About the American Association for Pediatric Ophthalmology and Strabismus

AAPOS was formed in 1974 and has over 1800 members. Membership includes the vast majority of practicing fellowship-trained, board-certified pediatric ophthalmologists and adult strabismus specialists in the United States and Canada, as well as over 350 international members. Each year, AAPOS conducts an annual scientific meeting at a location in North America. Annual Meeting attendance in recent years has averaged over 900 professionals, including approximately 700 physicians.

Thank You!

AAPOS thanks Bausch + Lomb for providing an unrestricted educational grant for the 2019 Annual Meeting.

Bausch + Lomb
400 Somerset Corporate Blvd
Bridgewater, NJ 08807
(800) 828-9030
www.bausch.com
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## Schedule at a Glance

### Wednesday, March 27

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<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30 AM – 2:30 PM</td>
<td>AAPOS Board of Directors Meeting</td>
<td>SAPPHIRE 400AB</td>
</tr>
<tr>
<td>12:00 PM – 8:00 PM</td>
<td>Attendee/Exhibitor Registration</td>
<td>SAPPHIRE WEST FOYER</td>
</tr>
<tr>
<td>12:00 PM – 8:00 PM</td>
<td>Exhibitor Installation</td>
<td>SAPPHIRE CDGHKL</td>
</tr>
<tr>
<td>12:15 PM – 2:15 PM</td>
<td>AAPOS Council of Committee Chairs</td>
<td>SAPPHIRE 400AB</td>
</tr>
<tr>
<td>1:00 PM – 4:00 PM</td>
<td>Poster Set Up (1st Set)</td>
<td>SAPPHIRE WEST FOYER</td>
</tr>
<tr>
<td>6:15 PM – 7:00 PM</td>
<td>International Attendees Reception</td>
<td>SAPPHIRE 400AB</td>
</tr>
<tr>
<td>7:00 PM – 9:00 PM</td>
<td>Opening Reception</td>
<td>SAPPHIRE ABEFLJMN</td>
</tr>
</tbody>
</table>

### Thursday, March 28

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>6:30 AM – 5:00 PM</td>
<td>Registration</td>
<td>SAPPHIRE WEST FOYER</td>
</tr>
<tr>
<td>7:55 AM – 8:50 AM</td>
<td>Opening Remarks &amp; Costenbader Lecture</td>
<td>SAPPHIRE ABEFLJMN</td>
</tr>
<tr>
<td>8:50 AM – 9:55 AM</td>
<td>Scientific Session</td>
<td>SAPPHIRE ABEFLJMN</td>
</tr>
<tr>
<td>9:55 AM – 10:55 AM</td>
<td>Interactive Poster Session – Author Presentation and Q/A (1st Set)</td>
<td>SAPPHIRE WEST FOYER</td>
</tr>
<tr>
<td>11:00 AM – 11:15 AM</td>
<td>Presentation of Parks Medal and CEF/FAPOS Update</td>
<td>SAPPHIRE ABEFLJMN</td>
</tr>
<tr>
<td>11:15 AM – 11:45 AM</td>
<td>Helveston Lecture</td>
<td>SAPPHIRE ABEFLJMN</td>
</tr>
<tr>
<td>11:45 AM – 1:00 PM</td>
<td>Scientific Session</td>
<td>SAPPHIRE ABEFLJMN</td>
</tr>
<tr>
<td>1:10 PM – 2:00 PM</td>
<td>AAPOS Business Meeting</td>
<td>SAPPHIRE ABEFLJMN</td>
</tr>
<tr>
<td>2:15 PM – 3:15 PM</td>
<td>Genetic Eye Disease Committee Symposium – Guest Speaker</td>
<td>SAPPHIRE ABEFLJMN</td>
</tr>
<tr>
<td>3:30 PM – 6:30 PM</td>
<td>Administrators Program – See Program Details in Registration Packet</td>
<td></td>
</tr>
<tr>
<td>3:30 PM – 4:30 PM</td>
<td>OMIC Workshop</td>
<td>SAPPHIRE OP</td>
</tr>
<tr>
<td>3:30 PM – 4:30 PM</td>
<td>Rapid Fire Poster Presentations</td>
<td>SAPPHIRE ABEFLJMN</td>
</tr>
<tr>
<td>4:30 PM – 6:30 PM</td>
<td>Helveston Founders Series Reception</td>
<td>SAPPHIRE CDGHKL</td>
</tr>
</tbody>
</table>

### Friday, March 29

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>6:30 AM – 5:00 PM</td>
<td>Registration</td>
<td>SAPPHIRE WEST FOYER</td>
</tr>
<tr>
<td>7:00 AM – 11:45 AM</td>
<td>Workshops (7:00 – 8:15; 8:30 – 9:45; 10:30 – 11:45)</td>
<td>SAPPHIRE OP, ABEF, LIMN, 400AB</td>
</tr>
<tr>
<td>8:00 AM – 4:00 PM</td>
<td>Administrators Program</td>
<td>COBALT 520</td>
</tr>
<tr>
<td>11:30 AM – 12:00 PM</td>
<td>Poster Removal (1st Set)</td>
<td>SAPPHIRE WEST FOYER</td>
</tr>
<tr>
<td>11:45 AM – 1:15 PM</td>
<td>Lunch Break – On Your Own</td>
<td>N/A</td>
</tr>
<tr>
<td>12:00 PM – 1:00 PM</td>
<td>Sanofi Genzyme Corporate Sponsored Symposium: Recognizing Ocular Manifestations of Fabry Disease &amp; MPS I Disease</td>
<td>COBALT 500</td>
</tr>
<tr>
<td>1:15 PM – 4:00 PM</td>
<td>Workshops (1:15 – 2:30; 2:45 – 4:00)</td>
<td>SAPPHIRE OP, ABEF, LIMN, 400AB</td>
</tr>
<tr>
<td>3:45 PM – 4:15 PM</td>
<td>Poster Set Up (2nd Set)</td>
<td>SAPPHIRE WEST FOYER</td>
</tr>
<tr>
<td>4:15 PM – 5:15 PM</td>
<td>President’s Symposium: Learning Resiliency to Improve Wellness in the Workplace</td>
<td>SAPPHIRE ABEF</td>
</tr>
<tr>
<td>5:30 PM – 6:30 PM</td>
<td>Young Ophthalmologists, Senior Ophthalmologists and New Member Reception</td>
<td>COBALT 500</td>
</tr>
<tr>
<td>7:00 PM – 10:00 PM</td>
<td>Children’s Eye Foundation of AAPOS Gala (Separate Registration/Fee)</td>
<td>USS MIDWAY</td>
</tr>
</tbody>
</table>
Schedule at a Glance

Saturday, March 30

7:00 AM – 5:00 PM  Registration  SAPPHIRE WEST FOYER
8:00 AM – 9:55 AM  Scientific Session  SAPPHIRE ABEFJMN
8:00 AM – 5:30 PM  Administrators Program – See Program Details in Registration Packet
9:55 AM – 10:55 AM  Interactive Poster Session – Author Presentation and Q/A (2nd Set)  SAPPHIRE WEST FOYER
11:00 AM – 11:20 AM  Updates: Journal of AAPOS; ABO; AAP; Surgical Scope Fund; IPOSC; Meetings  SAPPHIRE ABEFJMN
11:20 AM – 1:00 PM  Scientific Session  SAPPHIRE ABEFJMN
2:00 PM – 3:15 PM  SEC Practice Management Workshop  SAPPHIRE ABEFJMN
3:30 PM – 5:30 PM  Coding a Day in the Life of the Pediatric Ophthalmologist 2019 (Separate Registration/Fee)  SAPPHIRE OP
7:00 PM – 10:00 PM  Closing Reception  SAPPHIRE ABEFJMN

Sunday, March 31

6:30 AM – 10:30 AM  Registration  SAPPHIRE WEST FOYER
7:00 AM – 8:00 AM  Video Workshop  SAPPHIRE OP
8:10 AM – 9:10 AM  Difficult Non-Strabismus Problems  SAPPHIRE OP
9:20 AM – 10:20 AM  Difficult Problems in Strabismus Workshop  SAPPHIRE OP
10:20 AM – 10:30 AM  Poster Removal (2nd Set)  SAPPHIRE WEST FOYER

Quick Reference

Meeting Attendees Continental Breakfast  SAPPHIRE CDGHKL
Thursday–Sunday 6:30 AM – 8:00 AM

Registered Spouse & Guest Hospitality Suite  COBALT 502B
Thursday–Saturday 8:00 AM – 10:00 AM Continental Breakfast; Coffee & tea available until 12:00 PM

Poster Viewing  SAPPHIRE WEST FOYER
Wednesday 4:00 PM – 6:00 PM
Thursday–Saturday 6:30 AM – 8:00 PM
Sunday 6:30 AM – 10:20 AM

Exhibitor Hours  SAPPHIRE CDGHKL
Thursday 6:30 AM – 7:55 AM; 9:55 AM – 10:55 AM; 1:00 PM – 6:30 PM
Friday 6:30 AM – 7:00 AM; 9:45 AM – 10:30 AM; 11:45 AM – 1:15 PM
Saturday 6:30 AM – 8:00 AM; 9:55 AM – 10:55 AM
AAPOS Board of Directors

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Executive Vice President
Christie L. Morse, MD

Vice President
Jane C. Edmond, MD

Vice President Elect
Katherine A. Lee, MD, PhD

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Director at Large
Faruk H. Orge, MD

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AAPOS Councilor
Mary Louise Z. Collins, MD

CEF/FAPOS Advisory Board Chairman
M. Edward Wilson, Jr, MD

Program Committee
Scott A. Larson MD, Chair
Lisa Bohra, MD
Douglas R. Fredrick, MD
Scott E. Olitsky, MD
Faruk H. Orge, MD
Paul Joseph Rychwalski, MD
David K. Wallace, MD, MPH

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AAPOS Client Services Manager
Jennifer Hull

AAPOS Scientific Program Coordinator
Maria A. Schweers, CO

AAPOS Client Services Coordinator
Marjan Hazrati

AMS Communications Manager
Gina Minato

AMS Meetings Manager
Michael Paulos, CMP

AAO CME Program Manager
Sian Hillier, MSc, CHCP

AAPOS Past Presidents
Marshall M. Parks, MD
Lake Tahoe, NV
1974–1975

Robert D. Reinecke, MD
Bermuda
1975–1976

Jack C. Crawford, MD
San Francisco, CA
1976–1977

Robison D. Harley, MD
Williamsburg, VA
1977–1978

David S. Friendly, MD
Toronto, Canada
1978–1980

Phillip Knapp, MD
San Diego, CA
1979–1980

Webb Chamberlain, MD
Orlando, FL

Arthur Jampolsky, MD
Monterey, CA
1981–1982

Alfred G. Smith, MD
Vancouver, BC
1982–1983

John A. Pratt–Johnson, MD
Vail, CO
1983–1984

Eugene R. Folk, MD
Puerto Rico
1984–1985

Thomas D. France, MD
Maui, HI
1985–1986
Gunter K. von Noorden, MD
Scottsdale, AZ
1986–1987

Arthur L. Rosenbaum, MD
Boston, MA
1987–1988

William E. Scott, MD
Kiawah, SC
1988–1989

Eugene M. Helveston, MD
Lake George, NY
1989–1990

Henry S. Metz, MD
Montreal, Canada
1990–1991

John T. Flynn, MD
Maui, HI
1991–1992

Forrest D. Ellis, MD
Palm Springs, CA
1992–1993

David L. Guyton, MD
Vancouver, BC
1993–1994

Malcolm L. Mazow, MD
Orlando, FL
1994–1995

John D. Baker, MD
Snowbird, UT
1995–1996

Earl A. Palmer, MD
Charleston, SC
1996–1997

John W. Simon, MD
Palm Springs, CA
1997–1998

Marilyn T. Miller, MD
Toronto, Canada
1998–1999

Maynard B. Wheeler, MD
San Diego, CA
1999–2000

Albert W. Biglan, MD
Orlando, FL
2000–2001

Jane D. Kivlin, MD
Seattle, WA
2001–2002

Joseph H. Calhoun, MD
Waikoloa, HI
2002–2003

George S. Ellis, Jr, MD
Washington, DC
2003–2004

Susan H. Day, MD
Orlando, FL
2004–2005

Michael X. Repka, MD, MBA
Keystone, CO
2005–2006

Christie L. Morse, MD
Seattle, WA
2006–2007

Edward G. Buckley, MD
Washington, DC
2007–2008

Bradley C. Black, MD
San Francisco, CA
2008–2009

C. Gail Summers, MD
Orlando, FL
2009–2010

David A. Plager, MD
San Diego, CA
2010–2011

Steven E. Rubin, MD
San Antonio, TX
2011–2012

K. David Epley, MD
Boston, MA
2012–2013

Sharon F. Freedman, MD
Palm Springs, CA
2013–2014

Sherwin J. Isenberg, MD
New Orleans, LA
2014–2015

M. Edward Wilson, Jr, MD
Vancouver, Canada
2015–2016

Robert E. Wiggins, JR, MD, MHA
Nashville, TN
2016–2017

Derek T. Sprunger, MD
Washington, DC
2017–2018

View Abstracts
The meeting program with abstracts can be viewed on the 2019 Annual Meeting app or from the abstract book on the AAPOS website, under the meetings tab, www.aapos.org.

Claim Your CME Credits Online
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Your credits will post immediately to your AAO CME transcript.

