmil, R., 2530 - C0259, 4663 - A0305
 Villatoro, G., **2857** - B0275, 2861 - B0279, 4476, 5075 - B0026
 Villegas, V., 177 - B0331
 Villette, T., 3850 - C0111, 598 - B0270
 Villringer, A., 1128 - C0163
 Vilupuru, S., 2198 - A0367, **5177** - B0020
 Vin, A., 2073 - A0131
 Vinagre, I., 2802 - B0220
 Vinas, M., **252** - C0111, 654 - C0212
 Vinberg, F., **1869** - C0173, 3586 - A0203
 Vincent, A., 5022 - A0218, 669 - C0227
 Vincent, A. L., **1437** - B0356
 Vincent, N. H., **3745** - B0092
 Vincent, S., 1732 - A0253, 2139 - A0273, 4940

- Vinekar, A., **2759 - B0138**
Vingerling, J. R., 3010, 3012, 3013, 3015
Vingolo, E., 17 - A0048
Vingrys, A. J., 2182 - A0351, 2386 - C0052, 2994, 3696 - B0043, 3946, 5126 - B0115, **5127 - B0116**
Vinh, K., 66 - A0113
Vinnett, A., 4568 - A0097, 50 - A0081
Viola, F., 3253 - B0352
Violette, K., 391 - A0091, 4445
Viquez, M. V., **184 - B0338**
Virgili, G., 1696 - A0217, 2836 - B0254, 2838 - B0256, 4993
Viriato, D., 6109 - C0228
Viringipurampeer, I., 3967
Viruni, N., **4672 - A0314**
Vishnivetskiy, S., 2354 - B0364, **3062 - A0033**
Vishnivetskiy, S. A., 3063 - A0034
VISICORT (see Table 1), 1299 - B0006
Vision Group, 5827 - C0114
vision neurosciences, 6122 - C0241
Visitisen, D., 1055 - B0366
Visotcky, A., 1086 - C0099
Visser, P., 627 - B0299
VISTA-DME and VIVID-DME study Investigators, 3621 - A0239
Visual Neuroscience, 5042 - A0238
Visual Optics, 4938, 5808 - C0095
Visual Psychophysics and Perception Laboratory, 1288 - A0323
Visual Sciences Innovation, 1376 - B0136
Visual Sciences Laboratory, Faculty of Medicine, Federal University of Minas Gerais, Brazil, 2116 - A0174
Visuvanathan, S., **6136 - C0255**
Viswanath, V., 147 - B0061
Viswanathan, S., 3584 - A0201, 696 - C0291
Vital Filho, J., 4306 - C0280
Vitale, A. T., 417 - A0235
Vitale, S., 1534 - C0375, **6013**
Vitar, V., 5144 - B0167
Viteri, E., 4229 - C0071, 5595 - A0314
Vithana, E., 3518 - A0081, 5149 - B0172
Vithana, E. N., **5143 - B0166**, 5146 - B0169
Vittitow, J. L., 140 - B0054, **2235 - A0404**, 2666 - A0393
Viturino, M. G., 2338 - B0327, 931 - B0109
Vizibelli Chaves, P. P., **2893 - C0190**
Vizvari, E., 423 - C0368
Vizzari, G., 1571, **2058 - A0116**
VKH Brazilian Study Group, 422 - A0240
Vlachopoulos, G., 1762 - B0077
Vlad, S., 1350 - B0110
Vladimir, R., 1094 - C0129
Vlemineckx, K., 377 - A0037
Vo, T. A., 3693 - A0377, **4314 - C0288**, 89 - A0252
Vocking, O., **579 - B0194**
Vodopivec, I., 2191 - A0360
Voegeler, J., 215 - C0026
Voelter, K., **2527 - C0256**
Vogl, W., 2623
Vogrin, S., 4399 - C0447
Vohnsen, B., 2947 - C0269, 4052 - A0259, **4759 - B0260**, 662 - C0220
Vohra, R., **1480 - C0222**
Voigt, R. G., 3764 - B0179
Voigt, V., 970 - B0224
Voigtmann, P., 5871 - C0158
Volantis, 2137 - A0271
Vold, S. D., **2044 - A0102**
Volk, M., 2185 - A0354
Volkmann, I., 5460 - A0129
Volland, S., 3980 - A0105
Vollmer, T., 4711 - B0135
Volpe, N. J., 3365 - C0247, 3721 - B0068, 3998 - A0123, 5078 - B0029, 5096 - B0047
vomEndt, M., 1440 - C0002
von der Burchard, C., **4484**
von der Emde, L., 2421 - C0087, **4945**
von Eckardstein, A., 2454 - C0120
von Hofsten, J., **3648 - A0332**
von Livonius, B., 3361 - C0243, 3363 - C0245
Voorduyn Ramos, S., 1116 - C0151
Voorhees, A., 1216, 1220
Vora, P., 3273 - C0067, **5879 - C0165**
Vorm, M., 2275 - B0229
Vorun, H., 3074 - A0045
Votruba, M., 619 - B0291
Voykov, B., 4727 - B0151
Vrabec, T., 3786 - C0013, **5456 - C0245**
Voorduin Ramos, S., 1116 - C0151
Vranka, J., 5907 - C0194
Vranka, J. A., **4722 - B0146**, 4724 - B0148, 4725 - B0149
VRI, 4261 - C0132
Vrouvliantis, J., 2532 - C0261, 3544 - A0161
Vu, C. H., **4930 - C0375**
Vu, P. Q., 1317 - B0024, **3693 - A0377**, 4314 - C0288
Vucetic, S., 2613
Vugler, A., 2985
Vujosevic, S., 1937 - C0337, **4850 - C0208**
Vuong, V., 5969
Vupparaboina, K., 1113 - C0148, 1513 - C0354, 1674 - A0195, 3253 - B0352, 5973
Vural, A., 3760 - B0175
Vyas, R., **1684 - A0205**
-
- W**
Wa, C. A., **4431**
Waagepetersen, H., 1480 - C0222
Wacker, K., **1320 - B0027**
Wada, I., 5356 - A0008, **65 - A0112**
Wade, K. C., 2751 - B0130
Wade, M., 1335 - B0042, **3395 - C0319**, 6018, 6019
Wadehra, M., 2538 - C0267
Wadhwa, S., 107 - A0270
Wadt, K., 3188 - A0331
Waduthantri, S., 4933
Wafapoor, H., 5703 - A0422
Wagenpfeil, S., 2261 - B0215
Wagner, A. K., 4007 - A0132
Wagner, B. D., 2427 - C0093, 2756 - B0135, 2760 - B0139, 3767 - B0182, 5540 - A0232
Wagner, D., 715 - C0310
Wagner, J., 5663 - A0382, **5664 - A0383**
Wagner, N., 1630 - A0006
Wagner, S., **2940 - C0262**
Wagner, S., 5550 - A0242, 838 - A0170
Wagner, S. K., 1469 - C0031, 1471 - C0033, 3216 - B0315, **815 - A0147**, 816 - A0148, 826 - A0158
Wagstaff, P., **3747 - B0094**
Waheed, N. K., 1928 - C0328, 2440 - C0106, 2621, 2798 - B0216, 2886 - B0304, 3229 - B0328, 3922
Wahl, D., 6065 - A0194
Wahl, S., 1085 - C0098, 1276 - A0311, 2147 - A0281, 3386 - C0310, **4754 - B0255**
Wahle, A., 1677 - A0198
Wahlig, S., **1375 - B0135**
Wählin, A., 5055 - B0006
Wahlm, K., 3105 - A0113, 4002 - A0127, 574 - B0189
Wai, K., 4277 - C0148, 5538 - A0230
Waibel, S., **2017 - A0044**
Waiczius, H., 5877 - C0164
Waisbourd, M., 5186 - B0209
Waizel, M., **674 - C0232**
Wajdenc, G., **5714 - C0001**
Wakabayashi, T., **5419 - A0160**
Wakabayashi, Y., 4235 - C0077
Wakamatsu, T., 5759 - C0046
Wakamatsu, T. H., **3329 - C0171**
Wakayama, A., 5132 - B0121
Wakefield, D., 2241 - B0195, 2990, 404 - A0222
Wakil, S., **4985**
Wakshull, E., **1456 - C0018**
Waksmunski, A. R., **1420 - B0339**
Wald, K. J., 1052 - B0363, 4253 - C0095, 857 - A0189
Waldrop, S. C., 2360 - B0370
Waldestein, S. M., 1620, 1677 - A0198, **1736 - A0257**, 1738 - A0259, 2623, 819 - A0151
Walia, H., 3598 - A0216
Walkden, A., **4812 - C0170**
Walker, A., 1155
Walker, B., 2719 - B0040
Walker, B., 521 - B0028
Walker, G., 1231 - A0072
Walker, L., 1091 - C0104
Walker, M., **1772 - B0087**
Walker, M., 2415 - C0081
Wall, K. M., 5540 - A0232
Wall, M., 3025
Wallace, A., 4173 - C0015
Wallace, D. K., 178 - B0332
Wallace, G., 4343 - C0391, 4344 - C0392
Wallace, G. R., 2521 - C0250, 2522 - C0251, 5851 - C0138
Wallace, H., 4339 - C0387
Wallace, M., 5517 - A0186
Wallace, M., **4185 - C0027**
Wallace, R., 4509 - A0024, 5542 - A0234
Wallace, S. I., 2960 - C0282
Wallace, V., 4582 - A0171
Wallace, V. A., 3261 - B0360
Wallendorf, M., 1970
Walline, J. J., 3403 - C0327
Wallraven, C., 2164 - A0333
Wallsh, J. O., **81 - A0128**
Wallstrom, G., 2424 - C0090
Wallukat, G., 2720 - B0041
Walpert, M., **1543 - C0384**
Walpole, J., 3571 - A0188
Walsdorf, K., 48 - A0079
Walsh, A. M., 3168 - A0311
Walsh, C., 3823 - C0050
Walsh, E. P., **834 - A0166**
Walsh, J. M., 3370 - C0294
Walsh, M. K., 4431
Walsh, M. M., **5678 - A0397**
Walshe, C., 947 - B0125
Walshe, T., 4009 - A0134
Walter, H., 5008 - A0079
Walter, M., 2012
Walter, M. A., 3020, 5140 - B0163, 5156 - B0179
Walter, P., 4566 - A0095, 4570 - A0099, 5012 - A0208
Walter, S., 4855 - C0213
Walters, E., 3587 - A0204
Walters, G., **4806 - B0416**
Walters, S., **1155**
waltl, I., 2395 - C0061
Walton, A., 6025
Walton, M., **3433**
Walton, R., 1463 - C0025, 829 - A0161
Wan, A., 6022
Wan, D., 2161 - A0330
Wan, J., 4002 - A0127
Wan, K. H., **4984**
Wan, Q., 1985, 555 - B0170
Wan, S., 505 - B0012, **902 - B0080**
Wan, X., 429 - A0289
Wan, Z., 534 - B0149
Wang, A., 347 - A0007
Wang, A. L., **873 - A0205**
Wang, B., 3636 - A0297
Wang, B., **3082 - A0053**, 4701 - B0125
Wang, B., 1723 - A0244
Wang, B., 3375 - C0299
Wang, B., **3856 - C0117**
Wang, C., 2721 - B0100, 5166 - B0189
Wang, C., 615 - B0287
Wang, C., 891 - A0280
Wang, C., 4068 - B0063, **5269 - C0115**
Wang, D., 2672 - A0399
Wang, D., 2552 - C0281
Wang, D., **3210 - B0309**
Wang, D., 5633 - A0352
Wang, D., 366 - A0026, 5646 - A0365
Wang, E., 892 - A0281
Wang, E., **2879 - B0297**
Wang, F., 1744 - B0059
Wang, F., 2071 - A0129, 2188 - A0357, 622 - B0294
Wang, F., 4737 - B0238, **4738 - B0239**, 809 - A0141
Wang, G., 1169
Wang, H., **2639 - A0144**, 5469 - A0138
Wang, H., 476 - A0336
Wang, H., 2935 - C0257
Wang, H., 3096 - A0104
Wang, H., **1267 - A0302**, 1270 - A0305
Wang, H. H., 3121 - A0129, 5253 - C0099, 5388 - A0040
wang, H., **3390 - C0314**
Wang, H., 4899 - C0344
Wang, H., 4079 - B0074
wang, H., **481 - A0341**, 5147 - B0170
Wang, H., 1101 - C0136, 1105 - C0140, **1128 - C0163**, 5107 - B0096, 5134 - B0123, 6028, 6046 - A0080
Wang, L., 143 - B0057, 1794 - B0109
Wang, J., 1515 - C0356, 2619, 4301 - C0275
Wang, J., 1988, 3105 - A0113
Wang, J., **2741 - B0120**, 5920 - C0317
Wang, J., 3520 - A0083
Wang, J., 30 - A0061, 4988
Wang, J., **1102 - C0137**, 1124 - C0159, 2977, 4902 - C0347, 5994, 618 - B0290, 721
Wang, J., **3511 - A0074**, 4735 - B0236
Wang, J., 1181, 4128 - B0291, **5155 - B0178**, 5506 - A0175
Wang, J., 2511 - C0215, 2620, 2842 - B0260, **2844 - B0262**, 2853 - B0271, 3921, 991 - B0245, 992 - B0246
Wang, J., 2600, 3009, **6008**, 6009
Wang, J., 2601, 3389 - C0313, 3957
Wang, J., 2345 - B0334
Wang, J., 429 - A0289
Wang, J., **2149 - A0283**
Wang, J., **4125 - B0288**
Wang, J., 4458
Wang, J., 3093 - A0064, **3979 - A0104**, 4576 - A0165
Wang, J., 2196 - A0365, **2197 - A0366**
Wang, J., 2597
Wang, J., **2350 - B0360**
Wang, J., 2998
Wang, J., **3358 - C0240**
Wang, J., 1969, 32 - A0063
Wang, K., **421 - A0239**
Wang, K., 3970
Wang, L., 342 - A0002
Wang, L., **4190 - C0032**
Wang, L., **5782 - C0069**, 5947 - C0344
Wang, L., 4473, 5094 - B0045, **5095 - B0046**
Wang, L., 2248 - B0202
Wang, L., 2676 - A0403, **497 - B0004**
Wang, L., 1851 - C0155
WANG, L., 5502 - A0171
Wang, M., 3116 - A0124
Wang, M., **5963**, 657 - C0215
Wang, M., 1101 - C0136, 1105 - C0140, 1128 - C0163, **5107 - B0096**, 5134 - B0123, 5769 - C0056, 6028
Wang, M. T., 4859 - C0304
Wang, M., 1171, 685 - C0280, **686 - C0281**
Wang, M., 5651 - A0370
Wang, M., 5699 - A0418
Wang, N. N., **3550 - A0167**
Wang, N., 2330 - B0319, 5410 - A0062
Wang, N., 2031 - A0058, 2038 - A0065, 2095 - A0153, 3397 - C0321, 3398 - C0322, 3521 - A0084, 481 - A0341, 5052 - B0003, 5083 - B0034, 5147 - B0170
Wang, P., **4075 - B0070**
Wang, P., 710 - C0305
Wang, P., 1864 - C0168, 2995
Wang, Q., 2210 - A0379
Wang, Q., **4919 - C0364**
Wang, Q., **3699 - B0046**
Wang, Q., 2477 - C0143
Wang, Q., 5764 - C0051
Wang, Q., **5885 - C0172**
Wang, Q., 753
Wang, R., 5396 - A0048
Wang, R., 2008
Wang, R. K., 1531 - C0372, 1540 - C0381, 1924 - C0324, 2835 - B0253, 2869 - B0287, 2873 - B0291, 2880 - B0298, 3236 - B0335, 3923, **3926**, 5059 - B0010, 5060 - B0011, 5069 - B0020, 5203 - B0316, 5452 - A0121, 5819 - C0106, 5907 - C0194, 739
Wang, S., 4672 - A0314
Wang, S., **514 - B0021**
Wang, S., **5010 - A0081**, 551 - B0166, 6021
Wang, S., 4001 - A0126
Wang, S., 4272 - C0143
Wang, S., 5487 - A0156
Wang, S., 4114 - B0277
Wang, S., 4577 - A0166
Wang, S., 3098 - A0106
Wang, S., 2449 - C0115, 2462 - C0128, **5488 - A0157**
Wang, S. Y., 1241 - A0082, **2045 - A0103**
Wang, S., 4574 - A0103
Wang, T., 4899 - C0344
Wang, T., 3846 - C0106
Wang, W., 2457 - C0123
Wang, W., **3090 - A0061**
Wang, W., 1304 - B0011, **206 - C0017**, **3795 - C0022**, 4011 - A0136, 5208 - B0321, 5979, 6176 - C0295
Wang, W., 2439 - C0105
Wang, W., 2537 - C0266
Wang, W., 3266 - B0365
Wang, W., 1494 - C0236, **1495 - C0237**
Wang, X., 3967, **5319 - C0252**
Wang, X., 5633 - A0352
Wang, X., 2323 - B0312
Wang, X., 5395 - A0047, 5396 - A0048
Wang, X., 2028 - A0055, 2037 - A0064, 5910 - C0197
Wang, X., 4737 - B0238
Wang, X., **1345 - B0052**
Wang, X., 4636 - A0278, 4637 - A0279, 733
Wang, X., 2642 - A0147, 5476 - A0145, **5480 - A0149**
Wang, X., 2873 - B0291
Wang, X., **3167 - A0310**
Wang, X., 2356 - B0366
Wang, X., 3396 - C0320, **4744 - B0245**
Wang, X., 5833 - C0120, 5852 - C0139
Wang, Y., 1817 - B0278, **2031 - A0058**, 2038 - A0065, 4081 - B0076

