



NORTH AMERICAN  
NEURO-OPHTHALMOLOGY  
SOCIETY

# 2025 NANOS

## 51<sup>ST</sup> ANNUAL MEETING

MARCH 15-20  
JW MARRIOTT  
STARR PASS  
TUCSON, AZ

Earn up to 33.75  
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On-Demand  
April 15 - September 30, 2025

**SATURDAY, MARCH 15<sup>TH</sup>**

8:00 am – 12:00 pm	NANOS Board of Directors Meeting (board members only)	San Luis
1:00 pm – 7:30 pm	Registration/Help Desk	Foyer
2:00 pm – 7:30 pm	Descriptive Posters Set-Up	Arizona Ballroom 1-6
2:30 pm – 3:45 pm	A Taste of Neuro-Ophthalmology: Cases with Experts (trainees only)	Arizona Ballroom 7
4:00 pm – 5:00 pm	Neuro-Radiology Symposium [1.0 CME]	Tucson Ballroom
5:00 pm – 6:00 pm	Walsh Practice & Orientation (Walsh presenters & moderators only)	Tucson Ballroom
6:00 pm – 9:00 pm	Welcome Reception & Awards: <i>Sponsored by Viridian Therapeutics, Inc.</i>	Ania Terrace

**SUNDAY, MARCH 16<sup>TH</sup>**

6:30 am – 7:30 am	Breakfast with Exhibitors	Arizona Ballroom & Foyer
6:30 am – 7:30 am	JNO Editorial Board Meeting (JNO editorial board members only)	San Luis
6:30 am – 7:30 am	Descriptive Posters Preview (no author standby)	Arizona Ballroom 1-6
6:30 am – 7:30 am	YONO Breakfast with Experts	Arizona Ballroom 7
6:30 am – 7:30 am	JNO Editorial Board Meeting	San Luis
7:30 am – 9:30 am	Frank B. Walsh I [2.0 CME]	Tucson Ballroom
9:30 am – 9:45 am	Thomas Carlow Distinguished Service Award Presentation	Tucson Ballroom
9:45 am – 10:15 am	Morning Coffee Break with Exhibitors: <i>Sponsored by Acelyrin</i>	Arizona Foyer
10:15 am – 12:15 am	Frank B. Walsh II [2.0 CME]	Tucson Ballroom
12:15 am – 12:45 pm	NANOS Business Meeting & JNO Update (all invited)	Tucson Ballroom
12:45 pm – 1:45 pm	Lunch Provided by NANOS	Arizona Ballroom 7
12:45 pm – 1:45 pm	Fellowship Directors Committee Meeting (committee members only)	San Luis
1:00 pm – 3:00 pm	Descriptive Posters: Meet the Author	Arizona Ballroom 1-6
2:45 pm – 3:15 pm	Afternoon Coffee Break with Exhibitors: <i>Sponsored by Acelyrin</i>	Arizona Foyer
3:00 pm – 4:00 pm	Descriptive Posters Break-Down	Arizona Ballroom 1-6
3:00 pm – 5:00 pm	Frank B. Walsh III [2.0 CME]	Tucson Ballroom
5:00 pm – 6:00 pm	Analytical Poster Set Up	Arizona Ballroom 1-6
5:30 pm – 6:00 pm	Walsh Committee Meeting (committee members only)	Arizona 8-11
6:00 pm – 7:00 pm	Members-in-Training Reception (trainees & educators only)	Ania Terrace

**MONDAY – MARCH 17<sup>TH</sup>**

6:00 am – 6:45 am	Yoga with the President*	Ania Lawn
6:30 am – 7:30 am	Breakfast with Exhibitors	Arizona Ballroom & Foyer
6:30 am – 7:30 am	YONO Breakfast with Experts	Arizona Ballroom 7
6:30 am – 7:30 am	Breakfast with International Colleagues	Arizona Ballroom 7
6:30 am – 7:30 am	Analytical Posters Preview (no author standby)	Arizona Ballroom 1-6
6:30 am – 7:15 am	NOVEL/Editorial Board/Curriculum Committee Meeting (committee members only)	San Pedro
7:30 am – 9:30 am	What's New - Literature Review [2.0 CME]	Tucson Ballroom
9:30 am – 10:00 am	Morning Coffee Break with Exhibitors	Arizona Foyer
10:00 am – 12:00 pm	Scientific Platforms I [2.0 CME]	Tucson Ballroom
12:00 pm – 1:00 pm	Lambert-Eaton Myasthenic Syndrome (LEMS): An Often-Misdiagnosed Condition with Ophthalmic Signs and Symptoms	Arizona Ballroom 7
	<small>*This non-CME lunch symposium is an industry-sponsored activity organized by Catalyst Pharmaceuticals, Inc. The NANOS Program Committee was not involved in the planning of this event.</small>	
12:00 pm – 1:00 pm	Exploration of FcRn Blockade in Thyroid Eye Disease	Arizona Ballroom 8-11
	<small>*This non-CME lunch symposium is an industry-sponsored activity organized by argenx and is intended for healthcare professionals only. The NANOS Program Committee was not involved in the planning of this event.</small>	
1:00 pm – 2:30 pm	Member Submitted Symposium: The Cerebellum in Neuro-ophthalmology [1.5 CME]	Arizona Ballroom 7
1:00 pm – 2:30 pm	Member Submitted Symposium: Difficult Strabismus and the Neuro-ophthalmologist [1.5 CME]	Tucson Ballroom
2:30 pm – 3:00 pm	Afternoon Coffee Break with Exhibitors	Arizona Foyer
3:00 pm – 5:00 pm	Scientific Platforms II [2.0 CME]	Tucson Ballroom
5:00 pm – 7:00 pm	Analytical Studies Poster Reception: <i>Sponsored by Catalyst Pharmaceuticals, Inc.</i>	Arizona Ballroom 1-7

