

## Message from the President

### The real reason that we do research

For the past 17 years I have had the privilege of serving as a faculty member at the F.I. Proctor Foundation for Research in Ophthalmology, a University of California, San Francisco research unit whose mission is the prevention of blindness worldwide through research and training focused on infectious and inflammatory eye diseases. We take a global view of blinding eye diseases and focus on areas where we can make a difference. Therefore, it is very appealing to me that the theme of the 2009 Annual Meeting is Reducing Disparities in Eye Disease and Treatment.

It doesn't take much expertise with Google to discover the magnitude of the "disparities" issue. The overall prevalence



Todd P. Margolis, MD, PhD

of blinding eye disease in Africa and South Asia is five times that in North America and Western Europe. And in patients greater than 50 years of age the disparities are even greater. In this demographic the prevalence of blinding eye disease in North America and Western Europe is 0.5% as compared to 5% in South Asia and an astonishing 9% in Africa. The reasons for these differences become apparent when one looks at the major causes of blindness in different parts of the world. Whereas in North America and Western Europe the main causes are age related macular degeneration, diabetes and glaucoma, in Africa and South Asia the

See *From the President*, page 4

## ARVO 2008 Annual Meeting breaks records

Attendance at this year's ARVO Annual Meeting (April 27-May 1 in Fort Lauderdale, FL) was higher than ever, with more than 10,600 people gathering to explore the latest scientific offerings and network with colleagues and friends.

Response to ARVO's post-Meeting online survey also broke records, with more than 1,500 attendees from every ARVO section providing feedback about the scientific program, publications, services and thoughts about future meetings.

Ninety-five percent of those respondents indicated that the Annual Meeting met or exceeded their expectations, and 94% ranked the quality of the scientific program as excellent or

good. This compares with 93% and 91% respectively for the 2007 Annual Meeting.

Survey respondents recognized several improvements that ARVO made as a direct result of survey feedback following the 2007 Annual Meeting, such as:

- return of the Message Center
- warmer temperatures in the Convention Center meeting rooms and Exhibit Hall
- higher quality shuttle bus service

ARVO will be considering suggestions

2008 respondents made about Meeting publications, the scientific program, housing and convention center food service.



ARVO members register onsite.

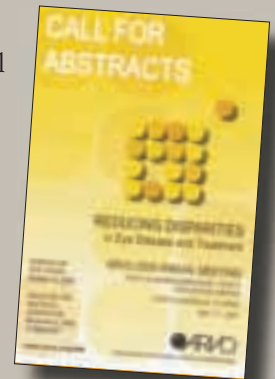
More 2008 meeting highlights, page 11

## ARVO 2009 Annual Meeting

May 3-7  
Fort Lauderdale, FL

The theme for next year's Annual Meeting is Reducing Disparities in Eye Disease and Treatment. The Meeting will address disparities across racial, ethnic, gender, age, geographic and socioeconomic groups. Sessions will also consider contributing factors such as lifestyle, culture, language and religious beliefs.

ARVO encourages members to submit abstracts to the Meeting that showcase research to address and reduce these gaps. Abstract submission begins October 15 at [www.arvo.org](http://www.arvo.org). (See the *Call for Abstracts* mailed with this newsletter for more information.) ■



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## 2008–2009 Officers

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## ARVO committees – get involved!

Are you an ARVO member in good standing? If you would like to contribute your expertise and play a part in helping to shape ARVO's goals and vision, visit the ARVO Committees page at [www.arvo.org/committee](http://www.arvo.org/committee), where you can also complete an online Volunteer Form. New volunteers will be appointed in March 2009. ■

## Phase I clinical trials must now be registered



Leonard Levin,  
MD, PhD

The Ethics and Regulations in Human Research (ERHR) Committee (chaired by Leonard Levin, MD, PhD), has been monitoring the International Committee of Medical Journal Editors' (ICMJE) clinical trials registration policy changes, which now require phase I trials be registered. At the Committee's recommendation, the ARVO Board of Trustees approved updating the ARVO clinical trials registration policy to include this requirement. The change was implemented in April 2008 and will apply

to papers submitted to ARVO journals immediately and to 2009 Annual Meeting abstracts.

The ERHR Committee has teamed up with the ARVO Commercial Relationships Committee to co-sponsor a workshop on clinical trials registration at the 2009 ARVO Annual Meeting. The workshop will focus on why these registration standards are needed from the editor, US government and world health perspectives. See page 10 for date and time of workshop.

To learn more about ARVO clinical trials registration requirements, read the Statement on Registering Clinical Trials at [www.arvo.org/clinicaltrials](http://www.arvo.org/clinicaltrials). ■

## 2009 ARVO Annual Award recipients

ARVO is pleased to announce the recipients of the 2009 ARVO Annual Awards. All Awards and lectures will be presented at the Annual Meeting, May 3-7, 2009, in Fort Lauderdale. Nominations for the 2010 Awards must be submitted by March 2, 2009. For additional information, see [www.arvo.org](http://www.arvo.org) or e-mail [awards@arvo.org](mailto:awards@arvo.org).

### Proctor Medal

**Joe G. Hollyfield, PhD**  
*Cleveland Clinic Foundation*

Presented for significantly advancing the understanding of the cell biology of photoreceptors, interphotoreceptor matrix and the pigment epithelium.

### Friedenwald Award

**Samuel M. Wu, PhD**

*Baylor College of Medicine*  
Presented for characterizing synaptic interactions at the inner and outer retina and for setting the highest standards for retinal systems analyses.

### Weisenfeld Award

**Alan Bird, MD**  
*University College London*

Presented for his masterful knowledge of both clinical and basic vision science as one of the foremost experts in the field of inherited retinal diseases and age-related macular degeneration.

### Cogan Award

**Marie E. Burns, PhD**  
*University of California–Davis*

Presented for her contributions in retinal phototransduction; specifically to the understanding of the termination steps of the light response in rod photoreceptors and for her promise for future achievements.

### Kupfer Award

**Martin J. Steinbach, PhD**  
*York University*

Presented for his advocacy, leadership and championing of research in vision and ophthalmology in Canada.

### Distinguished Service Awards

**Martine J. Jager, MD, PhD**  
*Leiden University*

Immediate Past President 2008–2009  
President 2007–2008  
AP Section Trustee 2003–2008

**Robert Ritch, MD**

*New York Eye & Ear Infirmary*  
Vice President 2007–2008  
GL Section Trustee 2003–2008 ■



# No limits in sight

Allergan Eye Care is focused on the future, and on the unlimited possibilities in sight. For more than five decades we've helped shape the landscape of eye care. We will continue to pursue research and development that address the field of vision, never losing sight of all the lives we can touch along the way.



## 2009 ARVO Trustee candidates

At business meetings held during the ARVO 2008 Annual Meeting, the following sections nominated Trustee candidates to stand for election in 2009:



### IM Section

**Rachel R. Caspi, PhD**  
Lab Immunology,  
National Eye Institute/  
National Institutes of Health



**Justine R. Smith, MBBS, PhD**  
Casey Eye Institute,  
Oregon Health &  
Science University



### RC Section

**Michael E. Boulton, PhD**  
Director, Age-Related  
Macular Degeneration  
Center, University of  
Texas Medical Branch



**John S. Penn, PhD**  
Snyder Professor and Vice  
Chairman, Vanderbilt  
Eye Institute, Vanderbilt  
University School of  
Medicine



### VI Section

**David R. Williams, PhD**  
Director, Center  
for Visual Science,  
University of Rochester

## A thank you to outgoing committee chairs and volunteers

ARVO extends thanks to all members who served on committees this past year. Special thanks go out to M. Christine McGahan, PhD (Advocacy), Reza Dana, MD (Awards), Todd Margolis, MD, PhD (Commercial Relationships), Thomas Friberg, MD (Exhibits), and John Paul SanGiovanni, ScD (Members-in-Training), who completed their chair terms this year. We also thank outgoing Annual Meeting Program Committee Chairs:

Michael A. Kirby, PhD, William K. Stell, MD, PhD, Arun D. Singh, MD, Erik F. van Kuijk, MD, PhD, Rohit Varma, MD, Andrew J. Quantock, PhD, Natalie Afshari, MD, Linda K. McLoon, PhD, Claude Burgoyne, MD, Dale S. Gregerson, PhD, Judith A. West-Mays, PhD, Carol Toris, PhD, Ron Afshari Adelman, MD MPH, Bernd Kirchhof, MD, Michael E. Boulton, PhD, Norberto Lopez-Gil, PhD, and William H. Seiple, PhD. ■

## 2008–2009 Committee Chairs

The ARVO Committee Chairs for this coming year are:

### Advocacy Committee

Barry S. Winkler, PhD

### Animals in Research Committee

Catherine Thut, PhD

### Annual Meeting Program Committee

Sally S. Atherton, PhD

### Awards Committee

Edward N. Pugh Jr., PhD

### Commercial Relationships Committee

Russell N. Van Gelder, MD, PhD

### Continuing Medical Education Committee

Todd P. Margolis, MD, PhD

### Diversity Issues Committee

Laura J. Robles, PhD

### Ethics and Regulations in Human Research Committee

Leonard A. Levin, MD, PhD

### Finance Committee

Donald C. Hood, PhD

### International Members Committee

Robert Ritch, MD

### Long Range Planning Committee

Frederick L. Ferris, III, MD

### Members-in-Training Committee

Pedram Hamrah, MD

### Professional Development and Education Committee

Maureen G. Maguire, PhD

### Publications Committee

Nicholas A. Delamere, PhD ■

*From the President, continued from page 1*

main cause of blindness is cataract followed distantly by corneal opacification caused by infection and/or trauma. This is disconcerting since cataract is a disease that can be treated effectively and most corneal opacification is preventable. Paradoxically, this problem will likely be compounded by ever improving medical care in developing countries and the resultant increased lifespan that comes with it.

As members of ARVO, we all have a stake in these issues. We have all become involved in vision research not only because the visual system is inherently interesting to study and clinically “way cool,” but because we are concerned about the emotional, political and financial tolls

that blindness plays in the world. Every year that I attend the Annual Meeting at ARVO, I am moved by not only the quality of the research being presented but also by the driving force behind this research. Namely, that our members really do want to make a difference.

It is my sincere hope that this year’s theme will once again remind our membership of the reason for our research effort. By raising awareness of not only the causes of blinding ocular disease but the disparities that exist in the treatment of these diseases, our members may walk away invigorated with new direction and purpose in their work. I look forward to seeing you all at the upcoming meeting in Fort Lauderdale and welcome your thoughts. ■



## Outreach to underrepresented students

ARVO is working to encourage students from minority backgrounds to explore vision research as a career.



Laura Robles, PhD

Laura Robles, PhD, Diversity Issues Committee Chair, and Committee Member Andy Tsin, PhD, will represent ARVO at the Society for Advancement of Chicanos and Native Americans in Science

(SACNAS) Annual Conference October 9–12, 2008 in Salt Lake City, UT, and present \$200 cash prizes for the top three eye and vision posters. ARVO will also provide \$250 cash prizes for the top eight poster session/oral presentations in vision or vision-related research at the November 2008 Annual Biomedical Research Conference for

Minority Students (ABRCMS) in Orlando.

The Diversity Issues Committee and the Members-in-Training Committee have developed an eye and vision research career brochure to encourage underrepresented undergraduate and graduate students to enter the field.

The brochure describes a variety of careers in vision research as well as the educational requirements needed to pursue them. The brochure will be distributed at SACNAS and ABRCMS. ARVO is also developing a Web site to supplement the brochure, which will include ARVO member testimonials and a discussion forum.

The brochure is also available as a pdf at [www.arvo.org/resources](http://www.arvo.org/resources). ■

## New resources to help protect researchers coming under attack

In light of the increasing attacks on researchers, a subgroup of the Animals in Research Committee (ARC) is developing content for the ARVO Web site to help members protect themselves against animal extremists. Another subgroup of the ARC is reviewing the *ARVO Statement for the Use of Animals in Ophthalmic and Visual Research* and bibliography. Both the US and EU Animal Use Guidelines are cur-

rently undergoing revision, and references to these revisions will be added.

ARC also encourages ARVO members in European countries to join the European Biomedical Research Association (EBRA), a group of individuals and organizations in the scientific, medical and veterinary professions in Europe. More information is available at [www.ebra.org](http://www.ebra.org). ■

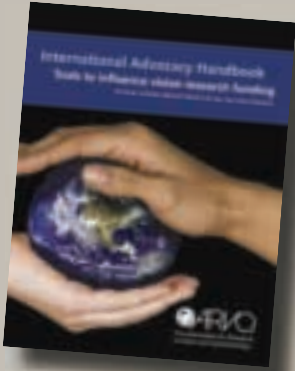
## Building a global community

This year, the National Alliance for Eye and Vision Research (NAEVR) Contact Congress booth at the ARVO Annual Meeting served as a focal point for building a global community of support for eye and vision research funding.

