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Since 1989
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**Sunday, May 7**

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<tr>
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<tr>
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<tr>
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<tr>
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<td>8:30–10:15am</td>
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</tr>
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† Separate registration required
* All Posters—all first authors will be present
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Disclaimer
The Association for Research in Vision and Ophthalmology (ARVO) Annual Meeting online program materials and print publications aim to promote vision research and scientific discourse for educational purposes. ARVO accepts no responsibility for any products, presentations, opinions, statements or positions expressed; and inclusion of such material within the Meeting, the publications or posted online does not constitute an endorsement by ARVO.

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

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Complete meeting information is available at arvo.org/am
ARVO Policies

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

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

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

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

Continuing Medical Education

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

ARVO designates this live activity for a maximum of 29.75 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity. Please refer to the CME information on page 111.
ARVO Imaging in the Eye Conference
Education Courses
Cross-sectional Group Meetings

Complete meeting information is available at arvo.org/am

Baltimore Convention Center
Level 400

Baltimore Convention Center
Level 300
Complete meeting information is available at arvo.org/am
Complete meeting information is available at arvo.org/am
Complete meeting information is available at arvo.org/am

Baltimore Convention Center
Level 100

Keynote Sessions
Award Lectures
Hall G

Exhibits
ARVO Central
NAEVR Central
Exhibitor Presentations
Concessions

ARVO 2018 Hotels
Honolulu Kick-off
Reception

Poster
Area A

Pratt Street
How to Connect

**Wireless Internet**
Complimentary wireless Internet access will be available in designated areas throughout the convention center. Search for “ARVO” from your respective device’s web browser and click to connect to the network.

Wi-Fi provided by ARVO is used by all attendees and ARVO asks that attendees limit their web use with regards to live streaming and downloading. The ARVO wireless network is an “open” network and does not use any encryption or security measures. We recommend that you avoid making online purchases or accessing personal information over the wireless network.

Follow ARVO 2017 on your favorite networking site for the most up-to-date Annual Meeting information:

- arvoconnect.arvo.org
- twitter.com/ARVOinfo or #ARVO2017
- facebook.com/ARVOinfo
- #ARVO2017
Safety/Security Tips

■ Carry with you the name, address, phone numbers and email of an individual to contact in case of emergency. If you have a mobile phone, enter the emergency contact phone number in your contacts list under the heading “ICE” (In Case of Emergency).
■ Be sure to carry a card describing any medical conditions or allergies you may have, or wear a medical alert tag.
■ Do not wear your Meeting name badge out and about in Baltimore.
■ Avoid unlit streets and always walk with another person when sightseeing or shopping, particularly at night.
■ Do not display large amounts of cash when paying for taxis or other purchases.
■ Do not leave unsecured valuables in your hotel room; lock them in your in-room safe. Hotels are not responsible for items left in your room.
■ At the Meeting, check items at the coat and luggage check area located on the Level 1 of the convention center.
Presenters
All speakers scheduled in session rooms are required to check into the Speaker Ready Room, Room 331, preferably 24 hours, but no later than four hours, before their presentations. Previously uploaded presentations must be reviewed and approved.

All presentation slides and other files must be uploaded in advance of your presentation. Presenters will not be allowed to load PowerPoint slides or other files directly to the computer in the session room.

Personal laptops cannot be used for presentations in the session rooms. Do not bring your laptop or other media devices to the session.

If you are unavoidably delayed, you must still go directly to the Speaker Ready Room.

Speaker Ready Room — Room 331
(410) 649-7420
Friday, May 5 ..........................................................4 – 9pm
Saturday, May 6 .......................................................7am – 6pm
Sunday, May 7 .........................................................7am – 6pm
Monday, May 8 .........................................................7am – 6pm
Tuesday, May 9 ........................................................7am – 6pm
Wednesday, May 10 .............................................. 7am – 6pm
Thursday, May 11 .....................................................7am – 1pm

For details, see Paper, Invited Speaker, SIG Presentation Guidelines: arvo.org/am/abstracts.

Poster Presenters
- Sunday poster presenters are strongly encouraged to register and print their badges on Saturday.
- All posters must be placed 7 – 8:30am on the day of presentation and remain on display the entire day.
- Posters may not be displayed prior to the day of presentation.
- Presenters must be present at their poster boards during their scheduled presentation time and during the “All Posters” session on that day.
- The poster area will be monitored, and “no show” presenters will be recorded and will be ineligible for 2018 abstract submission as First Author.
- Posters scheduled Sunday must be removed by 5:30pm;
Posters scheduled Monday through Wednesday must be removed by 6pm; Thursday posters must be removed by 1:45pm.

- ARVO is not responsible for poster materials left at the end of day. Posters remaining on the poster boards will be removed and discarded.
- For details, see Poster Presentation Guidelines: arvo.org/am/abstracts.

Abstract Withdrawals and Substitute Presenters

If the First Author cannot attend and present, he/she must submit an online withdrawal or an online request for approval of a co-author as substitute presenter. Withdrawals and substitute presenter requests must be received by 2pm (U.S. Eastern Time) the day before the scheduled presentation. Failure to comply will result in rejection of the First Author’s abstract submission to the 2018 Annual Meeting.

For details, see Abstract Withdrawal and Substitute Presenter Policy: arvo.org/am/abstracts.org/am/abstracts.
Business Center
(410) 649-7194/7195
The Center maintains exclusive in-house business center services. The Business Center is located on the 300 Level adjacent to the Pratt Street Lobby. Services include photocopying, faxing, word processing, shipping (hand carry items only), computer access and rental, notary public and cellular phone leasing.

Sat. – Wed., May 6-10 ............................................8am – 5pm
Thurs., May 11 ....................................................7am – 4:30pm

Cash Machine/ATM
There are two ATMs in the building. One is near Room 327 under the escalator that leads to the Ballrooms and one is in Charles Street Lobby.

Mother’s Lounge
The Mother’s Lounge is in the Box Office of the Baltimore Convention Center. Go to registration desk in the Pratt Street Lobby to get access to the lounge.

Coat and Luggage Check (Pratt Street Lobby)
Check your coat, luggage, and other items. Hours:
Sat., 7am – 6:30pm
Sun., 7am – 8pm
Mon., 7am – 9:30pm
Tues., 7am – 7:30pm
Wed., 7am – 8pm
Thurs., 6:45am – 4pm

ARVO is not responsible for items left at the end of the Meeting.

Disabilities or Special Needs
The Baltimore Convention Center is accessible to the disabled. Registrants with questions regarding accessible transportation or other auxiliary requirements should go to the Meeting Management Office, Room 336, for assistance.
First Aid/Onsite Medical Emergencies
For medical emergencies, immediately call 911. The First Aid office is located in the registration area (Pratt Street 300 West Office) in Pratt Street Lobby of the Baltimore Convention Center. The Visit Baltimore information desk is in the registration area as well and can provide information on local dentists, doctors, and hospitals.

Lost and Found
All lost items are taken to Meeting Management Office, Room 336. Please stop by this office, call (410) 649-7422 or email arvoabstracts@arvo.org to see if your item has been found.

Prayer/Meditation Room
The Prayer/Meditation Room is in the Box Office of the Baltimore Convention Center. Go to registration desk in the Pratt Street Lobby to get access to the room.

Recycling
Recycling and compost bins are located throughout the Convention Center. Help ARVO in our efforts to be environmentally friendly and put your trash in the appropriate receptacle.

Visit Baltimore Information Desk
(Pratt Street Lobby)
Information is available on local attractions and activities as well as city maps, water taxi schedules and much more.

Security Services
If you need assistance while at the Baltimore Convention Center, contact the Information Desk in ARVO Central, Exhibit/Poster Hall or Meeting Management in Room 336.

Water Coolers
Water coolers are available in meeting and session rooms throughout the Convention Center.
ARVO 2017 Matching Gift Campaign

Invest in the Future
Your donation to the ARVO Foundation supports the next generation of eye and vision research scientists.

Every dollar you give at ARVO 2017 will be matched by two generous members up to $15,000. Together, we can raise $30,000 to support young scientists pursuing their vision research goals.

Who are the donors?
Join us at the ARVO/Alcon Opening Keynote session on Sunday at 12pm to find out who the generous matching donors are for the ARVO 2017 campaign.

Ways to donate
- Donation boxes at the keynote sessions and outside the Exhibit Hall
- In ARVO Central in the Exhibit Hall
- arvofoundation.org/donate

Complete meeting information is available at arvo.org/am
Lighthouse Guild congratulates Russell N. Van Gelder, MD, PhD University of Washington School of Medicine recipient of the 2017 Bressler Prize for his work in non-visual photoreception and Uveitis

Yoshikazu Imanishi, PhD Case Western Reserve University recipient of the 2017 Pisart Award for his studies of photoreceptor cell membrane functions, particularly as they relate to Usher Syndrome

The Bressler Prize recognizes a mid-career vision clinician-scientist whose leadership, research and service have led to important advancements in the understanding of vision loss, treatment of eye disease, or the rehabilitation of people with vision loss.

The Pisart Award recognizes an early-career vision clinician-scientist whose contributions to vision science have the potential for substantial influence.

For both the Bressler Prize and the Pisart Award, non-clinicians may be eligible if their work has direct, immediate and readily translatable clinical relevance.
Meeting Management Office
Staff will be available in Room 336 throughout the week to assist with Meeting services, Tel: (410) 649-7422, email: arvoabstracts@arvo.org. Hours: Sat., May 6 – Wed., May 10, 7am – 5:30pm; Thurs., May 11, 7am – 3pm.

Press Activities/Press Registration
ARVO invites members of the press to cover paper and poster sessions at the Meeting. Pre-registered press should bring their email confirmation to Room 330 to pick up their badges. Other press may apply for press credentials in Room 330. Please note that research presented at the Meeting may be proprietary or submitted for publication.

The Press Office is located in Room 330, with some space available for interviews. Please inquire in the Press Office, Tel: (410) 649-7421.

Registration (Convention Center)
ARVO 2017 registration will be in Pratt Street Lobby of the Baltimore Convention Center. Registration includes:

Badge Printing
Bring your email confirmation with the QR code to an ExpressPass badge printing kiosk. Simply scan the QR code and receive your badges and/or tickets. QR codes can also be used from your smartphone.

Onsite Registration
Complete the onsite registration form and submit payment at the onsite registration desk.

Onsite Guest
Complete the appropriate registration form and submit payment at the onsite registration desk.

Name badge replacement
Replace a lost or forgotten name badge at the Badge Replacement desk for a $50 fee. Corrections to the badges are free.

Exhibitor registration
All pre-registered exhibitors should print their confirmation and bring it with them to the convention center. Simply scan the QR code at the Exhibitor registration desk. All non-registered exhibitors may register onsite at the Exhibitor registration desk.
**Registration and Badge Printing**  
**Convention Center**

Sat., May 6 ......................................................... 7am – 6pm  
Sun., May 7 ......................................................... 7am – 6pm  
Mon., May 8 ......................................................... 7am – 6pm  
Tues., May 9 ......................................................... 7am – 6pm  
Wed., May 10 ......................................................... 7am – 6pm  
Thurs., May 11 ...................................................... 7am – 2:30pm

Note: **Sunday presenters are strongly encouraged to register and/or print their badges on Saturday.**

**Badge Printing (Hilton Baltimore)**

Bring your email confirmation with the QR code to an ARVO kiosk at the Hilton Baltimore, 401 W. Pratt St. Simply scan the QR code and receive your badges and/or tickets. QR codes can also be used from your smartphone.

Saturday, May 6 ..................................................7am – 9pm  
Sunday, May 7 ......................................................7am – 3pm

**Speaker Ready Room (Room 331)**

All speakers scheduled in session rooms are required to check into the Speaker Ready Room preferably 24 hours, but no later than four hours, before their presentations.  
Tel: (410) 649-7420

Fri., May 5 .............................................................4 – 9pm  
Sat., May 6 ..........................................................7am – 6pm  
Sun., May 7 ..........................................................7am – 6pm  
Mon., May 8 ..........................................................7am – 6pm  
Tues., May 9 ..........................................................7am – 6pm  
Wed., May 10 ..........................................................7am – 6pm  
Thurs., May 11 ......................................................7am – 1pm

For details; see Paper, Invited Speaker, SIG Presentation Guidelines: arvo.org/am/abstracts.
**ARVO Fellows**

ARVO Fellows in the Class of 2017 may pick up their materials at the FARVO Lounge in Room 341 of the convention center during registration hours. Please note: enter through Room 340 to gain access to the Room 341. Ribbons for prior year Fellows will also be available.

**Travel Grant Recipients**

Pick up your Travel Grant packet during registration hours at the Travel Grants/Awards Desk on Saturday in the Pratt Street Lobby and on Sunday – Thursday at ARVO Central in the Exhibit Hall.

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**General Business Meeting**

#323, Room 324  
**Tues., May 9, 10:15 – 10:55am**

- Welcome — ARVO President, Emily Chew, MD, FARVO
- Presentation of ARVO Distinguished Service Awards —
  - Craig E. Crosson, PhD, FARVO
  - John I. Clark, PhD, FARVO
  - Paul S. Bernstein, MD, PhD, FARVO
  - Peter D. Lukasiewicz, PhD, FARVO
- Presentation of the Joanne G. Angle Award to Robert Ritch, MD, FARVO
- Presentation of the Kupfer Award to Donald Everett, MA
- Presentation of the Dr. David L. Epstein Award to David Huang, MD, PhD, FARVO
- Presentation of Certificate of Appreciation to Mark Radford, MD, PhD, FARVO, for his outstanding contributions to ARVO-Asia
- Presentation of Membership Update and Election Results
- Membership and Annual Meeting attendance update
- Introduction of Incoming Officers
- 2017 Achievement Award recipients
- 2018 Achievement Award nominees
- Conclude Meeting
Complete meeting information is available at arvo.org/am

LIMA - PERU - 2017

AUGUST 9-12, 2017 / PAAOLIMA2017.COM
Center Grill (Hall D)
Personal Papa John’s pizza, made to order gyros, chicken souvlaki sandwiches and Greek salad, desserts and beverages.

Center Bakery (Hall E)
Offers hot breakfast du Jour, AM pastries, yogurt parfaits, whole fruit, breakfast sandwiches, MTO sandwiches and salads, soup du jour, go gourmet, snacks, housemade desserts and beverages. May 7 – 10, 7am – 3pm.

Center Market (Hall F)
Offers AM pastries, hot option of the day, Maryland crab cake sandwich, options from the grill, chicken tenders, French fries, soup du jour, go gourmet, snacks, desserts and beverages. May 7–10, 11am – 3pm.

Market Fresh Café (Located Across From Rm 310)
Offers hot breakfast du jour, AM pastries, smoothie bowl, yogurt parfaits, whole fruit, seasonal chef selections, MTO sandwiches, soup du jour, go gourmet, snacks, desserts and beverages:
- May 7 – 10, 7am – 3pm
- May 11, 7am – 1:30pm

Starbucks (Located In E. Pratt Street Lobby)
Offers coffee, cappuccino, latte and frappuccino as well as a deluxe pastry bar from the morning hours transitioning into afternoon delights:
- May 6, 8am – 6pm
- May 7 – 10, 6:30am – 6pm
- May 11, 6:30am – 3:15pm

Coffee Carts
Coffee carts are available in the Exhibit Hall as well as in the Ballroom Foyer throughout the week. Disclaimer: The hours and items listed within each concession above could change:
- May 6 – May 10, 7am – 6:30pm
- May 11, 7am – 4pm
NEI Audacious Goals Initiative Town Hall: Advancing Cellular Therapies to the Clinic
Session #114 – Room 314
Sunday, May 7, 2017 10:40 – 11:50am

Building on last year’s ARVO town hall about retinal diseases amenable to regenerative therapies, this year’s discussion seeks input from scientists and clinicians to identify paths for advancing potential therapies to human clinical trials. The event will comprise short introductory talks and a moderated discussion.
Complete meeting information is available at arvo.org/am
ARVO/Alcon Opening Keynote
Sun., May 7, 12 – 1:15pm | Hall G #116

Mary-Claire King, PhD
University of Washington
Seattle, Wash

ARVO/Alcon Closing Keynote
Thurs., May 11, 1:30 - 3:15pm | Hall G #551
What’s next in the investigation of genetics of age-related macular degeneration?

