

Pocket Guide



ARVO
2017

Global Connections
in Vision Research

May 7 – 11
Baltimore Convention Center
Baltimore, Md.

abbvie

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NI UVEITIS WITH
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HAS ITS IRIS

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Program Overview

Sunday, May 7

Registration/Badge Printing	Pratt Street Lobby	7am–6pm
ARVO Central	Exhibit Hall	7am–5pm
Exhibits	Exhibit Hall	9am–5pm
Symposia	See Program	8:30–10:30am
Eye and Vision Trauma Session	316	8:30–10:30am
Posters*	Exhibit Hall	8:30–10:15am/10:45–11:45am*/1:30–3:15pm/3:15–5pm
NEI Town Hall	314	10:40–11:50
Opening Keynote Session	Hall G	12noon–1:15pm
Pizza with the Experts †	328	1:30–3pm
EVER/ARVO Workshop	316	1:30–3pm
SiGs/Workshops	See Program	1:30–3pm
Genetics Group	Ballroom 2	1:30–3pm
Papers/Minisymposia	See Program	3:15–5pm
Basic/Clinical Lecture	Hall G	5:15–7:15pm
Beckman-Argyros Award Lecture	Ballroom 2	5:30–6:30pm

Monday, May 8

Registration/Badge Printing	Pratt Street Lobby	7am–6pm
ARVO Central	Exhibit Hall	7am–5:30pm
NAEVR Defense Briefing	328	7:30–8:30am
Exhibits	Exhibit Hall	9am–5:30pm
Posters *	See Program	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
Low Vision Group	308	1–2:30pm
China–ARVO Networking Forum	328	1–2:30pm
NEI Roundtable	316	1–2:30pm
Proctor Award Lecture	Hall G	5:45–6:30pm
Weisenfeld Award Lecture	Hall G	6:45–7:30pm

Tuesday, May 9

Registration/Badge Printing	Pratt Street Lobby	7am–6pm
ARVO Central	Exhibit Hall	7am–5:30pm
Exhibits	Exhibit Hall	9am–5:30pm
Posters *	See Program	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 Administrators Program †	342	8am–4:30pm
General Business Meeting	324	10:15–10:55am
SiGs/Workshops	See Program	1–2:30pm
Clinician Scientist Forum	316	1–2:30pm
ARVO Foundation WEAVR Luncheon †	Hilton Baltimore Holiday Ballroom	1–2:30pm
MIT Outstanding Poster Award Competition	Hall B	1–2:30pm
ARVO/Champalimaud Award Lecture	Hall G	5:45–7pm

Wednesday, May 10

Registration	Pratt Street Lobby	7am–6pm
ARVO Central	Exhibit Hall	7am–5:30pm
Breakfast with the Experts †	328	7–8:30am
Exhibits	Exhibit Hall	9am–5:30pm
Posters *	See Program	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
SiGs/Workshops	See Program	1–2:30pm
Multidisciplinary Ophthalmic Imaging Group	Ballroom 2	1–2:30pm
Cogan Award Lecture	Hall G	5:45–6:30pm
Friedenwald Award Lecture	Hall G	6:45–7:30pm

Thursday, May 11

Registration	Pratt Street Lobby	7am–2:30pm
ARVO Central	Exhibit Hall	7am–1:15pm
Symposia	See Program	8:30–10:30am
Posters*	See Program	8:30–10:15am/10:30–11:30am*/11:30am–1:15pm
Honolulu Kickoff Reception	Exhibit Hall	10:30–11:30am
Papers	See Program	11:30am–1:15pm
Closing Keynote Session	Hall G	1:30–3:15pm

† Separate registration required

* All Posters— all first authors will be present

Program Overview	2
Policies	5
Convention Center Maps	6
How to Connect	10
Safety and Security	11
Presenter Guidelines	12
Services	
Business Center	14
Cash Machine/ATM.....	14
Mother's Lounge	14
Coat and Luggage Check	14
Disabilities or Special Needs	14
First Aid/Onsite Medical Emergency.....	15
Lost and Found.....	15
Prayer and Meditation Room	15
Recycling	15
Visit Baltimore Information	15
Security Services.....	15
Water Coolers	15
Meeting Information	
Meeting Management Office.....	18
Press Activities/Press Registration	18
Registration.....	18
Registration/Badge Printing Hours (Convention Center)	19
Badge Printing (Hilton Baltimore)	19
Speaker Ready Room	19
Fellows.....	20
Travel Grant Desk	20
General Business Meeting	20
Concessions/Food Services	
Convention Center Concessions	22
ARVO Awards and Awards Lectures	
Proctor Award and Lecture	24
Weisenfeld Award and Lecture	24
Cogan Award and Lecture	24
Friedenwald Award and Lecture	24
Kupfer Award	24
ARVO/Alcon Keynote Series.....	25
ARVO Distinguished Service Awards	26
Beckman-Argyros Award	27
Joanne G. Angle Service Award	28
ARVO/Champalimaud Award Lecture.....	28
Fellows Class of 2017.....	29
Exhibits	
Exhibit Hall Hours	31
Exhibit Hall Floor Plan	32
Exhibits A-Z	34
Exhibitor Descriptions.....	39
Exhibitor Presentations.....	86

Table of Contents

Daily Program Schedules

Saturday	88
Sunday.....	89
Monday.....	93
Tuesday.....	98
Wednesday.....	103
Thursday.....	108

CME Information

Physician Accreditation Statement	111
Physician Credit Designation.....	111
CME Credits and Certificates Fee	111
Instructions to Receive Credits.....	112
Disclosures of Conflicts of Interest — AMPC Committee/CME Committee.....	113
CME Sessions	116
Section Business Meetings	130

Transportation/Parking

Airport Transportation	132
Other Transportation Options.....	132
ARVO 2018 Hotel Information	133
Travel Grant Supporters.....	134
Annual Meeting Supporters.....	135
Social Events.....	136



The Association for Research in Vision and Ophthalmology
1801 Rockville Pike, Suite 400 | Rockville, MD 20852-5622
Tel: +1.240.221.2900 | arvo@arvo.org | arvo.org

Disclaimer

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

Photography Release

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

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ARVO Policies

Use of recording/photography/audiotape/video equipment:

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

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

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

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



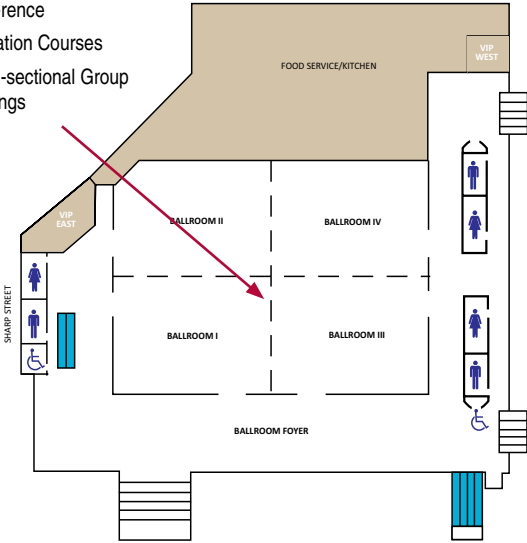
Continuing Medical Education

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

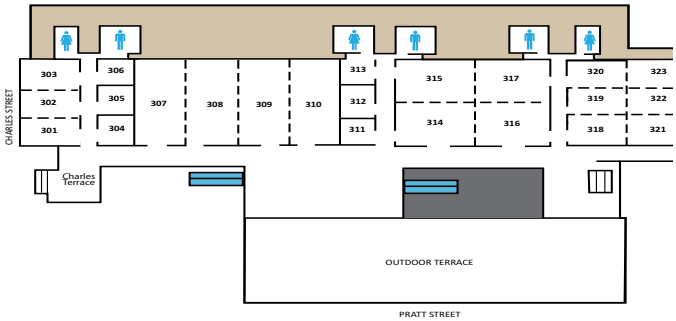
ARVO designates this live activity for a maximum of 29.75 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity. Please refer to the CME information on page 111.

Convention Center

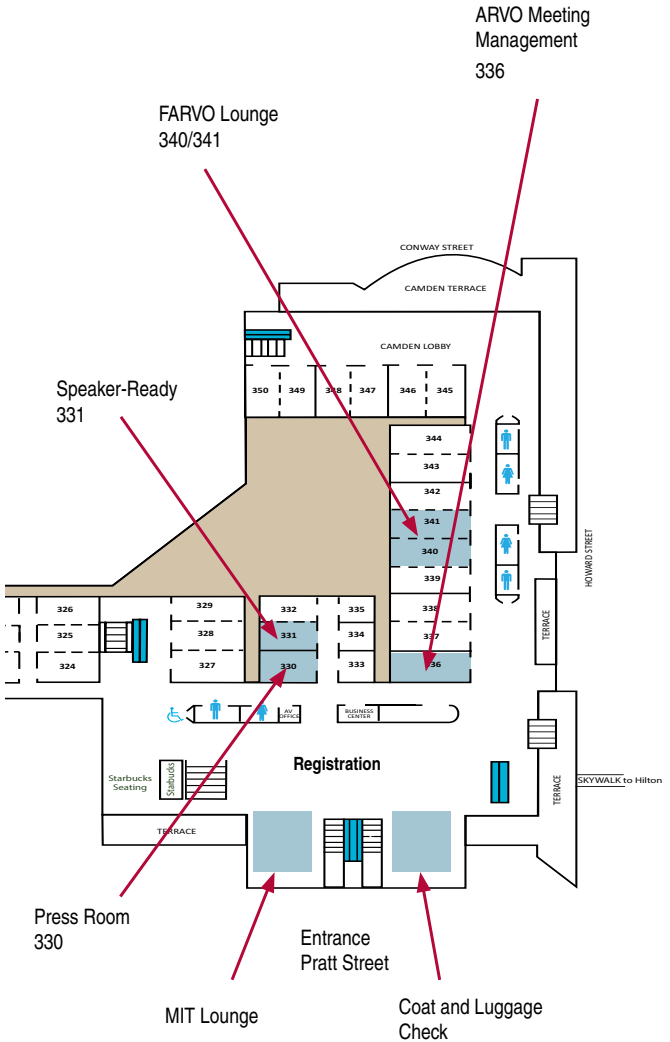
ARVO Imaging in the Eye
Conference
Education Courses
Cross-sectional Group
Meetings



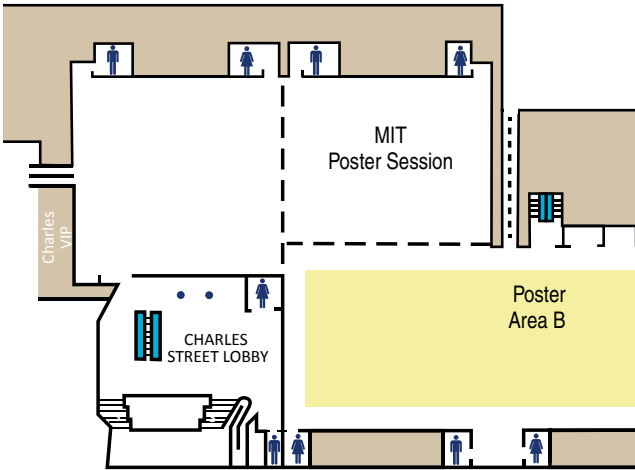
Baltimore Convention Center Level 400



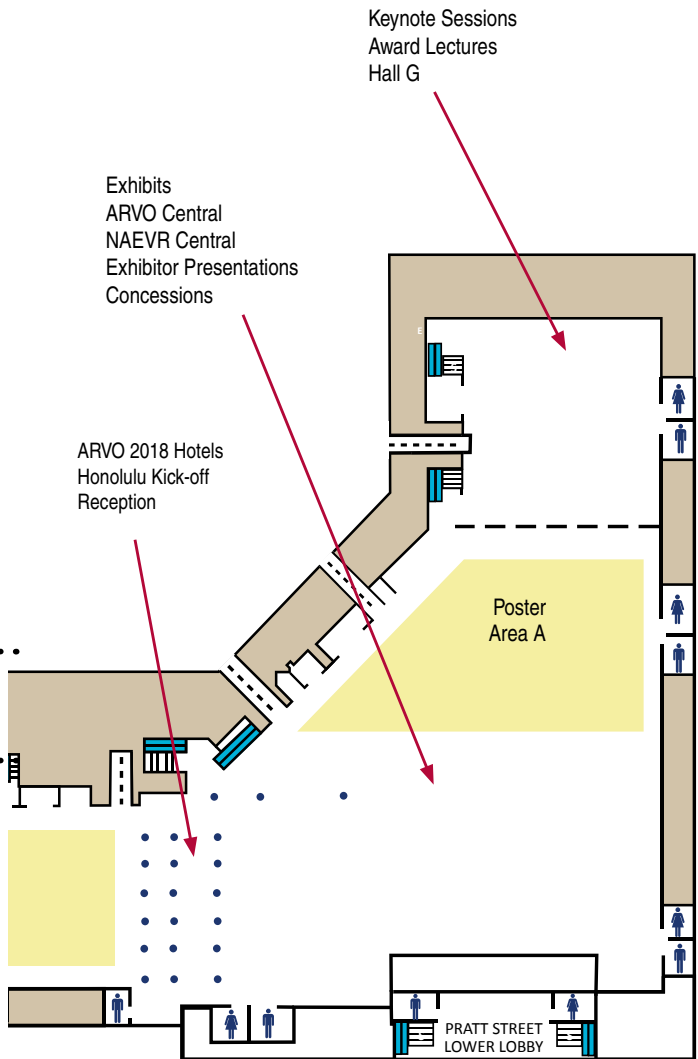
Baltimore Convention Center Level 300



Baltimore Convention Center Level 300



Baltimore Convention Center
Level 100



Pratt Street

Baltimore Convention Center Level 100

Wireless Internet

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

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

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

 arvoconnect.arvo.org



twitter.com/ARVOinfo or [#ARVO2017](https://twitter.com/ARVO2017)



facebook.com/ARVOinfo



[#ARVO2017](https://twitter.com/ARVO2017)

Safety/Security Tips

- Carry with you the name, address, phone numbers and email of an individual to contact in case of emergency. If you have a mobile phone, enter the emergency contact phone number in your contacts list under the heading “ICE” (In Case of Emergency).
- Be sure to carry a card describing any medical conditions or allergies you may have, or wear a medical alert tag.
- Do not wear your Meeting name badge out and about in Baltimore.
- Avoid unlit streets and always walk with another person when sightseeing or shopping, particularly at night.
- Do not display large amounts of cash when paying for taxis or other purchases.
- Do not leave unsecured valuables in your hotel room; lock them in your in-room safe. Hotels are not responsible for items left in your room.
- At the Meeting, check items at the coat and luggage check area located on the Level 1 of the convention center.



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EVER 2017 NICE
SEPTEMBER 27-30
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EVER
CONGRESS

17/02/2017

Abstract deadline: June 1, 2017

Presenters

All speakers scheduled in session rooms are required to check into the Speaker Ready Room, Room 331, preferably 24 hours, but no later than four hours, before their presentations. Previously uploaded presentations must be reviewed and approved.

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

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

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

Speaker Ready Room — Room 331

(410) 649-7420

Friday, May 5.....	4 – 9pm
Saturday, May 6.....	7am – 6pm
Sunday, May 7.....	7am – 6pm
Monday, May 8.....	7am – 6pm
Tuesday, May 9.....	7am – 6pm
Wednesday, May 10.....	7am – 6pm
Thursday, May 11.....	7am – 1pm

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

Poster Presenters

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

Posters scheduled Monday through Wednesday must be removed by 6pm; Thursday posters must be removed by 1:45pm.

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

Abstract Withdrawals and Substitute Presenters

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

For details, see Abstract Withdrawal and Substitute Presenter Policy: arvo.org/am/abstracts.org/am/abstracts.



The graphic features a globe with a magnifying glass over it, surrounded by the text "Creativity and Technology without Boundaries" in a curved banner. Below the globe, the text "APAO 2018 Hong Kong" is displayed in large blue letters, with "Feb 8-11-2018" in a dark blue box. The background consists of blue and white wavy lines.

Creativity and Technology without Boundaries

APAO
2018
Hong Kong
Feb 8-11-2018

The 33rd Asia-Pacific Academy of Ophthalmology Congress
in conjunction with
The 29th Hong Kong Ophthalmological Symposium

Host:  Co-Hosts:   <http://2018.apaophth.org> 

Business Center

(410) 649-7194/7195

The Center maintains exclusive in-house business center services. The Business Center is located on the 300 Level adjacent to the Pratt Street Lobby. Services include photocopying, faxing, word processing, shipping (hand carry items only), computer access and rental, notary public and cellular phone leasing.

Sat. – Wed., May 6-108am – 5pm

Thurs., May 117am – 4:30pm

Cash Machine/ATM

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

Mother's Lounge

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

Coat and Luggage Check (Pratt Street Lobby)

Check your coat, luggage, and other items. Hours:

Sat., 7am – 6:30pm

Sun., 7am – 8pm

Mon., 7am – 9:30pm

Tues., 7am – 7:30pm

Wed., 7am – 8pm

Thurs., 6:45am – 4pm

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

Disabilities or Special Needs

The Baltimore Convention Center is accessible to the disabled. Registrants with questions regarding accessible transportation or other auxiliary requirements should go to the Meeting Management Office, Room 336, for assistance.

First Aid/Onsite Medical Emergencies

For medical emergencies, immediately call 911. The First Aid office is located in the registration area (Pratt Street 300 West Office) in Pratt Street Lobby of the Baltimore Convention Center. The Visit Baltimore information desk is in the registration area as well and can provide information on local dentists, doctors, and hospitals.

Lost and Found

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

Prayer/Meditation Room

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

Recycling

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

Visit Baltimore Information Desk (Pratt Street Lobby)

Information is available on local attractions and activities as well as city maps, water taxi schedules and much more.

Security Services

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

Water Coolers

Water coolers are available in meeting and session rooms throughout the Convention Center.



ARVO 2017 Matching Gift Campaign

Invest in the Future

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

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

Who are the donors?

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

Ways to donate

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



LIGHTHOUSE GUILD

congratulates

Russell N. Van Gelder, MD, PhD

University of Washington School of Medicine

recipient of the

2017 BRESSLER PRIZE

for his work in non-visual
photoreception and Uveitis

and

Yoshikazu Imanishi, PhD

Case Western Reserve University

recipient of the

2017 PISART AWARD

for his studies of photoreceptor
cell membrane functions,
particularly as they relate
to Usher Syndrome

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

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

For both the Bressler Prize and the Pisart Award, non-clinicians may be eligible if their work has direct, immediate and readily translatable clinical relevance.



**LIGHTHOUSE
GUILD**

Vision+Health

lighthouseguild.org

Meeting Management Office

Staff will be available in Room 336 throughout the week to assist with Meeting services, Tel: (410) 649-7422, email: arvoabstracts@arvo.org. Hours: Sat., May 6 – Wed., May 10, 7am – 5:30pm; Thurs., May 11, 7am – 3pm.

Press Activities/Press Registration

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

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

Registration (Convention Center)

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

Badge Printing

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

Onsite Registration

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

Onsite Guest

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

Name badge replacement

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

Exhibitor registration

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

Registration and Badge Printing (Convention Center)

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

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

Badge Printing (Hilton Baltimore)

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

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

Speaker Ready Room (Room 331)

All speakers scheduled in session rooms are required to check into the Speaker Ready Room preferably 24 hours, but no later than four hours, before their presentations.