NAEVR Executive Director James Jorkasky, who authored ARVO's *International Advocacy Handbook: Tools to Influence Vision Research Funding*, premiered this new resource at a workshop, then met with interested ARVO members at the booth. ARVO has posted the Handbook and its appendices at [www.arvo.org/advocacyhandbook](http://www.arvo.org/advocacyhandbook). ■



In an interactive workshop, NAEVR Executive Director James Jorkasky discusses with attendees how to use the *ARVO International Advocacy Handbook*.



### Download the ARVO International Advocacy Handbook

ARVO has participated in many activities organized by the National Alliance for Eye and Vision Research to expand awareness of eye disease and vision impairment and to increase vision research funding. This handbook is offered to members and others to help increase vision research funding worldwide and can be downloaded at [www.arvo.org/advocacyhandbook](http://www.arvo.org/advocacyhandbook). ■



Left: NAEVR President Stephen Ryan listens as Peter Wiedemann, University of Leipzig, Germany, reviews the *ARVO International Advocacy Handbook* with James Jorkasky.

## 2008 ARVO International Chapter Affiliate Travel Grant recipients

This past year, the ARVO International Chapter Affiliate Travel Grant Program awarded 16 grants to attend the 2008 ARVO Annual Meeting. Recipients were selected by the ARVO International Chapter Affiliates.

### Argentina (The Nicolas Bazan Scholarship to Promote Scientific Research in Argentina)

- Carolina Gentile, Hospital Italiano
- Ana Laura Gramajo, Centro de Ojos Romagosa
- María Iribarne, Universidad Austral
- Vanesa Krochik, Consultorio Oftalmologico Dr. S. Lerner

- Federico Luengo, Hospital Austral
- Jorge Eduardo, Mancini facultad de Ciencias Biomedicas
- Ana Vanesa Torbidoni, Universidad Austral

### Brazil

- Carolina Del Debbio, University of São Paulo

- Ana C. Dias, FMRP-USP, Ribeirao Preto-SP, Brazil
- Claudio E.C. Teixeira, Universidade Federal do Para

### Hungary

- Imre Zsolt Fejes, University of Szeged
- Agnes Berta, Semmelweis University

- Arnold Szabo, Semmelweis University
- Gabor Mark Somfai, Semmelweis University
- Gergely Losonczy, University of Debrecen

### Israel

- Shimrit Dadon, The Krieger Eye Research Lab, FMRC, Tel Aviv University ■

## Hungary and The Netherlands: Newest ARVO International Chapter Affiliates

ARVO chapters have proven to be a successful way to bring researchers in one area together to discuss eye and vision science. ARVO is pleased that the existing International Chapter Affiliates in Brazil, Argentina and Israel have now been joined by the Hungarian Association for Research in Vision and Ophthalmology (HARVO) and ARVO-NED.

HARVO was established in March 2007 as a section of the Hungarian Ophthalmological Society. Members of HARVO include basic and clinical researchers, some of whom regularly attend the ARVO Annual Meeting. HARVO hopes that its affiliation with ARVO will help strengthen collaboration between basic and clinical researchers in Hungary. As a first step, HARVO organized an inaugural annual symposium on May 30, 2008 in Pécs, Hungary, in conjunction with the Hungarian Ophthalmological Society's Annual Meeting. ARVO Immediate Past President Martine Jager, MD, PhD, was a featured speaker, along with ARVO member and President of the Austrian Ophthalmological Society, Susanne Binder, MD. HARVO also awarded travel grants to five younger researchers to attend the ARVO 2008 Annual Meeting. To learn more about HARVO, visit [www.harvo.org](http://www.harvo.org).

ARVO-NED is a newly formed subgroup of the Netherlands Ophthalmological Society aimed at uniting all Dutch scientists who are involved with vision research. Through its affiliation with ARVO, ARVO-NED will be able to provide new opportunities for members to learn more about basic research and form new collaborations. ARVO-NED members plan to be active advocates for eye research, helping stimulate fundraising and awareness about the importance of eye and vision research.

The first meeting of ARVO-NED will take place November 28, 2008 at Leiden University Medical Center in Leiden, The Netherlands. The meeting will focus on new research collaborations and opportunities for young researchers to network with other eye researchers in The Netherlands. Professor Joke H. Meijer from Leiden will give a special presentation, "The influence of light on the biological clock."

The ARVO-NED meeting will also award a travel grant for a young researcher to attend the ARVO 2009 Annual Meeting. Alcon has kindly agreed to sponsor the meeting in Leiden as well as the travel grant. ■



Hungary Chapter Affiliate Chairman János Nemeth, MD, PhD, (third from left) and travel grant recipients



Brazil Chapter Affiliate travel grant recipient



Argentina Chapter Affiliate travel grant recipients



ARVO President Martine Jager, MD, PhD (left) with Israel Chapter Affiliate President Mordechai Rosner, MD (right) and travel grant recipient

# 2009 ANNUAL MEETING



**REDUCING DISPARITIES  
in Eye Disease and Treatment**  
ARVO 2009 ANNUAL MEETING  
FORT LAUDERDALE, FLORIDA  
MAY 3-7, 2009

The ARVO 2009 Annual Meeting will address disparities across racial, ethnic, gender, age, geographic and socioeconomic groups. Sessions will also consider contributing factors such as lifestyle, culture, language and religious beliefs.

ARVO encourages the submission of abstracts that showcase research that addresses and reduces these gaps. Abstract submission begins October 15, 2008 at [www.arvo.org](http://www.arvo.org). ■

## ARVO/Alcon Early Career Clinician Scientist Research Awards

The ARVO/Alcon Early Career Clinician-Scientist Research Awards are made available through a generous donation by Alcon to the ARVO Foundation for Eye Research to support researchers who are committed to a career as a clinician-scientist. The recipients will receive travel funds and an honorarium. Up to five awards will be presented at the ARVO/Alcon Keynote Session on Sunday, May 3, 2009. Using the Online Abstract Submission Program ([www.arvo.org/AM](http://www.arvo.org/AM)), applicants must submit an abstract as First Author and complete the online Award Application Form by December 5. Award winners will be notified and announced in early March. ■

## Fort Lauderdale update

As the ARVO Annual Meeting continues to grow, housing arrangements in Fort Lauderdale become increasingly challenging. Fort Lauderdale now positions itself as a luxury resort destination, and with that comes higher costs. We recognize that Meeting attendees experience frustration about hotels and costs and we will continue to work to keep hotel rates at manageable levels.

During the next six months, ARVO leaders and staff will conduct an Annual Meeting site analysis and will consider other Annual Meeting destinations. More than 56% of respondents to a survey on the 2008 Annual Meeting indicated a desire to consider other cities on a rotating basis. We will provide more information in the Winter/Spring issue of *ARVONews*.

If you have suggestions about the Annual Meeting, contact Ellyn Terry, Director of Meetings and Education, at [eterry@arvo.org](mailto:eterry@arvo.org). ■

## 2009 Annual Meeting Preliminary Schedule

Friday/Saturday May 1-2	Time	Sunday May 3	Monday May 4	Tuesday May 5	Wednesday May 6	Thursday May 7
ARVO/Pfizer Ophthalmics Research Institute (May 1-2)	8:30am	Papers & Posters	Papers & Posters	Papers & Posters	Papers & Posters	Papers & Posters
	10:15am	ALL POSTERS				ALL POSTERS
ARVO/ISIE Annual Meeting (May 1-2)	10:20am		Section Business Meetings	General Business Meeting	Last day for Exhibits	
	11am		ALL POSTERS	ALL POSTERS	ALL POSTERS	
ARVO Education Courses (May 2) ■ Cell Signaling Pathways in Ocular Development and Tumor Formation ■ Intravitreal Injections: Techniques, Drugs and Complications	11:15am	Posters & Symposia				Papers & Posters
	12noon		SIGS/Workshops	SIGS/Workshops	SIGS/Workshops	
	1:15pm	SIGS/Workshops				Papers & Posters
	1:45pm		Papers & Posters	Papers & Posters	Papers & Posters	
	2:45pm	Posters, Symposia & Basic/Clinical Lecture				
ARVO Clinical Trials Education Series (May 2) ■ The Design, Conduct and Management of Clinical Trials	3:45pm		Papers & Posters	Papers & Posters	Papers & Posters	
	5:15pm	ARVO/Alcon Keynote Session				
	5:30pm		Award Lectures	Award Lectures	ARVO/Champalimaud Lecture	
	7:30pm	ARVO Social	MIT Social			
	8pm			ARVO Rocks	ARVO Classical Concert	



## Reserve your hotel today!

The ARVO housing bureau has sent confirmations for all housing requests received during the 2008 Annual Meeting. If you have not received a confirmation for your request, contact the housing bureau at [gflhousing@broward.org](mailto:gflhousing@broward.org). If you have not already made a hotel reservation for 2009, go to [www.arvo.org/housing](http://www.arvo.org/housing). The hotels closest to the Convention Center sell out quickly — don't delay.

If you have questions about the reservation process, visit the Housing FAQs page on the ARVO Web site at [www.arvo.org/housing/faq](http://www.arvo.org/housing/faq).

To reserve a block of 10 rooms or more, contact Lancey Cowan, Annual Meeting Manager, at [lcowan@arvo.org](mailto:lcowan@arvo.org). ■

## ARVO exhibits

Visit exhibitors Sunday, May 3 through Wednesday, May 6, 9am–4:45pm daily. See the latest products and services that will help you in your research and/or clinical work. ■

## Symposia Sunday, May 3, 2008

### Oxidative Stress in Ocular Disease: Theories and Therapies

Organizing Sections: BI, LE, RC, RE  
Organizers: Jayakrishna Ambati and Carl Romano

Features six experts on the role of oxidative stress in ocular disease. Evidence from cellular studies will be coordinated with data from new animal models and clinical findings. Academic and industry representatives will participate.

### Socioeconomic Disparities in Access to and Use of Eye Care

Organizing Sections: AP, CL, CO, GL, IM, LE, RE  
Organizers: Thomas Millar and Janine Smith

With modern advances in eyecare technology, education and communication methods, it is now possible to transfer the latest medical and scientific knowledge to socioeconomically disadvantaged communities. Highlights the inequalities in disadvantaged communities throughout the world and how these needs are being addressed by individuals and groups.

### New Insights into Retinal Diseases Using Imaging and Functional Techniques

Organizing Sections: RC, RE, VI, VN  
Organizers: Ido Perlman, Joseph Carroll and Maureen McCall

New imaging technologies have been developed that allow layer-by-layer analysis of retinal structure in the normal and diseased eye. Through these techniques, damaged retinal structures can be identified and followed during progression of the disease and during its treatment. Structure-function relationship is the ideal approach for objective assessment of the disease state of the retina and of treatment efficacy. Includes lectures from experts in these fields who will discuss both modalities in relationship to different retinal diseases and their treatment.

### Inflammation: Different Diseases, Common Themes

Organizing Sections: BI, CO, GL, IM, RC, RE  
Organizers: Suzanne Fleiszig, Shukti

Chakravarti and Andrew Dick

Multiple, seemingly unrelated, diseases involve inflammation with common themes in their pathogenesis. Further insights may uncover new mechanisms that directly link immune function to chronic inflammatory diseases and aging. Speakers will explore the overlapping underlying aspects of inflammation in the context of understanding and managing ocular disease.

### Basic/Clinical Lecture: Diabetic Retinopathy — A Global Epidemic

Organizing Sections: CL, RE  
Organizers: Paolo Lanzetta and Arup Das

The Basic/Clinical Lecture, presented from a clinical-to-basic viewpoint, will focus on epidemiologic disparities and similarities of diabetic retinopathy throughout the world and will highlight the most recent advances on diagnostic imaging and newer therapies.

