ARVO 2014 Annual Meeting
Orange County Convention Center
South Building
Orlando, Florida
May 4 – 8, 2014

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Iris Pharma Specializes in Offering Preclinical and Clinical Ophthalmology Research Services Worldwide.

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- **CONSULTING**

Specific Focus on Ophthalmology and Highly Skilled Staff for Drug & Medical Device Development.

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Program Overview

Saturday, May 3

Registration  Level 2/S Lobby A 7am–6pm
ARVO-ISE Imaging Conference†  S 310 8am-5:30pm
ARVO Education Courses‡  See Daily Program 8:30am–4:30pm
ARVO Foundation/Dowling Gala†  Hyatt Regency (Peabody) 7–10pm

Sunday, May 4

Registration  Level 2/S Lobby A 7am–6pm
ARVO Central  Level 1/S Hall A 7am–6pm
Exhibits/Optional Exhibit Hours**  Level 1/S Hall A 7:30–8:30am
Symposia  See Program 8:30am-10:30am
Posters/All Posters Session  Level 1/S Hall A 8:30–10:15am/10:45–11:45am/11:30–1:30pm/3:15–5:30pm
Opening Keynote Session  Level 1/S Hall A 12noon–1:15pm
Pizza with the Experts†  S 210A-C 1:30–3pm
EVER ARVO Workshop  S 320 GH 1:30–3pm
SIGs/Workshops  See Program 1:30–3pm
Imaging Group  S 210DE 1:30–3pm
Papers  See Program 3:15–5:30pm
Basic Clinical Lecture  Level 1/S Hall B 5:15–7:15pm
ARVO Social/ARVO Rocks†  Universal Studios Florida® 7:30am–10:30pm

Monday, May 5

Registration  Level 2/S Lobby A 7am–6pm
ARVO Central  Level 1/S Hall A 7am–6pm
Exhibits/Optional Exhibit Hours**  Level 1/S Hall A 7:30–8:30am
NAEVR Briefing  S 329 7:30–8:30am
Posters/All Posters Session  Level 1/S Hall A 8:30–10:15am/11am–12:45pm/2:45–3:45pm/3:45–5:30pm
Papers/Minisymposia  See Program 8:30–10:15am/11am–12:45pm/3:45–5:30pm
Section Business Meetings  See Program 10:15–10:55am
SIGs/Workshops  See Program 1–2:30pm
Genetics Group  S 210DE 1–2:30pm
China-US Networking Forum  S 210A-C 1–2:30pm
Proctor Award Lecture  Level 1/S Hall B 5:45–6:30pm
Weiserfeld Award Lecture  Level 1/S Hall B 6:45–7:30pm
Student/Trainee Social  Hilton Orlando 7:30–9pm

Tuesday, May 6

Registration  Level 2/S Lobby A 7am–6pm
ARVO Central  Level 1/S Hall A 7am–6pm
Exhibits/Optional Exhibit Hours**  Level 1/S Hall A 7:30–8:30am
Posters/All Posters Session  Level 1/S Hall A 8:30–10:15am/11am–12:45pm/2:45–3:45pm/3:45–5:30pm
Papers/Minisymposia  See Program 8:30–10:15am/11am–12:45pm/3:45–5:30pm
Research Grant Admin. Program  S319 8am–5pm
WEAVR Silent Auction  Level 1/S Hall A 9:30am–3:45pm
General Business Meeting  S 230 GH 10:15–10:55am
SIGs/Workshops  See Program 1–2:30pm
Low Vision Group  S 210DE 1–2:30pm
WEAVR Luncheon†  Level 1/S Hall B 1–2:30pm
Where are the Women? Forum  S 320 AB 5:30–7pm

Wednesday, May 7

Registration  Level 2/S Lobby A 7am–6pm
ARVO Central  Level 1/S Hall A 7am–6pm
Breakfast with the Experts†  S 210A-C 7–8:30am
Exhibits/Optional Exhibit Hours**  Level 1/S Hall A 7:30–9am
Posters/All Posters Session  Level 1/S Hall A 8:30–10:15am/11am–12:45pm/2:45–3:45pm/3:45–5:30pm
Papers/Minisymposia  See Program 8:30–10:15am/11am–12:45pm/3:45–5:30pm
NEI/Audacious Goals Update  Level 1/S Hall B 10:15–10:55am
SIGs/Workshops  See Program 1–2:30pm
Nanotechnology Group  S 210DE 1–2:30pm
Cogan Award Lecture  Level 1/S Hall B 5:45–6:30pm
Friedenwald Award Lecture  Level 1/S Hall B 6:45–7:30pm
Classical Concert  Hyatt Regency (Peabody) 6–10pm
ARVO Karaoke Night  ICEBAR Orlando 9pm–12midnight

Thursday, May 8

Registration  Level 2/S Lobby A 7am–2pm
ARVO Central  Level 1/S Hall A 7am–2pm
Symposia  See Program 8:30–10:30am
Posters/All Posters Session  Level 1/S Hall A 8:30–10:15am/10:45–11:45am/12noon–1:15pm
Denver Kickoff Reception  Level 1/S Hall A 10:45–11:45am
Papers  See Program 12noon–1:45pm
Closing Keynote Session  Level 1/S Hall B 2–3:15pm

† 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 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
South Hall B

ARVO/Alcon Keynote Series
WEAVR Luncheon
Career Forum
Basic Clinical Lecture
Awards Lectures
Paper Sessions
MIT Career Forum

Building

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

Convention Center

- Meeting Management Lost and Found/ S 220A
- Bag Pickup S 220D
- Speaker Ready S 220B
- Registration
- Mothers’ Lounge/ Meditation Room S 219 (key available in S 220A)
- Pizza with the Experts
- Breakfast with the Experts S 210A–C
- Coat and Luggage Check — Wednesday and Thursday
- Entrance/Exit
- ARVO/ISIE Imaging Conference S 310
- Open to South Exhibit Hall below
- South Building

Walkway to North Building

Open to North Exhibit Hall below

Open to South Exhibit Hall below

Coat and Luggage Check — Wednesday and Thursday

Speaker Ready S 220B

Meeting Management Lost and Found/ S 220A

Bag Pickup S 220D

Registration

Mothers’ Lounge/ Meditation Room S 219 (key available in S 220A)

Pizza with the Experts
Breakfast with the Experts S 210A–C

Crosswalks

Open to North Exhibit Hall below

Open to South Exhibit Hall below

ARVO/ISIE Imaging Conference S 310

South Building
ARVO Policies

Recording/Photography/Audiotape/Video Equipment Policy — Recording by any means (photographing, audiotaping, videotaping) of any presentation or session 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, see the Commercial Relationships Index at arvo.org/amindices.

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 must be registered, and the registration location and number must be 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 arvo.org/amindices.

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.
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 Orlando.
- 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.

www.2-sight.com

The world’s only FDA approved retinal prosthesis for the treatment of RP.

For the latest update on Argus II, please attend the following ARVO session:

May 8 @ 1:30pm — Mark Humayun, MD, PhD
#526 Retinal Prosthesis (Room S 230A-D)

For a complete list of indications, contraindications, side effects, and warnings, please visit our website or call 855-756-3703. Email: physicians@2-sight.com
How to Connect

Wireless Internet
Complimentary 5GHz Internet access is available throughout the convention center. Both 2.4GHz and 5GHz service is available in the public space and meeting rooms; devices need to be 5GHz in order to connect to the Internet in South Hall A and B. Laptops must be equipped with a wireless card, SSID: ARVO. Smart City is the Internet service provider to the convention center. They are located at the service desk in South Hall A, Tel: 888.614.2637.

Internet Kiosks
Get online for free. Internet stations are located in front of rooms S 310, S 320, and S 330 (all located on Level 3).

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

- arvoconnect.arvo.org
- twitter.com/ARVOinfo
- arvo.org/facebook
- #ARVO2014

Win an iPad
Stop by Connect Café in ARVO Central and update your ARVOConnect profile. If you complete 70% or more of your profile by Thursday, May 8, at noon, you will be entered into a drawing to win an iPad. A professional photographer will be available to take a photo and upload it to your profile on Sunday, 1 – 5pm, and Monday and Tuesday, 9am – noon.
With a network of global facilities and a comprehensive portfolio, Charles River is an ideal contract research partner for your ocular program. Studies can be conducted under GLP conditions either as stand-alone studies or as part of general and specialty toxicology programs. Non-GLP pilot or proof-of-concept studies are also available for your early research needs.

Ocular Disease Models
Safety Assessment

Laboratory Support Services
Specialized Ocular Pathology

Visit us at booth #500 to learn more about our capabilities.

www.criver.com
Presenter Guidelines

Presenters
All speakers in paper sessions, symposia, workshops and special interest groups (SIGs) are required to check into the Speaker Ready Room, S 220B, 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. Speaker Ready Room audiovisual (AV) technicians will upload files and screen them for compatibility. 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 S 220B
Friday, May 2  4 – 6pm
Saturday, May 3  7am – 6pm
Sunday, May 4  7am – 6pm
Monday, May 5  7am – 6pm
Tuesday, May 6  7am – 6pm
Wednesday, May 7  7am – 6pm
Thursday, May 8  7am – 1pm
For details, see arvo.org/presenterguidelines

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 posterboards during their scheduled presentation time and during the “All Posters” session on the day of their scheduled presentation.
■ The Poster area will be monitored, and “no shows” will be recorded and will be ineligible for 2015 abstract submission as First Author.

■ Posters scheduled Sunday must be removed by 6pm; Monday – Wednesday posters must be removed by 6:30pm; Thursday posters must be removed no later than 2:45pm.

■ ARVO is not responsible for poster materials left at the end of day. Posters remaining on the posterboards will be removed and discarded.

■ For details, see arvo.org/presenterguidelines.

Abstract Withdrawals

If the First Author cannot attend and present, he/she must contact the ARVO office by email at arvoabstracts@arvo.org to provide notification of withdrawal. Withdrawals must be received by 5pm the day before the scheduled presentation. Failure to comply will result in rejection of the First Author’s abstract submission to the 2015 Annual Meeting.
The objective of the 2014 Annual Meeting is to provide a forum for the exchange of new ophthalmology and vision research by scientists and investigators.

**2014 Annual Meeting Accreditation Information**

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

ARVO designates the 2014 Annual Meeting, a live activity, for a maximum of 22.5 **AMA PRA Category 1 Credits™**. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

The following 2014 Annual Meeting formats are not eligible for **AMA PRA Category 1 Credit™**: ALCON/Keynote series, Award Lectures, Posters, Workshops, Special Interest Groups (SIGs), and the Research Grant Administrators Program. See the list of CME eligible sessions on page 26 of the *Program Summary* for more details.

ARVO designates live full-day Education Courses, for a maximum of 6.5 **AMA PRA Category 1 Credits™** and live half-day Education courses for a maximum of 3.5 **AMA PRA Category 1 Credits™**. Physicians should claim only the credit commensurate with the extent of their participation in these activities.

Education courses that are eligible for **AMA PRA Category 1 Credit™** include: New Insights in Understanding Diabetic Retinopathy; Predicting, Measuring and Treating Changes in Corneal Biomechanics; and Telehealth Methods for Eye Disease: Focus on Diabetic Retinopathy, Glaucoma and Retinopathy of Prematurity.

The AMA has determined that physicians not licensed in the USA who participate in this CME activity are eligible for **AMA PRA Category 1 Credit™**.

**Professional Practice Gap and Needs Statement**

Clinicians need access to the most current research in ophthalmology and vision science in order to learn more about cellular functions within the eye and new pre-clinical possibilities. Exposure to this new information will enhance the clinician’s understanding of eye and vision disease processes to the benefit of their patients.

**Target Audience**

The Annual Meeting is targeted to clinical practitioners, research scientists, and medical education professionals involved in ophthalmology and vision research and treatment.

**Learning Objectives**

Upon participation in this activity, attendees will be able to:

- Discuss the ophthalmology and vision research underway relevant to their areas of interest
Describe the methods being used by researchers and practitioners in these fields
Integrate the discovery of new methods/ideas into one’s own practice

Disclosure Policy
It is the policy of ARVO to ensure balance, independent objectivity, and scientific rigor in all its sponsored educational programs. All persons in a position to control the content of a continuing medical education activity are required to disclose to ARVO and the program audience any relevant commercial relationships held within the past 12 months by themselves, their spouses, and/or their partners. The disclosure must include the name of the commercial interest and the nature of the relationship. The Continuing Medical Education Committee reviews each disclosure for real and potential conflicts of interest and removes sessions from the CME program if conflicts are identified. See the ARVO Commercial Relationships Policy on the first page of the Commercial Relationships Index for more details.

Evaluation/CME Certificate and Certificate of Attendance
CME Certificates for attending CME-eligible sessions and Certificates of Attendance are accessible via ARVO’s online evaluation system at http://www.planion.com/Web.Admin/Login?Account=ARVO. All evaluations and requests for credit should be entered into the system by 12 midnight EST, on Monday, September 1, 2014.

Attendees who preregistered for the Education Courses by Monday, April 28, 2014, can submit evaluations starting Saturday, May 3, 2014. Those who preregister for the Annual Meeting by Monday, April 28, can submit evaluations starting on Sunday, May 4. All others may access the system beginning Wednesday, May 14, 2014. Use your ARVO ID and Password, or click “forgot your password” to log in.

Certificates are official. You will not receive additional documentation. You may log on to update record/print certificate(s) anytime.
Questions? Email: education@arvo.org

Disclaimer
The Annual Meeting provides a forum for the open exchange and discussion of research results and scientific advancements in the field of ophthalmology. 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 it. The views expressed by the individual speakers are not 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.

Contact information
Any questions related to CME may be directed to ARVO staff at education@arvo.org
Services

Business Center
The convention center has a FedEx Office, located on Level 2 near the entrance closest to the Hyatt Regency. They handle photocopying, color copying, faxing, and mail services. They will also do poster printing. Hours: Sat-Thurs 7am – 6pm

Cash Machine/ATM
There are ATM machines located on Level 2 at each entrance of the convention center.