Tel: (410) 649-7420

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

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

ARVO Fellows

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

Travel Grant Recipients

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

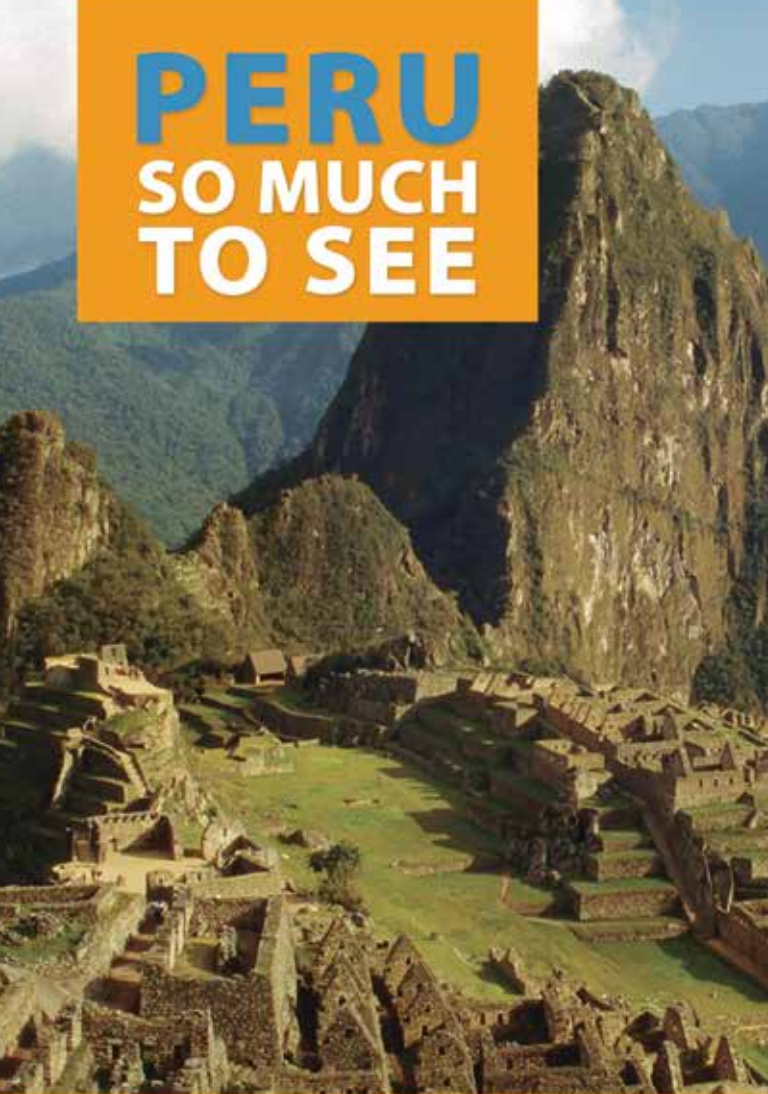
General Business Meeting

#323, Room 324

Tues., May 9, 10:15 – 10:55am

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

PERU
SO MUCH
TO SEE



**XXXIII PAN-AMERICAN
CONGRESS OF
OPHTHALMOLOGY**

LIMA - PERU - 2017

AUGUST 9-12, 2017 / PAAOLIMA2017.COM



**XXXIII CONGRESO
PANAMERICANO
DE OFTALMOLOGIA**
LIMA - PERU, AGOSTO 2017

Center Grill (Hall D)

Personal Papa John's pizza, made to order gyros, chicken souvlaki sandwiches and Greek salad, desserts and beverages.

Center Bakery (Hall E)

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

Center Market (Hall F)

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

Market Fresh Café

(Located Across From Rm 310)

Offers hot breakfast du jour, AM pastries, smoothie bowl, yogurt parfaits, whole fruit, seasonal chef selections, MTO sandwiches, soup du jour, go gourmet, snacks, desserts and beverages:

May 7 – 10, 7am – 3pm

May 11, 7am – 1:30pm

Starbucks (Located In E. Pratt Street Lobby)

Offers coffee, cappuccino, latte and frappuccino as well as a deluxe pastry bar from the morning hours transitioning into afternoon delights:

May 6, 8am – 6pm

May 7 – 10, 6:30am – 6pm

May 11, 6:30am – 3:15pm

Coffee Carts

Coffee carts are available in the Exhibit Hall as well as in the Ballroom Foyer throughout the week. Disclaimer: The hours and items listed within each concession above could change:

May 6 – May 10, 7am – 6:30pm

May 11, 7am – 4pm



National Eye Institute

NEI Audacious Goals Initiative Town Hall: Advancing Cellular Therapies to the Clinic

Session #114 – Room 314

Sunday, May 7, 2017 10:40 – 11:50am

Building on last year's ARVO town hall about retinal diseases amenable to regenerative therapies, this year's discussion seeks input from scientists and clinicians to identify paths for advancing potential therapies to human clinical trials. The event will comprise short introductory talks and a moderated discussion.

KEYNOTE SPEAKERS

Janey Wiggs, MD, PhD
Don Zack, MD, PhD
Ernst Tamm, MD
Susan Quaggin, MD
Balwantray Chauhan, PhD
Leopold Schmetterer, PhD

ABSTRACT SUBMISSION
AND REGISTRATION
NOW OPEN

BASIC SCIENCE CATALYZING TREATMENTS FOR GLAUCOMA

OCTOBER 5-8, 2017

EMORY CONFERENCE CENTER | ATLANTA, GA

iser.org/off_year_meeting



International Society
for Eye Research



BrightFocus™
Foundation

Cure in Mind. Cure in Sight.

Proctor Award and Lecture



Gustavo D. Aguirre, VMD, PhD, FARVO
University of Pennsylvania
School of Veterinary Medicine

Mon., May 8, 5:45 – 6:30pm | Hall G
#288

From the Cage to the Bedside-Concepts and Strategies in Retinal Gene Therapy

Mildred Weisenfeld Award



Johanna Seddon, MD, ScM, FARVO
Tufts University School of Medicine and
Tufts Medical Center

Mon., May 8, 6:45 – 7:30pm | Hall G
#289

Macular Degeneration Epidemiology: Nature-Nurture, Lifestyle Factors, Genetic Risk and Gene-Environment Interactions

Cogan Award and Lecture



Andrew Huberman, PhD
Stanford University School of Medicine

Wed., May 10, 5:45pm – 6:30pm | Hall G
#490

Visual restoration and function: from genetics to virtual reality

Friedenwald Award and Lecture



Paul Kaufman, MD, FARVO
University of Wisconsin
School of Medicine and Public Health

Wed., May 10, 6:45pm – 7:30pm | Hall G
#491

Presbyopia and Glaucoma – The Missing Link?

Kupfer Award



Donald Everett, MA
National Eye Institute

Presented at the General Business Meeting
#323

Tues., May 9, 10:15 – 10:55am | Room 324

ARVO/Alcon Opening Keynote

Sun., May 7, 12 – 1:15pm | Hall G

#116



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

ARVO/Alcon Closing Keynote

Thurs., May 11, 1:30 - 3:15pm | Hall G

#551

What's next in the investigation of genetics of age-related macular degeneration?



Clockwise:

Donald Zack, MD, PhD
(moderator)

Pamela Sklar, MD, PhD

Nancy J. Cox, PhD;

Terri Manolio, MD, PhD

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

ARVO Distinguished Service Awards

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



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



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University of Washington.
Seattle, Wash.
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Paul S. Bernstein, MD, PhD, FARVO
University of Utah/Moran Eye Center,
Salt Lake City, Utah
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Peter D. Lukasiewicz, PhD, FARVO
Washington University School of Medicine,
St. Louis, Mo.
Vice President and VN Section Trustee



Beckman–Argyros Award

The Arnold and Mabel Beckman Foundation supports cutting-edge research through their generous Beckman-Argyros Award: The third annual award has been presented to **Jeremy Nathans**, MD, PhD, of Johns Hopkins University.



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

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



NAEVR

National Alliance For
Eye And Vision Research

Visit NAEVR Central in the Exhibit Hall

Hours: Sunday – Wednesday, 9am – 4pm

Hosted by NAEVR's James Jorkasky and David Epstein

- Contact Congress to support vision research funding increases
- Learn about research funding resources, such as multiple Department of Defense (DoD) funding opportunities to meet critical vision research gaps

NAEVR's Defense-Related Vision Research Opportunities Session

Monday, May 8, 7:30 – 8:30am | Room 328

NAEVR has invited DoD representatives to speak about funding opportunities and past DoD awardees to offer insights into how researchers can be most responsive to the funding Program Announcement.

eyerresearch.org

Joanne G. Angle Award



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

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

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

Celebrating 10 years

ARVO/Champalimaud Award Lecture

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



Carol Mason
Columbia University



Carla Shatz
Stanford University

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



Champalimaud
Foundation

Fellows of ARVO

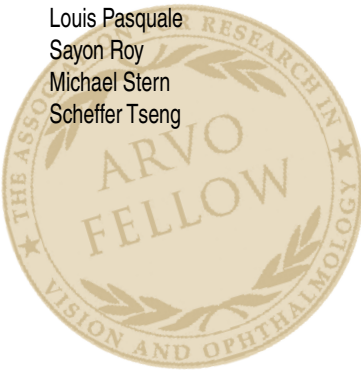
ARVO will induct the Fellows Class of 2017 at the opening ARVO/Alcon Keynote Session, to recognize and honor these members for their leadership, dedication and contributions to the Association.

Gold Fellows

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

Silver Fellows

Rando Allikmets
 Paul Bishop
 Norman Blair
 David Brainard
 Michael Collins
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 Karl Csaky
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 Christina Flaxel
 Samuel Jacobson
 Peter King-Smith
 Pierre Lachapelle
 Kirsten Lampi
 Goldis Malek
 James McGinnis
 Anton Reiner
 Kevin Schey
 Mark Sherwood
 Ronald Silverman
 Ariei Solomon
 Thomas Van Den Berg
 Bernhard Weber
 Michael Young



2017 Annual Meeting Survey

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



Research essentials — Core knowledge and skills for eye and vision scientists

Foundational knowledge

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

Next-step skills

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

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ARVO

2017

MAY 7 – 11 | BALTIMORE

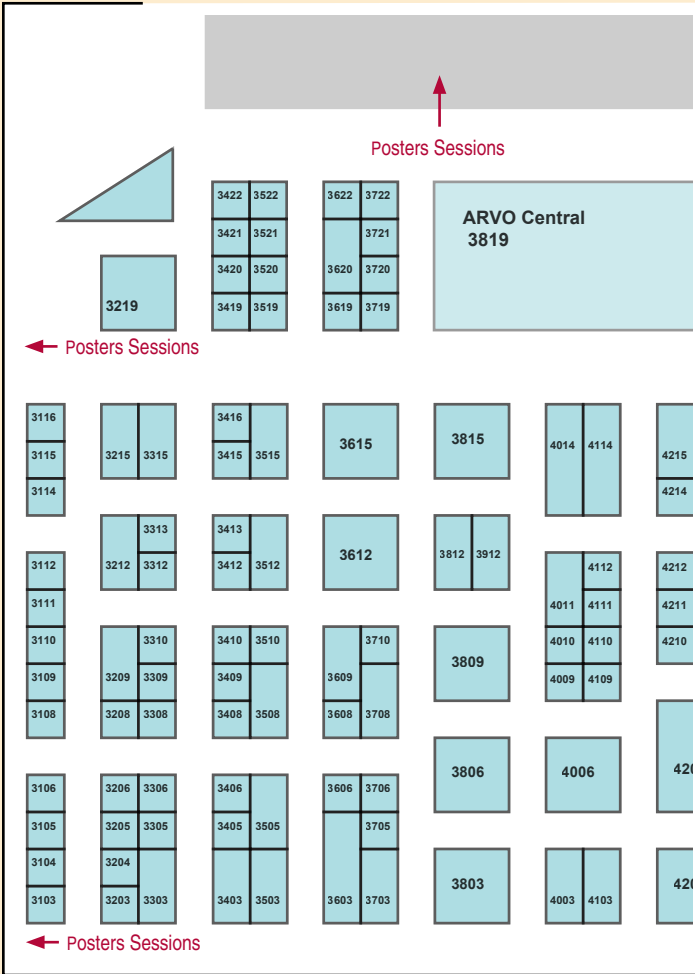
GLOBAL CONNECTIONS IN VISION RESEARCH

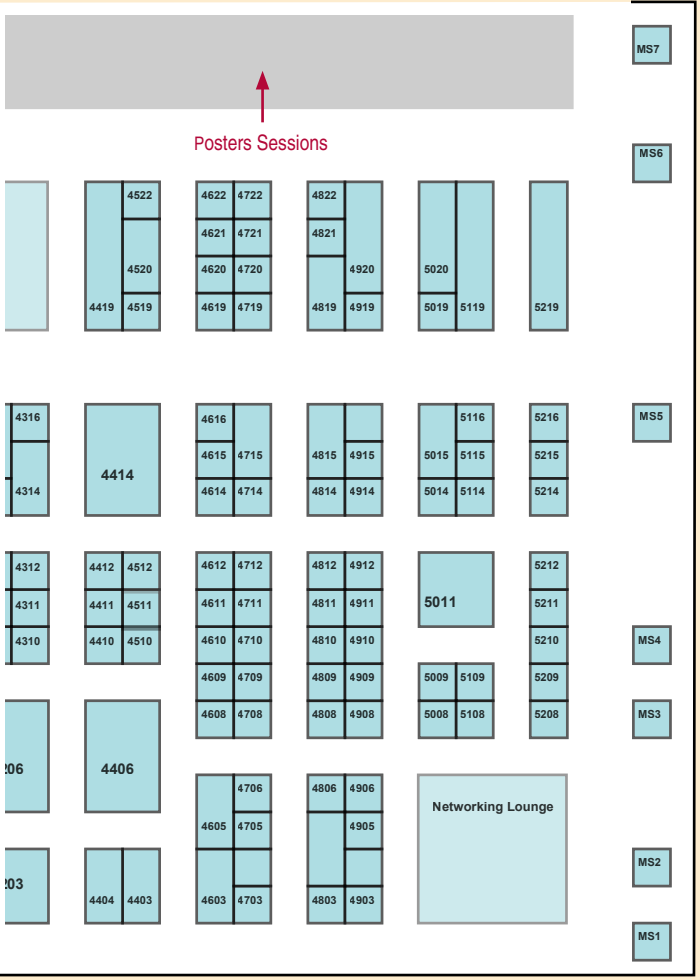
Exhibit Hall Hours

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

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

Baltimore Convention Center Lower Pratt Street Lobby





A

AbbVie	3219
AbbVie Medical Affairs	3522
ABO	4822
Absorption Systems	4803
Accutome Inc.	4608
Accuisee	4715
Aerpio Therapeutics	MS2
AGTC (Applied Genetic Technologies Corporation)	3115
Aier Eye Hospital Group	4821
Akorn, Inc.....	3306
Alcon.....	4006
Alimera Sciences.....	4211
Allergan	4815
Allergan Medical Affairs.....	5015
Alpha Independent Review Board, Inc.....	4710
American Macular Degeneration Foundation	3205
Aptar Pharma	3620
ArcScan.....	3606
Arrington Research, Inc.....	3719
Asia-Pacific Academy of Ophthalmology.....	5115
Aurora Surgical	4703

B

Braun CeGaT, LLC	4808
Bausch & Lomb, Inc.....	3519
Bio-Concept Laboratories, Inc.	4806
Biocytogen.....	4722
Bioniko.....	4903
BioSpherix, Ltd	5114
Biotime.....	MS6
Blackrock Microsystems	5108
Blueprint Genetics	4314
BOCO SV	MS3
Boston Micromachines Corp.....	3309
BrightFocus Foundation.....	4619
BTI – Biotechnology Institute.....	3203

C

Calvert Laboratories, Inc.....	3510
Cambridge Research Systems.....	3706
Castle Biosciences, Inc.	4511
CDMRP	4721
CenterVue, Inc.	3409
Charles River.....	3815
ChengDu KangHong Biotechnology Co. Ltd.....	3210

CiToxLAB North America	3305
Clinical Edge, Inc.	3405
Colonial Medical Supply	4621
Comparative Biosciences, Inc.....	4112
Covance.....	4014
CROMSOURCE	4704
Cylite Py Ltd.....	413

D

D-Eye, Srl	4814
Diagnosys LLC	4114
DigiSight Technologies.....	3708
Diopsys, Inc.	4612
Doctor Multimedia.....	5212
Doheny Eye Institute (DIRC)	3415

E

Electro-Diagnostic Imaging, Inc.....	4906
Ellex	4404
Elsevier Inc.	4510
Emmes	5008
Encompass Pharmaceutical Services, Inc.	3508
EPISKIN	3114
European Association Vision Eye Research (EVER)	4909
Eversight.....	5216, MS5
Experimentica Ltd.....	4520
Exsera BioLabs	3204
EyeCRO.....	3603
Eyezor, Inc.	4014

F

Fight for Sight	4611
Forus Health	3111
Foundation Fighting Blindness	3112

G

Gene Tools, LLC	3619
Genentech, A Member of the Roche Group	4203, MS1
Geuder AG	4709
Global Clinical Trials, LLC	4911
Gooch & Housego	3109
Good-Lite Company	4512
Grand Seiko & Luneau Technology	5014

H

HAI Laboratories, Inc.....	4109
Heidelberg Engineering, Inc.	3809
Heine Usa Ltd.....	3110
Hi-Dow International.....	5109

I

ifa systems AG.....	3608
Iflexis	5009
Imagine Eyes.....	3503
Imedos Systems UG.....	3420
INC. Research	3408
Innova Systems, Inc.....	4010
INO	4110
Integral BioSystems, LLC	3308
International Council of Ophthalmology	4905
International Society for Eye Research (ISER)	4705
Iris Pharma.....	4603

J

Jackson ImmunoResearch Labs	3421
JANIX CRO.....	3806
Jorvec Corp.....	3521
JP Medical Publishers	4908

K

Karger Publishers	4214
Katena Products Inc.	4310
Keeler Instruments	4605
KeraLink International (Formerly TBI/Tissue Banks International)	4904
Konan Medical USA, Inc.....	4215
Kugler Publications	4609

L

LAgen Laboratories LLC.....	3104
Leica Microsystems	3812
Lexitas Pharma Services, Inc.....	3315
Lightmed USA	4809
Lions Eye Institute for Transplant and Research.....	4212
Lions VisionGift.....	4708
LKC Technologies, Inc.	4103

M

M&S Technologies	4614
Mallinckrodt Pharmaceuticals.....	4819, 4914
Medmont International.....	3412
Metrovision	3416
Minnesota Lions Eye Bank	4719
Moorfields Eye Hospital.....	4311
Movu Inc.	3310
MPI Research.....	3505
MUHC - McGill University Eye Pathology Laboratory.....	3212
Multi Channel Systems.....	5211

N

National Disease Research Interchange	5208
National Eye Institute.....	4419
Natus Medical Incorporated	3710
Nemera.....	3108
NeoMedix Corporation	3515
Nidek	3912
NOF America Corporation.....	4620
Novartis Alcon Pharmaceuticals.....	3609

O

Ocular Immunology & Uveitis Foundation	3116
Ocular Instruments	3703
Oculos Clinical Research	3209
Oculus, Inc.....	5209
OcuMetrics, Inc.....	4411
OcuScience	4003
OD-OS, Inc.....	4916
<i>Ophthalmology Times</i>	5215
Optical Imaging, Ltd.....	4522
Optos Inc.	4011
Optovue, Inc.....	3612
Ora, Inc.....	4206, 4406
OSOD, LLC.....	4014

P

PharmOptima, LLC.....	4616
Phoenix Research Lab	4414
Physical Sciences Inc.....	3312
Powered Research	3419
Precision Vision	4410
ProMed Pharma LLC.....	4910
Promedica International	4412
Purmabiotics, LLC	3313

R

Regeneron Pharmaceuticals	3803
Reichert, Inc.	3705
RetinAi Medical GmbH	3206
<i>Review of Ophthalmology/Jobson Publishing</i>	4111
Rockland Immunochemicals.....	4811
Roland Consult.....	4009
RxGen, Inc.....	3406

S

Santen	4210
SDC	4206

Shenyang Sinqi Pharmaceutical Co. Ltd.....	4720
Shire	3422
Sinclair Research Center.....	3103
Singapore Eye Research Institute (SERI)	3722
Slack.....	3215
Softcare Ltd.	5210
Spark Therapeutics.....	5011
Speedway Delhi.....	4711
Sterling Institutional Review Board	3403
Striata Technologies	3208

T

TA Sciences.....	3622
Taylor & Francis Group	4615
TearLab Corporation.....	4519
The <i>JAMA</i> Network.....	4714
Tobii Pro.....	3106
Topcon	3512
Toxikon Corporation.....	4706
tpm taberna pro medicum GmbH.....	4812
Trial Runners LLC.....	3303
Turing Pharmaceuticals LLC.....	5116

U

U.S. Food and Drug Administration	4316
---	------

V

Vasoptic Medical.....	3410
Vision Share	MS4
Vision Tiffany Inc.....	3720
Volk Optical, Inc.....	4403
Voxeleron LLC	3520