### The Impact of Vision Loss on the Individual

Organizing Sections: CL, GL, RE, VI  
Organizers: David Garway-Heath, Emily Gower and Marilyn Schneck

Various methods quantify the impact of vision loss, and many of these are based on questionnaires. Objective tools to quantify the impact of eye disease on patient function (including everyday tasks, such as navigation, climbing/descending stairs, driving, reading, etc.) may better quantify deficits of which patients are less aware. Experts will review and critically appraise questionnaire-based and performance-based assessment of vision-related activities, and the translation of these measures into quality-of-life and utility measures. Topics include the relationship between vision impairment and visual disability, the impact of vision loss on mobility, driving and reading, quantification of disability, the economic impact of vision loss, vision- and health-related quality of life, and preference-based quality of life measures. ■



# 2009 ANNUAL MEETING

## Important dates

### 2008

#### Starting September 1

2009 Membership dues online

#### September 15

2009 Annual Meeting registration online

#### October 15

Abstract submission and revision online

#### December 5

Deadline for online abstract submission 11:59pm EST  
ARVO/Alcon Awards application deadline  
Travel Grant Awards application deadline  
SIG Proposal Deadline

#### December 7

Online abstract revision deadline 11:59pm EST

### 2009

#### February 9

Notification of abstract acceptance

#### February 22

2009 Abstract Search and Itinerary Builder online

#### March 2

ARVO Annual Awards nomination deadline  
ARVO Travel Grant Awards announced online

#### March 17

Deadline for online housing reservations  
Deadline for early registration rates

#### April 24

Registration cancellation deadline

#### May 1-2

ARVO/Pfizer Ophthalmics Research Institute  
ARVO/ISIE 7th Annual Meeting  
Vision Research Conference

#### May 2

ARVO Education Courses (see page 10)

#### May 3-7

2009 ARVO Annual Meeting: Reducing Disparities in Eye Disease and Treatment

## Planning an event during the ARVO 2009 Annual Meeting?

To reserve space, contact Lancey Cowan at [lcowan@arvo.org](mailto:lcowan@arvo.org).

## ARVO Travel Grant Program

### Application deadline: December 5

The ARVO Travel Grant Program provides partial travel support to investigators who demonstrate potential for future significant research accomplishments, and whose research findings, selected to be presented at the ARVO Annual Meeting, are considered to be of high interest to the vision and ophthalmology community.

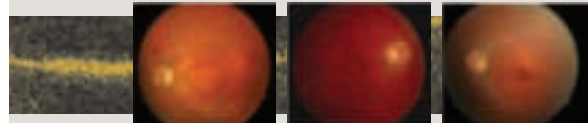
Using the Online Abstract Submission Program between October 15 and December 5, 2008, applicants must submit an abstract as First Author and complete the online Travel Grant Application Form, applying only for grants for which the First Author is eligible. To view available grants, their restrictions and requirements, visit the ARVO Web site at [www.arvo.org/travelgrant](http://www.arvo.org/travelgrant). One grant may be awarded to an investigator who has not previously received a grant and whose abstract is accepted for presentation. The level of support (\$500-\$1,100) depends on the individual grant requirements. Annual Meeting registration fees will be waived.

Travel Grant awardees will be notified in March 2009. Contact Rhonda Williams at [rwilliams@arvo.org](mailto:rwilliams@arvo.org) or +1.240.221.2908 for additional information. ■

## TWELFTH ANNUAL VISION RESEARCH CONFERENCE MECHANISMS OF MACULAR DEGENERATION

May 1-2, 2009 • Fort Lauderdale, FL, USA

A TWO-DAY SATELLITE EVENT PRIOR TO THE 2009 MEETING OF ARVO



The meeting will review the latest developments in the genetics of AMD, and focus on animal models that closely mimic early or late onset human macular diseases. Major areas to be covered will be mechanisms that lead to macular dystrophies, novel animal models of macular degeneration, and upcoming strategies in pharmacological and gene-based therapies in animal models.

The Twelfth Annual Vision Research Conference is sponsored and hosted by Elsevier / Vision Research and co-sponsored by ARVO



### TOPICS INCLUDE

- AMD/Angiogenesis/VEGF
- AMD Gene defects: Focus on Biology/Clinical Manifestations)
- AMD: Pathogenesis, Genetics, Mechanisms and Treatments
- Animal models of MD and cone dystrophies
- Cone degeneration and cone survival
- Gene-based therapies in animal models of MD
- RPE and Retinoids/Carotenoids/Lipofuscin
- The macula in health and disease

### CALL FOR POSTERS

Abstract submission deadline: **February 2, 2009**

For full details and abstract submission visit:  
[www.visionresearch-conference.elsevier.com](http://www.visionresearch-conference.elsevier.com)

## Minisymposia

Each ARVO Scientific Section has the opportunity to organize at least one minisymposium during the Annual Meeting.

**AP: Targeted Therapy in Uveal Melanoma**

Organizers: Charlotta All-Ericsson and Arun Singh

**BI: Photoreceptor Cilium and Associated Retinal Diseases**

Contributing Sections: RC, RE, VN  
Organizer: Muna Naash

**EY: Suppression in Strabismus and Amblyopia**

Contributing Section: VI  
Organizer: Richard Harrad

**GL: What Damages Ganglion Cells in Glaucoma?**

Contributing Section: PH  
Organizers: David Garway-Heath, Cynthia Grosskreutz and Neeru Gupta

**IM: Infections as a Cause of Global Blindness**

Contributing Sections: AP, CL, CO, RE  
Organizers: Nisha Acharya and Suzanne Fleiszig

**IM: Translational Animal Models of Immunotherapeutics: Getting Closer to Man?**

Organizers: Andrew Dick, Junko Hori and Suzanne Fleiszig

**LE: Genetic Pathways of Lens Formation**

Contributing Sections: BI and RC  
Organizers: Michael L. Robinson and Nadean Brown

**PH: Carbon Monoxide and Nitric Oxide Signaling**

Contributing Sections: GL, RC, RE  
Organizer: Filippo Drago

**RC: Optic Nerve Regeneration – A Dream or an Approaching Reality**

Contributing Section: GL  
Organizer: Dong Feng Chen

**RE: Reducing Disparities in Treatments: Combining Therapies for Treating Retinal Diseases**

Organizers: Paolo Lanzetta and Ursula Schmidt-Erfurth

**VI: Visual Performance with Adaptive Optics Correction**

Organizers: Susana Marcos and Nancy Coletta

**VN: RGS Proteins in the Retina and Their Function for Vision**

Contributing Section: BI  
Organizers: Maarten Kamermans and Catherine Morgans ■

## ARVO Education Courses

**Saturday, May 2, 2009**

Separate registration is required. For more information, go to [www.arvo.org/courses](http://www.arvo.org/courses).

**Cell Signaling Pathways in Ocular Development and Tumor Formation**

Organizer: J. William Harbour, MD, Washington University

**Intravitreal Injections: Techniques, Drugs and Complications**

Organizer: Eduardo B. Rodrigues, MD, University of São Paulo ■

## ARVO Committee-Sponsored Workshops

**Alternatives to Mammalian Models**

Organized by the Animal Research Committee  
Sunday, May 3, 2009

**Getting Published: Advice and Admonitions**

Organized by the Members-in-Training Committee  
Sunday, May 3, 2009

**Ethics Related to Clinical Trials Registration**

Jointly organized by the Ethics and Regulations in Human Research Committee and the Commercial Relationships Committee  
Tuesday, May 5, 2009

**Communicating Across Cultures to Achieve Research Excellence**

Organized by the Diversity Issues Committee  
Wednesday, May 6, 2009 ■

## Future ARVO Annual Meetings

**May 2–6, 2010**

**May 1–5, 2011**

**Fort Lauderdale, FL**

# 2008 ANNUAL MEETING HIGHLIGHTS

## Congratulations American Academy of Optometry Grantees

Congratulations to this year's ARVO Student Travel Fellowship recipients, presented by the American Academy of Optometry. The fellowships were handed out at the joint American Optometric Association/American Academy of Optometry reception as were travel grants to the American Optometric Foundation's prestigious Ezell Fellowship recipients.

Ten fellowships were provided by an educational grant generously donated by VISTAKON®, a Division of Johnson & Johnson. ■



ARVO Student Travel Fellowship recipients are (from left) Fan Zhang, Hongxin Song, Kevin Van Doorn, Jenny Huang, Walter Wittich, Mahesh Shivanna, Liat Gantz, Xin Wei, Padmapriya Ramamoorthy, David Bernsten, joined by Sheila Hickson-Curran (Director, Medical Affairs VISTAKON®, Johnson & Johnson Vision Care, Inc.)



Ezell Fellows (from left) Lakshman Subbaraman, Zan Pan, Jessica Mathew, Michael (Joe) Phillips, Heather Anderson, Wendy Harrison, AOF President Mark Bullimore, Sheila Hickson-Curran (Director, Medical Affairs VISTAKON®, Johnson & Johnson Vision Care, Inc.), Kathryn Richdale, Sruthi Srinivasan.

The International Society for Imaging in the Eye has joined ARVO



7TH  
ANNUAL  
MEETING  
May 1–2, 2009  
Fort Lauderdale  
Florida

[www.arvo.org/isie](http://www.arvo.org/isie)



# 2008 ANNUAL MEETING HIGHLIGHTS

## ARVO / Alcon Keynote Session

The 2008 ARVO/Alcon Keynote Session, which opened the Annual Meeting on Sunday, April 27, featured inventor and technology expert Ray Kurzweil. Kurzweil is the principal developer of, among other things, the first print-to-speech reading machine for the blind.

The annual keynote session, sponsored by the ARVO Foundation for Eye Research through a generous donation from Alcon provided a context for the Annual Meeting theme, Eyes on Innovation.

In keeping with the Meeting theme, Ray Kurzweil gave his presentation through an innovative technology called “teleport,” similar to a video conference with a highly specialized screen. The teleport software simulated Mr. Kurzweil’s image as if he were standing at the podium on stage. Kurzweil’s virtual presentation was the buzz of the Meeting.

If you missed the session or would like to review it, Dr. Kurzweil’s talk — along with the 2008 ARVO Awards Lectures — is available online at [www.arvo.org/video](http://www.arvo.org/video). His PowerPoint presentation is available at [www.arvo.org/am/2008](http://www.arvo.org/am/2008) (7.5MB). ■



ARVO President Martine Jager introduces ARVO/Alcon Keynote Speaker Ray Kurzweil. Kurzweil presented his lecture live via teleporter.



Captivated attendees at the Imaging Group

2008 Board of Trustees:  
back row from left is Paul Sternberg, David Hunter, Donald Hood and Robert Miller. Middle row from left is Shigeru Kinoshita, Barry Winkler, Jeffrey Boatright, Executive Director Joanne Angle, Mark Petrash and Paul Mitchell. Front row from left is Frederick Ferris, Executive Vice President Sally Atherton, Robert Ritch, President Martine Jager, President-Elect Todd Margolis and Nicholas Delamere.



Board member Barry Winkler and Cheryl Craft chat at the President’s Reception.



It’s all about the science.



Local Fort Lauderdale high school students enjoy a scientific presentation prior to a visit to the exhibit hall.

# 2008 ANNUAL MEETING HIGHLIGHTS



ARVO President Martine Jager with Champalimaud awardee Aravind Eye Care Center's P. Namperumalsamy and AFER President Gary Abrams



Kathy Pokorny moderates a table discussion at Pizza with a Prof.



ARVO Board President Todd Margolis contacts Congressional offices he had visited during ARVO's Advocacy Day in January 2008.



Learning about new products in the exhibit hall



NAEVR Advocacy Manager David Epstein assists Elaine Chuang in contacting Congress about research funding.



ARVO/ISIE Meeting attendees



Far left: Questions abound during the Genetics Group session. Center: Robert Ritch and Rajiv Mohan moderate the Nanotechnology Group session. Right: Participants at the Pfizer Ophthalmics Research Institute



Jammin' at ARVO Rocks



Classical ARVO



Dr. Balasubramanian moderates the Indo-US Collaborators Workshop.



ARVO Social



## Research Grant Administrators Program

The 2008 Annual Meeting again featured a Research Grant Administrators Program for administrators from universities, foundations and institutions, which attendees continue to rate highly.

One participant in the workshop told ARVO that the event “provides a good overview of National Eye Institute (NEI) grants management.” Said another: “It’s an opportunity to meet NEI staff in person and to network with peers working for similar organizations.”

Each year, the workshop attempts to cover new ground, and 2008 was no exception. In addition to the important “nuts and bolts” topics presented every year, attendees heard from Anne Lindblad and Lisa Coleman from the Emmes Corporation about CROs and site and personnel certification for clinical trials. A representative from the Foundation Fighting Blindness discussed grant submission best practices. Participants also met in small groups in the afternoon to discuss topics of specific interest.

Program organizers for the workshop were William Darby, the chief grants management officer in the Division of Extramural Research at the NEI of National Institutes of Health (NIH); Cheryl Formes, the chief operations officer of

the Department of Ophthalmology at the University of Texas Southwestern Medical Center; and Tracy Perkins, MPH, administrative director at the University of Wisconsin Eye Research Institute in Madison.