Clockwise:
Donald Zack, MD, PhD (moderator)
Pamela Sklar, MD, PhD
Nancy J. Cox, PhD;
Terri Manolio, MD, PhD

The ARVO/Alcon Keynote Series is sponsored by the ARVO Foundation through a generous grant from Alcon Laboratories.

Complete meeting information is available at arvo.org/am
ARVO Distinguished Service Awards

Distinguished Service Award recipients will be recognized at the General Business Meeting (Tuesday, May 9, 10:15 – 10:55am | Room 324).

Craig E. Crosson, PhD, FARVO
Medical University of South Carolina
Charleston, S.C.
Executive Vice President and PH Section Trustee

John I. Clark, PhD, FARVO
University of Washington.
Seattle, Wash.
Immediate Past President and LE Section Trustee

Paul S. Bernstein, MD, PhD, FARVO
University of Utah/Moran Eye Center,
Salt Lake City, Utah
Vice President and BI Section Trustee

Peter D. Lukasiewicz, PhD, FARVO
Washington University School of Medicine,
St. Louis, Mo.
Vice President and VN Section Trustee

Need Gifts?
Visit the ARVO Gift Shop
ARVO Central, Exhibit Hall
Beckman–Argyros Award
The Arnold and Mabel Beckman Foundation supports cutting-edge research through their generous Beckman-Argyros Award: The third annual award has been presented to Jeremy Nathans, MD, PhD, of Johns Hopkins University.

Nathans is the professor of molecular biology and genetics, neuroscience and ophthalmology at the university’s School of Medicine. The award will help Nathans’s lab further their research using molecular genetic approaches to study the development of mammalian retina and embryo.

Nathans will present his award-winning work at session #165, Sunday, May 7, 5:30pm | Ballroom II, “Seeing through the retina.”

Visit NAEVR Central in the Exhibit Hall
Hours: Sunday – Wednesday, 9am – 4pm
Hosted by NAEVR’s James Jorkasky and David Epstein
• Contact Congress to support vision research funding increases
• Learn about research funding resources, such as multiple Department of Defense (DoD) funding opportunities to meet critical vision research gaps

NAEVR’s Defense-Related Vision Research Opportunities Session
Monday, May 8, 7:30 – 8:30am | Room 328
NAEVR has invited DoD representatives to speak about funding opportunities and past DoD awardees to offer insights into how researchers can be most responsive to the funding Program Announcement.

eyeresearch.org
**Joanne G. Angle Award**

The Joanne G. Angle Award is the highest service honor to a volunteer professional bestowed by ARVO.

The 2017 award is presented to Robert Ritch, MD, FARVO, of the New York Eye and Ear Infirmary of Mount Sinai, New York, NY. Ritch has a record of continuous service to ARVO since late 1991. He has served in numerous leadership roles including the Board of Trustees, Annual Meeting Program Committee, Continuing Medical Education Committee, Global Members Committee, TVST journal editorial board, and as a mentor.

The Joanne G. Angle Award will be presented to Ritch at the General Business Meeting (Tues, May 9, 10:15 – 10:55am | Room 324).

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**ARVO/Champalimaud Award Lecture**

Session #385 | Tues., May 9, 5:45 – 7pm | Hall G

The work of the four awardees, John Flanagan, Christine Holt, Carol Mason and Carla Shatz, has shone light on the connection between the two fundamental organs responsible for vision — the eye and the brain — and their groundbreaking work has greatly advanced the understanding of the visual system. The award winners are selected because they are leaders in contributing to high-impact overall vision research.
Fellows of ARVO

ARVO will induct the Fellows Class of 2017 at the opening ARVO/Alcon Keynote Session, to recognize and honor these members for their leadership, dedication and contributions to the Association.

Gold Fellows
Jayakrishna Ambati
Radha Ayyagari
Carlos Belmonte
Mitchell Brigell
Andrew Dick
Thomas Ferguson
John Flannery
David Garway-Heath
Pedram Hamrah
David Hicks
Chris Johnson
Mineo Kondo
Louis Pasquale
Sayon Roy
Michael Stern
Scheffer Tseng

Silver Fellows
Rando Allikmets
Paul Bishop
Norman Blair
David Brainard
Michael Collins
Minas Coroneo
Karl Csaky
Robert Fechtner
Alistar Fielder
John Flanagan
Christina Flaxel
Samuel Jacobson
Peter King-Smith
Pierre Lachapelle
Kirsten Lampi
Goldis Malek
James McGinnis
Anton Reiner
Kevin Schey
Mark Sherwood
Ronald Silverman
Arieľ Solomon
Thomas Van Den Berg
Bernhard Weber
Michael Young

2017 Annual Meeting Survey

We want to hear from you! Following the Annual Meeting, all attendees will receive a link to the Online Annual Meeting Survey. Please respond and send us your thoughts about how ARVO can continue to improve the Annual Meeting. We appreciate your attendance and look forward to receiving your comments.
Research essentials — Core knowledge and skills for eye and vision scientists

Foundational knowledge
- Guide to scientific method and experimental design
  Lead author: Subhabrata Chakrabarti, PhD
- Guide to eye and vision research techniques
  Lead author: Francine F. Behar-Cohen, MD, PhD
- Guide to human subjects research
  Lead author: M. Elizabeth Hartnett, MD, FACS, FARVO
- Guide to scientific publishing
  Lead author: Steven J. Fliesler, PhD, FARVO

Next-step skills
- Guide to scientific peer review
  Lead author: Jeffrey H. Boatright, PhD, FARVO
- Strategies for effective grant writing
  Lead authors: ARVO 2015 Grant Writing Course faculty
- Guide to intellectual property and patenting
  Lead authors: ARVO 2016 IP/Patenting Course faculty

Certificates of completion available
To learn more, visit arvo.org/online_education.
Exhibit Hall Hours

Sunday, May 7 9am – 5pm
Monday, May 8 9am – 5:30pm
Tuesday, May 9 9am – 5:30pm
Wednesday, May 10 9am – 5:30pm

The Association for Research in Vision and Ophthalmology gratefully acknowledges the support of exhibiting companies and Annual Meeting supporters.

Complete meeting information is available at arvo.org/am
Complete meeting information is available at arvo.org/am
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Complete meeting information is available at [arvo.org/am](http://arvo.org/am)
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Jacqueline Trimble
1 North Waukegan Rd, R601/AP4-2
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Tel: 847.938.2228
jcrowley@cmimedia.com; abbvie.com
AbbVie is a global, research-based biopharmaceutical company which combines the focus of a leading-edge biotech with the expertise and structure of a long-established pharmaceutical leader. AbbVie is committed to using unique approaches to innovation to develop and market advanced therapies that address some of the world’s most complex and serious diseases.

AbbVie Medical Affairs .............................................................................. 3522
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Absorption Systems ............................................................................. 4803
Tawny Britton
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Tel: 610.280.7300
contact@absorption.com; absorption.com
Absorption Systems is a preclinical contract research organization specializing in ADMET services for drugs, biologics, and medical devices. Our ocular capabilities span from in vitro permeability to in vivo PK, toxicology, disease models, devices and custom model development. We have experience with species such as rabbit, pig, dog, and sheep. All animal studies are performed in our 30,000 sq. ft. AAALAC-accredited, GLP-compliant, and NIH-assured vivarium in San Diego, Calif.
Accutome Inc. .......................................................................................... 4608
Lydia Andruscavage
3222 Phoenixville Pike, Building 50
Malvern, Pa. 19355
Tel: 610.889.0200
Fax: 610.889.3233
landruscavage@accutome.com; accutome.com

Accutome is known for our superior customer service and in house repair center. We offer a full line of diagnostic equipment including the 4Sight Ophthalmic Ultrasound Platform, A-Scan Plus Connect, B-Scan Plus, UBM, PachPen handheld pachymeter and AccuPen handheld tonometer. Accutome also offers a full line of surgical and office medications and supplies as well as a full line of surgical instruments and diamond knives. Visit our website to see many of the 2500 ophthalmic products we offer.

AcuiSee ..................................................................................................... 4715
Jeff Jamison
5512 Bob White Ave
Kalamazoo, Mich. 49009
Tel: 858.736.1359
jeff@acuisee.com; acuisee.com

AcuiSee offers an innovative method to measure true visual acuity in rodents. Our unique blend of hardware and software utilizes operant conditioning to train animals to a visual task and once trained, visual acuity and contrast sensitivity can be easily and quickly measured. The system requires little technician intervention and is free from user bias. Our devices are ideal for users new to visual testing as well as experienced users looking for an easier unbiased method to measure VA.

AGTC (Applied Genetic Technologies Corporation) .............................. 3115
Stephen Potter
14193 NW 119th Terrace, Suite 10
Alachua, Fla. 32615
Tel: 386.462.2204
spotter@agtc.com

AGTC is a clinical-stage biotechnology company that uses its proprietary gene therapy platform to develop products designed to transform the lives of patients with severe diseases. AGTC’s lead product candidates are designed to treat inherited orphan diseases of the eye, caused by single genes mutations, that significantly affect visual function.

Aier Eye Hospital Group ................................................................. 4821
Shibo Tang,, Md.,PhD.
18th floor, the New century building198 Furong Middle Rd.
Changsha Hunan 410015
China
Tel: +86 13925100123
tangshibo@vip.163.com; aierchina.com/en/

Aier Eye Hospital Group is the largest eye health service provider in China. It has 158 specialized eye hospitals all over the country, providing service for over 4 million people every year. Devoting to the course of human eye care, together with its strong medical and research teams, Aier will have many more competitive eye hospitals to provide high-quality, multi-level eye care for the public and achieve the ideal of enabling everyone, rich or poor, to enjoy the right of eye care.
Exhibitor Descriptions

Akorn, Inc. 3306
Mindy Bailey
1925 West Field Court, Suite 300
Lake Forest, Ill. 60045
Tel: 847.739.5764
mindy.bailey@akorn.com; akorn.com

Since 1971, Akorn has been known as a leader in ophthalmic pharmaceuticals. Akorn is dedicated to the improvement of this growing segment and markets established brands like AzaSite®, Akten®, Betimol®, Cosopt®PF, IC-Green®, AK-Fluor®, Paremyd®, and TheraTears®, as well as a full line of generic products.

Alcon 4006
Erin Moore
6201 South Freeway TC-33
Fort Worth, Texas. 76134
Tel: 817.568.6077
erin.moore@alcon.com; alcon.com

As a global leader in eye care, Alcon's mission is to provide innovative products that enhance quality of life by helping people see better. Alcon offers the widest spectrum of eye care products in surgical, pharmaceutical and vision care across 180 markets and operations in 75 countries. Alcon is committed to making significant contributions to preserve, restore and enhance vision by addressing the world's most pressing eye care needs. For more information on Alcon, visit; alcon.com.

Alimera Sciences 4211
Elizabeth Van De Bogart
6120 Windward Parkway, Suite 290
Alpharetta, Ga. 30005
Tel: 678.527.1307
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elizabeth.vandebogart@alimerasciences.com; alimerasciences.com

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**American Macular Degeneration Foundation**

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The American Macular Degeneration Foundation works for the prevention, treatment and cure of macular degeneration by raising public awareness and knowledge about the Inc.reasing threat of this disease, providing support for those afflicted and their families, and supporting scientific research.; macular.org

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BrightFocus Foundation is a donor-supported charity that funds research seeking cures for age-related macular degeneration, glaucoma, and Alzheimer’s disease and provides the public with information about risk factors, preventative lifestyles, available treatments and coping strategies. Since Inc. option, BrightFocus has committed more than $160 million in support of its research aims. For more information, visit; brightfocus.org.

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European Association Vision Eye Research (EVER)

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Eversight

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Eversight is a global network of eye banks restoring sight and preventing blindness through donation, transplantation and research. We accelerate discoveries in eye and vision research by delivering human ocular tissue and critical funding to scientists seeking cures for eye diseases. The Eversight Eye Donor Registry & Biorepository, launching in 2017, will connect researchers with well-characterized ocular tissue accompanied by detailed medical records to transform the future of ophthalmology.

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**Fight for Sight**

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**Foundation Fighting Blindness**

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Oculus, Inc..............................................................................................................5209
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**Optos Inc.** ..................................................................................................................... 4011
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PharmOptima™, a member of Genesis Biotechnology Group® (GBG), is a preclinical CRO founded, owned, and operated by scientists. PharmOptima™ has been advancing drug discovery and development with a niche in ocular drug development since 2003. Services include in vivo studies such as ADME/PK and ocular models, bioanalysis through LC-MS/MS, and biochemical capabilities such as in vitro and cell based assay development, protein cloning and expression, custom ELISA, ECL, and biomarker development.
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Exhibitor Descriptions

Precision Vision

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ProMed Pharma LLC

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Leveraging historical expertise in molded implantable components, ProMed Pharma develops and manufactures polymer-based drug releasing implants and combination device components. Working with both established and early-stage medical device and pharmaceutical companies, we develop robust processes and platforms for controlled release of drugs from a variety of materials. Applications include steroid-eluting components, drug eluting stents, punctal plugs, and ophthalmic implants.

Promedica International

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Promedica International is a privately held, full-service, ISO-certified CRO providing clinical trial services for the medical device, biotechnology and pharmaceutical industries. Founded in 1985, we are a woman-owned Corporation headquartered in Orange County, California. We have successfully provided exceptional value to our clients in clinical trial project management, site recruitment and management, clinical study monitoring, data management, biostatistics, medical writing and GCP auditing.

Purmabiologics, LLC

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Reichert Technologies of Buffalo, N.Y. (unit of AMETEK, Inc.) is a global leader in the design and manufacture of diagnostic devices for optometry, ophthalmology, and retail eye centers. Inventors of the Phoroptor® and Non-Contact Tonometer, Reichert continues its American-made tradition by providing industry defining products, including the digital Phoroptor® VRx, Tono-Pen® Tonometer, the breakthrough Ocular Response Analyzer® featuring Corneal Hysteresis, and ClearChart Digital Acuity Systems.

RetinAi Medical GmbH ................................................................. 3206
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RetinAI Medical (RetinAI) is a Swiss start-up focused on empowering eye care professionals and doctors through artificial intelligence. Our vision is to transform reactive medicine to preventive medicine for high-impact diseases such as Age-related Macular Degeneration (AMD), Diabetic Retinopathy, Glaucoma and multitude of neurodegenerative diseases such as Alzheimer’s, Parkinson’s, multiple sclerosis (MS), and amyotrophic lateral sclerosis (ALS).
Review of Ophthalmology/Jobson Publishing ................................. 4111
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Rockland Immunochemicals supports the academic, biopharma and diagnostic industries with antibodies and antibody based tools™ for basic research, assay development and preclinical studies for over 50 years. Established in Pennsylvania, Rockland manufactures over 10,000 products for use in critical assays including western blotting, immunohistochemistry, immunofluorescence microscopy, ELISA and flow cytometry.