W

Wasatch Photonics	4804
Welch Allyn.....	4912
Wicab, Inc.....	4810
Wolters Kluwer Health	4712
Women's Eye Health.org	3721
World Glaucoma Association	4610
World Precision Instruments.....	4312

Z

Zeiss.....	3615
------------	------

A

AbbVie 3219

Jacqueline Trimble
 1 North Waukegan Rd, R601/AP4-2
 North Chicago, Ill. 60064
 Tel: 847.938.2228
 jcrowley@cmimedia.com; abbvie.com

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Cathy Miller
 1 North Waukegan Rd
 North Chicago, Ill. 60064
 Tel: 847.937.8915
 catherine.miller@abbvie.com

ABO 4822

Claudia Moral
 Rua Casa do Ator 1117 Vila Olimpia
 Sao Paulo, SP 04546-004
 Brazil
 Tel: 55.113.266.4000
 aboonline@cbo.com.br; cbo.com.br

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Absorption Systems 4803

Tawny Britton
 436 Creamery Way, #600
 Exton, Pa. 19341
 Tel: 610.280.7300
 contact@absorption.com; absorption.com

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Lydia Andruscavage
3222 Phoenixville Pike, Building 50
Malvern, Pa. 19355
Tel: 610.889.0200
Fax: 610.889.3233
landruscavage@accutome.com; accutome.com

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

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AGTC (Applied Genetic Technologies Corporation)..... 3115

Stephen Potter
14193 NW 119th Terrace, Suite 10
Alachua, Fla. 32615
Tel: 386.462.2204
spotter@agtc.com

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

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Mindy Bailey
 1925 West Field Court, Suite 300
 Lake Forest, Ill. 60045
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Erin Moore
 6201 South Freeway TC-33
 Fort Worth, Texas. 76134
 Tel: 817.568.6077
 erin.moore@alcon.com; alcon.com

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Elizabeth Van De Bogart
 6120 Windward Parkway, Suite 290
 Alpharetta, Ga. 30005
 Tel: 678.527.1307
 Fax: 678.990.5742
 elizabeth.vandebogart@alimerasciences.com; alimerasciences.com

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Mary Mikels
 2525 Dupont Dr.
 Irvine, Calif. 92612
 Tel: 714.246.4500
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Mary Mikels
2525 Dupont Dr.
Irvine, Calif. 92612
Tel: 714.246.4500
Fax: 714.246.4971
mikels_mary@allergan.com; allergan.com

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Alpha Independent Review Board, Inc..... 4710

Marianne Thornton
1001 Avenida Pico Suite C 497
San Clemente, Calif. 92673
Tel: 949.542.3882
mthornton@alphairb.com; alphairb.com

American Macular Degeneration Foundation 3205

Chip Goehring
PO Box 515
Northampton, Mass. 01061-0515
Tel: 413.896.8227
amdf@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

Aptar Pharma 3620

Pamela Moran
250 North Route 303
Congers, N.Y. 10920
Tel: 845.639.3700
pamela.moran@aptar.com; aptar.com

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433 Park Pointe Dr. Suite 220
Golden, Colo. 80401
Tel: 720.773.8550
tsingh@arcscan.com; arcscan.com

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Brenda Dugue
400 Somerset Corporate Blvd.
Bridgewater, N.J. 08807
Tel: 908.541.3254
Fax: 585.338.0686
brenda.dugue@bausch.com; bausch.com

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13 Industrial Way
Salem, N.H. 03079
Tel: 603.734.4990-2001
francis.smith@bioconcept.com; bioconcept.com

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Min Deng
1 Innovation Dr Suite 103
Worcester, Mass. 01605-4307
Tel: 508.421.4800
mdeng@biocytogen.com; biocytogen.com

Bioniko 4903

Maria Ramirez
3585 NE 207Th Ave Bay 9 #802803
Miami, Fla. 33280
Tel: 507.246.6456
info@bioniko.com; bioniko.com

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Jennifer Grinnell
25 Union St.
Parish, N.Y. 13131
Tel: 315.387.3414
Fax: 315.387.3415
jgrinnell@biospherix.com; biospherix.com

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Julia Oentrich
391 Chipeta Way Suite G
Salt Lake City, Utah. 84108
Tel: 801.582.5533
clind@blackrockmicro.com; blackrockmicro.com

Blueprint Genetics..... 4314

Jessica Kim
 1250 Missouri St. 208
 San Francisco, Calif. 94107
 Tel: 650.452.9340
jessica.kim@blueprintgenetics.com; blueprintgenetics.com

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Michael Feinberg
 30 Spinelli Place
 Cambridge, Mass. 02138
 Tel: 617.868.6417; Fax: 617.868.7996
mrf@bostonmicromachines.com; bostonmicromachines.com

Founded in 1999, Boston Micromachines Corporation (BMC) is a designer of advanced retinal imaging instrumentation and is the leading provider of microelectromechanical systems (MEMS) based mirror products. BMC's customizable Apaeros Retinal Imaging Systems are adaptive optics scanning laser ophthalmoscopes (AOSLO). This family of instruments is designed for best-in-class performance and has the ability to add the latest features developed by leaders in retinal imaging instrument development.

BrightFocus Foundation..... 4619

Kara Summers
 22512 Gateway Center Dr.
 Clarksburg, Md. 20871
 Tel: 301.948.3244
ksummers@brightfocus.org; brightfocus.org

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

C

Calvert Laboratories, Inc..... 3510

Joe Winslow
 130 Discovery Dr, Scott Technology Park
 Scott Township, Pa. 18447
 Tel: 570.586.2411
 Fax: 570.586.3450
joe.winslow@calvertlabs.com; calvertlabs.com

Calvert Labs is a collaborative preclinical CRO bringing extensive experience, an innovative, solutions-oriented approach and unsurpassed performance to your drug development program. We offer a range of lead identification and optimization services and a wide array of preclinical services in most therapeutic areas to meet your R&D needs, helping you navigate your GLP testing needs prior to advancing to clinical trials.

Exhibitor Descriptions

Cambridge Research Systems 3706

Carol Luscombe
80 Riverside Estate Sir Thomas Longley Rd.
Rochester Kent ME2 4BH
U.K.
Tel: +44.1634.7207.07
Fax: +44.1634.7207.19
carol.luscombe@crsltd.com; crsltd.com/metropsis

Precise psychophysical assessment of visual function. Ready-to-run protocols for measuring visual acuity and spatial, temporal, color, and depth discrimination in individuals of all ages and normal or defective vision. Now available to run at scotopic, mesopic and photopic light levels. Sufficiently sensitive to examine the small changes in visual function of acquired or congenital conditions, allowing the investigator to monitor the progression or remission of disease quantitatively over time.

Castle Biosciences, Inc. 4511

Heather Kippola
820 S. Friendswood Dr. Suite 201
Friendswood, Texas 77546
Tel: 866.788.9007
Fax: 866.431.2924
conferences@castlebiosciences.com; castlebiosciences.com

Castle Biosciences is a molecular diagnostics company committed to improving cancer treatment decisions. The Decision Dx-UM gene expression profile test enables accurate staging of five-year metastatic risk in uveal melanoma by identifying aggressive tumor biology. The test has been validated in multiple prospective and retrospective studies and is standard of care in the majority of ocular oncology practices. More information can be found at; MyUvealMelanoma.com

CDMRP 4721

Robert C. Read
1053 Patchel St.
Fort Detrick, Md. 21702
Tel: 301.619.4207
Fax: 301.619.7792
robert.c.read.civ@mail.mil; cdmrp.army.mil

CDMRP manages 27 medical research programs for the Department of Defense (DOD) and U. S. Army Medical Research & Materiel Command (US-AMRMC). Since 2009, VRP has funded 67 awards totaling ~\$60M addressing: (1) mitigation and treatment of traumatic injuries, war-related injuries, and diseases to the ocular structure and visual system; (2) mitigation and treatment of visual dysfunction associated with TBI; (3) ocular and visual systems diagnostic capabilities; and (4) vision restoration.

CenterVue, Inc...... 3409

Keshia Sanchez
 43301 Osgood Rd.
 Fremont, Calif. 5439
 Tel: 408.988.8404
 Fax: 408.716.3271
 keshia.sanchez@centervue.com; centervue.com

CenterVue develops highly advanced and easy to use diagnostic systems for early detection and management of sight-threatening pathologies such as Diabetic Retinopathy, Glaucoma and Macular Degeneration. Our innovative devices employ imaging principles and fluid functionality that aid in precise diagnosis and efficient workflow. The CenterVue portfolio includes the DRS Automated Fundus Camera, the EIDON Wide-Field Confocal Scanner, the Mass.IA Microperimeter and the new COMPASS Fundus Perimeter.

Charles River 3815

Greta Lindberg
 251 Ballardvale St.
 Wilmington, Mass. 01887-1000
 Tel: 339.368.0944; Fax: 978.988.9236
 greta.lindberg@crl.com; criver.com

Charles River offers an integrated approach to ophthalmology research to guide new drugs from bench to market. Compounds or implantable devices intended for ocular treatment can be assessed for efficacy and safety. Ocular effects of compounds targeted to non-ocular conditions can also be characterized. GLP studies either as stand-alone studies or as part of general and specialty toxicology programs as well as Non-GLP pilot or proof-of-concept studies can also be conducted.

CiToxLAB North America..... 3305

Sophie Dubois
 445 boulevard armand frappier
 Laval, QC H7V4B3
 Canada
 Tel: 450.973.2240
 duboiss@ca.citoxlab.com; citoxlab.com/en

CiToxLAB is a full-service non-clinical CRO, serving the Pharma/Biotech and Chemical/Agrochemical/Cosmetic industries through five state-of-the-art GLP facilities in North America and Europe. Our service portfolio includes general and specialty toxicology (reproductive, juvenile, infusion, inhalation, carcinogenicity, transgenics), safety pharmacology (including EEGs and CV/CNS electrophysiology), genomics, biomarkers, bioanalysis, immunology, ecotoxicology and radiation safety.

Clinical Edge, Inc...... 3405

Christine Chan
 939 West North Ave., Suite 750
 Chicago, Ill 60642
 Tel: 773.218.6449
 cchan@clinicaledgeInc.net; clinicaledgeInc.com

Clinical Edge, Inc. provides certification in all areas of visual function including BCVA, low luminance, reading tests and IOP in order to assure a high level of quality and consistency amongst clinical sites participating in the conduct of ophthalmology drug, biologic, and device trials. Our Certifiers are licensed optometrists and ophthalmologists, with added experience in serving patients with low-vision. Our Team of professionals has an unparalleled level of expertise and experience.

Exhibitor Descriptions

Colonial Medical Supply 4621

Susan Fleming
6 Fox St., P.O. Box 544
Windham, N.H. 03087
Tel: 603.328.5130
Fax: 603.328.8921
cms@colmedsupply.com; colmedsupply.com

Colonial Medical Supply is a distributor of the ONLY tonometer designed to measure IOP in mice and rats' eyes. The icare TonoLab provides practical means with convenience and accuracy. TonoVet for larger animals produces the same high level of performance. We offer VetEquip inhalation anesthesia systems and 'v-gel' by JorVet.

Comparative Biosciences, Inc..... 4112

Rachel Stainton
786 Lucerne Dr.
Sunnyvale, Calif. 94085
Tel: 408.738.8074
Fax: 408.738.9278
rachel_stainton@compbio.com; compbio.com

CBI provides the best resources and quality service to all sectors of the biomedical community. With a multitude of expertise, we are able to serve pharmaceutical and biotech companies as well as academic, industrial and governmental organizations. CBI's extensive experience performing ocular GLP and non-GLP preclinical toxicology, efficacy, pharmacology, pharmacokinetics-pharmacodynamics, histopathology, and safety studies make us the ideal collaborator for your next scientific breakthrough.

CROMSOURCE 4704

Margherita Mosconi
Via Giorgio De Sandre 3
Verona, Italy 37135
Tel: 393.357.6983.80
globalmarketing@cromsource.com; cromsource.com

CROMSOURCE Vision is part of CROMSOURCE, a leading provider of clinical life science services to the pharmaceutical and medical device industries. CROMSOURCE has over 20 years of expertise in delivering outstanding clinical research services in locations across the globe. CROMSOURCE Vision has bRd. ophthalmic trial expertise Including, but not limited to: AMD Blepharitis Conjunctivitis Contact Lens Solution Cataract Surgery Dry eye Geographic atrophy Glaucoma Macular Degeneration Retinitis pigmentosa.

Cylite Py Ltd..... 3413

Steve Frisken
7/45 Normanby Rd.
Nottinghill, VIC 3168,
Australia
Tel: 614.012.8704.7
steve.frisken@cyliteoptics.com; cyliteoptics.com

Cylite's Hyperparallel OCT (HP-OCT) technology can acquire over 1000 simultaneous A-scans in one millisecond, freezing eye movement and allowing, for the first time in a commercial instrument, accurate in-vivo measurements of anterior ocular surface topography using OCT. Cylite's HP-OCT instrument also features axial length measurement and high resolution volumetric imaging.

D

D-Eye, Srl..... 4814

Richard Sill
Via Tommaseo, 77 – 35131 Padova,
Italy
Tel: +39.626.497.9212
rick.sill@d-eyecare.com; d-eyecare.com

D-EYE is a smarttel-based retinal imaging system. The D-EYE lens was invented by Italian Ophthalmologist Andrea Russo and works in harmony with iTels and Android devices by removing corneal glare. D-EYE is the modern day “digital ophthalmoscope” as retinal images may now be captured, stored and transmitted with ease. The perfect eye health screening device for use in just about anywhere.

Diagnosys LLC 4114

Anne Doran
175 Cabot St., Suite 500
Lowell, Mass. 01854
Tel: 978.458.1600
Fax: 978.458.1755
anne@diagnosysllc.com; diagnosysllc.com

This year, Diagnosys LLC is pleased to offer you a top of the line, simple-to-use Rodent ERG system; Celeris delivers reproducible, noise-free results in a matter of minutes. Our clinical line has also expanded with the addition of Envoy, our versatile, mini pattern stimulator that’s useful for PERG & VEP. Please visit our booth to see Celeris and Envoy for yourself. Our new product forums are being held at 2:30pm on Monday, Tuesday, and Wednesday during the show.

DigiSight Technologies 4622

Chet Kumar
55 Hawthorne St, Suite 410
San Francisco, Calif. 94105
Tel: 650.223.5560
sales@digisight.net; digisight.net

DigiSight Technologies, Inc., based in San Francisco, is a digital health company developing HIPAA-compliant mobile solutions for health systems and practices that enable health care professionals to examine eye health and coordinate patient care in real-time. Developed by renowned ophthalmologists, DigiSight is led by a team of health care and technology veterans and backed by blue-chip investors. For more information, please visit; digisight.net.

Exhibitor Descriptions

Diopsys, Inc...... 4612

Jae Jeong
16 Chapin Rd., Suite 912 PO Box 672
Pine Brook, N.J. 07058
Tel: 973.244.0622
Fax: 973.244.0670
jjeong@diopsys.com; diopsys.com

Diopsys is the leader in providing ophthalmologists and optometrists with objective, functional information about the vision system to aid in the early detection of vision disorders and patient management through ERG and VEP vision testing. Diopsys® ERG and VEP tests can be performed on the Diopsys® NOVA cart or Diopsys® ARGOS™ tabletop system. The company understands the important role of early medical intervention for correctable vision problems, which can lead to an improved quality of life.

Doheny Eye Institute (DIRC)..... 3415

Christopher C. Conway, JD
PO Box 86228
Los Angeles, Calif. 90086
Tel: 323-342-7101
ccconway@doheny.org; doheny.org

Doheny Eye Institute is a global leader in ophthalmology research and clinical services. Now affiliated with UCLA and Stein Eye Institute, we boast a faculty of 67 ophthalmologists representing all specialty areas. A new Doheny Eye Institute research facility will house our extensive portfolio of projects and ventures for advancing vision care. Visit our booth at ARVO to learn about joining the Doheny team.

E

Electro-Diagnostic Imaging, Inc. 4906

Charlette Schmidt
1551 McCarthy Blvd. Suite #114
Milpitas, Calif. 95035
Tel: 650.631.0120
Fax: 650.631.0122
susanm@veris-edi.com; electro-diagnostic.com

VERIS is a unique recording system for Electrophysiology and Ophthalmology. The VERIS system generates multifocal stimuli of the retina and objectively derives a topographic map of the retinal and visual functions. It maps the response characteristics to local flash, pattern or chromatic stimulation at hundreds of areas across the visual field, and images retinal dysfunction in patients. The FDA has cleared this device for use in the diagnosis and management of retinal diseases.

Ellex 4404

Kylie Brown
 7138 Shady Oak Rd.
 Minneapolis, Minn. 55344
 Tel: 800.824.7444
 Fax: 952.941.5511
 kbrown@ellex.com; ellex.com

Ellex Medical provides a comprehensive range of laser and imaging products for the diagnosis and treatment of cataract, glaucoma and retinal conditions. With our head office and manufacturing based in Adelaide, Australia, Ellex has sold more than 25,000 Ellex-branded laser and ultrasound systems worldwide.

Elsevier Inc..... 4510

Melanie Spain
 1600 JFK Blvd.,, Suite 1800
 Philadelphia, Pa. 19103
 Tel: 215.239.3722
 Fax: 215.239.3494
 m.spain@elsevier.com; elsevierhealth.com

Elsevier is a world-leading provider of information solutions that enhance the performance of science, health, and technology professionals, empowering them to make better decisions, and deliver better care.

Emmes..... 5008

Kimberly Dawkins
 401 North Washington St., Suite 700
 Rockville, Md. 20850
 Tel: 301.251.1161.236
 kdawkins@emmes.com; emmes.com

Emmes has set the gold standard and is the leader in the field of Ophthalmic Clinical Trial Training and Certification. Emmes has certified over 500 clinical centers in over 20 countries and has over 30 years of ophthalmic experience. A collaboration with Emmes is your assurance of excellence in the important issues of public health and quality visual function certification services. Please stop by our booth and meet our representatives and learn about the Electronic Visual Acuity Tester!

Encompass Pharmaceutical Services, Inc..... 3508

Rick Coulon
 130 Technology Parkway, N.W.
 Norcross, Ga. 30092
 Tel: 770.248.4501.260
 Fax: 678.215.0180
 rick.coulon@encompass-pharma.com; encompass-pharma.com

We offer a full range of ophthalmic drug development and formulation services from pre-formulation through manufacturing scale-up Including: -Preclinical Support -Consulting -Drug Formulation -Drug Delivery -Analytical Support -Manufacturing Process Development -Clinical Supplies Manufacturing We have proprietary in-vitro models & drug delivery technologies to assist our clients in the efficient evaluation, & selection formulations. Our PROLOC delivery technology offers a 8 hour drug release profile.

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Alain Alonso
4 rue Alexander Fleming
69007 Lyon
France
Tel: +33 – 62.31.84.916
aalonso@episkin.com; episkin.com

EPISKIN, world leader in tissue engineering, offers Human Reconstructed Tissues to the global scientific community - academic and industry - to support research and development activities in Safety and Efficacy. We provide our worldwide clients RELIABLE AND RELEVANT IN VITRO TOOLS FOR SAFETY AND EFFICACY EVALUATION.

European Association Vision Eye Research (EVER)..... 4909

Marlene Verlaeck
Kapucijnenvoer 33, Leuven B-3000
Belgium
Tel: +32 – 04.72.43.06.91
Fax: +32 – 16.23.40.97
ever@ever.be; ever.be

EVER, the European Association for Vision and Eye Research, is currently the leading non-profit ophthalmological research association in Europe which covers all areas of ophthalmology and the visual sciences. Membership is open to individuals of any nationality engaging in or with an interest in ophthalmic and vision research. The EVER 2017 congress will be held in France at the Nice Acropolis Convention Center from September 27-30, 2017.

Eversight5216, MS5

Colleen Vrba
4889 Venture Dr.
Ann Arbor, Mich. 48108
Tel: 312.469.5552
Fax: 312.706.6761
colleen@eversightvision.org; eversightvision.org

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

Experimentica Ltd..... 4520

Giedrius Kalesnykas
Microkatu 1, P.O. Box 1188
Kuopio
Finland
Tel: +358 503.7902.75
Fax: +1 844.546.8376
info@experimentica.com; experimentica.com

Experimentica Ltd. is a contract research organization dedicated to developing and offering preclinical ocular models and services to clients in the pharmaceutical, biotech and academic sectors.