The entire NEI Extramural Research staff was there to provide firsthand information to attendees on topics ranging from allowable expenses and carryover rules to how Study Sections work. The group also received critical updates on NIH activities and the outlook for funding.

Plan now to attend the Research Grant Administrators Program at the ARVO 2009 Annual Meeting. Contact Lancey Cowan ([lcowan@arvo.org](mailto:lcowan@arvo.org)) for more information. ■



Michael Steinmetz of the NEI Extramural Program



Participants broke into groups for more in-depth discussions.

European Association for Vision and Eye Research  
◀ annual congress ▶



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[www.ever.be](http://www.ever.be)

## Breakthrough gene research gets global attention at Annual Meeting

Two groups of researchers presented findings at the ARVO 2008 Annual Meeting that attracted unprecedented attention from the international media. The two teams — one from the University of Pennsylvania and Children’s Hospital of Philadelphia and the other from University College London Institute of Ophthalmology and Moorfields Eye Hospital — also published their results in the *New England Journal of Medicine* immediately following presentation at the Meeting.

Both groups presented promising interim results of clinical trials that dealt with gene replacement therapy for young patients suffering from Leber congenital amaurosis (LCA), a severe form of retinitis pigmentosa.

ARVO hosted a press conference and facilitated interviews with the scientists that were covered by news teams from major news outlets around the world (see story on Capitol Hill briefing on page 20–21 for more details), resulting in hundreds of stories in the print, broadcast and online media. ■



## From the Chairman



Gary W. Abrams, MD

Dear Colleagues: Thank you for making the first half of 2008 spectacular. The ARVO Foundation for Eye Research (AFER) had a large presence at the ARVO Annual Meeting through the Dowling Gala,

the ARVO/Alcon Early Career Clinician-Scientist Awards, the ARVO/Alcon Keynote Session, ARVO/Pfizer Institute, the AFER booth and the attendees who benefitted from travel grant awards funded through the Foundation. More activities are underway for the remainder of 2008, including several workshops under the Allergan Clinical Trials Education Series.

AFER wants to continue to expand support for vision researchers. A recent AFER Board of Governors Strategic Planning Meeting set the stage for new

initiatives such as research grant awards and the Women in Eye and Vision Research initiative. Support from individual donors is extremely important to making these programs successful. I encourage you to contribute to the Foundation through the ARVO dues renewal portal or directly at [www.arvofoundation.org](http://www.arvofoundation.org).

I look forward to AFER making an even larger impact on vision researchers in the coming year. Become a part of this dynamic organization by contributing today. ■

Sincerely,

Gary W. Abrams, MD  
Chairman  
AFER Board of Governors

## Gala honoring Dowling raises funds, awareness for AFER

The Friends of John Dowling raised a grand total of \$75,000 for AFER at a special gala event held in honor of former Chairman John E. Dowling, PhD.

Held on April 27 in conjunction with the ARVO 2008 Annual Meeting, the John Dowling Gala was attended by AFER donors, ARVO members, representatives of vision-related companies and Dr. Dowling's family, friends, former students and colleagues. The event honored Dr. Dowling for his substantial service to AFER and to the vision science community.

The gala also served to increase awareness of AFER and raise money for new and ongoing projects. To view more photos of the event, visit [www.arvofoundation.org](http://www.arvofoundation.org). ■



John Dowling and his wife, Judy, show off a gift celebrating his championing of AFER: a box of Wheaties with his photo.

**Calling all ARVO members: Invest in AFER today!**

Your membership in ARVO is a key to your professional growth and development. Your contribution to the continuance of vision research is equally important. That's why AFER encourages you to invest in the future of vision research with an annual contribution of \$50 or more. You can make this investment at the same time that you renew your ARVO membership. ■



### For more information ...

For more information or to make a donation to AFER or the Dowling Society, please contact Lori Methia, Director of Governance and Strategic Initiatives, at +1.240.221.2912; [lmethia@arvo.org](mailto:lmethia@arvo.org) or visit [www.arvofoundation.org](http://www.arvofoundation.org)

## AFER looks to DC-area federal employees

AFER will again participate in this year's Combined Federal Campaign (CFC). CFC solicits donations from federal employees and members of the military and helps to raise millions of dollars for non-profit organizations each year.

If you are a federal employee or know a federal employee in the D.C. area, be sure to designate #38547, ARVO Foundation for Eye Research, during this year's campaign, September 1–December 15. Your contribution will help ensure the future of vision research. ■



## Host-a-Researcher program brings latest science to developing countries

Twelve researchers from economically emerging countries received insider advice and scientific insight from their own “hosts” at the ARVO 2008 Annual Meeting, as part of AFER’s first Host-a-Researcher award program.

Host-a-Researcher aims to expand awardees’ knowledge in specific research areas by providing funding to help them attend the ARVO Annual Meeting and opportunities to network with fellow researchers, colleagues, mentors and thought leaders.

AFER is currently organizing the 2009 Host-a-Researcher program. If you are interested in supporting a researcher or serving as host, contact AFER today. Below are the 2008 researchers and hosts.

### Researchers

Aistè Damijonaitytė, MD  
Michael Gyasi, MD  
Constantinos Kakoulidis, MUDr

Ognjen Zrinscak, MD  
Susan E I Williams, MBBCh, FCOph, FRCSEd

Nadeema Gallow, MBChB, FCOphth

Vitaly V. Potyomkin, MD  
Elena Takhchidi, MD  
Adun Ogunro, MD, FWACS  
Bimbo Ashaye, MD(F)

### Country

Lithuania  
Ghana  
Slovakia

Croatia  
South Africa

South Africa

Russia  
Russia  
Nigeria  
Nigeria

### Hosts

Zaher Sbeity, Mila Kisilevsky  
Miller Ogidigben, Junko Hori  
J. Mark Petrash,  
Poonam Mudgil

Vesna Jurisic  
Pratap Challa,  
R. Rand Allingham  
Valeriy Lyzogubov,  
Mohamed-Karim Ezzat  
Andrey Dmitriev, Elena Ilitchev  
Ilya Rozenbaum, Sanjoy Roy  
Paul Lee, Bill Merrigan  
Jim Puklin, Miller Ogidigben

Sincere thanks to this year’s donors, who provided a total of \$33,500 for international visiting researchers.

- Alcon South Africa
- The Al Noor Foundation
- Trevor Carmichael, MD, PhD
- Deseret Community Vision Institute — Nigeria Russian Nobility Association
- The Glaucoma Foundation
- The Kazickas Family Foundation
- Merck & Company
- Thomas Nugent
- Joyce Tombran-Tink, PhD ■



Researcher Adun Ogunro of Nigeria and host Bill Merrigan



Host Junko Hori reviews papers with Michael Gyasi of Ghana.

## AFER establishes female eye researcher community – WEAVR

In 2009, AFER will debut Women in Eye and Vision Research (WEAVR). This novel program will encourage women to enter the field of vision research and empower current female investigators to become leaders in the field of vision research and ARVO.

Women have only recently begun to take leadership positions at ARVO, even though 35% of ARVO’s members are female. This is echoed in academia, where few department chairs are female.

WEAVR will serve as a support system for female vision clinicians and scientists. The group will showcase various career paths for women involved in eye and vision research,

demonstrate the importance and influence of female eye and vision researchers and establish a networking/mentorship program for women investigators.

WEAVR will host its first in a series of educational programs during the ARVO 2009 Annual Meeting. A luncheon will feature a panel of female vision researchers sharing experiences on overcoming their barriers to success.

Don’t miss the luncheon at the ARVO 2009 Annual Meeting on Saturday, May 2. E-mail [info@arvofoundation.org](mailto:info@arvofoundation.org) to add your name to the WEAVR mailing list. ■

## Did you know?

Since its inception AFER has supported the eye and vision research community with

- 4 articles in IOVS on research opportunities
- 5 endowments providing ongoing programmatic support
- 6 keynote sessions bringing the highest level speakers to the ARVO Annual Meeting
- 11 scientific programs reaching researchers around the globe
- 32 visiting researchers and hosts
- 100 travel grants and awards



## ARVO/Pfizer Ophthalmics Research Institute

The fourth ARVO/Pfizer Ophthalmics Research Institute (April 25–26 in Fort Lauderdale, FL) explored how glia, mitochondria and the immune system intersect during glaucomatous neurodegeneration.

The conference was funded by AFER through a generous grant from Pfizer Ophthalmics.

The sessions also identified future strategies essential to improve the current understanding of the immunogenic component of glaucomatous neurodegeneration and provided insights for designing neuroprotective treatment strategies in order to modulate the immune response toward tissue repair while avoiding the initiation of a neurodegenerative process.

A report on the presentations and discussions will be submitted for review to ARVO's journal, *Investigative Ophthalmology & Visual Science*, in the coming months.

Previous Institute topics included:

- Drug Delivery to Posterior Intraocular Tissues (2007)
- Aqueous Humor Outflow: What Do We Know, Where Will It Lead Us? (2006)
- Angiogenesis (2005)

The ARVO/Pfizer Ophthalmics Research Institute is held annually. Next year's conference is May 1–2, 2009 in Fort Lauderdale, FL. For more information, visit [www.arvofoundation.org](http://www.arvofoundation.org), or contact Rhonda Williams at [rwilliams@arvo.org](mailto:rwilliams@arvo.org), +1.240.221.2908. ■



## Clinical trials workshops

The Clinical Trials Education Series was developed specifically for vision researchers to present state-of-the-art approaches to the design, construction and execution of clinical trials in ophthalmology. The need for trialists, researchers and others to have an opportunity to learn from seasoned trialists, who also can serve as resources, is unparalleled in other fields. As design complexity and government requirements increase, workshops will provide crucial information to move the science from bench to bedside. A schedule of upcoming workshops is at [www.arvo.org/ctes](http://www.arvo.org/ctes) or contact Jot Grammer at [jgrammer@arvo.org](mailto:jgrammer@arvo.org) for more information. ■



The recipients of the 2008 ARVO ALCON Early Career Clinician-Scientist Research Award were recognized during the Keynote Session at the ARVO Annual Meeting.

## ARVO/Alcon Early Career Clinician-Scientist Research Awards

The ARVO/Alcon Early Career Clinician-Scientist Research Awards are made available through a generous donation by Alcon Laboratories to AFER. The awards support researchers who are committed to careers as clinician-scientists. As many as five awards are presented in recognition of significant research presented at the ARVO Annual Meeting in a given year by clinician-scientists engaged in basic or clinical vision research. ■

## AFER funds travel grantees

Some 100 travel grantees to the ARVO Annual Meetings have benefitted from AFER support since 1993. In 2008 AFER provided the following awards:

- 5 grantees Oswald and Pauline Lapp Travel Grants
- 1 grantee Grant Wood Balkema Travel Grant
- 1 grantee Richard B. Lolley Travel Grant
- 1 grantee Ramon F. Dacheux, II Travel Grant
- 22 grantees Retina Research Fund/Joseph M. and Eula C. Lawrence Travel Scholarships (RRF/Lawrence) ■



The Joseph M. and Eula C. Lawrence Travel Scholarships were awarded to 22 recipients for their work in retina research.



## Thank you Friends of John Dowling!

AFER is tremendously thankful for the generosity and support of each individual or organization that participated in the Friends of John Dowling Campaign. For a list of all AFER donors, visit [www.arvofoundation.org](http://www.arvofoundation.org).