ARS
To participate in ARS:
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• Enter Event Code: aapos
• Click “Join”
• Select Room
### AAPOS Committee/Task Force/Group Meetings

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<th>Committee</th>
<th>Date</th>
<th>Time</th>
<th>Room</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finance Committee</td>
<td>Wednesday, March 27</td>
<td>7:00 AM – 8:30 AM</td>
<td>Sapphire 400AB</td>
</tr>
<tr>
<td>Socioeconomic Committee</td>
<td>Wednesday, March 27</td>
<td>3:00 PM – 4:30 PM</td>
<td>Cobalt 501C</td>
</tr>
<tr>
<td>Pediatric Low Vision Rehabilitation Committee</td>
<td>Wednesday, March 27</td>
<td>3:00 PM – 4:00 PM</td>
<td>Sapphire 410A</td>
</tr>
<tr>
<td>Genetic Eye Disease Committee</td>
<td>Wednesday, March 27</td>
<td>3:00 PM – 4:30 PM</td>
<td>Cobalt 502B</td>
</tr>
<tr>
<td>Fellowship Directors Group</td>
<td>Wednesday, March 27</td>
<td>3:00 PM – 4:00 PM</td>
<td>Cobalt 501A</td>
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<tr>
<td>Pediatric Uveitis Task Force</td>
<td>Wednesday, March 27</td>
<td>4:00 PM – 5:00 PM</td>
<td>Cobalt 520</td>
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<tr>
<td>Interorganizational Relations Committee</td>
<td>Wednesday, March 27</td>
<td>4:15 PM – 5:15 PM</td>
<td>Sapphire 410A</td>
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<tr>
<td>Adult Strabismus Task Force</td>
<td>Wednesday, March 27</td>
<td>4:30 PM – 6:00 PM</td>
<td>Cobalt 502B</td>
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<tr>
<td>Research Committee</td>
<td>Wednesday, March 27</td>
<td>4:30 PM – 6:00 PM</td>
<td>Cobalt 502A</td>
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<tr>
<td>Membership Committee</td>
<td>Wednesday, March 27</td>
<td>5:00 PM – 6:00 PM</td>
<td>Cobalt 501B</td>
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<tr>
<td>Vision Screening Committee</td>
<td>Thursday, March 28</td>
<td>2:00 PM – 3:30 PM</td>
<td>Sapphire 400B</td>
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<tr>
<td>Corporate Relations Committee</td>
<td>Thursday, March 28</td>
<td>2:00 PM – 3:00 PM</td>
<td>Sapphire 411A</td>
</tr>
<tr>
<td>Public Information Committee</td>
<td>Thursday, March 28</td>
<td>2:00 PM – 3:30 PM</td>
<td>Cobalt 502A</td>
</tr>
<tr>
<td>Professional Education Committee</td>
<td>Thursday, March 28</td>
<td>2:00 PM – 2:45 PM</td>
<td>Sapphire 410A</td>
</tr>
<tr>
<td>Online Media Committee</td>
<td>Thursday, March 28</td>
<td>2:15 PM – 3:15 PM</td>
<td>Cobalt 501B</td>
</tr>
<tr>
<td>Legislative Committee</td>
<td>Thursday, March 28</td>
<td>2:15 PM – 3:30 PM</td>
<td>Sapphire 411B</td>
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<tr>
<td>IPOSC Council Meeting</td>
<td>Thursday, March 28</td>
<td>2:15 PM – 3:15 PM</td>
<td>Cobalt 500</td>
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<tr>
<td>Young Ophthalmologist Committee</td>
<td>Thursday, March 28</td>
<td>2:30 PM – 3:30 PM</td>
<td>Sapphire 400A</td>
</tr>
<tr>
<td>Socioeconomic Committee (Subcommittee)</td>
<td>Friday, March 29</td>
<td>9:45 AM – 10:30 AM</td>
<td>Cobalt 502A</td>
</tr>
<tr>
<td>Senior Pediatric Ophthalmologist Group</td>
<td>Friday, March 29</td>
<td>12:00 PM – 1:15 PM</td>
<td>Cobalt 501C</td>
</tr>
<tr>
<td>JAAPOS Editorial Board</td>
<td>Friday, March 29</td>
<td>12:00 PM – 1:00 PM</td>
<td>Cobalt 501A</td>
</tr>
<tr>
<td>IPOSC ROP Africa Committee</td>
<td>Saturday, March 30</td>
<td>7:00 AM – 8:00 AM</td>
<td>Sapphire 400A</td>
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<tr>
<td>Learning Disabilities and Vision Therapy Committee</td>
<td>Saturday, March 30</td>
<td>1:00 PM – 2:00 PM</td>
<td>Sapphire 410A</td>
</tr>
<tr>
<td>International Program Committee: Australia</td>
<td>Saturday, March 30</td>
<td>2:00 PM – 3:00 PM</td>
<td>Sapphire 411A</td>
</tr>
<tr>
<td>International Program Committee: South Africa</td>
<td>Saturday, March 30</td>
<td>3:00 PM – 4:00 PM</td>
<td>Sapphire 411A</td>
</tr>
<tr>
<td>International Affairs Committee</td>
<td>Saturday, March 30</td>
<td>4:00 PM – 6:00 PM</td>
<td>Cobalt 501A</td>
</tr>
</tbody>
</table>
AAPOS Educational Mission Statement

The purpose of the American Association for Pediatric Ophthalmology and Strabismus’ (AAPOS) educational activities is to present pediatric ophthalmologists and strabismologists with the highest quality lifelong learning opportunities that promote improvement and change in physician practices, performance, or competence through joint sponsorship with the American Academy of Ophthalmology (AAO), thus enabling such physicians to maintain or improve the competence and professional performance needed to provide the best possible eye care for their patients.

Due to the nature of the subspecialty, the largest component of AAPOS’ educational program focuses on strabismus, amblyopia, visual development, and binocular function. However, the content also emphasizes the other Practice Emphasis Areas (PEAs) that have been defined by the American Board of Ophthalmology (ABO) for their Maintenance of Certification (MOC) process with emphasis on these disease processes in children, and adults with strabismus and eye movement disorders. These include:

- Cataract and Anterior Segment
- Cornea and External Disease
- Glaucoma
- Neuro-ophthalmology and Orbit
- Oculoplastics and Orbit
- Refractive Management and Intervention
- Retina and Vitreous
- Uveitis

Additionally, AAPOS’ educational program provides content for topics such as effective management of a pediatric ophthalmology practice, medical ethics, risk management, and other areas deemed relevant by the needs of the membership.

Types of educational activities provided at the annual AAPOS meeting include:

- Didactic lectures
- Original research in the form of free papers and posters
- In-depth focused workshops and symposia on specific topics
- Small-group discussion opportunities with speakers and researchers

All meeting content is reviewed by the AAPOS Program Committee and Secretary for Program with respect to education quality and utility. Members are routinely queried regarding their assessment of quality and content, as well as needs for future meetings, and comments are reviewed by the Program Committee and Board of Directors, with necessary changes incorporated into future programs.

The expected result of AAPOS’ educational activities is a broad array of ophthalmic knowledge that contributes to the lifelong learning of members and advances physician performance or competence. Ongoing assessment of the impact of AAPOS’ educational program is important in determining modifications to existing activities and the development of new activities. Specific expected results include increased knowledge across the ophthalmic community, activities designed to increase competence and performance with evidence-based standards, current practices, and methods of diagnosis, therapies, and disease prevention.
Continuing Medical Education

**Accreditation Statement**

This activity has been planned and implemented in accordance with the accreditation requirements and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint providership of the American Academy of Ophthalmology and the American Association for Pediatric Ophthalmology and Strabismus. The American Academy of Ophthalmology is accredited by the ACCME to provide continuing medical education for physicians.

**Credit Designation Statement**

The American Academy of Ophthalmology 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.

**Overall Meeting Goals**

Upon completion of this activity, participants will be able to:

- Describe recent medical advances in the diagnosis, management, and treatment of conditions encountered in the practice of pediatric ophthalmology and strabismus
- Discuss improved techniques, compare/contrast methods, and review clinical research and advances in order to provide the best possible treatment options and care to patients
- Describe aspects of professionalism that will assist in practice of pediatric ophthalmology and strabismus
- Describe new techniques in select aspects of surgery pertinent to pediatric ophthalmology and strabismus

**Specific Learning Objectives**

1. Cite most recent data from randomized controlled clinical trials in the diagnosis and management of amblyopia.
2. Describe new preoperative evaluation techniques and surgical strategies to improve outcomes in patients with comitant, non-paretic strabismus.
3. Compare new surgical techniques for complicated strabismus (restrictive, paretic, miswiring syndromes, scarring, incomitance, etc) to decrease reoperation rate.
4. Outline up-to-date patient selection criteria to identify children undergoing cataract surgery who should receive intraocular lenses.
5. Recognize new treatment techniques for pediatric glaucoma, retinal, and oculoplastic and orbital disease and make appropriate sub-specialty referrals for such cases.
6. Describe new treatment strategies to decrease the incidence of significant visual loss from high risk ROP.
7. Recognize pediatric ophthalmic disease of neurologic origin and describe the process for appropriate referrals to pediatric neurology.
8. Utilize the latest resources for discussion of visual development, epidemiology of pediatric eye disease, learning disabilities, vision screening strategies with other physicians and members of the lay community.
9. Identify current coding rules and regulations for pediatric eye diseases.
10. Recognize current laboratory research with potential translation applicability to pediatric ophthalmology.
11. Describe the role of OCT imaging in the diagnosis and treatment of optic nerve, retinal and anterior segment diseases.

**FDA Status Disclaimer**

The FDA has stated that it is the responsibility of the physician to determine the FDA status of each drug or device he or she wishes to use in clinical practice, and to use these products with appropriate patient consent and in compliance with applicable law. The AAPOS provides the opportunity for material to be presented for educational purposes only. The material represents the approach, ideas, statement, or opinion of the presenter and/or author, not necessarily the only or best method or procedure in every case, nor the position of AAPOS. The material is not intended to replace a physician’s own judgement or give specific advice for case management. AAPOS specifically disclaims any and all claims that may arise out of the use of any technique demonstrated or described in any material by any presenter and/or author, whether such claims are asserted by a physician or any other person. Please note: The AAPOS requires all presenters and/or authors to disclose any drug or device that is not approved for use by the FDA in the manner discussed during any oral presentation and/or on all written materials.
Financial Disclosures

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<thead>
<tr>
<th>Category</th>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consultant/Advisor</td>
<td>C</td>
<td>Consultant fee, paid advisory boards or fees for attending a meeting (for the past 1 year)</td>
</tr>
<tr>
<td>Employee</td>
<td>E</td>
<td>Employed by a commercial entity</td>
</tr>
<tr>
<td>Lecture Fees</td>
<td>L</td>
<td>Lecture fees (honoraria), travel fees or reimbursements when speaking at the invitation of a commercial entity (for the past 1 year)</td>
</tr>
<tr>
<td>Equity Owner</td>
<td>O</td>
<td>Equity ownership/stock options of publicly or privately traded firms (excluding mutual funds) with manufacturers of commercial ophthalmic products or commercial ophthalmic services</td>
</tr>
<tr>
<td>Patents/Royalty</td>
<td>P</td>
<td>Patents and/or royalties that might be viewed as creating a potential conflict of interest</td>
</tr>
<tr>
<td>Grant Support</td>
<td>S</td>
<td>Grant support for the past 1 year (all sources) and all sources used for this project if this form is an update for a specific talk or manuscript with no time limitation</td>
</tr>
</tbody>
</table>

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**AAPOS Program Committee**

Bohra, Lisa  
S – Luminopia  
S – Nevakar

Fredrick, Douglas  
C – Eyenovia

Wallace, David  
P – FocusROP

**Oral Paper Presentations**

Drack, Arlene  
S – Spark Therapeutics  
L, S – Retrophin  
S – ProQR  
S – National Institutes of Health  
S – Vision for Tomorrow

Miller, Aaron  
L, S – Luminopia

Hunter, David  
(presented by Aaron Miller)  
O, P – Rebin  
C – Luminopia

Suh, Donny  
(presented by Safeer Siddicky)  
P – Suh Hermsen Glasses

Chiang, Michael  
(presented by Kishan Gupta)  
C – Clarity Medical Systems  
C – Novartis  
O – Intelertina, LLC  
S – National Institutes of Health  
S – National Science Foundation

**Poster Presentations**

Thompson, Benjamin  
C, P – Objective Acuity Ltd.

Birch, Eileen  
(presented by Benjamin Thompson)  
S – National Eye Institute  
S – Thrasher Research Fund  
S – Canadian Institute of Health Research  
C – Objective Acuity

Arnold, Robert  
(presented by Stephanie Arnold, Andrew Arnold, Kyle Smith)  
O, P – PDI Check, LLC  
O – Glacier Medical Software  
C – Alaska Blind Child Discovery

Smith, Kyle  
O – PDI Check, LLC

Seitz, Aaron  
(presented by Yoon Lee)  
O – Carrot Neurotechnology

Wyganski-Jaffe, Tamara  
C, O, P, E – NovaSight

Stolovitch, Chaim  
(presented by Daphna Mezad Koursh)  
C – Green C. Tech, Ltd.

Collins, Megan  
(presented by Angeline Nguyen)  
C – Superior Vision

Mercado, Carmel  
O, P – Optovue, Inc

Koerner, Jagger  
P – FocusROP

Gaier, Eric  
C, O – Luminopia

**Workshop Presentations**

Ashworth, Jane  
L, S – Biomarin Ltd  
C – Inventiva  
C – Fortress Biotech  
C – AbbVie  
L – OrphanEurope

Sornalingam, Krishanthy  
S – Biomarin

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The Frank D. Costenbader Lecture

The Frank D. Costenbader Lecture was inaugurated in 1974 at the Annual Meeting of the Costenbader Society to honor Dr. Costenbader. The American Association for Pediatric Ophthalmology, later the American Association for Pediatric Ophthalmology and Strabismus was created at this meeting. From its inception, AAPOS undertook to sponsor the Costenbader Lecture as the keynote presentation at its annual meeting. Due to failing health, Dr. Costenbader was unable to attend any of the lectures which honored him.