EyeCRO 3603

Rafal Farjo
 800 Research Parkway Suite 360
 Oklahoma City, Okla. 73104
 Tel: 405.271.2557
 Fax: 405.271.2554
 rfarjo@eyecro.com; eyecro.com

Our team has 80+ years of combined experience utilizing ophthalmic animal models for drug development. We specialize in preclinical ophthalmic studies of pharmacology/efficacy, PK/tox, and eyedrop formulation development. Efficacy models include dry eye, allergic conjunctivitis, corneal NV, laser-induced CNV, STZ-induced diabetes, ischemia/reperfusion, inherited retinal degenerations, quantification of A2E/retinoids, light-induced retinal degeneration, OIR, and experimental autoimmune uveitis.

Fight for Sight 4611

Janice Benson
 381 Park Ave., South, Suite 809
 New York, N.Y. 10016
 Tel: 212.679.6060
 Fax: 212.679.4466
 janice@fightforsight.org; fightforsight.org

Since 1946, Fight for Sight has supported & inspired eye and vision research by funding promising scientist early in their careers. Fight for Sight has granted over \$21 million dollars and funded more than 3,000 researchers / scientists which have contributed to major advances in ophthalmology and vision research, including development of gene therapies, the intraocular lens, donor cornea preservation, glaucoma therapies and various uses of ophthalmic lasers, and stem cell research.

Forus Health..... 3111

Connor Larkin
 5520 Sherier Pl.
 Washington, D.C. 20016
 Tel: 202.744.0841
 connor@forushealth.com

Forus Health seeks to address the health issues affecting the world through innovative products and solutions combined with innovation in deployment in an inclusive environment. Forus' flagship affordable retinal screening device, the 3nethra classic, has over 1000 installations across 22 countries, including the US. Forus is now launching new products in the neo-natal imaging and optometry spaces, and invites all ARVO 2016 participants to visit us at booth #2000.

Foundation Fighting Blindness..... 3112

Corrie Simkin-Brocato
 7168 Columbia Gateway Dr., Suite 100
 Columbia, Md. 21046
 Tel: 410.423.0579
 csimkin-brocato@blindness.org; blindness.org

The urgent mission of the Foundation Fighting Blindness is to Dr. the research that will provide preventions, treatments and cures for people affected by retinitis pigmentosa, age-related macular degeneration, Usher syndrome and the entire spectrum of retinal degenerative diseases. A cure is in sight and you can help us reach it.

G

Gene Tools, LLC 3619

Zhengfeng Li
1001 Summerton Way
Philomath, Ore. 97370
Tel: 541.929.7840.1011; Fax: 154.192.9784.1
zli@gene-tools.com; gene-tools.com

Gene Tools manufactures Morpholino oligos for blocking translation, modifying splicing or inhibiting miRNA activity. Morpholinos are used in cell cultures, embryos or, as Vivo-Morpholinos, in adult animals. Morpholinos are effective, specific, stable and non-toxic. Backed by PhD.-level customer support, Gene Tools designs and synthesizes Morpholinos and offers cytosolic delivery options.

Genentech, A Member of the Roche Group 4203, MS1

Sue Garcia
1 DNA Way
South San Francisco, Calif. 94080
Tel: 650.255.1000
sgarcia@gene.com; gene.com

Considered the founder of the biotechnology industry, Genentech has been delivering on the promise of biotechnology for more than 35 years, using human genetic information to discover, develop, manufacture and commercialize medicines to treat patients with serious or life-threatening medical conditions. Today, Genentech is among the world's leading biotech companies, with multiple products on the market and a promising development pipeline.

Geuder AG 4709

Kathrin Schoppa
Hertzstr. 4
Heidelberg Baden-Wurttemberg
Germany 69126
Tel: 49.622.130.6705
kschoppa@geuder.de; geuder.com

The Geuder Group represents innovation and research. Modern procedures cannot be performed without precise instruments, innovative systems, highly effective and well tolerated vitreoretinal fluids and vitreous substitutes. By providing such products, the Geuder Group aims to contribute to the success and ongoing development of the procedures in anterior and posterior eye segment surgeries.

Global Clinical Trials, LLC 4911

Natalia Katsnelson
256 Bunn Dr., Suite 6
Princeton, N.J.08540
Tel: 609-921-6868
info@gctrials.com; gctrials.com

Global Clinical Trials (GCT) is a full-service CRO, headquartered in Princeton, with operations in Central-Eastern Europe and therapeutic focus on ophthalmology. We have been performing clinical research in this rapidly emerging region since 2001 within GCP/EMA/FDA standards. Our experience, competent staff, the immense enrollment potential of the region and strong understanding of both local and international regulations ensure fast study start-up and full compliance with the set timelines.

Gooch & Housego 3109

Mark Stevens
 Dowlish Ford, Ilminster
 U.K. TA19 0PF
 Tel: +44 1460 256440
 mstevens@goochandhousego.com; goochandhousego.com

Gooch & Housego researches, designs and manufactures high quality optical components and optical sub-systems for the biomedical imaging and laser surgery markets. We are proud of our track record in providing OCT components and systems critical to medical imaging systems fabricators. Our acousto-optic and electro optic laser control devices are at the heart of many medical lasers systems Including LASIK. We offer contract manufacturing of components, sub assemblies and systems.

Good-Lite Company 4512

Joseph Villari
 1155 Jansen Farm Dr.
 Elgin, Ill. 60123
 Tel: 630.503.7649
 Fax: 184.784.1114.9
 joev@good-lite.com; good-lite.com

Manufacturer of the Lea Test System Including Lea Symbols and Lea Numbers. Complete range of vision testing products Including the new self-calibrating ETDRS Standardized Viewer. Cortical Vision Assessment, high and low contrast, color vision, preferential looking tests will be on display at ARVO 2014

Grand Seiko & Luneau Technology..... 5014

Mark Dehn
 224 James St.
 Bensenville, Ill. 60106
 Tel: 800.729.1959 x135
 m.dehm@luneautech.com; aitindustries.com

The Grand Seiko WAM-5500A Binocular Autorefractor/Keratometer can measure refraction and pupil diameter simultaneously in addition to all of the features present on its sister product, the WR-5100K. It also has the ability to dynamically measure accommodation making it ideal for pediatrics and research applications.

H

HAI Laboratories, Inc..... 4109

Vivian Xue
 320 Massachusetts Ave
 Lexington, Mass. 02420
 Tel: 781.862.9884
 Fax: 781.860.7722
 shows@hailabs.com;hailabs.com

HAI Laboratories, the leading US manufacturer of ophthalmic equipment, specializes in clinical (non-contact and contact), eye bank and laboratory specular microscopes, digital video slit lamps, full exam-lane equipment, and microsurgical instruments. Our software features live sequence imaging, comprehensive analysis and image-data correlation. We offer custom manufacturing for research and studies.

Exhibitor Descriptions

Heidelberg Engineering, Inc. 3809

Marc Crosier
10 Forge Parkway
Franklin, Mass. 02038
Tel: 508.530.7847
marc.crosier@heidelbergengineering.com; heidelbergengineering.com
Please visit Heidelberg Engineering at booth 614

Heine Usa Ltd.....3110 Colin Campbell

10 Innovation Way
Dover, N.H. 03820-5932
Tel: 603-842-6621
ccampbell@heine-na.co; heine.com

HEINE is a German manufacturer with 70 years of experience in optics and illumination, manufacturing primary diagnostic instruments in Germany that improve the accuracy of diagnosis, reduce examination time, and offer market leading reliability.

i

ifa systems AG..... 3608

Christine Jahnke
1850 SE 17st, Suite 107
Fort Lauderdale, Fla 33316
Tel: 888.443.2367
Fax: 195.471.3147.8
christine.jahnke@ifasystems.de; ifa4emr.com

Ifa is the world leader in ophthalmic health IT providing efficient EHR designed for clinics and research, connectivity to +500 different ophthalmic instruments, versions for all sub-specialties, and easy-to-use customization tools. Ifa will be first to the ophthalmic market with Big Data cognitive computing through our collaboration with IBM Watson.

Iflexis 5009

Sven Vercauteren
Boeretang 200
Mol Antwerp 2400
Belgium
Tel: +32-475-531-271
info@iflexis.com; iflexis.com

IFLEXIS is software for calculating the Central Retinal Arteriolar Equivalent, Central Retinal Venular Equivalent and the Arteriovenous ratio. These parameters are accepted measures to evaluate an individual's microvascular risk and they are prognostic indicators for diseases. IFLEXIS also quantifies branching dimensions of retinal vessels and characterizes the vessel network by calculating more than 20 parameters.

Imagine Eyes..... 3503

Laurent Vabre
 18 rue Charles de Gaulle
 Orsay 91400, France
 Tel: 33-164-861-566
 Fax: 33-169-075-379
 lvabre@imagine-eyes.com; imagine-eyes.com

Imagine Eyes is a leading pioneer in ultrahigh-resolution retinal imaging. Our flagship product, the rTexas1-e Adaptive Optics Retinal Camera, enables imaging patients' retinas with unprecedented microscopic detail. This breakthrough device is equipped with user-friendly software that make examinations quick and easy, as well as software tools for quantifying cellular and microvascular biomarkers.

Imedos Systems UG..... 3420

Dieter Mueller
 Am Nasstal 4
 Jena Thuringia D-07751
 Germany
 Tel: +49-3641-63960
 Fax: +49-3641-6396-12
 info@imedos.de; b imedos.de

Systems for biomarkers of retinal microcirculation. Retinal Vessel Analysis, Oxygen Saturation and Functional Diagnostic of autoregulation or dysregulation (Dynamic Vessel Analyzer/DVA, Static Vessel Analyzer/SVA) in humans and animals. Contact Lens Dynamometer for measurement of blood pressure magnitudes. Special applications: cardio-vascular risk stratification, retinal vascular diseases and especially new possibilities for glaucoma diagnostic.

INC. Research 3408

Stephanie Ramos
 3201 Beechleaf Ct, Suite 600
 Raleigh NC 27604
 Tel: 919-876-9300
 stephanie.ramos@Inc.research.com; Inc.reasearch.com

INC. Research is a leading global contract research organization providing a full range of Phase I to Phase IV clinical development services for the biopharmaceutical and medical device industries. INC. Research is headquartered in Raleigh, NC, with operations across six continents and experience spanning more than 100 countries.

Innova Systems, Inc. 4010

Valerie Valentino
 8330 S. Madison St., Suite 60
 Burr Ridge, Ill. 60527
 Tel: 163-092-0888-0
 Fax: 163-092-0889-6
 valerie@innovasystemsusa.com; innovasysi.com

Our product line ranges from visual acuity to quality of vision tests Including Rabin Cone Test, contrast sensitivity and night vision. Innova Systems' Rabin Cone Test is quickly becoming known as the functional disease detection & management device. The Rabin Cone Test has been chosen for clinical trials by Duke University, UCSF and Shiga University for disease studies Including Dry AMD, Glaucoma and MS. Stop by our booth to see how the Rabin Cone Test may be used in your practice or research!

INO 4110
Pierre Talbot
2740 Einstein St.
Quebec City, QC G1P 4S4
Canada
Tel: 418-657-7006; Fax: 418-657-7009
pierre.talbot@ino.ca; ino.ca

INO is a premier design, prototyping and small-run production house specialized in optics and photonics. Certified ISO13485, INO creates medical and ophthalmic solutions for our clients by offering integrated services tailored to their needs. Our expertise in ophthalmologic product development includes optical and opto-mechanical design; systems integration; electronics; custom fibers; light delivery systems; software; image/video processing; wavefront sensing; surgical visualization/guidance.

Integral BioSystems, LLC 3308
Dave Karasic
23 Crosby Dr Suite 100A
Bedford, Mass. 01730
Tel: 781-275-8059
dkarasic@integralbiosystems.com; integralbiosystems.com

Bedford, Mass.-based CRO Integral BioSystems specializes in ophthalmic delivery, partnering with pharmaceutical companies in formulation R&D, dissolution testing, corneal permeability, analytical methods, stability and process development. Dose Forms: Microspheres, Eye-drops, Hydrogels, CMC writing for INDs for 505b1/2, ANDA. Drugs: Small Molecules, Biologics. The company has also developed a proprietary licensable emulsion, OcuSurf, designed for high bioavailability and efficient drug absorption.

International Council of Ophthalmology 4905
Jennifer Hanes
711 Van Ness Blvd., Suite 445
San Francisco Calif. 94102
Tel: 415-521-1651
info@icoph.org; icoph.org

The International Council of Ophthalmology works with ophthalmologic societies and others to enhance ophthalmic education and improve access to the highest quality eye care in order to preserve and restore vision for the people of the world. Stop by to learn more about our Exams, Fellowships, Foundation and Congress.; icoph.org

International Society for Eye Research (ISER) 4705
Erik Rosales
655 Beach St.
San Francisco Calif. 94109
Tel: 415-561-8569; Fax: 415-561-8531
mail@iser.org; iser.org

The International Society for Eye Research (ISER) was founded in 1968 to establish an international organization to support eye & vision research and is comprised of vision research scientists from more than 34 countries. The ISER Biennial Meeting is held in some of the world's most distinctive and exciting cities. Research topics covered at these meetings vary from year to year, and include the most current areas of eye & vision research. ISER's official journal is Experimental Eye Research.

Iris Pharma..... 4603

Yann Quentric
 Allee Hector Pintus
 La Gaude 06610
 France
 Tel: 33-493-594-959
 Fax: 33-493-594-950
 k.barcaroli@iris-pharma.com; iris-pharma.com

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J

Jackson ImmunoResearch Labs..... 3421

Nancy Moroney
 872 West Baltimore Pike
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JANIX CRO..... 3806

Janice Sidorick
 3850 W. Ann Rd., Suite 110
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 Tel: 949.251.9800
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Fax: 186-067-5730-2
s.gunther@karger.com; karger.com

Publications include the book series Developments in Ophthalmology and ESASO Course Series; and the journals Case Reports in Ophthalmology (Open Access), Ocular Oncology and Pathology, Ophthalmic Research, and Ophthalmologica.

Katena Products Inc..... 4310
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LAgen Laboratories LLC..... 3104

Alan Marmorstein
4925 North Highway 52
Rochester, Minn. 55901
Tel: 520.400.0196
Fax: 507.322.0555
Alan.marmorstein@lagenlabs.com; lagenlabs.com

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Ryan Hrejsa
1700 Leider Lane
Buffalo Grove, Ill. 60089
Tel: 847.876.5701
Ryan.Hrejsa@leica-microsystems.co; leica-microsystems.com

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Chris Matheus
313 Foster St.
Durham, N.C. 27701
Tel: 919.625.7731
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Christopher Ferguson
Unit 5/56 Norcal Rd.
Nunawading VIC 3131
Australia
Tel: +61 3 9259 0800
Fax: +61 3 9877 6431
christopher.ferguson@medmont.com; medmont.com

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Minnesota Lions Eye Bank..... 4719

Kathy Goode
 1000 Westgate Dr. St., Suite 260
 Saint Paul , Minn. 55114
 Tel: 612.626.4863; Fax: 612.625.4295
 jezx0001@umn.edu; aGiftofSight.org

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Julian Hughes
 162 City Rd.
 London EC1V 2PD
 U.K.
 Tel: +44.020.756.6280.1
 julian.hughes@moorfields.nhs.uk; moorfields.nhs.uk

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Katie Kridler
54943 North Main St.
Mattawan, Mich. 40971
Tel: 269.668.3336; Fax: 269.668.4151
Katie.Kridler@mpiresearch.com; mpiresearch.com

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MUHC - McGill University Eye Pathology Laboratory 3212

Dr. Miguel N Burnier Jr
1001 Boul Decarie, Block E, E02.2389
Montreal QC H4A 3J1
Canada
Tel: 514.934.1934.76129
tiffany.porraccio@mail.mcgill.ca; ocularpathlab.com/

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N

National Disease Research Interchange 825

1628 John F. Kennedy Blvd., 8th Floor 8 Penn Center
Philadelphia, Pa. 19103
Tel: 215.577.7361.290
kharvey@ndriresource.org; ndriresource.org

The National Disease Research Interchange (NDRI) is a 501(c)(3) not-for-profit, NIH-funded organization that provides project-DON human biospecimen service to academic and Corporate scientists. NDRI has over 30 years of experience globally distributing human biospecimens for research. Our extensive recovery network has the expertise to provide anatomical structures, organs, and tissues with annotated data.

National Eye Institute 4419

Kerry Goetz
10 Center Dr.; Room 10N226
Bethesda, Md. 20892-1860
Tel: 301.443.7835; Fax: 301.480.3787
goetzke@nei.nih.gov; nei.nih.gov

The National Eye Institute (NEI) of the National Institutes of Health will celebrate its 50th anniversary in 2018! During our anniversary year, we will be sharing information and stories about accomplishments in vision research and eye health over the decades. We will look into the future of vision research, and that's where you come in! Be sure to stop by the NEI table to participate in our "Voices in Vision Research" interviews. We're looking forward to meeting you!

Nemera 3108

Fanny Sellier
 20 Ave. de la Gare
 La Verpillière 38290
 France
 Tel: +33. 47.4.4. 06. 54
 Fax: +33 6 75 69 .40 .38
 fanny.sellier@nemera.net; nemera.net/

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Alora Nguyen
 15042 Parkway Loop Suite A
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 Fax: 510.405.8603
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Ocular Immunology & Uveitis Foundation..... 3116

Alison Justus
1440 Main St., Suite 201
Waltham, Mass. 02451
Tel: 781.647.1431
Fax: 781.790.1409
ajustus@mersi.us; uveitis.org

The Ocular Immunology and Uveitis Foundation is a not-for-profit, 501c(3). Our mission is to find cures for ocular inflammatory diseases, to correct the worldwide deficit of properly trained ocular immunologists, and to provide education and emotional support for those patients afflicted with ocular inflammatory disease. Visit booth 2430 to learn about past and current research projects, fellowship opportunities, and to purchase Dr. Foster's latest books on ocular inflammatory disease/uveitis.

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Ronil Patel
400 N. Ashley Dr., Suite 2010
Tampa, Fla 33602
Tel: : 813.843.5641
rpatel@pointguardllc.com; oculocr.com

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 jconway@oculususa.com; oculususa.com

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 6201 Oak Canyon Dr. Suite 200
 Irvine, Calif. 92618
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 Fax: 415.552.5903
 erik.blazek@od-os.com; od-os.com

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Ophthalmology Times 5215

Jillyn Frommer
485 F Route One South, Suite 210
Iselin, N.J. 08830
Tel: 732.346.3007; Fax: 732.596.0016
jfrommer@advanstar.com; ophthalmologytimes.com

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Optical Imaging, Ltd. 4522

Sagi Reuven
5 Openheimer St., 3rd Floor, Suite 41
5 Rabin Science Park
Rehovot, 76701
Israel
Tel: +97.549.982505
sagier@opt-imaging.com; opt-imaging.net

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Optos Inc. 4011

Judy Reger
67 Forest St.
Marlborough, Mass. 01752
Tel: 508.787.1400; Fax: 508.486.9310
BDS@optos.com; optos.com

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2800 Bayview Dr.
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Tel: 510.897.1577
Fax: 510.623.8668
kellie_archer@optovue.com; optovue.com

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Suzanne Reynolds
 300 Brickstone Square
 Andover, Mass. 01810
 Tel: 978.685.8900
 sreynolds@oraclinical.com; oraclinical.com

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 455 Science Dr., Suite 120
 Madison, Wis. 53711
 Tel: 608.206.3614
 gleatherberry@ocularservices.com; ocularservices.com

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Steven J. Weber, PhD.
 6710 Quality Way
 Portage, Mich. 49002
 Tel: 269.492.3872
 Fax: 269.329.4390
 sjweber@pharmoptima.com; pharmoptima.com

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Exhibitor Descriptions

Phoenix Research Lab 4414

Annamarie Jegers
6630 Owens Dr.
Pleasanton, Calif. 94588
Tel: 925.485.1100
Fax: 925.485.1155
marketing@phoenixreslabs.com; phoenixreslabs.com

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20 New England Business Center
Andover, Mass. 01810
Tel: 978.738.8254
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Chris Brasfield
PO Box 14466
RTP NC 27709
Tel: 919.213.6035
Fax: 919.882.1423
cbrasfield@poweredresearch.com; poweredresearch.com

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Precision Vision 4410

Jessica Kopidlansky
1725 Kilkenny Ct.
Woodstock, Ill. 60098
Tel: 815.223.2022
Fax: 815.223.2224

info@precision-vision.com; precision-vision.com

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ProMed Pharma LLC 4910

James Arps
15600 Medina Rd.
Plymouth , Minn. 55447
Tel: 763.331.3800
Fax: 761.331.3888

jim.arps@promedpharmallc.com; promedpharmallc.com

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Promedica International..... 4412

Terrie Hopton
3100 Bristol St., Suite 250
Costa Mesa, Calif. 92626
Tel: 714.460.7363
Fax: 714.460.7364

thopton@promedica-intl.com; promedica-intl.com

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Purmabiologics, LLC..... 5019

Seifollah Azadi
755 Research Parkway, Suite 450A
Oklahoma City, Okla. 73104
Tel: 405.822.2830

seifollah.azadi@purmabiologics.com; purmabiologics.com

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777 Old Saw Mill River Rd.