Gary W. Abrams, MD  
 Alan R. Adolph, PhD  
 Lama A. Al-Aswad, MD  
 Alcon Laboratories, Inc.  
 Joanne G. Angle, MLS, MPA  
 Paul Artes  
 The Association for Research  
 in Vision and Ophthalmology  
 Sally S. Atherton, PhD  
 Gautam Awatramani  
 Dimitri Azar, MD  
 Nathalie Azar, MD  
 William Baldrige  
 Robert B. Barlow, PhD  
 Steve Barnes  
 J Bronwyn Bateman, MD  
 Haydee E. P. Bazan, PhD  
 Herman Bazan  
 Nicholas G. Bazan, MD, PhD  
 Janice Benson  
 Eliot L. Berson, MD  
 Kyra Kaplan-Berson  
 Robert E. Besthof, MIM  
 Janet C. Blanks, PhD  
 Robert H. Blanks  
 Stewart A. Bloomfield, PhD  
 Ivan Gy Bodis-Wollner, MD  
 Charles Bosworth, PhD  
 Diane Bovenkamp, PhD  
 Oliver J. Braddick, PhD  
 Dwight A. Burkhardt, PhD  
 Marie E. Burns, PhD  
 Gerald Cagle, PhD  
 Judy Cagle  
 Joseph Carroll, PhD  
 Richard Chappell, PhD  
 Jed Chatterton, PhD  
 Patricia Chevez-Barrios, MD  
 Karen Christensen  
 Cheryl M. Craft, PhD  
 Alan F. Cruess, MD  
 Robert D'Amato, MD  
 Patricia D'Amore, PhD  
 Dalhousie University  
 Reza Dana, MD, MSC  
 Bryan Daniels  
 Nicholas A. Delamere, PhD  
 Carin B. Dohlman  
 Claes H. Dohlman, MD  
 Henry F. Edelhauser, PhD  
 Berndt E. J. Ehringer, MD  
 Audrey Eisenmann  
 Jasmine Ellison  
 Farida Emran, PhD  
 William Erhardt, MD  
 David Eveleth, PhD

James M. Fadool, PhD  
 Paul T. Finger, MD  
 Frederick W. Fitzke, PhD  
 Foundation Fighting Blindness  
 Robert N. Frank, MD  
 Joel G. Freeman, BS  
 Michael Ford  
 Donald Fox, PhD  
 Michael Gilmore, PhD  
 Ilene Gipson, PhD  
 Keith Gordan  
 Peter Gouras, MD  
 Adrienne Graves, PhD  
 Jeffrey Gross, PhD  
 John W. Grunden, PharmD  
 Harvard Medical  
 School-Department of  
 Ophthalmology  
 Linda Hazlett, PhD  
 Thanh Hoang-Xuan, MD  
 John A. Hoepner, MD  
 Thomas Hohman, PhD  
 Donald Hood, PhD  
 David Hunter, MD, PhD  
 Martine J. Jager, MD, PhD  
 Alon Kahana, MD, PhD  
 Jeffrey W. Kalenak, MD  
 Mike Kapin, PhD  
 Herbert E. Kaufman, MD  
 Paul L. Kaufman, MD  
 Eleanor D. Kendrick  
 Shigeru Kinoshita II, MD, PhD  
 Kresge Eye Institute & Wayne  
 State University  
 Ryo Kubota, MD, PhD  
 Alan M. Laties, MD  
 Jennifer H. LaVail, PhD  
 Paul P. Lee, MD  
 Yuk Fai Leung, PhD  
 Brian A. Link, PhD  
 Peter D. Lukasiewicz, PhD  
 Todd Margolis, MD, PhD  
 Richard H. Masland, PhD  
 Elizabeth McKenna, PhD  
 Douglas G. McMahon, PhD  
 Ian Meinertzhagen  
 Cameron Millar, PhD  
 Joan Miller, MD  
 Robert Francis Miller, MD  
 Ishara A. Mills, PhD  
 Chris Muir  
 Angela Munro  
 Patrick Murphy, MD  
 Jay Neitz, PhD  
 Maureen Neitz, PhD  
 Judith Ogilvie, PhD

Richard Ornberg, PhD  
 Deborah C. Otteson, PhD  
 Iok-hou Pang, PhD  
 Christopher L. Passaglia, PhD  
 Christopher A.  
 Paterson, PhD, DSc  
 Raj Patil, PhD  
 Andrea Pecoraro  
 John S. Penn, PhD  
 David R. Pepperberg, PhD  
 Brian Perkins, PhD  
 J. Mark Petrash, PhD  
 Pfizer Ophthalmics  
 Mary Prudden  
 Edward N. Pugh Jr., PhD  
 Harry A. Quigley, MD  
 Harris Ripps, PhD, DSc  
 Jeanne Harris Ripps  
 Carl Romano, PhD  
 Stephen Rose, PhD  
 Botond Roska  
 Stephen J. Ryan, MD  
 Vin Ryan  
 Santen Inc.  
 Vijay P. Sarthy, PhD  
 Susan Schneider, MD  
 Timothy Schoen, PhD  
 Laura Schulz  
 Pamela Sieving, MLS  
 Paul A. Sieving, MD  
 Patricia Sluder  
 Lois Smith, MD  
 Janet Sparrow, PhD  
 Devesh Srivesteva, PhD, JD  
 Paul Sternberg Jr., MD  
 Enrica Strettoi, PhD  
 Diane S. Swift  
 Bruce Szamier, PhD  
 Stuart Trenholm  
 Radouil Tzekov, MD, PhD  
 Tracy Valorie, BS, MBA  
 Carl-Frederick Wachtmeister  
 Lillemor M.B.  
 Wachtmeister, MD, PhD  
 Andrew Watson, PhD  
 David F. Weeks BS, PhD  
 Xiangyun Wei, PhD  
 Jane Werner, MD  
 Sheila K. West, PhD  
 Janey Wiggs, MD  
 Samuel M. Wu, PhD  
 Xiong-Li Yang, PhD  
 King-wai Yau, PhD  
 Fu Shin Yu, PhD  
 Charles Zucker, PhD ■



## Dowling Society seeks additional members

The Dowling Society is a special network of dedicated donors who value and encourage novel eye and vision research. Members of the Dowling Society have demonstrated their commitment to vision research with a gift of \$10,000 or more to AFER.

A one-time contribution of \$10,000 is welcomed, but not required to join the Society. AFER can help you develop a customized investment plan to donate \$10,000 at a pace suitable for you.

Thank you to the 2008 members of the Dowling Society.

Gary W. Abrams, MD  
 Joanne Angle, MLS, MPA  
 Robert B. Barlow, PhD,  
 and Patricia Barlow  
 Haydee E. P. Bazan, PhD,  
 and Nicolas G. Bazan,  
 MD, PhD  
 Bernard Becker, MD  
 Eliot L. Berson, MD, and  
 Kyra Kaplan-Berson  
 Laszlo Z. Bito, PhD  
 Cheryl M. Craft, PhD  
 John E. Dowling, PhD  
 Paul L. Kaufman, MD,  
 and Margaret Kaufman  
 Shigeru Kinoshita, MD,  
 PhD  
 Janice Oliva  
 Sheila K. West, PhD ■



# The American Society for Cell Biology Annual Meeting

December 13–17, 2008 • San Francisco

It's the science that...

## **Illuminates Hot Topics**

- Cell Biology in the Genomic Era
- Models for Stem Cell Biology
- Development and Regeneration
- Genomic Instability and Cancer
- Nuclear Organization and Disease

## **Spotlights Questions, Charts Directions**

- Impacts of Stem Cell Research on Cell Biology
- Cellular Basis for Motor Neuron Degeneration
- Dynamic Nature of the Nucleoplasm
- Stress Responses
- 3-D Electron Microscopy
- Cellular Response to Infectious Agents

It's what you can't find elsewhere...

- Multiple career-focused sessions
- CellSlam fun
- Celldance image and video contest winners presented
- Workshops on teaching tools

## **Important Deadlines**

**Regular Abstract Deadline** – September 3  
(for poster consideration ONLY)

**Early Registration Deadline** – October 7

**Late Abstract Deadline** – October 16

See you there!

[www.ascb.org/meetings](http://www.ascb.org/meetings)

## Renew your dues

The 2009 renewal notices have been mailed; this is the only printed notice you will receive. Renew quickly online at [www.arvo.org](http://www.arvo.org) using a Visa or MasterCard.

**Remember, your 2009 membership dues must be paid before you can submit an abstract.**

## ARVO adds Assistant Director, Science Policy and Programs

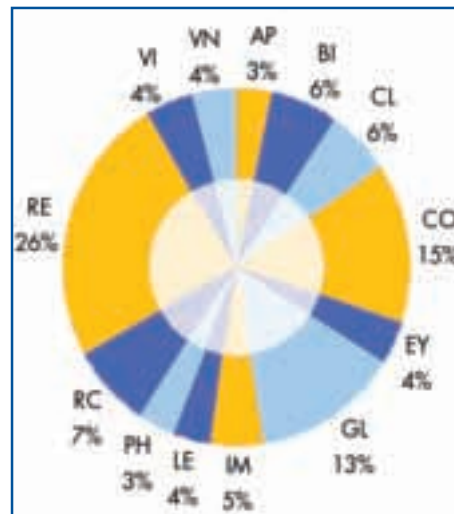


Bobbie Austin, PhD

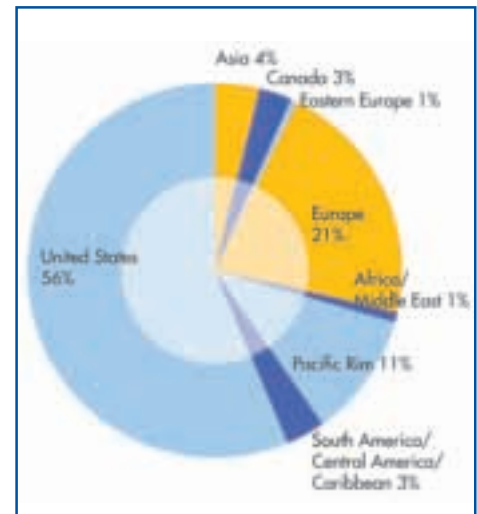
**B**obbie Ann Austin, PhD, has joined ARVO as the new Assistant Director, Science Policy and Programs. She will be responsible for developing scientific policy statements, collaborating with committees and members on developing and enhancing scientific content of our programs, and serving as a scientific advisor. Dr. Austin has a background in vision science that includes graduate studies in a myopia research lab (University of North Dakota, School of Medicine and Health Sciences), a postdoctoral fellowship to study ocular herpes simplex virus 1 infections (University of Oklahoma, Health Sciences Center), and an intramural training fellowship to study age-related macular degeneration (NIH/NEI Laboratory of Immunology). ■

## Demographics update: Who are ARVO members?

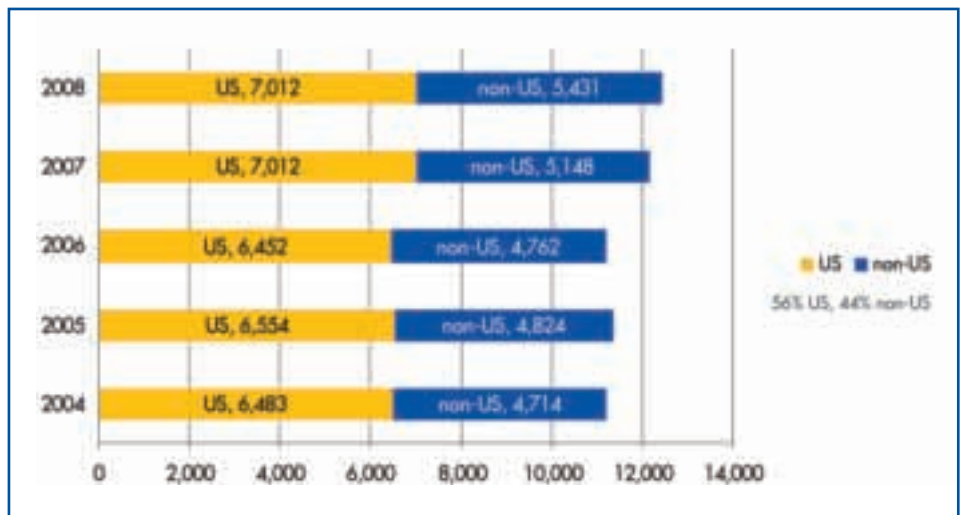
Membership by section



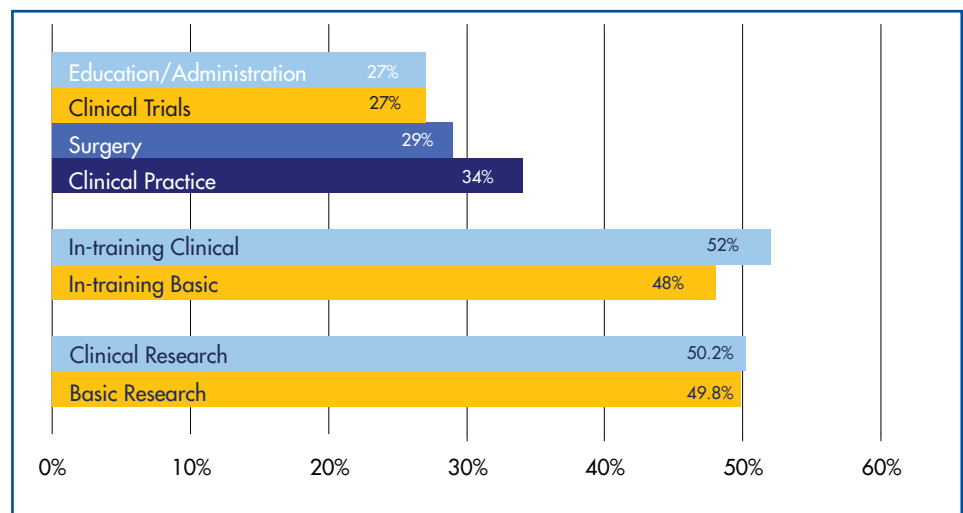
Membership by region



Membership trends (as of August 1, 2008)



## What our members do





## Help us keep member information secure

The ARVO Member Directory contains proprietary and confidential information. It is designed as a service to ARVO members for personal, non-commercial and informational use only. Any commercial use or other solicitation is strictly prohibited. ARVO does not distribute e-mail addresses, phone or fax numbers to outside groups for any purpose. Please help keep member information secure by not sharing your login and password!