Wang – Williams

- Wang, Y., 1602, 1607, 3866 -
C0127, **4878 - C0323, 5769**
- **C0056, 5775 - C0062, 5781**
- C0068
- Wang, Y., **3943**
- Wang, Y., 3818 - C0045
- Wang, Y., 1872 - C0176
- Wang, Y., **4237 - C0079**
- Wang, Y., 3510 - A0073, **3522 - A0085,**
3728 - B0075
- Wang, Y., 5955
- Wang, Y., 3644 - A0305, **4686 - A0328**
- Wang, Y., 2458 - C0124
- Wang, Y., 2246 - B0200, 2266 -
B0220, **4366 - C0414**
- Wang, Y., **3442, 5959**
- Wang, Y., 1551
- Wang, Y., 3311 - C0153
- Wang, Y., 5870 - C0157
- Wang, Y., 536 - B0151
- Wang, Y., 648 - C0206, **731**
- Wang, Y., 4999 - A0070
- Wang, Y., 2954 - C0276, **2955 - C0277**
- Wang, Y., 5395 - A0047, 5396 - A0048
- Wang, Y., 3530 - A0093
- Wang, Y., 2353 - B0363
- Wang, Y., **128 - B0042**
- Wang, Y., **2518 - C0247**
- Wang, Y., 5463 - A0132, **964 - B0218**
- Wang, Y., **3399 - C0323, 3401 - C0325**
- Wang, Y., 3761 - B0176
- Wang, Z., 3265 - B0364, 5119 - B0108
- Wang, Z., 2243 - B0197, 3535 - A0098
- Wang, Z., 2462 - C0128
- Wang, Z., 2452 - C0118, 3570 - A0187,
762, 764
- Wang, Z., 2873 - B0291
- Wang, Z., 1714 - A0235, 3224 - B0323
- Wannamaker, K., 1240 - A0081,
1833 - B0294, **2705 - B0026,**
3127 - A0244, 5443 - A0112,
860 - A0192
- Ward, K., **230 - C0041, 238 - C0049,**
5690 - A0409
- Ward, M., 5658 - A0377
- Ward, M. M., 421 - A0239
- Ward, N., 5336 - C0269
- Ward, T., 792
- Wardani, S. I., 2470 - C0136
- Warfvinge, K., 2641 - A0146, 2643
- A0148, 2645 - A0150, **5504**
- **A0173, 5505 - A0174, 6068**
- A0197
- Wargo, J. A., 3179 - A0322
- Waring, G., 254 - C0113
- Warner, K. A., 3407 - C0331
- Warner, R. L., **647 - C0205**
- Warren, C., 1086 - C0099
- Warren, J., 1037 - B0348
- Warren, J. Z., **2156 - A0290**
- Warrington, R. E., **4224 - C0066**
- Wartak, A., 1975, 297 - C0198, 298 -
C0199, 5863 - C0150
- Warwick, R. A., **1590**
- Wasan, K., 5319 - C0252
- Waschkowski, F., 4570 - A0099
- Waseem, N., 4467
- Washington, K. M., 4999 - A0070
- Washington, M. A., **111 - A0274, 5627**
- A0346
- Washington University, 5365 - A0017
- Wasmuth, S., 3981 - A0106
- Wassel, D., 4951
- Wassermann, L., 3248 - B0347
- Watanabe, A., 108 - A0271, 109 -
A0272, 4879 - C0324
- Watanabe, E., 5570 - A0262
- Watanabe, K., 862 - A0194
- Watanabe, K., 872 - A0204
- Watanabe, K., 1354 - B0114
- Watanabe, M., 5601 - A0320
- Watanabe, S., **591 - B0206, 597 -**
B0212
- Watanabe, T., 4181 - C0023
- Watanabe, T., 541 - B0156
- Watanabe, Y., 3081 - A0052
- Watanachai, N., 3250 - B0349
- Waterbury, L., **2225 - A0394**
- Waterman, G., 5869 - C0156
- Waterman, H., 3911
- Waterson, S., 5021 - A0217
- Watola, D., 633 - C0063
- Watsky, M. A., 3877 - C0138, **4357**
- **C0405**
- Watson, S., 2790 - B0208
- Watson, S. L., 2241 - B0195,
2990, 3276 - C0070, 3650 -
A0334, **3681 - A0365, 3778**
- C0005, 4380 - C0428, 5178
- B0201
- Watt, C. B., 5990
- Watt, K., 2963 - C0285
- Waxman, J., 4286 - C0157
- Waxman, S., 111 - A0274
- Wazieres, A., 2232 - A0401
- Wazin, F., **893 - A0282**
- Weaver, L. K., 2318 - B0272
- Weaver, M. A., **2189 - A0358**
- Webb, J., **1416 - B0193**
- Webb, L. A., 5177 - B0200
- Webber, A. L., **4115 - B0278**
- Webber, S., 947 - B0125
- Weber, A., 4597 - A0186
- Weber, B. H., 18 - A0049, 2407 -
C0073
- Weber, J., 1283 - A0318, 1284 - A0319
- Weber, L., 419 - A0237
- Weber, M., 2314 - B0268
- Weber, M., 38 - A0069, 55 - A0086,
5933 - C0330
- Webers, C. A., 3457, 5068 - B0019
- Webster, A., 1195, 1564, 3345 -
C0227, **3855 - C0116, 4030**
- A0155, 4467, 4492 - A0007,
4724 - B0148, 4968, 5404 -
A0056, 6026
- Webster, D., 1227, 1720 - A0241, 1729
- A0250
- Webster, J., 2962 - C0284
- Webster, M., 559 - B0174
- Wee, R., 5439 - A0108
- Wee, W., 1756 - B0071, 4883 - C0328
- Weeber, H. A., 254 - C0113, 2966 -
C0288, **3030 - A0001**
- Weed, L., **985 - B0239**
- Wegener, A. R., 3036 - A0007
- Wehrmann, K., 1898 - C0298, 2809 -
B0227, 5450 - A0119
- Wei, J., 195 - C0006
- Wei, J., **2540 - C0269, 2614**
- Wei, J., 2096 - A0154
- Wei, L., 903 - B0081
- Wei, L. L., **5656 - A0375**
- Wei, M., 2977
- Wei, N., 4128 - B0291
- Wei, R., 5395 - A0047, 5396 - A0048
- WEI, R., 2149 - A0283
- Wei, S., 3358 - C0240
- Wei, W., 3926, 5417 - A0069
- wei, W., 2873 - B0291
- Wei, W., 5048 - A0244
- Wei, X., 1971, **3925**
- Wei, X., 579 - B0194
- Wei, X., **349 - A0009, 6128 - C0247**
- Wei, Y., **766**
- Wei, Y., 919 - B0097
- Wei, Y., 139 - B0053
- Wei, Y., **5741 - C0028**
- wei, Z., 4017 - A0142
- Wei, Z., 1207
- Weichsel, J., 1511 - C0352, 1528 -
C0369, 2097 - A0155
- Weichselberger, A., 1455 - C0017,
1464 - C0026, 1624, 2394 -
C0060
- Weigel-DiFranco, C., 1947, 5179 -
B0202
- Weigert, G., 3248 - B0347, **818 -**
A0150
- Weikert, R., 1959
- Weiland, J. D., 1969, **1994, 32 - A0063,**
640 - C0070
- Weiler, D., 1916 - C0316
- Weinberg, R., 1799 - B0147
- Weiner, G., 5470 - A0139
- Weinhandl, A. S., 4483
- Weinhandl, A., **1445 - C0007**
- Weintz, S., 18 - A0049, 3151 - A0268
- Weinlander, E., **5444 - A0113**
- Weinreb, R. N., 1182, 2090 - A0148,
2735 - B0114, 2856 - B0274,
2857 - B0275, 2861 - B0279,
2875 - B0293, 2877 - B0295,
3481, 3498, 3695 - B0042, 3876
- C0137, 4476, 4709 - B0133,
471 - A0331, 5068 - B0019, 5075
- B0026, 5137 - B0160
- Weinstein, J., 1531 - C0372
- Weintraub, D., 3423 - C0347
- Weisenberger, D. J., 1352 - B0112
- Weisman, M. H., 421 - A0239
- Weiss, A. H., **2169 - A0338, 5783 -**
C0070
- Weiss, E. R., 601 - B0273
- Weiss, H., 4685 - A0327
- Weiss, J., **287 - C0188**
- Weiß, M., 3602 - A0220, **3614 - A0232**
- Weiss, R., **117 - B0031**
- Weiss, S. L., **2677 - A0404**
- Weiss, S. J., 5540 - A0232
- Weiss, S., **1502 - C0343**
- Weissbart, S. B., 2214 - A0383, 3820
- C0047
- Weisschuh, N., 1516 - C0357, 1832 -
B0293, 23 - A0054, 2982, 3163
- A0280
- Weissgerber, G., 2394 - C0060
- Weissleder, S., **930 - B0108**
- Weitz, R., 3447
- Weksler, M., 200 - C0011
- Welch, D. L., 2424 - C0090
- Welch, J., 1425 - B0344
- Welch, M., 4616 - A0205, **516 - B0023,**
517 - B0024
- Weleber, R. G., 1001 - B0255,
1269 - A0304, 1538 - C0379,
2339 - B0328, 2503 - C0207,
2842 - B0260, 3145 - A0262,
3896 - C0362
- Welk, A., 2967 - C0289
- Weller, J., 1311 - B0018, 1326 - B0033
- Weller, K. K., 1001 - B0255, 2486 -
C0190, 2503 - C0207
- Wellik, S. R., 4465, 5107 - B0096,
5134 - B0123, 6028
- Wellman, J., 3900 - C0366
- Wells, F. S., 3282 - C0076
- Wells, M., 5021 - A0217
- Wells, M., 907 - B0085
- Wells, M., 1156
- Welsbie, D. S., **2493 - C0197, 2612,**
6152 - C0271
- Welsh, C., **416 - A0234**
- Wen, C., **2855 - B0273, 2887 - B0305**
- Wen, D., 5737 - C0024, 5742 - C0029
- Wen, J. C., 2073 - A0131, 2689 -
B0010
- Wen, K., 5907 - C0194
- Wen, L., 181 - B0335, 182 - B0336
- Wen, L., 531 - B00146
- Wen, L., 3393 - C0317, 3394 - C0318
- Wen, Q., 1601
- Wen, R., 2495 - C0199, **2633 - A0138,**
5503 - A0172, 999 - B0253
- Wen, W., **4114 - B0277**
- Wen, X., 1858 - C0162
- Wen, Y., 2498 - C0202, **2500 - C0204,**
2504 - C0208, 3346 - C0228,
3349 - C0231
- Wen, Z., 3820 - C0047
- Weng, C. Y., 5240 - B0353, **841 -**
A0173
- Weng, C. Y., 1044 - B0355, 4659 -
A0301
- Weng, D. S., 4071 - B0066
- Weng, J., **3301 - C0095**
- Weng, L., **2289 - B0243**
- Weng, R., **3402 - C0326**
- Weng, S., **5762 - C0049, 5975**
- Weng, S., 1851 - C0155
- Weng, S., 3192 - B0192
- Wenick, A., 5974, 825 - A0157
- Weninger, W., **5340**
- Wenke, J. L., 3483
- Wensel, T. G., 3100 - A0108, 3102 -
A0110, 4016 - A0141
- Wensveen, J. M., 5955
- Wentzell, D., **59 - A0106**
- Wenz, D., **5877 - C0164**
- Werbeck, N., 2493 - C0197
- Werblin, F. S., 2563
- Werkmeister, R. M., 1234 - A0075,
271 - C0172, 3191 - B0191,
941 - B0119
- Werley, E. B., 6162 - C0281
- Wermeur, B., 908 - B0086
- Wernecke, K., 5081 - B0032
- Werner, J. S., 295 - C0196
- Werner, L., 2211 - A0380, 260 - C0119,
2980, **2981, 5641 - A0360**
- Wernig, G., 549 - B0164
- Wernig, M., 549 - B0164
- Wernimont, S. M., 4148 - B0371
- Wernthelm, H., 6202 - C0356
- Weschta, M., **281 - C0182, 5274 -**
C0120
- West Herts NHS Trust, 4286 - C0157
- west, J., 5678 - A0397
- West, S. K., 1568, 1945, 2099 - A0157,
4108 - B0233
- West-Mays, J. A., 1606, 3708 - B0055
- Westall, C. A., 5022 - A0218, 5206
- B0319
- Westborg, L., **822 - A0154**
- Westcott, A., 6166 - C0285
- Westcott, M., 412 - A0230, 4175 -
C0017, 4206 - C0048
- Westenskow, P., 2446 - C0112
- Westerfield, M., 4446
- Westin, L., 19 - A0050, **5413 - A0065**
- Westman, S., 4007 - A0132
- Weston-Davies, W., 507 - B0014
- Wetherby, K., 2340 - B0329
- Wetsel, R., 2446 - C0112
- Wetz, J. M., 5526 - A0218
- Wetzl, P. A., 2318 - B0272
- Wey, S., 4080 - B0075
- Whalley, P., 4542 - A0057
- Whan, R., 2990
- Wheeler, L. A., 1246 - A0087
- Wheisthal, S., 535 - B0150
- Whisenhunt, K., 701 - C0296
- Whitaker, C., 5497 - A0166
- Whitaker, D. T., 2598
- Whitcroft, K., 1565
- White, A. G., 5223 - B0336
- White, A., 1247 - A0088
- White, A., 2572
- White, A. J., 1177, 6156 - C0275
- White, D., 2168 - A0337
- White, D., 1595
- White, D., 1628 - A0004
- White, D., 3724 - B0071, 4678 - A0320
- White, K., 560 - B0175
- White, M., 5354 - A0006
- White, P., 5618 - A0337
- White, S., 4416
- White, T. W., 4698 - A0340
- White, T. L., **2269 - B0223**
- Whiteford, J. R., 5474 - A0143
- Whiteside, M., 115 - B0029, **3788 -**
C0015
- Whitford, C., 1415 - B0192
- Whiting, M., 2924 - C0221
- Whiting, P., 2985
- Whiting, R., 6078 - A0207
- Whitley, W., 938 - B0116
- Whitlock, A., 391 - A0091, 4445, **5568**
- **A0260**
- Whitman, M., **1580**
- Whitney, D., 2184 - A0353
- Whitton, H., 5162 - B0185
- Whiston, C., 6008
- Wichorek, M., 1891 - C0291, 1904
- C0304
- Wicker, D., 640 - C0070
- Wickremasinghe, S., 1958, **4839 -**
C0197, 4847 - C0205
- Widdowson, P. S., 3716 - B0063, **6132**
- **C0251, 6133 - C0252**
- Wieben, E., 1353 - B0113, 4434
- Wiedemann, P. M., 2568
- Wieghofer, P., 1487 - C0229, 2627
- A0132
- Wieland, M., **784**
- Wielechowski, E., 1422 - B0341, 4546
- A0061
- Wiemann, S., **3727 - B0074, 4439**
- Wieneke, S., 3103 - A0111
- Wieteska, M., 1278 - A0313
- Wietschorke, H., 2147 - A0281
- Wigdahl, J. C., **1689 - A0210, 1709**
- A0230
- Wiggs, J. L., 1178, 1180, 1181, 1818 -
B0279, 3020, 5135 - B0158, 5136
- B0159, 5140 - B0163, 5142
- B0165, 5144 - B0167, 5153 -
B0176, 5157 - B0180
- Wijdh, R. J., 1576
- Wijeratne, T., 2182 - A0351
- Wijesundera, C., 2182 - A0351
- Wijeyakumar, W., 820 - A0152
- Wijnholds, J., 43 - A0074, 4540 -
A0055, 4970
- Wilbanks, N., 5746 - C0033
- Wilcox, A. E., 1357 - B0117
- Wild, P., 5191 - B0214
- Wilda, M. K., **2382 - C0048**
- Wilding, C., 6143 - C0262
- Wildner, G., **2536 - C0265, 2548 -**
C0277
- Wildsoet, C. F., 1578, 585 - B0200, 691
- C0286, **707 - C0302, 752**
- Wilensky, J., 5726 - C0013, 5901 -
C0188
- Wiley, H., 2423 - C0089
- Wiley, W., 5768 - C0055
- Wilhelm, B., 2658 - A0385, 2982,
4561 - A0090
- Wilk, M. A., 1526 - C0367
- Wilke, R., 2384 - C0050
- Wilken, M., 1485 - C0227
- Wilkerson, A., 2576
- Wilkerson, J., 1012 - B0266
- Wilkinson, M. J., 6162 - C0281
- Will, D., 6003
- Willard, B., 3514 - A0077, 354 - A0014
- Willburger, C., 3260 - B0359
- Willcox, M., 1747 - B0062, 1766
- B0081, 3319 - C0161, 908 -
B0086, 936 - B0114
- Willcox, M. D., 1743 - B0058, 1777
- B0092, 1792 - B0107, 1811
- B0159
- Willeford, K. T., **1847 - C0151, 2166**
- A0335
- Willen, R., 3321 - C0163
- Willett, W., 5544 - A0236
- William, R., 5675 - A0394
- Williams, A. C., 5849 - C0136
- Williams, A., 3875 - C0136
- Williams, A. M., **875 - A0207**
- Williams, B., 5719 - C0006, 5721 -
C0008
- Williams, C., 3956
- Williams, C., 4562 - A0091
- Williams, D., 1623
- Williams, D. R., 2589, 666 - C0224