Child Care Services
KiddieCorp provides a professional children's program at the ARVO 2014 Annual Meeting. Children will enjoy games, story time, arts and crafts, and other fun-filled activities. The 2014 program will have an “Around the World with Friends” theme! The program is available Saturday, May 3 – Wednesday, May 7 from 7:30am – 6:30pm and Thursday, May 8 from 7:30am – 4:30pm. It will be located at the Hyatt Regency Orlando (formerly the Peabody) at 9801 International Drive, Orlando, FL 32819 and is connected by skywalk to the convention center. Fees are $8 per hour, per child, and each child must be registered for a minimum of two consecutive hours per day. Space is limited and will be granted on a first-come, first-served basis. For additional information, please contact Meeting Management Office, Room S 220A or call 407.685.6002. ARVO does not assume responsibility or accept liability with respect to this service.

Need Gifts?
Visit the ARVO Gift Shop
ARVO Central, South Hall A
Coat and Luggage Check
Coat and luggage check will be available for the final two days of the Meeting. It is located on Level 2 across from Room S 210. Hours:
Wednesday, May 7, 7am – 7:30pm
Thursday, May 8, 7am – 4:30pm

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

Disabilities or Special Needs
The Orange County Convention Center is accessible to the disabled. Registrants with questions regarding accessible shuttle transportation should call 410. 507.3748. For other auxiliary requirements, including scooter needs inside the building, go to the Meeting Management Office, Room S 220A or call 407. 685.6002.

First Aid/Onsite Medical Emergencies
For medical emergencies, contact security at 407.685.5102 and they will immediately call 911 to retrieve emergency help and provide proper directions to the location of need. During Meeting hours, Room Med 6, in the South B Concourse on Level 2, will be available for any First Aid needs. You may also stop by the Meeting Management Office, Room S 220A, or call 407.685.6002 for assistance.

Concessions/Food Service
Food service is available in the convention center Sunday – Thursday. For a list of retail food outlets, concessions, locations, hours and menus, see page 19.

Lost and Found
All lost items are taken to Meeting Management Office, Room S 220A. Please stop by this office or call 407.685.6002 to see if your item has been found.

Mother’s Lounge/Prayer and Meditation Room
Mother’s Lounge/Prayer & Meditation Room
The Mother’s Lounge/Prayer and Meditation Room is in S 219. Contact the Meeting Management Office, Room S 220A to gain access and/or schedule a time to use this room.
Services

Orlando Information, Tours and Restaurants Desk
Located on Level 2, there is a concierge desk staffed by Visit Orlando. They will provide information about local attractions, shopping, local transportation, tours, and restaurants.

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.

Security Services
If you need assistance while at the convention center, contact the Information Desk in ARVO Central, Exhibit/Poster Hall or Meeting Management in Room S 320A.

Water Coolers
Water coolers are available throughout the convention center.

Save the date

MAY 3 – 7 | DENVER

ARVO 2015

POWERFUL CONNECTIONS: VISION RESEARCH AND ONLINE NETWORKING
All outlets in the Orange County Convention Center take Mastercard, VISA, and American Express.

**Coffee**
- Level 2/Concourse S 210 (closest to Hyatt Regency)**
- Level 2/Concourse S 230 (closest to Hilton Orlando)**
- Level 1/Food Courts, front of South Halls A** and B*
- Level 1/Poster Networking Areas B and D in South Hall A
- Level 1/Cart Stations, front of South Halls A and B*, back of South Hall A**
- Level 3/Cart Station, Concourse S 310

**Grab N Go (drinks, bars, chips, candy etc.)**
- Level 2/Concourses S 210 (closest to Hyatt Regency)
- Level 2/Concourse S 220 (near the registration area)
- Level 2/Concourse S 230 (closest to Hilton Orlando)
- Level 1/Poster Networking Areas A, B and C in South Hall A
- Level 1/Cart Stations, front of South Halls A and B*, back of South Hall A.

**Sandwiches**
- Level 2/Concourse S 210 (closest to Hyatt Regency)
- Level 1/Food Courts, front of South Halls A and B*
- Level 1/Cart Station, back of South Hall A

**Vegetarian**
- Level 2/Southside Restaurant
- Level 2/Concourse S 210 (closest to Hyatt Regency)
- Level 1/Food Courts, front of South Halls A and B*
- Level 1/Cart Station, back of South Hall A

**Gluten-Free Options**
- Level 2/Southside Restaurant
- Level 1/Food Courts, front of South Halls A and B*
- Level 1/Cart Stations, back of South Hall A
- Level 2/Concourse S 210 (closest to Hyatt Regency)

*South Hall B is open Sunday only
**Specialty coffee available (latte, espresso, cappuccino, etc.)
Healthy Options
- Level 2/Southside Restaurant
- Level 2/Concourse S 210 (closest to Hyatt Regency)
- Level 2/Concourse S 230 (closest to Hilton Orlando)
- Level 1/Food Courts, front of South Halls A and B*
- Level 1/Cart Station, back of South Hall A

American
- Level 2/Southside Restaurant
- Level 1/ARVO Central, South Hall A
- Level 1/Food Court, front of South Hall A

Asian
- Level 1/Cart Station, back of South Hall A

Barbeque
- Level 1/Food Court, front of South Hall B*
- Level 1/Cart Station, back of South Hall A

Crepes
- Level 2/Concourse S 230 (closest to Hilton Orlando)
- Level 1/ARVO Central- South Hall A

Greek
- Level 2/Concourse S 230 (closest to Hilton Orlando)
- Level 1/Cart Station, back of South Hall A

Italian/Pizza
- Level 2/Southside Restaurant
- Level 1/Food Courts, front of South Halls A and B*
- Level 1/Cart Station, back of South Hall A

Mexican
- Level 2/Concourse S 210 (closest to Hyatt Regency)
- Level 1/Food Court, front of South Hall A
- Level 1/Cart Station, back of South Hall A

New Orleans
- Level 1/Cart Station, back of South Hall A

*South Hall B is open Sunday only
**Specialty coffee available (latte, espresso, cappuccino, etc.)
Dr. Seiving will discuss the Audacious Goal Initiative (AGI) of regenerating neurons and neural connections in the eye and visual system. Photoreceptor cells and retinal ganglion cells have been selected as the two compelling target tissues, because the loss of either cell type by disease or injury leads to severe visual disorders and blindness. Funding opportunities to address scientific needs for accomplishing the Audacious Goal Initiative will be discussed, as well as recently published opportunities to address AGI High Priority Areas of Research to develop molecular therapies and to study the intersection of aging and the biological mechanisms of eye disease. For information about the NEI Audacious Goal Initiative, visit nei.nih.gov/audacious/.
Meeting Management Office
Staff will be available in Room S 220A throughout the week to assist with Meeting services, Tel: 407.685.6002.

Hours:
Saturday 8am – 6pm
Sunday – Wednesday 7am – 6:30pm
Thursday 7am – 3pm

Press Activities
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 S 220G to pick up their badges. Other press may register onsite at the Press/Guest Registration counter in the Registration Area, Level 2, South Building. Please note that research presented at the Meeting may be proprietary or submitted for publication.

The Press Room is located in Room S 220G, with some space available for interviews. Please inquire in the Press Room, Tel: 407.685.6101

Registration (Convention Center)
ARVO 2014 registration will be on Level II, South Building of the Orange County 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 an onsite registration desk.
- **Onsite Guest/Press Registration** – Complete the appropriate registration form and submit payment at an onsite registration desk.
- **Press badge pickup** – Pre-registered press should print the email confirming press registration and bring that to Room S 220G for badge pick-up.
- **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 desk. All non-registered exhibitors may register onsite at the Exhibitor desk.

Registration and Badge Printing hours
(Convention Center)
Sunday presenters are strongly encouraged to register and/or print their badges on Saturday.

- Saturday, May 3  7am - 6pm
- Sunday, May 4  7am - 6pm
- Monday, May 5  7am - 6pm
- Tuesday, May 6  7am - 6pm
- Wednesday, May 7  7am - 6pm
- Thursday, May 8  7am - 2:30pm

Badge Printing (Hotels)
Bring your email confirmation with the QR code to an ARVO kiosk at one of the hotels below. Simply scan the QR code and receive your badges and/or tickets. QR codes can also be used from your smartphone.
- Hilton Orlando – 6001 Destination Parkway
- Hyatt Regency Orlando (formerly the Peabody) – 9801 International Drive

- Saturday, May 3  7am - 9pm
- Sunday, May 4  7am - 5pm

Speaker Ready Room — Room S 220B
All speakers in paper sessions, symposia, workshops and special interest groups (SIGs) are required to check into the Speaker Ready Room at least four hours in advance.

- Friday, May 2  4 – 6:00pm
- Saturday, May 3  7am – 6pm
- Sunday, May 4  7am – 6pm
- Monday, May 5  7am – 6pm
- Tuesday, May 6  7am – 6pm
- Wednesday, May 7  7am – 6pm
- Thursday, May 8  7am – 1pm

For details, see arvo.org/presenterguidelines

Avoid long lines at the convention center and print your badge at the Hilton Orlando or Hyatt Regency Orlando (Peabody). See information above.
ARVO Fellows
ARVO Fellows in the Class of 2014 may pick up their materials at the Travel Grants/Awards Desk in Level II, South Lobby A of the convention center during registration hours. Ribbons for prior year Fellows will also be available.

Travel Grant Recipients
Pick up your Travel Grant packet which includes your name badge, ribbon and reimbursement form at the Travel Grants/Awards Desk in Level II, South Lobby A of the convention center during registration hours.

ARVO Information Desk
The ARVO Information Desk is open during registration hours or call 407.685.6000. Staff will respond to questions about general meeting information, sessions and events.

Session #250
Monday, May 5
1 – 2:30pm
S 210A-C

China-ARVO Networking Forum
Organized by Shikun He, David R. Hinton, Ningli Wang, Overseas Chinese Association for Vision and Eye Research (OCAVER)

This is the 9th annual ARVO-China Networking Forum. The purpose of this event is to provide a platform for vision researchers from China, the USA and other countries to interact, discuss and exchange knowledge in the field of vision research & ophthalmology and to promote collaboration among the scientists. Speakers include leading ophthalmic researchers from China, and the USA. Topics will align with the 2014 ARVO “Leading Eye and Vision Research” theme that will show the leadership of researchers studying major blinding eye diseases. Everyone is welcome to attend the meeting.
Dowling Society

The ARVO Foundation for Eye Research would like to recognize the members of the Dowling Society. Established to honor the innovative vision researcher and first chairman of the ARVO Foundation Board of Governors, John E. Dowling, PhD, the society carries forth his spirit of innovative research by recognizing individuals for their significant support of eye and vision research.

Thank you to the generous members of the Dowling Society who have made a pledge or donation of $10,000 or more.

To become a member of the Dowling Society, please contact Maureen Dimont, Director of Development, at mdimont@arvofoundation.org or +1.240.221.2950.
ARVO/Alcon Keynote Series

Barry Marshall, AC, DSc, FRACP, FRS, FAA
2005 Nobel Laureate, Physiology or Medicine
University of Western Australia
*How curiosity-driven research can lead to the Nobel Prize*
Session #117
Sunday, May 4, 12noon – 1:15pm
Level 1/South Hall B

Jean Bennett, MD, PhD, FARVO
University of Pennsylvania School of Medicine
*Seeing the Light with Retinal Gene Therapy: Things You Wished You’d Known Early on Your Way to Late-Stage Trials*
Session #551
Thursday, May 8, 2 – 3:15pm
Level 1/South Hall B

ARVO Foundation for Eye Research

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

2014 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 take a few minutes to 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.
ARVO Awards and Awards Lectures

Joanne G. Angle Award

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

This 2014 award is presented to Martine J. Jager, MD, PhD, FARVO, of Leiden University Medical Center in the Netherlands. Among her outstanding contributions, Jager served as ARVO president (2007 – 2008), Trustee, chair of the Annual Meeting Program Committee, chair of the Advocacy Committee, chair of the International Chapter Affiliate Council and co-chair of the Long Range Planning Committee. In addition, she has served on numerous other committees and as an IOVS Editorial Board Member. Jager continues to be active in the ARVO Foundation WEAVR Leadership Committee, a member of the Dowling Society and has established an ARVO travel grant in honor of her father.

The Joanne G. Angle Award will be presented to Jager at the General Business Meeting (Session #323, Tuesday, May 6, 10:15 – 10:55am, Room S 230GH).

ARVO Distinguished Service Awards

Distinguished Service Award recipients will be recognized at the General Business Meeting (Session #323, Tuesday, May 6 10:15 – 10:55am, S 230GH).

Sir Peng T. Khaw, MD, PhD, FARVO
NIHR Biomedical Research Centre
Moorfields Eye Hospital and UCL Institute of Ophthalmology
Immediate Past President

Anton M. Kolomeyer, MD, PhD
University of Medicine & Dentistry of New Jersey
Trustee — Members-in-Training

Jacob Pe’er, MD, FARVO
Hadassah-Hebrew University Medical Center
Vice President

Complete meeting information is available at arvo.org/am
ARVO Awards and Awards Lectures

Proctor Award and Lecture

Session #289
Monday, May 5, 5:45 – 6:30pm
Level 1, South Hall B

Wolfgang Baehr, PhD, FARVO
University of Utah School of Medicine

Membrane Protein Transport in Photoreceptors

Mildred Weisenfeld Award and Lecture

Session #290
Monday, May 5, 6:45 – 7:30pm
Level 1, South Hall B

José Cunha-Vaz, MD, PhD
AIBILI, University of Coimbra, Portugal

Phenotypes and biomarkers of diabetic retinopathy

Cogan Award and Lecture

Session #482
Wednesday, May 7, 5:45 – 6:30pm
Level 1, South Hall B

Kirill Martemyanov, PhD
The Scripps Research Institute

G protein signaling in the retina and beyond

Friedenwald Award and Lecture

Session #483
Wednesday, May 7, 6:45 – 7:30pm
Level 1, South Hall B

Krzysztof Palczewski, PhD
The Scripps Research Institute

Structural biology of the fundamental steps in vision

Complete meeting information is available at arvo.org/am
Helping Eye Researchers Save Sight

The ARVO Foundation provides opportunities for scientists to discover and share information. We help:

- Promote scientific interactions between basic scientists and clinicians
- Provide financial support for vision researchers
- Expand vision research opportunities in developing countries
- Disseminate scientific research findings

In addition, the ARVO Foundation supports the following ARVO Annual Meeting events:

- ARVO/Alcon Keynote Series
- Pizza with the Experts and Breakfast with the Experts
- Women in Eye and Vision Research Silent Auction
- Women in Eye and Vision Research Luncheon

To learn more about how you can ensure the future of vision research and become a donor, see our website.

arvofoundation.org
Fellows of ARVO

ARVO will induct the Fellows Class of 2014 at the opening ARVO/Alcon Keynote Session, to recognize and honor these members for their leadership, dedication and contributions to the Association.