Anyone interested in mailing information to ARVO members, such as meeting announcements, etc., may rent the mailing list. For additional information see [www.arvo.org/maillinglist](http://www.arvo.org/maillinglist). ■

## IOVS: Go Green

Do you read your printed copy of *IOVS*? How many articles are relevant to your expertise? Have you tried using the online version? ARVO is asking members to consider opting out of the print version to reduce the number of copies printed and mailed.

All members have access to *IOVS* online. You can print out articles that you want to keep, and even request to receive weekly Publish Ahead of Print e-alerts to see scientifically-approved articles before they are published.

Just check "No" on the *IOVS* option on your membership renewal, and access *IOVS* online. Activating your online subscription is easy.

1. Go to [www.iovs.org/cgi/activate/basic](http://www.iovs.org/cgi/activate/basic).
2. Enter your ARVO member number.
3. Complete your contact information and create your username and password.
4. Sign up to receive monthly Tables of Contents by e-mail.

Go green and get out from under those piles of unread journals! ■

## Find a meeting, advertise a meeting

It's free on the ARVO Meetings Calendar at [www.arvo.org/calendar](http://www.arvo.org/calendar).

- Search by title, keywords, location, sponsoring organization or date
- Deadlines for abstracts, registration and housing
- CME availability
- Detailed descriptions of the meetings
- Print individual meeting announcements.

Just click "Add Meeting" to submit your courses, meetings and conferences to the calendar. ■

## In memoriam

Ruben Adler, MD (RC)  
December 31, 2007

Judah Folkman, MD (AP)  
January 15, 2008

Arthur Ginsburg, PhD (VI)  
January 1, 2008

Muriel Kaiser-Kupfer (CL)  
January 10, 2008

James Jumblatt, PhD (CO)  
January 26, 2008

Loren Riggs, PhD (VI)  
April 8, 2008

Submit notifications to  
[bhollis@arvo.org](mailto:bhollis@arvo.org).



Executive Vice President Sally Atherton helps staff the ARVO booth at the 2008 World Ophthalmology Conference in Hong Kong.

## ARVO at other meetings

Visit the ARVO exhibit booth:

**European Association for Vision and Eye Research**

October 1–4  
Portoroz, Slovenia

**American Academy of Optometry**

October 22–25  
Anaheim, California  
Booth 929

**American Academy of Ophthalmology**

November 8–11  
Atlanta, Georgia  
Booths 4810-4812

**Society for Neuroscience**

Nov 15–19  
Washington, DC  
Booth 3332

See page 18 for information about ARVO sessions at these meetings. ■

## Upcoming ARVO events



**January 15–18, 2009  
Hyderabad, India**

The second Asia-ARVO meeting is being organized by the Indian Eye Research Group and hosted by the L.V. Prasad Eye Institute. Register by October 31 and save \$50. For information about the scientific program, travel and other information, see [www.arvo.org/asiaarvo](http://www.arvo.org/asiaarvo).



**May 1–2, 2009  
Fort Lauderdale**



**May 1–2, 2009  
Fort Lauderdale**

This compelling meeting on imaging in the eye will present research on current advances as well as state-of-the-art technology in ophthalmic imaging. Learn scientific principles behind ophthalmic imaging, discuss clinical applications of imaging technologies and explore new research and recent advances in imaging. See [www.arvo.org/isie](http://www.arvo.org/isie).



**ARVO Summer Eye  
Research Conference**

**July 31–August 1, 2009  
Bethesda, MD**

Plan to attend the ARVO 2009 SERC on “Ophthalmic drug delivery systems for the treatment of retinal diseases: basic research to clinical application (a bench to bedside approach).”

For details, see [www.arvo.org/serc](http://www.arvo.org/serc). ■

## ARVO co-sponsors symposia

ARVO continues to collaborate with other societies and co-sponsor symposia at other meetings, including:

### European Association for Vision and Eye Research (EVER)

October 1–4, Portoroz, Slovenia

- September 30: Design and Management of Clinical Trials in Eye Research. Details and registration information: [www.ever.be/view\\_session.php?ses\\_id=751](http://www.ever.be/view_session.php?ses_id=751). Separate registration required.
- October 2, 11:30am–3pm: Making the Case for Funding Eye Research. Session details at [www.ever.be/view\\_session.php?ses\\_id=718](http://www.ever.be/view_session.php?ses_id=718).

### American Academy of Optometry

October 22–25, Anaheim, California

- October 22, 2–6pm: Assessing the Structure and Function of the Visual System Using Novel Imaging Technologies. Session details: [www.aaopt.org/meetings/meeting8/Education/Symposia/index.asp](http://www.aaopt.org/meetings/meeting8/Education/Symposia/index.asp)

### American Academy of Ophthalmology

November 8–11, Atlanta, Georgia

- November 8, 8am–4:30pm: Design and Management of Clinical Trials in Eye Research. Details at [www.arvo.org/ctes](http://www.arvo.org/ctes). Separate registration required.
- November 11, 8:30–10am: How Does Immunology Help in Treating Ocular Oncology Patients? Session details: [www.aao.org/meetings/annual\\_meeting/program/onlineprogram08.cfm](http://www.aao.org/meetings/annual_meeting/program/onlineprogram08.cfm); enter event number SYM27. ■



ARVO Foundation for Eye Research  
**Clinical Trials  
Education Series**

Clinical trials protocols and requirements are changing, and ARVO is helping members keep up with a series of courses developed especially for vision researchers.

Sponsored by the ARVO Foundation for Eye Research (thanks to a generous donation from Allergan), the Clinical Trials Education Series presents state-of-the-art approaches to the design, construction and execution of clinical trials in ophthalmology.

An advanced course was held September 3–6 in New Jersey and will be repeated in other locations in 2009 and 2010. The director of this year’s course, Curtis Meinert, PhD (Johns Hopkins University), along with a world-renowned faculty, presented three days of sessions and a practicum covering high-level issues in clinical trial methodology, analysis and management.

The series will continue with several one-day basic clinical trials courses at key ophthalmic meetings worldwide:

- September 30: European Association for Vision and Eye Research (EVER) Annual Congress, Portoroz, Slovenia
- November 8: American Academy of Ophthalmology Annual Meeting, Atlanta, GA
- January 15, 2009: Asia-ARVO Meeting, Hyderabad, India
- May 2, 2009: ARVO Annual Meeting, Fort Lauderdale, FL

A Clinical Trials Online Learning Center will be launched in late 2009.

For more information, go to the Clinical Trials Education Series Web site, [www.arvo.org/ctes](http://www.arvo.org/ctes), or contact Jot Grammer, [jgrammer@arvo.org](mailto:jgrammer@arvo.org), +1.240.221.2933. ■

## 2008 SERC showcases immune response in the eye

The ARVO Summer Eye Research Conference, "Ocular Autoimmunity and Inflammation," was held July 31–August 2 in Monterey, CA. It was attended by 85 scientists for an exciting three days of scientific sessions and networking opportunities.

Course directors Rachel Caspi, PhD (National Eye Institute, National Institutes of Health) and Justine Smith, MBBS, PhD (Oregon Health & Science University) convened a notable faculty of experts from around the globe to advance the understanding of the involvement of the immune system in pathogenesis of ocular inflammatory and degenerative disease.

Sessions covered topics such as immune response in the eye, animal models of ocular inflammation and autoimmunity, mechanisms of inflammation and autoimmunity, ocular imaging in health and disease, and new therapeutic approaches. Mark S. Anderson, MD, PhD, UCSF, commented, "It was a very worthwhile conference. I particularly enjoyed the lively discussions and getting to meet all of the investigators in a laid-back atmosphere" ■



Scott Whitcup, Robert Nussenblatt, Todd Margolis and Douglas Jabs at the 2008 summer conference in Monterey, CA.

## ISOCB joins ARVO

The International Society for Ocular Cell Biology (ISOCB) is merging with ARVO. ARVO co-sponsored the recent ISOCB Conference, September 2–5 in San Diego, CA. In the future, the meeting will be presented as the ARVO/ISOCB Meeting, replacing the ARVO Ocular Cell and Molecular Biology (OCMB) Conference. Former members of the ISOCB are asked to become ARVO members and pay the same dues as regular ARVO members. Separate dues will no longer be collected for ISOCB. Plans are already underway for a 2009 meeting in Portugal. For more information, go to [www.arvo.org/isocb](http://www.arvo.org/isocb) or contact Rhonda Williams, [rwilliams@arvo.org](mailto:rwilliams@arvo.org), +1.240.221.2908. ■

## ARVO accredited as a CME provider

This spring ARVO finalized a rigorous accreditation process with the Accreditation Council for Continuing Medical Education (ACCME) and is proud to announce that we are now accredited by the ACCME to offer AMA PRA Category 1 Credits™ to physicians.

Continuing Medical Education (CME) credits are essential to every physician. As an accredited provider, ARVO will no longer need to provide CME credit through a joint sponsorship agreement with the Federation of American Societies for Experimental Biology (FASEB); CME credit will be offered directly by ARVO.

Physicians can look forward to many new ARVO educational initiatives for which CME will be available in a variety of formats, such as live meetings and webcasts, journal-based learning, enduring materials both in print and online, and more.

ARVO would like to thank Todd Margolis, ARVO president and chair of the ARVO CME Committee, for his expertise and leadership during the accreditation process. Dr. Margolis spent many hours reviewing the Self Study Report and was a vital part in the interview with the ACCME.

For more information on upcoming educational opportunities, visit [www.arvo.org](http://www.arvo.org) or contact Jot Grammer at [jgrammer@arvo.org](mailto:jgrammer@arvo.org). ■

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## NEI receives \$3.5 million in supplemental funding

### Enacted: \$150 Million in FY2008 Supplemental NIH Appropriations

On June 30, President Bush signed into law a Supplemental Appropriations bill, passed overwhelmingly by the House (416-12) and the Senate (92-6), which included a science package of \$150 million in additional FY 2008 National Institutes of Health (NIH) funding, as well as \$62.5 million for the National Science Foundation (NSF). The National Eye Institute's (NEI) share of these supplemental funds is \$3.5 million, for an FY2008 total of \$670.7 million, or a 0.5% increase over FY2007. This will go primarily to fund R01 grants, about eight additional, as well as some Center grant and bridge award funding. Bipartisan Senate leaders, specifically Senate Labor, Health and Human Services, and Education (LHHS) Appropriations Subcommittee Chair Tom Harkin (D-IA) and Ranking Member Arlen Specter (R-PA), had directed these additional NIH resources to fund another 246 research grants.



Senator Arlen Specter (R-PA) introduces S. 3272, an emergency appropriations bill to increase NIH funding by \$5.2 billion in FY2008.

Senator Harkin) made a statement on the Senate floor introducing Senate Bill 3272, which would make emergency supplemental appropriations of \$5.2 billion for the NIH in FY2008 — \$4 billion would be provided to the Office of the NIH Director for prorating to Institutes and Centers, and \$1.2 billion would go to the National Cancer Institute (NCI) to enhance cancer research. Senator Specter, who just completed a chemotherapy regime for Hodgkin's disease, noted that these emergency appropriations were necessary to restore NIH's purchasing power, which has been eroded by 13% due to flat funding and the impact of biomedical inflation over the past five funding cycles. Whether the supplemental is acted upon in the remaining days of the 110th Congress is currently unclear. However, it is a dramatic statement about the decline of the NIH's purchasing power that provides a basis for future actions to increase funding.