- Williams, D. S., 3980 - A0105
 Williams, D., 1156
 Williams, E. R., 4230 - C0072
 Williams, G., 3026, 4063 - B0058
 Williams, G., 1622, 4252 - C0094
 Williams, G. A., 1532 - C0373, 3771
 - B0186, 5434 - A0103, 6177
 - C0296
 Williams, G., 3600 - A0218
 Williams, J. A., 4015 - A0140
 Williams, J. I., 2666 - A0393
 Williams, J., 3493
 Williams, L., 4043 - A0250
 Williams, M. T., 956 - B0134
 Williams, O. A., 104 - A0267
 Williams, P., 5697 - A0416
 Williams, P., 3018
 Williams, P., 4598 - A0187
 Williams, R., 3546 - A0163, **4143** -
B0366, 437 - A0297
 Williams, R. A., 4562 - A0091
 Williams, R., 1527 - C0368, 2845 -
 B0263
 Williams, R., 3018, 5160 - B0183
 Williams, R. W., 3141 - A0258, 780
 Williams, S., 1949, 1950, 268 - C0127,
 2978, 2979
 Williams, S., 5671 - A0390, 5673 -
 A0392, 5674 - A0393
 Williams, S., 3515 - A0078, 5145 -
 B0168
 Williams, T., 3708 - B0055
 Williams-Blangero, S., 2724 - B0103,
 5893 - C0180
 Willis, J. R., **2604**, 883 - A0215
 Willmott, G., 3282 - C0076
 Willoughby, A., **5969**
 Willoughby, C. E., 4470, 5141 - B0164
 Willshire, C., 5093 - B0044
 Wilmot, B., 499 - B0006
 Wilmott, L., 1012 - B0266
 Wils, E., 4029 - A0154
 Wilsey, L. J., **3742** - **B0089**
 Wilson, A., 4553 - A0068, **5694** -
A0413
 Wilson, C., 385 - A0045, 4711 - B0135
 Wilson, D. J., 1269 - A0304, 2849 -
 B0267, 3896 - C0362
 Wilson, D., 2466 - C0132
 Wilson, D., 449 - A0309
 Wilson, I. R., **1698** - **A0219**
 Wilson, J., 1422 - B0341, 4546 - A0061
 Wilson, L., 1222, **2546** - **C0275**
 Wilson, M., 4107 - B0232
 Wilson, M. W., 3168 - A0311, 3174
 - A0317, **3175** - **A0318**, 3183 -
 A0326, 5982, 5984
 Wilson, S. H., 2318 - B0272
 Wilson, V., 5618 - A0337
 Wiltberger, M., 5920 - C0317
 Wiltshire, N., **2085** - **A0143**
 Win, W., 2601
 Winaikosol, P., 3250 - B0349
 Winegarner, A., 3639 - A0300
 Winer, L., 4962
 Wingfield, P., 2359 - B0369
 Winkler, K. P., 113 - A0276
 Winlove, P., 1415 - B0192
 Winter, T., 2194 - A0363
 Winterbottom, M., 4043 - A0250
 Wintergerst, M., **2777** - **B0156**
 Winterhalter, S., 423 - A0241
 Wintermantel, T., 6109 - C0228
 Wintermark, P., 6064 - A0193
 Winters, J. E., 1815 - B0276
 Wirick, E. O., 2592
 Wirix, M., 3951
 Wirkner, K., 1101 - C0136, 1105 -
 C0140
 Wirta, D., 1231 - A0072, 2715 - B0036
 Wiseman, R., 4587 - A0176
 Wisloff, T., 804 - A0136
 Wisse, R., 1576
 Wissinger, B., 1516 - C0357, 2982,
 6044 - A0078
 Wistow, G., 2438 - C0104
 Wistuba, J., 3981 - A0106, 3982 -
 A0107
 Wit, F., 4649 - A0291
 Withers, B., 1252 - A0093
 Withers, C., 5641 - A0360
 Witherspoon, D. C., 4535 - A0050,
 6020
 Witkin, A. J., 1928 - C0328, 2798 -
 B0216
 Witkowska, K. J., 3191 - B0191
 Witt, J., **118** - **B0032**
 Witte, A., 1128 - C0163
 Withthayaweerarak, J., **609** - **B0281**
 Wittich, W., 1067 - C0080, **1068**
 - **C0081**, 1292 - A0327, 2429 -
 C0095, 3908, 643 - C0073
 Wittig, D., 545 - B0160
 Wiwatwongwana, D., 5589 - A0308
 Wizov, S. S., **1186** - **B0209**
 Woeller, C., 1143, 335 - C0268
 Woertz, E. N., **1106** - **C0141**
 Wohl, S. G., **4608** - **A0197**
 Wohlschlegel, J., 554 - B0169
 Wojeiechowski, R., 1821 -
 B0282, **1822** - **B0283**, 1826
 - B0287
 Wojek, C., 1731 - A0252
 Wojnarowicz, M., 5512 - A0181, 5640
 - A0359
 Wojtkowski, M., 279 - C0180, 4049
 - A0256
 Wolf, A., 5390 - A0042
 Wolf, B., 792
 Wolf, M., 1352 - B0112, 4338 - C0386
 Wolfe, J. D., 1160, 1532 - C0373,
 4431, 5697 - A0416, 739
 Wolfe, J., 1757 - B0072
 Wolfe, R., 5539 - A0231
 Wolffsohn, J. S., 3303 - C0097,
 3819 - C0046, 4888 - C0333,
 911 - B0089
 Wolfsum, U., 4979, 5324 - C0257
 Wolfson, Y., **2875** - **B0293**, 2877 -
 B0295, 3876 - C0137
 Wolkow, N., 2664 - A0391
 Wollstein, G., 1248 - A0089, 1672
 - A0193, 1682 - A0203, 1944,
 2032 - A0059, 2096 - A0154,
 2103 - A0161, 2111 - A0169,
 2113 - A0171, 3412 - C0336,
 3501, 3502, 4076 - B0071, 5077 -
 B0028, 6115 - C0234
 Wolosin, J., **2243** - **B0197**
 Wolosin, J., 3535 - A0098
 Wolpert, L., 1964, **958** - **B0136**
 Won, G., 2614, **4702** - **B0126**
 Won, G., 5652 - A0371
 Won, H., 4341 - C0389
 Won, J., 2346 - B0335
 Wong, A. M., 1954, 5035 - A0231
 Wong, B., 5778 - C0065
 Wong, C., 1813 - B0274, 2600, 4101
 - B0226
 Wong, C., 1713 - A0234, 3957, 4739 -
 B0240, **5261** - **C0107**
 Wong, C., **3258** - **B0357**
 Wong, C., 2994
 Wong, C. L., **2696** - **B0017**
 Wong, C. G., **5438** - **A0107**
 Wong, D. W., 1264 - A0299
 Wong, D., 1941 - C0341
 Wong, D., 5766 - C0053
 Wong, D., 5258 - C0104, 5927 - C0324
 Wong, D. T., 1955
 Wong, E., 5362 - A0014, 538 - B0153
 Wong, F., 3700 - B0047
 Wong, H., 472 - A0332
 Wong, I., 1043 - B0354, **3380** - **C0304**,
 3499
 Wong, J., 330 - C0263
 Wong, J., 1145
 Wong, J. M., **1301** - **B0008**, 1331
 - B0038, 2893 - C0190, 4332
 - C0380
 Wong, J., **430** - **A0290**
 Wong, J. C., **1980**
 Wong, K., 936 - B0114
 Wong, K., 5615 - A0334
 Wong, O., **6098** - **C0217**
 Wong, P., 3071 - A0042
 Wong, R. O., 2586
 Wong, R., 2801 - B0219, 4840 - C0198
 Wong, R., **4578** - **A0167**
 Wong, R., **1048** - **B0359**, 6187 - C0306
 Wong, R., 5276 - C0122
 Wong, S., 4972
 Wong, S., **4680** - **A0322**
 Wong, S., 877 - A0209
 Wong, S., **3757** - **B0172**, 4276 - C0147,
 844 - A0176
 Wong, T. Y., 1712 - A0233, 1713 -
 A0234, 1995, 2091 - A0149,
 2181 - A0350, 2858 - B0276,
 3445, 3957, 4074 - B0069, 4101
 - B0226, 5166 - B0189, 5362 -
 A0014, 6008
 Wong, T. Y., 1033 - B0344, 1706 -
 A0227, 1813 - B0274, 1817
 - B0278, 195 - C0006, 2567,
 2601, 2603, 2642 - A0147,
 2721 - B0100, 3239 - B0338,
 371 - A0031, 3955, 4949, 5143 -
 B0166, 5480 - A0149, 6009
 Wong, T., 2600, 2602, 4680 - A0322
 Wong, T., 121 - B0035, 3518 -
 A0081, **477** - **A0337**, 5143 -
 B0166, 5261 - C0107
 Wong, T., **5259** - **C0105**
 Wong, V., **5992**
 Wong, V. H., 3696 - B0043
 Wong, W. T., 2423 - C0089, 2530
 - C0259, 3136 - A0253, 3215 -
 B0314, 3944, 6010
 Wong, W., 3593 - A0211
 Wong, Y., 4711 - B0135
 Wong, Y., **3957**
 Wong-Powell, J., 1765 - B0080
 Woo, J., 2478 - C0144, **3987** - **A0112**
 Woo, J., 1035 - B0346
 Woo Kim, S., 1388 - B0165
 Woo, S., 1430 - B0349, 1431 - B0350,
 1432 - B0351, 1510 - C0351,
 3924
 Wood, A., 3230 - B0329
 Wood, D., 3954
 Wood, E. H., 5397 - A0049, **6052** -
A0086
 Wood, J. M., 1289 - A0324, 1291 -
 A0326, **1942**, 4464, 4760 - B0261
 Wood, J. P., 2618
 Wood, J. P., **2513** - **C0217**, 2650 -
 A0155
 Wood, J. P., 2651 - A0156, 6069 -
 A0198, 961 - B0215
 Wood, J. C., 6060 - A0189
 Wood, K., 5543 - A0235
 Wood Ortiz, F., 2365 - B0375
 Wood, T., **1538** - **C0379**, 2842 - B0260
 Woodall, R., **5021** - **A0217**
 Woodley, V., 1253 - A0094, 5483 -
 A0152, 5530 - A0222, 5847
 - C0134
 Woods, D., 3889 - C0355
 Woods, J., **1753** - **B0068**
 Woods, R., 5539 - A0231
 Woods, R. L., **1560**, **1947**, 5179 -
 B0202
 Woods, S., **3154** - **A0271**
 Woodward, A. M., 3846 - C0107
 Woodward, M. A., 5222 - B0335
 Woolf, Y., 4607 - A0196
 Woog, K., 4697 - A0339
 Woolman, T. A., 5511 - A0180
 Woolson, S., 5228 - B0341
 Woon, K., 4933
 Wormstone, M., 5635 - A0354, **5638** -
A0357, 5639 - A0358
 Woronkiewicz, M., 3158 - A0275, **4745**
 - **B0246**
 Worrall, E., 4507 - A0022
 Wosikowski, K., 236 - C0047, **5702**
 - **A0421**
 Wözl, A., 2850 - B0268
 Wozniak, D., **5093** - **B0044**
 Wozniak, D. R., 5091 - B0042
 Wozniak, R., 1313 - B0020
 Wree, A., 4976
 Wright, A., 5021 - A0217
 Wright, C., 6162 - C0281
 Wright, C., **6169** - **C0288**
 Wright, D., 5393 - A0045
 Wright, D., 5366 - A0018
 Wright, D., 2408 - C0074
 Wright, J., 5783 - C0070
 Wright, J., 3619 - A0237
 Wright, K., 590 - B0205
 Wright, T., 5206 - B0319
 Wrobel, K., 5874 - C0161
 Wu, A., 2307 - B0261, 332 - C0265
 Wu, A., **5389** - **A0041**
 Wu, A. M., **4775** - **B0385**
 Wu, C., 4792 - B0402
 Wu, C., 2796 - B0214
 Wu, C., 4692 - A0334
 Wu, C. Y., **5170** - **B0193**
 Wu, C., 4564 - A0093
 Wu, C. M., 4775 - B0385
 Wu, D., **1163**, 2916 - C0213, 3886
 - C0147
 Wu, D. M., 2464 - C0130, **3960**, 4026 -
 A0151, 4497 - A0012
 Wu, D., 1227, **1720** - **A0241**
 Wu, D., 476 - A0336, 56 - A0103
 Wu, F., **3369** - **C0293**
 Wu, G., 4690 - A0332, **4691** - **A0333**
 Wu, H., 532 - B0147
 Wu, H., 2178 - A0347
 Wu, H., **3705** - **B0052**
 Wu, H., **2958** - **C0280**
 Wu, H., 2515 - C0244, 2532 - C0261
 Wu, H., 366 - A0026, **5646** - **A0365**
 Wu, H., 4389 - C0437, **4900** - **C0345**
 Wu, J. F., **1086** - **C0099**
 Wu, J., 1926 - C0326
 Wu, J. S., **5887** - **C0174**
 Wu, J., **2831** - **B0249**
 Wu, J., 1855 - C0159
 Wu, J., 5555 - A0247
 Wu, J., 1651 - A0027
 Wu, J., 3549 - A0166
 Wu, K., 159 - B0073, **901** - **B0079**
 Wu, K., 6022
 Wu, K., 2323 - B0312, 3072 - A0043
 Wu, K., 5536 - A0228
 Wu, L., 184 - B0338, 2750 - B0129,
 390 - A0090, 402 - A0102, 4284
 - C0155
 Wu, L., 2248 - B0202
 Wu, M., **1248** - **A0089**, 2032 - A0059,
 2111 - A0169, 2113 - A0171,
 3412 - C0336, 3501, 3502, 4076
 - B0071, 5077 - B0028, 6158
 - C0277
 Wu, M., **3866** - **C0127**, 4878 - C0323
 Wu, M., 5650 - A0369
 Wu, P., **3405** - **C0329**
 Wu, P., 3292 - C0086, 3293 - C0087
 Wu, P., 2298 - B0252
 Wu, R., **178** - **B0332**
 Wu, S. M., 1857 - C0161, 2193 -
 A0362
 Wu, S., 3038 - A0009, **3487**
 Wu, S., 4089 - B0084
 Wu, S., 4114 - B0277
 Wu, S., 2596, **6110** - **C0229**
 Wu, T., 2632 - A0137, 3172 - A0315
 Wu, T. P., 4422, 770
 Wu, W., 2748 - B0127, 2750 - B0129,
 5389 - A0041
 Wu, W., 1428 - B0347, 4469
 Wu, W., 5769 - C0056
 Wu, W., **5299** - **C0232**
 Wu, X., **4193** - **C0035**
 Wu, X., 5956
 Wu, X., 1939 - C0339
 Wu, X., **2532** - **C0261**, 3544 - A0161
 Wu, X., **4243** - **B0244**
 Wu, X., **1381** - **B0141**, 3873 - C0134,
 494 - B0001, 495 - B0002
 Wu, Y., 3990 - A0115, **4037** - **A0162**
 Wu, Y., 3406 - C0330
 Wu, Y., 3399 - C0323, 3401 - C0325
 Wu, Y., **3283** - **C0077**, 4926 - C0371
 Wu, Y., **963** - B0217
 Wu, Y., **1663** - **A0039**
 Wu, Y., **1222**, 1223
 Wu, Y., **5837** - **C0124**
 Wu, Y., **1281** - **A0316**
 Wu, Y., 3528 - A0091, 3531 - A0094
 Wu, Z., 2089 - A0147, **4071** - **B0066**
 Wu, Z., **4241** - **C0083**
 Wu, Z., 2535 - C0264, 41 -
 A0072, **4528** - **A0043**, 5656
 - A0375
 Wubben, T., **4448**, 5444 - A0113
 Wudhikorn, K., 5589 - A0308
 Wu, C., 2796 - B0214
 Wuyuru, V., 3892 - C0358
 Wy, S., **1841** - **B0302**
 Wyant, F., 161 - B0075
 Wynnanski-Jaffe, T., 1024 - B0308
 Wykoff, C. C., 1096 - C0313, 1129
 - C0164, 1454 - C0016, 1914
 - C0314, 1939 - C0339, 5545 -
 A0237, **74** - **A0119**
 Wylegala, A., **1466** - **C0028**, 2393
 - C0059
 Wylegala, E., 1466 - C0028, 2393 -
 C0059, 5738 - C0025
 Wylegala, F., 1466 - C0028
 Wyles, E., 3805 - C0032, 5226 - B0339
 Wymore, E., 2756 - B0135, 3767 -
 B0182
 Wynne, N., 2332 - B0321, 5406 -
 A0058
 WYSIWYG, 4871 - C0316
 Wysocka, J., 2477 - C0143