Dr. Costenbader was born and educated in Virginia and was a true Virginia Gentleman. He received his undergraduate education at Hampton-Sydney College, his medical degree from the University of Virginia and completed his residency at the Episcopal Eye, Ear and Throat Hospital in Washington, DC. Dr. Costenbader started practice in 1932 in the depression and began a lifetime commitment to teaching, which set the stage for the tremendous influence he had on ophthalmology when he began to only see children. In 1933, Dr. Costenbader was appointed Instructor in Ophthalmology at Georgetown University and he became Special Lecturer and Conferee there in 1964. He also was on the faculty of George Washington University advancing to the rank of Clinical Professor. He was known for his enormous patience, generous with his time, always offering complete answers to even the weakest questions, and he rarely lost his equanimity. He changed the Children’s Hospital Clinic from one of service only to teaching and clinical care. He committed a full day a week to teaching for many years, spending Tuesday afternoons at Children's and another half day a week at the Episcopal EET Hospital. In 1946, the Episcopal residents started rotating at Children's, and he was able to focus his teaching efforts there.

Dr. Costenbader is referred to as the Father of Pediatric Ophthalmology. That designation is because of his decision in 1943 to limit his practice to pediatric ophthalmology, and he was the first ophthalmologist to do so. He moved his office to a stately brownstone townhouse on 22nd Street in Washington, DC. His waiting room was referred to as Dr. Costenbader’s living room by many of his young patients because of its small furniture. He had two exam rooms on the first floor, which he used, and there were additional exam rooms on the lower level for his orthoptist, Ms. Dorothy Bair, and associates, fellows and preceptors. It was a center for wonderful patient care and the first real education or training center for pediatric ophthalmology. His exam tools were limited. Dr. Costenbader had a picture of an airplane and a phone on a rotating box at the end of his room and kids would beg to come in and see his airplane and talk to him about it. The patient’s examination chair was a kitchen chair placed on a small wooden platform.

When asked why he limited his practice to pediatrics, the first thing Dr. Costenbader would say was that kids are just so much more fun. He also was fascinated with the eye problems of children and at that time, ophthalmologists interested in strabismus were more interested in adults and older children and in cosmetic alignment. Dr. Costenbader was an advocate for children. His concern for their health and the financial welfare of families in providing for the health of their children led him to establish and financially support the Eye Fund at Children’s Hospital to pay for indigent patient surgery. This fund is now used to support the training program at the Children's National Medical Center in Washington, DC. Continuing with his concern for providing for children’s health care, he was co-founder of the Medical Service Plan (today Blue Shield) of the District of Columbia and was the first president from 1946 to 1951. He remained on the board for many years. In addition, he started having parents be with their child in the anesthesia induction room before surgery, he eliminated bandages on eyes following strabismus surgery, and he changed strabismus surgery from two inpatient nights to same-day surgery. Dr. Costenbader was Chief of Ophthalmology at Children’s Hospital of Washington, DC, now The Children’s National Medical Center from 1938 to 1965. He had a remarkable effect on children’s eye care and children’s health in general.

This lecture memorializes the man who had the foresight and the courage to begin a subspecialty in ophthalmology and the talent and dedication to train and mold the next generation according to his ideals.
<table>
<thead>
<tr>
<th>Year</th>
<th>Location</th>
<th>Lecturer</th>
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<tbody>
<tr>
<td>1974</td>
<td>Los Angeles</td>
<td>Marshall M. Parks, MD</td>
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<tr>
<td>1975</td>
<td>Lake Tahoe</td>
<td>Robert N. Shaffer, MD</td>
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<td>1976</td>
<td>Bermuda</td>
<td>Lorenz E. Zimmerman, MD</td>
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<td>1977</td>
<td>San Francisco</td>
<td>T. Keith Lyle, MD</td>
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<td>1978</td>
<td>Williamsburg</td>
<td>Jules Francois, MD</td>
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<td>1979</td>
<td>Toronto</td>
<td>Robison D. Harley, MD</td>
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<tr>
<td>1980</td>
<td>San Diego</td>
<td>David G. Cogan, MD</td>
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<tr>
<td>1981</td>
<td>Orlando</td>
<td>Philip Knapp, MD</td>
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<td>1982</td>
<td>Monterey</td>
<td>Joseph Lang, MD</td>
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<td>1983</td>
<td>Vancouver</td>
<td>Jack C. Crawford, MD</td>
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<td>1984</td>
<td>Vail</td>
<td>Gunter K. von Noorden, MD</td>
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<td>1985</td>
<td>Puerto Rico</td>
<td>Arthur J. Jampolsky, MD</td>
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<td>Past Costenbader Lecturers</td>
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<tr>
<td>1986</td>
<td>Maui</td>
<td>Robert M. Ellsworth, MD</td>
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<td>1987</td>
<td>Scottsdale</td>
<td>John E. Wright, MD</td>
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<td>1988</td>
<td>Boston</td>
<td>Alan B. Scott, MD</td>
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<td>1989</td>
<td>Kiawah</td>
<td>Kenneth C. Swan, MD</td>
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<td>1990</td>
<td>Lake George</td>
<td>John T. Flynn, MD</td>
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<td>1991</td>
<td>Montreal</td>
<td>John A. Pratt-Johnson, MD</td>
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<td>1992</td>
<td>Maui</td>
<td>Eugene M. Helveston, MD</td>
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<td>1993</td>
<td>Palm Springs</td>
<td>Henry S. Metz, MD</td>
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<td>1994</td>
<td>Vancouver</td>
<td>William E. Scott, MD</td>
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<td>1995</td>
<td>Orlando</td>
<td>Eugene R. Folk, MD</td>
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<td>1996</td>
<td>Snowbird</td>
<td>Marilyn T. Miller, MD</td>
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<td>1997</td>
<td>Charleston</td>
<td>Robert D. Reinecke, MD</td>
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<td>1998</td>
<td>Palm Springs</td>
<td>David L. Guyton, MD</td>
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<td>1999</td>
<td>Toronto</td>
<td>Malcolm L. Mazow, MD</td>
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<td>2000</td>
<td>San Diego</td>
<td>David R. Stager, Sr., MD</td>
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<td>2001</td>
<td>Orlando</td>
<td>Forrest Daryel Ellis, MD</td>
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<td>2002</td>
<td>Seattle</td>
<td>Creig S. Hoyt, MD</td>
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<td>2003</td>
<td>Hawaii</td>
<td>Burton J. Kushner, MD</td>
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<td>2004</td>
<td>Washington, DC</td>
<td>Arthur L. Rosenbaum, MD</td>
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<td>2005</td>
<td>Orlando</td>
<td>Albert W. Biglan, MD</td>
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<td>2006</td>
<td>Keystone</td>
<td>Earl A. Palmer, MD</td>
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<tr>
<td>2007</td>
<td>Seattle</td>
<td>John D. Baker, MD</td>
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<td>2008</td>
<td>Washington, DC</td>
<td>Edward G. Buckley, MD</td>
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<td>2009</td>
<td>San Francisco</td>
<td>Richard A. Saunders, MD</td>
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<tr>
<td>2010</td>
<td>Orlando</td>
<td>A. Linn Murphree, MD</td>
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<tr>
<td>2011</td>
<td>San Diego</td>
<td>Susan H. Day, MD</td>
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<tr>
<td>2012</td>
<td>San Antonio</td>
<td>Michael X. Repka, MD</td>
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<td>2013</td>
<td>Boston</td>
<td>M. Edward Wilson, MD</td>
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<td>2014</td>
<td>Palm Springs</td>
<td>John F. O’Neill, MD</td>
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<td>2015</td>
<td>New Orleans</td>
<td>David S. Walton, MD</td>
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<td>2016</td>
<td>Vancouver</td>
<td>Edward L. Raab, MD</td>
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<td>2017</td>
<td>Nashville</td>
<td>Steven M. Archer, MD</td>
</tr>
<tr>
<td>2018</td>
<td>Washington, DC</td>
<td>Elias I. Traboulsi, MD, MEd</td>
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**46th Annual Frank D. Costenbader Lecturer**

**David A. Plager, MD**  
*Making the Superior Oblique Great Again*  
**Thursday, March 28, 2019 · 8:20 AM – 8:45 AM**

David A. Plager was born and lived his early childhood years in Gainesville, Florida then was raised in Urbana, Illinois with stops in New York City and Madison, Wisconsin. He graduated from Stanford University in 1979 followed by an MD degree from Indiana University where he graduated with highest honors. Following ophthalmology residency at Indiana, he completed his fellowship in pediatric ophthalmology and adult strabismus at the Children’s Hospital National Medical Center in Washington, DC.

He returned to Indianapolis where he joined Gene Helveston and Daryel Ellis on the Indiana University faculty as an assistant professor in 1988. He became Professor of Ophthalmology and Director of the IU pediatric ophthalmology fellowship program and the section of pediatric ophthalmology at Riley Children’s Hospital in 2000.

Dr. Plager has delivered over 250 lectures nationally and internationally on a wide range of topics in pediatric ophthalmology: from cataracts to glaucoma to vascular malformations and on a wide range of strabismus topics- he has a particular interest in the treatment of oblique muscle dysfunction. He has published or coauthored over 100 scientific articles in peer-reviewed journals, 15 book chapters and was editor and co-author of the textbook *Strabismus Surgery: Basic and Advanced Strategies*. He has received research grants for work in ROP, pediatric cataracts and pediatric glaucoma.

Dr. Plager was President of AAPOS in 2011 and served on the AAPOS Board of Directors for 12 years as Director at Large and Councilor to the AAO. He has chaired the AAPOS Finance, Corporate Relations and Long-Range Planning committees. AAPOS has awarded him its Honor, Senior Honor and Lifetime Achievement Awards.

He was a graduate of the American Academy of Ophthalmology’s LDP X class of 2007-08. Other AAO service has been on the BCSC Section 6 faculty, member of the Online Education Committee and the Knights Templar Pediatric Education Center. The AAO has awarded him its Achievement, Senior Achievement, Lifetime Achievement, Secretariat and Special Recognition Awards.

Other activities in ophthalmic societies include many stents as a Board examiner for the American Board of Ophthalmology as well as positions as item writer for the MOC-PORT and CREW exams. He was a charter member of the Pediatric Clinical Committee of the American Society for Cataract and Refractive Surgery, was a member of the Board of Directors of the Children’s Eye Foundation, and was President of the American Eye Study Club.

He served as an Associate Editor of the Journal of AAPOS, pediatric chairperson of the Eye Net Advisory Board and serves as ad hoc reviewer for the AJO, JAMA- Ophthalmology, BJO, Journal of ASCRS and Ophthalmology among others.

In his spare time, he serves as ophthalmologist for the Indianapolis Colts who awarded him Super Bowl rings in 2006 and 2009. Dr. Plager and his wife Martha have two sons, Henry who lives in Dallas and works at Pepsico/Frito Lay and Charlie who lives in Kansas City and works at Cerner.

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**2019 Helveston Lecturer**

**Michael X. Repka, MD, MBA**  
*Cataract Surgery in Children from Birth to Less than 13 Years of Age in the PEDIG Registry: Status Three Years Following Surgery*  
**Thursday, March 28, 2019 · 11:20 AM – 11:40 AM**

Dr. Michael Repka is professor of ophthalmology and a professor of pediatrics at the Johns Hopkins University School of Medicine. He currently holds the David L. Guyton, MD, and Feduniak Family Chair in ophthalmology.

Dr. Repka has been at the Johns Hopkins University School of Medicine since 1983. He received his medical degree from the Jefferson Medical College of Thomas Jefferson University in 1979 and completed his ophthalmology residency at Wills Eye Hospital. Following completion of his residency...
training, a fellowship was spent training in pediatric ophthalmology and strabismus as well as neuro-ophthalmology at the Wilmer Ophthalmological Institute of Johns Hopkins Hospital. He completed his MBA at Johns Hopkins University in 2010.

He has contributed in the fields of pediatric ophthalmology, strabismus, retinopathy of prematurity and pediatric neuro-ophthalmology. His clinical practice includes an interest in the management of strabismus and ambyloplia. In these areas, he has a special interest in using alternatives to patching for the management of ambyloplia and using strabismus surgery, botulinum toxin and adjustable sutures to treat strabismus. He performs cataract surgery and intraocular lens implantation on children with cataracts. He has a special interest in pediatric neuro-ophthalmology. He led the Pediatric Eye Disease Investigator Group from 1997 to 2009 as chair and currently serves as past chair for and member of the operations committee. PEDIG's network has conducted more than 20 clinical trials in pediatric ophthalmology funded by the National Eye Institute.

Dr. Repka currently is Vice-chair for Clinical Practice of the Wilmer Institute and Division Director of Pediatric Ophthalmology and Adult Strabismus at the Wilmer Institute of Johns Hopkins University. He also serves as the Medical Director for Governmental Affairs of the American Academy of Ophthalmology. He is a past chair of the FDA's Ophthalmic and Dermatological Advisory Committee and is currently AAO's CPT Advisor to the AMA's CPT Editorial Panel.

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**2019 Parks Award Recipient**

**Susan H. Day, MD**

**Thursday, March 28, 2019 · 11:00 AM – 11:08 AM**

Born in Louisiana, Dr. Day’s formative years were immersed in the importance of education. Emphasis on science was everywhere and included space exploration, polio vaccines, and safer transportation. At home, art was the focus as both parents were teachers of music. It was the kindness of a pediatrician who first introduced Dr. Day to the merging of art and science as a physician. By sharing the experience of “rounding” in a nursery, the beauty of combining service, art, and science was first seen.

Upon graduation from Louisiana State University School of Medicine in New Orleans, it was San Francisco that became the center for Dr. Day’s ophthalmic career. Her residency at California Pacific Medical Center introduced her to the complexities of Dr. Art Jampolsky’s clinical practice, the creativity of Dr. Alan Scott’s oculinum research, and the oft-ignored emphasis of Dr. William Hoyt’s neuro-ophthalmic perspective on pediatric ophthalmology and strabismus. Underpinning all of this early experience was the role of educational rigor and standards-setting brought by Dr. Bruce Spivey and Dr. William Spencer.