Gold Fellows
Dimitri T. Azar, MD, MBA
Bruce A. Berkowitz, PhD
John I. Clark, PhD
Scott W. Cousins, MD
Steven J. Fliesler, PhD
Thomas R. Friberg, MS, MD
John D. Gottsch, MD
David R. Hinton, MD
Gary N. Holland, MD
Marc Kantorow, PhD
Sir Peng Tee Khaw, MD, PhD
Uday B. Kompella, PhD
Friedrich E. Kruse, MD
Geoffrey P. Lewis, PhD
Alexander V. Ljubimov, PhD
David C. Musch, PhD
Joseph F. Rizzo, III, MD
Joel S. Schuman, MD
Janet R. Sparrow, PhD
Kathy K.H. Svoboda, PhD
Filippo Drago, MD, PhD
Dan Epstein, MD, PhD
Roderick J. Fullard, PhD, OD
David F. Garway-Heath, MD
David Huang, MD, PhD
Karen M. Joos, MD, PhD
Ordan J. Lehmann, MD, PhD
Jennifer I. Lim, MD
Woo-Kuen Lo
Frank J. Lovicu, PhD
Susana Marcos Celestino
William F. Mieler, MD
Robert F. Miller, MD
Kenneth P. Mitton, PhD
Rajiv R. Mohan, PhD
Vittorio Porciatti, DSc
Graham E. Quinn, MSCE, MD
Thomas W. Raasch, OD, PhD
Leopold Schmetterer, PhD
Marilyn E. Schneck, PhD
Mathias W. Seeliger, MD
K. Krishna Sharma, PhD
David M. Silver, PhD
Giovanni Staurenghi, MD
Jody A. Summers Rada, PhD
Dora Fix Ventura, PhD

Silver Fellows
Shiro Amano, MD
Jayakrishna Ambati, MD
Nancy J. Coletta, OD, PhD
Stephen P. Daiger, PhD

Visit the ARVO Gift Shop
ARVO Central, South Hall A

Need Gifts?
Exhibit Hall Hours*

Sunday, May 4  
Monday, May 5  
Tuesday, May 6  
Wednesday, May 6  

9am – 4pm  
9am – 4pm  
9am – 4pm  
9am – 4pm  

*Exhibits have optional daily hours,  
Sunday: 7:30 – 9am and 4 – 5pm  
Monday – Wednesday: 7:30 – 9am and 4-5:30pm  

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
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436 Creamery Way, #600, Exton, PA 19341
Tel: 610.280.1452; tmacarthur@absorption.com; absorption.com/ocular/?ts=gtc2014
Absorption Systems is a preclinical CRO 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, and devices. All animal studies are performed in our 30,000 sq. ft. AAALAC-accredited, GLP-compliant, and NIH-assured vivarium located in San Diego, CA. We have experience with species such as rabbit, pig, dog, and sheep plus disease models including glaucoma, AMD, KCS, CNV, and more.

Accutome, Inc. ................................................................................. 617
James O’Connor
3222 Phoenixville Pike, Malvern, PA 19355
Tel: 610.889.0200; Fax: 610.889.3233; joconnor@accutome.com; accutome.com
Accutome will be unveiling the new laptop and tablet based A-Scan Plus Connect®, AccuPen® handheld tonometer, PachPen®, UBM Plus® and B-Scan Plus®, along with diamond clear cornea, micro incision and LRI keratomes. Accutome will also feature the latest in Femtosecond Cataract Instruments and Toric Marking (Devgan Axis Markers). Diamond knife and instrument repairs available. Accutome Rx offers a full line of diagnostic and therapeutic products.

Acucela, Inc. .................................................................................. MS14
Trudy Bean
1301 2nd Ave., Suite 1900, Seattle, WA 98101-3805
Tel: 206.805.8300; Fax: 206.805.8301; tbean@acucela.com; acucela.com
Acucela Inc. is a clinical-stage biotechnology company that specializes in discovering and developing novel therapeutics to treat and slow the progression of sight-threatening ophthalmic diseases affecting millions of individuals worldwide.

AIT Industries ................................................................................... 238
Mark Dehn
224 W. James St., Bensenville, IL 60106
Tel: 800.729.1959, ext. 135; Fax: 800.729.7489
markd@aitindustries.com; aitindustries.com
The Grand Seiko WAM-5500 has been improved upon. New CPU board for faster dynamic measurements, access to freeze image to determine accuracy of measurement, internally adjusted focal point for easier IOL measurements, and error handling mechanism reduces measurement delays. Visit AIT Industries #238 to view the newly designed WAM-5500 Advanced. Many references available. Watch for WAM-5500 research projects featured at ARVO 2014.
Exhibitor Descriptions

**Akorn** .................................................................745
Kerry VanderMey
1925 West Field Court, Suite 300
Lake Forest, IL  60045
847.279.6111
kerry.vandermey@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 laboratories, Inc.** ...........................................501
Melissa Pugh
6201 South Freeway, TC-32, Fort Worth, TX  76134
Tel: 817.615.2622; Fax: 817.615.4769
melissa.pugh@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** .....................................................625
Antonio Cutino
6120 Windward Parkway, Suite 290, Alpharetta, GA  30005
Tel: 678.527.1322; Fax: 678.990.5742
elizabeth.vandebogart@alimerasciences.com; alimerasciences.com

Alimera Sciences (NASDAQ: ALIM) focuses on diseases of the retina. Alimera’s primary product, ILUVIEN® (fluocinolone acetonide intravitreal implant), has received marketing authorization in Austria, France, Portugal and Spain, and has launched in Germany and the UK. The national phase in Italy is ongoing. ILUVIEN is under review by the FDA.

**American Macular Degeneration Foundation** ............627
Chip Goehring
PO Box 515, Northampton, MA  01061
Tel: 413.896.8227
amd@macular.org; macular.org

The American Macular Degeneration Foundation works for the prevention, treatment and cure of macular degeneration by raising public awareness and knowledge about the increasing threat of this disease, providing support for those afflicted and their families, and supporting scientific research.; macular.org
Aniridia Foundation International ................................................................. 828
Jill Nerby
UVA Ophthalmology, PO Box 800715
Charlottesville, VA 22908-0715
Tel: 434.243.3357; jill_nerby@aniridia.net; make-a-miracle.org
Our organization provides educational conferences, support for aniridia families and collects research data to assist scientists and clinicians in their studies related to aniridia syndrome. The AFI medical registry collects data on the various eye & medical conditions which when combined make up aniridia syndrome, and many of which are also prevalent in the general population such as glaucoma, cataracts, cornea and retinal issues; medical conditions such as diabetes, autism spectrum and obesity.

The Angiogenesis Foundation .................................................................... 323
Ellie Crowley
One Broadway, 14th Floor, Cambridge, MA 02142
Tel: 617.401.2774
ecrowley@angio.org; angio.org
The Angiogenesis Foundation is the world’s leading nonprofit organization focused on conquering diseases caused by angiogenesis. Key goals include improving patient outcomes in ocular neovascular diseases, such as wet AMD, DME, and CRVO, through raising awareness, fostering early detection, and improving access to and the effective use of antiangiogenic treatments. Our booth will have multimedia tools, reports, and educational materials for clinicians, scientists, advocates and patients.

Annidis Health Systems Corp. ..................................................................... 145
Nicole Sandhaus
2650 Queensview Dr., Suite 245, Ottawa ON K2B 8H6, Canada
Tel: 613.596.1800, ext. 2019; Fax: 613.596.9453
mmcdonnell@annidis.com; annidis.com
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Powered Research, LLC is a North Carolina based preclinical CRO specializing in ophthalmic models. Led by our Ophthalmic Chief Medical Officer, Dr. Brian Gilger, Powered Research has proven expertise in multiple models for the ocular space including Ophthalmic Examinations, Models of Disease, and Biocompatibility / Toxicity / PK studies. Our standard IACUC protocol review occurs within 3-4 days and we typically can begin a study within 2 weeks of protocol submission.

Precision Vision, Inc...................................................................................... 235
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Tel: 815-223-2022; Fax: 815-223-2224
info@precision-vision.com;; precision-vision.com

Precision Vision has been the leading producer of vision testing and visual acuity products worldwide for decades. They have been at the forefront of numerous milestones in the field and are still recognized as the premier manufacturer for standard and custom products.

PreventionGenetics....................................................................................... 446
Rachel Crist
3800 South Business Park Ave., Marshfield, WI 54449
Tel: 715.387.0848; Fax: 715.207.6602
preventiongenresitics.com

PreventionGenetics offers NextGen sequencing, Sanger sequencing and deletion/duplication testing via aCGH for over 1000 genes. Our highly experienced team of geneticists provide fast turnaround times, outstanding personalized service, and the most reasonable prices in the industry. Our lab is CAP and CLIA accredited and has the largest DNA test menu of any lab in North America.
Promedica International ................................................................. 800
Terrie Hopton
3100 Bristol St., Suite 250, Costa Mesa, CA 92626
Tel: 714.460.7363; Fax: 714.460.7364
thopton@promedica-intl.com; promedica-intl.com
Promedica International is a privately held, full-service CRO providing clinical trial services for the medical device, biotechnology and pharmaceutical industries. Founded in 1985, Promedica International, a woman-owned corporation, is headquartered in Orange County, California. We have successfully been providing exceptional value to our clients for over 28 years.

Quantel Medical ............................................................................. 525
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601 Haggerty Lane, Bozeman, MT 59715
Tel: 877.782.6835; Fax: 406.522.2005
paula@pljmarketing.com; quantel-medical.com
Global Therapeutic Solutions including a comprehensive product portfolio of Diagnostic Ultrasound and Surgical Lasers, QUANTEL MEDICAL is a global ophthalmic medical device company dedicated to developing leading technologies to improve the treatment of ocular diseases. QUANTEL MEDICAL has a strong emphasis in research and development, resulting in many first-to-market product introductions and has built up a worldwide leadership reputation in the field of ocular Ultrasound and laser systems.

Regeneron Pharmaceuticals ......................................................... 705
777 Old Saw Mill River Rd., Tarrytown, NY 10591
Tel: 914.847.7000; regeneron.com
Regeneron is a leading science-based biopharmaceutical company that discovers, invents, develops, manufactures, and commercializes medicines for the treatment of serious medical conditions. Regeneron markets medicines for eye diseases, colorectal cancer, and a rare inflammatory condition and has product candidates in development in other areas of high unmet medical need, including hypercholesterolemia, oncology, rheumatoid arthritis, allergic asthma, and atopic dermatitis.

Reichert Technologies .................................................................. 504
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Exhibitor Descriptions

Retinal Physician......................................................................................624
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321 Norristown Rd., Suite 150, Ambler, PA 19002
Tel: 215.628.6594; Fax: 215.367.2142
michelle.kieffer@pentavisionmedia.com; retinalphysician.com
Delivers in-depth coverage of the latest advances in AMD, diabetic retinopathy, macular edema, retinal vein occlusion as well as surgical intervention in posterior segment care. Retinal Physician provides practical insight regarding current and future treatment strategies in medical/surgical retina care and puts into perspective what scientific developments mean to today’s practice.

Review of Ophthalmology.........................................................................229
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Tel: 610.492.1007; Fax: 610.492.1039
klawler@jobson.com; revophth.com
Review of Ophthalmology® features clinically relevant information on surgical technique, new technologies, disease diagnosis and management. Review presents timely articles on ophthalmic subspecialties such as glaucoma, retina, refractive surgery, cornea and external disease, pediatric ophthalmology, and oculoplastics. The Review Group is your resource for continuing medical education and promotional meetings, conferences, webinars, teleconferences, and events.

Roland Consult..........................................................................................834
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Rose Micro Solutions..................................................................................724
Mark Overhoff
4105 Seneca St., West Seneca, NY 14224
Tel: 716.608.0009; Fax: 716.608.0006
mark@rosemicrosolutions.com; rosemicrosolutions.com
Rose Micro Solutions sells High Quality Optical Loupes & LED Lights for Less! Our loupes start @ $279.00. We are a “Family” business consisting of 4 Brothers. We named the company after our mother “ROSE”. Stop by booth # 724 to see for yourself; rosemicrosolutions.com 716-608-0009

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Rumex International Co. .................................................................305
Margarita Malteva
13770 58th St. N., Suite 317, Clearwater, FL 33760
Tel: 727.535.9600; Fax: 727.535.8300
maltevam@rumex.net; rumex.net

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RxGen, Inc. ...................................................................................448
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5001 Plaza on the Lake, Suite 103, Austin, TX 78746
Tel: 203.498.9706; Fax: 619.353.6690
cstanley@rx-gen.com; rx-gen.com

RxGen, a specialized translational research organization focused on advancing therapeutic development through the validation and application of clinically relevant disease models to define the optimal path to clinic, through a combination of services, collaborations, and partnering. We offer extensive scientific and technical expertise in ophthalmology and leverage decades of experience in the development and application of nonhuman primate research models to advance translational programs.