### Proposed: \$5.2 Billion in FY2008 Supplemental NIH Appropriations

On July 16, Senator Specter (on behalf of

### Proposed: FY2009 NEI Increases of \$23.6 Million (House), \$20.2 Million (Senate)

Per the funding chart, both the House and Senate LHHS Appropriations Subcommittees reported out FY2009 spending bills that would increase NIH funding by \$1 billion (inclusive of Global AIDS funding and other transfers) and \$20 million-plus increases for the NEI. Both bills match the biomedical inflation rate of 3.5% for increased funding overall for the NIH, which had been proposed to be flat-funded in the President's proposed FY2009 budget. The House bill, which is slightly more generous, has yet to be reported out of full Committee due to partisan disputes. Both bills are unlikely to be acted on until the 111th Congress convenes in late January 2009. ■

	FY2008+ Final	FY2009 Budget	FY2009* House	FY2009 Senate
NIH	\$29.38 B	\$29.2 B 0%	\$30.4 B +3.9%	\$30.2 B +3.5%
NEI	\$670.7 M	\$667.8 M +0.1%	\$690.7 M +3.5%	\$687.3 M +3.0%

+ 2008 figures include original appropriations sums of \$29.2B NIH/\$667.1M NEI plus supplemental appropriations of \$150M NIH/\$3.5M NEI.

\* House figures are from Subcommittee mark as full Committee markup has not yet occurred and reflect percent increase over base FY2008 appropriation.

## Capitol Hill briefing highlights human gene therapy trials

On June 24, two top retinal researchers educated Congressional staff about their landmark clinical trial in which they used gene therapy to restore some vision in three young adults who were virtually blind from a severe

form of retinitis pigmentosa known as Leber congenital amaurosis (LCA). Seventy people attended the briefing, which was hosted by the Alliance for Eye and Vision Research (AEVR) and the Foundation Fighting Blindness (FFB).

Jean Bennett, MD, PhD, the study's scientific director, and Al Maguire, MD, the study's principal investigator, both of whom are at the University of Pennsylvania and are ARVO members, provided details of their clinical study, which is taking place at the Children's Hospital of Philadelphia (CHOP). The researchers noted that critical funding from NEI and the Foundation Fighting Blindness, a non-profit organization that funds research to cure retinal degenerative diseases, made their advancement possible.

Paul Sieving, MD, PhD, Director of NEI, called the researchers' work a "stunning outcome" and a great testament to the value of research funding. He added, "This effort is the tip of the iceberg. This validates the process of putting genes in the body for the purpose of restoring vision, liver function, heart function and treating many other conditions."

Initial results of the study were published in the *New England Journal of Medicine* on April 27, 2008. News of the advancement was carried by dozens of major media

outlets around the world including: ABC (Good Morning America), NBC, CBS, *The Wall Street Journal* and *The Washington Post*.

Seven years ago, Dr. Bennett came to Capitol Hill to share the results from a preclinical study of the same gene therapy, which was at the time successfully giving vision to dogs born blind from LCA. During her June 24 Hill visit, she said, "We predicted seven years ago at a similar venue that this approach could cure blindness in humans. We are thrilled to be here today to tell you that this prediction appears to be coming true." Dr. Maguire, a vitreoretinal surgeon, provided technical details of the

study, including how the corrective gene is delivered to the retina using a therapeutic man-made virus or adeno-associated virus (AAV) — an approach that is also being used in studies of diseases such as muscular dystrophy and hemophilia.

Though the primary goal of the Phase I study at CHOP is to ensure safety of the treatment, Dr. Maguire noted that the patients' vision was also tested objectively and subjectively. After treatment, they were able to read several lines on an eye chart.

They also had improved peripheral vision and better eyesight in dimly lit settings. Dr. Maguire said that he knew the treatment was working well when the patients asked to receive the therapy in their untreated eyes. The investigators will be treating LCA patients as young as eight years old. They believe the most dramatic results will be seen in young children.

In concluding the briefing, Dr.

Sieving put historical perspective on the breakthrough. "The roots of this trial go back many years. A gene that causes this disease, RPE65, was found 15 years ago," he said. Dr. Sieving also noted that the

discovery that vitamin A is essential for vision — a Nobel-Prize-winning finding made by George Wald, MD (h), PhD, in the 1930s — was also a crucial step in the recent gene therapy advancement. "This is a very exciting time for all of medicine," he added. "Because this is a time when charitable and taxpayer dollars are being converted into treatments for people."

The research teams working on these projects also received funding from private sources Research to Prevent Blindness and Fight for Sight. ■



*"This validates the process of putting genes in the body for the purpose of restoring vision, liver function, heart function and treating many other conditions."*

*—NIH Director Paul Sieving*



ARVO members and University of Pennsylvania researchers Jean Bennett, MD, PhD, and Al Maguire, MD, respond to attendee questions.



NEI Director Paul Sieving, MD, PhD, provided an historical context to the current human gene therapy trials.



Dr. Bennett and Dr. Maguire met with Elizabeth King (right), Senior Legislative Assistant to Rep. Chaka Fattah (D-PA), in whose district the University of Pennsylvania is located. Rep. Fattah is a member of the House Committee on Appropriations.



Left to right: Yewlin Chee and Lauren Stein, two students conducting research at the University of Pennsylvania, speak with Norm Lanphear of the American Academy of Ophthalmology.

## Zerhouni to Senate: How a \$1 billion increase should be spent

On July 16, after an opening statement by Chairman Harkin, NIH Director Elias Zerhouni testified before the LHHS Appropriations Subcommittee on NIH's accomplishments and challenges. He was joined by four Institute directors: Francis



NIH Director Elias Zerhouni

Collins, MD, PhD (National Human Genome Research Institute); Anthony Fauci, MD (National Institute of Allergy and Infectious Diseases); Elizabeth Nabel, MD (National Heart, Lung, and Blood Institute); and John Niederhuber, MD (National Cancer Institute).

Dr. Zerhouni expanded on previous testimony about NIH advances that are transforming the research and healthcare practice paradigm to one that is predictive, personalized, preemptive and participatory. He noted that the almost-daily announcement of research findings into genes associated with specific diseases (including AMD) which has emerged from the Human Genome Project represents a "revolution of knowledge" that NIH must take advantage of by being flexible and adaptive. For example, he

stated that NIH must follow up on these gene discoveries by: confirming the findings in large population-based studies; better understanding the complexity of the associated disease process and how the biology works to identify potential targets; and translating the discoveries into prevention, diagnosis and treatment.

Regarding NIH's budget, Dr. Zerhouni stated that "medical research is a long-term process that does not operate on a 12-month cycle" and that predictable funding is necessary to sustain the research enterprise. He added that a reasonable success rate is also necessary to maintain the scientific infrastructure (for the first time, the FY2009 NIH success rate is expected to fall under 18%), especially to encourage young and first-time investigators.

When asked what NIH would do with a \$1 billion dollar increase, Dr. Zerhouni said that the first priority should be funding young/first-time investigators by putting a "lock box" on a specific amount of appropriations. He noted that "NIH should be funding at least 3,000 new scientists a year, and it is currently less than that." (FY2008 funding for new/first-time investigators is \$60 million, and proposed FY2009 funding is \$108 million.) Other key NIH priorities with increased funding include: encouraging risk-taking/innovation in research; having adequate resources to conduct clinical trials; and encouraging collaboration across disciplines. ■

## Extramural research conflict of interest

The Report Language accompanying the Senate's proposed FY2009 LHHS Appropriations bill requires the Secretary of Health and Human Services (DHHS) to issue an Advance Notice of Proposed Rulemaking to solicit public comment in advance of modifying regulations governing financial conflicts of interest among extramural investigators receiving grant support from the NIH. NIH Director Elias Zerhouni explains that:

- DHHS has already put into effect rigorous safeguards regarding conflict of interest for NIH personnel and intramural investigators.
- There is value to a well-managed interaction

between the public and private funding of research, and it is up to Congress, the NIH and the receiving academic institutions to strike that balance and have a transparent process.

- Any regulation must stratify the risk associated with public/private interaction.
- Receiving academic institutions need to explore cultural change. Enforcing any policy may need to be done through a third-party, independent organization that is more rigorous than "self-policing."

NAEVR has already informed member networks about potential DHHS actions and will continue to monitor future actions. ■



**2008**  
Your Candidates,  
Your Health.

**R**esearch!America has launched Your Candidates, Your Health to enable voters to read more about candidates' positions on various health-related issues, including NIH funding. Visit [www.yourcandidatesyourhealth.org](http://www.yourcandidatesyourhealth.org). ■



## AEVR/NAEVR celebrate 15th anniversary

On June 9, AEVR and NAEVR celebrated their 15th anniversary with a reception in the foyer of the Rayburn House office building. At the event, NAEVR released its updated joint fact sheet with Research!America entitled *Vision and Blindness: Investment in Research Saves Lives and Money*. ARVO, along with the American Academy of Ophthalmology and the Association of University Professors of Ophthalmology, is a founding member of the Alliances.

Rep. Pete Sessions (R-TX) provided an inspirational welcome in which he lauded the 55 member organizations for their efforts to prevent blindness and to save and restore vision. Earlier in the evening, Congressional Vision Caucus co-Chair Rep. Gene Green (D-TX) mingled with attendees, who included Congressional staff, administration representatives, coalition partners and AEVR/NAEVR contributor organizations.

In opening comments, AEVR and NAEVR Boards President and ARVO member Stephen Ryan, MD (Doheny Eye Institute), acknowledged a letter of congratulations from NIH Director Elias Zerhouni which read, "I am pleased to recognize 15 years since the founding of AEVR and NAEVR and I applaud your unwavering efforts to preserve the nation's commitment to eye and vision research." NIH was represented at the event by Alan Krensky, MD, Director of NIH's Office of Portfolio Analysis and Strategic Initiatives, which manages the NIH common fund for trans-Institute research. Dr. Ryan said, "During the past 15 years, we have seen dramatic breakthroughs in vision research emerging from the NEI, from understanding the genetic basis of eye disease to developing treatments that save and restore vision." As a practicing ophthalmologist, he added "I can assure you that these therapies are having a fundamental impact on

the productivity, independence and quality of life of all Americans."

Research!America President Mary Woolley highlighted details from the fact sheet and noted that her organization's polling data consistently demonstrate that Americans want more spent on medical research, even if it meant an increase in their taxes. NEI Director Paul Sieving thanked AEVR/NAEVR for sharing the message about the value of the research emerging from the NEI, including the recently released initial results from human gene therapy trials for Leber congenital amaurosis (LCA), a debilitating form of childhood blindness (see pages 14 and 20).

In introducing the last speaker, Hyman Shapiro, who is the featured patient on the fact sheet, AEVR/NAEVR Executive Director James Jorkasky emphasized that the focus of the Alliances' work is ultimately patients with vision impairment and eye disease. Mr. Shapiro related his experience with AMD, noting his involvement in the Age-Related Eye Disease Study (AREDS), an NEI-funded study which demonstrated that high levels of dietary anti-oxidants and zinc can reduce the risk of progression to advanced AMD by a factor of 25 percent. He is hopeful that dietary supplements, coupled with the new AMD treatments also emerging from NEI-funded research, can maintain his remaining vision. ■



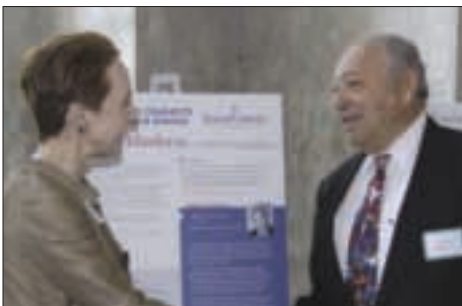
AEVR/NAEVR Boards President Stephen Ryan, MD (Doheny Eye Institute)



Rep. Pete Sessions (R-TX) provides a welcome.



Left to right: NAEVR Advocacy Manager David Epstein, Rep. Gene Green (D-TX) and AEVR/NAEVR Executive Director James Jorkasky



Left to right: Research!America President Mary Woolley and patient Hyman Shapiro in front of his featured profile on the joint RIA/NAEVR fact sheet *Vision and Blindness*



Left to right: ARVO member Craig Geist, MD (George Washington University), and NEI Director Paul Sieving



Left to right: ARVO Executive Director Joanne Angle and NIH's Alan Krensky, MD (Office of Portfolio Analysis and Strategic Initiatives)

## Gene transfer: Momentous and challenging

This past summer I was invited to Capitol Hill to take part in a Congressional briefing with Drs. Jean Bennett and Albert Maguire of the Scheie Eye Institute to discuss gene transfer and the Leber congenital amaurosis (LCA) clinical trial results. As I listened to the presentation, I was struck by the momentous nature of this work.



Paul A. Sieving,  
National Eye  
Institute Director

For much of the 1990s, NEI-sponsored investigators searched for gene variants that caused eye disease. This search was very productive. Nearly 500 genes have been implicated. My NIH colleague Dr. Francis Collins has expressed astonishment in that number, as there are only about 2,000 genes thus far implicated in any form of human disease. All these discoveries have presented enormous yet daunting opportunities to develop treatments for previously incurable diseases.