To gain further perspective on how children might be helped, Dr. Day spent her fellowship with Mr David Taylor, consultant at Great Ormond Street Hospital, London. As a tertiary/quaternary care center, the multitude of unusual diseases was offset by the realization that children’s needs were universal, and that the attitudes of those they met could mold lifelong behavior-vulnerability building trust, inexperience linking to creative thinking, relief from suffering resulting in gratitude. To supplement her training, Dr. Day completed additional strabismus education with Dr. William Scott and Dr. Marshall Parks prior to returning to San Francisco.

Dr. Day feels blessed to have practiced pediatric ophthalmology and strabismus for over 30 years, enjoying the welcoming collegiality of those who trained her as well as with future partners Drs. William Good and Taliva Martin. Research colleagues at Smith-Kettlewell Eye Research Institute provided answers to clinically relevant questions, and constant reminders that continuing education comes from diverse disciplines. Yet her compelling interest in learning and teaching led to increased activities in how residents are trained and how standards are set.

It was participation in such organizations governing these processes- the American Academy of Ophthalmology, the American Association for Pediatric Ophthalmology and Strabismus, the Association of University Professors in Ophthalmology, the American Board of Ophthalmology, the American Ophthalmological Society, and the Ophthalmology Residency Review Committee that provided her with leadership positions to learn even further how miraculous it is that anyone can become a competent physician! Her favorite relevant quote, written by Abigail Adams (wife of our third president in the US), is truly the theme of her career: Learning is not attained by chance. It must be sought for with ardor and attended to with diligence.

Since 2014, Dr. Day has served as Senior Vice President, Medical Affairs, for ACGME International. In this role, she works internationally with places and programs who seek to build a system of education. America has the distinct reputation of producing high quality physicians through its educational system which has evolved over a century. By exporting these high standards and allowing country-specific flexibility, it is her hope to contribute to the improvement of world health.
Dr. Derek Sprunger, Associate Professor of Clinical Ophthalmology at Indiana University School of Medicine, served as President of the American Association for Pediatric Ophthalmology and Strabismus (AAPOS), and was the inaugural President of the International Pediatric Ophthalmology and Strabismus Council (IPOSC). His service to the American Academy of Ophthalmology (AAO) included 2 terms on the AAO Council and 1 term on The Secretariat of State Affairs. He is a recipient of the Lifetime Achievement Award from AAPOS and Senior Achievement Award from the AAO. He has been President of the Indiana Academy of Ophthalmology (IAO) and was twice their Ophthalmologist of the Year. Dr. Sprunger received the John H Killian Award from the American Eye Study Club, where he is an Emeritus Member.

Dr. Sprunger has co-authored over 100 journal publications. He considers his most rewarding and cherished professional experience to be his involvement in the training of over 65 USA and International Pediatric Ophthalmology Fellows.
Hilton San Diego Bayfront

Hotel Map

Level 5  Cobalt Level
### Program Schedule

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<th>Time</th>
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<th>Location</th>
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</thead>
<tbody>
<tr>
<td>7:00 AM–2:30 PM</td>
<td>Finance Committee, Board of Directors Meetings</td>
<td>SAPPHIRE 400AB</td>
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<tr>
<td>12:00 PM–8:00 PM</td>
<td>Registration</td>
<td>SAPPHIRE WEST Foyer</td>
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<tr>
<td>1:00 PM–4:00 PM</td>
<td>Poster Set Up (1st Set)</td>
<td>SAPPHIRE WEST Foyer</td>
</tr>
<tr>
<td>4:00 PM–6:00 PM</td>
<td>Poster Viewing (1st Set) (Authors not present)</td>
<td>SAPPHIRE WEST Foyer</td>
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<tr>
<td>6:15 PM–7:00 PM</td>
<td>International Attendees Reception</td>
<td>SAPPHIRE 400AB</td>
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<tr>
<td>7:00 PM–9:00 PM</td>
<td>Opening Reception</td>
<td>SAPPHIRE ABEFJMN</td>
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#### Thursday, March 28

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tr>
<td>6:30 AM–5:00 PM</td>
<td>Registration</td>
<td>SAPPHIRE WEST Foyer</td>
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<tr>
<td>6:30 AM–8:00 AM</td>
<td>Breakfast</td>
<td>SAPPHIRE CDGHKL</td>
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<tr>
<td>6:30 AM–7:30 AM</td>
<td>Poster Viewing (Authors not present)</td>
<td>SAPPHIRE WEST Foyer</td>
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<tr>
<td>7:55 AM–9:55 AM</td>
<td>Moderators: Mary Louise Z. Collins, MD &amp; R. Michael Siatkowski, MD</td>
<td>SAPPHIRE ABEFJMN</td>
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<tr>
<td>7:55 AM–8:00 AM</td>
<td>Introduction and Welcome</td>
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<tr>
<td>8:00 AM–8:15 AM</td>
<td>AAPOS President's Remarks, Honor Awards, Senior Honor Awards, Lifetime Achievement Awards</td>
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<tr>
<td>8:15 AM–8:48 AM</td>
<td>Scientific Session: Cataract – Glaucoma – Uveitis</td>
<td>SAPPHIRE ABEFJMN</td>
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<td>8:15 AM–8:20 AM</td>
<td>Introduction of Costenbader Lecturer</td>
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<tr>
<td>8:20 AM–8:45 AM</td>
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<td>8:45 AM–8:48 AM</td>
<td>Presentation Ceremony</td>
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<td>8:50 AM–9:55 AM</td>
<td>Scientific Session: Cataract – Glaucoma – Uveitis</td>
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<tr>
<td>8:50 AM–8:57 AM</td>
<td>Are Piggyback IOLs Recommendable for Children?</td>
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<tr>
<td>8:57 AM–9:04 AM</td>
<td>Outcomes of Bilateral Cataracts Removed in Infants 1 to 7 Months of Age Concurrent with the Infant Aphakia Treatment Study</td>
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<tr>
<td>9:04 AM–9:11 AM</td>
<td>Outcomes and Complications of Simultaneous Bilateral Cataract Surgery (SBCS) in Children – A 10 Year Review</td>
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<tr>
<td>9:11 AM–9:15 AM</td>
<td>DISCUSSION OF PREVIOUS PAPER – David G. Morrison, MD</td>
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### Program Schedule

**Thursday, March 28 (continued)**

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<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Authors</th>
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</thead>
<tbody>
<tr>
<td>9:15 AM–9:22 AM</td>
<td><strong>PAPER 4</strong> Home Tonometry Redefines Glaucoma Drainage Device Management in Childhood Glaucoma</td>
<td>Michelle S. Go, MD; Navajyoti R. Barman, BS; Robert J. House, MD; Sharon F. Freedman, MD</td>
</tr>
<tr>
<td>9:22 AM–9:29 AM</td>
<td><strong>PAPER 5</strong> Trabeculotomy Ab-Interno with the Trab360 Device for Childhood Glaucomas</td>
<td>Raymond G. Areaux, Jr, MD; Alana L. Grajewski, MD; James D. Brandt, MD; Beth Edmunds, MD, PhD; Elena Bitrian, MD</td>
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<tr>
<td>9:29 AM–9:33 AM</td>
<td>DISCUSSION OF PREVIOUS PAPER – Faruk H. Orge, MD</td>
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<tr>
<td>9:33 AM–9:40 AM</td>
<td><strong>PAPER 6</strong> Failure of Methotrexate Monotherapy and Subsequent Response to Tumor Necrosis Factor Inhibitors in Pediatric Non-Infectious Uveitis</td>
<td>Basak Can Ermerak, MD; Erin D. Stahl, MD; Ashley M. Cooper, MD; Katie Keck, MD</td>
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<tr>
<td>9:40 AM–9:55 AM</td>
<td>PANEL DISCUSSION – M. Edward Wilson, Jr, MD; Erick D. Bothun, MD; Vishaal Bhambhwani; Michelle S. Go, MD; Raymond G. Areaux, Jr., MD; Basak Can Ermerak, MD</td>
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<tr>
<td>11:00 AM–1:00 PM</td>
<td>Moderators: Jean E. Ramsey, MD, MPH &amp; Derek T. Sprunger, MD</td>
<td>Sapphire ABEFJMN</td>
</tr>
<tr>
<td>11:00 AM–11:08 AM</td>
<td>Presentation of Parks Medals</td>
<td>Sapphire ABEFJMN</td>
</tr>
<tr>
<td>11:08 AM–11:15 AM</td>
<td>Children’s Eye Foundation of AAPOS Update</td>
<td>Sapphire ABEFJMN</td>
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<tr>
<td>11:15 AM–11:43 AM</td>
<td>Helveston Lecture</td>
<td>Sapphire ABEFJMN</td>
</tr>
<tr>
<td>11:15 AM–11:20 AM</td>
<td>Introduction of Helveston Lecturer</td>
<td>David L. Guyton, MD</td>
</tr>
<tr>
<td>11:20 AM–11:40 AM</td>
<td>Helveston Lecture</td>
<td>Cataract Surgery in Children from Birth to Less than 13 Years of Age in the PEDIG Registry: Status Three Years Following Surgery</td>
</tr>
<tr>
<td>11:40 AM–11:43 AM</td>
<td>Presentation Ceremony – David A. Plager, MD</td>
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</tr>
<tr>
<td>11:45 AM–1:00 PM</td>
<td>Scientific Session: Retinoblastoma – Retina – Genetics – Ocular Sensory</td>
<td>Sapphire ABEFJMN</td>
</tr>
<tr>
<td>11:45 AM–11:52 AM</td>
<td><strong>PAPER 7</strong> Optical Coherence Tomography Guided Localization and Laser Photocoagulation of Invisible New Retinoblastoma</td>
<td>Sameh E. Soliman; Cynthia VandenHoven; Leslie Mackeen; Brenda L. Gallie</td>
</tr>
<tr>
<td>11:52 AM–11:59 AM</td>
<td><strong>PAPER 8</strong> Comparison of Outcomes, Adverse Events, and Treatment Burden of Intravenous Chemotherapy vs. Intra-Arterial Chemotherapy for Retinoblastoma: Results of a Pilot Study</td>
<td>Pranav R. Santapuram, BA; Jessica L. Burris, BS; Debra L. Friedman, MD; Tatsuki Koyama, PhD; Anthony B. Daniels, MD, MSc</td>
</tr>
<tr>
<td>11:59 AM–12:06 PM</td>
<td><strong>PAPER 9</strong> Determining the Tractional Forces on Vitreoretinal Interface Using Computer Simulation and Animal Models to Elucidate the Retinal Hemorrhage Patterns in Abusive Head Trauma</td>
<td>Donny W. Suh, MD</td>
</tr>
<tr>
<td>12:06 PM–12:10 PM</td>
<td>DISCUSSION OF PREVIOUS PAPER – Alex V. Levin, MD, MHS</td>
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<tr>
<td>Time</td>
<td>Session</td>
<td>Title</td>
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<tr>
<td>12:10 PM–12:17 PM</td>
<td><strong>PAPER 10</strong></td>
<td>Diagnosis of Inherited Retinal Degenerations in Pediatric Patients using the RETeval Handheld Electroretinogram</td>
</tr>
<tr>
<td>12:17 PM–12:24 PM</td>
<td><strong>PAPER 11</strong></td>
<td>How Long Does Gene Therapy Last? 4 Year Follow-Up of Phase 3 Voretigene Neparvovec Trial in RPE65-Associated LCA/Inherited Retinal Disease</td>
</tr>
<tr>
<td>12:24 PM–12:31 PM</td>
<td><strong>PAPER 12</strong></td>
<td>Diagnosis of Congenital Special Forms of Strabismus Based on High-Throughput Sequencing and High-Resolution MRI</td>
</tr>
<tr>
<td>12:38 PM–12:45 PM</td>
<td><strong>PAPER 14</strong></td>
<td>Incidence of Symptomatic Torsional and Vertical Diplopia After Superior Rectus Transposition for Esotropic Duane Syndrome and 6th Nerve Palsy</td>
</tr>
<tr>
<td>1:10 PM–2:00 PM</td>
<td><strong>AAPOS Business Meeting</strong></td>
<td><strong>SAPPHIRE ABELJAN</strong></td>
</tr>
<tr>
<td>2:15 PM–3:15 PM</td>
<td><strong>WORKSHOP 1</strong></td>
<td>Genetic Eye Disease Committee Symposium <strong>SAPPHIRE ABELJAN</strong></td>
</tr>
<tr>
<td>3:30 PM–4:30 PM</td>
<td><strong>WORKSHOP 2</strong></td>
<td>OMIC Workshop <strong>SAPPHIRE OP</strong></td>
</tr>
<tr>
<td>3:30 PM–4:30 PM</td>
<td><strong>Rapid Fire Poster Presentations</strong></td>
<td><strong>SAPPHIRE ABELJAN</strong></td>
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<tr>
<td></td>
<td><strong>POSTER 17</strong></td>
<td><strong>SAPPHIRE ABELJAN</strong></td>
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<td></td>
<td><strong>POSTER 25</strong></td>
<td><strong>SAPPHIRE ABELJAN</strong></td>
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<td><strong>POSTER 88</strong></td>
<td><strong>SAPPHIRE ABELJAN</strong></td>
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<tr>
<td>Thursday, March 28 (continued)</td>
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</table>
| **POSTER 105** | Performance of a Photoscreener with Novel C.R. Infrared Wand Strabismus Estimation Compared to Another Screening Device and Comprehensive Examination  
*Stephanie L. Arnold, OMS II* |
| **POSTER 108** | A Novel Objective Visual Acuity Screener for Preschool Children  
*Eileen E. Birch, PhD for Ben Thompson, PhD* |
| **POSTER 124** | Incidence of Strabismus in Children Initially Diagnosed with Pseudostrabismus Using the Optum Dataset  
*Won Yeol W. Ryu, MD* |
| **POSTER 137** | Bilateral Full Tenectomy of the Superior Oblique Muscle for the Treatment of A-Pattern Strabismus  
*Iara Debert, MD, PhD* |
| **POSTER 148** | Correlation Between Spectral Domain Optical Coherence Tomography (SD-OCT) and Long-Term Vision Loss in Children with Papilledema  
*Michael J. Wan, MD, FRCS* |
| **POSTER 150** | Utility of the OCT Lazy V Sign in Diagnosing Optic Nerve Edema in a Pediatric Population  
*Hilliary E. Inger, MD* |
| 4:30 PM–6:30 PM | Helveston Founders Series Reception  
SAPPHIRE CDGHKL |
| 5:30 PM–6:30 PM | Administrators Meet and Greet  
COBALT 520 |