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Singapore Eye Research Institute (SERI) ............................................... 3722
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Singapore Eye Research Institute, SERI is Singapore's national eye research institute. SERI has played key strategic roles in the conceptualization of research ideas & technologies with local & international institutions that has ensured a high level of research competency & skills transfer. Critically, SERI's research has translated to tangible outcomes, actual patient benefit, & success stories. Today, SERI is recognized as a preeminent pacesetters of eye research in Asia and globally.
Exhibitor Descriptions

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Spark Therapeutics

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Spark Therapeutics, a fully integrated company, strives to challenge the inevitability of genetic disease by discovering, developing, and delivering gene therapies that address inherited retinal diseases (IRDs), neurodegenerative diseases, as well as diseases that can be addressed by targeting the liver. To learn more about us, visit; sparktx.com.

Speedway Delhi

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Striata Technologies ................................................................................. 3208
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Trial Runners is an ophthalmology CRO providing biotech and pharmaceutical companies with clinical research management services. During the past 10 years, we have worked on over 60 clinical studies researching innovative ways to manage or cure diseases related to the eye. Our mission is to provide an unprecedented level of execution, commitment and value.

Turing Pharmaceuticals LLC ................................................................... 5116
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Turing Pharmaceuticals, LLC 1177 Ave. of the Americas, 39th Floor New York, N.Y. 10036; turingpharma.com Contact: Cherie Dennis, Marketing Operations Manager (Tel: 917.656.4797, cherie@turingpharma.com) Turing Pharmaceuticals is a privately-held biopharmaceutical company with offices in Zug, Switzerland and New York, N.Y. Turing aims to discover, develop and commercialize innovative treatments for toxoplasmosis and other serious and neglected diseases.
U

U.S. Food and Drug Administration .............................................................. 4316
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The Food and Drug Administration is responsible for protecting the public health by ensuring the safety and efficacy of Medical Devices. We facilitate medical device innovation by advancing regulatory science, providing industry with efficient regulatory pathways, and assuring consumer confidence in ophthalmic devices marketed in the U.S. Our mission aims to provide consumers and patients with understandable and accessible science-based information about the products we oversee.

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Vasoptic Medical developed the XyCalif.M, an investigational device able to estimate blood flow in the retina with high spatio-temporal resolution. The XyCalif.M is portable and affordable, making it suitable for research involving collection of retinal blood flow data in point-of-care setting. Robust elucidation of blood flow is emerging as frontier for retinal imaging. The XyCalif.M enables assessment of flow-derived trends and parameters that may lead to improved diagnostics and disease management.

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Tel: 925.558.2755
jonathan@voxeleron.com; voxeleron.com

Voxeleron’s mission is to be the leader in delivering advanced image analysis
solutions for applications in medicine, biology, and beyond. Our focus is the
development of ophthalmic image analysis software with emphasis on OCT
imagery. At ARVO we will be demonstrating Orion, our advanced OCT retinal
analysis software; and InSight, our animal OCT analysis software.

Wasatch Photonics ................................................................................................... 4804
David Freihofer
4022 Stirrup Creek Dr. Suite #311
Durham  NC  27703
Tel: 617.513.8730
dfreihofer@wasatchphotonics.com; wasatchphotonics.com

Wasatch Photonics provides high-resolution and high-sensitivity optical
coherence tomography (OCT) solutions. We provide all the tools necessary
for obtaining world class OCT images Including full plug and play systems
for a variety of applications. Our OCT solutions are specifically developed
for research and OEM applications. We also manufacture spectrometers for
Hyperspectral Imaging, NIR, UV-VIS, Fluorescence and Raman spectroscopy.

Welch Allyn ................................................................................................................. 4912
Thomas Grant
4341 State St. Rd., P.O. Box 220
Skaneateles Falls, N.Y.  13153
Tel: 315.685.4100
Fax: 315.685.4091
thomas.grant@welchallyn.com; welchallyn.com

The Welch Allyn® VISION FOR ALL initiative is focused on delivering simple
and affordable screening solutions in primary care settings to help eradicate
some of the leading causes of preventable blindness. Simple and affordable
solutions to screen for diabetic retinopathy in primary care settings or detect
amblyopia risk factors from six-months of age. Stop by ARVO Booth 2226 or
visit RetinaVue.com, RETeval-DR.com, and WelchAllyn.com online!
Wicab, Inc.  ......................................................................................................................... 4810
Bill Conn
8313 Greenway Blvd., Suite 100
Middleton, Wis.  53562  Tel: 608.829.4504
Fax: 608.829.4501
info@wicab.com; wicab.com

Wicab, Inc. developed and sells the FDA approved BrainPort® V100 oral electronic vision aid that provides electro-tactile stimulation to aid profoundly blind users in orientation, mobility, and object recognition as an adjunctive device to other assistive methods such as the white cane or a guide dog. BrainPort V100 translates digital information from a wearable video camera into electrical stimulation patterns on the surface of the tongue. Some have described it as “seeing with your tongue”.

Wolters Kluwer Health ............................................................................................... 4712
Joey-Rose Jester
Two Commerce Square, 2001 Market St.
Philadelphia, Pa.  19103
Tel: 215.521.8300
joey-rose.jester@wolterskluwer.com

Wolters Kluwer Health is a leading global provider of information and point of care solutions for the healthcare industry. Our solutions are designed to help professionals build clinical competency and improve practice and patient care. We offer evidence-based medical, nursing and allied health content and clinical decision support tools.

Women’s Eye Health.org ......................................................................................... 3721
Beth Durkee
Schepens Eye Research Institute
20 Staniford St.
Boston, Mass.  02114
Tel: 617.573.3832
weh@meei.harvard.edu; womenseyehealth.org

The mission of Women's Eye Health.org is to educate people regarding eye diseases which are more prevalent in women worldwide. Visit womenseyehealth.org for more information.

World Glaucoma Association .............................................................................. 4610
Mariska van der Veen
Schipluidenlaan 4
Amsterdam    1062HE
The Netherlands
Tel: +31 20 679 3411
Fax: +31 20 673 7306
vanderveen@worldglaucoma.org; worldglaucoma.com
World Precision Instruments ................................................................. 4312
Carmen Raymond
175 Sarasota Center Blvd.
Sarasota, Fla. 34240
Tel: 941.371.1003
Fax: 941.377.5428
sales@wpilnc.com; wpilnc.com

WPI is a leading global laboratory product manufacturer focused on providing scientists with cutting edge laboratory instruments at cost-effective prices. Our popular ARVO display items will feature: surgical / microdissection instrumentation, surgical accessories, loupes and our UltraMicroPump (UMP3) with Nanofil for microinjection.

Z

Zeiss ........................................................................................................ 3615
Kati Spencer
5160 Hacienda Dr.
Dublin, Calif. 94568
Tel: 925.557.4803
Fax: 192.555.7442 x7
katalin.spencer@zeiss.com; zeiss.com/us

ZEISS offers a comprehensive portfolio of products and services to help eye care professionals deliver the best possible care for their patients. The portfolio includes: leading-edge technologies that aid in the diagnosis, treatment and management of the most common eye diseases; a data management solution that enhances clinical efficiency and streamlines workflow; clinical applications training; and a broad range of service and support options.

Future ARVO Annual Meetings

April 29 – May 3, 2018
Honolulu, Hawaii

April 28 – May 2, 2019
Vancouver, BC

May 3 – 7, 2020
Baltimore, Md.

May 2 – 6, 2021
San Francisco, Calif.
Don’t miss our special presentations in the Exhibit Hall, Exhibitor Presentation Area

Sun., May 7

10:30am
**Biospherix**
*Physiologically Relevant Conditions Improve Cell-Based Vision Research*

11:15am
**Carl Zeiss**
*Changing the Innovation Paradigm*

1:15pm
**Phoenix Research Lab**
*Demystifying ERG*

2pm
**Getson & Schatz**
*Green Cards for Scientific Researchers: How to Win Your EB-1/NIW Case*

2:45pm
**RSIP Vision**
*From Digital Age to AI Age in Ophthalmic Imaging*

Mon., May 8

1pm
**INC Research**
*The ‘How’ of Real World Evidence in Ophthalmology trials*

1:45pm
**Aptar**
*Patient Adherence and Compliance in Eye Care*

2:30pm
**Diagnosys LLC**
*Celeris: Preclinical and Research Applications of a novel High-throughput Small Animal Electrophysiology System*
3:15pm
**Phoenix Research Lab**
*Elevate your research with the Micron X large animal camera*

Tues., May 9

1pm
**Power Research**
*Evaluation of Aflibercept in a Laser-Induced Model of Choroidal Neovascularization in Pigs*

1:45pm
**Phoenix Research Lab**
*Look inside the eye with 3D OCT segmentation*

2:30pm
**Diagnosys LLC**
*Envoy: Advances in Pattern ERG and VEP*

3:15pm
**Imdeos Systems**
*Both Dynamic Response of Retinal Vessels and Retinal Venous Pressure are Useful Biomarker of Eye Diseases such as Glaucoma*

Wed., May 10

1pm
**National Eye Institute (NEI)**
*Insights wanted: leveraging mini-retinas to ROC big breakthroughs in eye disease*

2:30pm
**Diagnosys LLC**
*Celeris: Preclinical and Research Applications of a novel High-throughput Small Animal Electrophysiology System*
### Daily Program

**Saturday, May 6**  
**Education Courses**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30am – 4:30pm</td>
<td>001</td>
<td>Big Data: Current status and future directions</td>
<td>Room 307</td>
</tr>
<tr>
<td></td>
<td>002</td>
<td>Diabetic retinopathy: Past, present and future</td>
<td>Room 316</td>
</tr>
<tr>
<td></td>
<td>003</td>
<td>Demystifying statistics and research for ophthalmic investigators</td>
<td>Room 308</td>
</tr>
<tr>
<td></td>
<td>004</td>
<td>Stem cells and organoids as models of tissue differentiation and eye diseases</td>
<td>Room 309</td>
</tr>
<tr>
<td>1 – 4:30pm</td>
<td>005</td>
<td>Retinitis pigmentosa: Novel treatments and challenges</td>
<td>Room 314</td>
</tr>
</tbody>
</table>

* Education Courses require separate registration

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**Don’t miss another poster!**

**Locate sessions**

Poster board numbers indicate location in the Poster/Exhibit Hall. Examples:

<table>
<thead>
<tr>
<th>Program #</th>
<th>Poster Area</th>
<th>Poster Board #</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1360</td>
<td>A0381</td>
<td>Direct induction of functional neurons from adult human retina derived fibroblast-like cells. Lili Hao, Z. Xu, W. Luo, Y. Yan, H. Sun, S. Chen. ZhongShan Ophthalmic Center, Sun Yat-sen University, Guangzhou, China</td>
<td></td>
</tr>
</tbody>
</table>

**Meet the authors!**

In addition to the scheduled poster session times, all First Authors will be present at their poster boards on the day of their presentation during the “All Posters and Networking” session:

- Sunday: 10:45–11:45am
- Monday: 2:45–3:45pm
- Tuesday: 2:45–3:45pm
- Wednesday: 2:45–3:45pm
- Thursday: 10:30am–11:30am
### Sunday, May 7
- Keynote, symposia, papers, workshops/SIGs, lectures and events

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30 – 10:30am</td>
<td>101</td>
<td><strong>Light-based treatment strategies for blinding eye disease</strong> — [AR, BI, CO, EY, GL, IM, LE, LV, MOI, PH, RC, RE, VI] #1-6</td>
<td>Ballroom 3</td>
</tr>
<tr>
<td>10:40 – 11:50am</td>
<td>102</td>
<td><strong>Homologies between the brain and the eye: Can ocular researchers lead the way or are we following our ‘brainy’ colleagues?</strong> — Symposium [IM, AP, BI, GL, PH, RC] #7-12</td>
<td>Ballroom 4</td>
</tr>
<tr>
<td>10:30am</td>
<td>103</td>
<td><strong>Eye and Vision Trauma</strong></td>
<td>Room 316</td>
</tr>
<tr>
<td>10:40am</td>
<td>114</td>
<td><strong>NEI Audacious Goals Initiative Town Hall</strong></td>
<td>Room 314</td>
</tr>
<tr>
<td>12noon – 1:15pm</td>
<td>116</td>
<td><strong>ARVO/Alcon Keynote Opening Session</strong></td>
<td>Hall G</td>
</tr>
<tr>
<td>1:30 – 3pm</td>
<td>117</td>
<td><strong>Genetics Group: New tools and methodologies for ocular genetics: Promises and challenges [stct]</strong></td>
<td>Ballroom 2</td>
</tr>
<tr>
<td>1:40 – 2pm</td>
<td>118</td>
<td><strong>NIH-CSR workshop on the peer review of grant applications</strong></td>
<td>Room 309</td>
</tr>
<tr>
<td>1:40 – 2pm</td>
<td>119</td>
<td><strong>Addressing global blindness and eye diseases through research</strong></td>
<td>Room 310</td>
</tr>
<tr>
<td>1:40 – 2pm</td>
<td>120</td>
<td><strong>How to write and publish a high impact vision research article: The do’s and don’ts</strong></td>
<td>Room 314</td>
</tr>
<tr>
<td>1:40 – 2pm</td>
<td>121</td>
<td><strong>EVER/ARVO workshop: Update on mitochondrial optic neuropathies</strong></td>
<td>Room 316</td>
</tr>
<tr>
<td>1:40 – 2pm</td>
<td>122</td>
<td><strong>Pizza with the experts</strong></td>
<td>Room 328</td>
</tr>
<tr>
<td>1:40 – 2pm</td>
<td>123</td>
<td><strong>Managing Patients with Diabetic Macular Edema, Neovascular AMD, and Retinal Vein Occlusion: How to Best Utilize Data from Clinical Trials — SIG [RE, CL, IM, PH, VN]</strong></td>
<td>Ballroom 1</td>
</tr>
<tr>
<td>1:40 – 2pm</td>
<td>124</td>
<td><strong>Lasker/IRRF Initiative on Amblyopia — SIG [EY, RE, VI, VN]</strong></td>
<td>Ballroom 3</td>
</tr>
<tr>
<td>1:40 – 2pm</td>
<td>125</td>
<td><strong>Conclusions and recommendations from the TFOS Dry Eye Workshop II — SIG [CO]</strong></td>
<td>Ballroom 4</td>
</tr>
<tr>
<td>1:40 – 2pm</td>
<td>126</td>
<td><strong>Role of mitochondria in retinal health and diseases — SIG [RC, BI]</strong></td>
<td>Room 301</td>
</tr>
<tr>
<td>1:40 – 2pm</td>
<td>127</td>
<td><strong>Beyond Axial Length: Modern Imaging Biomarkers for Better Understanding Myopia Development and Progression — SIG [MOI, AP, CL, CO, RE]</strong></td>
<td>Room 307</td>
</tr>
<tr>
<td>1:40 – 2pm</td>
<td>128</td>
<td><strong>Inflammasome activation in the pathogenesis of glaucoma — SIG [RC, EY, GL, IM, PH]</strong></td>
<td>Room 308</td>
</tr>
</tbody>
</table>

Complete meeting information is available at [arvo.org/am](http://arvo.org/am)
## Sunday, May 7  ■ Keynote, symposia, papers, workshops/SIGs, lectures and events