X

- Xavier, C., 366 - A0026, 5646 - A0365
 Xeroudaki, M., 2251 - B0205
 Xi, H., **5551** - **A0243**, 5563 - A0255
 Xi, Y., 1849 - C0153
 Xia, C., **4010** - **A0135**, 4974, 892 -
 A0281
 Xia, F., 5473 - A0142
 Xia, H., 2676 - A0403
 Xia, T., **4278** - **C0149**, 4803 - B0413
 Xia, X., 2983, 569 - B0184
 Xia, X., 3748 - B0095, 5833 - C0120
 Xia, X., **2256** - **B0210**, 2596
 Xiang, C., 1650 - A0026
 Xiang, J., 1573
 Xiang, L., 2323 - B0312
 Xiang, N., 4666 - A0308
 Xiang, Z., 5282 - C0215
 Xiao, B., 4809 - B0419, **898** - **A0287**
 Xiao, D., 1693 - A0214, 1694 -
 A0215, **1707** - **A0228**
 Xiao, H., 5417 - A0069
 Xiao, J., 4222 - C0064
 Xiao, J., 982 - B0236
 Xiao, M., 4737 - B0238, 4738 - B0239,
 809 - A0141
 Xiao, P., **278** - **C0179**, 3437
 Xiao, R., 4529 - A0044, 6130 - C0249
 Xiao, S., 1222, **1223**
 Xiao, T., 5422 - A0074
 Xiao, Y., 3291 - C0085
 Xiao, Y., 2575
 Xiao, Y., 4458, **4560** - **A0089**
 Xiao, Y., 3555 - A0172