<table>
<thead>
<tr>
<th>Friday, March 29</th>
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</table>
| 6:30 AM–5:00 PM | Registration  
SAPPHIRE WEST FOYER |
| 6:30 AM–8:00 AM | Breakfast  
SAPPHIRE CDGHKL |
| 6:30 AM–7:00 AM | Poster Viewing (1st Set) (Authors not present)  
SAPPHIRE WEST FOYER |
| 7:00 AM–8:15 AM | Workshops  
CME |
| **WORKSHOP 3** | Stump the Chump – Tough Cases to Highlight Challenges in Childhood Glaucoma Diagnosis and Management  
*SapPHIRE OP*  
*Sharon F. Freedman, MD; Alex V. Levin, MD; Allen D. Beck, MD; Ta-Chen (Peter) Chang, MD; Amanda L. Ely, MD; Allison R. Loh, MD* |
| **WORKSHOP 4** | 21st Century Teaching: Best Practices in Medical Education  
*SAPPHIRE 400AB*  
*Matthew D. Gearinger, MD; Tammy Yanovitch; Michelle Cabrera; Gena Heidary* |
| **WORKSHOP 5** | IPoSC Workshop: Nightmares in Strabismus  
*SAPPHIRE ABEF*  
*Faruk H. Orge; Frank Martin; Sonal Farzavandi; Tamara Wygnanski Jaffe; Adolfo Guemes; Eedy Mezer; Moustafa Salah* |
| **WORKSHOP 6** | Reading Difficulties and the Pediatric Ophthalmologist  
*SAPPHIRE LINN*  
*Melinda Rainey, MD; Deborah M. Alcorn, MD; Linn M. Mangano, MD; Laura J. Heinmiller, MD; Sheryl M. Handler, MD; Walter F. Fierso, MD* |
| 8:30 AM–9:45 AM | Workshops  
CME |
| **WORKSHOP 7** | What’s New and Important in Pediatric Ophthalmology and Strabismus in 2019  
*SAPPHIRE ABEF*  
*Darron A. Bacal, MD, FAAP; Tina Rutar, MD; Hee-Jung Park, MD, MPH; Marina Eisenberg, MD; Melanie Schmitt, MD; Sudha Nallasamy, MD; Kara Cavuoto, MD; Gena Heidary, MD, PhD; Ilana Friedman, MD; Phoebe Lenhart, MD* |
| **WORKSHOP 8** | Pediatric Optometrists Trained in a Medical Home – A Training Program and the Pediatric MD-OD Working Relationship  
*SAPPHIRE 400AB*  
*Sharon F. Freedman, MD; Nathan Cheung, OD; Robert Enzenauer, MD, PhD; Daniel Smith, OD; Scott E. Oltisky, MD; Erin D. Stahl, Timothy E. Hug, OD; Michael E. Gray, MD* |
| **WORKSHOP 9** | AAP Workshop: Cortical/Cerebral Visual Impairment 2019: What You Need to Know to Diagnose and Treat  
*SAPPHIRE OP*  
*Sharon S. Lehman, MD; Linda M. Lawrence, MD; Terry L. Schwartz, MD* |
### Program Schedule

#### Friday, March 29 (continued)

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<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:45 AM–10:30 AM</td>
<td>Refreshment Break and Exhibit Viewing</td>
<td>SAPPHIRE CDJKL</td>
</tr>
<tr>
<td>10:30 AM–11:45 AM</td>
<td>Workshops</td>
<td>SAPPHIRE ABF</td>
</tr>
<tr>
<td>9:45 AM–10:30 AM</td>
<td>Evaluating the Evidence: AAPOS Research Committee In-Depth Analyses of What’s New in Pediatric Ophthalmology</td>
<td>SAPPHIRE ABF</td>
</tr>
<tr>
<td>10:30 AM–11:45 AM</td>
<td>‘Returning to the Scene:’ IOL Implant-Related Reoperations</td>
<td>SAPPHIRE OP</td>
</tr>
<tr>
<td>11:00 AM–12:00 PM</td>
<td>Poster Removal (1st Set)</td>
<td>SAPPHIRE WEST FOYER</td>
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<tr>
<td>11:45 AM–1:15 PM</td>
<td>Lunch Break – On Your Own</td>
<td>SAPPHIRE ABF</td>
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<tr>
<td>1:15 PM–2:30 PM</td>
<td>Workshops</td>
<td>SAPPHIRE ABF</td>
</tr>
<tr>
<td>1:15 PM–2:30 PM</td>
<td>Become a Leader in AAPOS: The Inside Tips</td>
<td>SAPPHIRE 400AB</td>
</tr>
<tr>
<td>1:15 PM–2:30 PM</td>
<td>Periocular Dermatologic Conditions: Clinical Pearls</td>
<td>SAPPHIRE OP</td>
</tr>
<tr>
<td>1:15 PM–2:30 PM</td>
<td>Pediatric Uveitis Task Force: A Multi-Disciplinary Approach to Management Challenges in Pediatric Uveitis</td>
<td>SAPPHIRE LMMN</td>
</tr>
<tr>
<td>1:15 PM–2:30 PM</td>
<td>Adult Strabismus Workshop</td>
<td>SAPPHIRE ABF</td>
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<tr>
<td>2:45 PM–4:00 PM</td>
<td>Workshops</td>
<td>SAPPHIRE ABF</td>
</tr>
<tr>
<td>2:45 PM–4:00 PM</td>
<td>AOC Workshop: Alternative Treatments: Bogus or Bona Fide?</td>
<td>SAPPHIRE ABF</td>
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<tr>
<td>2:45 PM–4:00 PM</td>
<td>Practical Oculoplastics for Pediatric Ophthalmologists</td>
<td>SAPPHIRE LMMN</td>
</tr>
<tr>
<td>2:45 PM–4:00 PM</td>
<td>Musculoskeletal Symptoms Among Ophthalmologists and How to Prevent Them</td>
<td>SAPPHIRE 400AB</td>
</tr>
<tr>
<td>2:45 PM–4:00 PM</td>
<td>Multimodal Imaging of the Infant and Pediatric Eye: Pearls and Pitfalls</td>
<td>SAPPHIRE OP</td>
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</tbody>
</table>
## Program Schedule

### Friday, March 29 (continued)

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>3:45 PM–4:15 PM</td>
<td>Poster Set Up (2nd Set)</td>
<td>SAPPHIRE WEST FOYER</td>
</tr>
<tr>
<td>4:15 PM–5:15 PM</td>
<td>President's Symposium</td>
<td>SAPPHIRE ABEF</td>
</tr>
<tr>
<td>WORKSHOP 23</td>
<td>Learning Resiliency to Improve Wellness in the Workplace</td>
<td>Cobalt 500</td>
</tr>
<tr>
<td>5:30 PM–6:30 PM</td>
<td>Young Ophthalmologists, Senior Ophthalmologists and New Member Reception</td>
<td>USS MIDWAY</td>
</tr>
<tr>
<td>7:00 PM–10:00 PM</td>
<td>Children’s Eye Foundation of AAPOS Gala (Separate Registration/Fee)</td>
<td>Cobalt 500</td>
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</table>

### Saturday, March 30

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
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<tbody>
<tr>
<td>6:30 AM–8:00 AM</td>
<td>Breakfast</td>
<td>Cobalt 500</td>
</tr>
<tr>
<td>7:00 AM–5:00 PM</td>
<td>Registration</td>
<td>SAPPHIRE WEST FOYER</td>
</tr>
<tr>
<td>7:00 AM–8:00 AM</td>
<td>Poster viewing (2nd Set) (Authors not present)</td>
<td>SAPPHIRE WEST FOYER</td>
</tr>
<tr>
<td>8:00 AM–2:00 PM</td>
<td>Administrators Program</td>
<td>Cobalt 500</td>
</tr>
<tr>
<td>8:00 AM–9:55 AM</td>
<td>Moderators: Robert S. Gold, MD &amp; Katherine A. Lee, MD, PhD</td>
<td>Sapphire ABFJMN</td>
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<tr>
<td>8:00 AM–8:13 AM</td>
<td>Young Investigator Award</td>
<td>Sapphire ABFJMN</td>
</tr>
<tr>
<td>8:00 AM–8:02 AM</td>
<td>Introduction of the Young Investigator Award</td>
<td>Gil Binenbaum, MD, MSCE</td>
</tr>
<tr>
<td>8:02 AM–8:12 AM</td>
<td>Young Investigator Paper</td>
<td>Paper 15</td>
</tr>
<tr>
<td></td>
<td>The Functional Impact of Strabismus</td>
<td>Stacy L. Pineles, MD, MS</td>
</tr>
<tr>
<td>8:12 AM–8:13 AM</td>
<td>Presentation Ceremony</td>
<td>Gil Binenbaum, MD, MSCE</td>
</tr>
<tr>
<td>8:13 AM–8:55 AM</td>
<td>Scientific Session: Retinopathy of Prematurity – Retina</td>
<td>SAPPHIRE ABFJMN</td>
</tr>
<tr>
<td>8:13 AM–8:20 AM</td>
<td>Validation of the G-ROP Modified Retinopathy of Prematurity Screening Criteria</td>
<td>Gil Binenbaum, MD, MSCE</td>
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<td>Lauren A. Tomlinson; Alejandra de Alba Campomanes; Edward Bell; Pamela Donohue; David Morrison; Graham Quinn; Michael X. Repka; David Rogers; Michael Yang; Yinxi Yu; Gui-shuang Yang</td>
<td></td>
</tr>
<tr>
<td>8:20 AM–8:27 AM</td>
<td>Punctate Hyperreflective Vitreous Opacities Visualized by Handheld Spectral Domain Optical Coherence Tomography in Premature Infants Screened for Retinopathy of Prematurity</td>
<td>Emily M. Zepeda, MD</td>
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<td>Thomas B. Gillette, MD; Ayesha Shariff, MD; Laura Grant, MD; Leona Ding, MS; Kristina Tarczy-Hornoch, MD; Michelle T. Cabrera, MD</td>
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</tr>
<tr>
<td>8:27 AM–8:34 AM</td>
<td>Deep Learning for Monitoring ROP Progression</td>
<td>Kishan Gupta, MD, PhD</td>
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<td>Stanford Taylor, MD; J. Peter Campbell, MD, MPH; Jayashree Kalpathy-Cramer, PhD; James M. Brown, PhD; R.V. Paul Chan, MD; Sang J. Kim, PhD; Michael F. Chiang, MD</td>
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</tr>
<tr>
<td>8:34 AM–8:41 AM</td>
<td>Short- and Long-Term Effects of Aflibercept on Retinal Vascular Development in the Oxygen-Induced Retinopathy Mouse Model of Retinopathy of Prematurity</td>
<td>Sarina M. Amin, MD</td>
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<td>Jade Guevara, MD; Andres Gonzalez, MD; Wesley C. Smith, PhD; Swati Agarwal-Sinha, MD</td>
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</table>
### Program Schedule