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:30 – 3pm</td>
<td>129</td>
<td>National Academies of Sciences of Medicine and Engineering, Making Eye Health A Population Health Imperative Report: Closing the gaps in eye care — SIG [PH, GL, GEN]</td>
<td>Room 321</td>
</tr>
<tr>
<td></td>
<td>142</td>
<td>Dry Eye I [CO] #795-801</td>
<td>Ballroom 2</td>
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<td></td>
<td>143</td>
<td>Retinal glia [RC] #802-808</td>
<td>Ballroom 1</td>
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<td></td>
<td>144</td>
<td>Biochemistry and Molecular Biology of AMD I [BI] #809-815</td>
<td>Ballroom 4</td>
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<td></td>
<td>145</td>
<td>OCT Angiography in AMD [RE] #816-821</td>
<td>Hall G</td>
</tr>
<tr>
<td>3:15 – 5pm</td>
<td>146</td>
<td>Deep learning for image segmentation and classification [MOI] #822-827</td>
<td>Room 301</td>
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<tr>
<td></td>
<td>147</td>
<td>Genetics and modeling of lens and anterior segment anomalie — Minisymposium [LE] #828-833</td>
<td>Room 307</td>
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<tr>
<td></td>
<td>148</td>
<td>Frequency of Visual Impairment and Eye Disease and Their Risk Factors [CL] #834-840</td>
<td>Room 309</td>
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<td></td>
<td>149</td>
<td>Systemic influences on ocular disease [IM] #841-847</td>
<td>Room 310</td>
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<td></td>
<td>150</td>
<td>Pharmacology and Cellular Mechanisms [GL] #848-853</td>
<td>Room 316</td>
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<td></td>
<td>151</td>
<td>Retinoblastoma: From Genetics and Pathology to Therapy [AP] #854-859</td>
<td>Room 321</td>
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<tr>
<td></td>
<td>152</td>
<td>Nystagmus and Gaze Holding [EY] #860-866</td>
<td>Room 324</td>
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<tr>
<td>5:15 – 7:15pm</td>
<td>164</td>
<td>Improving global eye health: Beating the odds for neglected and emerging diseases around the world [CO, CL, EY, GEN, GL, IM, LV, MOI] #1165-1170</td>
<td>Hall G</td>
</tr>
<tr>
<td>5:30 – 6:30pm</td>
<td>165</td>
<td>Beckman-Argyros Award in Vision Research #1171</td>
<td>Ballroom 2</td>
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</table>
## Daily Program

<table>
<thead>
<tr>
<th>Time</th>
<th>Session Title</th>
<th>Program #</th>
<th>Board #</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>8:30 – 10:15am</strong></td>
<td>104 AMD Imaging 1 [RE]</td>
<td>13 - 57</td>
<td>A0001 - A0045</td>
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<tr>
<td></td>
<td>105 Diabetic retinopathy: medical (non-surgical) [RE]</td>
<td>58 - 102</td>
<td>A0138 - A0182</td>
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<tr>
<td></td>
<td>106 Development of the Retina [RC]</td>
<td>103 - 126</td>
<td>A0210 - A0233</td>
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<tr>
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<td>107 Cornea Wound Healing and Repair [CO]</td>
<td>127 - 175</td>
<td>A0317 - A0365</td>
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<td></td>
<td>108 Genetic Epidemiology [CL]</td>
<td>176 - 188</td>
<td>B0120 - B0132</td>
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<td></td>
<td>109 Cytokines; growth factors; Antiangiogenic drugs [PH]</td>
<td>189 - 211</td>
<td>B0220 - B0242</td>
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<tr>
<td></td>
<td>110 Retina; RPE; Mechanisms [PH, MOI, VN]</td>
<td>212 - 262</td>
<td>B0243 - B0293</td>
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<tr>
<td></td>
<td>112 Adaptive optics ophthalmoscopy: technology and application [MOI]</td>
<td>295 - 316</td>
<td>B0494 - B0515</td>
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<tr>
<td></td>
<td>113 Accommodation and presbyopia correction [VI]</td>
<td>317 - 340</td>
<td>B0562 - B0585</td>
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<tr>
<td>1:30 – 3:15pm</td>
<td>130 Determinants of PR development and repair [RC]</td>
<td>341 - 367</td>
<td>A0183 - A0209</td>
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<td></td>
<td>131 AMD Imaging 2 [RE]</td>
<td>368 - 405</td>
<td>A0234 - A0271</td>
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<td></td>
<td>132 AMD and anti-VEGF therapy 1 [RE]</td>
<td>406 - 440</td>
<td>A0272 - A0306</td>
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<tr>
<td></td>
<td>133 Dry eye, non-clinical [CO]</td>
<td>441 - 499</td>
<td>A0366 - A0424</td>
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<td>134 Uveitis therapeutics: remedy and Relief [IM, MOI]</td>
<td>500 - 527</td>
<td>B0055 - B0082</td>
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<tr>
<td></td>
<td>135 Autoimmune Ocular disease: selfies gone wrong [IM, VI]</td>
<td>528 - 564</td>
<td>B0083 - B0119</td>
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<td></td>
<td>137 Biochemistry and molecular biology of the retina [BI]</td>
<td>586 - 636</td>
<td>B0154 - B0204</td>
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<tr>
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<td>140 Eye movements [EY]</td>
<td>747 - 762</td>
<td>B0586 - B0601</td>
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<tr>
<td></td>
<td>141 Cataract Surgery Outcomes and Epidemiology [LE]</td>
<td>763 - 794</td>
<td>B0602 - B0633</td>
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</tbody>
</table>

**Poster board numbers correspond to poster location in the Exhibit Hall.**

**A = Poster Area A, B = Poster Area B.**

**All Posters and Networking — authors will be present at posterboards:**

- **Sunday, 10:45 – 11:45am**
- **Monday, Tuesday and Wednesday, 2:45 – 3:45pm**
- **Thursday, 10:30 - 11:30am**
<table>
<thead>
<tr>
<th>Time</th>
<th>Session Title</th>
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<th>Board #</th>
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<tbody>
<tr>
<td>3:15 – 5pm</td>
<td>138 Image Processing and Interpretation [MOI, VI]</td>
<td>637 - 691</td>
<td>B0384 - B0438</td>
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<tr>
<td></td>
<td>153 AMD and anti-VEGF therapy 2 [RE]</td>
<td>867 - 911</td>
<td>A0046 - A0090</td>
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<tr>
<td></td>
<td>154 Diabetic macular edema clinical research [RE, AP]</td>
<td>912 - 958</td>
<td>A0091 - A0137</td>
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<tr>
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<td>155 Cornea Development [CO]</td>
<td>959 - 968</td>
<td>A0307 - A0316</td>
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<td>156 Corneal neovascularization, immunology and neuropathy [CO]</td>
<td>969 - 1022</td>
<td>B0001 - B0054</td>
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<td>157 Outer Retina Function [VN]</td>
<td>1023 - 1037</td>
<td>B0205 - B0219</td>
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<td>158 New insights in RPE anatomy and physiology [RC]</td>
<td>1038 - 1059</td>
<td>B0294 - B0315</td>
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<td>159 Intraocular pressure; aqueous humor dynamics [PH]</td>
<td>1060 - 1078</td>
<td>B0348 - B0366</td>
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<td>160 Anti-inflammatory; antibiotics; antivirals [PH]</td>
<td>1079 - 1095</td>
<td>B0367 - B0383</td>
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<td>161 Posterior segment mechanisms and functions in eye development and myopia [AP]</td>
<td>1096 - 1116</td>
<td>B0516 - B0536</td>
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<tr>
<td></td>
<td>162 Aberrations, optical models [VI, AP]</td>
<td>1117 - 1141</td>
<td>B0537 - B0561</td>
</tr>
<tr>
<td></td>
<td>163 Cataract Surgery - IOLs [LE]</td>
<td>1142 - 1164</td>
<td>B0634 - B0656</td>
</tr>
</tbody>
</table>

Visit ARVO Gifts in ARVO Central, Exhibit Hall

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

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<tbody>
<tr>
<td>8:30 – 10:15am</td>
<td>203</td>
<td>Corneal Wound Healing [CO] #1172-1178</td>
<td>Ballroom 2</td>
</tr>
<tr>
<td>204</td>
<td></td>
<td>Common pathogenic role of inflammation in retinal diseases — Minisymposium [RC, BI] #1179-1184</td>
<td>Ballroom 1</td>
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<tr>
<td>205</td>
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<td>Vitreoretinal surgery I [RE] #1185-1190</td>
<td>Ballroom 3</td>
</tr>
<tr>
<td>206</td>
<td></td>
<td>Optic nerve regeneration: Barriers past and future — Minisymposium [GL, AP, BI, YE, NT, RC, RE, VN] #1191-1194</td>
<td>Ballroom 4</td>
</tr>
<tr>
<td>207</td>
<td></td>
<td>AMD and anti-VEGF therapy [RE] #1195-1201</td>
<td>Hall G</td>
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<tr>
<td>208</td>
<td></td>
<td>Retina/RPE 1 [PH] #1202-1208</td>
<td>Room 301</td>
</tr>
<tr>
<td>209</td>
<td></td>
<td>Lens Development and Cell Biology [LE] #1209-1215</td>
<td>Room 307</td>
</tr>
<tr>
<td>210</td>
<td></td>
<td>Diseases and Protection [VN] #1216-1222</td>
<td>Room 308</td>
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<tr>
<td>211</td>
<td></td>
<td>Genetic Epidemiology [CL] #1223-1229</td>
<td>Room 308</td>
</tr>
<tr>
<td>212</td>
<td></td>
<td>Emerging treatments for uveitis [IM] #1230-1236</td>
<td>Room 310</td>
</tr>
<tr>
<td>213</td>
<td></td>
<td>Genotype-phenotype correlations, prevalence studies and novel gene defects [BI] #1237-1243</td>
<td>Room 314</td>
</tr>
<tr>
<td>214</td>
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<td>IOL and presbyopia correction [VI] #1244-1250</td>
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<td>Novel Imaging and Biomarkers for Ocular Tumors and Disease [AP, MOI] #1251-1256</td>
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<td>10:15 – 10:55am</td>
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<td>11am – 12:45pm</td>
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<td><strong>Barrier function of the ocular surface</strong> — Minisymposium [CO, IM] #1562-1569</td>
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<td>Gene therapies [BI] #1570-1576</td>
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<td>AMD imaging I [RE] #1577-1582</td>
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<td>Imaging Posterior Segment and Progression [GL] #1583-1589</td>
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<td>Vitreoretinal interface and retinal detachment [RE] #1590-1595</td>
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<td>IOP Measurement and Characterization I [GL] #1596-1602</td>
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<td>Ganglion cells [VN] #1609-1615</td>
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<td>Improving Eye Care Delivery [CL] #1616-1622</td>
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<td>Immunological influences on AMD [IM] #1623-1628</td>
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<td>235</td>
<td><strong>Applications of adaptive optics for retinal imaging and visual function testing</strong> — Minisymposium [VI, CL, GL, LV, MOI, RC, RE, VN] #1629-1634</td>
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<td><strong>Optical coherence tomography in pediatric neuro-ophthalmology</strong> — Minisymposium [EY, GL, LV, RC] #1635-1640</td>
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<td>1 – 2:30pm</td>
<td>251</td>
<td>LV Group: Reading with low vision: What we know and need to know [LV, VI, CL, EY]</td>
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<td>252</td>
<td>Novel models and trends for accelerating applied ophthalmic product discovery and development</td>
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<td>253</td>
<td>A global perspective on diversity: Challenges and opportunity</td>
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<td>254</td>
<td>NEI extramural roundtable</td>
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<td>255</td>
<td>China-ARVO networking forum</td>
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<td>Nanotechnology for Imaging the Eye — SIG [CO, AP, GL, PH, RE, RC]</td>
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<td>The RPE-Photoreceptor Nexus: the Good, the Bad and the Ugly — SIG [RC, AP, BI, IM, PH, RE]</td>
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<td>Targeting Mitochondrial Dysfunction in Retinal and Optic Nerve Disease — SIG [RC, BI, GL, PH, RE]</td>
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<td>Time</td>
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<td>1 – 2:30pm</td>
<td>259</td>
<td>TGF beta signal transductions in ocular health and disease — SIG [CO, IM, LE, RE, RC]</td>
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<td>Controversies in Albinism: Why is Their Vision Poor and How Do We Fix It? — SIG [EY, RE, RC, VI, GEN]</td>
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<td>2:30 –3:45</td>
<td>261</td>
<td>Update on Treatments for Diabetic Retinopathy: Clinically Relevant Results from DRCR.net #1995a-1995g</td>
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<td>Biomarkers based on vasculature imaging [MOI] #2003-2009</td>
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<td>Inherited retinal diseases and macular degeneration [RE] #2010-2016</td>
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<td>Neurodegeneration [GL] #2017-2023</td>
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<td>Diabetic macular edema clinical and anti-VEGF research [RE] #2024-2029</td>
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<td>Retina [PH] #2030-2036</td>
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<td>Cataractogenesis I [LE] #2037-2043</td>
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<td>The Impact of Low Vision on Mobility [LV] #2044-2049</td>
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<td>Molecular and biochemical mechanisms in retinal disorders [BL] #2050-2056</td>
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<td>Mechanisms of accommodation [VI] #2057-2063</td>
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<td>Corneal immunology and neuropathy [CO] #2064-2070</td>
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<td>5:45 – 6:30</td>
<td>288</td>
<td>Proctor Award Lecture #2436</td>
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<td>6:45 – 7:30pm</td>
<td>289</td>
<td>Weisenfeld Award Lecture #2437</td>
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</table>

MIT Outstanding Poster Competition
Tuesday, May 9, 1 – 2:30pm, Hall B

MIT First Authors of the top five scored poster abstracts from each Scientific Section and Cross-sectional Group will participate in the MIT Outstanding Poster Award Competition. One award recipient from each Scientific Section and Cross-sectional Group will be selected by the MIT Committee. Award recipients will be selected based on how well a poster displays the abstract’s research and on how effectively the MIT First Author discusses the research with the judges and with meeting participants. All meeting participants are invited to view the competing posters and presentations.
Complete meeting information is available at arvo.org/am

### Daily Program

#### Monday, May 8 • Posters

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<thead>
<tr>
<th>Time</th>
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<th>Program #</th>
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<tbody>
<tr>
<td>8:30 – 10:15am</td>
<td>216 AO, OCT, and advanced optical methods [VI, MOI]</td>
<td>1257-1279</td>
<td>A0001 - A0023</td>
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<td>217 OCT applications [MOI]</td>
<td>1280-1327</td>
<td>A0024 - A0071</td>
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<td>218 Living With Vision Loss [CL]</td>
<td>1328-1359</td>
<td>A0297 - A0328</td>
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<td>219 Stem cells for ganglion cell regeneration and repair [RC]</td>
<td>1360-1373</td>
<td>A0381 - A0394</td>
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<td>220 Corneal Biology and Regenerative Medicine [CO]</td>
<td>1374-1432</td>
<td>B0024 - B0082</td>
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<td>221 Corneal Endothelium [CO]</td>
<td>1433-1485</td>
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<td>222 Retinal Diseases [CL, LV]</td>
<td>1486-1509</td>
<td>B0167 - B0190</td>
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<td>223 AMD [CL]</td>
<td>1510-1529</td>
<td>B0191 - B0210</td>
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<td>224 Retinal vascular diseases I (excluding diabetes) [RE]</td>
<td>1530-1561</td>
<td>B0362 - B0393</td>
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<td>237 Clinical applications of OCT angiography [MOI]</td>
<td>1641-1700</td>
<td>A0072 - A0131</td>
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<td>238 Lens Development and Molecular Cell Biology [LE]</td>
<td>1701-1722</td>
<td>A0179 - A0200</td>
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<td>239 Embryology and morphogenesis of ocular structures [AP, MOI, RC, GL]</td>
<td>1723-1735</td>
<td>A0201 - A0213</td>
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<td>240 Optic and extraocular anatomy and function [AP]</td>
<td>1736-1745</td>
<td>A0214 - A0223</td>
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<td>242 Retinoblastoma: Basic/Translational [AP, BI]</td>
<td>1770-1781</td>
<td>A0410 - A0421</td>
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<td>243 Tumors - Inside and around the eye, I [AP, EY, GEN]</td>
<td>1782-1802</td>
<td>A0422 - A0442</td>
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<td>244 Cataract Surgery Procedures [LE]</td>
<td>1803-1832</td>
<td>B0136 - B0165</td>
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<td>245 Genetics of macular degeneration [GEN]</td>
<td>1833-1853</td>
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<td>246 Clinical retinal imaging 1 [RE, AP, MOI, RC, VI, VN]</td>
<td>1854-1889</td>
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<td>247 Diabetic macular edema and anti-VEGF therapy [RE]</td>
<td>1890-192</td>
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<td>248 AMD therapies (excluding anti-VEGF) [RE]</td>
<td>1922-1946</td>
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Poster board numbers correspond to poster location in the Exhibit Hall. A = Poster Area A, B = Poster Area B.