The RPE65 gene was discovered in 1993. At the time, it was just one among many genes found in ocular tissue and its importance was not yet understood. It was soon discovered to play a role in LCA. Providentially, researchers quickly identified animal models that revealed an underlying pathology that left retinal structure intact. This form of LCA was among the best possible candidate diseases to explore the potential of gene transfer as treatment.

The advantages of ocular gene transfer include immune privilege, noninvasive diagnostic assessment and the need for relatively small quantities of vector.

Despite all of this, translational research is extremely challenging and complex. It has required investigators from many disciplines to realize this effort. It is truly a collaborative accomplishment worth celebrating — and repeating. We have reached a transformative moment in medicine that opens the door to intervene in many eye diseases. ■

— Paul A. Sieving, MD, PhD  
Director  
National Eye Institute

The region's most valuable event  
for eye researchers ...



January 15–18, 2009  
Hyderabad International Convention Centre  
Hyderabad, India

### Key dates

**Early registration deadline**  
October 31

**Advance registration deadline**  
November 30

**Late registration**  
December 31



The Association for Research  
in Vision and Ophthalmology

[www.asiaarvo2009.org](http://www.asiaarvo2009.org)

## NEI's Jack McLaughlin Retires



National Eye Institute deputy director Jack McLaughlin, PhD has retired after 32 years at the NIH. Jack held several other key positions with the NEI including acting director

of the institute and director of the Division of Extramural Research.

"NEI has prospered under his careful attention these many years," said NEI director Dr. Paul A. Sieving. "I want to congratulate Jack on his exemplary service to the NEI and to NIH, as well as to the entire vision research community across the country and the world." ■

## The National Advisory Eye Council: Who, what, how

National Eye Institute Acting Deputy Director Loré Anne McNicol, PhD, reviews the workings of the National Advisory Eye Council.

### Membership

The National Advisory Eye Council (NAEC) consists of 12 members appointed by the secretary of the Department of Health and Human Services (DHHS) and five nonvoting ex-officio members: the secretary; the director of National Institutes of Health (NIH); the director of National Eye Institute (NEI); the chief medical director of the Department of Veterans Affairs; and the assistant secretary of Defense for Health Affairs (or their designees). Members generally serve overlapping four-year terms and meet three times a year.

Council members are expected to be knowledgeable with respect to the mission of NEI. Members of NAEC are advocates for all who have an interest in advancing opportunities for eye and vision research.

### Peer review

NIH uses a two-tiered system for evaluating grant applications. NIH initial review groups, or study sections, are responsible for the first level of peer review in which subject matter experts evaluate the scientific and technical merit of grant applications. The National Advisory Councils or Boards are the federal advisory groups responsible for the second level of peer review, in which scientific and lay representatives make recommendations based on program priorities and policy considerations.

NAEC is responsible for this second level review of grant applications assigned to the NEI.

### Reviewing grant applications

Consideration of scientific merit is generally limited to determining if the first level review was adequate. NAEC's review is not intended to duplicate the intensity or the level of detail of the initial review, or to second-guess its recommendations regarding scientific merit.

If NAEC believes the initial review of an application was inadequate, it may defer the application for re-review.

Applications receive special NAEC discussion when the research proposed has been identified by either Council or NEI extramural staff as being of particular interest (e.g., consideration

of high program relevance) or concern. NAEC can designate a grant application as having "high program relevance." Such applications are judged to have significant scientific merit in addressing a designated priority or supporting an NEI program goal or objective and yet, would ordinarily not be in the funding range. NEI funds nearly all applications that receive the "high program relevance" designation. Approximately 10 out of 1,200 competing applications receive this designation each year.



### Advice on NEI programs and policies

NAEC's impact on vision research extends far beyond reviewing grant applications.

NAEC recommendations form the basis for NEI funding policy taking into account prior commitments for active grants, the estimated numbers and costs of competing applications, success rate estimates, the distribution of funds among the different funding mechanisms, and more.

NAEC convenes workshops and conferences and a Vision Research Program Planning activity. Program planning enlists the efforts of members of the vision research community and others who have special expertise to work with NEI staff in the development of long-range plans for vision research.

The goal of the most recent cycle of Council/NEI planning was realized with the publication of "National Plan for Eye and Vision Research" in 2004. This five-year plan is the latest in a series of national vision research plans that began in 1974 and have been updated at roughly three- to five-year intervals as a joint effort of NAEC, NEI staff and leading representatives of the vision research community.

NAEC has been a strong advocate of funding strategies which maximize opportunities for the individual investigator. NAEC continues to recommend that NEI's first funding priority for basic research should be the individual, investigator-initiated research grant and not program projects or any other type of "umbrella" mechanism of support. The impact of NAEC's strong advocacy is apparent when one considers that NEI devotes proportionately more of its extramural resources to traditional research project grants (R01-type) than does any other Institute at NIH.

For details about NAEC's responsibilities and operations, visit [www.nei.nih.gov/about/naec](http://www.nei.nih.gov/about/naec). ■

## National Advisory Eye Council

**Scott W. Cousins, MD (11)**  
Duke University Eye Center

Ronald J. Gardner, JD (11)  
National Federation for the Blind

**Charles D. Gilbert, MD, PhD (11)**  
Rockefeller University

**Mae O. Gordon, PhD (10)**  
Washington University School of Medicine

**Gunilla Haegerstrom-Portnoy, OD, PhD (09)**  
University of California, Berkeley

**Lenworth N. Johnson, MD (08)**  
University of Missouri, Columbia

Juan I. Korenbrot, PhD (09)  
University of California, San Francisco

**Todd P. Margolis, MD, PhD (08)**  
F. I. Proctor Foundation

**Mary C. McGahan, PhD (10)**  
North Carolina State University

**Earl L. Smith, III, OD, PhD (08)**  
University of Houston College of Optometry

Val C. Sheffield, MD, PhD (10)  
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*Boldface indicates ARVO member*

*Numbers in parentheses indicate the year the member's term ends*



## A word from the editor of IOVS



Paul L. Kaufman

# IOVS

Investigative Ophthalmology  
& Visual Science

Technology transfer — moving university-based discoveries into the real world — is increasingly accepted and important at all levels, including societal. To quote Thomas Edison, “the value of an idea lies in the using of it.”

In terms of new ideas that may have important biomedical, and eventually clinical implications, the university is a poor and inappropriate vehicle for application; it simply isn't designed at any level to do that.

**Disclosures.** Development, as opposed to basic research, is a corporate endeavor. That can be accomplished either by licensing an idea (intellectual property) to an existing company, or to a company created specifically for this purpose, i.e., a spin-off. The faculty member may be a part owner, CEO, CSO, etc.; and both the faculty member and the university may benefit, financially and in reputation, if the development proceeds. And of course, society may benefit; that is the ultimate goal.

This is all by way of introduction about how journals like ours should handle situations with regard to scientific articles. The

answer is two-fold but simple: Rigorous peer review and complete ad nauseam disclosure of all commercial relationships.

I won't pretend that all our disclosure policies or their implementation are perfect, and “spin-off” has multiple meanings, but if you tell all — who you consult with and for, what you own (stock, IP, etc.) — related to your article, the interest of all parties is protected, including author, university, journal, reader and society.

We require this of our authors; articles are not published without such disclosures in the article itself, and if we discover after the fact that such relationships were neglected or misrepresented, the sanctions can be both public and severe.

### **Double submission and publication.**

A second and equally serious situation is dual submission and double publication — and the corollary, adaptation of art or data without attribution — which are becoming more common across all scientific disciplines, including, I regret to report, ophthalmology.

With software recently developed by large publishers and vendors and the especially keen perceptions of our reviewers who often serve in this capacity for many journals, it is becoming

easier to detect dual submissions and unattributed materials. Web searches, now such a common tool used by all of us, detect duplicate publications.

IOVS published its editorial policy in May 2005 (Frank, RN. *IOVS Statement on “Double Publication” Invest Ophthalmol Vis Sci* 2005;46:1549-1550). I concur with this statement and will continue to enforce the policy.

Editors across our field communicate if dual submission or publication is suspected, and we will continue to compare the articles. Before taking any action, IOVS will contact the author and ask for a response. If the response is reasonable, then no further action is necessary beyond, if indicated, withdrawal of one or both manuscripts. If the explanation is considered inadequate, the editors have agreed that penalties may include contacting the dean of the corresponding author's institution and banning all authors from publishing in the journal for a year or more.

**IOVS submission is up.** On a happier note: submissions continue to increase. In 2007, over 1,600 articles were submitted and, based on year-to-date information, in 2008 we expect to exceed these numbers. In addition, IOVS continues to receive high-quality research from over 50 countries.

In January, IOVS began Publish Ahead of Print (P<P) — online publication of scientifically approved articles as soon as the final files are submitted. Other new online features include citation downloads to the following reference formats: EndNote; Reference Manager; ProCite; BibTeX; RefWorks; and the Medlars Format; and links to the Copyright Clearance Center to obtain permissions.

**e-TOCs.** I encourage you to log in regularly and to sign up for e-mail alerts and eTOCs (electronic tables of contents) so you'll know when the latest issue is available online, which is the day the print edition is mailed.

With the Associate Editors and staff I will continue to explore new sections and features to enhance the usefulness and interest in IOVS. ■

Paul L. Kaufman, MD  
Editor-in-Chief  
IOVS

### Go Green

With your ARVO dues renewal you will be asked to consider dropping the print version of IOVS. All members have access to IOVS online. Please consider this option as we attempt to reduce our environmental footprint. ■

## Journal of Vision increases impact factor (again)

In June, the *Journal of Vision* received its latest Impact Factor. The value was 3.791, which moved the journal up two places to No. 3 out of 45 in the ophthalmology category (Journal Citation Reports® 2008, published by Thomson Scientific).

It also places the journal at No. 1 among journals specializing in vision science. This is the most recent indication of the continuing success of the *Journal of Vision*.

Other recent statistics worth mentioning are:

- Web page views have increased 34% over a year ago
- Web visits have increased 48% over a year ago
- submission rate has increased 71% over a year ago
- publication rate has increased 54% over a year ago
- three recent special issues received 24, 53 and 79 submissions respectively.

Clearly, authors and readers have voted overwhelmingly in favor of the *Journal of Vision* practices: prompt review and publication, open-access, online, high-quality publication of high-quality papers.

Another indicator of the vigor of the journal is the number of downloads of each article. As noted in a recent editorial (<http://journalofvision.org/7/7/i/>), we now compute and publish current counts of the number of PDF downloads

of each article (multiple downloads from the same user count as one download). So far as we know, we are the only scientific journal providing these numbers.

In the most recent accounting in July, the top five articles were downloaded between 3,478 and 1,993 times. While we cannot equate download of an article with actually reading it, these are nonetheless remarkable numbers.

The reader may wonder how downloads of an article compare with more traditional measures of interest such as citations. To learn the answer, look for a forthcoming editorial in the journal in which I describe the results of an analysis comparing the two quantities.

Suffice it to say, the results are clear and compelling, and suggest that download statistics should take their place alongside citations as useful measures of the interest in and significance of individual articles. ■



Andrew B. Watson

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Andrew B. Watson, PhD  
Editor-in-Chief  
JOV

## JOV special issues

### Perceptual Organization and Neural Computation

Highlights new methods and theories in visual psychophysics, visual neuroscience and computational vision that could lead to a more rigorous and complete understanding of perceptual organization. Informed by the work of the Gestalt psychologists, the authors combine rigorous psychophysical techniques with mathematics, computational science and neuroscience to recast our understanding of perceptual organization. <http://journalofvision.org/8/7/>

### Neuroimaging in Vision Science

Collects a number of imaging studies of visual processing and presents them in a journal used by vision researchers of varied methodological persuasions. The collection serves a useful scientific purpose in itself, and may stimulate an increase in the number of imaging submissions to the *Journal of Vision*. <http://journalofvision.org/8/10/>

### Eye movements and the perception of a clear and stable visual world

Natural vision occurs under daunting conditions: Saccadic eye movements abruptly shift the retinal image at intervals ranging from once every several seconds to two or three times per second, bringing an entirely new image to the fovea each time. These abrupt displacements are superimposed on a platform of irregular retinal oscillations that can reach velocities of several degrees per second when head and body, as well as the eye, are free to move. Recent developments have led to insights into how the visual system copes with natural retinal image motions, as well as the neural mechanisms underlying their perceptual suppression. **To be published in September.** ■



<http://jobs.arvo.org>

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The Association for Research  
in Vision and Ophthalmology