**Saturday, March 30 (continued)**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session/Conference</th>
<th>Title</th>
<th>Presenters/Participants</th>
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<tbody>
<tr>
<td>8:41 AM–8:48 AM</td>
<td>Can Fluorescein Angiography Retinal Findings Predict the Late-Onset Risk of Recurrence Post Intravitreal Bevacizumab for ROP?</td>
<td>Swati Agarwal-Sinha, MD, Andres Gonzalez, MD</td>
<td></td>
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<tr>
<td>8:48 AM–8:55 AM</td>
<td>Comparison of Hand-Held Spectral Domain Optical Coherence Tomography (HH-SDOCT) findings in Non-Accidental Injury (NAI) and non-NAI</td>
<td>Bhamy Hariprasad Shenoy, MBBS, MS, FICO, FRCOphth</td>
<td>Vinod Sharma, MBBS, MS, DNB, FRCSeD, FRCOphth; William Newman, MB, BS, FRCS (Glasg), FRCOphth, LL.M (Medical Law); Jane Ashworth, BMCh, FRCOphth, PhD; Susmito Biswas, BSc, Hons, MBBS, FRCOphth</td>
</tr>
<tr>
<td>8:55 AM–9:27 AM</td>
<td>Scientific Session: Strabismus – Extraocular Muscles</td>
<td>A Prospective Observational Study of Adult Divergence Insufficiency Esotropia</td>
<td>Eric R. Crouch, MD; Trevano W. Dean, MPH; Jonathan M. Holmes, MD; Raymond T. Kraker, MSPH; Aaron M. Miller, MD; Courtney Kraus; Kammi B. Gunton, MD; Michael X. Repka, MD, MBA; Justin D. Marsh, MD; Monte A. Del Monte, MD; Paula A. Luke, OD; Jason H. Peragallo, MD; David K. Wallace, MD, MPH</td>
</tr>
<tr>
<td>9:02 AM–9:09 AM</td>
<td>The Medial Rectus is the Bad Actor in Intermittent Esotropia</td>
<td>Joseph L. Demer, MD, PhD, Robert A. Clark, MD</td>
<td></td>
</tr>
<tr>
<td>9:09 AM–9:16 AM</td>
<td>High Prevalence of Sagging Eye Syndrome in Adults with Binocular Diplopia</td>
<td>Toshiaki T. Goseki, MD, PhD</td>
<td>Suh Soh Youn, MD; Laura Robbins, OD; Stacy L. Pineles, MD; Federico G. Velez, MD; Joseph L. Demer, MD, PhD</td>
</tr>
<tr>
<td>9:16 AM–9:23 AM</td>
<td>Horizontal and Vertical Eye Movements After Horizontal and Vertical Recti Were Detached from Eyes in Patients with Nystagmus</td>
<td>Dongsheng Yang, MD, PhD</td>
<td>Ping Wang, MD</td>
</tr>
<tr>
<td>9:23 AM–9:27 AM</td>
<td>DISCUSSION OF PREVIOUS PAPER – Michael C. Brodsky, MD</td>
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<tr>
<td>9:27 AM–9:55 AM</td>
<td>Scientific Session: Practice Management</td>
<td>Machine Learning for Prediction of Pediatric Ophthalmology Examination Lengths and Scheduling Optimization</td>
<td>Michelle R. Hribar, PhD; Wei-Chun Lin, MD; Isaac H. Goldstein, BA; Michael F. Chiang, MD</td>
</tr>
<tr>
<td>9:55 AM–10:55 AM</td>
<td>Interactive Poster Session – Author Presentation and Q/A</td>
<td>PANEL DISCUSSION – Gil Binenbaum, MD, MSCE; Emily M. Zepeda, MD; Kishan Gupta, MD, PhD; Sarina M. Amin, MD; Swati Agarwal-Sinha, MD; Bhamy Hariprasad Shenoy, MBBS, MS, FICO, FRCOphth; Eric R. Crouch, MD; Joseph L. Demer, MD, PhD; Toshiaki T. Goseki, MD, PhD; Dongsheng Yang, MD, PhD; Michelle R. Hribar, PhD; Michael F. Chiang, MD</td>
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**Odd Numbered Posters 9:55 – 10:30; Even Numbered Posters 10:20 – 10:55**
<table>
<thead>
<tr>
<th>Time</th>
<th>Session Details</th>
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<tbody>
<tr>
<td>11:00 AM–1:00 PM</td>
<td>Moderators: <strong>Jane C. Edmond, MD &amp; Faruk H. Orge, MD</strong> <strong>SAPPHIRE ABELJAN</strong></td>
</tr>
<tr>
<td>11:00 AM–11:20 AM</td>
<td>Updates <strong>SAPPHIRE ABELJAN</strong></td>
</tr>
<tr>
<td>11:00 AM–11:03 AM</td>
<td>JAPOS Update – <strong>William V. Good, MD</strong></td>
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<tr>
<td>11:03 AM–11:06 AM</td>
<td>ABO Update on Continuous Certification – <strong>Julia L. Stevens, MD</strong></td>
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<tr>
<td>11:06 AM–11:09 AM</td>
<td>AAP Update – <strong>Geoffrey E. Bradford, MD</strong></td>
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<tr>
<td>11:09 AM–11:12 AM</td>
<td>Surgical Scope Fund Update – <strong>Kenneth P. Cheng, MD</strong></td>
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<tr>
<td>11:12 AM–11:15 AM</td>
<td>IPOS Update – <strong>Sonal Farzavandi, MD</strong></td>
</tr>
<tr>
<td>11:15 AM–11:20 AM</td>
<td>Meetings Update – <strong>Scott A. Larson, MD</strong></td>
</tr>
<tr>
<td>11:20 AM–11:27 AM</td>
<td>A Prospective Outcomes Study of Pediatric Optic Neuritis – <strong>Stacy L. Pineles, MD, MS</strong></td>
</tr>
<tr>
<td>11:34 AM–11:41 AM</td>
<td>The Effect of Decreasing Working Distance in Stereopsis and its Role in Perception of Closure While Texting and Driving – <strong>Amanda M. Selchau, MD</strong></td>
</tr>
<tr>
<td>11:41 AM–11:48 AM</td>
<td>Treating Central-Peripheral Rivalry (CPR)-Type Diplopia – <strong>Jonathan M. Holmes, BM, BCh</strong></td>
</tr>
<tr>
<td>11:48 AM–11:55 AM</td>
<td>Stepped Strabismus Surgery – <strong>Amr A. Elkamshoushy, MD</strong> – <strong>Ahmed Kassem, MD</strong></td>
</tr>
<tr>
<td>11:55 AM–12:31 PM</td>
<td>Scientific Session: Amblyopia <strong>SAPPHIRE ABELJAN</strong></td>
</tr>
<tr>
<td>11:55 AM–12:02 PM</td>
<td>What Causes Slow Binocular Reading in Amblyopic Children? – <strong>Krista R. Kelly, PhD</strong></td>
</tr>
<tr>
<td>12:02 PM–12:06 PM</td>
<td>DISCUSSION OF PREVIOUS PAPER – <strong>Anna Horwood, PhD, DBO(T)</strong></td>
</tr>
<tr>
<td>12:06 PM–12:13 PM</td>
<td>Feasibility of Eye Patch Assistant Plus a Microsensor to Monitor Objective Adherence with Patching – <strong>Jingyun Wang</strong></td>
</tr>
<tr>
<td>12:13 PM–12:20 PM</td>
<td>Novel Digital Therapeutic Improves Visual Acuity and Encourages High Adherence in Amblyopic Children – <strong>Aaron M. Miller, MD</strong></td>
</tr>
<tr>
<td>12:20 PM–12:24 PM</td>
<td>DISCUSSION OF PREVIOUS PAPER – <strong>David K. Wallace, MD, MPH</strong></td>
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### Saturday, March 30 (continued)

<table>
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<th>Time</th>
<th>Session</th>
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| 12:24 PM–12:31 PM | Baseline and Clinical Factors Associated with Response to Binocular Amblyopia Treatment  
 | PAPER 36    | **Eileen E. Birch, PhD**  
 |              | Reed M. Jost, MS; Krista R. Kelly, PhD; Joel N. Leffler, MD; Lori Dao, MD; Cynthia L. Beauchamp, MD  |
| 12:31 PM–1:00 PM | Scientific Session: Public Health  
 |              | **SAPPHIRE ABELJMJN**  |
| 12:31 PM–12:38 PM | Reliability of Telemedicine for Real-Time Pediatric Ophthalmology Consultations  
 | PAPER 37    | **Sudha Nallasamy, MD**  
 |              | Josephine Coffey-Sandoval, OD; Carly Stewart, MHA; Mark W. Reid, PhD; Thomas C. Lee, MD  |
| 12:38 PM–12:45 PM | Redesigning Surgical Magnification Loupes: Effect of Angle of Declination, Weight, and Strap Design on the Postural Ergonomics of Ophthalmic Surgeons  
 | PAPER 38    | **Safeer F. Siddicky, PhD**  
 |              | Hozhabr Mozaafari, MS; Gregory W. King, PhD, PE; Donny W. Suh, MD  |
| 12:45 PM–1:00 PM | PANEL DISCUSSION –  
 |              | **Stacy L. Pineles, MD, MS; Bilal K. AlWattar, MD; Amanda M. Selchau, MD; Jonathan M. Holmes, BM, BCh; Amr A. Elkamshousy, MD; Krista R. Kelly, PhD; Jingyun Wang; Aaron M. Miller, MD; Eileen E. Birch, PhD; Sudha Nallasamy, MD; Safeer F. Siddicky, PhD**  |

### Sunday, March 31

<table>
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| 6:30 AM–10:30 AM | Registration  
 |              | **SAPPHIRE WEST FOYER**  |
| 6:30 AM–8:00 AM | Breakfast  
 |              | **SAPPHIRE CDGHKL**  |
| 6:30 AM–7:00 AM | Poster viewing (2nd Set) (Authors not present)  
 |              | **SAPPHIRE WEST FOYER**  |
| 7:00 AM–10:20 AM | Moderator: **Scott A. Larson, MD**  
 |              | **SAPPHIRE ABELJMJN**  |
| 7:00 AM–8:00 AM | Video Demonstrations of Signs, Diagnostics of Diseases, and Complex Surgical Procedures in Pediatric Ophthalmology and Strabismus  
 | WORKSHOP 26  | **SAPPHIRE ABELJMJN**  
 |              | Sharon F. Freedman, MD; Nikos Kozeis, MD; Hana Leiba, MD; Phoebe D. Lenhart, MD; Stacy L. Pineles, MD; Ankoor S. Shah, MD, PhD  |
| 8:10 AM–9:10 AM | Difficult Non-Strabismus Problems  
 | WORKSHOP 27  | **SAPPHIRE ABELJMJN**  
 |              | Laura B. Enyedi, MD; Matthew Gearinger, MD; Mary A. O’Hara, MD; Ricardo Rodriguez-Rosa, MD; David K. Wallace, MD; Tammy L. Yanovitch, MD  |
| 9:20 AM–10:20 AM | Difficult Problems in Strabismus  
 | WORKSHOP 28  | **SAPPHIRE ABELJMJN**  
 |              | Rosario Gomez-de-Liaño, MD; Seyhan B. Özkan, MD; Andrea Molinari, MD; Gill Adams, MD; Mohamad S. Jaafar, MD; Galton Vasconcelos, MD  |
| 10:20 AM     | End of 2019 Meeting  

First set of posters will be displayed from 4:00 PM Wednesday, March 27 – 11:30 Friday, March 29 in Sapphire West Foyer.

**VISION SCREENING – AMBLYOPIA – SENSORY**

1. Reading Target Communities in a Preschool Vision Screening Program
   - **Richard A. Ulangca, BS**
   - Chase R. Atiga, BA; Connie J. Oh, BS; Jennifer A. Dunbar, MD; Leila M. Khazaeni, MD

2. Implications of Community-Based Repeat Annual Vision Screening Using the Spot Photoscreener
   - **Connie J. Oh, BS**
   - Richard A. Ulangca, BS; Chase R. Atiga, BA; Stephanie Terrill, MD; Leila M. Khazaeni, MD; Jennifer A. Dunbar, MD

3. Vision Screening and Educational Development in Preschoolers from Low-Income Communities
   - **Christopher R. Lees**
   - Andrea Everett, PhD; Zaynab Sajjadi; April Nakayoshi; Alejandra G. de Alba Campomanes, MD, MPH

4. Refractive Error Prevalence Among Inner-City Students Receiving School-Based Vision Screenings and Eye Exams
   - **Angeline Nguyen, MD**
   - XinXing Guo, MD, PhD; Amanda Inns, PhD; Alyssa M. Kretz, BA; Moneesha R. Mukherjee, BA; David S. Friedman, MD, MPH; Michael X. Repka, MD, MBA; Megan E. Collins, MD, MPH

5. Effects of State Variation in Vision Screening Policy on Likelihood of Vision Screening in Children Ages Three to Five
   - **John H. Lillvis, MD, PhD**
   - Denise F. Lillvis, PhD; Lorin Miller; Gregory Wilding, PhD; Dennis Z. Kuo, MD, MHS

6. Analysis of Vision Screening Failures in a School-Based Vision Program (2016–18)
   - **Rachel R. Milante, MD**
   - XinXing Guo, MD, PhD; Amanda Inns, PhD; Alyssa Kretz, BA; Moneesha R. Mukherjee, BA; David S. Friedman, MD, MPH; Michael X. Repka, MD, MBA; Megan E. Collins, MD, MPH

7. A Qualitative Approach to Understanding Reasons for Non-Participation in School-Based Vision Programs
   - **Hursuon Vongsachang, BA**
   - Amanda J. Inns, PhD; Alyssa M. Kretz, BA; Moneesha R. Mukherjee, BA; David S. Friedman, MD, MPH; Phd; Michael X. Repka, MD, MBA; Megan E. Collins, MD, MPH

8. The Value of Multiple Telephone Calls in Ensuring Follow-Up After Referral From Vision Screening
   - **Chase R. Atiga, BA**
   - Connie J. Oh, BS; Richard A. Ulangca, BS; Leila M. Khazaeni, MD; Jennifer A. Dunbar, MD

9. Vision Screening and the School Nurse in Washington State
   - **K. David Epley, MD**
   - Jeffrey D. Colburn, MD; Matthew C. Weed, MD; Julie Schultz

    - **Kayla M. White**
    - Ariana Naaseh; Chantal J. Boisvert, MD, OD; Justine Chinm; Justine Maher; Elizabeth Crawford; Emma Cooper; Danielle Zezoff; Andreea Dinicu; Alexa Lucas; Kevin Bera; Ava Runge

11. Response to Patching in Amblyopic Patients with and without Fusion Malddevelopment Nystagmus
    - **Matteo Scaramuzzi, MD**
    - Aasef Shaikh, MD, PhD; Fatema Ghasia, MD

12. From Bears to Dinosaurs: Lenticular Technology to Measure Stereopsis in Children
    - **Oded Lagstein, MD**
    - Irene Anteby, MD

**LOW VISION**

    - **David A. Leske, MS**
    - Sarah R. Hatt, DBO; Suzanne M. Wernimon, CCRP; Yolanda S. Castañeda, BSN; Laura Liebermann, CO; Christina S. Cheng-Patel, BS, BS; Eileen E. Birch, PhD; Jonathan M. Holmes, BM, BCh

    - **Robert W. Arnold, MD**

15. The Relationship between Severity of Visual Impairment and Learning Scores of the Blind at the Bangkok School of the Blind
    - **Navapol Kanchanaranya, MD**
    - Pakornkit Phruksaudomchai, MD

16. Accommodation and Refractive Error of Children with Congenital Zika Syndrome
    - **Luiza M. Neves, MD**
    - Julia D. Rossetto, MD, PhD; Lorena Haefeli, MD; Isabel Garcia, MD; Ana Costa, PhD; Jocielli Malacarne, PhD; Maria Moreira, MD, PhD; Andrea Zin, MD, PhD