All Posters and Networking — authors will be present at posterboards:
Sunday, 10:45–11:45am; Monday, Tuesday and Wednesday, 2:45–3:45pm; Thursday, 10:30–11:30am.
### Monday, May 8 — Posters

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<tr>
<th>Time</th>
<th>Session Title</th>
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<td>11am – 12:45pm continued</td>
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<td>274 Imaging: Anterior Segment [GL]</td>
<td>2071 - 2098</td>
<td>A0132 - A0159</td>
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<td>275 Clinical Trials and Drug Studies I [GL]</td>
<td>2099 - 2117</td>
<td>A0160 - A0178</td>
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<td>276 Genetics of glaucoma [GEN]</td>
<td>2118 - 2142</td>
<td>A0224 - A0248</td>
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<td>277 Uveitis: Diagnosis, Epidemiology, Quality of Life [IM, MOI]</td>
<td>2143 - 2190</td>
<td>A0249 - A0296</td>
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<td>279 Inner Retinal circuits [VN]</td>
<td>2219 - 2233</td>
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<td>280 Lacrimal glands and Meibomian glands [CO]</td>
<td>2234 - 2256</td>
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<td>281 Bruch's membrane and choroid in macular disease [RC]</td>
<td>2257 - 2272</td>
<td>B0211 - B0226</td>
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<td>282 RPE dysfunction in macular diseases [RC]</td>
<td>2273 - 2297</td>
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<td>283 AMD translational studies and choroidal neovascularization [RE]</td>
<td>2298 - 2321</td>
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<td>284 AMD Clinical Research 1 [RE]</td>
<td>2322 - 2350</td>
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<td>285 Amblyopia I [EY]</td>
<td>2351 - 2368</td>
<td>B0500 - B0517</td>
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<td>286 Refractive Error [CL, AP, LV]</td>
<td>2369 - 2405</td>
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<td>287 Pediatric Eye Disease [CL]</td>
<td>2406 - 2435</td>
<td>B0555 - B0584</td>
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<td>8:30 – 10:15am</td>
<td>301</td>
<td>Corneal Imaging and Biomechanics [CO] #2438-2444</td>
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<td>Angiogenesis [RC] #2445-2451</td>
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<td>Biomechanics I [GL] #2452-2458</td>
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<td>304</td>
<td>Clinical Trials and Drug Studies II [GL] #2459-2465</td>
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<td>Novel therapies and imaging techniques for retinal disorders — Minisymposium [RE, BI, GL, RC] #2466-2471</td>
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<td>Lens Physiology and Biomechanics I [LE] #2472-2478</td>
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<td>The Impact of Low Vision on Function and Everyday Activities [LV] #2479-2484</td>
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<td>Photoreceptors: Cell Biology, Disease and Rescue [RC] #2485-2491</td>
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<td>Surprising human visual processes revealed with advanced techniques [VI] #2492-2498</td>
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<td>Uveal melanoma: From Clinical Trials to Molecular Mechanisms [AP, RE] #2499-2504</td>
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<td>10:15 – 10:55am</td>
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<td>General Business Meeting</td>
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<td>11am – 12:45pm</td>
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<td>Corneal dystrophies: Where do we stand? — Minisymposium [CO] #2934-2939</td>
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<td>ER stress and the unfolded protein response in ocular health and disease — Minisymposium [BI, GL, LV, PH, RC, RE] #2940-2945</td>
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<td>Diabetic retinopathy clinical [RE] #2946-2951</td>
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<td>Neuroprotection [GL] #2952-2958</td>
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<td>Retinal Vascular Diseases and CSCR [RE] #2959-2965</td>
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<td>Retina/RPE 2 [PH] #2966-2971</td>
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<td>Bipolar, Horizontal and Amacrine cells [VN] #2972-2978</td>
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<td>Understanding the Course and Risk Factors for Age-Related Macular Degeneration [CL] #2979-2985</td>
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<td>Going viral! [IM] #2986-2992</td>
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<td>Age-related changes in optics of the eye and vision - Minisymposium [VI, CO, LE, GL, LE, VN] #2993-2998</td>
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<td>Factors affecting ocular development [AP, RC] #2999-3005</td>
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## Tuesday, May 9

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<td>1 – 2:30pm</td>
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<td>VSS at ARVO - Functional Brain Imaging in Development and Disorder</td>
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<td>349</td>
<td>Chinese Ophthalmological Society Workshop: Molecular Cell Biology and Gene Therapy for Eye Diseases</td>
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<td>How to discuss your animal research work with non-scientists</td>
<td>314</td>
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<td>351</td>
<td>Clinician-scientist forum: How to become a successful clinician-scientist</td>
<td>316</td>
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<td>354</td>
<td>Far peripheral vision: Review vision beyond 80o, where many people don t notice if there is a loss, but some intraocular lens patients report dark shadows — SIG [VI]</td>
<td>Ballroom 4</td>
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<td>356</td>
<td>New advancements in SD-OCT assessment of neuroretinal rim and fiber layer tissue for glaucoma detection and follow-up — SIG [GL, AP, RE, MOI]</td>
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<td>357</td>
<td>Mechanisms of ocular surface immunity in graft vs host disease and sjogren syndrome - SIG [IM, CO]</td>
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<td>2:30 – 3:45pm</td>
<td>360</td>
<td>Study of Comparative Treatments for Retinal Vein Occlusion 2 (SCORE2): Primary Results #3368-3370</td>
<td>Ballroom 2</td>
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<td>3:45 – 5:30pm</td>
<td>362</td>
<td>Corneal Tissue Engineering and Molecular Biology [CO] #3371-3377</td>
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<td>Macular degeneration-cell biology [RC] #3378-3384</td>
<td>Ballroom 1</td>
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<td>364</td>
<td>Retinal gene therapy and stem cell transplantation [RE] #3385-3390</td>
<td>Ballroom 3</td>
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<td>365</td>
<td>Capillaries, Blood Flow, OCT Angiography [GL] #3391-3397</td>
<td>Ballroom 4</td>
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<td></td>
<td>366</td>
<td>AMD imaging II and visual function [RE] #3398-3403</td>
<td>Hall G</td>
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<td>367</td>
<td>Intraocular pressure [PH] #3404-3409</td>
<td>Room 301</td>
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<td>368</td>
<td>Beyond the retina: Central visual circuits — Minisymposium [VN] #3410-3414</td>
<td>Room 308</td>
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</table>
## Daily Program

**Tuesday, May 9**

- Papers, minisymposia, workshops/SIGs, business meeting

### Time Schedule

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Location</th>
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<tr>
<td><strong>3:45 – 5:30pm continued</strong></td>
<td>369</td>
<td>Refractive Error: Risk Factors to Intervention Studies [CL, AP] #3415-3421</td>
<td>Room 309</td>
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<tr>
<td></td>
<td>370</td>
<td>New Insights and Animal models [GEN] #3422-3428</td>
<td>Room 314</td>
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<td>371</td>
<td>Improving Retinal Imaging and Image Understanding-AO [VI] #3429-3435</td>
<td>Room 316</td>
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<tr>
<td></td>
<td>372</td>
<td>Strabismus: Basic and Clinical [EY] #3436-3442</td>
<td>324</td>
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<tr>
<td><strong>5:45 – 7pm</strong></td>
<td>385</td>
<td>ARVO/Champalimaud Award Lecture</td>
<td>Hall G</td>
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**Save the date**

**ARVO 2018**

**April 29 – May 3 | Honolulu**

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Complete meeting information is available at [arvo.org/am](http://arvo.org/am)
<table>
<thead>
<tr>
<th>Time</th>
<th>Session Title</th>
<th>Program #</th>
<th>Board #</th>
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<tr>
<td></td>
<td>312 Neurodegeneration and Neuroprotection [GL]</td>
<td>2532 - 2577</td>
<td>A0122 - A0167</td>
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<td>313 Ganglion Cells and Beyond [VN]</td>
<td>2578 - 2600</td>
<td>A0168 - A0190</td>
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<td>314 Corneal Epithelium [CO]</td>
<td>2601 - 2647</td>
<td>A0191 - A0237</td>
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<td>315 Dry eye, Clinical [CO]</td>
<td>2648 - 2707</td>
<td>A0238 - A0297</td>
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<td>316 Anterior segment imaging and optics [VI]</td>
<td>2708 - 2732</td>
<td>A0412 - A0436</td>
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<td>317 Visual functions, optical cues effecting and affected by myopia [AP]</td>
<td>2733 - 2749</td>
<td>A0437 - A0453</td>
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<td>318 Whole Genome Analysis, Genetic Screening in Retinal Dystrophies and Others [GEN]</td>
<td>2750 - 2790</td>
<td>B0077 - B0117</td>
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<td>319 Vitreoretinal surgery [RE]</td>
<td>2791 - 2833</td>
<td>B0228 - B0270</td>
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<td>321 Diabetic Eye Disease [CL, VN]</td>
<td>2882 - 2917</td>
<td>B0528 - B0563</td>
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<td>322 Strabismus [EY]</td>
<td>2918 - 2933</td>
<td>B0564 - B0579</td>
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<tr>
<td>11am – 12:45pm</td>
<td>335 Cellular Metabolism of the Retina and RPE [RC, RE]</td>
<td>3006 - 3028</td>
<td>A0001 - A0023</td>
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<td>336 Blood flow [PH]</td>
<td>3029 - 3043</td>
<td>A0024 - A0038</td>
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<td>337 Contact Lenses [CO]</td>
<td>3044 - 3097</td>
<td>A0298 - A0351</td>
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<td>338 Functional imaging [MOI]</td>
<td>3098 - 3108</td>
<td>B0001 - B0011</td>
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<td>339 Innovations in imaging [MOI, RE]</td>
<td>3109 - 3134</td>
<td>B0012 - B0037</td>
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<td>340 Biomechanics II [GL]</td>
<td>3135 - 317</td>
<td>B0038 - B0076</td>
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<td>341 Cataractogenesis II [LE]</td>
<td>3174 - 3196</td>
<td>B0205 - B0227</td>
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<td>342 AMD Clinical Research 2 [RE]</td>
<td>3197 - 3215</td>
<td>B0330 - B0348</td>
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</table>

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

All Posters and Networking — authors will be present at posterboards: 
Sunday, 10:45–11:45am; Monday, Tuesday and Wednesday, 2:45–3:45pm; 
Thursday, 10:30 -11:30am.
**Tuesday, May 9 — Posters**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session Title</th>
<th>Program #</th>
<th>Board #</th>
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<tbody>
<tr>
<td>11am – 12:45pm</td>
<td>Retinitis pigmentosa (clinical) [RE, GEN, LV, RC]</td>
<td>3216 - 3263</td>
<td>B0349 - B0396</td>
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<td></td>
<td>Functioning with Low Vision [LV, CL]</td>
<td>3264 - 3303</td>
<td>B0397 - B0436</td>
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<td>Papilledema, IIH and Optic Nerve [EY]</td>
<td>3304 - 3329</td>
<td>B0580 - B0605</td>
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<td>Retinoblastoma: Clinical [AP]</td>
<td>3330 - 3342</td>
<td>B0606 - B0618</td>
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<td></td>
<td>Tumors: Inside and around the eye, II [AP, GEN]</td>
<td>3343 - 3367</td>
<td>B0619 - B0643</td>
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<tr>
<td>3:45 – 5:30pm</td>
<td>ROP: Basic mechanisms [RC]</td>
<td>3443 - 3465</td>
<td>A0066 - A0088</td>
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<td>Trabecular Meshwork and Ciliary Body [GL]</td>
<td>3466 - 3496</td>
<td>A0089 - A0121</td>
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<td>Corneal Imaging, Topography, and Keratoconus [CO]</td>
<td>3499 - 3558</td>
<td>A0352 - A0411</td>
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<td>Ocular gene expression, proteomics and lipidomics [BI, CL]</td>
<td>3559 - 3574</td>
<td>B0118 - B0133</td>
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<td>Visual cycle and phototransduction [BI]</td>
<td>3575 - 3586</td>
<td>B0134 - B0145</td>
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<td>Cellular mechanisms of retinal diseases and ocular therapeutics [BI]</td>
<td>3587 - 3601</td>
<td>B0146 - B0160</td>
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<td>Clinical virology [IM]</td>
<td>3602 - 3614</td>
<td>B0161 - B0173</td>
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<td>Mechanisms of viral infections [IM]</td>
<td>3615 - 3630</td>
<td>B0174 - B0189</td>
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<td>Lens Physiology and Biomechanics II [LE]</td>
<td>3631 - 3645</td>
<td>B0190 - B0204</td>
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<td>Retinal vascular diseases II (excluding diabetes) [RE, AP]</td>
<td>3646 - 3679</td>
<td>B0271 - B0304</td>
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<td>Macular diseases (non-inherited) [RE]</td>
<td>3680 - 3704</td>
<td>B0305 - B0329</td>
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<td>Glaucoma [CL]</td>
<td>3705 - 3747</td>
<td>B0485 - B0527</td>
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</table>

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### Daily Program

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<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Location</th>
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<tbody>
<tr>
<td>7 – 8:30am</td>
<td>401</td>
<td>Breakfast with the Experts</td>
<td>Room 328</td>
</tr>
<tr>
<td>8:30 –10:15am</td>
<td>402</td>
<td>Dry Eye II [CO] #3748-3754</td>
<td>Ballroom 2</td>
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<tr>
<td>403</td>
<td></td>
<td>Stem Cells: new approaches and disease modeling [RC] #3755-3761</td>
<td>Ballroom 1</td>
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<tr>
<td>404</td>
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<td>AMD clinical research [RE] #3762-3767</td>
<td>Ballroom 3</td>
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<tr>
<td>405</td>
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<td>Trabecular Meshwork, Ciliary Body and Anterior Segment Imaging [GL] #3768-3774</td>
<td>Ballroom 4</td>
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<td>406</td>
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<td>Diabetic retinal imaging [RE] #3775-3780</td>
<td>Hall G</td>
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<td>407</td>
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<td><strong>Inflammaging and eye</strong> — Minisymposium [PH, CO, GL, IM, RC, RE] #3781-3785</td>
<td>Room 301</td>
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<td>408</td>
<td></td>
<td>Lens Epithelial Cells and PCO [LE] #3786-3792</td>
<td>Room 307</td>
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<td>409</td>
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<td>Corneal Endothelium and Fuchs Corneal Dystrophy [CO] #3793-3799</td>
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<tr>
<td>410</td>
<td></td>
<td>Vision and driving: Lessons learned and future directions — Minisymposium [CL, GL, LV, VI] #3800-3803</td>
<td>Room 309</td>
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<tr>
<td>11am – 12:45pm</td>
<td>411</td>
<td>All of the eye is a stage and immune cells are merely players — Minisymposium [IM, AP, RC] #3804-3808</td>
<td>Room 310</td>
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<tr>
<td>412</td>
<td></td>
<td>Novel ophthalmic instrumentation and imaging [MOI] #3809-3815</td>
<td>Room 314</td>
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<tr>
<td>413</td>
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<td>New Genes and Loci [GEN] #3816-3822</td>
<td>Room 321</td>
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<td>414</td>
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<td>Amblyopia II [EY] #3823-3829</td>
<td>Room 324</td>
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<td>429 Corneal Epithelium in Health and Disease [CO] #4238-4244</td>
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<td>Diabetic Retinopathy [RC] #4245-4251</td>
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<td>Vitreoretinal surgery II and endophthalmitis [RE] #4252-4256</td>
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<td>432</td>
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<td>Structure-Function Relationships I [GL] #4257-4263</td>
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<td>Retinal prostheses [RE] #4264-4270</td>
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<td>434</td>
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<td>Membrane domains: Polarity, trafficking and assembly in the eye — Minisymposium [LE, AP, BI, CO, GL, RC] #4271-4275</td>
<td>Room 307</td>
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<tr>
<td>435</td>
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<td>ERG:Advances, Disease and Injury [VN] #4276-4282</td>
<td>Room 308</td>
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<td>436</td>
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<td>Improving Care for Diabetic Retinopathy [CL] #4283-4289</td>
<td>Room 309</td>
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<td>437</td>
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<td>Basic investigations in the treatment of ocular infections [IM] #4290-4296</td>
<td>Room 310</td>
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Complete meeting information is available at [arvo.org/am](http://arvo.org/am)
### Daily Program