San Diego Eye Bank ........................................................................418
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jennifer@sdeb.org; sdeb.org

The San Diego Eye Bank is the largest worldwide distributor of human ocular tissue dedicated to supporting innovative scientific research and studies in ocular disease. We specialize in: whole globes, diseased globes, corneas, posterior poles, conjunctiva, sclera, lens, retina, vitreous and blood serum. Other ocular tissue and serology testing is available as needed. Quality Tissue. Quality Service. ; sandiegoeyebank.org
Santen Inc.                                                                                           329
Michael Ford
2100 Powell St., 16th Floor, Emeryville, CA 94608
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mford@santeninc.com; santeninc.com

At Santen, we’re innovating therapies to improve the quality of life for patients worldwide. Our single focus in ophthalmology enables us to challenge unmet needs in the field—through passionate research, successful collaboration, and clarity of commitment. With over 120 years of investigative insight, Santen remains committed to the discovery, exploration, and development of ophthalmic therapies. Now, and into the future.

SDC                                                                                                   626
Melanie Raimo
21 East 6th St., Unit 110, Tempe, AZ 85281
Tel: 480.632.5468; Fax: 480.632.5469
mraimo@sdcclinical.com; sdcclinical.com/

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Shenyang Sinqi Pharmaceutical Co. Ltd.                                                              740
Xin Zhao
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Shenyang Sinqi Pharmaceutical Co., Ltd. is a state-level new and high-tech enterprise specializing in R&D, production and sales of ophthalmic drugs. With an eye on the rejuvenation of China’s national pharmaceutical industry, it is committing itself to the ophthalmology.

Sinclair Research Center                                                                             319
Marc Tayman
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Singapore Eye Research Institute (SERI) ....................................................744
Sharmila Kannan
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sharmila.kannan@seri.com.sg; seri.com.sg
Singapore Eye Research Institute is Singapore’s national eye research insti-
tute. SERI has played key strategic roles in conceptualization of research ideas
& technologies with local & international institutions, which has ensured a high
level of research competency & skills transfer. Importantly, SERI’s research
has translated to tangible outcomes, actual patient benefit, & success stories.
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and globally.

SinusMedii Ltd. .............................................................................................727
Dr. Hariloas Ginis
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Tel: +34.667.210.078
ginis@um.es; sinusmedii.com
Optical measurement of Straylight Measurement of straylight is performed in
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develops instruments for the measurement of the optical properties of the
eye. The instruments operate based on the double-pass principle, analyzing
spatio-temporally modulated light reflected from the ocular fundus.

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Speedway Surgical Co. .............................................................................324
Mr. Jatin Pahwa
64 1st Floor, Edward Line, Kingsway Camp, Delhi 110009, India
Tel: +91 9811027705
sales@speedwaydelhi.com; speedwaydelhi.com
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Sterling Institutional Review Board .......................................................... 741
Kathy Richards
5500 Interstate North Parkway, Suite 515, Atlanta, GA 30328
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kathy.richards@sterlingirb.com; sterlingirb.com
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The TearLab Osmolarity System is the first objective and quantitative test for diagnosing and managing Dry Eye patients. Fast and accurate results in seconds using only 50 nanoliters (nL) of tear film to diagnose Dry Eye Disease. The TearLab Research Guide contains tips and recommendations for using the TearLab Osmolarity System in your Research or clinical study of Dry Eye Disease. You can find the research guide at http://tearlab.com/products/doctors/research.

ThromboGenics, Inc. ............................................................................ 818, 836
Patrick Brauer
101 Wood Ave. South, Suite 610, Iselin, NJ 08830
Tel: 732.590.2900
patrick.brauer@carling-communications.com; thrombogenics.com
At ThromboGenics, Inc., we are dedicated to the research and development of pharmacologic treatments that address unmet clinical needs within eye care. Our commitment is demonstrated by FDA-approved JETREA® (ocriplasmin) Intravitreal Injection, 2.5 mg/mL. For more information about JETREA, please visit the ThromboGenics, Inc., booth (#818) or go to; JETREA.com.

Tomey Corporation .............................................................................. 322
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Tel: +81.525.815.327; Fax: +81.525.614.735
t-tamaoki@tomey.co.jp; tomey.com
TOMEY CORPORATION is well established in the fields of specular microscopy, refraction, tonometry, ultrasound, corneal topography, OCT and electrophysiology etc. We focus all of the resources of our organization on the goal of meeting the ever-changing needs of one group of people: eye care professionals.
Exhibitor Descriptions

Topcon ..................................................................................................219
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Tel: 201.599.5100; Fax: 201.599.5248
tmsmarketing@topcon.com; topconmedical.com

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Toxikon Corporation ............................................................................611
Jackie Wong
15 Wiggins Ave., Bedford MA 01730
Tel: 781.275.3330; Fax: 781.271.1136
jacqueline.wong@toxikon.com; toxikon.com

As part of its extensive custom research and testing portfolio for drug discovery and medical device development, Toxikon offers life science companies a variety of ophthalmic preclinical services. Toxikon’s preclinical ocular studies include disease/animal models, acute irritation, ocular tissue distribution, pharmacokinetic/pharmacodynamic (PK/PD), dose escalation, acute and repeat dose toxicity, required ISO and OECD/ICH guideline testing programs, implantation, and drug screening and efficacy.

Trial Runners LLC ................................................................................135
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UCL Institute of Ophthalmology ..........................................................739
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a.standen@ucl.ac.uk; ucl.ac.uk/oo-courses

UCL Institute of Ophthalmology is a global centre for excellence in education, enterprise, research and training. In conjunction with our partner Moorfields Eye Hospital, we offer postgraduate Masters courses in: Biology of Vision; Clinical Ophthalmology; Ophthalmology; Clinical Ophthalmic Practice; Translational Immunobiology; Vision Research; Translational Regenerative Neuroscience, with research-embedded teaching and lab-based projects. Please visit for more information!
Unilife Corporation .................................................................................................315
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Tel: 717.384.3400
gautam.shetty@unilife.com; unilife.com

Unilife is design, developer and manufacturer of innovative drug delivery devices. Ocu-ject is a device for accurate, precise intravitreal injections using standard prefilled syringes. Depot-ject is a device for implantation of drug depots; the device design allows for precise, deterministic placement of the implant. Ocu-Mix device allows for mixing/reconstitution and delivery of lyophilized drugs. Unilife has the broadest portfolio of devices for ocular delivery.

Vision Tiffany Inc. ..............................................................................................125
Tiffany Wang
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Tel: 847.287.6688; Fax: 312.277.6768
twang@visiontiffany.com; visiontiffany.com

Vision Tiffany Inc. Is a dedicated eye surgical instrument company • Titanium Instrument & Stainless Instrument reusable and disposables • Surgical Trays • I phone Adapter • Vision Chart and • Portable slit lamps • Slit lamp Digital Adapters Lens Meter

Visionsearch Pty Ltd. .......................................................................................218
Daniella Khoury
Suite 1110A, Level 11 173-175 Phillip St., Sydney NSW 2000, Australia
Tel: +61.44.876.3873
daniella@visionsearch.biz; visionsearch.biz

Visionsearch’s innovative mf/ffVEP system uses world-leading science developed by the University of Sydney, Australia for superior accuracy and repeatability. Sophisticated and easy to use, it gives objective amplitude and latency response of the Visual Field in mfVEP mode - 2ms latency reproducibility - Realtime run improvement scores for mfVEP and run averaging for ffVEP - Advanced patient fixation system - Asymmetry, progression and sector analysis functions Find out more at ; visionsearch.biz

Visit Denver, The Convention & Visitors Bureau .............................................736
Melissa Ryland
1555 California St., Suite 300, Denver, CO 80031
Tel: 303.571.9404; Fax: 303.892.1636
mryland@visitdenver.com; denver.org/ARVO

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Visoptics / Gibraltar IT, LLC. ............................................................... 237
Ashley McHugh
200 E State St., #301, Media, PA 19063
Tel: 610.892.1708
amchugh@gibraltarit.com; visoptics.com

Visoptics introduces 2 new devices that for the first time measure vision under conditions that mimic real world activities. The Central Vision Analyzer, or CVA, for distance and near vision at fixation and the Omnifield for vision within the central 20 degree field.

Volk Optical Inc. ................................................................................... 509
Ayla Gencer
7893 Enterprise Dr., Mentor, OH 44060
Tel: 440.510.0784; Fax: 440.510.0840
ayla.gencer@volk.com; volk.com

Volk Optical is the premier manufacturer of ophthalmic lenses for use in diagnosis, laser therapy and surgery. Our newest high resolution and Digital lenses provide unmatched retinal views. More recently we have been working to address unmet imaging needs with a new, truly portable ophthalmic imager that takes digital imagery of the retina and also the external structures of the eye. Visit Volk, booth 509 to try all the new products.

Voptica .................................................................................................. 729
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guillermo@voptica.com; voptica.com

Voptica develops and commercializes AOnEye, a new technological concept joining, in a unique device, the capacity to provide a full characterization of the patient’s vision, with the power of providing personalized solutions for vision, thanks to the Adaptive Optics. Voptica owns the know-how around AOnEye technology; Adaptive Optics applied to vision, the result of over a decade of world leader contributions made by the founders of the company.

Voxeleron LLC...................................................................................... 746
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4695 Charbot Dr. Suite 200
Pleasanton, CA 94588
Tel: 925.558.2755
jonathan@voxeleron.com: voxeleron.com

Voxeleron LLC provides software solutions in the fields of computer vision and machine learning. Our current focus is the development of ophthalmic image analysis software with an emphasis on optical coherence tomography (OCT) imagery. We will be demonstrating our latest OCT workstation software at our booth.
Wasatch Photonics ................................................................. 340
Cindy Gong
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Tel: 919.544.7785; Fax: 919.752.4306
cgong@wasatchphotonics.com
Wasatch Photonics

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guodong.zhang@winconlab.com; winconlab.com
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Wolters Kluwer Health ............................................................. 119
Michael Torpey
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Tel: 407.625.6375
mike.torpey@wolterskluwer.com

Women’s Eye Health.org ......................................................... 127
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Tel: 617.573.3832
weh@meeli.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 womenseye-health.org for more information.

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vanderveen@worldglaucoma.org; worldglaucoma.com

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joannem@wpiinc.com; wpiinc.com
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Jim Neal
2910 Seventh St., Berkeley, CA  94710
Tel: 510.204.7405
leticia.leon@xoma.com; xoma.com
XOMA discovers and develops allosteric modulating therapeutic antibodies. XOMA’s lead product candidate, gevokizumab (IL-1 beta modulating antibody), is in global Phase 3 clinical trials for non-infectious uveitis (NIU). This Phase 3 program, referred to as EYEGUARD™, was initiated in 2012 and targets multiple forms of NIU, including Behçet’s. For more information please visit; xoma.com.

Zeiss .....................................................................................................408
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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.

Zyleris PharmaTech .............................................................................822
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info@zyleris.com; zyleris.com
Zyleris PharmaTech provides high-throughput topical formulation screening, drug delivery, and formulation development services. Our first-in-class, high-throughput Franz Cell technology platform is designed to transform topical product development. We provide high-throughput cornea and sclera absorption and permeation screening service. Intravitreal drug delivery and ocular formulation development and optimization service. In vitro model: bovine, rabbit, and human corneal and scleral tissue.
### Daily Program

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<th>Section</th>
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<tr>
<td>8:30am – 4:30pm</td>
<td>1</td>
<td>New Insights in Understanding Diabetic Retinopathy</td>
<td>S 210A-C</td>
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<tr>
<td></td>
<td>2</td>
<td>Predicting, Measuring and Treating Changes in Corneal Biomechanics</td>
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<td></td>
<td>3</td>
<td>Cell Therapy in Ocular Disease — Emerging Research and Therapy</td>
<td>S 230A-D</td>
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<tr>
<td></td>
<td>4</td>
<td>Tissue Diagnosis in Ophthalmology: Biopsy and Beyond</td>
<td>S 230EF</td>
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<tr>
<td>8:30am – 12pm</td>
<td>5</td>
<td>Metabolic Networks in the Aging Eye: Implications for Pathophysiology of Disease</td>
<td>S 230GH</td>
<td></td>
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<tr>
<td>1 – 4:30pm</td>
<td>6</td>
<td>Telehealth Methods for Eye Disease: Focus on Diabetic Retinopathy, Glaucoma and Retinopathy of Prematurity</td>
<td>S 230GH</td>
<td></td>
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### 2014 ARVO General Business Meeting

**Tuesday, May 6, 10:15 – 10:55am | S 230GH | Session #323**

- **Welcome** — Justine R. Smith, FRANZCO, PhD, FARVO
- **Presentation of ARVO Distinguished Service Awards** — Justine R. Smith, FRANZCO, PhD, FARVO
  - **Sir Peng T. Khaw, MD, PhD, FARVO**
    Immediate Past President
  - **Anton M. Kolomeyer, MD, PhD**
    Trustee — Members-in-Training
  - **Jacob Pe'er, MD, FARVO**
    Vice President
- **Executive Vice President’s Remarks** — Craig E. Crosson, PhD, FARVO
- **Presentation of Joanne G. Angle Service Award** — Martine Jager, MD, PhD, FARVO
- **Introduction of Incoming Officers** — Justine R. Smith, FRANZCO, PhD, FARVO
- **Open Discussion** — Justine R. Smith, FRANZCO, PhD, FARVO
- **Conclude Meeting** — Justine R. Smith, FRANZCO, PhD, FARVO