- Xie, B., 4591 - A0180
 Xie, F., 4389 - C0437, 4900 - C0345
 Xie, G., 3837 - C0064
 Xie, H., 5359 - A0011
 Xie, H., 4918 - C0363, 4921 - C0366
 Xie, J., 5502 - A0171
 Xie, J., 2296 - B0250, 2297 - B0251
 Xie, K., 1317 - B0024
 Xie, L., 4094 - B0219
 Xie, L., 4364 - C0412
 Xie, M., 747
 Xie, P., 1925 - C0325
 Xie, W., 1008 - B0262, 997 - B0251
 Xie, X., 4545 - A0060
 Xie, X., 5852 - C0139
 Xie, Y., 497 - B0004
 Xie, Y., 2676 - A0403
 Xie, Y., 5052 - B0003
 Xie, Y., 3538 - A0101
 Xie, Y., 5422 - A0074
 Xie, Z., 4389 - C0437
 Xin, C., 2873 - B0291, 5907 - C0194
 Xin, M., 5306 - C0239
 Xin, X., 3507 - A0070
 Xinxin, H., 2617
 Xinxing, G., 2849 - B0267
 Xiong, G. M., 240 - C0051
 Xiong, W., 3278 - C0072
 Xiong, W., 376 - A0036, 3960, 4497 - A0012
 Xiong, Y., 2562
 Xiong, Y., 3386 - C0310
 Xu, B., 3495
 Xu, B., 2725 - B0104, 471 - A0331, 5896 - C0183
 Xu, B., 3983 - A0108
 Xu, B., 4031 - A0156
 Xu, C., 5172 - B0195
 Xu, D., 2621, 4297 - C0271
 Xu, F., 5160 - B0183
 Xu, G., 1499 - C0241, 2806 - B0224, 3091 - A0062
 Xu, G., 3093 - A0064, 3979 - A0104, 4576 - A0165, 5359 - A0011, 5644 - A0363
 Xu, H., 1002 - B0256, 1211, 1436 - B0355, 1439 - C0001, 1476 - C0218, 3566 - A0183, 3942, 536 - B0151, 5377 - A0029, 5552 - A0244, 5556 - A0248, 5557 - A0249, 6111 - C0230
 Xu, H., 4391 - C0439
 Xu, H., 3520 - A0083
 Xu, J., 1163, 1573, 2916 - C0213, 3886 - C0147, 5715 - C0002
 Xu, J., 3702 - B0049
 Xu, J., 1704 - A0225
 Xu, J., 3824 - C0051, 3927
 Xu, J., 3093 - A0064, 4576 - A0165, 5644 - A0363
 Xu, J., 5203 - B0316, 5819 - C0106
 Xu, J., 718
 Xu, K., 2342 - B0331, 5422 - A0074
 Xu, K., 239 - C0050
 Xu, K., 4425
 Xu, L., 1186
 Xu, L., 5442 - A0111
 Xu, L., 1637 - A0013
 Xu, L., 4618 - A0260
 Xu, P., 1266 - A0301
 Xu, Q., 6063 - A0192
 Xu, R., 4048 - A0255
 Xu, R., 496 - B0003
 Xu, S. C., 622 - B0294
 Xu, S., 1227
 Xu, S., 1545
 Xu, T., 3390 - C0314
 Xu, T., 1771 - B0086
 Xu, W., 3386 - C0310, 3390 - C0314
 Xu, W., 2632 - A0137, 5463 - A0132, 964 - B0218
 Xu, X., 2406 - C0072, 5417 - A0069
 Xu, X., 2602, 5166 - B0189
 Xu, X. X., 1712 - A0233, 2091 - A0149
 Xu, X., 1713 - A0234
 Xu, X., 3192 - B0192, 3374 - C0298
 Xu, Y., 3359 - C0241, 5282 - C0215
 Xu, Y., 2532 - C0261
 Xu, Y., 3712 - B0059, 5429 - A0098, 5968
 Xu, Z., 3203 - B0203, 766
 Xu, Z., 5779 - C0066
 Xu, Z., 368 - A0028
 Xue, K., 1195, 1530 - C0371, 3493, 5509 - A0178, 5654 - A0373, 5936 - C0333, 6005, 6060 - A0189
 Xue, T., 2983
 Xue, Y., 3960
 Yamamoto, S., 1834 - B0295, 2487 - C0191, 4281 - C0152, 553 - B0168, 5592 - A0311, 610 - B0282
 Yamamoto, T., 3751 - B0098, 460 - A0320, 462 - A0322
 Yamamoto, T., 3706 - B0053
 Yamamoto, Y., 2912 - C0209, 4085 - B0080, 484 - A0344
 Yamamoto, Y., 4184 - C0026
 Yamanaka, M., 3506 - A0069
 Yamanaka, O., 3843 - C0104, 4353 - C0401, 4419
 Yamanari, M., 291 - C0192, 5002 - A0073
 Yamane, T., 1742 - B0057, 1784 - B0099, 6049 - A0083
 Yamane, T., 1876 - C0180
 Yamanuha, J., 2834 - B0252
 Yamasaki, S., 541 - B0156
 Yamashiro, C., 1686 - A0207, 4003 - A0128
 Yamashiro, K., 1817 - B0278, 1819 - B0280, 2397 - C0063
 Yamashita, A., 5653 - A0372
 Yamashita, A., 3133 - A0250, 811 - A0143
 Yamashita, H., 1834 - B0295, 2074 - A0132, 282 - C0183, 4827 - C0185
 Yamashita, T., 1730 - A0251, 2132 - A0266, 3410 - C0334
 Yamashita, T., 4116 - B0279
 Yamauchi, A., 4257 - C0128
 Yamauchi, K., 1686 - A0207
 Yamauchi, T., 1965, 4860 - C0305, 4863 - C0308
 Yamazaki, A., 2355 - B0365
 Yamazaki, K., 1319 - B0026
 Yamazaki, M., 4548 - A0063
 Yamazaki, T., 2943 - C0265
 Yan, D., 3173 - A0316, 5385 - A0037
 Yan, H., 1207, 4971
 Yan, J., 5355 - A0007
 Yan, L., 4389 - C0437
 Yan, L., 3549 - A0166
 Yan, Q., 3655 - A0339, 3661 - A0345
 Yan, R., 4577 - A0166
 Yan, T., 5395 - A0047, 5396 - A0048
 Yan, W., 1054 - B0365
 Yan, X., 325 - C0258
 Yan, X., 1663 - A0039
 Yan, X., 536 - B0151
 Yan, X., 4792 - B0402
 Yanagawa, A., 3841 - C0102
 Yanagi, Y., 1426 - B0345, 1730 - A0251, 3239 - B0338, 350 - A0010, 371 - A0031, 5362 - A0014
 Yanai, A., 4581 - A0170
 Yanai, R., 4003 - A0128
 Yanase, T., 2159 - A0293
 Yanda, M., 218 - C0029
 Yanev, P., 1240 - A0081, 860 - A0192
 Yanez, V., 384 - A0044
 Yang, A., 1797 - B0145, 1807 - B0155, 2078 - A0136
 Yang, A., 1771 - B0086
 Yang, B., 1220
 Yang, C., 1910 - C0310, 2337 - B0326, 4574 - A0103
 Yang, C., 6175 - C0294
 Yang, C., 5472 - A0141
 Yang, C., 5685 - A0404
 Yang, C., 222 - C0033
 Yang, C., 1910 - C0310, 2337 - B0326
 Yang, D., 2149 - A0283
 Yang, D., 5052 - B0003
 Yang, E., 4733 - B0157
 Yang, F., 4965, 4966, 974 - B0228
 Yang, H., 5682 - A0401
 Yang, H., 5114 - B0103
 Yang, H., 2933 - C0255, 4134 - B0297, 608 - B0280, 611 - B0283
 Yang, H., 5092
 Yang, H., 1215, 2097 - A0155, 3496, 4063 - B0058, 4084 - B0079
 Yang, H., 1970
 Yang, H., 2534 - C0263
 Yang, H. Y., 3175 - A0318
 Yang, H., 3359 - C0241, 3367 - C0249
 Yang, J., 2461 - C0127, 790
 Yang, J., 1015 - B0269, 1023 - B0307, 3807 - C0034, 3832 - C0059, 5423 - A0092
 Yang, J., 5024 - A0220
 Yang, J., 5990
 yang, J., 963 - B0217
 Yang, J., 270 - C0171
 Yang, J., 5610 - A0329
 Yang, J., 2468 - C0134, 2987, 3203 - B0203, 5651 - A0370
 Yang, J., 1231 - A0072, 1699 - A0220, 2794 - B0212
 Yang, J., 990 - B0244
 Yang, K., 2669 - A0396
 Yang, L., 3386 - C0310, 3390 - C0314
 Yang, L., 3306 - C0100
 Yang, L., 5323 - C0256
 Yang, L., 379 - A0039
 Yang, L., 4214 - C0056, 5502 - A0171
 Yang, L., 1430 - B0349, 1431 - B0350, 1432 - B0351
 Yang, L., 1650 - A0026
 Yang, M., 5671 - A0390, 5673 - A0392, 5674 - A0393
 Yang, M. B., 2783 - B0162
 Yang, M., 1224
 Yang, M., 221 - C0032, 5710 - A0429
 Yang, M., 36 - A0067, 42 - A0073
 Yang, M., 5123 - B0112
 Yang, N., 5395 - A0047, 5396 - A0048
 Yang, N., 549 - B0164
 Yang, P., 1001 - B0255, 2339 - B0328, 2486 - C0190, 2503 - C0207, 2842 - B0260, 3145 - A0262, 3896 - C0362
 Yang, P., 2461 - C0127, 4034 - A0159
 Yang, Q., 2093 - A0151, 3225 - B0324
 Yang, Q., 3551 - A0168, 5359 - A0011
 Yang, Q., 1973, 2356 - B0366, 732
 Yang, Q., 5669 - A0388, 5814 - C0101
 Yang, Q., 2283 - B0237
 Yang, S., 67 - A0114
 Yang, S., 5385 - A0037
 Yang, S., 4493 - A0008
 Yang, S., 5599 - A0318
 Yang, S., 3246 - B0345, 3289 - C0083
 Yang, T., 5336 - C0269
 Yang, U., 844 - A0176
 Yang, W., 4611 - A0200
 Yang, W., 2873 - B0291
 Yang, X., 2502 - C0206, 3943, 564 - B0179
 Yang, X., 3733 - B0080, 6140 - C0259
 Yang, X., 3399 - C0323, 3401 - C0325
 Yang, X., 175 - B0329, 1783 - B0098
 Yang, X., 321 - C0254
 Yang, X., 6115 - C0234
 Yang, X., 5765 - C0052, 5975
 Yang, X., 5852 - C0139
 Yang, X., 1851 - C0155
 Yang, X., 536 - B0151
 Yang, Y., 4867 - C0312
 Yang, Y., 1861 - C0165
 Yang, Y., 6175 - C0294
 Yang, Y., 4166 - C0008
 Yang, Y., 1092 - C0105
 Yang, Y., 1409 - B0186
 Yang, Y., 3112 - A0120
 Yang, Y., 3963
 Yang, Y., 5052 - B0003
 Yang, Y. C., 2349 - B0359, 2569
 Yang, Y., 5359 - A0011, 5644 - A0363
 Yang, Y., 4720 - B0144, 4722 - B0146
 Yang, Y., 312 - C0245
 Yang, Y., 1573
 Yang, Y., 5165 - B0188
 Yang, Z., 1434 - B0353, 36 - A0067, 42 - A0073, 963 - B0217
 Yang, Z., 2958 - C0280, 3393 - C0317
 Yannuzzi, L., 3368 - C0292
 Yao, F., 3552 - A0169
 Yao, J., 4222 - C0064, 4964
 Yao, J., 3473
 Yao, K., 1204, 5645 - A0364
 Yao, Q., 132 - B0046
 Yao, T., 3965
 Yao, X., 1224, 1974, 2162 - A0331, 4204 - C0046, 4684 - A0326, 5427 - A0096, 5458 - A0127, 606 - B0278
 Yao, X., 4214 - C0056
 Yao, Y., 2978
 Yao, Z., 655 - C0213
 Yao, Z., 2954 - C0276
 Yaoeda, K., 4116 - B0279
 Yap, T., 4118 - B0281
 Yap, T., 4120 - B0283
 Yap, V., 2748 - B0127
 Yapp, M., 2081 - A0139, 5247 - B0360
 Yappert, M. C., 2367 - B0377
 Yappert, M. C., 3812 - C0039
 Yarber, F., 2672 - A0399, 5677 - A0396
 Yarishkin, O., 1212, 1660 - A0036, 3939, 3969
 Yarmohammadi, A., 2856 - B0274, 4476, 5075 - B0026
 Yarp, J., 4088 - B0083
 Yaseri, M., 6153 - C0272
 Yashar, A., 1409 - B0186, 4361 - C0409
 Yashiro, S., 4184 - C0026
 Yasino, O., 4237 - C0079
 Yaspan, B., 2432 - C0098
 Yassin, S., 726
 Yasuda, J., 5366 - A0018
 Yasuda, K., 389 - A0089, 62 - A0109
 Yasuda, K., 1230 - A0071
 Yasuda, M., 4294 - C0165
 Yasuda, M., 1426 - B0345
 Yasuda, N., 1230 - A0071
 Yasuda, S., 3338 - C0180
 Yasuda, Y., 636 - C0066
 Yasukawa, T., 4682 - A0324, 800 - A0132
 Yasukura, S., 1056 - B0367
 Yasukura, Y., 2019 - A0046
 Yasuina, R., 2459 - C0125, 2475 - C0141
 Yasuma, T., 2456 - C0122, 2459 - C0125, 2475 - C0141, 823 - A0155
 Yasuno, Y., 2102 - A0160, 2852 - B0270, 3249 - B0348, 3256 - B0355, 6200 - C0354
 Yasushi, K., 2208 - A0377
 Yasuoina, M. V., 3551 - A0168
 Yata, K., 4271 - C0142
 Yates, J., 1581
 Yates, K. A., 2660 - A0387, 3658 - A0342
 Yates, W., 404 - A0222, 6173 - C0292
 Yawata, M., 5745 - C0032
 Yawata, N., 4933, 5362 - A0014, 5745 - C0032
 Yazar, S., 2732 - B0111, 3370 - C0294, 3954
 Yazdani, M., 3884 - C0145
 Yazdankhah, M., 2448 - C0114, 311 - C0244, 3472, 3994 - A0119, 4594 - A0183, 64 - A0111
 Yazdanyar, A., 2372 - C0038, 3004, 3149 - A0266
 Yazu, H., 5565 - A0257, 5566 - A0258
 Ye, C., 5680 - A0399
 Ye, J., 1539 - C0380
 Ye, J., 2296 - B0250, 2297 - B0251
 Ye, Z., 4001 - A0126, 581 - B0196
 Yedutenko, M., 1977
 Yee, A., 1317 - B0024