#### Wednesday, May 10  ■ Papers, minisymposia, workshops/SIGs, lectures and events

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<th>Location</th>
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<tbody>
<tr>
<td>11am – 12:45pm continued</td>
<td>438</td>
<td>Color vision, low vision [VI] #4297-4303</td>
<td>Room 316</td>
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<tr>
<td>1– 2:30pm</td>
<td>439</td>
<td>Intracranial Hypertension and Optic Nerve Changes [EY] #4304-4310</td>
<td>Room 324</td>
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<tr>
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<td>454</td>
<td>MOI Group: Advanced interpretation of structural retinal optical coherence tomography [MOI, VI, GL, RE, AP, EY, RC]</td>
<td>Ballroom 2</td>
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<td>455</td>
<td>Leveling the Playing Field: Are we decreasing the disparities between minority and non minority individuals? [GEN, GL, PH]</td>
<td>Room 308</td>
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<td>456</td>
<td>Idea to patents: Project to company</td>
<td>Room 309</td>
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<tr>
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<td>457</td>
<td>Grant writing tips for pre- and post-doctoral fellows: The nuts and bolts</td>
<td>Room 310</td>
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<td>458</td>
<td>Vulnerable populations in medical research: Ethical dilemmas and practical approaches</td>
<td>Room 314</td>
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<td>459</td>
<td>But I’m not from the US or EU! — international funding opportunities</td>
<td>Room 316</td>
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<td>460</td>
<td>Update on Automated Screening for Diabetic Retinopathy: Validation and Implementation — SIG [RE, IM, MOI]</td>
<td>Ballroom 1</td>
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<td>461</td>
<td>New knowledge of genetics and cell biology of exfoliation syndrome, a disorder of elastic tissue and ECM associated with ocular and systemic disease, offers novel means to treatment and prevention — SIG [GL]</td>
<td>Ballroom 3</td>
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<tr>
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<td>462</td>
<td>Predictive testing for age-related macular degeneration (AMD): Are we there yet? — SIG [CL, BI, RE, GEN]</td>
<td>Ballroom 4</td>
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<tr>
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<td>463</td>
<td>Emerging Therapeutic Modalities in Retinal Diseases — SIG [RE, CO, GL, IM, PH, RC]</td>
<td>Room 301</td>
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<td>465</td>
<td>Role of LXR in Inflammation and cholesterol metabolism in the retina — SIG [RC]</td>
<td>Room 324</td>
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<tr>
<td>2:45– 3:45pm</td>
<td>466</td>
<td>Establishing a Vision and Eye Health Surveillance System for the Nation #4718-4721</td>
<td>Room 307</td>
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<tr>
<td>Time</td>
<td>Session</td>
<td>Title</td>
<td>Location</td>
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<tr>
<td>3:45 – 5:30pm</td>
<td>468</td>
<td>Conjunctiva, Lacrimal and Meibomian glands and contact lenses [CO] #4722-4728</td>
<td>Ballroom 2</td>
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<tr>
<td>3:45 – 5:30pm continued</td>
<td>469-</td>
<td>An eye on the eye microvasculature — Minisymposium [RC, RE] #4729-4733</td>
<td>Ballroom 1</td>
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<td>470</td>
<td>Retinopathy of Prematurity [RE] #4734-4740</td>
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<td>471</td>
<td>Visual Fields, Vision Function, Psychophysics II [GL] #4741-4747</td>
<td>Ballroom 4</td>
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<td>472</td>
<td>Clinical posterior segment imaging [RE] #4748-4754</td>
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<td>473</td>
<td>Drug delivery II [PH] #4755-4760</td>
<td>Room 301</td>
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<td>474</td>
<td>Low Vision Devices and Rehabilitation [LV] #4761-4766</td>
<td>Room 308</td>
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<td>475</td>
<td>The bench and the bedside: Who is the instructor? — Minisymposium [IM, CO, RE, VI] #4767-4771</td>
<td>Room 310</td>
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<td>Ocular Transcriptomics and proteomics [BI] #4772-4778</td>
<td>Room 314</td>
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<td>477</td>
<td>Corneal Surgery: Techniques and outcomes [CO] #4779-4784</td>
<td>Room 316</td>
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<td>478</td>
<td>Visual functions and processes conserved across species — Minisymposium [AP, CO, EY, GEN, LE, MOI, PH, RC, VI, VN] #4785-4789</td>
<td>Room 321</td>
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<tr>
<td>5:45 – 6:30pm</td>
<td>490</td>
<td>Cogan Award Lecture #5100</td>
<td>Hall G</td>
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<td>6:45 – 7:30pm</td>
<td>491</td>
<td>Friedenwald Award Lecture #5101</td>
<td>Hall G</td>
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**ARVO Classical Concert**

**ARVO Classical Concert**  
**Wed., May 10, 8 – 10pm**  
**Hilton Baltimore – Holiday Ballroom**  
**401 W. Pratt Street, Baltimore**

The popular ARVO Classical Concert is performed by multi-talented ARVO members. Relax and enjoy the music.
Complete meeting information is available at [arvo.org/am](http://arvo.org/am)

**Wednesday, May 10 ▷ Posters**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session Title</th>
<th>Program #</th>
<th>Board #</th>
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<tbody>
<tr>
<td>8:30 – 10:15am</td>
<td>415 Oculoplastics [EY, AP]</td>
<td>3830 - 3849</td>
<td>A0001 - A0020</td>
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<td>416 Optic Neuropathy [EY]</td>
<td>3850 - 3873</td>
<td>A0021 - A0044</td>
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<td>417 Clinical microbiology [IM]</td>
<td>3874 - 3901</td>
<td>A0045 - A0072</td>
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<td>418 Corneal Stroma and Keratocytes [CO]</td>
<td>3902 - 3915</td>
<td>A0098 - A0111</td>
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<td>419 Ocular Surface Health and Disease [CO]</td>
<td>3916 - 3953</td>
<td>A0155 - A0192</td>
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<td>420 Molecular mechanisms in uveal melanoma [AP, GEN]</td>
<td>3954 - 3972</td>
<td>A0241 - A0259</td>
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<td>423 Angiogenesis: Basic Mechanisms [RC, AP]</td>
<td>4052 - 4080</td>
<td>B0025 - B0053</td>
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<td>424 Drug and gene therapy and delivery [PH]</td>
<td>4081 - 4122</td>
<td>B0081 - B0122</td>
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<td>425 ipRGCs and Circadian Rhythms [VN]</td>
<td>4123 - 4147</td>
<td>B0242 - B0266</td>
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<td>426 Retinal detachment (clinical) [RE]</td>
<td>4148 - 4174</td>
<td>B0443 - B0469</td>
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<td></td>
<td>427 Retinal prostheses [RE, LV, MOI]</td>
<td>4175 - 4208</td>
<td>B0531 - B0564</td>
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<tr>
<td></td>
<td>428 Spatial and temporal vision [VI, VN]</td>
<td>4209 - 4237</td>
<td>B0670 - B0698</td>
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<tr>
<td>11am – 12:45pm</td>
<td>440 Corneal Biomechanics [CO]</td>
<td>4311 - 4353</td>
<td>A0112 - A0154</td>
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<td>441 Conjunctival cell Biol and Meibomian glands [CO, AP]</td>
<td>4354 - 4400</td>
<td>A0193 - A0239</td>
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<td>442 Uveal melanoma clinical studies [AP]</td>
<td>4401 - 4422</td>
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<td>443 Physiological and myopic ocular biometry [AP, MOI]</td>
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<td>444 Drug delivery I [PH]</td>
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<td>445 Gene editing and gene therapies [BI]</td>
<td>4468 - 4509</td>
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<table>
<thead>
<tr>
<th>Time</th>
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<tr>
<td>11am–12:45pm</td>
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<td>446</td>
<td>Genetics of retinal dystrophies and Functional Analysis [GEN]</td>
<td>4510-4529</td>
<td>B0165 - B0184</td>
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<tr>
<td>447</td>
<td>Photoreceptor degeneration and retinal rescue strategies [RC, LV]</td>
<td>4530-4555</td>
<td>B0185 - B0210</td>
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<tr>
<td>448</td>
<td>Stem cells and tissue engineering for retinal repair [RC, CO, RE]</td>
<td>4556-4586</td>
<td>B0211 - B0241</td>
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<td>449</td>
<td>Pharmacological Intervention and Cellular Mechanisms [GL]</td>
<td>4587-4615</td>
<td>B0288 - B0316</td>
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<tr>
<td>450</td>
<td>Macular edema clinical and translational [RE]</td>
<td>4616-4634</td>
<td>B0489 - B0507</td>
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<td>Macular diseases (inherited) [RE, MOI, RC, VI]</td>
<td>4635-4657</td>
<td>B0508 - B0530</td>
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<td>452</td>
<td>Low Vision Populations, Services and Treatments [LV]</td>
<td>4658-4689</td>
<td>B0565 - B0596</td>
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<td>453</td>
<td>Vision in aging and disease [VI]</td>
<td>4690-4717</td>
<td>B0642 - B0669</td>
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<tr>
<td>479</td>
<td>Cornea and Anterior Chamber [CL]</td>
<td>4790-4814</td>
<td>A0073 - A0097</td>
</tr>
<tr>
<td>480</td>
<td>Imaging technology and applications [MOI, VI]</td>
<td>4815-4861</td>
<td>A0337 - A0383</td>
</tr>
<tr>
<td>481</td>
<td>Animal imaging [MOI]</td>
<td>4862-4878</td>
<td>A0384 - A0400</td>
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<tr>
<td>482</td>
<td>Clinical electrophysiology [VN]</td>
<td>4879-4898</td>
<td>B0268 - B0287</td>
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<tr>
<td>483</td>
<td>Glaucoma: Biochemical and molecular disease mechanisms [BI]</td>
<td>4899-4919</td>
<td>B0317 - B0337</td>
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<tr>
<td>484</td>
<td>Surgery and Wound Healing [GL]</td>
<td>4920-4974</td>
<td>B0338 - B0392</td>
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<tr>
<td>485</td>
<td>Laser Therapy and MIGS [GL, LV]</td>
<td>4975-4999</td>
<td>B0393 - B0417</td>
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<tr>
<td>486</td>
<td>Vitreoretinal surgery novel approaches and vitreoretinal interface [RE]</td>
<td>5000-5024</td>
<td>B0418 - B0442</td>
</tr>
<tr>
<td>487</td>
<td>Diabetic retinopathy clinical and surgical [RE]</td>
<td>5025-5043</td>
<td>B0470 - B0488</td>
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<tr>
<td>488</td>
<td>Eye Care Delivery and Economic Research [CL]</td>
<td>5044-5088</td>
<td>B0597 - B0641</td>
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<tr>
<td>489</td>
<td>Pupil [EY, VN]</td>
<td>5089-5099</td>
<td>B0699 - B0709</td>
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| 3:45–5:30pm     |                                                                                |             |                 |

Posters

Wednesday, May 10

<table>
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<th>Time</th>
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</thead>
<tbody>
<tr>
<td>8:30 – 10:15am</td>
<td>501</td>
<td><strong>Genes and disease: How knowledge of genetics can guide treatment, now and in the future</strong> [AP, CO, EY, GL, RE] #5102-5108</td>
<td>Ballroom 3</td>
</tr>
<tr>
<td>11:30–1:15pm</td>
<td>502</td>
<td><strong>The global problem of antibiotic resistance: Impact on ocular health worldwide and researching alternatives</strong> [AP, BI, CL, CO, PH, RE] #5109-5113</td>
<td>Ballroom 4</td>
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<td></td>
<td>524</td>
<td>Keratoconus: Basic Science and Clinical Applications [CO] #5560-5566</td>
<td>Ballroom 2</td>
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<td>525</td>
<td>Cellular and molecular bases of retinal development [RC] #5567-5572</td>
<td>Ballroom 1</td>
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<td>526</td>
<td>Surgery, Laser Therapy, Wound Healing [GL] #5573-5579</td>
<td>Ballroom 3</td>
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<td>527</td>
<td>Novel methods and Mechanisms of Disease [GEN] #5580-5586</td>
<td>Ballroom 4</td>
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<td>528</td>
<td>Molecular pharmacology and ocular toxicology [PH] #5587-5592</td>
<td>Room 301</td>
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<td>529</td>
<td>Lens Biochemistry [LE] #5593-5599</td>
<td>Room 307</td>
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<td>530</td>
<td>Photoreceptors [VN, VI] #5600-5606</td>
<td>Room 308</td>
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<td>531</td>
<td>Glaucoma: Frequency, Risk Factors, and Care [CL] #5607-5613</td>
<td>Room 309</td>
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<td>532</td>
<td>Genomics and proteomics to dissect normal and diseased ocular sites: an immunology and microbiology perspective [IM] #5614-5619</td>
<td>Room 310</td>
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<tr>
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<td>533</td>
<td>Biochemistry and Molecular Biology implicated in diabetic retinopathy and glaucoma [BI] #5620-5626</td>
<td>Room 314</td>
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<td>534</td>
<td>Visual perception with defocus, distortions, and training [VI] #5627-5633</td>
<td>Room 316</td>
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<td>535</td>
<td>Novel findings and approaches in myopia research [AP] #5634-5640</td>
<td>Room 321</td>
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<td>536</td>
<td>Retinal Abnormalities and Neuropathology [EY, VN] #5641-5647</td>
<td>Room 324</td>
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<tr>
<td>1:30–3:15</td>
<td>551</td>
<td>ARVO/Alcon Closing Keynote: What's next in the investigation of genetics of age-related macular degeneration?</td>
<td>Hall G</td>
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<tr>
<td>Time</td>
<td>Session Title</td>
<td>Program #</td>
<td>Board #</td>
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<tr>
<td>8:30 – 10:15am</td>
<td>503 Neurodegenerative Diseases and Brain Trauma [EY, MOI, VN]</td>
<td>5114 - 5137</td>
<td>B0001 - B0024</td>
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<td>504 Orbital and Thyroid Eye Disease [EY, MOI]</td>
<td>5138 - 5163</td>
<td>B0025 - B0050</td>
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<td>505 Toxicology; hypoxia; ischemia; oxidative stress; corneal disease [PH]</td>
<td>5164 - 5188</td>
<td>B0051 - B0075</td>
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<td>506 Diabetic Retinopathy: Neurodegeneration and pathology associated with the</td>
<td>5189 - 5205</td>
<td>B0076 - B0092</td>
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<td>neurovascular unit. [RC]</td>
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<td>507 Molecular mechanisms of diabetic retinopathy [BI]</td>
<td>5206 - 5227</td>
<td>B0093 - B0114</td>
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<td>508 Biochemistry and Molecular Biology of AMD II [BI]</td>
<td>5228 - 5263</td>
<td>B0115 - B0150</td>
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<td>509 Corneal Refractive Surgery [CO]</td>
<td>5264 - 5297</td>
<td>B0217 - B0250</td>
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<td>510 Crystallins [LE]</td>
<td>5298 - 5311</td>
<td>B0266 - B0279</td>
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<td>511 IOP Measurement and Characterization II [GL]</td>
<td>5312 - 5338</td>
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<td>512 Retinal Function: ERG studies [VN]</td>
<td>5339 - 5351</td>
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<td>513 Oxidative damage, ER stress and autophagy [RC, RE]</td>
<td>5352 - 5374</td>
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<td>514 Non-neural cells of the retina: Glia and Microglia [RC, CO, RE]</td>
<td>5375 - 5403</td>
<td>B0532 - B0560</td>
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<td>515 Color vision, binocular and stereoscopic vision [VI, VN]</td>
<td>5404 - 5430</td>
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<td>516 Advancements in OCT [MOI]</td>
<td>5431 - 5444</td>
<td>B0588 - B0601</td>
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<td>517 Wide field retinal imaging [MOI, VI]</td>
<td>5445 - 5459</td>
<td>B0602 - B0616</td>
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<td>518 Factors mediating myopia [AP]</td>
<td>5460 - 5479</td>
<td>B0617 - B0636</td>
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<td>519 High myopia, associated complications and potential treatments [AP]</td>
<td>5480 - 5495</td>
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<td>520 Endophthalmitis and trauma [RE]</td>
<td>5496 - 5522</td>
<td>B0678 - B0704</td>
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<td>521 Retinopathy of Prematurity [RE]</td>
<td>5523 - 5559</td>
<td>B0723 - B0759</td>
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</table>