Complete meeting information is available at [arvo.org/am](http://arvo.org/am)
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<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>8:30 – 10:30am</td>
<td>101</td>
<td>The Pathology of Retinal Neuro-inflammation — Symposium #1-6</td>
<td>AP, GL, IM, RC, RE, NT, VN</td>
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<td>102</td>
<td>ROP: Evolving Phenotypes and Emerging Treatments — Symposium #7-12</td>
<td>RC, CL, EY, RE, VN</td>
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<td>12 – 1:15pm</td>
<td>117</td>
<td>ARVO/Alcon Keynote Series — Opening Keynote #487</td>
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<td>Hall SB</td>
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<td>1:30 – 3pm</td>
<td>129</td>
<td>Multidisciplinary Ophthalmic Imaging Group: Cellular-Scale Imaging — From In-Vitro to In-Vivo</td>
<td>MOI</td>
<td>S 210DE</td>
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<td>130</td>
<td>Pizza with the Experts</td>
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<td>Authorship Ethics: Credit and Credibility</td>
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<td>Animal Models Leading to Clinical Trials</td>
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<td>EVER/ARVO Workshop: Corneal Cross-linking</td>
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<td>Pre-Clinical Drug Discovery: Using Cro's to Speed Development and Reduce Conflict of Interest</td>
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<td>VSS Symposium at ARVO</td>
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<td>RPE barrier, does it matter? — SIG</td>
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<td>137</td>
<td>New insights into the role of nitric oxide signaling in glaucoma — SIG</td>
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<td>Microglia in the Aging Retina: Can aging changes in retinal microglia contribute to age-related retinal disease? — SIG</td>
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<td>New understanding about extracellular matrix turnover and its contribution to material properties — SIG</td>
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<td>Understanding cone degeneration in retinitis pigmentosa and associated disorders — SIG</td>
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<td>141</td>
<td>The Aging Eye — SIG</td>
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### Sunday, May 4 (continued)

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<tr>
<td>1:30 – 3pm continued</td>
<td>142</td>
<td>A Report from the TFOS International Workshop on Contact Lens Discomfort — SIG</td>
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<td>3:15 – 5pm</td>
<td>143</td>
<td><strong>Economic Evaluation of the Impact of Visual Impairment and Interventions for Low Vision</strong> — Minisymposium #806-810</td>
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<td>144</td>
<td>Amblyopia</td>
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<td>Surgery, wound healing and laser</td>
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<td>Shedding light on mechanisms — genetics and beyond #839-845</td>
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<td>Ocular Tumors: Experimental therapeutics #846-851</td>
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<td>Microbial Pathogenesis</td>
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<td>CNV Management</td>
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<td>5:15 – 7:15pm</td>
<td>163</td>
<td>From Bench to Therapy: Translating Molecular Genetics into Clinical Practice — Basic Clinical Lecture</td>
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<tr>
<td>7:30-10:30pm</td>
<td>164</td>
<td>Sunday Social at Universal Studios with music by ARVO Rocks! (admission required)</td>
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<td>Universal Studios Florida</td>
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## Daily Program

**Sunday, May 4**

### Posters

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<th>Board #</th>
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<tr>
<td>8:30 – 10:15am</td>
<td>103 Meibomian Gland, Lacrimal Gland and Tear Film</td>
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<td>104 Immunobiology of AMD</td>
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<td>105 Retina/RPE Immunobiology #1</td>
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<td>106 IOP measurement</td>
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<td>#111-155</td>
<td>A0204-A0248</td>
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<td>107 Measuring visual function and quality of life</td>
<td>CL</td>
<td>#156-192</td>
<td>A0343-A0379</td>
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<td>108 Vasculature and flow imaging</td>
<td>MOI</td>
<td>#193-236</td>
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<td>109 Retinal imaging</td>
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<td>110 Vitreomacular Interface and Management</td>
<td>RE, PH, VI</td>
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<td>111 Clinical electrophysiology</td>
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<td>112 RPE/Retina Cell Biology and Degeneration, I</td>
<td>RC, RE</td>
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<td>113 Retina/RPE: Biochemistry and Molecular Biology</td>
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<td>114 Amblyopia: Detection and Prevalence</td>
<td>EY</td>
<td>430-440</td>
<td>D0049-D0059</td>
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<td>115 Drug delivery #1</td>
<td>PH, RE</td>
<td>441-486</td>
<td>D0060-D0105</td>
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<td>10:45 – 11:45am</td>
<td>116 All Posters, Networking</td>
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<td>1:30 – 3:15pm</td>
<td>118 Corneal Cell and Molecular Biology and Stem Cells</td>
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<td>488-529</td>
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<td>119 Pharmacology and clinical studies</td>
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<td>120 Biomarkers and Retinal Disease</td>
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<td>568-574</td>
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<td>121 Anti-VEGF</td>
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<td>575-611</td>
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<td>122 Biochemistry and Molecular Biology of AMD I</td>
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*Poster board numbers correspond to poster location in Level 1/South Hall A. A = Poster Area A, B = Poster Area B, C = Poster Area C, and D = Poster Area D.*

**Sunday and Thursday, 10:45–11:45am:** Monday, Tuesday and Wednesday, 2:45–3:45pm: All Posters and Networking — authors will be present at posterboards
### Sunday, May 4  ●  Posters (continued)

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<thead>
<tr>
<th>Time</th>
<th>Session Title</th>
<th>Section</th>
<th>Program #</th>
<th>Board #</th>
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<tbody>
<tr>
<td>1:30 – 3:15pm</td>
<td>123 Retinal diseases in the aged eye</td>
<td>CL, RE</td>
<td>637-690</td>
<td>C0047-C0100</td>
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<td>124 Retinal Development</td>
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<td>125 Lens cell biology and structure</td>
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<td>126 Binocular vision and stereopsis</td>
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<td>751-751</td>
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<td>127 Spatial and temporal vision</td>
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<td>758-790</td>
<td>D0001-D0033</td>
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<td>128 Amblyopia: Neural Mechanisms and Treatment</td>
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<td>791-805</td>
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<td>3:15 – 5:pm</td>
<td>153 Cornea surgery, posterior lamellar transplantation</td>
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<td>154 Lamina cribrosa, angles and blebs</td>
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<td>155 Structure function</td>
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<td>156 Corneal Dystrophies and Genetics</td>
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<td>157 Diabetic Retinopathy</td>
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<td>158 The Diabetic Retina: physiology and pharmacology</td>
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<td>1048-1070</td>
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<td>159 Retinal detachment and allied diseases</td>
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<td>160 Other macular disease imaging and surgery</td>
<td>RE, GEN, VI</td>
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<td>161 AMD and CNV: Preclinical and Clinical Studies</td>
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<td>162 Cataractogenesis and cataract models</td>
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<td>1206-1223</td>
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<tr>
<td>7:30 – 8:30am</td>
<td>201</td>
<td>NAEVR Defense-Related Vision Research Opportunities</td>
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<td>8:30 – 10:15am</td>
<td>202</td>
<td>ipRGCs #1230-1236</td>
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<td>10:15 – 10:55am</td>
<td>202A</td>
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<td>8:30 – 10:15am</td>
<td>203</td>
<td>Geographic Atrophy #1237-1242</td>
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<td>203A</td>
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<td>8:30 – 10:15am</td>
<td>204</td>
<td>New Insights into Amblyopia I: Neurophysiology, Neuroanatomy and Neuroplasticity — Minisymposium #1243-1246</td>
<td>VI, AP, CL, EY, VN</td>
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<td>8:30 – 10:15am</td>
<td>206</td>
<td>Mechanisms of Axonal Damage in Optic Nerve Disease — Minisymposium #1247-1253</td>
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<td>Photoreceptor Degeneration #1254-1260</td>
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<td>Angiogenesis — new approaches #1261-1267</td>
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<td>Myopia — going beyond the near-work hypothesis #1268-1274</td>
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<td>Functional, Evolutionary and Translational Genomics #1275-1281</td>
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<td>Ocular Tumors: Molecular Genetics #1282-1288</td>
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Complete meeting information is available at arvo.org/am
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<td>Cataract surgery: optimizing outcomes #1289-1295</td>
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<td>Innervation in Corneal Health and Inflammation — Minisymposium #1296-1299</td>
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<td>Meibomian Gland, Lacrimal Gland and Tear Film #1300-1306</td>
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<td>215</td>
<td>CNV outcomes #1307-1313</td>
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<td>11am – 12:45pm</td>
<td>226</td>
<td>Disease Models #1638-1644</td>
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<td>CNV home detection and outcome #1645-1650</td>
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<td>8:30 – 10:15am</td>
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<td>Adaptive Optics Imaging of retinal structure and function #1651-1657</td>
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<td>11am – 12:45pm</td>
<td>229</td>
<td>New Insights into Amblyopia II: Psychophysics and Treatment — Minisymposium #1658-1661</td>
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<td>New ideas in glaucoma #1662-1668</td>
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<td>Non-Coding Variations of the Genome and Their Alterations in Ocular Disease — Minisymposium #1676-1680</td>
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<td>The fiber cell environment #1681-1687</td>
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<td>New Insights into the Etiology, Impact and Treatment of Oxidative Stress in the Cornea and External Eye — Minisymposium #1695-1699</td>
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<td>Diabetic Macular Edema Management #1700-1706</td>
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<td>1 – 2:30pm</td>
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<td>Genetics Group: Exomes and Eye Disease — Challenges and Successes</td>
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<td>S 210DE</td>
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<td>250</td>
<td>China — ARVO Networking Forum</td>
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<td>251</td>
<td>Ethical Issues in Emerging Treatments and Technologies</td>
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<td>Members-in-Training Career Forum</td>
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<td>Stem Cell Approaches for In Vitro Modeling of Retinal Development — SIG</td>
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<td>Working Towards International Consensus in the Field of Vision Restoration Outcome Measures — SIG</td>
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<td>Mitochondrial dysfunction and the eye — from monogenic to complex neurodegenerative disorders — SIG</td>
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<td>256</td>
<td>Polarization-sensitive optical coherence tomography for retinal imaging: What needs to be done to transfer the technology from the laboratory to the clinic? — SIG</td>
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<td>S 310E-H</td>
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<td>257</td>
<td>Using Induced Pluripotent Stem Cells to Model and Treat Inherited Retinal Disease — SIG</td>
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<td>258</td>
<td>Research on Progress and Barriers Towards Elimination of Trachoma — SIG</td>
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<td>259</td>
<td>The clinical impact of neuroretinal degeneration in DM patients — SIG</td>
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<td>260</td>
<td>Ectatic corneal disorders: Research, Diagnosis, and Treatments — SIG</td>
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### Daily Program

#### Monday, May 5 (continued)

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<tr>
<td>3:45 – 5:30pm</td>
<td>262</td>
<td>Cornea surgery refractive, corneal imaging and topography #2136-2142</td>
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<td>263</td>
<td>Glaucoma genetics #2143-2149</td>
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<td>Low vision #2150-2156</td>
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<td>265</td>
<td>Ocular Nanotechnology and Regenerative Medicine #2157-2163</td>
<td>NT</td>
<td>S 230GH</td>
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<td>266</td>
<td>IOP and Trabecular meshwork #2164-2170</td>
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<td>267</td>
<td>New Discoveries using Ophthalmic Imaging and MOI Business Meeting #2171-2176</td>
<td>MOI</td>
<td>S 310E-H</td>
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<td>268</td>
<td>Targets for Neurodegeneration and Neuroprotection #2177-2183</td>
<td>PH</td>
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<td>Molecular mechanisms of AMD #2184-2189</td>
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<td>CNS and Ocular Inflammation and Infection #2190-2196</td>
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<td>Corneal Epithelium and Development #2197-2203</td>
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<td>272</td>
<td>Macular Surgery and complications #2204-2209</td>
<td>RE</td>
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<tr>
<td>5:45 – 6:30pm</td>
<td>289</td>
<td>Proctor Award and Lecture</td>
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<td>Hall SB</td>
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<tr>
<td>6:45 – 7:30pm</td>
<td>290</td>
<td>Weisenfeld Award and Lecture</td>
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<td>Hall SB</td>
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<tr>
<td>7:30 – 9:00pm</td>
<td>291</td>
<td>Student/Trainee Social Honoring Travel Grant Awardees</td>
<td></td>
<td>Fountain Plaza, Hilton Orlando</td>
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</tbody>
</table>

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**Locate sessions**  
Poster board numbers indicate location in South Hall A

**Meet the authors!**  
In addition to the scheduled poster session times, all First Authors will be present at their poster boards daily 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: 10:45–11:45am

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Complete meeting information is available at arvo.org/am
<table>
<thead>
<tr>
<th>Time</th>
<th>Session Title</th>
<th>Section</th>
<th>Program #</th>
<th>Board #</th>
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<tbody>
<tr>
<td>8:30 – 10:15am</td>
<td>216 Biochemistry and Molecular Biology of AMD II</td>
<td>BI, RE</td>
<td>1314-1338</td>
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<td>217 Molecular Biology and Biochemistry of Retinal Degeneration</td>
<td>BI</td>
<td>1339-1357</td>
<td>A0057-A0075</td>
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<td></td>
<td>218 Stem Cell I</td>
<td>RC, RE</td>
<td>1358-1388</td>
<td>A0114-A0144</td>
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<td>219 Degenerative Eye Disease</td>
<td>RE, CL, GEN</td>
<td>1389-1434</td>
<td>A0246-A0291</td>
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<td></td>
<td>220 Nanotherapy, nanodiagnosics and nanoimaging</td>
<td>NT</td>
<td>1435-1457</td>
<td>B0037-B0059</td>
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<td>221 Ocular surface health and disease</td>
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<td>1458-1511</td>
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<td>222 Cornea surgery, refractive</td>
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<td>1512-1558</td>
<td>C0151-C0197</td>
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<td>223 Cataract and anterior segment</td>
<td>CL, RC</td>
<td>1559-1585</td>
<td>C0198-C0224</td>
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<td>224 New technologies for ophthalmic imaging</td>
<td>MOI, RE, RC</td>
<td>1586-1614</td>
<td>D0001-D0029</td>
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<td>225 New OCT technologies for ophthalmic imaging</td>
<td>MOI</td>
<td>1615-1637</td>
<td>D0030-D0052</td>
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<td>510 TM and aqueous dynamics</td>
<td>GL</td>
<td>5649-5692</td>
<td>D0142-D0185</td>
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<td>11am – 12:45pm</td>
<td>237 Life and Death in the Retina/RPE</td>
<td>RC, RE</td>
<td>1707-1744</td>
<td>A0076-A0113</td>
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<td>238 Diabetic Macular Edema Therapy</td>
<td>RE, PH</td>
<td>1745-1792</td>
<td>A0182-A0229</td>
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<td>239 Posterior segment, new techniques</td>
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<td>240 Immunohistichemistry</td>
<td>AP</td>
<td>1843-1854</td>
<td>A0399-A0410</td>
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<td>241 Immune Responses and Immunopathology</td>
<td>IM, CO, PH</td>
<td>1855-1880</td>
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<td>242 Retina: physiology and pharmacology</td>
<td>PH</td>
<td>1881-1934</td>
<td>B0146-B0199</td>
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<td>243 Antiangiogenic agents</td>
<td>PH, RE</td>
<td>1935-1951</td>
<td>B0200-B0216</td>
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<td>244 AMD: physiology and pharmacology</td>
<td>PH, RE</td>
<td>1952-1966</td>
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<td>245 Dry Eye Disease #1</td>
<td>CO</td>
<td>1967-2021</td>
<td>B0266-B0320</td>
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Poster board numbers correspond to poster location in Level 1/South Hall A. 
A = Poster Area A, B = Poster Area B, C = Poster Area C, and D = Poster Area D.