- Yee, K. M., **2199 - A0368**, 5270 - C0116, 6197 - C0351
- Yee, R., 3656 - A0340, 3662 - A0346, 3666 - A0350
- Yee-Rendon, C., 4040 - A0247
- Yeh, S., **2260 - B0214**
- Yeh, S., 408 - A0226, 4172 - C0014, 5355 - A0007, 719
- Yeh, T. N., **920 - B0098**
- Yehezkel, O., **1024 - B0308**
- Yekta, A., 4379 - C0427
- Yeo, A., 3957
- Yeo, D., 3757 - B0172
- Yeo, D. C., **2319 - B0308**
- Yeo, I., 3239 - B0338, 4739 - B0240, 5362 - A0014
- Yeom, M., 867 - A0199
- Yeomans, D., 2679 - A0406
- Yeotikar, N., 137 - B0051, 1789 - B0104, 1793 - B0108
- Yeotikar, N. S., 1776 - B0091, **4875 - C0320**
- Yopez, J. B., 1829 - B0290
- Yerramothu, P., **3319 - C0161**
- Yesilirmak, N., **1408 - B0185**
- Yeu, E., 938 - B0116
- Yeung, D., **3930**
- Yeung, I. Y., **4173 - C0015**
- Yeung, L. Y., 5615 - A0334
- Yeung, S., 3787 - C0014
- Yi, D., 1721 - A0242
- Yi, F., **659 - C0217**
- Yi, S., 1406 - B0183
- Yiannakou, Y., 2655 - A0382, **6093 - C0212**, 74 - A0121
- Yigit, F. U., 3760 - B0175
- Yildirim, A., 4979
- Yiidirim, T. M., 265 - C0124, 266 - C0125
- Yildiz, V., 2764 - B0143, 2767 - B0146, 2772 - B0151, 3938
- Yile, X., 3274 - C0068, 3831 - C0058
- Yilmaz, I., 2661 - A0388
- Yilmaz, T., 4793 - B0403
- Yilmaz-Elis, S., 5315 - C0248
- Yim, B., 3665 - A0349
- Yin, H., 3773 - B0188
- Yin, J., 2574, **3341 - C0183**, 4349 - C0397
- Yin, J., 1179
- Yin, J., 3999 - A0124, 4038 - A0163, **5322 - C0255**
- Yin, K., 4125 - B0288
- Yin, X., 4001 - A0126, 4031 - A0156, **581 - B0196**
- Yin, Y., 5682 - A0401
- Yin, Y., **926 - B0104**
- Yin, Y., 2012
- Ying, G., 1422 - B0341, 1963, 2125 - A0183, 2396 - C0062, 2751 - B0130, 2754 - B0133, **2757 - B0136**, 2774 - B0153, 2775 - B0154, 2779 - B0158, 2783 - B0162, 2786 - B0165, 3252 - B0351, 3754 - B0169, 3829 - C0056, 4150 - B0373, 4270 - C0141, 4291 - C0162, 4546 - A0061, 4880 - C0325, 5211 - B0324, 919 - B0097, 937 - B0115
- Ying, G., 2358 - B0368, 3054 - A0025
- Ying, H. S., 1041 - B0352, 50 - A0081
- Yip, J. L., 1998
- Yip, L., 1782 - B0097, 472 - A0332
- Yip, Y. W., 1926 - C0326
- Yiqin, D., 5680 - A0399
- Yiu, B., 4673 - A0315, 5841 - C0128
- Yiu, G., **1160**, 2372 - C0038, 283 - C0184, 3149 - A0266, 3265 - B0364, 393 - A0093, 4153 - B0376, 5969, 877 - A0209
- Yiu, K., 1043 - B0354
- Yiu, S. C., 4422, 4920 - C0365
- Yoda, M., 5701 - A0420, 5707 - A0426
- Yoder, B. K., 2360 - B0370, 2361 - B0371
- Yoder, M. C., 765
- Yohannan, J., 4988
- Yokogawa, H., **1310 - B0017**, 3841 - C0102, 5760 - C0047
- Yokoi, N., 116 - B0030, **1751 - B0066**, 4866 - C0311, 4879 - C0324, 4881 - C0326, 4890 - C0335, 4891 - C0336
- Yokoi, T., 5414 - A0066
- Yokomizo, T., 5574 - A0266, 5575 - A0267
- Yokoo, S., 1394 - B0171
- Yokosaki, Y., 508 - B0015
- Yokota, H., 1715 - A0236, 1718 - A0239, 2079 - A0137
- Yokota, S., 263 - C0122
- Yokouchi, H., **610 - B0282**
- Yokoyama, K., 5465 - A0134
- Yokoyama, S., 3240 - B0339, **3251 - B0350**, 5109 - B0098
- Yokoyama, Y., 6105 - C0224
- Yonahara, M., 6082 - C0201
- Yoneda, K., 336 - C0269, 871 - A0203
- Yoneda, K., 2717 - B0038, 2718 - B0039
- Yonekawa, Y., 1162, 1532 - C0373, 3758 - B0173, 5697 - A0416
- Yong, V., 472 - A0332
- Yongsheng, Y., 4199 - C0041
- Yonkers, M. A., 89 - A0252
- Yoo, D., 4307 - C0281
- Yoo, G., 3289 - C0083
- Yoo, J., 301 - C0234, 5310 - C0243
- Yoo, S. H., 1949, 1950, 2979, 5742 - C0029
- Yoo, S., 1422 - B0341
- Yoo, Y., **2933 - C0255**
- Yoon, C., **1332 - B0039**, 3290 - C0084
- Yoon, D., **4883 - C0328**, 933 - B0111
- Yoon, G., **1561**, 4941
- Yoon, H. H., **683 - C0278**
- Yoon, H., **3836 - C0063**
- Yoon, K., 3288 - C0082, 3295 - C0089, 3836 - C0063, 3838 - C0065, 4228 - C0070, 4893 - C0338
- Yoon, M., 3137 - A0254
- Yoon, S., 5423 - A0092
- Yoon, S., 5446 - A0115
- Yoon, S. P., **2818 - B0236**, 5459 - A0128
- Yoon, Y., 2480 - C0146
- Yorio, T., 5291 - C0224, 5296 - C0229, 5298 - C0231
- York, N. W., 2785 - B0164, **3117 - A0125**
- Yoshida, A., 2814 - B0232, 3196 - B0196
- Yoshida, A., 5579 - A0298
- Yoshida, J., 1306 - B0013, 4378 - C0426, 4382 - C0430, 4436, 4928 - C0373, 87 - A0250
- Yoshida, K., 4262 - C0133
- Yoshida, M., **1742 - B0057**, 1784 - B0099
- Yoshida, M., 5082 - B0033
- Yoshida, M., 3577 - A0194, 4682 - A0324, 800 - A0132
- Yoshida, N., 33 - A0064
- Yoshida, S., 1426 - B0345, 21 - A0052, 33 - A0064, 4290 - C0161, 5356 - A0008, 5376 - A0028, 65 - A0112, 863 - A0195
- Yoshida, Y., 1781 - B0096
- Yoshihara, N., 2132 - A0266
- Yoshii, K., 1353 - B0113, 2912 - C0209
- Yoshikawa, D., 1876 - C0180
- Yoshikawa, H., 2912 - C0209
- Yoshikawa, M., 1876 - C0180
- Yoshikawa, M., 1817 - B0278
- Yoshikawa, Y., **4881 - C0326**
- Yoshikawa, Y., 5073 - B0024
- Yoshimine, S., 1852 - C0156
- Yoshimizu, S., 3610 - A0228
- Yoshimura, A., 2926 - C0223
- Yoshimura, Y., 943 - B0121
- Yoshinaga, P., 3428 - C0352
- Yoshioka, N., 1260 - A0295, 2409 - C0075, 4083 - B0078
- Yoshioka, T., 3196 - B0196
- Yoshiro-Miyake, D., 5597 - A0316
- Yoshitake, K., 1429 - B0348, 6076 - A0205
- Yoshitake, S., 3610 - A0228
- Yoshitake, T., 1056 - B0367, 3595 - A0213, **5378 - A0030**
- Yoshitomi, T., 33 - A0064
- Yotsukura, E., 2145 - A0279
- You, I., **3295 - C0089**
- You, J., 4343 - C0391, 4344 - C0392, **531 - B0146**
- You, Q., 2873 - B0291
- You, Q., 1885 - C0285, 3380 - C0304, **3499**
- You, X., 3375 - C0299
- You, Y., 3354 - C0236, **615 - B0287**
- You, Z., 5453 - A0122
- Youcef, L., **441 - A0301**
- Young, A. N., 5054 - B0005
- Young, A., **3122 - A0130**
- Young, A., 127 - B0041
- Young, A., 5405 - A0057, 5615 - A0334
- Young, A. G., 5125 - B0114
- Young, B., **1864 - C0168**, 2995
- Young, D., 3713 - B0060
- Young, E., 2832 - B0250, 5736 - C0023
- Young, G., 1151
- Young, I., 2408 - C0074
- Young, J., 4812 - C0170
- Young, J., **490 - A0350**
- Young, J., **2362 - B0372**
- Young, J., 2832 - B0250, 5054 - B0005, 5736 - C0023, 5769 - C0056
- Young, K., 2359 - B0369
- Young, L. A., 3562 - A0179
- Young, L., 4106 - B0231
- Young, L. H., 39 - A0070
- Young, M., 442 - A0302, 669 - C0227
- Young, M. J., 556 - B0171, 563 - B0178, 71 - A0118
- Young, R. D., 3858 - C0119
- Young, R. C., 1048 - B0359, 6187 - C0306
- Young, T. L., **701 - C0296**
- Young-Zvandarsa, T., 2223 - A0392
- Younis, S., 75 - A0122
- Yousefi, S., **3018**, 5103 - B0092, 5116 - B0105
- Yow, A., 1264 - A0299
- Ystenas, A., 928 - B0106
- Ytreberg, F., 3080 - A0051
- Yu, A., 2010, **2013**, 4673 - A0315, 5841 - C0128
- Yu, B., **2462 - C0128**, 5488 - A0157
- Yu, C., 2175 - A0344, **6150 - C0269**
- Yu, C. Q., 98 - A0261
- Yu, C., 3313 - C0155
- Yu, C., **2544 - C0273**, 2545 - C0274, 2550 - C0279
- Yu, D., 1266 - A0301
- Yu, F., 1140, 1315 - B0022, 132 - B0046, 2729 - B0108, 2733 - B0112, 2992, 3860 - C0121, 4087 - B0082, 4102 - B0227, 4103 - B0228, 4129 - B0292, 4775 - B0385, 5104 - B0093, 5105 - B0094, 5125 - B0114
- Yu, F., 2357 - B0367
- Yu, F. X., 4333 - C0381, 4348 - C0396
- Yu, G., 4621 - A0263
- Yu, H., 3964, **4538 - A0053**
- Yu, H., 1841 - B0302, 4318 - C0292, 4746 - B0247
- Yu, J., 3836 - C0063
- Yu, J. J., **5548 - A0240**
- Yu, J., **2468 - C0134**
- Yu, J. Y., 111 - A0274, 5627 - A0346
- Yu, J., **6057 - A0091**
- Yu, M., 3286 - C0080, 3298 - C0092, 4349 - C0397, **4957**
- Yu, M., **687 - C0282**
- Yu, M., 2129 - A0263
- Yu, M. D., **3638 - A0299**
- Yu, M., 5329 - C0262, 560 - B0175
- Yu, M., 4867 - C0312, 5956, 97 - A0260
- Yu, M., 3001, **971 - B0225**
- Yu, P., 5092
- Yu, P., **5323 - C0256**
- Yu, R., 2175 - A0344
- Yu, S., 1035 - B0346, 1919 - C0319, 3219 - B0318, **3222 - B0321**, 3590 - A0207, 5448 - A0117
- Yu, S., 5429 - A0098, 5968
- Yu, S., **1693 - A0214**, 1707 - A0228
- Yu, S., 2517 - C0246, **2533 - C0262**
- Yu, S., 706 - C0301
- Yu, S., **2124 - A0182**, 2833 - B0251, 5111 - B0100, 5112 - B0101, 6032
- Yu, S., 3192 - B0192
- Yu, W., 1628 - A0004
- Yu, W., 41 - A0072, 4528 - A0043
- Yu, W. H., 3473
- Yu, W., 3377 - C0301, 3385 - C0309, 3700 - B0047
- Yu, X., 869 - A0201
- Yu, Y., 2125 - A0183, 3754 - B0169, **3785 - C0012**, 6189 - C0308, 919 - B0097
- Yu, Y., 1025 - B0309, 2939 - C0261
- Yu, Y., **3824 - C0051**, 6115 - C0234
- Yu, Y., 1723 - A0244, **5354 - A0006**
- Yu, Y., **221 - C0032**
- Yu, Y., 710 - C0305
- Yu, Z., 4950
- Yu, Z., 3900 - C0366
- Yu-Ting, T., 149 - B0063, 4903 - C0348
- Yu-Wai-Man, C., **3456**
- Yu-Wai-Man, P., 3345 - C0227, 3356 - C0238, 619 - B0291
- Yuan, A., 4665 - A0307
- Yuan, H., 4140 - B0303
- Yuan, H., **6123 - C0242**
- Yuan, J., 3856 - C0117, 4902 - C0347, **5753 - C0040**
- Yuan, K., 3168 - A0311, 3175 - A0318, **3183 - A0326**, 4592 - A0181, 5984
- Yuan, S., 5745 - C0032
- Yuan, S., 5852 - C0139
- Yuan, Y., 5888 - C0175, 5911 - C0198
- Yuan, Y., 1127 - C0162
- Yuan, Y., **710 - C0305**
- Yuan, Y., 4329 - C0377
- Yuan, Y., **3123 - A0240**
- Yuan, Z., 3692 - A0376
- Yuasa, T., 296 - C0197
- Yuda, K., 428 - A0288
- Yuda, K., 1319 - B0026, **428 - A0288**
- Yudcovitch, L., 2820 - B0238
- Yudkoff, C., 385 - A0045
- Yue, J., 5160 - B0183
- Yue, L., 232 - C0043, **3976**
- Yue You, J., 5207 - B0320
- Yuen, Y., 3593 - A0211
- Yuhua, P. T., **5040 - A0236**
- Yui, C., 1230 - A0071, 5465 - A0134
- Yui, S., 425 - A0243
- Yukawa, C., **253 - C0112**
- Yuki, K., 2012, **3417 - C0341**, 3418 - C0342
- Yumnamecha, T., 3552 - A0169
- Yun, C., **2812 - B0230**
- Yun, H., 4729 - B0153, **4934**
- Yun, I., 1023 - B0307
- Yun, L., 3153 - A0270, **3235 - B0334**, 4283 - C0154
- Yun, S., 1400 - B0177, 1401 - B0178, 1407 - B0184, 746
- Yusuf, A., 1261 - A0296
- Yusuf, I. H., **3146 - A0263**
- Yzer, S., **1521 - C0362**, 6075 - A0204
- Zacharias, L. C., 1125 - C0160, 1470 - C0032, 1908 - C0308, 3347 - C0229, 613 - B0285
- Zack, D. J., 1988, 2466 - C0132, 2493 - C0197, 2612, 3105 - A0113, 4002 - A0127, 592 - B0207, 6152 - C0271, 980 - B0234
- Zacks, D. N., 4032 - A0157, 6139 - C0258
- Zacks, D. N., 1618, 3126 - A0243, 4, 4222 - C0064, 4243 - C0085, 4964
- Zadlo, A., 4495 - A0010
- Zadnik, K., 3388 - C0312, 3392 - C0316
- Zagar, Y., 4012 - A0137
- Zagora, S., **4200 - C0042**, 4745 - B0246, 6173 - C0292
- Zagozewski, J., 3111 - A0119
- Zagua, F., **3659 - A0343**
- Zaheer, M., 4953
- Zahid, M., 1359 - B0119
- Zahid, S., 2832 - B0250, **5427 - A0096**, 5458 - A0127
- Zaidi, M., 1296 - B0003, 2224 - A0393, 2226 - A0395, 2898 - C0195, 4387 - C0435, 4788 - B0398
- Zaidi, Q., 5123 - B0112
- Zaidi, T., 1546
- Zainullin, R., 3373 - C0297, 950 - B0128
- Zakaria, N., 1378 - B0138, 2270 - B0224, 2276 - B0230, **2280 - B0234**, 2675 - A0402, 3452
- Zakharova, M., **95 - A0258**
- Zakik, A., 1667 - A0188
- Zalevsky, Z., 4565 - A0094
- Zaman, B., 195 - C0006
- Zambrano, A., 5945 - C0342
- Zambrowicz, B., 6134 - C0253
- Zambrowski, O., 5425 - A0094
- Zamir, E., 5899 - C0186
- Zamora, D. O., 1377 - B0137, 4355 - C0403, 4372 - C0420
- Zamora, D., 4776 - B0386
- Zamora, G., 1689 - A0210, 1887 - C0287
- Zamora-Alvarado, R., 1465 - C0027
- Zamora-Alvarado, R., 3070 - A0041, 3280 - C0074
- Zandi, S., 3565 - A0182
- Zangerl, B., 1260 - A0295, **2081 - A0139**, 2409 - C0075, 4083 - B0078, 5247 - B0360
- Zangwill, L. M., 1182, 2090 - A0148, 2735 - B0114, 2856 - B0274, 2857 - B0275, 2861 - B0279, 2875 - B0293, 2877 - B0295, 3498, 3876 - C0137, 4476, 5075 - B0026, 5137 - B0160
- Zaniolo, K., 4336 - C0384, 4354 - C0402
- Zanlonghi, X., 2322 - B0311
- Zanon-Moreno, V., **5152 - B0175**
- Zanon-Moreno, V., 5364 - A0016
- Zapata, D., 1149
- Zapata, M. A., **1708 - A0229**, 2628 - A0133, 58 - A0105
- Zarai, K., 620 - B0292
- Zarbin, M. A., 4221 - C0063, 4278 - C0149
- Zarbin, M., 4803 - B0413
- Zarei, K., **2186 - A0355**
- Zareinejad, M., 6153 - C0272