Thursday, May 11 — Posters

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Thursday, May 11  ■  Posters

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<tr>
<td>11am–12:45pm</td>
<td>537 Genetics of Corneal dystrophies [GEN]</td>
<td>5648 - 5661</td>
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<td>538 Corneal Non-refractive Surgery [CO]</td>
<td>5662 - 5712</td>
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<td>539 Cataract/Reporting of Research [CL]</td>
<td>5713 - 5727</td>
<td>B0251 - B0265</td>
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<td>540 Immune mechanisms in Eye disease: perception and reality [IM]</td>
<td>5728 - 5759</td>
<td>B0280 - B0311</td>
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<td>541 Infection and immunology [IM]</td>
<td>5760 - 5787</td>
<td>B0312 - B0339</td>
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<tr>
<td></td>
<td>542 Diabetic retinopathy [PH]</td>
<td>5788 - 5807</td>
<td>B0340 - B0359</td>
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<td>544 Electrophysiology [GL]</td>
<td>5843 - 5856</td>
<td>B0395 - B0408</td>
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<td>545 Visual Disease Models and Restoration [VN]</td>
<td>5857 - 5886</td>
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<td>546 Paradigms of retinal degeneration and rescue [RC]</td>
<td>5887 - 5916</td>
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<td>547 Myopic CNV and CSCR [RE, AP, LV, MOI]</td>
<td>5917 - 5941</td>
<td>B0653 - B0677</td>
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<td>548 Ocular Trauma [CL, VI]</td>
<td>5942 - 5959</td>
<td>B0705 - B0722</td>
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<td>549 Retinal detachment: Basic research [RE]</td>
<td>5960 - 5979</td>
<td>B0760 - B0779</td>
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<td>550 Clinical retinal imaging 2 and lasers [RE, MOI, VN]</td>
<td>5980 - 6009</td>
<td>B0780 - B0809</td>
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For the latest program information
This ARVO Annual Meeting program information is up to date as of April 7, 2017. For the latest changes to any program or session, visit the Online Planner at arvo.org/am/program.

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Statement of need
Ophthalmic researchers and physicians are many times unaware of and/or have limited exposure to the most recent research advances in vision and ophthalmology. This research continuously evolves toward enhancing the general understanding of the eye and visual systems, which gives rise to new pre-clinical treatment options, and revised standards of practice. Exposure to this new information is a critical first step in enhancing the understanding of basic eye functions and vision disease processes.

Target audience
The educational design of this activity addresses the needs of basic researchers, clinician-scientists, ophthalmologists, ophthalmology residents, optometrists, post-doctoral fellows, graduate students, PhD candidates, medical students and research assistants/associates involved in the treatment of patients with eye and vision diseases and disorders.

Educational objectives
After participating in this CME activity, participants should be able to:

- Discuss the results of basic and clinical ophthalmology investigations and vision research underway, relevant to my area of interest or practice.
- Describe new models and methods being used by researchers and practitioners in eye and vision science.
- Cite ways in which new research data and methods may influence my research and/or practice.
- Discuss prospective advancements in eye and vision research and/or practice.

Physician Accreditation Statement
The Association for Research in Vision and Ophthalmology (ARVO) is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

Physician Credit Designation
ARVO designates this live activity for a maximum of 29.75 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

International Attendees: The American Medical Association (AMA) has determined that physicians not licensed in the U.S. who participate in CME activities are eligible for AMA PRA Category 1 Credit™.

CME credits and certificate fee

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<thead>
<tr>
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<th>Advance</th>
<th>Onsite</th>
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<tbody>
<tr>
<td>MIT, Student Non-Member</td>
<td>$29</td>
<td>$29</td>
</tr>
<tr>
<td>Member, Non-Member, Exhibitor (paid full-meeting access badge)</td>
<td>$49</td>
<td>$69</td>
</tr>
</tbody>
</table>
Exhibitor (complimentary full-meeting access badge only) $89 $89

Instructions to receive credit and/or certificates
Attendees interested in claiming AMA PRA Category 1 Credits™ for attendance at the ARVO Annual Meeting must pay the CME credits and certificates fee. Payment is collected during the registration process. Upon payment of this amount, an account will be created in our CME credit system allowing you to submit session evaluations and indicate the extent of your participation in each session. You will receive an email from “ARVO 2017 CME” with login information after the start of the Annual Meeting or within two business days of your purchase (whichever is later). Only attendees with a paid account will be able to claim credit for the 2017 Annual Meeting.

All requests for credit must be submitted no later than 11:59pm U.S. Eastern Time on Thursday, Aug. 31, 2017. Certificates are official. You will not receive additional documentation.

Certificate of Participation*
ARVO is accredited to offer AMA PRA Category 1 Credits™ to physicians. All other participants may receive a Certificate of Participation that documents the number of CME hours attended* by following the same instructions listed above and paying the CME credits and certificates fee.

*Some accrediting agencies may award equivalent Continuing Education (CE) credit when presented with a Certificate of Participation from an activity that offered AMA PRA Category 1 Credit™. Check with your accrediting agency for information. Questions? Email: education@arvo.org

Certificate of Attendance
Certificates of attendance are available free to all attendees. These certificates state that one has attended the Annual Meeting; but does not offer credit tracking. They will be available for pick-up onsite at the meeting registration desk and ARVO Central in the exhibit hall.

Disclaimer
The Annual Meeting provides a forum for the open exchange and discussion of research results and scientific advancements in the field of ophthalmology; however, ARVO makes no representation or warranty as to the truth, originality, or accuracy of the information presented at the meeting or in materials distributed in connection with them. Nor are the views expressed by the individual speakers necessarily the views of ARVO. ARVO supports the ACCME’s policy on evidence-based content and encourages faculty to adhere to these standards when planning a presentation.

Participants have an implied responsibility to use the newly acquired information to enhance patient outcomes and their own professional development. The information presented in this meeting is not meant to
serve as a guideline for patient management. Any procedures, medications, or other courses of diagnosis or treatment discussed in this activity should not be used by clinicians without evaluation of patient conditions and possible contraindications on dangers in use, review of any applicable manufacturer’s product information, and comparison with recommendations of other authorities.

Disclaimer off-label use
The Annual Meeting may contain discussion of published and/or investigational uses of agents that are not indicated by the FDA. ARVO does not recommend the use of any agent outside of the labeled indications.

The opinions expressed in the educational activity are those of the faculty and do not necessarily represent the views of any organization associated with this activity. Please refer to the official prescribing information for each product for discussion of approved indications, contraindications and warnings.

Disclosure of conflicts of interest
ARVO requires instructors, planners, managers and other individuals and their spouse/partner who are in a position to control the content of this activity to disclose any real or apparent conflict of interest they may have as related to the content of this activity. All identified conflicts of interest are thoroughly vetted by ARVO for fair balance, scientific objectivity of studies mentioned in the materials or used as the basis for content, and appropriateness of patient care recommendations.

Disclosure information for faculty will be provided within initial disclosure slides, prior to the start of their respective presentations. Disclosure for all individuals involved in planning and managing this CME activity are listed here with their relevant disclosure information.

The planners and managers reported the following financial relationships or relationships to products or devices that they or their spouse/life partners have with commercial interests related to the content of this CME activity:

Annual Meeting Program Committee (AMPC)
Chair: Craig E. Crosson, PhD, FARVO, has reported no financial relationships.

The following individuals on the AMPC reported financial relationships.

- Alexandra Benavente, MCOptom, MS, PhD: Johnson and Johnson Vision Care, Inc. (F)
- Netan Choudhry, MD, FRCS(C): Topcon (C, R); Bayer (C, R); Alcon (C); Novartis (C); Arctic DX- I Optos (C, R); Allergan (C, R)
- Itay Chowers, MD: Novartis (C, F); Bayer (C, F); Biokine (F); Lycored (F); Cell Cure (C)
• Sophie Xiaohui Deng, MD, PhD: Chiesi Farmacceutici (C)
• Alfredo Dubra, PhD: Athena Vision (owned by MeiraGTX) (C); Boston Micromachines Corporation (C); P - US Patent # 8,226,236
• Ann E. Elsner, PhD, FARVO: Aeon Imaging, LLC. (F, I, P, R, S); Aeon Imaging, LLC. (C)
• Murray Fingeret, OD: Aerie (C); Alcon (C); Allergan (C); Bausch & Lomb (C); Carl Zeiss Meditec (C); Diopsys (C); Inotek (C); Reichert (C); Heidelberg Engineering (R)
• Paul D Gamlin, PhD: Editas (F); Applied Genetic Technologies Corporation (AGTC) (F)
• Yali Jia, PhD: Optovue Inc. (P, F)
• Malik Y. Kahook, MD: Alcon (C); Allergan (C); ClarVista Medical (C); New World Medical (C)
• Noriko Koizumi, MD PhD: Senju Pharmaceutical Co. (C, P); Kowa Company Ltd. (C); M’s Science Corporation (C); Doshisha University (P)
• Thomas W. Raasch, OD, PhD, FARVO: Transcend Medical, Inc. (C)
• Tony Realini, MD, MPH: Alcon (F, C); Bausch & Lomb (C); Inotek (C); Optovue (F); Topcon (F); Smith-Nephew (C)
• Jun Shimazaki, MD, PhD: Santen Pharmaceutical (F,C,R); Otsuka Pharmaceutical (F,C,R); Senju Pharmaceutical: (C,R); AMO: (R); Alcon (R); Bausch & Lomb (R); Wakamoto (R)
• Elliott H. Sohn, MD: GSK (R); Oxford BioMedica (R); Regeneron (R)
• Donny W. Suh, MD: NIH (Pediatric Eye Disease Investigator Group) (C)
• Geunyoung Yoon, PhD: Bausch and Lomb (F); Ovitz (C)
• Yeni H. Yücel, MD, PhD: No relationships to disclose; Bausch&Lomb (C) – SPOUSE

The following individuals on the AMPC committee reported no financial relationships.
Audrey Bernstein, PhD, Milam A Brantley, Jr., MD, PhD, Claudio Bucolo, PhD, Vivian Choh, PhD, T Timothy William Corson, PhD, Nick Di Girolamo, PhD, Adriana Di Polo, PhD, Amani A Fawzi, Thomas A Ferguson, PhD, FARVO, Brad Fortune, OD, PhD, Velia M. Fowler, PhD, Ellen E. Freeman, PhD, Shahar Frenkel, MD, PhD, Marina S Gorbatyuk, PhD, PhD, Ronald G Gregg, PhD, Jeffrey M. Gross, PhD, Ulrike Gruenert, PhD, Shirin E. Hassan, BAppSc, Optom. PhD, Hiroshi Ishikawa, MD, Zi-Bing Jin, MD PhD, Dimitrios Karamichos, PhD, Lisa J. Keay, PhD, Antonio Longo, MD, PhD, Mary E. Marquart, PhD, Nicholas Marsh-Armstrong, PhD, Paul G. McMenamin, DSc, PhD, FARVO, Robert F. Mullins, PhD, Catherine A. Opere, PhD, Lisa A. Ostrin, OD, PhD, Luminita I Paraoan, PhD, Frank A. Proudluck, PhD, Magali Saint-Geniez, PhD, Kevin L. Schey, PhD, Falk Schroedi, Alan W. Stitt, PhD, Enrica Strettoi, PhD, Bonniein K. Swenor, MPH, PhD, William Rowland Taylor, PhD, Eranga Nishanthie Vithana, PhD, Joanne M. Wood, BSc, PhD, Russell L. Woods, PhD, Christina Zeitz, PhD
Continuing Medical Education Committee (CME)
Chair: Marlyn P. Langford, PhD, has reported no financial relationships.

The following individuals on the CME Committee reported financial relationships.
- Jacque L. Duncan, MD: AGTC (C); Avalanche (C); California Institute for Regenerative Medicine (C), (F); Foundation Fighting Blindness (C), (F); Ionis Pharmaceuticals, Inc. (C); Neurotech USA, Inc. (F); OcuGen, Inc. (C) Okuvision (C); QLT, Inc. (C); Shire Human Genetic Therapies, Inc. (C); Spark Therapeutics (C); US Food and Drug Administration Office of Orphan Product Development (F)
- Anton B. Hommer, MD: Alcon (R); Aerie (R); Allergan (R); Haag Streit (R); Heidelberg (R); Pfizer (R); Santen (R), (F)

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The following activity managers have reported no financial relationships.
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CONTINUING MEDICAL EDUCATION SESSIONS

All Annual Meeting sessions certified as Continuing Medical Education (CME) and eligible for AMA PRA Category 1 Credit™ are listed below with their associated faculty presenters. Presenters are listed in alphabetical order. For a complete list of all individuals involved with each research project, refer to the Program Summary Book.

The following 2017 Annual Meeting formats are not certified as Continuing Medical Education (CME) and are not eligible for AMA PRA Category 1 Credit™: ALCON/Keynote series, Award lectures, Posters, SiGs, Special sessions, Workshops and the Research Grant Administrators Program.