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

Complete meeting information is available at arvo.org/am
### Daily Program

**Monday, May 5**

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<tr>
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<th>Session Title</th>
<th>Section</th>
<th>Program #</th>
<th>Board #</th>
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<tbody>
<tr>
<td><strong>11am – 12:45pm continued</strong></td>
<td>246 Corneal endothelium</td>
<td>CO</td>
<td>2022-2077</td>
<td>C0041-C0096</td>
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<td>247 Ophthalmic imaging of animals</td>
<td>MOI</td>
<td>2078-2109</td>
<td>D0053-D0084</td>
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<td>248 Ocular Optics and Visual Performance</td>
<td>VI</td>
<td>2110-2135</td>
<td>D0116-D0141</td>
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<tr>
<td><strong>2:45 – 3:45pm</strong></td>
<td>261 All Posters / Networking</td>
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<tr>
<td><strong>3:45 – 5:30pm</strong></td>
<td>273 Genetics I: Genetics of AMD and Diabetic Retinopathy</td>
<td>GEN</td>
<td>2210-2240</td>
<td>A0001-A0031</td>
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<td>274 Glia, Diabetic Retinopathy, and Retinal Angiogenesis</td>
<td>RC</td>
<td>2241-2277</td>
<td>A0145-A0181</td>
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<td>275 Diabetic Retinopathy Screening</td>
<td>RE, MOI</td>
<td>2278-2293</td>
<td>A0230-A0245</td>
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<td>276 Vitreoretinal Surgery</td>
<td>RE, LE</td>
<td>2294-2350</td>
<td>A0342-A0398</td>
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<td>277 Ocular Therapeutics and Chemical Biology</td>
<td>BI</td>
<td>2351-2360</td>
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<td>278 Photoreceptors and their synapses</td>
<td>VN</td>
<td>2361-2371</td>
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<td>279 Circadian, adaptation, and modulation</td>
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<td>2372-2376</td>
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<td>280 Retinal ganglion cells</td>
<td>VN, RE</td>
<td>2377-2395</td>
<td>B0076-B0094</td>
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<td>281 Neurodegeneration and neuroprotection</td>
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<td>2396-2446</td>
<td>B0095-B0145</td>
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<td>282 Corneal imaging and topography</td>
<td>CO</td>
<td>2447-2480</td>
<td>B0232-B0265</td>
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<td>283 Autoimmune Ocular Disease and Allergy</td>
<td>IM</td>
<td>2481-2520</td>
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<td>284 Cataract surgery I</td>
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<td>2521-2557</td>
<td>C0225-C0261</td>
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<td>285 Eye Movements: Measurement and Rehabilitation</td>
<td>EY</td>
<td>2558-2569</td>
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<td>286 Eye Movements: Neural Mechanisms</td>
<td>EY</td>
<td>2570-2585</td>
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</table>

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

Complete meeting information is available at arvo.org/am
**MIT Poster Award Session & Competition**

**Tuesday, May 6, 1-2:30pm, Room S 320EF**

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 poster presentations.
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<tbody>
<tr>
<td>8:30 – 10:15am</td>
<td>301</td>
<td>Bipolar and amacrine cells #2637-2643</td>
<td>VN</td>
<td>S 210DE</td>
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<tr>
<td>302</td>
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<td>Structure function #2644-2650</td>
<td>GL</td>
<td>S 230A-D</td>
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<td>303</td>
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<td>New Perspectives on Color Vision — Minisymposium #2651-2656</td>
<td>VI, BI, PH, VN</td>
<td>S 230EF</td>
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<td>Eye movements #2657-2663</td>
<td>EY, CL</td>
<td>S 230GH</td>
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<td>305</td>
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<td>Neuroprotection #2664-2670</td>
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<td>S 310A-D</td>
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<td>306</td>
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<td>Stem Cells: Biology and Therapeutic Applications #2671-2677</td>
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<td>S 310E-H</td>
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<td>Life-and-death consequences of visual impairment #2678-2684</td>
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<td>Mechanisms in Retinal degeneration #2685-2690</td>
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<td>309</td>
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<td>New Insights into the Anatomy of Blood and Lymphatic Vasculature of the Eye — Minisymposium #2691-2696</td>
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<td>310</td>
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<td>Cornea surgery, non-refractive #2697-2703</td>
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<td>S 331A-D</td>
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<td>311</td>
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<td>Novel Approaches for Retinal Drug and Gene Delivery — TVST Minisymposium #2704-2710</td>
<td>RE, PH</td>
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<td>9:30am – 3:45pm</td>
<td>322</td>
<td>WEAVR Silent Auction</td>
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<tr>
<td>10:15 – 10:55am</td>
<td>323</td>
<td>General Business Meeting</td>
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<td>S 230GH</td>
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<tr>
<td>11am – 12:45pm</td>
<td>324</td>
<td>Keratoconus, biomechanics and keratoprosthesis #2986-2992</td>
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<td>325</td>
<td>Early AMD #2993-2999</td>
<td>RE</td>
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<td>326</td>
<td>Spatial vision #3000-3006</td>
<td>VI</td>
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<td>Visual fields and visual function #3007-3013</td>
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<td>328</td>
<td>Mechanisms in retinal angiogenesis and retinopathy #3014-3020</td>
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<tr>
<td>329</td>
<td>Physiology / Pharmacology #3021-3027</td>
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<td>330</td>
<td>Phototransduction #3028-3034</td>
<td>BI, VN</td>
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<td>Myopia #3035-3041</td>
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<td>PCO #3042-3048</td>
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<td>333</td>
<td>The Microbiome of the Eye and Beyond — How the Microbiome Influences Resistance against Opportunistic Pathogens — Minisymposium #3049-3053</td>
<td>IM, CO, RC</td>
<td>S 330GH</td>
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<td>334</td>
<td>Dry Eye Disease #3054-3060</td>
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<td>335</td>
<td>Real life management of retinal disease #3061-3067</td>
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<tr>
<td>1pm – 2:30pm</td>
<td>351</td>
<td>Low Vision Group: Binocular Vision Meets Low Vision</td>
<td>LV</td>
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<td>352</td>
<td>Safely Taking Risks in Public and Patient Involvement</td>
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<td>S 230EF</td>
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<td>NIH-CSR Peer Review Workshop</td>
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<td>The Symbiosis of Global Eye Research: Building Bridges between the Developed and Developing Worlds</td>
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<td>355</td>
<td>En Face OCT imaging of the Eye — SIG</td>
<td>S 230A-D</td>
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<td>RPE autofluorescence in a new light — SIG )</td>
<td>S 310A-D</td>
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<td>357</td>
<td>Managing Patients with Diabetic Macular Edema, Neovascular AMD, or Retinal Vein Occlusion: How to Best Utilize Data from Clinical Trials — SIG</td>
<td>S 310E-H</td>
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<tr>
<td>358</td>
<td>Nuclear receptors (NRs) in retinal development and disease: identifying new signaling pathways with therapeutic potential — SIG</td>
<td>S 320AB</td>
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<td>Long term career considerations for graduate students — SIG</td>
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<tr>
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<td>1 – 2:30pm continued</td>
<td>360</td>
<td>Non-Invasive Targeted Molecular Imaging in the Living Eye — SIG</td>
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<td>361</td>
<td>Contributions of neuronal and vascular defects to early diabetic retinopathy — SIG</td>
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<td>362</td>
<td>Sixth Annual Women in Eye and Vision Research (WEAVR) Luncheon (Tickets required)</td>
<td>Hall SB</td>
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<tr>
<td>3:45 – 5:30pm</td>
<td>364</td>
<td>Leading Edge — New Directions in the Analysis of Retinal Image Motion — Minisymposium #3521-3525</td>
<td>VN S 210DE</td>
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<td>365</td>
<td>Drusen and drusenoid structures #3526-3532</td>
<td>RE S 230A-D</td>
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<td>Visual function in eye disease #3533-3538</td>
<td>VI S 230EF</td>
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<td>367</td>
<td>Neuro-ophthalmology #3539-3545</td>
<td>EY S 230GH</td>
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<td>Glaucoma pharmacology and clinical studies #3546-3552</td>
<td>GL S 310A-D</td>
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<td>369</td>
<td>Pathophysiology of AMD and retinopathies #3553-3559</td>
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<td>370</td>
<td>Eye-Health and Nutrition: From Cradle to Grave — Minisymposium #3560-3565</td>
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<td>Lens cell survival, development, and aging #3566-3572</td>
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<td>Corneal endothelium #3580-3586</td>
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<td>385</td>
<td>Where Are the Women? Exploring Roles in ARVO</td>
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Tuesday, May 6 | Posters

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<td>343 OCT imaging - Clinical studies of choroid</td>
<td>MOI, RE, RC</td>
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Poster board numbers correspond to poster location in Level 1/South Hall A. A = Poster Area A, B = Poster Area B, C = Poster Area C, and D = Poster Area D.
Sunday and Thursday, 10:45–11:45am; Monday, Tuesday and Wednesday, 2:45–3:45pm: All Posters and Networking — authors will be present at posterboards

Complete meeting information is available at arvo.org/am
### Daily Program

**Tuesday, May 6**

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<thead>
<tr>
<th>Time</th>
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<tr>
<td>11am – 12:45pm</td>
<td>344 OCT imaging - Clinical studies of retina</td>
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<td>347 Retinoids, Carotenoids and Macular Pigment</td>
<td>BI, CL, RE</td>
<td>3466-3492</td>
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<td>1 – 2:30pm</td>
<td>350 MIT Poster Award Session/Judging</td>
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<td>363 All Posters / Networking</td>
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<td>374 Myopia</td>
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<td>376 Dry Eye Disease #2</td>
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<td>377 Corneal biomechanics and Keratoprosthesis</td>
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<td>378 IOL and Accommodation</td>
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<td>381 Endophthalmitis and trauma</td>
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<td>382 Retinal and choroidal vascular diseases</td>
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<td>384 Stem Cell II: Restoration of Photoreceptors</td>
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<tr>
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<th>Title</th>
<th>Section</th>
<th>Location</th>
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<tbody>
<tr>
<td>7:00 – 8:30am</td>
<td>401</td>
<td>Breakfast with the Experts</td>
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<td>8:30 – 10:15am</td>
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<td>AMD Imaging and Phenotyping #4014-4018</td>
<td>RE</td>
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<td>IOL and Presbyopia Correction #4019-4024</td>
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<td>RC</td>
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<td>Changes in Cell Volume Effecting IOP — Minisymposium #4039-4043</td>
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<td>Polypoidal Choroidal Vasculopathy #4044-4049</td>
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<td>10:15 – 10:55am</td>
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<td>Synaptic mechanisms #4526-4531</td>
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<td>Function and microstructure of the macula #4532-4538</td>
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<td>Color Vision #4539-4544</td>
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<td>Strabismus #4545-4551</td>
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<td>Consequences of impaired visual function in everyday life #4573-4579</td>
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<td>Leading Vision Research: Promoting and Managing Diverse Collaborations</td>
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<td>Dialogue with Entrepreneurs</td>
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<td>The Role of Complement Activation in AMD — SIG</td>
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<td>The inflammasome, lysosomal disruption and the P2X7 receptor; emerging evidence for a key role in RPE pathology — SIG</td>
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<td>Epigenetics and degenerative ocular disease — SIG</td>
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<td>Retinal Oximetry: Recent findings and future applications — SIG</td>
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<td>Consequences of Neurotrauma to the Visual System — SIG</td>
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<td>Translational Research: Drug or Regenerative Medicine — SIG</td>
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<td>Clinical Implications of Novel Ophthalmic Imaging #5017-5023</td>
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<td>Cogan Award and Lecture</td>
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<td>8pm – 10pm</td>
<td>484</td>
<td>ARVO Classical Concert</td>
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<td>Plaza International Ballroom I-J, Hyatt Regency</td>
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<td>9pm – 12am</td>
<td>485</td>
<td>ARVO Karaoke Night</td>
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<td>8:30 – 10:15am</td>
<td>411 Orbital Disease and Surgery</td>
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<td>413 Neuro-ophthalmology: Visual fields and Psychophysics</td>
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<td>419 Glaucoma - screening, risk factors, and outcomes</td>
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<td>423 Anatomy Development</td>
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<td>424 Genetic and pediatric eye diseases</td>
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<td>425 Ocular Proteomics, Lipidomics, Metabolomics, and Systems Biology</td>
<td>BI</td>
<td>4516-4525</td>
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<td>440 Nanobioengineering, nanopharmaceuticals and nanobiomarker</td>
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<td>441 Contact Lens #1</td>
<td>CO</td>
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<td>442 Corneal Wound Repair and Healing</td>
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<td>4678-4726</td>
<td>A0303-A0351</td>
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<td></td>
<td>443 Imaging #2</td>
<td>GL</td>
<td>4727-4779</td>
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**Poster board numbers correspond to poster location in Level 1/South Hall A. A = Poster Area A, B = Poster Area B, C = Poster Area C, and D = Poster Area D.**