- Zarouchlioti, C., 3022
 Zarranz-Ventura, J., 1095 - C0130, 1427 - B0346, 1907 - C0307, 2797 - B0215, **2802 - B0220**, 4826 - C0184, 4842 - C0200
 Zas, M., 390 - A0090
 Zavala, J., 1376 - B0136, 142 - B0056, 2908 - C0205, 4315 - C0289, **6055 - A0089**
 Zawadzki, R. J., 1011 - B0265, 295 - C0196, 3004, 4515 - A0030, **5822 - C0109**, 5825 - C0112, 5832 - C0119, 5834 - C0121
 Zazzarino, N., 3050 - A0021
 Zeballos, D., 420 - A0238
 Zegarra, H., 4816 - C0174
 Zehetner, C., 2395 - C0061
 Zeidenweber, D. A., **1297 - B0004**
 Zein, W., 2340 - B0329
 Zein, W. M., 2331 - B0320
 Zeiter, J., 6095 - C0214
 Zeiter, J. H., **2215 - A0384**
 Zeitouni, C., 3636 - A0297
 Zeitz, C., 4030 - A0155, 4526 - A0041, 5415 - A0067
 Zele, A. J., **5036 - A0232**, 5037 - A0233
 Zelek, J. S., 1678 - A0199
 Zelingner, L., **6023**
 Zeman, A., 6027
 Zemova, E., 3436
 Zendejas Reyes, L., **3656 - A0340**
 Zeng, H., 1491 - C0233
 Zeng, J., 680 - C0275
 Zeng, Q., 747
 Zeng, Q., 3675 - A0359, 3733 - B0080, 5001 - A0072
 Zeng, R., 5640 - A0359
 Zeng, W., 2994
 Zeng, W., 3581 - A0198
 Zeng, Y., 5656 - A0375
 Zenkel, M., 3019, 3453, **3513 - A0076**, 3515 - A0078
 Zenteno, J. C., 1065 - C0078, 2925 - C0222, 5399 - A0051, 6056 - A0090
 Zenteno-Ruiz, J., 5398 - A0050
 Zepeda-Palacio, C., **1116 - C0151**, 5151 - B0174
 Zerbin, A., 4178 - C0020
 Zermeno, A., 1027 - B0311, 204 - C0015, **424 - A0242**, 4519 - A0034
 Zernant, J., 5409 - A0061, 787
 Zerti, D., **542 - B0157**
 Zett Lobos, C., **2824 - B0242**
 Zetterberg, F., 3332 - C0174
 Zetterberg, H., **5267 - C0113**
 Zetterberg, M., 1090 - C0103, 3040 - A0011, 3648 - A0332, **3792 - C0019**, 5267 - C0113
 Zeyer, J. C., **1099 - C0134**
 Zhai, H., 5711 - A0430
 Zhai, R., **3520 - A0083**
 Zhai, Y., 4737 - B0238
 Zhan, T., 2737 - B0116
 Zhan, Z., **4867 - C0312**
 Zhang, A., 78 - A0125
 Zhang, A. Y., 4672 - A0314
 Zhang, B., 3389 - C0313
 Zhang, B., 2149 - A0283, 2958 - C0280, **5955**, 909 - B0087
 Zhang, C., 3072 - A0043
 Zhang, C., 5010 - A0081, 551 - B0166
 Zhang, C., **5359 - A0011**, 5644 - A0363
 Zhang, C., 2794 - B0212
 Zhang, C., 1658 - A0034, **2586**
 Zhang, C., 2871 - B0289
 Zhang, C., 1188
 Zhang, D., **4898 - C0343**
 Zhang, D., 5904 - C0191
 Zhang, D., 376 - A0036
 Zhang, F., 4547 - A0062
 Zhang, F., 1153, 728, **730**
 Zhang, G., 2016 - A0043
 Zhang, H. F., 5820 - C0107
 Zhang, H., 4785 - B0395
 Zhang, H., 1677 - A0198
 Zhang, H., **2669 - A0396**, 497 - B0004
 Zhang, H., 5928 - C0325
 Zhang, H., **445 - A0305**
 Zhang, H., **963 - B0217**
 Zhang, J., 2056 - A0114
 Zhang, J., 4423
 Zhang, J., 5282 - C0215
 Zhang, J., 5781 - C0068
 Zhang, J., 5904 - C0191
 Zhang, J., 4094 - B0219, 4792 - B0402, **703 - C0298**
 Zhang, J., 229 - C0040
 Zhang, J., 4329 - C0377
 Zhang, J., **4079 - B0074**
 Zhang, J., **1374 - B0134**, 3123 - A0240, **4971**, 5358 - A0010, **666 - C0224**
 Zhang, J., 3093 - A0064, 3979 - A0104
 Zhang, J., 5462 - A0131
 Zhang, J., 2717 - B0038, 690 - C0285
 Zhang, J., 4214 - C0056, **5777 - C0064**
 Zhang, J., **429 - A0289**
 Zhang, J., 3093 - A0064, 5359 - A0011
 Zhang, J., **3521 - A0084**
 Zhang, J., 212 - C0023
 Zhang, J., 1457 - C0019
 Zhang, J., 747
 Zhang, J., 4308 - C0282
 Zhang, J., **2676 - A0403**
 Zhang, K., 1246 - A0087
 Zhang, K., **2609**, 376 - A0036
 Zhang, L., 3514 - A0077, 3795 - C0022, 4792 - B0402, 5907 - C0194
 Zhang, L., 1813 - B0274, 2037 - A0064
 Zhang, L., 500 - B0007
 Zhang, L., **5645 - A0364**
 Zhang, L., 2819 - B0237
 Zhang, L., **1434 - B0353**, 5475 - A0144, 5781 - C0068, 994 - B0248
 Zhang, L., 2219 - A0388
 Zhang, L., **1550**
 Zhang, L., **2246 - B0200**, 2266 - B0220, 4366 - C0414
 Zhang, L., 753
 Zhang, L., 312 - C0245, 6121 - C0240
 Zhang, L., 135 - B0049
 Zhang, L., **980 - B0234**
 Zhang, L., **5208 - B0321**
 Zhang, L., **3375 - C0299**
 Zhang, M., 2873 - B0291
 Zhang, M., 2853 - B0271, 3921, **480 - A0340**
 Zhang, M., 4794 - B0404
 Zhang, M., **718**
 Zhang, M., 4612 - A0201
 Zhang, M., 5963, **657 - C0215**
 Zhang, M., **3735 - B0082**
 Zhang, M., 5335 - C0268
 Zhang, N., 2533 - C0262, 5875 - C0162
 Zhang, N., 3940
 Zhang, P., 1457 - C0019
 Zhang, P., 1487 - C0229, **2627 - A0132**, 4317 - C0291
 Zhang, P., 1011 - B0265, 3004, 4515 - A0030, 5822 - C0109, **5825 - C0112**, 5832 - C0119, 5834 - C0121
 Zhang, P., **6152 - C0271**
 Zhang, Q., 2031 - A0058, **2038 - A0065**, 2768 - B0147
 Zhang, Q., 975 - B0229
 Zhang, Q., 4721 - B0145
 Zhang, Q., **2515 - C0244**, 2532 - C0261
 Zhang, Q., 1540 - C0381, 2880 - B0298, 3236 - B0335, **3923**, 3926, 5203 - B0316
 Zhang, Q., 4032 - A0157
 Zhang, R., **1003 - B0257**, 1492 - C0234
 Zhang, R., 376 - A0036
 Zhang, R., 5688 - A0407
 Zhang, S., 1434 - B0353, **5475 - A0144**
 Zhang, S., **476 - A0336**
 Zhang, S., 5365 - A0017
 Zhang, S., 4214 - C0056
 Zhang, S., **5044 - A0240**
 Zhang, S., 3442
 Zhang, T., **1477 - C0219**, 4000 - A0125, 5290 - C0223, 5975
 Zhang, T., **299 - C0200**, 5832 - C0119
 Zhang, T., 97 - A0260
 Zhang, W., 5833 - C0120, 5852 - C0139, **981 - B0235**
 Zhang, W., 1704 - A0225
 Zhang, W., 132 - B0046
 Zhang, W., 2644 - A0149, 4605 - A0194, 4612 - A0201, 5473 - A0142
 Zhang, W., **288 - C0189**
 Zhang, W., **1351 - B0111**, 4432
 Zhang, W., 4999 - A0070
 Zhang, X., 1803 - B0151, 372 - A0032, 5699 - A0418, 5820 - C0107
 Zhang, X., **564 - B0179**
 Zhang, X., 2794 - B0212
 Zhang, X., 3283 - C0077, **4897 - C0342**
 Zhang, X., 1449 - C0011, 2342 - B0331, 5422 - A0074
 Zhang, X., 1218
 Zhang, X., **134 - B0048**
 Zhang, X., 1141, 2520 - C0249, **2523 - C0252**, 2541 - C0270, 507 - B0014
 Zhang, X., 322 - C0255
 Zhang, X., 2119 - A0177, **2126 - A0184**, 5058 - B0009
 Zhang, X., 5395 - A0047, **5396 - A0048**
 Zhang, X., **2078 - A0136**
 Zhang, X., 2256 - B0210
 Zhang, X., 4498 - A0013
 Zhang, X., 3510 - A0073, 3522 - A0085, 3728 - B0075, 4910 - C0355, 5119 - B0108, 5888 - C0175, **5897 - C0184**, 5911 - C0198, 6083 - C0202
 Zhang, X., **3532 - A0095**
 Zhang, X., 3200 - B0200
 Zhang, X., 1038 - B0349
 Zhang, X., **2178 - A0347**, 3266 - B0365
 Zhang, Y., 901 - B0079
 Zhang, Y., 707 - C0302, **752**
 Zhang, Y., **4364 - C0412**
 Zhang, Y., 1642 - A0018
 Zhang, Y., 5769 - C0056
 Zhang, Y., 963 - B0217
 Zhang, Y., 3656 - A0340, 3662 - A0346, 3666 - A0350
 Zhang, Y., **2835 - B0253**
 Zhang, Y., 5336 - C0269
 Zhang, Y., 1224, 442 - A0302
 Zhang, Y., 2406 - C0072, 4636 - A0278, **4637 - A0279**, 733
 Zhang, Y., 2246 - B0200, 2266 - B0220, 4366 - C0414
 Zhang, Y., **3359 - C0241**
 Zhang, Z., 5612 - A0331, **966 - B0220**
 Zhang, Z., 2585
 Zhang, Z., **4140 - B0303**
 Zhang, Z., 508 - B0015
 Zhao, C., 359 - A0019
 Zhao, D., **3696 - B0043**, 4473
 Zhao, D., 1599
 Zhao, F., 2449 - C0115
 Zhao, F., 5754 - C0041, **680 - C0275**
 Zhao, G., **1203**
 Zhao, G., **2219 - A0388**, 496 - B0003
 Zhao, H., 320 - C0253
 Zhao, H., 2983
 Zhao, J., **2245 - B0199**
 Zhao, J., 5557 - A0249
 Zhao, J., 5856 - C0143
 Zhao, J., **1836 - B0297**, 309 - C0242, 5754 - C0041
 Zhao, L., 2530 - C0259, 3944
 Zhao, L., 5680 - A0399, **5713 - A0432**
 Zhao, L., **183 - B0337**
 Zhao, M., 1008 - B0262, 3752 - B0099, **997 - B0201**
 Zhao, M., 2811 - B0229, 2871 - B0289, 3773 - B0188
 Zhao, P., 3593 - A0211, 4220 - C0062
 Zhao, P., 2768 - B0147, 3772 - B0187, **5928 - C0325**, 5940 - C0337
 Zhao, Q., **2873 - B0291**
 Zhao, Q., 734
 Zhao, S., 3358 - C0240
 Zhao, S., 3960
 Zhao, T., 335 - C0268
 Zhao, T., 2512 - C0216
 Zhao, W., 1813 - B0274, 1817 - B0278
 Zhao, W., 5781 - C0068
 Zhao, W., **1803 - B0151**
 Zhao, X., 2356 - B0366, **5699 - A0418**
 Zhao, X., 3258 - B0357
 Zhao, X., 346 - A0006
 Zhao, Y., 436 - A0296, 4784 - B0394, 4791 - B0401, **5642 - A0361**
 Zhao, Y., 5719 - C0006, 5721 - C0008
 Zhao, Y., 5873 - C0160
 Zhao, Y., 4567 - A0096, **5754 - C0041**
 Zhao, Y., 3016
 Zhao, Y., **1121 - C0156**
 Zhao, Y., **1074 - C0087**, 4943
 Zhao, Y., **436 - A0296**, 4784 - B0394, 4785 - B0395, 4791 - B0401, 5642 - A0361
 Zhao, Z., 4013 - A0138
 Zhao, Z., 5904 - C0191
 Zhen, W., 2819 - B0237
 Zheng, C., 1064 - C0077
 Zheng, D. D., 4460
 Zheng, D., 4809 - B0419, 898 - A0287
 Zheng, F., 274 - C0175, 3923
 Zheng, H., **1275 - A0310**
 Zheng, H., **699 - C0294**
 Zheng, J. J., **1658 - A0034**, 2371 - B0381, 4719 - B0143
 Zheng, J., 3406 - C0330
 Zheng, K., 4737 - B0238
 Zheng, M., 1632 - A0008
 Zheng, S., 4338 - C0386
 Zheng, S., 2575
 Zheng, W., 575 - B0190
 Zheng, W., **4727 - B0151**
 Zheng, Y., 3328 - C0170, 5719 - C0006, 5721 - C0008
 Zheng, Y., 4471
 Zheng, Y., 2482 - C0148, 475 - A0335
 Zheng, Y., 3529 - A0092
 Zhi, W., 1213
 Zhi, Z., **3079 - A0050**
 Zhirong, L., 3300 - C0094, **4389 - C0437**, 4900 - C0345
 Zhong, H., 5119 - B0108
 Zhong, H., 4735 - B0236
 Zhong, J., 2984
 Zhong, J., 4239 - C0081
 Zhong, J., 3856 - C0117, 5753 - C0040
 Zhong, L., **4907 - C0352**
 Zhong, L., **57 - A0104**
 Zhong, X., 5979
 Zhong, X., 4591 - A0180
 Zhong, Y., 5417 - A0069
 Zhong, Y., **1851 - C0155**
 Zhong, Z., 5682 - A0401
 Zhou, B., 1218
 Zhou, C., **2579**, 2664 - A0391
 Zhou, C., **5985**
 Zhou, D., 368 - A0028
 Zhou, E. J., 1422 - B0341
 Zhou, E. H., **4711 - B0135**
 Zhou, E., 3596 - A0214
 Zhou, F., 3079 - A0050
 Zhou, G., **2323 - B0312**
 Zhou, G., **5299 - C0232**
 Zhou, H., 713 - C0308
 Zhou, H., 2537 - C0266
 Zhou, H., 4972
 Zhou, J., **5637 - A0356**
 Zhou, J., **2954 - C0276**, 2955 - C0277
 Zhou, K., 1184
 Zhou, K., 651 - C0209
 Zhou, L., 2357 - B0367, 3518 - A0081, 371 - A0031, 4381 - C0429, 5480 - A0149
 Zhou, L., 4001 - A0126
 Zhou, M., **1036 - B0347**
 Zhou, M., **2128 - A0186**, 4085 - B0080
 Zhou, M., 5939 - C0336
 Zhou, M., **4730 - B0154**
 Zhou, P., 4377 - C0425
 Zhou, P., 767
 Zhou, Q., 4418
 Zhou, Q., 2875 - B0293, 2877 - B0295, 3876 - C0137
 Zhou, Q., 5835 - C0122, 5882 - C0169
 Zhou, Q., 5488 - A0157
 Zhou, Q., 4364 - C0412
 Zhou, R., 1421 - B0340
 Zhou, R., **5888 - C0175**, 5911 - C0198
 Zhou, S., 5651 - A0370
 Zhou, S., 159 - B0073
 Zhou, T., 2571, **773**
 Zhou, T., **2648 - A0153**
 Zhou, T., 2676 - A0403
 Zhou, T., 1712 - A0233
 Zhou, T., 809 - A0141
 Zhou, T., 3300 - C0094
 Zhou, T., 3591 - A0208, 5479 - A0148
 Zhou, W., 3406 - C0330
 Zhou, X., 3079 - A0050, **753**
 Zhou, X., 4107 - B0232, 4316 - C0290, 483 - A0343, 529 - B0144, **5604 - A0323**
 Zhou, X., 3396 - C0320, 4913 - C0358, 5754 - C0041
 Zhou, X., 6123 - C0242
 Zhou, X., **4913 - C0358**
 Zhou, X., **5503 - A0172**
 Zhou, X., **3717 - B0064**
 Zhou, Y., 4737 - B0238, 4738 - B0239
 Zhou, Y., 3748 - B0095
 Zhou, Y., 1754 - B0069
 Zhou, Y., 5777 - C0064
 Zhou, Y., 3300 - C0094, 3339 - C0181
 Zhou, Z., 2999
 Zhu, A., **1329 - B0036**
 Zhu, C. Q., **1041 - B0352**
 Zhu, D., 3380 - C0304, 3499
 Zhu, D., 558 - B0173
 Zhu, E., **1108 - C0143**, 4167 - C0009
 Zhu, H., 3393 - C0317, 3394 - C0318, 4079 - B0074, 5102 - B0091, **5114 - B0103**, 5115 - B0104
 Zhu, H., **3655 - A0339**, 3661 - A0345
 Zhu, I., 856 - A0188, 876 - A0208
 Zhu, J., 3375 - C0299
 Zhu, J., **376 - A0036**, 3864 - C0125
 Zhu, J., **3873 - C0134**
 Zhu, J., 5824 - C0111
 Zhu, K., 3370 - C0294
 Zhu, L., 1563, 5329 - C0262
 Zhu, L., 1003 - B0257, 1477 - C0219, 1492 - C0234, 4000 - A0125, **5290 - C0223**
 Zhu, M., 3551 - A0168, **907 - B0085**
 Zhu, M., 2505 - C0209
 Zhu, M., **6116 - C0235**
 Zhu, M., **159 - B0073**, 901 - B0079
 Zhu, P., 3965
 Zhu, S., **2644 - A0149**, 5473 - A0142
 Zhu, T., 2648 - A0153, 321 - C0254
 Zhu, W., 4721 - B0145
 Zhu, W., **3007**
 Zhu, W., **2543 - C0272**