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Tel: 914.847.7000

medical.information@regeneron.com; 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 commercializes medicines for eye diseases, high LDL cholesterol, and a rare inflammatory condition and has product candidates in development in other areas of high unmet medical need, including oncology, rheumatoid arthritis, asthma, atopic dermatitis, pain, and infectious diseases.

Reichert, Inc. 3705

Linda Hauser

3362 Walden Ave.

Buffalo, N.Y. 14043

Tel: 716.686.4500

Fax: 716.686.4545

linda.hauser@ametek.com; reichert.com

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

RetinAi Medical GmbH 3206

Carlos Ciller

Murtenstrasse, 50

Bern 3008

Switzerland

Tel: 41.787.122.162

carlos@retinai.com; retinai.com

RetinAI Medical (RetinAI) is a Swiss start-up focused on empowering eye care professionals and doctors through artificial intelligence. Our vision is to transform reactive medicine to preventive medicine for high-impact diseases such as Age-related Macular Degeneration (AMD), Diabetic Retinopathy, Glaucoma and multitude of neurodegenerative diseases such as Alzheimer's, Parkinson's, multiple sclerosis (MS), and amyotrophic lateral sclerosis (ALS).

Review of Ophthalmology/Jobson Publishing 4111

Casey Foster
11 Campus Blvd., Suite 100
Newton Square, Pa. 19073
Tel: 610.492.1007
Fax: 610.492.1039
cfoster@jobson.com; reviewofophthalmology.com

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Rockland Immunochemicals 4811

Claudia Gaitan
P. O. Box 5199
Limerick, Pa. 19468
Tel: 484.791.3823
Fax: 484.369.8654
claudia.gaitan@rockland-inc.com; rockland-inc.com

Rockland Immunochemicals supports the academic, biopharma and diagnostic industries with antibodies and antibody based tools™ for basic research, assay development and preclinical studies for over 50 years. Established in Pennsylvania, Rockland manufactures over 10,000 products for use in critical assays including western blotting, immunohistochemistry, immunofluorescence microscopy, ELISA and flow cytometry.

Roland Consult 4009

Joachim Finger
Friedrich Franz Str 19
Brandenburg, 14770
Germany
Tel: +49.3381.890 1034
Fax: +49.3381.890 2994
j.finger@roland-consult.de.w; roland-consult.com

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Exhibitor Descriptions

RxGen, Inc. 3406
Christopher Stanley
100 Deepwood Dr.
Hamden CT 06517
Tel: 203.498.9706
Fax: 619.353.6690
cstanley@rx-gen.com; rx-gen.com

RxGen is a specialty translational research company developing and providing innovative in vivo disease modeling and related preclinical research and development services to meet preclinical and translational research needs of the global pharmaceutical, biotechnology, and life sciences industry. Our translational research platform is designed to accelerate the evaluation, selection, and development of candidate therapeutics while reducing the cost and risk of clinical failure.

S

Santen.....
4210
Ram Palanki
6401 Hollis St. Suite 125
Emeryville, Calif. 94608
Tel: 415.268.9100
RamPrashanth.Palanki@santen.com; santenInc.com

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Melanie Ciotti
21 East 6th St., Suite 110
Tempe, Ariz. 85281
Tel: 480.632.5468
Fax: 480.632.5469
mciotti@sdclinical.com; sdclinical.com

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Shenyang Sinqi Pharmaceutical Co. Ltd. 4720

Qiang Yang
 No.68 Sishui St., Dongling District
 Shenyang 110163
 China
 Tel: +86.139.9885.7971
 Fax: +86.139.9885.7971
 yangqiang@sinqi.co; sinqi.com

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.

Shire..... 3422

Christine Caci
 300 Shire Way
 Lexington, Mass. 02421
 Tel: 781.482.1688
 ccaci@shire.com; shire.com

Shire is the leading global biotechnology company focused on serving people with rare diseases and other highly specialized conditions.

Sinclair Research Center 3103

Ashley Campbell
 562 State Rd. DD
 Auxvasse, Mo. 65231
 Tel: 573.387.4400
 Fax: 573.387.4404
 acampbell@sinclairresearch.com; sinclairresearch.com

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Singapore Eye Research Institute (SERI)..... 3722

Sharmila Kannan
 The Academia, 20 College Rd. Discovery Tower Level 6
 Singapore, Singapore 169856
 Tel: +65.65767217
 Fax: +65.62252568

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

Exhibitor Descriptions

Slack 3215

Kirsten Schuitema
6900 Grove Rd.
Thorofare, N.J. 08086
Tel: 856.848.1000
Fax: 856.848.3522
healio.com/ophthalmology

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Softcare Ltd..... 5210

Kenji Okamoto
Yatsunami 243-5
Fukutsu Fukuoka 811-3201
Japan
Tel: +81.940.36.9693
okamoto@softcare-ltd.co.jp; softcare-ltd.co.jp

Softcare's Laser Speckle Flowgraphy (LSFG-NAVI) visualizes the distribution of blood flow in the retina with a series of 2-D color coded maps and observes changes in retinal and choroidal blood flow in real time. Demonstrations of the latest version of LSFG-NAVI's value to the study of ocular blood circulation will be conducted at the exhibition. We can provide the equipment to observe blood flow of animal eye ground as laboratory mice, rats, rabbit, pig or monkey.

Spark Therapeutics..... 5011

Danielle Potteiger
3737 Market St.Suite 1300
Philadelphia, Pa. 19104
Tel: 215.220.6291
danielle.potteiger@sparktx.com; Sparktx.com

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

Speedway Delhi 4711

Mr. Jatin Pahwa
64 1st Floor, Edward Line, Kingsway Camp
Delhi 110009
India
Tel: +919811027705
sales@speedwaydelhi.com; speedwaydelhi.com

Quality Ophthalmic Instruments at Factory Price, Limited Stocks

Striata Technologies 3208

Thomas Muench
 Otfried-Müller-Str. 25
 Tübingen Baden-Württemberg 72076,
 Germany
 Tel: 49.152.098.9938.0
 thomas.muench@striata-tech.com; striata-tech.com

A well established behavioral methodology to quantify visual abilities in mice is based on the optomotor reflex: Mice compensate for global image drift in the visual environment with reflexive eye and head movements. This behavior can be used to characterize the visual abilities of the animal, thus gaining information about spatial acuity or contrast sensitivity. Striata Technologies offers an optomotor drum which enables you to assess the animals' behavior based on an automated analysis.

T

TA Sciences..... 3622

Eric Mc Donald
 420 Lexington Ave., Suite 2900
 New York , N.Y. 10170
 Tel: 212.588.8805
 Fax: 866.697.5535
 eric@tasciences.com; tasciences.com

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Taylor & Francis Group 4615

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 530 Walnut St., Suite 850
 Philadelphia, Pa. 19106
 Tel: 215.606.4169
 Fax: 215.207.0050
 rachel.smitley@taylorandfrancis.com; tandfonline.com

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TearLab Corporation 4519

Kristine Coan
 9980 Huennekens St., Suite 100
 San Diego, Calif. 92121
 Tel: 817.714.7890
 kcoan@tearlab.com; tearlab.com

TearLab Corporation develops and markets lab-on-a-chip technologies that enable eye care professionals to objectively and quantitatively test for disease markers in tears at the point-of-care. We believe that every tear tells a story and reveals important information about your patient's health and well-being. By revealing the message of tears, we help you fulfill your promise of healthier visual outcomes.

Exhibitor Descriptions

The JAMA Network..... 4714

Millette Jackson-Bates
330 N. Wabash Ave., Suite 39300
Chicago, Ill. 60611
Tel: 312.464.4868
Fax: 312.464.5831
millette.jackson-bates@ama-assn.org; jamanetwork.com

Building on a tradition of editorial excellence, The JAMA Network brings JAMA together with 11 specialty journals to offer enhanced access to the research, viewpoints, and medical news shaping medicine today and into the future. JAMA Cardiology, a new peer-reviewed journal, launched in 2016.

Tobii Pro 3106

Toby Younis
510 N. Washington St., Suite 200
Falls Church, Va. 22046
Tel: 703.738.1300
toby.younis@tobii.com;tobiipro.com

We provide world leading eye tracking solutions to academic institutions and to commercial companies that want to better understand human behavior. Our solutions consist of hardware, software, training and support. Our world-leading eye tracking research products and services are used by more than 3,000 companies and 2,000 research institutions, including all 50 of the world's highest-ranked universities.

Topcon..... 3512

Christina Peccini
111 Bauer Dr.
Oakland, N.J. 07436
Tel: 201.599.5100
Fax: 201.599.5248
tmsmarketing@topcon.com; topconmedical.com

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Toxikon Corporation..... 4706

Berna Toparlar
15 Wiggins Ave.
Bedford, Mass. 01730
Tel: 781.275.3330
Fax: 781.271.1136
Berna.Toparlar@Toxikon.com; oxikon.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.

tpm taberna pro medicum GmbH..... 4812

Sven Scharenberg
 Im Dorf 15a
 Lueneburg NI 21335
 Germany
 Tel: 494.131.4015.55
 info@tpm-online.de; tpm.eu

tpm is the global leader in high frequency ultrasound diagnostic for the skin, developed from the inspiration of Ophthalmology systems in 1983. tpm has always been active in Ophthalmology and Dermatology for new and inovative diagnostic products. tpm is launching the new Ocular Pressure Blood Flow Analyzer. Non-invasive diagnostic procedure to measure and record pulsatile ocular perfusion in support of the early detection of glaucoma and other circulatory irregularities.

Trial Runners LLC..... 3303

Patrick Healy
 116 W Villard St
 Dickinson, N.D. 58601
 Tel: 701.483.3599
 Fax: 701.483.1556
 melissapavlicek@trialrunners.com; trialrunners.com

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

Turing Pharmaceuticals LLC 5116

Curtis Fisher, Lance Ranck, Jonathan Sayegh and Deyvehn East
 1177 Ave. of the Americas, 39th Floor
 New York , N.Y. 10036
 Tel: 646.356.5628
 cherie@turingpharma.com; turingpharma.com

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

U

U.S. Food and Drug Administration..... 4316

Denise Hampton
10903 New Hampshire Ave., Building 66
Silver Spring, Md. 20993
Tel: 301.796.6860
Fax: 301.847.8126
denise.hampton@fda.hhs.gov; fda.gov

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

University of Pennsylvania, School of Medicine 3105

Junwei Sun
422 Curie Blvd., Rm 807
Philadelphia, Pa. 19104
Tel: 215.573.1968
junwei@mail.med.upenn.edu

V

Vasoptic Medical..... 3410

Yusi Liu
1215 East Fort Ave., Suite 203
Baltimore, Md. 21230
Tel: 443.961.3591
yusi.liu@vasoptic.com; asoptic.com

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

Vision Tiffany Inc. 3720

Tiffany Wang
2345 Wentworth Ave., 2nd Floor
Chicago, Ill. 60606
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 tel. Adapter • Vision Chart and • Portable slit lamps • Slit lamp Digital Adapters Lens Meter

Volk Optical, Inc. 4403
 Ayla Gencer
 7893 Enterprise Dr.
 Mentor, Ohio 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. More recently we have diversified our product offering with an addition of diagnostic imaging equipment. *Pictor Plus a 2 lbs. portable fundus and anterior segment camera *Volk InView a 1lb portable fundus camera that works with your iTel (5/6/6S) or iTouch *Volk Eye Check an ocular measurement device providing applications for Oculoplasty, best fit contact analysis

Voxeleron LLC 3520
 Jonathan Oakley
 4695 Chabot Dr., Suite 200
 Pleasanton, Calif. 94588
 Tel: 925.558.2755
 jonathan@voxeleron.com; voxeleron.com

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

W

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

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

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

The Welch Allyn® VISION FOR ALL initiative is focused on delivering simple and affordable screening solutions in primary care settings to help eradicate some of the leading causes of preventable blindness. Simple and affordable solutions to screen for diabetic retinopathy in primary care settings or detect amblyopia risk factors from six-months of age. Stop by ARVO Booth 2226 or visit RetinaVue.com, RETeval-DR.com, and WelchAllyn.com online!

Exhibitor Descriptions

Wicab, Inc...... 4810

Bill Conn
8313 Greenway Blvd., Suite 100
Middleton, Wis. 53562 Tel: 608.829.4504
Fax: 608.829.4501
info@wicab.com; wicab.com

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

Wolters Kluwer Health..... 4712

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

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

Women’s Eye Health.org..... 3721

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

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

World Glaucoma Association..... 4610

Mariska van der Veen
Schipluidenlaan 4
Amsterdam 1062HE
The Netherlands
Tel: +31 20 679 3411
Fax: +31 20 673 7306
vanderveen@worldglaucoma.org; worldglaucoma.com

World Precision Instruments..... 4312

Carmen Raymond
175 Sarasota Center Blvd.
Sarasota, Fla 34240
Tel: 941.371.1003
Fax: 941.377.5428
sales@wpilnc.com; wpilnc.com

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

Z

Zeiss 3615

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

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

Future ARVO Annual Meetings

April 29 – May 3, 2018
Honolulu, Hawaii

April 28 – May 2, 2019
Vancouver, BC

May 3 – 7, 2020
Baltimore, Md.

May 2 – 6, 2021
San Francisco, Calif.

Don't miss our special presentations in the Exhibit Hall, Exhibitor Presentation Area

Sun., May 7

10:30am

Biospherix

Physiologically Relevant Conditions Improve Cell-Based Vision Research

11:15am

Carl Zeiss

Changing the Innovation Paradigm

1:15pm

Phoenix Research Lab

Demystifying ERG

2pm

Getson & Schatz

Green Cards for Scientific Researchers: How to Win Your EB-1/NIW Case

2:45pm

RSIP Vision

From Digital Age to AI Age in Ophthalmic Imaging

Mon., May 8

1pm

INC Research

The 'How' of Real World Evidence in Ophthalmology trials

1:45pm

Aptar

Patient Adherence and Compliance in Eye Care

2:30pm

Diagnosys LLC

Celeris: Preclinical and Research Applications of a novel High-throughput Small Animal Electrophysiology System

3:15pm

Phoenix Research Lab

Elevate your research with the Micron X large animal camera

Tues., May 9

1pm

Power Research

Evaluation of Aflibercept in a Laser-Induced Model of Choroidal Neovascularization in Pigs

1:45pm

Phoenix Research Lab

Look inside the eye with 3D OCT segmentation

2:30pm

Diagnosys LLC

Envoy: Advances in Pattern ERG and VEP

3:15pm

Imdeos Systems

Both Dynamic Response of Retinal Vessels and Retinal Venous Pressure are Useful Biomarker of Eye Diseases such as Glaucoma

Wed., May 10

1pm

National Eye Institute (NEI)

Insights wanted: leveraging mini-retinas to ROC big breakthroughs in eye disease

2:30pm

Diagnosys LLC

Celeris: Preclinical and Research Applications of a novel High-throughput Small Animal Electrophysiology System

Saturday, May 6 ■ Education Courses*

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

* Education Courses require separate registration

Don't miss another poster!

Locate sessions

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

Program #
Poster Area
Poster Board #

1360 — A0381 Direct induction of functional neurons from adult human retina derived fibroblast-like cells. Lili Hao, Z. Xu, W. Luo, Y. Yan, H. Sun, S. Chen. ZhongShan Ophthalmic Center, Sun Yat-sen University, Guangzhou, China

Meet the authors!

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

- Sunday: 10:45–11:45am
- Monday: 2:45–3:45pm
- Tuesday: 2:45–3:45pm
- Wednesday: 2:45–3:45pm
- Thursday: 10:30am–11:30am

Sunday, May 7 ■ Keynote, symposia, papers, workshops/SIGs, lectures and events

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

Sunday, May 7 ■ Keynote, symposia, papers, workshops/SIGs, lectures and events

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

Sunday, May 7 ■ Posters

Time	Session Title	Program #	Board #
8:30 – 10:15am	104 AMD Imaging 1 [RE]	13 - 57	A0001 - A0045
	105 Diabetic retinopathy: medical (non-surgical) [RE]	58 - 102	A0138 - A0182
	106 Development of the Retina [RC]	103 - 126	A0210 - A0233
	107 Cornea Wound Healing and Repair [CO]	127 - 175	A0317 - A0365
	108 Genetic Epidemiology [CL]	176 - 188	B0120 - B0132
	109 Cytokines; growth factors; Antiangiogenic drugs [PH]	189 - 211	B0220 - B0242
	110 Retina;RPE; Mechanisms [PH, MOI, VN]	212 - 262	B0243 - B0293
	111 Retinal degeneration. Models and mechanisms [RC, LV]	263 - 294	B0316 - B0347
	112 Adaptive optics ophthalmoscopy: technology and application [MOI]	295 - 316	B0494 - B0515
	113 Accommodation and presbyopia correction [VI]	317 - 340	B0562 - B585
	1:30 – 3:15pm	130 Determinants of PR development and repair [RC]	341 - 367
131 AMD Imaging 2 [RE]		368 - 405	A0234 - A0271
132 AMD and anti-VEGF therapy 1 [RE]		406 - 440	A0272 - A0306
133 Dry eye, non-clinical [CO]		441 - 499	A0366 - A0424
134 Uveitis therapeutics: remedy and Relief [IM, MOI]		500 - 527	B0055 - B0082
135 Autoimmune Ocular disease: selfies gone wrong [IM, VI]		528 - 564	B0083 - B0119
136 Structural/functional genomics and gene variants [BI, VN]		565 - 585	B0133 - B0153
137 Biochemistry and molecular biology of the retina [BI]		586 - 636	B0154 - B0204
139 Imaging: Macula Retina, Blood Flow, OCT Angiography [GL]		692 - 746	B0439 - B0493
140 Eye movements [EY]		747 - 762	B0586 - B0601
141 Cataract Surgery Outcomes and Epidemiology [LE]		763 - 794	B0602 - B0633

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Sunday, May 7 ■ Posters

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



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Monday, May 8 ■ Papers, minisymposia, workshops/SIGs, lectures and events

Time	Session	Title	Location	
8:30 – 10:15am	203	Corneal Wound Healing [CO] #1172-1178	Ballroom 2	
	204	Common pathogenic role of inflammation in retinal diseases — Minisymposium [RC, BI] #1179-1184	Ballroom 1	
	205	Vitreoretinal surgery I [RE] #1185-1190	Ballroom 3	
	206	Optic nerve regeneration: Barriers past and future — Minisymposium [GL, AP, BI, YE, NT, RC, RE, VN] #1191-1194	Ballroom 4	
	207	AMD and anti-VEGF therapy [RE] #1195-1201	Hall G	
	208	Retina/RPE 1 [PH] #1202-1208	Room 301	
	209	Lens Development and Cell Biology [LE] #1209-1215	Room 307	
	210	Diseases and Protection [VN] #1216-1222	Room 308	
	211	Genetic Epidemiology [CL] #1223-1229	Room 308	
	212	Emerging treatments for uveitis [IM] #1230-1236	Room 310	
	213	Genotype-phenotype correlations, prevalence studies and novel gene defects [BI] #1237-1243	Room 314	
	214	IOL and presbyopia correction [VI] #1244-1250	Room 316	
	215	Novel Imaging and Biomarkers for Ocular Tumors and Disease [AP, MOI] #1251-1256	Room 321	
	10:15 – 10:55am	203a	CO Section Business Meeting	Ballroom 2
		204a	RC Section Business Meeting	Ballroom 1
205a		RE Section Business Meeting	Ballroom 3	
206a		GL Section Business Meeting	Ballroom 4	
208a		PH Section Business Meeting	Room 301	
209a		LE Section Business Meeting	Room 307	
210a		VN Section Business Meeting	Room 308	
211a		CL Section Business Meeting	Room 309	
212a		IM Section Business Meeting	Room 310	
213a		BI Section Business Meeting	Room 314	
214a		VI Section Business Meeting	Room 316	
215a		AP Section Business Meeting	Room 321	