**Sunday and Thursday, 10:45–11:45am; Monday, Tuesday and Wednesday, 2:45–3:45pm: All Posters and Networking — authors will be present at posterboards**
<table>
<thead>
<tr>
<th>Time</th>
<th>Session Title</th>
<th>Section</th>
<th>Program #</th>
<th>Board #</th>
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<tr>
<td></td>
<td>Ophthalmic image processing, informatics, and</td>
<td>MOI, RE</td>
<td>4780-4835</td>
<td>B0156-B0211</td>
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<td>image-based diagnostics</td>
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<td>Imaging of anterior eye</td>
<td>MOI</td>
<td>4836-4878</td>
<td>B0212-B0254</td>
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<td>Ocular toxicity / toxicology</td>
<td>PH, CO, RE</td>
<td>4879-4900</td>
<td>C0075-C0096</td>
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<td>Diabetic Retinopathy, I</td>
<td>RC</td>
<td>4901-4931</td>
<td>C0216-C0246</td>
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<td>CNV approaches to treatment</td>
<td>RE, AP, RC, VI</td>
<td>4932-4988</td>
<td>D0042-D0098</td>
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<td>Retina/RPE: Gene Regulation and Expression</td>
<td>BI, RE</td>
<td>4989-5002</td>
<td>D0176-D0189</td>
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<td>2:45 – 3:45pm</td>
<td>All Posters / Networking</td>
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<td>3:45 – 5:30pm</td>
<td>Uveal melanoma: Pathophysiology, Management</td>
<td>AP</td>
<td>5056-5099</td>
<td>A0001-A0044</td>
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<td></td>
<td>and Prognosis</td>
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<td></td>
<td>Neuro-ophthalmology; papilledema, nystagmus</td>
<td>EY</td>
<td>5100-5113</td>
<td>A0080-A0093</td>
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<td>ERG and VEP techniques</td>
<td>VN</td>
<td>5114-5130</td>
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<td>Corneal Stroma and Keratocytes</td>
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<td>Corneal Regenerative Medicine</td>
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<td>Improving Imaging and Image Quantification</td>
<td>VI</td>
<td>5191-5205</td>
<td>B0141-B0155</td>
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<td>Early AMD and AMD imaging</td>
<td>RE</td>
<td>5206-5246</td>
<td>B0255-B0295</td>
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<td>Drug delivery #2</td>
<td>PH, RE</td>
<td>5247-5278</td>
<td>C0043-C0074</td>
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</table>

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

Complete meeting information is available at arvo.org/am
Meet Denver’s Blue Bear

Visit Denver and ARVO host a reception to welcome members to ARVO 2015 in Colorado. Light refreshments included. Denver’s famed Blue Bear will be on hand for photos.

Thursday, May 8
10:45 – 11:45am
South Hall A

Annual Meeting Suggestions and Comments

ARVO wants to make the Annual Meeting the best experience possible, and we value your comments and suggestions.

If you would like to provide feedback during the Annual Meeting, stop by the Meeting Management Office, S 220A. Or, you may send an email to arvoabstracts@arvo.org and type “Comments” in the subject line.

Also, be sure to complete the online survey we will send you after the Meeting.
### Thursday, May 8 | Papers, Minisymposia, Workshops/SIGs, Lectures and Events

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Section</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>502</td>
<td>Genetics and the Pathophysiology of AMD: From SNPs to Disease Modeling — Symposium</td>
<td>GEN, BI, RC, RE, PH, CL, VN</td>
<td>Hall SB</td>
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<tr>
<td>10:45 – 11:45am</td>
<td>523</td>
<td>All Posters, Networking</td>
<td></td>
<td>South Hall A</td>
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<td></td>
<td>524</td>
<td>Denver Welcomes ARVO 2015 Kickoff Reception</td>
<td></td>
<td>South Hall A</td>
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<tr>
<td>12 – 1:45pm</td>
<td>525</td>
<td>Photoreceptors #5955-5961</td>
<td>VN</td>
<td>S 210DE</td>
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<td></td>
<td>526</td>
<td>Retinal Prostheses #5962-5968</td>
<td>RE</td>
<td>S 230A-D</td>
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<td></td>
<td>527</td>
<td>Vision with Adaptive Optics #5969-5974</td>
<td>VI</td>
<td>S 230EF</td>
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<tr>
<td></td>
<td>528</td>
<td>Visual Development and Amblyopia #5975-5981</td>
<td>EY</td>
<td>S 230GH</td>
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<tr>
<td></td>
<td>529</td>
<td>Trabecular meshwork #5982-5988</td>
<td>GL</td>
<td>S 310A-D</td>
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<tr>
<td></td>
<td>530</td>
<td>Fundamental Mechanisms of Retinal Diseases #5989-5995</td>
<td>RC</td>
<td>S 310E-H</td>
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<td>531</td>
<td>Drug/gene delivery #5996-6002</td>
<td>PH</td>
<td>S 320AB</td>
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<td>Age-Related Macular Degeneration — What puts you at risk? #6003-6009</td>
<td>CL</td>
<td>S 320CD</td>
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<td>Protein Interactions and Trafficking #6010-6016</td>
<td>BI</td>
<td>S 320GH</td>
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<td>534</td>
<td>Ocular Tumors — Management and prognosis #6017-6023</td>
<td>AP</td>
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<td>535</td>
<td>Cataractogenesis #6024-6029</td>
<td>LE</td>
<td>S 330EF</td>
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<td>536</td>
<td>Clinical and Translational Studies in Ocular Inflammation #6030-6036</td>
<td>IM</td>
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</table>

Complete meeting information is available at [arvo.org/am](http://arvo.org/am)
### Thursday, May 8 (continued)

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Section</th>
<th>Location</th>
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<tr>
<td>12 – 1:45pm</td>
<td>537</td>
<td>Application of molecular biology to corneal regenerative medicine</td>
<td>CO</td>
<td>S 331A-D</td>
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<td>#6037-6043</td>
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<td>2 – 3:15pm</td>
<td>551</td>
<td>ARVO/Alcon Keynote Series — Closing Keynote</td>
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<td>Hall SB</td>
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**For the latest Program Information**

This ARVO Annual Meeting program information is up-to-date as of March 30, 2014. For the latest changes to any program or session, visit the Online Planner at [arvo.org/am](http://arvo.org/am)

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**Buy me at the ARVO Gift Shop, ARVO Central, South Hall A**
### Thursday, May 8 — Posters

<table>
<thead>
<tr>
<th>Time</th>
<th>Session Title</th>
<th>Section</th>
<th>Program #</th>
<th>Board #</th>
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<tbody>
<tr>
<td>8:30 – 10:15am</td>
<td>503 Conjunctival and ocular adnexal tumors</td>
<td>AP</td>
<td>5427-5446</td>
<td>A0001-</td>
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<td></td>
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<td>504 Ocular injuries and corneal disease</td>
<td>CL, RE</td>
<td>5447-5492</td>
<td>A0021-</td>
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<td>505 Corneal Epithelium and Development #1</td>
<td>CO</td>
<td>5493-5522</td>
<td>A0067-</td>
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<td>506 Corneal Epithelium and Development #2</td>
<td>CO</td>
<td>5523-5546</td>
<td>A0097-</td>
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<td>507 Health care delivery around the world</td>
<td>CL, RE</td>
<td>5547-5596</td>
<td>A0156-</td>
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<td>A0205</td>
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<td>508 Digital and Handheld Vision Tests</td>
<td>VI</td>
<td>5597-5607</td>
<td>A0236-</td>
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<td>A0246</td>
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<td>509 Visual fields and visual function</td>
<td>GL</td>
<td>5608-5648</td>
<td>A0256-</td>
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<td>510</td>
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<td></td>
<td>511 Molecular and Biochemical Mechanisms of Glaucoma</td>
<td>BI</td>
<td>5693-5720</td>
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<td>512 Lens biochemistry</td>
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<td>513 Neuroprotection</td>
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<td>514 ipRGCs</td>
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<td>515 Optic Neuritis</td>
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<td>516 Antimicrobials</td>
<td>PH</td>
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<td>517 Retinal/RPE Immunobiology #2</td>
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<td>518 Diabetic Retinopathy, II</td>
<td>RC</td>
<td>5815-5841</td>
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<td>519 Imaging techniques: ultrasound, MRI, microscopy</td>
<td>MOI, RE, RC</td>
<td>5842-5884</td>
<td>C0028-</td>
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<tr>
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<td>and others</td>
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<td>520 Geographic Atrophy</td>
<td>RE, MOI, RE</td>
<td>5885-5898</td>
<td>C0071-</td>
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<td>521 Pediatric Retinopathy</td>
<td>RE</td>
<td>5899-5935</td>
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<td>C0121</td>
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*510 TM and aqueous dynamics [GL], see Monday, May 5, 8:30am – 10:15am
### Daily Program

**Thursday, May 8**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session Title</th>
<th>Section</th>
<th>Program #</th>
<th>Board #</th>
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<tbody>
<tr>
<td>8:30 – 10:15am</td>
<td>522 Other macular diseases</td>
<td>RE, AP</td>
<td>5936-5954</td>
<td>C0167-C0185</td>
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<tr>
<td>10:45 – 11:45am</td>
<td>523 All Posters, Networking</td>
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<tr>
<td>12 – 1:45pm</td>
<td>538 Contact Lens #2</td>
<td>CO</td>
<td>6044-6078</td>
<td>A0121-A0155</td>
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<td></td>
<td>539 Visual impairment, health care delivery, and screening</td>
<td>CL</td>
<td>6079-6108</td>
<td>A0206-A0235</td>
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<td>540 Visual Field Testing</td>
<td>VI, RE</td>
<td>6109-6117</td>
<td>A0247-A0255</td>
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<td>541 Surgery and Laser</td>
<td>GL</td>
<td>6118-6171</td>
<td>A0297-A0350</td>
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<td>542 ERG and VEP animal models</td>
<td>VN</td>
<td>6172-6199</td>
<td>B0077-B0104</td>
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<tr>
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<td>543 Optic Nerve, LHON</td>
<td>EY, RE</td>
<td>6200-6237</td>
<td>B0119-B0156</td>
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<td>544 Cones, Rods and Color Vision</td>
<td>VI</td>
<td>6238-6249</td>
<td>B0157-B0168</td>
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<td>545 Corneal Infection and Inflammation</td>
<td>IM</td>
<td>6250-6288</td>
<td>B0169-B0207</td>
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<td>546 Cornea/ocular surface / ocular inflammation: pharmacology</td>
<td>PH</td>
<td>6289-6308</td>
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<td>547 RPE/Retina Cell Biology and Degeneration, III</td>
<td>RC</td>
<td>6309-6344</td>
<td>B0260-B0295</td>
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<td>548 Laser Therapy</td>
<td>RE</td>
<td>6345-6370</td>
<td>C0122-C0147</td>
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<td>549 Central Serous Chorioretinopathy</td>
<td>RE</td>
<td>6371-6389</td>
<td>C0148-C0166</td>
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<td>550 Genetics III</td>
<td>GEN</td>
<td>6390-6444</td>
<td>C0186-C0240</td>
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</table>

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**Sunday and Thursday, 10:45–11:45am; Monday, Tuesday and Wednesday, 2:45–3:45pm: All Posters and Networking — authors will be present at posterboards**
WEAVR Silent Auction

Everyone is welcome. Proceeds from the auction benefit Women in Eye and Vision Research (WEAVR) travel grants. In 2013 the Auction raised $7,000 for the WEAVR initiative. Below are some of the items available:

- paper-weights
- photography
- scarves
- paintings
- vases
- purses
- cheese-knives
- autographed-books
- tickets
- quilts
- jewelry
- golf items
- spyglass
- wine set
- sunglass

**When:** Tuesday, May 6

**Where:** Level 1, South Exhibit Hall A

**Auction bidding:** 9:30am – 3:45pm
Section Business Meetings

Monday, May 5, 10:15 – 10:55am

AP Section Business Meeting (S 330CD)
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. Other Business

BI Section Business Meeting (S 320GH)
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. Other Business

CL Section Business Meeting (S 320CD)
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. Other Business

CO Section Business Meeting (S 331A-D)
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. Other Business

EY Section Business Meeting (S 230GH)
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. Other Business

GL Section Business Meeting (S 310A-D)
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. Other Business

IM Section Business Meeting (S 330GH)
1. Trustee’s Report of Status of Association
2. ARVO Strategic Plan
3. 2014 Trustee Election Results
4. Annual Meeting Program Committee Chair’s Report
5. Annual Meeting Program Committee Election Results
6. Remembrance of Jim Hill
7. Other Business
Monday, May 5, 10:15 – 10:55am

LE Section Business Meeting (S330EF)
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. Presentation of the National Foundation for Eye Research 2014 Cataract Research Award to co-recipients Dr. Kevin L. Schey of Vanderbilt University and Dr. Larry L. David of the Oregon Health Sciences University.
6. Other Business

PH Section Business Meeting (S 320AB)
1. Trustee's Report of Status of Association
2. ARVO Strategic Plan
3. 2014 Trustee Nomination Results
4. Annual Meeting Program Committee Chair's Report
5. Annual Meeting Program Committee Election Results
6. Other Business

RC Section Business Meeting (S 310E-H)
1. Trustee's Report of Status of Association
2. ARVO Strategic Plan
3. 2014 Trustee Election Results
4. Annual Meeting Program Committee Chair's Report
5. Annual Meeting Program Committee Election Results
6. Other Business

RE Section Business Meeting (S 230A-D)
1. Trustee's Report of Status of Association
2. ARVO Strategic Plan
3. 2014 Trustee Nomination Results
4. Annual Meeting Program Committee Chair's Report
5. Annual Meeting Program Committee Election Results
6. Other Business

VI Section Business Meeting (S 230EF)
1. Trustee's Report of Status of Association
2. ARVO Strategic Plan
3. 2014 Trustee Election Results
4. Annual Meeting Program Committee Chair's Report
5. Annual Meeting Program Committee Election Results
6. Other Business

VN Section Business Meeting (S 210DE)
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. Other Business
Sunday, May 4
Session #130
Pizza with the Experts
1:30 – 3pm, S 210A–C
Organized by the Members-in-Training Committee. This very popular program offers informal discussions over a pizza lunch or a continental breakfast on a wide range of topics to provide personal guidance, insight and skills to help you advance your career. Pizza with the Experts is supported by the ARVO Foundation through a grant from Alcon Grant Management and Medical Evidence Center. Advanced registration required.