**REFRACTION – REFRACTIVE ERRORS**

17. A 3D-Printed Tool for Improved Retinoscopy Experience
    - **Richard W. Helms, PhD**
    - Maryo C. Kohen, MD; Faruk H. Orge, MD
**Estimating Cycloplegic Retinoscopy by School Bus Accommodation-Relaxing Skiascopy (SBA-RS)**
Andrew W. Arnold, OMS II
Stephanie L. Arnold, OMS II; Jacob H. Sprano, OMS IV; Robert W. Arnold, MD

**A Rule of Astigmatism in Pediatric Subluxated Crystalline Lens**
Ran David, MD, PhD
Ori Berger, MD; Hadas Mechoulam, MD; Evelyne Cohen, CO; Ilana Karshai, CO; Irene Anteby, MD

**Implantation of Toric Phakic Intraocular Lenses To Treat Astigmatism in Special Needs Children**
Nicholas Faron
Lawrence Tychsen, MD; James Hoekel, OD

**Emmetropization During Early Childhood**
Yvette L. Schein
Yinxi Yu; Gui-shuang Ying; Gil Beninbaum

**Verification of Myopia Growth Chart Using Pediatric Cohort Data**
Dae Hee Kim, MD
Hyun Taek Lim, MD, PhD

**Practice Patterns to Decrease Myopia Progression Differ Among Pediatric Ophthalmologists Around the World**
Eedy Mezer, MD
Ari Leshno, MD; Tamara Wygnanski-Jaffe, MD; Sonal K. Farzavandi, MD; Rosario Gomez-de-Liano, MD, PhD; Derek T. Sprunger, MD

**Amplified Esotropia Syndrome: Long-Standing, Large-Angle Esotropia Causing Laxity of the Lateral Rectus-Superior Rectus Band Leading to Progressive Esotropia**
Phillip A. Tenzel
Ekaterina Semenova; Michael R. Chua; Mary T. Labowsky; Steven E. Rosenberg

**Genetic Associations in Esotropia: Genome-Wide Association Study and Copy Number Variation**
Mary C. Whitman, MD, PhD
Sherin Shaaban, MD, PhD; Sarah MacKinnon; Wai-Man Chan; Strabismus Genetics Research Consortium; David A. Mackey; David G; Hunter, MD, PhD; Elizabeth C. Engle

**Histopathologic Study of Accessory Orbital Band in Type I Duane Syndrome**
Federico Velez, MD
Muhammad Hassaan Ali, MD; Stacy Pineles, MD; Ben Glasgow, MD; Anika Tandon, MD

**‘Paradoxical’ Duane Retraction Syndrome with Abduction Deficit and Exotropia: Natural History and Surgical Management**
Mary E. Runkle, MD
Terry Schwartz, MD; Virginia M, Utz, MD; Stephen Kraft, MD; Elias I. Traboulsi, MD; Razek Coussa, MD

**Evaluation of Factors Affecting Sensory Outcomes in Patients with Intermittent Exotropia**
Zane D. Foster
Mohamed A. Hussein; Anthony Quesada; David K. Coats

**Block Building Performance Test Using a 3-Dimensional Virtual Reality System in Children with Intermittent Exotropia**
Seung Ah Chung, MD
Jaewon Choi; Seungchan Jeong; Jeonggil Ko, PhD; Jong Bok Lee, MD

**A Prospective Observational Study of Adult Convergence Insufficiency**
David K. Wallace, MD, MPH
S. Ayse Erzurum, MD; Elizabeth L. Lazar, MS, MPH; Susan A. Cotter, OD, MS; Raymond T. Kraker, MSPH; Jonathan M. Holmes, MD; Eric R. Crouch, MD; Christina A. Esposito, OD; Erin C. Jenewein, OD, MS; Ingrid Lorenzana, OD; Yi Pang, OD, PhD; Dashaini V. Retnasothie, OD, MS

**Objective Convergence Insufficiency and Fusional Convergence Amplitude Measurements with an Eye Tracking Based Device**
Tamara Wygnanski-Jaffe, MD
Michael Belkin, MD; Ran Yam; Dan Oz; Oren Yehezkeli, PhD

**‘Exotropic’ Heavy Eye Syndrome in Unilateral High Axial Myopia**
Dina H. Hassanein, MD, FRCS
Ahmed R. Awadein, MD, FRCS

**Globe Size and Eccentric Rotational Axis: Effect of Axial Myopia**
Robert A. Clark, MD
Joseph L. Demer, MD, PhD

**Quality Analysis of YouTube Videos for Pediatric Strabismus Surgery**
Benjamin K. Young
Erol Verter; Martha A. Howard

**Determination of the Strabismus Surgery Dosage Accuracy Using a New Technology**
Satenik G. Agagulyan, MD
Elena A. Kudryashova, MD; Victoria O. Balasanyan, PhD; Igor E. Aznarayan, Dr Sc, PhD

**Strabismus Surgical Time-Out: An Illustrated Whiteboard Modification**
Natasha N. Loudin, MD
David K. Coats, MD; Joyce Enoch, RN; Madhuri Chilakapati, MD

**Abscess Formation After Strabismus Surgery – A Case Series and Review of the Literature**
Fran L. Wu, MD, MPH
Jane C. Edmond, MD; Radha Ram, MD; Honey Herce, MD; Kimberly G. Yen, MD; David K. Coats, MD; Madhuri Chilakapati, MD

**Loss to Follow-Up After Strabismus Surgery: A Survey of Caregiver Impressions and Impediments to Appointment Attendance**
Robert L. Dembinski
Courtney L. Kraus, MD
39 Effects of Strabismus Surgery on Visually Guided Saccades  
*Fatema F. Ghasia, MD*  
Graham Lane

40 The Changing Face of Adult Strabismus Surgery  
*Frederick R. Burgess, MBChB*  
Alan O. Mulvihill, FRCSed

41 Adult Strabismus Surgery Outcomes with Adjustable and Nonadjustable Sutures  
*Siddharth Bhargava*  
David Shieh; Dan Liu, MD; Jitka Zobal-Ratner, MD; John W. Simon, MD

42 Natural Course and Surgical Outcomes of Ophthalmoplegia After Iatrogenic Ophthalmic Artery Occlusion Caused by Cosmetic Filler Injections  
*Yunjin Lee*  
Hee Kyung Yang; Se Joon Woo; Kyu Hyung Park; Jeong-Min Hwang

43 Face and Content Validation of a Low Cost Strabismus Surgery Simulation Model  
*Saurabh Jain*  
Mohsan M. Malik; Niel Shah; Vivienne Kit

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44 Magnitude and Stability of Alignment in Children Following Bupivacaine and/or Botulinum Toxin A Injection Into Extraocular Muscles  
*Rasha H. Zedan, MD*  
Ranya A. Badr, MSc; Lobna M. Khasbak, MD; Mohammed S. Zatar, MD

45 Single Lateral Rectus Resection in Adult Non-Accommodative Esotropia  
*Vanessa K. Avellaneda-Chevrier OC(C)*  
Helen A. Kim; Mrunalini D. Parvataneni, MD

46 Combined Unilateral Recession/Recession Surgery in the Management of Esotropia with Near-Distance Disparity  
*Panagiota Antonopoulou, MD, MSc, FRCOphth, FEOB*  
Mohammad W. Ghaffari; Adam Budd, DO; Anna P. Maino, FRCOphth, FEOB

47 Botulinum Toxin-Augmented Surgery for Large-Angle Esotropia  
*Livia A. Kühl, MD*  
Iara Debert, MD, PhD; Caroline N. Seto, MD; Maria R. Okamura, MD; Mariza Polati, MD, PhD

48 Surgical Outcomes for Esotropia in Children with High AC/A Ratio  
*Reecha S. Bahl, MD*  
Monique J. Cheng, BS; Sabrina Dass, BS

49 Horizontal Rectus Muscle Resections in the Elderly: Indications and Outcomes  
*Cody R. Richardson, MD*  
Miriam DiMenna, CO; Abigail Lepsch, MD; Mary E. Hoehn, MD; Natalie C. Kerr, MD

50 Jensen’s Procedure Combined with Adjustable Medial Rectus Recession to Treat Complete Sixth Nerve Palsy  
*Vu Thi Que Anh, MD*  
Do Quang Ngoc, MD; Tran Manh Hung, MD

51 The Relationship of Age and Other Baseline Factors to Outcome of Initial Surgery for Intermittent Exotropia  
*Michael X. Repka, MD, MBA*  
Danielle L. Chandler, MSPH; Jonathan M. Holmes, MD; Sean P. Donahue, MD, PhD; Paul H. Phillips, MD; Ann U. Stout, MD; Darren L. Hoover, MD; David K. Wallace, MD, MPh

52 Large Angle Exotropia and the Legend of the Surgical Dose-Response Curve  
*Lin Li, MD, PhD*  
Toshiaki Goseki, MD, PhD; Soh Youn Suh, MD; Stacy L. Pinelles, MD; Sherwin J. Isenberg, MD; Joseph L. Demer, MD, PhD

53 Effect of Inferior Oblique Myectomy on Primary Position Horizontal Alignment in Patients with Exotropia  
*Christina Scoffe*  
Maan Alkharashi

54 Results of Sensory Exotropia Surgery With and Without Oblique Muscles Weakening  
*Andre Leite, MD*  
Bruna Duca, MD; Simone Nakayama, MD; Deborah Stina, MD; Tomas Mendonca, MD

55 Prevalence and Natural History of Consecutive Exotropia in Botulinum Toxin Chemodenervation for Esotropia  
*Crystal S. Cheung, MD*  
Linda R. Dagi, MD; David G. Hunter, MD, PhD; Michael J. Wan, MD; Ankooor S. Shah, MD, PhD

**NEURO-OPHTHALMOLOGY**

56 Acute Acquired Comitant Esotropia in Children: Is It a Neurological Disease?  
*Gad Dotan, MD*  
Yariv Keshet; Ronit Friling

57 Ophthalmologic Disorders and Risk Factors in Children with Autism Spectrum Disorder (ASD)  
*Melinda Y. Chang, MD*  
Nandini Gandhi, MD; Mary O’Hara, MD

58 Ocular Findings in Children with Headache  
*Lisa Y. Lin, BS*  
Wei Pan, MS; Gui-Shuang Ying, PhD; Gil Binenbaum, MD, MSCE

59 Clinical Implications of ERG Monitoring for Vigabatrin Toxicity  
*Benjamin G. Jastrzembski*  
Jeff Locke; Michael Wan

60 Longitudinal Change of Buried Optic Disc Drusen in Children  
*Hyun Joo Kee, MD*  
Se Joon Woo, MD; Jeong-Min Hwang, MD

61 Test-Retest Reliability of Goldmann Perimetry in Children with NF-1 Associated Optic Pathway Glioma  
*Sarah Whitecross, MMEdSci, OC(C), CO*  
Bilal Al Watter, MB, ChB; Nicole Ullrich, MD, PhD; Gena Heidary, MD, PhD
OCULOPLASTICS

62 Conjunctival Nevi in Children: Clinical and Anterior Segment Optical Coherence Tomography Features
*Manca Tekavcic Pompe*
Špela Markelj; Lavric Groznik Alenka

63 Prevalence and Clinical Features of Orbital Vascular Anomalies in Children
*Laura A. Torrado, MD*
Gregory J. Griespentrog, MD; Brian G. Mohney, MD

64 Effect of Oral Propranolol in Astigmatism-Induced Orbital Hemangioma
*Nora Aldohayan, MD*
Yasser Al-Thnayan, MD

65 The Use of 3-D Reconstruction Technology in the Treatment of Severe Bilateral Ocular and Facial Trauma from Dog Bite
*Catherine S. Choi, MD*
Alison Callahan, MD; Andrew Scott, MD

66 Quality of Life and Visual Perception in Children and Young Adults with Anophthalmia and Microphthalmia Treated with Ocular Prosthesis
*Marita Andersson Gronlund, MD, PhD*
Beatrice Casslén; Yiva Jugard; Reznya Taha Najim; Marie Odersjo; Alexandra Topa

67 Outcome of Primary Probing for Congenital Nasolacrimal Duct Obstruction in Older Children
*Margaret M. Reynolds, MD*
Katharine Liegel, MD; Gregg T. Lueder, MD

68 Nasolacrimal Duct Obstruction and the Development of Anisometropia and Amblyopia
*Archana A. Nair, MD, MS*
Joyce Khandji, MD; Aryeh Lustig; Milan Ranka, MD

CATARACT

69 Predictive Value of Intraocular Lens Power Calculation Formula in Children
*Asmaa M. Shuaib, MD*
Abdelrahman M. Elhusseiney, MSC; Dina H. Hassanein, MD; Rasha H. Zedan, MD; Hala M. Ehilali, MD

70 Digital Biometry in Children Undergoing Cataract Surgery in Vitrectomised Eyes
*Sumita S. Agarkar*
Swathi Mailankody

71 Practice Patterns in the Surgical Management of Pediatric Traumatic Cataracts
*Angela Y. Zhu, MD*
Courtney L. Kraus, MD

72 Prognostic Factors Associated with Poor Visual Outcome of Traumatic Pediatric Cataract: A 10 Years Retrospective Review
*Thanidha Vitayavisavasakul, MD*
Phanthipha Wongwai, MD; Warachaya Phanphruk, MD; Sirinya Suwannaraj, MD

73 Referral Basis for Congenital and Juvenile Cataracts
*Laura C. Huang, MD*
Scott Lambert, MD

74 Is There Any Role for Endoilluminator in Pediatric Cataract Surgery? Beginner’s Perspective
*Abhilasha A. Parkhe, MS, FPOS*
Jyoti Matalia, FICO, DO, DNB; Sumitha M. Muthu, MS; Pooja Ghalla, DO, FPOS; Prabha Panmand, DO, DNB