Monday, May 8 ■ Papers, minisymposia, workshops/SIGs, lectures and events

Time	Session	Title	Location	
10:15 – 10:55am continued	215b	EY Section Business Meeting	Room 324	
11am – 12:45pm	225	Barrier function of the ocular surface — Minisymposium [CO, IM] #1562-1569	Ballroom 2	
	226	Gene therapies [BI] #1570-1576	Ballroom 1	
	227	AMD imaging I [RE] #1577-1582	Ballroom 3	
	228	Imaging Posterior Segment and Progression [GL] #1583-1589	Ballroom 4	
	229	Vitreoretinal interface and retinal detachment [RE] #1590-1595	Hall G	
	230	IOP Measurement and Characterization I [GL] #1596-1602	Room 301	
	231	RPE metabolism, autophagy and cell death [RC] #1603-1608	Room 307	
	232	Ganglion cells [VN] #1609-1615	Room 308	
	233	Improving Eye Care Delivery [CL] #1616-1622	Room 309	
	234	Immunological influences on AMD [IM] #1623-1628	Room 310	
	235	Applications of adaptive optics for retinal imaging and visual function testing — Minisymposium [VI, CL, GL, LV, MOI, RC, RE, VN] #1629-1634	Room 316	
	236	Optical coherence tomography in pediatric neuro-ophthalmology — Minisymposium [EY, GL, LV, RC] #1635-1640	Room 324	
	1 – 2:30pm	251	LV Group: Reading with low vision: What we know and need to know [LV, VI, CL, EY]	Room 308
		252	Novel models and trends for accelerating applied ophthalmic product discovery and development	Room 310
		253	A global perspective on diversity: Challenges and opportunity	Room 314
254		NEI extramural roundtable	Room 316	
255		China-ARVO networking forum	Room 328	
256		Nanotechnology for Imaging the Eye — SIG [CO, AP, GL, PH, RE, RC]	Ballroom 1	
257		The RPE-Photoreceptor Nexus: the Good, the Bad and the Ugly — SIG [RC, AP, BI, IM, PH, RE]	Ballroom 3	
258		Targeting Mitochondrial Dysfunction in Retinal and Optic Nerve Disease — SIG [RC, BI, GL, PH, RE]	Room 301	

Monday, May 8 ■ Papers, minisymposia, workshops/SIGs, lectures and events

Time	Session	Title	Location
1 – 2:30pm continued	259	TGF beta signal transductions in ocular health and disease — SIG [CO, IM, LE, RE, RC]	Room 307
	260	Controversies in Albinism: Why is Their Vision Poor and How Do We Fix It? — SIG [EY, RE, RC, VI, GEN]	Room 324
2:30 – 3:45	261	Update on Treatments for Diabetic Retinopathy: Clinically Relevant Results from DRCR.net #1995a-1995g	Ballroom 2
3:45 – 5:30	263	Corneal Development and Repair [CO] #1996-2002	Ballroom 2
	264	Biomarkers based on vasculature Imaging [MOI] #2003-2009	Ballroom 1
	265	Inherited retinal diseases and mactel [RE] #2010-2016	Ballroom 3
	266	Neurodegeneration [GL] #2017-2023	Ballroom 4
	267	Diabetic macular edema clinical and anti-VEGF research [RE] #2024-2029	Hall G
	268	Retina[PH] #2030-2036	Room 301
	269	Cataractogenesis I [LE] #2037-2043	Room 307
	270	The Impact of Low Vision on Mobility [LV] #2044-2049	Room 308
	271	Molecular and biochemical mechanisms in retinal disorders [BI] #2050-2056	Room 314
	272	Mechanisms of accommodation [VI] #2057-2063	Room 316
	273	Corneal immunology and neuropathy [CO] #2064-2070	Room 321
5:45 – 6:30	288	Proctor Award Lecture #2436	Hall G
6:45 – 7:30pm	289	Weisenfeld Award Lecture #2437	Hall G

MIT Outstanding Poster Competition

Tuesday, May 9, 1 – 2:30pm, Hall B

MIT First Authors of the top five scored poster abstracts from each Scientific Section and Cross-sectional Group will participate in the MIT Outstanding Poster Award Competition. One award recipient from each Scientific Section and Cross-sectional Group will be selected by the MIT Committee. Award recipients will be selected based on how well a poster displays the abstract's research and on how effectively the MIT First Author discusses the research with the judges and with meeting participants.

All meeting participants are invited to view the competing posters and presentations.

Monday, May 8 ■ Posters

Time	Session Title	Program #	Board #
8:30 – 10:15am	216 AO, OCT, and advanced optical methods [VI, MOI]	1257 -1279	A0001 -A0023
	217 OCT applications [MOI]	1280 -1327	A0024 - A0071
	218 Living With Vision Loss [CL]	1328 -1359	A0297 - A0328
	219 Stem cells for ganglion cell regeneration and repair [RC]	1360 -1373	A0381 - A0394
	220 Corneal Biology and Regenerative Medicine [CO]	1374 -1432	B0024 - B0082
	221 Corneal Endothelium [CO]	1433 - 1485	B0083 - B0135
	222 Retinal Diseases [CL, LV]	1486 -1509	B0167 - B0190
	223 AMD [CL]	1510 -1529	B0191 - B0210
	224 Retinal vascular diseases I (excluding diabetes) [RE]	1530 - 1561	B0362 - B0393
11am – 12:45pm	237 Clinical applications of OCT angiography [MOI]	1641 - 1700	A0072 - A0131
	238 Lens Development and Molecular Cell Biology [LE]	1701 - 1722	A0179 - A0200
	239 Embryology and morphogenesis of ocular structures AP, MOI, RC, GL]	1723 - 1735	A0201 - A0213
	240 Optic and extraocular anatomy and function [AP]	1736 - 1745	A0214 -A0223
	241 Ganglion Cells: Development, axotomy, trauma [RC]	1746 - 1769	A0357 - A0380
	242 Retinoblastoma: Basic/ Translational [AP, BI]	1770 - 1781	A0410 - A0421
	243 Tumors - Inside and around the eye, I [AP, EY, GEN]	1782 - 1802	A0422 - A0442
	244 Cataract Surgery Procedures [LE]	1803 - 1832	B0136 - B0165
	245 Genetics of macular degeneration [GEN]	1833 - 1853	B0276 - B0296
	246 Clinical retinal imaging 1 [RE, AP, MOI, RC, VI, VN]	1854 - 1889	B0326 - B0361
	247 Diabetic macular edema and anti-VEGF therapy [RE]	1890 - 192	B0394 - B0425
	248 AMD therapies (excluding anti-VEGF) [RE]	1922 - 1946	B0426 - B0450

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Monday, May 8 ■ Posters

Time	Session Title	Program #	Board #
11am – 12:45pm continued	249 AMD: New drugs, delivery systems [PH]	1947 - 1980	B0451 - B0484
	250 AMD-Novel therapies [RC, RE]	1981 - 1995	B0485 - B0499
3:45pm – 5:30pm	274 Imaging: Anterior Segment [GL]	2071 - 2098	A0132 - A0159
	275 Clinical Trials and Drug Studies I [GL]	2099 - 2117	A0160 - A0178
	276 Genetics of glaucoma [GEN]	2118 - 2142	A0224 - A0248
	277 Uveitis: Diagnosis, Epidemiology, Quality of Life [IM, MOI]	2143 - 2190	A0249 - A0296
	278 Visual Impairment [CL, LV]	2191 - 2218	A0329 - A0356
	279 Inner Retinal circuits [VN]	2219 - 2233	A0395 - A0409
	280 Lacrimal glands and Meibomian glands [CO]	2234 - 2256	B0001 - B0023
	281 Bruch's membrane and choroid in macular disease [RC]	2257 - 2272	B0211 - B0226
	282 RPE dysfunction in macular diseases [RC]	2273 - 2297	B0227 - B0251
	283 AMD translational studies and choroidal neovascularization [RE]	2298 - 2321	B0252 - B0275
	284 AMD Clinical Research 1 [RE]	2322 - 2350	B0297 - B0325
	285 Amblyopia I [EY]	2351 - 2368	B0500 - B0517
	286 Refractive Error [CL, AP, LV]	2369 - 2405	B0518 - B0554
	287 Pediatric Eye Disease [CL]	2406 - 2435	B0555 - B0584

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Tuesday, May 9 ■ Papers, minisymposia, workshops/SIGs, business meeting

Time	Session	Title	Location
8:30 – 10:15am	301	Corneal Imaging and Biomechanics [CO] #2438-2444	Ballroom 2
	302	Angiogenesis [RC] #2445-2451	Ballroom 1
	303	Biomechanics I [GL] #2452-2458	Ballroom 3
	304	Clinical Trials and Drug Studies II [GL] #2459-2465	Ballroom 4
	305	Novel therapies and imaging techniques for retinal disorders — Minisymposium [RE, BI, GL, RC] #2466-2471	Hall G
	306	Lens Physiology and Biomechanics I [LE] #2472-2478	Room 307
	307	The Impact of Low Vision on Function and Everyday Activities [LV] #2479-2484	Room 308
	308	Photoreceptors: Cell Biology, Disease and Rescue [RC] #2485-2491	Room 314
	309	Surprising human visual processes revealed with advanced techniques [VI] #2492-2498	Room 316
	310	Uveal melanoma: From Clinical Trials to Molecular Mechanisms [AP, RE] #2499-2504	Room 321
10:15– 10:55am	323	General Business Meeting	Room 324
11am – 12:45pm	324	Corneal dystrophies: Where do we stand? — Minisymposium [CO] #2934-2939	Ballroom 2
	325	ER stress and the unfolded protein response in ocular health and disease — Minisymposium [BI, GL, LV, PH, RC, RE] #2940-2945	Ballroom 1
	326	Diabetic retinopathy clinical [RE] #2946-2951	Ballroom 3
	327	Neuroprotection [GL] #2952-2958	Ballroom 4
	328	Retinal Vascular Diseases and CSCRC [RE] #2959-2965	Hall G
	329	Retina/RPE 2 [PH] #2966-2971	Room 301
	330	Bipolar, Horizontal and Amacrine cells [VN] #2972-2978	Room 308
	331	Understanding the Course and Risk Factors for Age-Related Macular Degeneration [CL] #2979-2985	Room 309
	332	Going viral! [IM] #2986-2992	Room 310
	333	Age-related changes in optics of the eye and vision - Minisymposium [VI, CO, LE, GL, LE, VN] #2993-2998	Room 316
	334	Factors affecting ocular development [AP, RC] #2999-3005	Room 321

Tuesday, May 9 ■ Papers, minisymposia, workshops/SIGs, business meeting

Time	Session	Title	Location
1 – 2:30pm	348	VSS at ARVO - Functional Brain Imaging in Development and Disorder	309
	349	Chinese Ophthalmological Society Workshop: Molecular Cell Biology and Gene Therapy for Eye Diseases	310
	350	How to discuss your animal research work with non-scientists	314
	351	Clinician-scientist forum: How to become a successful clinician-scientist	316
	352	Global Prevalence of Blindness and Vision Impairment: Magnitude, Temporal Trends, and Projections: are we on track to meet VISION 2020 and WHO Global Action Plan goals and beyond? — SIG [CL, CO, GL, RE]	Ballroom 1
	353	Optical Coherence Tomography Guided Ophthalmic Surgery: Next-Generation Advances — SIG [MOI, CO, GL, RE]	Ballroom 3
	354	Far peripheral vision: Review vision beyond 80o, where many people don't notice if there is a loss, but some intraocular lens patients report dark shadows — SIG [VI]	Ballroom 4
	355	New in vitro Models to Study AMD Pathogenesis: Step Aside ARPE19 — SIG [RC, RE]	Room 307
	356	New advancements in SD-OCT assessment of neuroretinal rim and fiber layer tissue for glaucoma detection and follow-up — SIG [GL, AP, RE, MOI]	Room 308
	357	Mechanisms of ocular surface immunity in graft vs host disease and sjogren syndrome - SIG [IM, CO]	Room 324
2:30 – 3:45pm	360	Study of COmparative Treatments for RETinal Vein Occlusion 2 (SCORE2): Primary Results #3368-3370	Ballroom 2
3:45 – 5:30pm	362	Corneal Tissue Engineering and Molecular Biology [CO] #3371-3377	Ballroom 2
	363	Macular degeneration-cell biology [RC] #3378-3384	Ballroom 1
	364	Retinal gene therapy and stem cell transplantation [RE] #3385-3390	Ballroom 3
	365	Capillaries, Blood Flow, OCT Angiography [GL] #3391-3397	Ballroom 4
	366	AMD imaging II and visual function [RE] #3398-3403	Hall G
	367	Intraocular pressure [PH] #3404-3409	Room 301
	368	Beyond the retina: Central visual circuits — Minisymposium [VN] #3410-3414	Room 308

Tuesday, May 9 ■ Papers, minisymposia, workshops/SIGs, business meeting

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

Save the date

ARVO

2018

April 29 – May 3 | Honolulu



Tuesday, May 9 ■ Posters

Time	Session Title	Program #	Board #
8:30 – 10:15am	311 Diabetic Retinopathy: Basic Mechanisms [RC, RE, MOI]	2505 - 2531	A0039 - A0065
	312 Neurodegeneration and Neuroprotection [GL]	2532 - 2577	A0122 - A0167
	313 Ganglion Cells and Beyond [VN]	2578 - 2600	A0168 - A0190
	314 Corneal Epithelium [CO]	2601 - 2647	A0191 - A0237
	315 Dry eye, Clinical [CO]	2648 - 2707	A0238 - A0297
	316 Anterior segment imaging and optics [VI]	2708 - 2732	A0412 - A0436
	317 Visual functions, optical cues effecting and affected by myopia [AP]	2733 - 2749	A0437 - A0453
	318 Whole Genome Analysis, Genetic Screening in Retinal Dystrophies and Others [GEN]	2750 - 2790	B0077 - B0117
	319 Vitreoretinal surgery [RE]	2791 - 2833	B0228 - B0270
	320 Visual Fields, Vision Function, Psychophysics I [GL, LV]	2834 - 2881	B0437 - B0484
	321 Diabetic Eye Disease [CL, VN]	2882 - 2917	B0528 - B0563
11am – 12:45pm	322 Strabismus [EY]	2918 - 2933	B0564 - B0579
	335 Cellular Metabolism of the Retina and RPE [RC, RE]	3006 - 3028	A0001 - A0023
	336 Blood flow [PH]	3029 - 3043	A0024 - A0038
	337 Contact Lenses [CO]	3044 - 3097	A0298 - A0351
	338 Functional imaging [MOI]	3098 - 3108	B0001 - B0011
	339 Innovations in imaging [MOI, RE]	3109 - 3134	B0012 - B0037
	340 Biomechanics II [GL]	3135 - 317	B0038 - B0076
	341 Cataractogenesis II [LE]	3174 - 3196	B0205 - B0227
	342 AMD Clinical Research 2 [RE]	3197 - 3215	B0330 - B0348

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Tuesday, May 9 ■ Posters

Time	Session Title	Program #	Board #
11am – 12:45pm continued	343 Retinitis pigmentosa (clinical) [RE, GEN, LV, RC]	3216 - 3263	B0349 - B0396
	344 Functioning with Low Vision [LV, CL]	3264 - 3303	B0397 - B0436
	345 Papilledema, IHH and Optic Nerve [EY]	3304 - 3329	B0580 - B0605
	346 Retinoblastoma: Clinical [AP]	3330 - 3342	B0606 - B0618
	347 Tumors: Inside and around the eye, II [AP, GEN]	3343 - 3367	B0619 - B0643
3:45 – 5:30pm	373 ROP: Basic mechanisms [RC]	3443 - 3465	A0066 - A0088
	374 Trabecular Meshwork and Ciliary Body [GL]	3466 - 3498	A0089 - A0121
	375 Corneal Imaging, Topography, and Keratoconus [CO]	3499 - 3558	A0352 - A0411
	376 Ocular gene expression, proteomics and lipidomics [BI, CL]	3559 - 3574	B0118 - B0133
	377 Visual cycle and phototransduction [BI]	3575 - 3586	B0134 - B0145
	378 Cellular mechanisms of retinal diseases and ocular therapeutics [BI]	3587 - 3601	B0146 - B0160
	379 Clinical virology [IM]	3602 - 3614	B0161 - B0173
	380 Mechanisms of viral infections [IM]	3615 - 3630	B0174 - B0189
	381 Lens Physiology and Biomechanics II [LE]	3631 - 3645	B0190 - B0204
	382 Retinal vascular diseases II (excluding diabetes) [RE, AP]	3646 - 3679	B0271 - B0304
	383 Macular diseases (non-inherited) [RE]	3680 - 3704	B0305 - B0329
	384 Glaucoma [CL]	3705 - 3747	B0485 - B0527

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

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

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

Time	Session	Title	Location	
11am – 12:45pm continued	438	Color vision, low vision [VI] #4297-4303	Room 316	
	439	Intracranial Hypertension and Optic Nerve Changes [EY] #4304-4310	Room 324	
1– 2:30pm	454	MOI Group: Advanced interpretation of structural retinal optical coherence tomography [MOI, VI, GL, RE, AP, EY, RC]	Ballroom 2	
	455	Leveling the Playing Field: Are we decreasing the disparities between minority and non minority individuals? [GEN, GL, PH]	Room 308	
	456	Idea to patents: Project to company	Room 309	
	457	Grant writing tips for pre- and post-doctoral fellows: The nuts and bolts	Room 310	
	458	Vulnerable populations in medical research: Ethical dilemmas and practical approaches	Room 314	
	459	But I'm not from the US or EU! — international funding opportunities	Room 316	
	460	Update on Automated Screening for Diabetic Retinopathy: Validation and Implementation — SIG [RE, IM, MOI]	Ballroom 1	
	461	New knowledge of genetics and cell biology of exfoliation syndrome, a disorder of elastic tissue and ECM associated with ocular and systemic disease, offers novel means to treatment and prevention — SIG [GL]	Ballroom 3	
	462	Predictive testing for age-related macular degeneration (AMD): Are we there yet? — SIG [CL, BI, RE, GEN]	Ballroom 4	
	463	Emerging Therapeutic Modalities in Retinal Diseases — SIG [RE, CO, GL, IM, PH, RC]	Room 301	
	464	Highlighting Successful Technologies in Sustained Drug Delivery in Ophthalmology: New Polymer Science and Particle Engineering Platforms that Drive Future Promising Extended Release Therapies — SIG [GL, RE]	Room 321	
	465	Role of LXR in Inflammation and cholesterol metabolism in the retina — SIG [RC]	Room 324	
	2:45– 3:45pm	466	Establishing a Vision and Eye Health Surveillance System for the Nation #4718-4721	Room 307

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

Time	Session	Title	Location
3:45 – 5:30pm	468	Conjunctiva, Lacrimal and Meibomian glands and contact lenses [CO] #4722-4728	Ballroom 2
3:45 – 5:30pm continued	469-	An eye on the eye microvasculature — Minisymposium [RC, RE] #4729-4733	Ballroom 1
	470	Retinopathy of Prematurity [RE] #4734-4740	Ballroom 3
	471	Visual Fields, Vision Function, Psychophysics II [GL] #4741-4747	Ballroom 4
	472	Clinical posterior segment imaging [RE] #4748-4754	Hall G
	473	Drug delivery II [PH] #4755-4760	Room 301
	474	Low Vision Devices and Rehabilitation [LV] #4761-4766	Room 308
	475	The bench and the bedside: Who is the instructor? — Minisymposium [IM, CO, RE, VI] #4767-4771	Room 310
	476	Ocular Transcriptomics and proteomics [BI] #4772-4778	Room 314
	477	Corneal Surgery: Techniques and outcomes [CO] #4779-4784	Room 316
	478	Visual functions and processes conserved across species — Minisymposium [AP, CO, EY, GEN, LE, MOI, PH, RC, VI, VN] #4785-4789	Room 321
5:45 – 6:30pm	490	Cogan Award Lecture #5100	Hall G
6:45 – 7:30pm	491	Friedenwald Award Lecture #5101	Hall G