Session #131
Authorship Ethics: Credit and Credibility
1:30 – 3pm, S 230EF
Part of an annual workshop series co-sponsored by the ARVO Publications and the Members-in-Training Committees, topics will include “earned authorship,” i.e., what qualifies a person to be listed as an author, and how to appropriately give credit where credit is due. Followed by a lecture on “honorary” (aka “gift”) authorship and practices to avoid.

Monday, May 5
Session #252
Members-in-Training Career Forum
1 – 2:30pm, Hall SB
Small-group discussions will be held in the form of various roundtables focusing on topics ranging from preparing your CV to negotiating a startup package. Bring your own lunch.

Student/Trainee Social
Hilton Orlando Hotel, Fountain Plaza
7:30 – 9pm
Members-in-Training are invited to join us in honoring 2014 travel and research grant recipients. Please come mingle with your colleagues, make new acquaintances and meet members of the ARVO Board of Trustees.

Tuesday, May 6
Members-in-Training Poster Awards
1 – 2:30pm, S 320EF
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 poster presentations.

Session #385
Where are the Women?
Exploring roles of women in ARVO
5:30pm–7pm, S 320AB

Join us for a unique session that explores the role of women in ARVO’s leadership in the context of some of the critical issues facing women in the scientific and academic workforce today. Presenters will discuss approaches to the gender gap from the institutional, organizational and country level perspectives; explore the pros and cons of quotas; and share statistics unique to ARVO about women in our globally diverse membership. This eye-opening session is designed to be a platform for attendees to actively participate and share ideas about how we can strengthen ARVO by ensuring that more of our women members become leaders.

Wednesday, May 7
Session #401
Breakfast with the Experts
7 – 8:30am, S210A–C

Like Pizza with the Experts, this program offers informal discussions over a continental breakfast on a wide range of topics to provide personal guidance, insight and skills to help you advance your career. Breakfast with the Experts is supported by the ARVO Foundation through a grant from Alcon Grant Management and Medical Evidence Center. Advanced registration required.

Session #453
Clinician-scientist Forum: How to Become a Successful Clinician-scientist
1 – 2:30pm, S320CD

Clinician-scientists at various stages in their career will share their experiences. Plus, an extramural representative from the National Eye Institute will be available to discuss clinician-scientist specific funding mechanisms.
Ancillary Events

All ARVO attendees are invited to attend any of the Ancillary Meetings and Events listed below. Some events may have fees. A listing of ARVO Committee Meetings and all Ancillary Events will be posted daily outside Room S 220A and the ARVO Information Desk at ARVO Central in Hall SA. ARVO does not have additional information for these events beyond what is listed below.

Saturday, May 3
ISCEV®@ARVO
3-7pm
Hyatt Regency Orlando, Plaza International Ballroom D & E

American Uveitis Society
Social Hour
5-6pm
Orange County Convention Center, S 320EF

Trabectome Training
6pm
Orange County Convention Center, S 311

Sunday, May 4
Women’s Eye Health.org Annual Luncheon and Meeting
1:30-3pm
Orange County Convention Center, S 321

Monday, May 5
Liverpool International Vision & Eye Research Network Lunch
1-2:30pm
Orange County Convention Center, S 319

Fight for Sight Alumni Cocktail Reception
7:30-10pm
Orange County Convention Center, S 320EF

Kresge Eye Institute Alumni Reception
8pm
Hyatt Regency Orlando, Plaza International Ballroom J

Tuesday, May 6
Applications of Visual Science discussion forum
1–2pm
Orange County Convention Center, S 329

Keratoconus Roundtable
1-2:30
Orange County Convention Center, S 321

OWL Leadership Roundtable
1-2:30pm
Hyatt Regency Orlando, Columbia Breakout Room 37

Complete meeting information is available at arvo.org/am
Airport Transportation
MEARS Transportation
(mearstransportation.com/global/orlando/)
Book a ride in advance for a shuttle, taxi or luxury sedan, SUV or Van. Receive a discount with an ARVO 2014 coupon by printing this online coupon: arvo.org/ARVO-MEARS-Coupon/

SuperShuttle (supershuttle.com)
All attendees receive $4 off roundtrip shared ride and $1 off one way shuttle service to and from the airport courtesy of SuperShuttle Orlando using discount code ARVO4. Exclusive Sedans, SUVs and vans are available (rates vary). Call 800.258.3826 for more information.

Convention Center/Hotel Shuttle
ARVO is providing Shuttle Bus Service to/from the Orange County Convention Center for the following hotels, Saturday, May 3 – Thursday, May 8:
- Hilton Garden Inn Orlando SeaWorld
- Renaissance Orlando at SeaWorld
- Doubletree by Hilton Orlando at SeaWorld
- Embassy Suites Orlando – I-Drive/Convention Center
- Rosen Plaza Hotel
- The Westin Orlando Universal Boulevard

Please note: Hilton Orlando, Hyatt Regency Orlando (formerly the Peabody), Rosen Centre Hotel and Red Roof Inn Orlando Convention Center are walking distance. Shuttle bus services will only be supplied to these hotels for the ARVO Sunday Social at Universal on May 4.

Orlando Public Transportation along International Drive
I-RIDE Trolley
Taking an I-RIDE Trolley is one of the most convenient and least expensive ways to explore the International Drive Resort Area. For maps and fare information, see iridetrolley.com

LYNX Bus
Orlando’s LYNX bus system has routes servicing the Orange County Convention Center with connections to the Orlando International Airport and Downtown Orlando. To plan your journey and obtain the latest fares, visit the golynx.com
Reserve your ARVO 2015 hotel online before you go home!

Hotel reservations for ARVO 2015 in Denver open on Sunday, May 4.

All attendees are encouraged to book their hotel for the 2015 Annual Meeting before heading home.

Two ways to book:
- Stop by Visit Denver in Booth #736
- Reserve online at arvo.org/hotels

Hotels are available in all price ranges and service levels, and your favorite hotel brands are represented. Official hotels are within a 10-minute walk of the Orange County Convention Center or will have peak-hours shuttle service.

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.
Our family of journals ...

**iovs**

an ARVO journal

ARVO’s original journal devoted to understanding the eye and vision, and to curing and preventing blindness by encouraging and assisting research, training, publication and knowledge-sharing worldwide. [iovs.org](http://iovs.org)

**jov**

journal of vision

an ARVO journal

An online, free-access, peer-reviewed scientific journal devoted to all aspects of visual function in humans and other organisms. The journal encourages the effective use of color, multimedia, hyperlinks, program code and other digital enhancements. [journalofvision.org](http://journalofvision.org)

**tvst**

translational vision science & technology

an ARVO journal

Online-only, peer-reviewed journal emphasizing multidisciplinary research that bridges the gap between basic research and clinical care in ophthalmology and visual science. [tvstjournal.org](http://tvstjournal.org)

Complete meeting information is available at [arvo.org/am](http://arvo.org/am)
Visit NAEVR Central at the ARVO Annual Meeting
Hours: Sunday – Wednesday, 9am – 4pm
Hosted by NAEVR’s James Jorkasky (left) and David Epstein (right)
• 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 5, 7:30 – 8:30am, S329
NAEVR has invited DOD representatives to speak about FY2014 funding opportunities and past DOD awardees to offer insights into how researchers can be most responsive to the funding Program Announcement.

eyereasearch.org
The Rosen Centre welcomes
ARVO to Orlando

ARVO attendees, please enjoy:

10% off Breakfast, Lunch and Dinner Buffets at Cafe Gauguin | 10% off prime steaks and fresh seafood at our Signature restaurant, Everglades, inspired by regional flavors.

Just steps from the Convention Center via Skywalk bridge. Reservations recommended. Please call 407.996.2385.

*Does not include alcohol, tax and gratuity. Cannot be combined with any other offer or special.

9840 International Drive • Orlando, FL 32819 RosenCentre.com
ARVO appreciates all Orlando vendors that offered special discounts to Annual Meeting attendees. This coupon has no cash value and is only valid from May 3 – May 17, 2014 unless otherwise specified. Limit 1 coupon per visit. Valid at the specified store location only. Offer may not be applied to prior purchases, combined with any other offers or discounts or applied to gift card purchases or shipping charges.
Dine amongst the stars.
Home of prime steaks, fresh seafood and the world's largest collection of celebrity caricatures.

25% off with ARVO badge.

*One coupon per table. Does not include alcohol, tax or gratuity and cannot be combined with any other offer or special. Reservations suggested. 407.996.1787. Open nightly from 5:30 p.m.

9700 International Drive
Adjacent to Orange County Convention Center
Complimentary Valet Parking

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20% OFF
ANY PURCHASE

Valid for Food, Non-Alcoholic Beverage or Merchandise. VIP Seating Included. No minimum purchase required. Not valid with any other offers or discounts. One coupon per visit, per table. Unauthorized internet distribution, replication or resale is strictly prohibited. No cash value or return. Excludes banquet and group menus, tax, alcohol, gratuity, merchandise and purchase of gift cards. Valid at participating Planet Hollywood locations. Expires 12/30/14.

Micros: 1031 0000 097 7 Aloha: 11031 0000 00097

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Complete meeting information is available at arvo.org/am

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Welcome Arvo Orlando! Great Food at Ming Court

10% off entire check with this coupon!

Ming Court - Open Daily L & D
407-351-9988 / ming-court.com
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Complete meeting information is available at arvo.org/am

Orlando Coupons for our attendees

Hilton Orlando
6001 Destination Parkway
Orlando, FL 32819
407-313-8581
opentable.com/davids-club
Open Daily at 4pm

Cannot be combined with other offers. No cash value.

Present this coupon for one (1) complimentary craft beer with the purchase of one (1) entree.

Hilton Orlando
6001 Destination Parkway
Orlando, FL 32819
407-313-8625
opentable.com/spencers
Open Tuesday - Sunday for dinner

Cannot be combined with other offers. No cash value.

Present this coupon for one (1) complimentary appetizer or dessert with the purchase of one (1) entree.

COMPLIMENTARY VALET PARKING. RESERVATIONS RECOMMENDED.
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Orlando Coupons for our attendees

**THE SPA AT ROSEN CENTRE**

$20 OFF Any 50 Min Service
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The Private Relaxation Lounge offers rain forest showers, steam, hot tub, entry bathrobe with plush robe and slippers. Referance ARVO when booking.

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Complete meeting information is available at arvo.org/am

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Orlando Coupons for our attendees

Present this coupon and receive $2.00 off Regular Golf Admission!

Pirate’s Cove Adventure Golf
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Orlando, FL 32819
407-352-7378
www.PiratesCove.com

Welcome ARVO 2014 Attendees!

ARVO Special

Purchase $100 of merchandise in the ARVO Gift Shop (Hall SA) and get an ARVO Bear Free!*

*while supplies last
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Orlando Coupons for our attendees

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Enjoy one-of-a-kind shows, world-class thrill rides and unforgettable animal encounters at SeaWorld®!

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For more information, visit SeaWorldGroupEvents.com or call 1-888-800-5447.

Discounts valid for attendee and up to five additional guests. Restrictions apply.

Complete meeting information is available at arvo.org/am
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Annual Meeting

2015

Asia OARVO

Evolutions in Ophthalmology: From quality of vision to aging and regenerative science

Feb. 16 – 19, 2015

Pacifico Yokohama

Yokohama, Japan

arvo.org/asia-arvo

Register now!
Annual Meeting Supporters

The Association for Research in Vision and Ophthalmology and the ARVO Foundation for Eye Research gratefully acknowledge corporate support for 2014 Annual Meeting programs and events.
Awards and fellowships supporters

ARVO Foundation awards
- Alcon Foundation
  - Early Career Clinician-Scientist Research Awards
- Pfizer Ophthalmics
  - Carl Camras Translational Research Awards
  - Collaborative Research Fellowships
- Merck
  - Collaborative Research Fellowships
- Vistakon
  - Contact Lens Fellowship
- Genentech
  - Age-Related Macular Degeneration Research Fellowships
  - The Lighthouse Guild
  - Oberdorfer Award in Low Vision

ARVO Foundation Developing Country Eye Researcher Travel Fellowships supporters:
- Alcon Foundation
- Alcon South Africa
- Allergan CIS SARL
- Champalimaud Foundation
- Ophthotech Corporation
- Tyson Research Initiative/Retina Research Foundation/ Pan-American Ophthalmological Foundation
- Women in Eye and Vision Research (WEAVR)

Support for ARVO Foundation travel grants:
- Nicolas G. Bazan, MD, PhD, FARVO
- IRCCS — Fondazione G.B. Bietti per lo Studio e la Ricerca in Oftalmologia — ONLUS
- Marij and Paulus T.V.M. de Jong, MD, PhD, FRCOpht, FARVO
- C. Stephen and Frances B. Foster Foundation
- Jeanie and Murray Johnstone, MD
- Kowa Pharmaceuticals
- Ingrid Kreissig, MD
- National Institute for Health Research Biomedical Research Centre for Ophthalmology
- Ocular Immunology and Uveitis Foundation
- Retina Foundation
- Santen Inc. — U.S.
- Tyson Research Initiative/Retina Research Foundation/ Pan-American Ophthalmological Foundation
- Women in Eye and Vision Research (WEAVR)

Support for ARVO travel grants:
- American Uveitis Society
- European Journal of Ophthalmology
- Informa Healthcare
- National Eye Institute*
- Societa Italiana Laser in Oftalmologia
  * Funding for this conference was made possible in part by grant 2U13EY002143-35 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.

Support for ARVO and ARVO Foundation memorial travel grants
ARVO and the ARVO Foundation appreciate the travel grants established through generous contributions made in honor of:
- Elizabeth Anderson
- Joanne G. Angle
- Grant Wood Balkema
- Sek-Jin Chew
- M.Velma Dobson
- G.M. Jager
- Pauline and Oswald Lapp
- Richard Newton Lolley
- Gesine Mohn
- Josh Wallman

Complete meeting information is available at arvo.org/am
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Ocular Immunity, Autoimmunity and Inflammation Conference
October 7 – 10, 2014
Fort Lauderdale, Fla.

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