- Zhu, X., **3035 - A0006**
zhu, X., 2131 - A0265
Zhu, X., 1434 - B0353, 3112 - A0120,
36 - A0067, 42 - A0073, 5475 -
A0144, **994 - B0248**
Zhu, X., 2571
Zhu, X., 2154 - A0288, 693 - C0288
ZHU, X., **2495 - C0199**
Zhu, Y., **2008**, 3079 - A0050
Zhu, Z., 3261 - B0360
Zhuang, X., 2796 - B0214
Zhuo, R., **909 - B0087**
Zhuo, Y., 2012, 2999, 6148 - C0267
Zhuo, Z., 3399 - C0323, **3401 - C0325**
Zicarelli, F., **4646 - A0288**, 4662 -
A0304
Ziebarth, N. M., 3031 - A0002, **3484**
Zielinska, A., 4049 - A0256
Zielonka, J., 5209 - B0322
Ziemanski, J. F., **3810 - C0037**
Ziemssen, F., 1042 - B0353, **215 -**
C0026, 3612 - A0230, 4727
- B0151
Zierhut, M., **4864 - C0309**
Zieske, J. D., 1369 - B0129, 2279 -
B0233
Zigler, J. S., 3994 - A0119, 3996 -
A0121
Zigler, J., 311 - C0244, 3472
Zigler, Jr., J., 4594 - A0183
Zimmer-Galler, I., 825 - A0157
Zimmermann, H., 4022 - A0147
Zimmermann, M. E., 2407 - C0073
Zimmermann, R., 4433
Zimmermann-Paiz, M., 5815 - C0102
Zin, E. A., 5667 - A0386
Zin, O., 3181 - A0324
Zinflou, C., **357 - A0017**
Ziniauskaitė, A., 2673 - A0400, 3204
- B0204
Zink, A., 64 - A0111
Zirjacks, P., 5285 - C0218
Zito, R., 1915 - C0315
Ziv, H., 6004
Zivcevska, M., 5035 - A0231
Zivotofsky, A. Z., **4130 - B0293**
Zivotofsky, N., 4130 - B0293
Zmina, S., 939 - B0117
Zobor, D., 1832 - B0293, **23 - A0054**,
2982, 3163 - A0280
Zobor, G., **3163 - A0280**
Zode, G., 3704 - B0051, 4728 - B0152,
6035
Zolfaghari, E. J., 1638 - A0014
zollino, M., 4321 - C0295
Zolnikova, I. V., 5050 - B0001
Zolubak, A. B., **4942**
zong, R., 3300 - C0094, **3339 - C0181**,
4893 - C0338
Zonszein, J., 1835 - B0296
Zorina, Y., 2510 - C0214
Zoroquiain, P., 1167
Zotter, S., 2622
Zou, H., 3374 - C0298, 3375 - C0299
Zou, T., 963 - B0217
Zou, X., 1430 - B0349, 1431 - B0350,
1432 - B0351
Zou, Y., 128 - B0042
Zoukhri, D., **2286 - B0240**
Zrenner, E., 1516 - C0357, 1565, 1568,
1832 - B0293, 23 - A0054, 2491
- C0195, 2940 - C0262, 2982,
3163 - A0280, 4561 - A0090,
5199 - B0312
Zsigmond, E., 2446 - C0112
Zucaro, O. F., 3001
Zucca, I., 3722 - B0069
Zuiderbaan, W., 5032 - A0228
Zukin, L. M., **1206**
Zumbansen, M., **5362 - A0014**
Zuniga Posselt, K., 3798 - C0025
Zuo, B., 3700 - B0047
Zupan, N., **1046 - B0357**, 1050 -
B0361
Zur, D., 1956, **3443**, 6001
Zurita-Cortes, V. Y., 6155 - C0274
Zusman, R., **50 - A0081**
Zuzic, M., **3103 - A0111**
Zweifel, L., 3243 - B0342
Zweifel, S. A., 4249 - C0091, **4645**
- **A0287**
Zyablitskaya, M., **748**
Zyrianova, T., 2286 - B0240

ARVO | CONFERENCE

Ocular oncogenesis and oncology

July 18 – 21, 2018

Champalimaud Centre for the Unknown
Lisbon, Portugal

Hosted in partnership with:



**Champalimaud
Foundation**

**Early registration
ends June 25**

 **ARVO**
The Association for Research
in Vision and Ophthalmology

ARVO.org/000