ARVO Classical Concert

ARVO Classical Concert

Wed., May 10, 8 – 10pm

Hilton Baltimore – Holiday Ballroom

401 W. Pratt Street, Baltimore

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



Wednesday, May 10 ■ Posters

Time	Session Title	Program #	Board #
8:30 – 10:15am	415 Oculoplastics [EY, AP]	3830 - 3849	A0001 - A0020
	416 Optic Neuropathy [EY]	3850 - 3873	A0021 - A0044
	417 Clinical microbiology [IM]	3874 - 3901	A0045 - A0072
	418 Corneal Stroma and Keratocytes [CO]	3902 - 3915	A0098 - A0111
	419 Ocular Surface Health and Disease [CO]	3916 - 3953	A0155 - A0192
	420 Molecular mechanisms in uveal melanoma [AP, GEN]	3954 - 3972	A0241 - A0259
	421 Imaging: Optic Nerve Head and Nerve Fiber Layer [GL, MOI]	3973 - 4027	A0282 - A0336
	422 Diabetic Retinopathy: New Targets and Emerging Therapies [RC]	4028 - 4051	B0001 - B0024
	423 Angiogenesis: Basic Mechanisms [RC, AP]	4052 - 4080	B0025 - B0053
	424 Drug and gene therapy and delivery [PH]	4081 - 4122	B0081 - B0122
	425 ipRGCs and Circadian Rhythms [VN]	4123 - 4147	B0242 - B0266
	426 Retinal detachment (clinical) [RE]	4148 - 4174	B0443 - B0469
	427 Retinal prostheses [RE, LV, MOI]	4175 - 4208	B0531 - B0564
	428 Spatial and temporal vision [VI, VN]	4209 - 4237	B0670 - B0698
11am– 12:45pm	440 Corneal Biomechanics [CO]	4311 - 4353	A0112 - A0154
	441 Conjunctival cell Biol and Meibomian glands [CO, AP]	4354 - 4400	A0193 - A0239
	442 Uveal melanoma clinical studies [AP]	4401 - 4422	A0260 - A0281
	443 Physiological and myopic ocular biometry [AP, MOI]	4423 - 4440	A0401 - A0418
	444 Drug delivery I [PH]	4441 - 4467	B0054 - B0080
	445 Gene editing and gene therapies [BI]	4468 - 4509	B0123 - B0164

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

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

Wednesday, May 10 ■ Posters

Time	Session Title	Program #	Board #
11am– 12:45pm continued	446 Genetics of retinal dystrophies and Functional Analysis [GEN]	4510 - 4529	B0165 -B0184
	447 Photoreceptor degeneration and retinal rescue strategies [RC, LV]	4530 - 4555	B0185 - B0210
	448 Stem cells and tissue engineering for retinal repair [RC, CO, RE]	4556 - 4586	B0211 - B0241
	449 Pharmacological Intervention and Cellular Mechanisms [GL]	4587 - 4615	B0288 - B0316
	450 Macular edema clinical and translational [RE]	4616 - 4634	B0489 - B0507
	451 Macular diseases (inherited) [RE, MOI, RC, VI]	4635 - 4657	B0508 - B0530
	452 Low Vision Populations, Services and Treatments [LV]	4658 - 4689	B0565 - B0596
	453 Vision in aging and disease [VI]	4690 - 4717	B0642 - B0669
3:45– 5:30pm	479 Cornea and Anterior Chamber [CL]	4790 - 4814	A0073 - A0097
	480 Imaging technology and applications [MOI, VI]	4815 - 4861	A0337 -A0383
	481 Animal imaging [MOI]	4862 - 4878	A0384 - A0400
	482 Clinical electrophysiology [VN]	4879 - 4898	B0268 - B0287
	483 Glaucoma: Biochemical and molecular disease mechanisms [BI]	4899 - 4919	B0317 - B0337
	484 Surgery and Wound Healing [GL]	4920 - 4974	B0338 - B0392
	485 Laser Therapy and MIGS [GL, LV]	4975 - 4999	B0393 - B0417
	486 Vitreoretinal surgery novel approaches and vitreoretinal interface [RE]	5000 - 5024	B0418 - B0442
	487 Diabetic retinopathy clinical and surgical [RE]	5025 - 5043	B0470 - B0488
	488 Eye Care Delivery and Economic Research [CL]	5044 - 5088	B0597 - B0641
	489 Pupil [EY, VN]	5089 - 5099	B0699 - B0709

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**All Posters and Networking — authors will be present at posterboards:
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Thursday, 10:30 -11:30am.**

Thursday, May 11 ■ Keynote, symposia, papers, workshops/SIGs, lectures and events

Time	Session	Title	Location
8:30 – 10:15am	501	Genes and disease: How knowledge of genetics can guide treatment, now and in the future [AP, CO, EY, GL, RE] #5102-5108	Ballroom 3
	502	The global problem of antibiotic resistance: Impact on ocular health worldwide and researching alternatives [AP, BI, CL, CO, PH, RE] #5109-5113	Ballroom 4
11:30–1:15pm	524	Keratoconus: Basic Science and Clinical Applications [CO] #5560-5566	Ballroom 2
	525	Cellular and molecular bases of retinal development [RC] #5567-5572	Ballroom 1
	526	Surgery, Laser Therapy, Wound Healing [GL] #5573-5579	Ballroom 3
	527	Novel methods and Mechanisms of Disease [GEN] #5580-5586	Ballroom 4
	528	Molecular pharmacology and ocular toxicology [PH] #5587-5592	Room 301
	529	Lens Biochemistry [LE] #5593-5599	Room 307
	530	Photoreceptors [VN, VI] #5600-5606	Room 308
	531	Glaucoma: Frequency, Risk Factors, and Care [CL] #5607-5613	Room 309
	532	Genomics and proteomics to dissect normal and diseased ocular sites: an immunology and microbiology perspective [IM] #5614-5619	Room 310
	533	Biochemistry and Molecular Biology implicated in diabetic retinopathy and glaucoma [BI] #5620-5626	Room 314
	534	Visual perception with defocus, distortions, and training [VI] #5627-5633	Room 316
	535	Novel findings and approaches in myopia research [AP] #5634-5640	Room 321
	536	Retinal Abnormalities and Neuropathology [EY, VN] #5641-5647	Room 324
1:30–3:15	551	ARVO/Alcon Closing Keynote: What's next in the investigation of genetics of age-related macular degeneration?	Hall G

Thursday, May 11 ■ Posters

Time	Session Title	Program #	Board #
8:30 – 10:15am	503 Neurodegenerative Diseases and Brain Trauma [EY, MOI, VN]	5114 - 5137	B0001 - B0024
	504 Orbital and Thyroid Eye Disease [EY, MOI]	5138 - 5163	B0025 - B0050
	505 Toxicology; hypoxia; ischemia; oxidative stress; corneal disease [PH]	5164 - 5188	B0051 - B0075
	506 Diabetic Retinopathy: Neurodegeneration and pathology associated with the neurovascular unit. [RC]	5189 - 5205	B0076 - B0092
	507 Molecular mechanisms of diabetic retinopathy [BI]	5206 - 5227	B0093 - B0114
	508 Biochemistry and Molecular Biology of AMD II [BI]	5228 - 5263	B0115 - B0150
	509 Corneal Refractive Surgery [CO]	5264 - 5297	B0217 - B0250
	510 Crystallins [LE]	5298 - 5311	B0266 - B0279
	511 IOP Measurement and Characterization II [GL]	5312 - 5338	B0409 - B0435
	512 Retinal Function: ERG studies [VN]	5339 - 5351	B0436 - B0448
	513 Oxidative damage, ER stress and autophagy [RC, RE]	5352 - 5374	B0509 - B0531
	514 Non-neural cells of the retina: Glia and Microglia [RC, CO, RE]	5375 - 5403	B0532 - B0560
	515 Color vision, binocular and stereoscopic vision [VI, VN]	5404 - 5430	B0561 - B0587
	516 Advancements in OCT [MOI]	5431 - 5444	B0588 - B0601
	517 Wide field retinal imaging [MOI, VI]	5445 - 5459	B0602 - B0616
	518 Factors mediating myopia [AP]	5460 - 5479	B0617 - B0636
	519 High myopia, associated complications and potential treatments [AP]	5480 - 5495	B0637 - B0652
	520 Endophthalmitis and trauma [RE]	5496 - 5522	B0678 - B0704
	521 Retinopathy of Prematurity [RE]	5523 - 5559	B0723 - B0759

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Thursday, 10:30 -11:30am.**

Thursday, May 11 ■ Posters

Time	Session Title	Program #	Board #
11am–12:45pm	537 Genetics of Corneal dystrophies [GEN]	5648 - 5661	B0151 - B0164
	538 Corneal Non-refractive Surgery [CO]	5662 - 5712	B0165 - B0215
	539 Cataract/Reporting of Research [CL]	5713 - 5727	B0251 - B0265
	540 Immune mechanisms in Eye disease: perception and reality [IM]	5728 - 5759	B0280 - B0311
	541 Infection and immunology [IM]	5760 - 5787	B0312 - B0339
	542 Diabetic retinopathy [PH]	5788 - 5807	B0340 - B0359
	543 Structure-Function Relationships II [GL]	5808 - 5842	B0360 - B0394
	544 Electrophysiology [GL]	5843 - 5856	B0395 - B0408
	545 Visual Disease Models and Restoration [VN]	5857 - 5886	B0449 - B0478
	546 Paradigms of retinal degeneration and rescue [RC]	5887 - 5916	B0479 - B0508
	547 Myopic CNV and CSCR [RE, AP, LV, MOI]	5917 - 5941	B0653 - B0677
	548 Ocular Trauma [CL, VI]	5942 - 5959	B0705 - B0722
	549 Retinal detachment: Basic research [RE]	5960 - 5979	B0760 - B0779
550 Clinical retinal imaging 2 and lasers [RE, MOI, VN]	5980 - 6009	B0780 - B0809	

For the latest program information

This ARVO Annual Meeting program information is up to date as of **April 7, 2017**. For the latest changes to any program or session, visit the Online Planner at arvo.org/am/program.

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Thursday, 10:30–11:30am.**

Statement of need

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

Target audience

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

Educational objectives

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

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

Physician Accreditation Statement

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

Physician Credit Designation

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

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

CME credits and certificate fee

	Advance	Onsite
MIT, Student Non-Member	\$29	\$29
Member, Non-Member, Exhibitor (paid full-meeting access badge)	\$49	\$69

Exhibitor (complimentary full-meeting access badge only)	\$89	\$89
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Instructions to receive credit and/or certificates

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

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

Certificate of Participation*

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

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

education@arvo.org

Certificate of Attendance

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

Disclaimer

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

Participants have an implied responsibility to use the newly acquired information to enhance patient outcomes and their own professional development. The information presented in this meeting is not meant to

serve as a guideline for patient management. Any procedures, medications, or other courses of diagnosis or treatment discussed in this activity should not be used by clinicians without evaluation of patient conditions and possible contraindications on dangers in use, review of any applicable manufacturer's product information, and comparison with recommendations of other authorities.

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Disclosure of conflicts of interest

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

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

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

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

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

Sunday, May 7, 8:30 – 10:30am

Session #	Session Title	Location
101	Light-based treatment strategies for blinding eye disease <i>Dimitri Azar, Ed Boyden, Randolph Glickman, Daniel Palanker, Tony Realini, Arun Singh, Brian Wilson</i>	Ballroom 3
102	Homologies between the brain and the eye: Can ocular researchers lead the way or are we following our 'brainy' colleagues? <i>Claude Bernard, Catherine Bowes Rickman, Sarah Coupland, Britta Engelhardt, Paul McMenamin, W. Daniel Stamer</i>	Ballroom 4

Sunday, May 7, 1:30 – 3:00pm

Session #	Session Title	Location
117	GEN Group: New tools and methodologies for ocular genetics: Promises and challenges <i>Chiea Chuen Khor, Stuart MacGregor, Eric Pierce, Carlo Rivolta, Anand Swaroop</i>	Ballroom 2

Sunday, May 7, 3:15 – 5:00pm

Session #	Session Title	Location
143	Retinal glia <i>Faizah Bhatti, Qianyi Luo, Nefeli Slavi, Levi Todd, Stefanie Wohl, Ting Zhang, Yikui Zhang</i>	Ballroom 1
144	Biochemistry and Molecular Biology of AMD <i>Barbara Braunger, Arkasubhra Ghosh, Nady Golestaneh, Emilie Heckel, Raffael Liegl, Laura Lorés de Motta, Qian Sun</i>	Ballroom 4

Session #	Session Title	Location
145	OCT Angiography in AMD <i>A. Yasin Alibhai, Steven Bailey, Enrico Borrelli, Nikolaos Giannakopoulos, Jost Laueremann, Carl Rebhun</i>	Hall G
146	Deep learning for image segmentation and classification <i>Forson Chan, Kunal Dansingani, Aaron Lee, Theodore Leng, S. Scott Whitmore, Yalin Zheng</i>	301
147	Genetics and modeling of lens and anterior segment anomalies – Minisymposium <i>John Gottsch, Robyn Jamieson, Salil Lachke, S. Amer Riazuddin, Elena Semina, Alan Shiels</i>	307
148	Frequency of Visual Impairment and Eye Disease and Their Risk Factors <i>Rupert Bourne, Leo Cubillan, Joshua Foreman, Rohit Khanna, Roberta McKean-Cowdin, Benedicte Merle, Meraf Wolle</i>	309
149	Systemic influences on ocular disease <i>Toshiaki Hirakata, Reiko Horai, Hyun Soo Lee, Zhijie Li, Stephanie Llop, H. Nida Sen, Anthony St. Leger</i>	310
150	Pharmacology and Cellular Mechanisms <i>Xiaomin Chen, Prabhavathi Maddineni, Claire Mitchell, Gaurang Patel, Ian Pitha, Valery Shestopalov</i>	316
151	Retinoblastoma: From Genetics and Pathology to Therapy <i>Alec Amram, Laura Asnaghi, Eunoo Bak, Jesse Berry, Anthony Daniels, Govindasamy Kumaramanickavel</i>	321
152	Nystagmus and Gaze Holding <i>Larry Abel, Richard Hertle, John Kelly, Frank Proudlock, Hyongsok Ryu, Mervyn Thomas, Avery Weiss</i>	324

Sunday, May 7, 5:15 – 7:15pm

Session #	Session Title	Location
164	Basic/Clinical lecture: Improving global eye health: Beating the odds for neglected and emerging diseases around the world <i>Tin Aung, Rubins Belfort, Paul Courtright, Brenda Gallie, Hugh Taylor, Sheila West</i>	Hall G

Monday, May 8, 8:30 – 10:15am

Session #	Session Title	Location
204	Common pathogenic role of inflammation in retinal diseases – Minisymposium <i>Steven Abcouwer, Sarah Doyle, Goldis Malek, Victor Perez, Andrew Taylor, Wai Wong</i>	Ballroom 1
206	Optic nerve regeneration: Barriers past and future – Minisymposium <i>Larry Benowitz, Jeffrey Goldberg, Daniel Goldman, Zhigang He</i>	Ballroom 4
207	AMD and anti-VEGF therapy <i>Paul Baird, Jason Hsu, Peter Kertes, Won Ki Lee, Anat Loewenstein, Daniel Martin, Cynthia Toth</i>	Hall G
209	Lens Development and Cell Biology <i>Lisa Brennan, M. Costello, Soma Dash, Jianguo Fan, Qiuli Fu, Rebecca McGreal, Meysam Yazdankhah</i>	307
210	Diseases and Protection <i>Mirella Barboni, Alun Barnard, Jasmina Cehajic Kapetanovic, Gregory Gauvain, Johnnie Moore-Dotson, Alisa Thavikulwat, Victoria Yang</i>	308
211	Genetic Epidemiology <i>Joan Bailey-Wilson, Stuart MacGregor, Abhishek Nag, Seang-Mei Saw, Milly Tedja, Robert Wojciechowski, Tien Wong</i>	309
213	Genotype-phenotype correlations, prevalence studies and novel gene defects <i>Rando Alikmets, Basamat Almoallem, Isabelle Audo, Frans Cremers, Alessia Fiorentino, Dror Sharon, Qingjiang Zhang</i>	314

Session #	Session Title	Location
215	Novel Imaging and Biomarkers for Ocular Tumors and Disease <i>Melanie Campbell, Chi-Chao Chan, Konstantin Kotliar, Oleg Nadiarnykh, Rajesh Rao, Hua Yang</i>	321

Monday, May 8, 11:00 – 12:45pm

Session #	Session Title	Location
226	Gene therapies <i>M. Dominik Fischer, Neena Haider, Susanne Koch, Thierry Leveillard, Margaret McDougal, Suddhasil Mookherjee, Patrizia Tomabene</i>	Ballroom 1
227	AMD imaging I <i>Magdalena Baratsits, Kate Grieve, Maged Habib, Ryan Larochele, Carlos Moreira Neto, Andreas Pollreis</i>	Ballroom 3
228	Imaging Posterior Segment and Progression <i>Tadamichi Akagi, Christopher Bowd, Ramin Daneshvar, Anna Dastiridou, Brad Fortune, Luke Saunders, Jayme Vianna</i>	Ballroom 4
229	Vitreoretinal interface and retinal detachment <i>Gabriel Gordon, Junyeop Lee, Dhruvesh Patel, Emilie Picard, Rodolfo Repetto, Mohammad Sadiq</i>	Hall G
230	IOP Measurement and Characterization I <i>J. Crawford Downs, David Friedman, Alexander Kokini, Xuyang Liu, Sean McCafferty, Brian Samuels, Bianca Nicoleta Susanna</i>	301
231	RPE metabolism, autophagy and cell death <i>Dhanesh Amarnani, Sayantan Datta, Wei-Hua Lee, Hongwei Ma, Philip Mzyk, Huan Yang</i>	307
232	Ganglion cells <i>Onkar Dhande, Ryan Maloney, Paul Martin, Scott Nawy, Kaushambi Roy, Wenyao Wang, Jasmine Yung</i>	308
233	Improving Eye Care Delivery <i>Tina Felfeli, Judith Goldstein, Emily Gower, Michael Huvard, Lisa Keay, Jamie Odden, Laura Pizzi</i>	309

Session #	Session Title	Location
235	Applications of adaptive optics for retinal imaging and visual function testing – Minisymposium <i>Stephen Burns, Jacque Duncan, Jennifer Hunter, Donald Miller, Ethan Rossi, William Tuten</i>	316
236	Optical coherence tomography in pediatric neuro-ophthalmology – Minisymposium <i>Robert Avery, Mays El-Dairi, Jack Gormley, Irene Gottlob, Anastasia Pilat, Frank Proudlock</i>	324

Monday, May 8, 1:00 – 2:30pm

Session #	Session Title	Location
251	LV Group: Reading with low vision: What we know and need to know <i>Vijaya Gothwal, Mi Young Kwon, Pradeep Ramulu, Gary Rubin</i>	308

Monday, May 8, 3:45 – 5:30pm

Session #	Session Title	Location
263	Corneal Development and Repair <i>Paola Bargagna-Mohan, Ricardo Gouveia, Carlo Iomini, Elena Koudouna, Li Ma, Mary Ann Stepp, Praveen Joseph Susaimanickam</i>	Ballroom 2
264	Biomarkers based on vasculature Imaging <i>Barbara Cortes, Thomas Hwang, ByungKun Lee, Yang Lu, Qingkai Ma, Matthew Muller, Jie Wang</i>	Ballroom 1
265	Inherited retinal diseases and mactel <i>Robert Koenekoop, Simone Mueller, Eric Pierce, Cecinio Ronquillo, Rupert Strauss, Mays Talib, Sanne Verbakel</i>	Ballroom 3
266	Neurodegeneration <i>Melissa Cooper, Jorge Luis Cueva Vargas, Lauren Davis, Rachel Fischer, Meredith Gregory-Ksander, Delaney Henderson, Yvonne Ou</i>	Ballroom 4