75 Spectacle Adherence Among Four-Year-Old Children in the Infant Aphakia Treatment Study
*Scott R. Lambert, MD*
Lindeth DuBois, Med; George Cotsonis, MA; E. Eugenie Hartmann, PhD; Carolyn Drews-Botsch, PhD

76 Long-Term Outcomes of Secondary Intraocular Lens Implantation in Children
*Bharti R. Nihalani-Gangwani, MD*
Deborah K. VanderVeen, MD

77 Does Secondary Intraocular Lens Implantation Cause or Worsen Glaucoma in Children?
*Peter J. Ness, MD*
Colette Jackson; Thomas L. Offerle; Rupal H. Trivedi; M. Edward Wilson

78 Changes in Intraocular Pressure and Anterior Chamber Angle after Congenital Cataract Extraction
*Jylan Gouda*
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79 Unexpected Returns to the Operating Room Within 3 Months After Pediatric Cataract-Related Intraocular Surgery: Indications and Risk Factors
*Colette M. Jackson, MD*
Peter Ness, MD; Matthew Bickford; Rupal H. Trivedi; M. Edward Wilson

GENETICS

80 Clinical Experiences in an Ocular Genetics Tertiary Care Clinic
*Robert S. Lowery, MD*
John Dehnel; Sami Uwaydat, MD; G. Bradley Schaefer, MD

81 Withdrawn

82 Connective Tissue Disorders: A Prospective Comparison of Ophthalmic Findings of Marfan Syndrome Versus Loeys-Dietz Syndrome
*Amgad A. Eldib, MBChB*
Soroosh Behshad, MD; Natalie Weil, MD; Irene Maumenee, MD

RETINA

83 Indirect Ophthalmoscopy Without an Indirect
*Kartik S. Kumar, MD*
Electroretinography Using REEval ERG System in Children with Diabetes Mellitus
Chenhao Yang
Yan Jia

Withdrawn

Incidence of Mitogen-Activated Protein Kinase Inhibitor-Associated Retinopathy in Pediatric Patients
Lauren M. Imbornoni, MD
Scott Oliver, MD; Jennifer Jung, MD; Robert Enzenauer, MD; Jasleen K. Singh, MD; Rebecca Sands Braverman, MD; Nicholas Foreman, MD; Molly Hemenway, NP; Emily McCourt, MD

Outcomes of Subretinal Delivery of Voretigene Neparvovec for Leber Congenital Amaurosis: The CHLA Experience
Aaron Nagiel, MD, PhD
Thomas C. Lee, MD

Clinical Profile and Treatment Outcomes Following Laser Monotherapy and Combination Therapy with Bevacizumab in Pediatric Coats’ Disease (PCD)
VInod Sharma, MBBS, MS, DNB, FRCSed FRCophth
Bhamy Hariprasad Shenoy, MBBS, S FICO, FRCophth; Jane Ashworth, BMCh, FRCophth, PhD; William Newman, MB, BS, FRCS (Glasc), FRCophth, LL.M (Medical Law); Susmito Biswas, BSc Hons, MBBS, FRCophth

Ocular Injuries in Pediatric Abusive Head Trauma
Rebecca S. Weiss, MD
Sabine Khan, MD; Afshin Parskia, MD, MPH; Joyce N. Mbekeani, MD, FRCS, FRCophth

RETINOPATHY OF PREMATURITY

Rationale, Design, and Subject Characteristics of the Postnatal Growth and Retinopathy of Prematurity Validation Study (G-ROP-2)
Lauren A. Tomlinson
Gui-shuang Ying; Yinxi Yu; Gil Binenbaum; on behalf of the G-ROP Study Group

Comparing Left and Right Eyes in Retinopathy of Prematurity With and Without Patent Ductus Arteriosus
Aaron M. Skelton, MD
Mary O’Hara, MD

Characteristics of High Risk Infants That Do Not Develop Retinopathy of Prematurity
Alyssa Spiller
Pamela Donohue; Yinxi You; Gui-shuang Ying; Lauren A. Tomlinson; Gil Binenbaum; on behalf of the G-ROP Study Group

Music Therapy May Decrease Apnea Associated with Retinopathy of Prematurity Exams
Susan M. Bakouros
John Evered; Kristin Rarey

Socioeconomics of Retinopathy of Prematurity Screening and Treatment in the United States
Shagun K. Bhatia, MD
Lance Siegel; Rebecca Braverman; Robert Enzenauer; David Granet; Shira L. Robbins

Impact of Higher Target Oxygen Saturation Levels on Postnatal Weight Gain as a Predictor for Retinopathy of Prematurity
Carolyn Wu, MD
Deborah K. VanderVeen, MD

Pattern of Retinopathy of Prematurity Cases From Differing Oxygen Level Changes in a Tertiary Referral Centre in Malaysia Over Two Different Periods – A Middle-Income Country
May May Choo, MBBS, FRCS
John Grigg, MD, FRANZCO; Nurliza Khalidin, MBBS, FRCS; Frank Martin, AM, MBBS, FRANZCO, FRACS

Dome-Shaped Macula in Infants Screened for Retinopathy of Prematurity as Seen By Handheld Spectral-Domain Optical Coherence Tomography
Alex T. Legocki, MD
Yasman Moshiri, BS; Emily M. Zepeda, MD; Thomas B. Gillette, MD; Ayesha Shariff, MD; Laura H. Grant, MD; Leona Ding, MS; Kristina Tarczy-Hornoch, MD, DPhil; Michelle T. Cabrera, MD

Longitudinal Analysis of Retinal Vascular Characteristics in Narrow-Field Retinal Images of Infants Being Screened for Retinopathy of Prematurity: A Quantitative Approach
Jagger C. Koerner, MD
Gloria J. Hong, BA; Marguerite C. Weinert, MD; Sharon F. Freedman, MD; David K. Wallace, MD; Wayne J. Riggins, MD; Keith J. Gallerher, MD; Grace S. Prakalapakorn, MPH

Progression from Pre-Plus Disease to Plus Disease in the G-ROP Study
Ryan S. McGuire
Gui-shuang Ying; Gil Binenbaum; on behalf of the G-ROP Study Group

Treatment of Retinopathy of Prematurity with Intravitreal Bevacizumab in Infants Weighing 500 Grams or Less at Birth
Elise L. Timtim
Colleen Peyton, PT, DPT, PCS; Michael Blair, MD; Sarah M. Hilkert Rodriguez, MD, MPH

VISION SCREENING

Abnormal Red Reflex: Etiologies in a Pediatric Ophthalmology Population
Sophie Y Lin, BA
Kimberly G. Yen, MD; Huirong Zhu, PhD; Madhuri Chilakapati, MD
Second Set of Posters

Second set of posters will be displayed from 4:30 PM, Friday, March 29 through 10:20 AM, Sunday, March 31.
102 Accuracy of the Red Reflex Test to Detect Unequal Refractive Error
Aldo Vagge, MD, PhD
Kara C. LaMattina; Leonard B. Nelson

103 Objective Measurement of Visual Acuity by Optokinetic Nystagmus Suppression
Anja Palmowski-Wolfe

Neémie Schwob, pract. med.

104 A Device for the Assessment of Both Visual Acuity and Strabismus to Identify Amblyopic Risk Factors in Preverbal and Verbal Children – Pilot Study
Daphna Mezad Koursh, MD
Amir Rosenblatt, MD, MPH; Idit Kainan, MD; Chaim Stolovitch, MD

105 Performance of a Photoscreener with Novel C.R. Infrared Wand Strabismus Estimation Compared to Another Screening Device and Comprehensive Examination
Stephanie L. Arnold, OMS II
Andrew W. Arnold, OMS II; Jacob H. Sprano, OMS IV; Robert W. Arnold, MD

106 Performance of a Screening Game on Children and Adults with and without Binocular Suppression
Kyle A. Smith, OD, MA
Andrew W. Arnold, OMS II; Stephanie L. Arnold, OMS II; Jacob H. Sprano, OMS IV; Robert W. Arnold, MD

107 Cycloplegic Refractive Error and Amblyopia Risk Factors Found After Photoscreening
Mariana A. Flores Pimentel, MD
Megan X. Law, MD; Alejandra G. De Alba Campomanes, MD, MPH

108 A Novel Objective Visual Acuity Screener for Preschool Children
Ben Thompson, PhD
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Using the Diplopia Questionnaire as an Outcome for Strabismus Studies
Sasha A. Mansukhani, MBBS
Sarah R. Hatt, DBO; David A. Leske, MS; Jonathan M. Holmes, BM, BCh

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Talia N. Shoshany, BA
David G. Hunter, MD, PhD

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Heeyoung Choi
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Jenny Y. Wang, MD
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Trevano W. Dean, MPH; David K. Wallace, MD, MPH; Raymond T. Kraker, MSPH; Jonathan M. Holmes, MD; Amy E. Aldrich, OD; Casey J. Beal, MD; Eric R. Crouch, MD

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Lionel Kowal, FRANZCO
Shivanannd Sheth, FRANZCO; Sheetal Shirke, DNB, FRCS; Robert Clark, MD

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Yair Morad, MD; Eran Pras, MD

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Ana L. Darcie, MD; Mariza Polati, MD, PhD

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Jon Peiter Saunte, MD
Tobias Tarp-Pedersen, MD, PhD; Claes Lankvist, MD

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Justin D. Marsh, MD; David L. Guyton, MD

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Gregg T. Lueder, MD

Combined Inferior Rectus Recession and Lower Eyelid Retractor Release in Thyroid Eye Disease
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The Outcome of Patients with Abnormal Head Position Due to Nystagmus Treated with The Anderson-Kestenbaum Procedure
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Yuxi Zheng, BS
Derick G. Holt, MD, PhD; James J. Law, BS; David G. Morrison, MD; Sean P. Donahue, MD, PhD

The Psychological Effects of Infantile Nystagmus
Maria Theodorou, FRCOphth
Kelly A. Mackenzie, MSc
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Richard W. Hertle, MD
Molly Curtiss; Isabel Ricker; Alyssa Gehring

Two-Muscle Extended Recession Surgery for Infantile Nystagmus Syndrome with Face Turn

Ping Wang, MD
Dongsheng Yang, PhD

Case Series: Horizontal Transposition of Vertical Recti for Idiopathic Nystagmus Syndrome with Head Tilt

Alexander H. de Castro-Abeger, MD, MBA
Nancy Benegas, MD; Burt Kushner, MD; Sean P. Donahue, MD, PhD

Correlation Between Spectral Domain Optical Coherence Tomography (SD-OCT) and Long-Term Vision Loss in Children with Papilledema

Michael J. Wan, MD, FRCSC

The Relationship Between Optic Canal Size and Severity of Papilledema in Children with Intracranial Hypertension

Anastasia A. Alex, MD
Hilliary E. Inger, MD; Hersh Varma, MD; Catherine O. Jordan, MD; Shawn C. Aylward, MD; Jeremy Jones, MD; David L. Rogers, MD

Utility of the OCT Lazy V Sign in Diagnosing Optic Nerve Edema in a Pediatric Population

Hilliary E. Inger, MD
Hersh Varma, MD; Mea A. Weaver, BS; Catherine O. Jordan, MD; Rachel E. Reem, MD; Mary Lou McGregor, MD; Shawn C. Aylward, MD; David L. Rogers, MD

Influence of Optic Nerve Appearance on Final Visual Outcome in Pediatric Patients with Idiopathic Intracranial Hypertension (IIH)

Jason H. Peragallo, MD
Jonathan A. Micieli, MD; Caroline Vasseneix, MD; Richard J. Blanch, FRCPophth, PhD; Damian E. Berezovsky, MD; Nancy J. Newman, MD; Valerie Biousse, MD; Beau B. Bruce, MD, PhD

Impact of Obstructive Sleep Apnea on Optic Nerve Function in Patients with Craniosynostosis and Recurrent Intracranial Hypertension

Josephine Q.N. Nguyen, BSc
Cory M. Resnick, MD, DMD; Yoon-hee Chang, MD; Ronald M. Hansen, PhD; Carly E. Calabrese, MPH; Anne Fulton, MD; Linda R. Dagi, MD

Deformation of the Peripapillary Retinal Pigmented Epithelium Layer on OCT: A Useful Tool to Identify Intracranial Hypertension in a Pediatric Population?

Mea A. Weaver, BS
Hilliary Inger, MD; Hersh Varma, MD; Catherine O. Jordan, MD; Rachel E. Reem, MD; Mary Lou McGregor, MD; Shawn Aylward, MD; David Rogers, MD

Longitudinal Analysis of Optic Nerve Edema, Retinal Nerve Fiber Layer Thickness, and Visual Field Mean Deviation in Pediatric Patients with Intracranial Hypertension

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Neurofibromatosis Type 1 Associated Optic Pathway Glioma – A Very Long Term Follow Up

Michael Kinori, MD
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Laura A. Roeder; Leslie A. Shock, MD; Arshad R. Muzaffar, MD; Kristina J. Aldridge, PhD; Mohannad Al-Samarrai, MD

Ocular Findings in Pontine Tegmental Cap Dysplasia

Lauren C. Mehner, MD, MPH
Jennifer L. Jung, MD; Emily A. McCourt, MD

Longitudinal Follow-Up Study of Ocular Pathology in Children with Trisomy 21 in a Pediatric Ophthalmology Clinic

Allison C. Umfress, MD
Collin Hair, MD; Sean P. Donahue, MD, PhD

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Experience of a Non-Pediatric Trained Ophthalmic Hospitalist at a Children’s Hospital

Ashley Khalili, MD
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Laura Kueny, MD; Camilo Martinez, COA; Joy Li; Adrianna Lee; Osamah Saeedi, MD; Moran Roni Levin, MD; Mona Kaleem, MD; Bethany Karwoski, MD; Marlet Bazemore, MD; Marijean Miller, MD; Mohamad Jaafar, MD, FACS, FAAP; Janet Leath Alexander, MD; William P. Madigan, MD, FACS, FAAP

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