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<td>144</td>
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**Tuesday, May 9, 8:30 – 10:15am**

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<td>Novel therapies and imaging techniques for retinal disorders – Minisymposium</td>
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<td>Justis Ehlers, Elliott Sohn, Tim Stout, Masayo Takahashi, Budd Tucker, Nadia Waheed</td>
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<td>308</td>
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<td>Michael Butler, Erik de Vries, Rachayata Dharmat, Steven Flesler, Erwin van Wijk, Jingyu Yao, Lina Zelinger</td>
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<td>309</td>
<td>Surprising human visual processes revealed with advanced techniques</td>
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<td>Pablo Artal, Antoine Barbot, Shrikant Bharadwaj, Silvestre Manzanera, John Pirog, William Tuten, Elaine Wells-Gray</td>
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<td>James Augsburger, Chandrani Chattopadhyay, Sarah Coupland, Amy Schefler, Eszter Szalai, Serdar Yavuzcigiloglu</td>
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<td>Marina Gorbatyuk, Stephanie Hagstrom, Jonathan Lin, Przemyslaw Mike Sapieha, Sarah Zhang, Gulab Zode</td>
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<td>Neuroprotection</td>
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<td>Jessica Agostinone, Nicolas Belforte, Alejandra Bosco, Keith Martin, William McLaughlin, Ben Mead, Derek Welsbie</td>
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<td>Daniel Carr, Homayon Ghasi, Paul Kinchington, Dai Miyazaki, Pawan Kumar Singh, Paul Steptoe, Hongmin Yun</td>
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<td>Age-related changes in optics of the eye and vision – Minisymposium</td>
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<td>Aki Kawasaki, Fabrice Marins, Allison McKendrick, Jos Rozema, Thomas Van Den Berg, James Wolffsohn</td>
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<td>334</td>
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<td>Jessica Eason, Jakub Famulecki, Suzanne Michalak, Amrita Pathak, Fatemeh Rajaii, Nguyen Tram, Eric Weh</td>
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<td>Sayan Basu, Margarita Calonge, Heather Chandler, Gina Griffith, Winston Kao, Shoumyo Majumdar, Golnar Shojaati</td>
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<td>363</td>
<td>Macular degeneration-cell biology</td>
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<td>Thomas Ach, Paul Bishop, So Goto, Elisabeth Obert, Magali Saint-Geniez, Peng Shang, Alison Szabo</td>
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<td>365</td>
<td>Capillaries, Blood Flow, OCT Angiography</td>
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<td>Luis Alarcon-Martinez, Tailoi Chan-Ling, Luciano Custo Greig, Masoud Fard, Liang Liu, Takuhei Shoji, Kelvin Wan</td>
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<td>366</td>
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<td>Saghar Bagheri, Deeba Husain, Marlene Sassmannshauen, Lydia Sauer, Ursula Schmidt-Erfurth, Wenlan Zhang</td>
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<td>Peter Campbell, Jess Cardin, Sandra Kuhlman, Aaron Mcgee, Tania Seabrook</td>
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<td>Refractive Error: Risk Factors to Intervention Studies</td>
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<td>New Insights and Animal models</td>
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<td>Robert Cooper, Ann Elsner, James Feeks, Charles Granger, Andres Guevara-Torres, Zhuolin Liu, Kaitlyn Sapoznik</td>
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<td>Strabismus: Basic and Clinical</td>
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<td>Zia Chaudhuri, Luisa Hopker, David Leske, Linda McLoon, Fatima Pedrosa Domellof, Suraj Upadhyaya, Janice Wensveen</td>
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<td>Maya Bitar, Ahmad Kheirkhah, Charity Lee, Stephen Pflugfelder, Tannin Schmidt, Adam Tanaka, Yuichi Uchino</td>
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<td>403</td>
<td>Stem Cells: new approaches and disease modeling</td>
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<td>Lin Cheng, Aman George, Olivier Goureau, Maria Laggner, Peter Quinn, Ruchira Singh, Min Jae Song</td>
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<td>AMD clinical research</td>
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<td>Kimberly Cocce, Christine Gonzales, Tim Krohn, Ines Lains, Wenqiang Liu, Marion Munk</td>
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<td>Ying-Ting Chen, Che Connon, Christopher Hood, Mangesh Kulkarni, Rei Murakami, Jong Kook Park, Alexander Richardson</td>
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<td>432</td>
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<td>Muhammed Alluwimi, Qian Cheng, C Gustavo De Moraes, Ingy Madi, Allison McKendrick, Kouros Nouri-Mahdavi, Rafaela Penteado</td>
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<td>Membrane domains: Polarity, trafficking and assembly in the eye – Minisymposium</td>
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<td>Christopher Brady, Jacqueline Chua, Rishabh Date, Marta Garcia-Finana, Aditi</td>
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<td>Gupta, Anne Langguth, Cecilia Lee</td>
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<td>Sandamali Amarasingha Ekanayaka, Thomas Carion, Jonathan Chan, Natalya</td>
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<td>Delia Cabrera DeBuc, Christine Curcio, David Garway-Heath, Donald Hood,</td>
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<td>Genes and disease: How knowledge of genetics can guide treatment, now and in the future John Fingert, John Flannery, John Guy, Emine Kilic, Caroline Klaver, Tara Moore, David Valle</td>
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<td>The global problem of antibiotic resistance: Impact on ocular health worldwide and researching alternatives Penny Asbell, Gautam Dantas, Prashant Garg, Mike Gilmore, Linda Hazlett</td>
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<td>Cellular and molecular bases of retinal development Jeroen Bastiaans, Helena Lee, Jiamin Ouyang, Lauren Renner, Pawat Seritrakul, Nicholas Silva</td>
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<td>Surgery, Laser Therapy, Wound Healing Yann Bouremel, Dolly Chang, Zhaoying Dai, Gus Gazzard, Yuta Ueno, Bogomil Voykov, Tian Xia</td>
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<td>Novel methods and Mechanisms of Disease Silvia Albert, Justin Branch, Walter Lukow, Magda Meester, Riccardo Sangermano, Dana Schlegel, Tasneem Sharma</td>
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<td>Gordon Fain, Justin Grassmeyer, Shinya Sato, Onkar Sawant, Ulrich Schraermeyer, Xiangyi Wen, Xianshi Zhang</td>
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<td>531</td>
<td>Glaucoma: Frequency, Risk Factors, and Care</td>
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<td>Pieter Bonnemaijer, Stephanie Chen, Nikhil Choudhari, Paul Healey, Rene Hoehn, Pirro Hysi, Tzukit Zehavi-Dorin</td>
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<td>532</td>
<td>Genomics and proteomics to dissect normal and diseased ocular sites: an immunology and microbiology perspective</td>
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<td>James Chodosh, Charles Eberhart, Jereme Ozkan, James Rosenbaum, Olol Sundin, Jonathon Young</td>
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<td>533</td>
<td>Biochemistry and Molecular Biology implicated in diabetic retinopathy and glaucoma</td>
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<td>Inas Aboobakar, Maulasri Bhatta, Monika Deshpande, Leona Ho, Mao Nakayama, Johannes Schouten, David Stark</td>
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<td>534</td>
<td>Visual perception with defocus, distortions, and training</td>
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<td>Maciej Bartuzel, Kevin Chan, Muhammad Hassan, Arun Krishnan, Anwaryarh Radhakrishnan, Lucie Sawides, Yukai Zhao</td>
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<td>535</td>
<td>Novel findings and approaches in myopia research</td>
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<td>Regan Ashby, Christopher Clark, Quan Hoang, Yu Huang, Erica Landis, Seyedhassan Paylakhi, Christopher Taylor</td>
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<tr>
<td>536</td>
<td>Retinal Abnormalities and Neuropathology</td>
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<td>John Chen, Jure den Haan, Thiago Filgueiras, Mark Kupersmith, jakaita Mostafa, Sobrai Rula, Yi Shao</td>
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</tbody>
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Monday, May 8, 10:15 – 10:55am

**AP Section Business Meeting** — Room 321
1. Trustee's Report of Status of Association
2. ARVO Strategic Plan
3. Annual Meeting Program Committee Chair’s Report
4. Annual Meeting Program Committee Election Results
5. AP Section Trustee nomination(s) update
6. Other Business

**BI Section Business Meeting** — Room 314
1. Trustee's Report of Status of Association
2. ARVO Strategic Plan
3. Annual Meeting Program Committee Chair’s Report
4. Annual Meeting Program Committee Election Results
5. 2017 Trustee Election Results
6. Other Business

**CL Section Business Meeting** — Room 309
10:15am - 10:55am
1. Trustee's Report of Status of Association
2. ARVO Strategic Plan
3. Annual Meeting Program Committee Chair’s Report
4. Annual Meeting Program Committee Election Results
5. 2017 Trustee Elections Results
6. Other Business

**CO Section Business Meeting** — Ballroom 2
1. Trustees Report of Status of Association
2. ARVO Strategic Plan
3. Annual Meeting Program Committee Chairs Report
4. Annual Meeting Program Committee Election Results
5. Other Business

**EY Section Business Meeting** — Room 324
1. Trustees Report of Status of Association
2. ARVO Strategic Plan
3. Annual Meeting Program Committee Chairs Report
4. Annual Meeting Program Committee Election Results
5. Other Business

**GL Section Business Meeting** — Ballroom 4
1. Trustee's Report of Status of Association
2. ARVO Strategic Plan
3. Annual Meeting Program Committee Chair’s Report
4. Annual Meeting Program Committee Election Results
5. GL Section Trustee nomination(s) update
6. Other Business
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<th>Location</th>
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<tr>
<td>IM Section Business Meeting — Room 310</td>
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<td>1. Trustees Report of Status of Association</td>
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<td>2. ARVO Strategic Plan</td>
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<td>4. Annual Meeting Program Committee Election Results</td>
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<td>5. Cora Verhagen Award</td>
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<td>6. Dr. Raniyah Ramadan Foundation Award</td>
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<td>7. Other Business</td>
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<td>LE Section Business Meeting — Room 307</td>
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<td>1. Trustees Report of Status of Association</td>
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<td>2. ARVO Strategic Plan</td>
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<td>3. Annual Meeting Program Committee Chairs Report</td>
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<td>4. Presentation of the National Foundation for Eye Research 2017 Cataract</td>
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<td>Research Award to Janice Walker, PhD, of the Thomas Jefferson University,</td>
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<td>6. Other Business</td>
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<td>PH Section Business Meeting — Room 301</td>
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<td>2. ARVO Strategic Plan</td>
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<td>RC Section Business Meeting — Ballroom 1</td>
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<td>5. Other Business</td>
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<td>RE Section Business Meeting — Ballroom 3</td>
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<td>5. Other Business</td>
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<td>VI Section Business Meeting — Room 316</td>
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<td>1. Trustees Report of Status of Association</td>
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<td>VN Section Business Meeting — Room 308</td>
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<td>5. 2017 Trustee Election Results</td>
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<td>6. Other Business</td>
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Complete meeting information is available at [arvo.org/am](http://arvo.org/am)
Airport Transportation
All ARVO attendees can receive a 10% discount on a SuperShuttle transfer to/from the local airports, using code 7CH5R. Downtown Baltimore is located extremely close to I-95, the downtown Baltimore Area is easily accessible and each hotel offers self-parking or valet services. To access driving directions from local areas Visit Baltimore offers driving directions from the North, South, and West. If you’re looking for more specific directions enter your address into Google maps.

Other Transportation Options
Nearly everything you need in Baltimore is within walking distance of the Baltimore Convention Center. However, if you find yourself looking to explore, there are multiple low-cost public transportation options. The Visit Baltimore Information Desk in Pratt Street Lobby of the Convention Center has more information.
Reserve your ARVO 2018 hotel online before you go home!

Hotel reservations for ARVO 2018 in Honolulu open on Sunday, May 7! All attendees are encouraged to book their hotel for the 2018 Annual Meeting before heading home.

Two ways to book:
- Stop by the Hawaii booth in the Exhibit Hall
- Reserve online at arvo.org/hotels

Hotels are available in all price ranges and service levels, and your favorite hotel brands are represented.

Please note: ARVO cannot assume responsibility for rooms reserved at hotels outside the ARVO block (either at hotels not listed or booked directly with the hotels). Special requests (i.e., king-size bed, non-smoking) may be noted but cannot be guaranteed. If you require accessible accommodations, contact ARVO's Housing Bureau with details.

am.arvo.org/hotels
ARVO and the ARVO Foundation are grateful to the supporters of the following named travel grants:

**Travel grants supporters:**

- America Uveitis Society Travel Grant
- ARVO International Travel Grants
- ARVO Foundation Travel Grants
- ARVO Staff Travel Grant
- Elizabeth Anderson Travel Grants
- Joanne G. Angle Travel Grants
- Grant Wood Balkema Memorial Travel Grant
- IRCCS-Fondazione G. B. Bietti per lo Studio e la Ricerca in Oftalmologia-ONLUS Travel Grants
- Sek-Jin Chew Travel Grant
- Ramon F. Dacheux II Memorial Travel Grant
- Marij and Paulus de Jong Travel Grant
- M. Velma Dobson Memorial Travel Grant
- C. Stephen and Frances B. Foster Foundation Travel Grant
- G. M. Jager Travel Grant
- Murray and Jeanie Johnstone Travel Grant
- Knights Templar Eye Foundation Travel Grants
- Kowa Travel Grant
- Kreissig Travel Grant
- Lions Eye Institute for Transplant & Research Travel Grants
- National Eye Institute Travel Grants
- Richard Newton Lolley Travel Grant
- Friederike Mackensen Travel Grant
- Gesine Mohn Travel Grant
- NIH Moorfields Biomedical Research Centre Travel Grants
- Ocular Immunology and Uveitis Foundation Travel Grant
- Overseas Chinese Association for Vision and Eye Research (OCAVER) Travel Grant
- Reader's Digest Partners for Sight Foundation Travel Grants
- Retina Research Foundation/ Joseph M. and Eula C. Lawrence Travel Grants
- Santen, Inc. Travel Grants
- Societa Italiana Laser in Oftalmologia Travel Grants
- Josh Wallman Travel Grant
- Women in Eye and Vision Research (WEAVR) Travel Grants

^ Supported by memorial donations

* Funding of grants for attendance at this conference was made possible in part by grant 2U13EY002143-40 from NEI. The views expressed in written conference materials or publications and by speakers and moderators do not necessarily reflect the official policies of the DHHS; nor does mention by trade names, commercial practices or organization imply endorsement by the U.S. Government.

**ARVO Foundation awards & fellowships**

- Alcon Early Career Clinician-Scientist Research Awards
- Collaborative Research Fellowships (supported by Pfizer)
- Genentech AMD Research Fellowships
- Oberdorfer Award in Low Vision Research (supported by The Lighthouse Guild)
- Pfizer Ophthalmics Carl Camras Translational Research Awards
- Dr. Roger Vogel Award for Pharmaceutical Research (supported by Point Guard Partners)
- Dr. David L. Epstein Award (supported by the family of Dr. Epstein)

**ARVO Foundation Developing Country Eye Researcher Travel Fellowships**

- Alcon Foundation
- Alcon South Africa
- Ophthotech
- University of Wisconsin - Madison
- Women in Eye and Vision Research (WEAVR)
ARVO gratefully acknowledges the generous support for the 2017 Annual Meeting and its programs.
ARVO Social Events: Everyone is welcome!

Sunday Social
PowerPlant Live!
Sun., May 7, 7:30 – 10:30pm
34 Market Street, Baltimore
(admission ticket required*)

Power Plant Live! is Baltimore’s premier dining and entertainment destination located just one block from the world famous Inner Harbor. Join meeting attendees for great food, drinks, music, dancing, games and more. This event is family-friendly so purchase tickets for your entire family to join in the fun.

Student/Trainee Social
Mon., May 8, 7:30 – 9pm
Baltimore Convention Center, Charles Street Lobby

All trainees attending the Meeting are invited to join us in honoring the 2017 Travel Grant Recipients. Come and mingle with your colleagues and make new acquaintances.

ARVO Classical Concert
Wed., May 10, 8 – 10pm
Hilton Baltimore
Holiday Ballroom 6

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

ARVO Karaoke
Wed., May 10, 9pm – 12midnight
PBR Bar, a Cowboy Bar
34 Market Street, Baltimore
(admission ticket required*)

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

Honolulu Welcomes ARVO
2018 Kick-Off Reception – Thurs., May 11, 10:30 – 11:30am
Baltimore Convention Center – Exhibit Hall

Join ARVO and Hawaii CVB as we look forward to the ARVO 2018 Annual Meeting.

*Tickets available at Registration on Sat.; ARVO Central, Sun–Wed.
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Developing new diagnostic, therapeutic and preventive interventions for complex eye diseases

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