Session #	Session Title	Location
269	Cataractogenesis I <i>Muhammad Ali, Norman Kleiman, Dan Li, Xin Liu, Aditi Swarup, Yichen Wang, Jeremy Whitson</i>	307
270	The Impact of Low Vision on Mobility <i>Regina de Luna, Shirin Hassan, Carrie Huisingsh, Robert Massof, Aleksandra Mihailovic, Alex Tam</i>	308
271	Molecular and biochemical mechanisms in retinal disorders <i>Wolfgang Baehr, Katie Bales, Gautami Das, Tanya Dilan, Dyah Karjosukarso, Shanu Markand, Diane Slusarski</i>	314
272	Mechanisms of accommodation <i>Atanu Ghosh, Katherine Knaus, Philip Kruger, Chunming Liu, Consuelo Robles, Marco Ruggeri, Irene Siso-Fuertes</i>	316
273	Corneal immunology and neuropathy <i>Joseph Catapano, Ali Djalilian, William Foulsham, Aubrey Hargrave, George Maiti, Maryam Tahvildari, Mark Yorek</i>	321

Tuesday, May 9, 8:30 – 10:15am

Session #	Session Title	Location
301	Corneal Imaging and Biomechanics <i>Kirill Larin, Kaleena Michael, Michael Pircher, Rushad Shroff, Brittany Simmons, Rene Werkmeister, Hongmin Zhang</i>	Ballroom 2
302	Angiogenesis <i>Saptarshi Biswas, Azza El-Remessy, Jean-Sebastien Joyal, Sergio Li Calzi, Ye Sun, Yanhong Wei, Jennifer Wilkinson-Berka</i>	Ballroom 1
303	Biomechanics I <i>Joseph Demer, Massimo Fazio, Rafael Grytz, Kapil Krishnan, Vijaykrishna Raghunathan, Cynthia Roberts, Joseph Sherwood</i>	Ballroom 3
304	Clinical Trials and Drug Studies II <i>Panayiota Founti, Albert Khouri, James Peace, Tony Realini, Janet Serle, Kavitha Srinivasan, Zhichao Wu</i>	Ballroom 4

Session #	Session Title	Location
305	Novel therapies and imaging techniques for retinal disorders – Minisymposium <i>Justis Ehlers, Elliott Sohn, Tim Stout, Masayo Takahashi, Budd Tucker, Nadia Waheed</i>	Hall G
306	Lens Physiology and Biomechanics I <i>Eric Beyer, Catherine Cheng, Mary Ann Croft, Lisa Ebihara, Xiaohua Gong, Jean Jiang, Kulandaippan Varadaraj</i>	307
308	Photoreceptors: Cell Biology, Disease and Rescue <i>Michael Butler, Erik de Vrieze, Rachayata Dharmat, Steven Fliesler, Erwin van Wijk, Jingyu Yao, Lina Zelinger</i>	314
309	Surprising human visual processes revealed with advanced techniques <i>Pablo Artal, Antoine Barbot, Shrikant Bharadwaj, Silvestre Manzanera, John Pirog, William Tuten, Elaine Wells-Gray</i>	316
310	Uveal melanoma: From Clinical Trials to Molecular Mechanisms <i>James Augsburger, Chandrani Chattopadhyay, Sarah Coupland, Amy Scheffler, Eszter Szalai, Serdar Yavuziyigitoglu</i>	321

Tuesday, May 9, 11:00 – 12:45pm

Session #	Session Title	Location
325	ER stress and the unfolded protein response in ocular health and disease – Minisymposium <i>Marina Gorbatyuk, Stephanie Hagstrom, Jonathan Lin, Przemyslaw Mike Sapiuha, Sarah Zhang, Gulab Zode</i>	Ballroom 1
327	Neuroprotection <i>Jessica Agostinone, Nicolas Belforte, Alejandra Bosco, Keith Martin, William McLaughlin, Ben Mead, Derek Welsbie</i>	Ballroom 4
328	Retinal Vascular Diseases and CSCR <i>Manuel Casselholm de Salles, Jennifer Lim, Ian MacCormick, Alexandre Matet, Michael Singer, Delu Song</i>	Hall G

Session #	Session Title	Location
330	Bipolar, Horizontal and Amacrine cells <i>Ivan Anastassov, Billie Beckwith-Cohen, Bart Borghuis, Lei-Lei Liu, Gregory Perrin, Teresa Puthusser, Shai Sabbah</i>	308
331	Understanding the Course and Risk Factors for Age-Related Macular Degeneration <i>Usha Chakravarthy, Emily Chew, Johanna Maria Colijn, Felix Grassmann, Julie Mares, Rachel Silver, Freekje Van Asten</i>	309
332	Going viral! <i>Daniel Carr, Homayon Ghiasi, Paul Kinchington, Dai Miyazaki, Pawan Kumar Singh, Paul Steptoe, Hongmin Yun</i>	310
333	Age-related changes in optics of the eye and vision – Minisymposium <i>Aki Kawasaki, Fabrice Manns, Allison McKendrick, Jos Rozema, Thomas Van Den Berg, James Wolffsohn</i>	316
334	Factors affecting ocular development <i>Jessica Eason, Jakub Famulski, Suzanne Michalak, Amrita Pathak, Fatemeh Rajaii, Nguyen Tram, Eric Weh</i>	321

Tuesday, May 9, 3:45 – 5:30pm

Session #	Session Title	Location
362	Corneal Tissue Engineering and Molecular Biology <i>Sayan Basu, Margarita Calonge, Heather Chandler, Gina Griffith, Winston Kao, Shoumyo Majumdar, Golnar Shojaati</i>	Ballroom 2
363	Macular degeneration-cell biology <i>Thomas Ach, Paul Bishop, So Goto, Elisabeth Obert, Magali Saint-Geniez, Peng Shang, Alison Szabo</i>	Ballroom 1
365	Capillaries, Blood Flow, OCT Angiography <i>Luis Alarcon-Martinez, Tailoi Chan-Ling, Luciano Custo Greig, Masoud Fard, Liang Liu, Takuhei Shoji, Kelvin Wan</i>	Ballroom 4

Session #	Session Title	Location
366	AMD imaging II and visual function <i>Saghar Bagheri, Deeba Husain, Marlene Sassmannshausen, Lydia Sauer, Ursula Schmidt-Erurth, Wenlan Zhang</i>	Hall G
368	Beyond the retina: Central visual circuits – Minisymposium <i>Peter Campbell, Jess Cardin, Sandra Kuhlman, Aaron Mcgee, Tania Seabrook</i>	308
369	Refractive Error: Risk Factors to Intervention Studies <i>Catherine Jan, Xuejuan Jiang, Himel Kandel, Kristine Lee, Lucy Mudie, Adriana Roth, Katie Williams</i>	309
370	New Insights and Animal models <i>Fei Dong, Ana Fakin, Angela Gauthier, Ala Moshiri, Vincent Raymond, William Scott, Jesse Sundar</i>	314
371	Improving Retinal Imaging and Image Understanding- AO <i>Robert Cooper, Ann Elsner, James Feeks, Charles Granger, Andres Guevara-Torres, Zhuolin Liu, Kaitlyn Sapoznik</i>	316
372	Strabismus: Basic and Clinical <i>Zia Chaudhuri, Luisa Hopker, David Leske, Linda McLoon, Fatima Pedrosa Domellof, Suraj Upadhyaya, Janice Wensveen</i>	324

Wednesday, May 10, 8:30 – 10:15am

Session #	Session Title	Location
402	Dry Eye II <i>Maya Bitar, Ahmad Kheirkhah, Charity Lee, Stephen Pflugfelder, Tannin Schmidt, Adam Tanaka, Yuichi Uchino</i>	Ballroom 2
403	Stem Cells: new approaches and disease modeling <i>Lin Cheng, Aman George, Olivier Goureau, Maria Laggner, Peter Quinn, Ruchira Singh, Min Jae Song</i>	Ballroom 1
404	AMD clinical research <i>Kimberly Cocce, Christine Gonzales, Tim Krohne, Ines Lains, Wenqiang Liu, Marion Munk</i>	Ballroom 3

Session #	Session Title	Location
407	Inflammaging and eye – Minisymposium <i>Reza Dana, Stefano Gandolfi, Hani Levkovitch-Verbin, Wai Wong, Heping Xu</i>	301
408	Lens Epithelial Cells and PCO <i>Shannon Das, Linda Musil, Rooban Nahomi, Rasiah Pratheepa Kumara, Mahbulul Shihan, Janice Walker, Michael Wormstone</i>	307
409	Corneal Endothelium and Fuchs Corneal Dystrophy <i>Ricardo Frausto, Thibaud Garcin, Viridiana Kocaba, Takako Onishi, Shivakumar Vasanth, Nelson Winkler, Takefumi Yamaguchi</i>	308
410	Vision and driving: Lessons learned and future directions – Minisymposium <i>Felipe Medeiros, Cynthia Owsley, Sheila West, Joanne Wood</i>	309
411	All of the eye is a stage and immune cells are merely players – Minisymposium <i>Florent Ginhoux, Gerard Lutty, Paul McMenamin, Daniel Saban, Florian Sennlaub</i>	310
413	New Genes and Loci <i>Pooja Biswas, Rui Chen, Jessica Cooke Bailey, Meha Kabra, Lin Li, Lev Prasov, Shi Song Rong</i>	321
414	Amyopia II <i>Eileen Birch, Krista Kelly, Vivian Manh, Mayu Nishimura, Jaime Tejedor, Wen Wen, Bin Zhang</i>	324

Wednesday, May 10, 11:00 – 12:45pm

Session #	Session Title	Location
429	Corneal Epithelium in Health and Disease <i>Ying-Ting Chen, Che Connon, Christopher Hood, Mangesh Kulkarni, Rei Murakami, Jong Kook Park, Alexander Richardson</i>	Ballroom 2
432	Structure-Function Relationships I <i>Muhammed Alluwimi, Qian Cheng, C Gustavo De Moraes, Ingy Madi, Allison McKendrick, Kouros Nouri-Mahdavi, Rafaella Pentead</i>	Ballroom 4

Session #	Session Title	Location
434	Membrane domains: Polarity, trafficking and assembly in the eye – Minisymposium <i>Vann Bennett, Silvia Finnemann, Velia Fowler, Kate Keller, Jaya Rajaiya</i>	307
435	ERG:Advances, Disease and Injury <i>James Akula, Roa Al-Abdalla, Kirsten Anderson, Jan Kremers, J. Jason McAnany, Carla Osigian, Wadih Zein</i>	308
436	Improving Care for Diabetic Retinopathy <i>Christopher Brady, Jacqueline Chua, Rishabh Date, Marta Garcia-Finana, Aditi Gupta, Anne Langguth, Cecilia Lee</i>	309
437	Basic investigations in the treatment of ocular infections <i>Sandamali Amarasingha Ekanayaka, Thomas Carion, Jonathan Chan, Natalya Doroshenko, Dinesh Jaishankar, Robert Shanks, Ting Wan</i>	310
438	Color vision, low vision <i>Susana Chung, Cord Huchzermeyer, Neruban Kumaran, Jay Neitz, Christina Schwarz, Caroline Seto, Merve Tuccar-Burak</i>	316
439	Intracranial Hypertension and Optic Nerve Changes <i>Isabelle Dortonne, Deepta Ghate, Sachin Kedar, Monica Okon, Virender Sachdeva, Patrick Sibony, Jui-Kai Wang</i>	324

Wednesday, May 10, 1:00 – 2:30pm

Session #	Session Title	Location
454	MOI Group: Advanced interpretation of structural retinal optical coherence tomography <i>Delia Cabrera DeBuc, Christine Curcio, David Garway-Heath, Donald Hood, Donald Miller</i>	Ballroom 2

Wednesday, May 10, 3:45 – 5:30pm

Session #	Session Title	Location
468	Conjunctiva, Lacrimal and Meibomian glands and contact lenses <i>Yosuke Asada, Jing Hua Bu, Darlene Dartt, Debarun Dutta, Maud Gorbet, Helen Makarenkova, Eisuke Shimizu</i>	Ballroom 2
469	An eye on the eye microvasculature – Minisymposium <i>Patricia D'Amore, Kaustabh Ghosh, Gerard Lutty, Enrique Rodriguez-Boulan, Nadia Waheed</i>	Ballroom 1
470	Retinopathy of Prematurity <i>J. Peter Campbell, Seema Emami, Chatarina Lofqvist, Graham Quinn, Travis Redd, Shivani Sinha, Brittany Wong</i>	Ballroom 3
471	Visual Fields, Vision Function, Psychophysics II <i>Andrew Tatham, Christopher Leung, Fabio Daga, Jared Sokol, Lilian Mohamed, Masaki Nakanishi, Moon Jeong Lee</i>	Ballroom 4
472	Clinical posterior segment imaging <i>Ross Chod, Ahmed Hagag, Amir Hariri, Shwetha Mangalesh, Dov Sebrow, Andrew Sill, Ruikang Wang</i>	Hall G
473	Drug delivery II <i>Brittany Coats, Morgan Fedorchak, Ding Lin, Ygal Rotenstreich, Sara Smith, Shigeo Tamiya</i>	301
475	The bench and the bedside: Who is the instructor? – Minisymposium <i>Peter Coffey, Dan Kastner, Kohji Nishida, Paul Sieving, Thomas Waldmann</i>	310
476	Ocular Transcriptomics and proteomics <i>Igor Butovich, Alecia Gross, Melissa Liu, Rinki Ratnapriya, Philip Ruzycski, Zeljka Smit-McBride, Christopher Starr</i>	314
477	Corneal Surgery: Techniques and outcomes <i>Lamis Baydoun, Claus Cursiefen, Silke Oellerich, Paulo Schor, Jun Shimazaki, David Tabibian</i>	316

Session #	Session Title	Location
478	Visual functions and processes conserved across species – Minisymposium <i>Belinda Chang, James Jester, Jon Kaas, Kristen Koenig, Jacob Sivak</i>	321

Thursday, May 11, 8:30 – 10:30am

Session #	Session Title	Location
501	Genes and disease: How knowledge of genetics can guide treatment, now and in the future <i>John Fingert, John Flannery, John Guy, Emine Kilic, Caroline Klaver, Tara Moore, David Valle</i>	Ballroom 3
502	The global problem of antibiotic resistance: Impact on ocular health worldwide and researching alternatives <i>Penny Asbell, Gautam Dantas, Prashant Garg, Mike Gilmore, Linda Hazlett</i>	Ballroom 4

Thursday, May 11, 11:30 – 1:15pm

Session #	Session Title	Location
524	Keratoconus: Basic Science and Clinical Applications <i>Jorge Alio del Barrio, Samantha Bradford, Vishal Jhanji, Sabine Kling, Yutao Liu, Rabab Sharif, Yumeng Wang</i>	Ballroom 2
525	Cellular and molecular bases of retinal development <i>Jeroen Bastiaans, Helena Lee, Jiamin Ouyang, Lauren Renner, Pawat Seritrakul, Nicholas Silva</i>	Ballroom 1
526	Surgery, Laser Therapy, Wound Healing <i>Yann Bouremel, Dolly Chang, Zhaoxing Dai, Gus Gazzard, Yuta Ueno, Bogomil Voykov, Tian Xia</i>	Ballroom 3
527	Novel methods and Mechanisms of Disease <i>Silvia Albert, Justin Branch, Walter Lukiw, Magda Meester, Riccardo Sangermano, Dana Schlegel, Tasneem Sharma</i>	Ballroom 4

Session #	Session Title	Location
528	Molecular pharmacology and ocular toxicology <i>Ivan Fernandez-Bueno, Caterina Gagliano, Nadine Gerber-Hollbach, William Johnson, Andrew Melchioris, Teemu Turunen</i>	301
529	Lens Biochemistry <i>Larry David, Xingjun Fan, Kirsten Lampi, Sanjay Mishra, Vatsala Sagar, Kevin Schey, K. Krishna Sharma</i>	307
530	Photoreceptors <i>Gordon Fain, Justin Grassmeyer, Shinya Sato, Onkar Sawant, Ulrich Schraermeyer, Xiangyi Wen, Xianshi Zhang</i>	308
531	Glaucoma: Frequency, Risk Factors, and Care <i>Pieter Bonnemaier, Stephanie Chen, Nikhil Choudhari, Paul Healey, Rene Hoehn, Pirro Hysi, Tzokit Zehavi-Dorin</i>	309
532	Genomics and proteomics to dissect normal and diseased ocular sites: an immunology and microbiology perspective <i>James Chodosh, Charles Eberhart, Jerome Ozkan, James Rosenbaum, Olof Sundin, Jonathon Young</i>	310
533	Biochemistry and Molecular Biology implicated in diabetic retinopathy and glaucoma <i>Inas Aboobakar, Maulasri Bhatta, Monika Deshpande, Leona Ho, Mao Nakayama, Johannes Schouten, David Stark</i>	314
534	Visual perception with defocus, distortions, and training <i>Maciej Bartuzel, Kevin Chan, Muhammad Hassan, Arun Krishnan, Aiswaryah Radhakrishnan, Lucie Sawides, Yukai Zhao</i>	316
535	Novel findings and approaches in myopia research <i>Regan Ashby, Christopher Clark, Quan Hoang, Yu Huang, Erica Landis, Seyyedhassan Paylakhi, Christopher Taylor</i>	321
536	Retinal Abnormalities and Neuropathology <i>John Chen, Jurre den Haan, Thiago Filgueiras, Mark Kupersmith, Jakaria Mostafa, Sohaib Rufai, Yi Shao</i>	324

Section Business Meetings

Monday, May 8, 10:15 – 10:55am

AP Section Business Meeting — Room 321

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

BI Section Business Meeting — Room 314

1. Trustee's Report of Status of Association
2. ARVO Strategic Plan
3. Annual Meeting Program Committee Chair's Report
4. Annual Meeting Program Committee Election Results
5. 2017 Trustee Election Results
6. Other Business

CL Section Business Meeting — Room 309

10:15am - 10:55am

1. Trustee's Report of Status of Association
2. ARVO Strategic Plan
3. Annual Meeting Program Committee Chair's Report
4. Annual Meeting Program Committee Election Results
5. 2017 Trustee Elections Results
6. Other Business

CO Section Business Meeting — Ballroom 2

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

EY Section Business Meeting — Room 324

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

GL Section Business Meeting — Ballroom 4

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

IM Section Business Meeting — Room 310

1. Trustees Report of Status of Association
2. ARVO Strategic Plan
3. Annual Meeting Program Committee Chairs Report
4. Annual Meeting Program Committee Election Results
5. Cora Verhagen Award
6. Dr. Raniyah Ramadan Foundation Award
7. Other Business

LE Section Business Meeting — Room 307

1. Trustees Report of Status of Association
2. ARVO Strategic Plan
3. Annual Meeting Program Committee Chairs Report
4. Presentation of the National Foundation for Eye Research 2017 Cataract Research Award to Janice Walker, PhD, of the Thomas Jefferson University, Philadelphia
5. Annual Meeting Program Committee Election Results
6. Other Business

PH Section Business Meeting — Room 301

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

RC Section Business Meeting — Ballroom 1

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

RE Section Business Meeting — Ballroom 3

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

VI Section Business Meeting — Room 316

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

VN Section Business Meeting — Room 308

1. Trustees Report of Status of Association
2. ARVO Strategic Plan
3. Annual Meeting Program Committee Chairs Report
4. Annual Meeting Program Committee Election Results
5. 2017 Trustee Election Results
6. Other Business

Airport Transportation

All ARVO attendees can receive a 10% discount on a SuperShuttle transfer to/from the local airports, using code 7CH5R. Downtown Baltimore is located extremely close to I-95, the downtown Baltimore Area is easily accessible and each hotel offers self-parking or valet services. To access driving directions from local areas Visit Baltimore offers driving directions from the North, South, and West. If you're looking for more specific directions enter your address into Google maps.

Other Transportation Options

Nearly everything you need in Baltimore is within walking distance of the Baltimore Convention Center. However, if you find yourself looking to explore, there are multiple low-cost public transportation options. The Visit Baltimore Information Desk in Pratt Street Lobby of the Convention Center has more information.



ARVO  **Asia**
Seoul, South Korea
21-24 Feb. 2019



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

Two ways to book:

- Stop by the Hawaii booth in the Exhibit Hall
- Reserve online at arvo.org/hotels

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

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

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[^] Supported by memorial donations

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

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

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- Alcon Foundation
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Everyone is welcome!



Sunday Social

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Sun., May 7, 7:30 – 10:30pm
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Student/Trainee Social

Mon., May 8, 7:30 – 9pm

Baltimore Convention Center, Charles Street Lobby

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



ARVO Classical Concert

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

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

ARVO Karaoke

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



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

Honolulu Welcomes ARVO

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

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

*Tickets available at Registration on Sat.; ARVO Central, Sun–Wed.

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