**TUESDAY – MARCH 18<sup>TH</sup>**

6:30 am – 7:30 am	Fun Run/Walk*	Tucson Mountain Park
7:00 am – 8:00 am	Breakfast with Exhibitors	Arizona Ballroom & Foyer
7:00 am – 8:00 am	Analytical Posters Encore (no author standby)	Arizona Ballroom 1-6
7:00 am – 8:00 am	YONO Breakfast with Experts	Arizona Ballroom 7
7:00 am – 8:00 am	Research Committee Meeting (committee members only)	San Luis
8:00 am – 10:00 am	Delivering Neuro-Ophthalmic Care: Workforce & Pipeline [2.0 CME]	Tucson Ballroom
10:00 am – 10:05 am	NOVEL Update	Tucson Ballroom
10:00 am – 10:30 am	Morning Coffee Break with Exhibitors	Arizona Foyer
10:30 am – 12:30 pm	Scientific Platforms III [2.0 CME]	Tucson Ballroom
12:30 pm – 1:30 pm	Demonstration of Neuro-Op Value Committee Meeting (committee members only)	San Pedro
12:30 pm – 1:30 pm	Case Challenges in TED: Applying the Latest Innovations in Practice	Arizona Ballroom 7
	<small>*This continuing education activity is provided by Mindico Medical Education and is supported by educational funding provided by Amgen. The NANOS Program Committee was not involved in the organization of this event.</small>	
1:30 pm – 3:00 pm	Member Submitted Symposium: How to Implement a Non-Mydriatic Retinal Camera in General Emergency Departments and in Neurology Clinics [1.5 CME]	Tucson Ballroom
1:30 pm – 3:00 pm	Member Submitted Symposium: Teaching Does Not Equal Learning/How to Become a Master Educator [1.5 CME]	Arizona Ballroom 7
3:00 pm – 3:30 pm	Afternoon Coffee Break with Exhibitors	Arizona Foyer
3:30 pm – 5:30 pm	Shaping the Future of Neuro-Ophthalmology: panel discussions [2.0 CME]	Tucson Ballroom
5:30 pm – 6:30 pm	Networking Reception	Ania Terrace
6:30 pm – 7:30 pm	Abstract Committee Meeting (committee members only)	San Luis

**WEDNESDAY – MARCH 19<sup>TH</sup>**

6:00 am – 6:45 am	Yoga with the President*	Ania Lawn
7:00 am – 8:00 am	Breakfast with Exhibitors	Arizona Ballroom & Foyer
7:00 am – 8:00 am	YONO Breakfast with Experts	Arizona Ballroom 7
7:00 am – 8:00 am	DEI Committee Meeting (committee members only)	San Luis
7:00 am – 8:00 am	Analytical Posters Encore (no author standby)	Arizona Ballroom 1-6
7:00 am – 8:00 am	International Relations Committee Meeting (committee members only)	San Pedro
7:15 am – 8:00 am	WIN Steering Committee Meeting (committee members only)	Arizona 8
8:00 am – 12:30 pm	Analytical Posters Break-Down	Arizona Ballroom 1-6
8:00 am – 10:00 am	Insight: The Science and Clinical Practice of Supporting Patients Through Vision Loss; Therapy When There Is No Cure [2.0 CME]	Tucson Ballroom
10:00 am – 10:30 am	Morning Coffee Break with Exhibitors	Arizona Foyer
10:30 am – 12:00 pm	Neuro-Ophthalmology Bowl [1.5 CME]	Tucson Ballroom
12:00 pm – 12:30 pm	Jacobson Lecture [0.5 CME]	Tucson Ballroom
12:30 pm – 1:30 pm	Optic Disc Drusen Study (ODDS) Consortium Meeting	San Luis
1:30 pm – 3:00 pm	Skills Session: Neuro-Otology Meets Neuro-Ophthalmology Session A [1.5 CME]	Arizona 8-11, Tucson C & D
1:30 pm – 3:00 pm	Skills Session: Chemodeneration Meets Neuro-Ophthalmology Session A [1.5 CME]	Arizona 7
3:15 pm – 4:45 pm	Skills Session: Neuro-Otology Meets Neuro-Ophthalmology Session B [1.5 CME]	Arizona 8-11, Tucson C & D
3:15 pm – 4:45 pm	Skills Session: Chemodeneration Meets Neuro-Ophthalmology Session B [1.5 CME]	Arizona 7
5:00 pm – 6:00 pm	Consortium of Pediatric Neuro-Ophthalmologists (CPNO) Meeting	San Luis
6:30 pm – 10:00 pm	Banquet and Trio of Cultures Entertainment	Starr Circle
10:00 pm – 12:00 am	DJ Dance Party	Arizona Ballroom 7

**THURSDAY – MARCH 20<sup>TH</sup>**

7:00 am – 8:00 am	Breakfast	Arizona Ballroom 7
8:00 am – 10:00 am	Treatments Outside the Box [2.0 CME]	Tucson Ballroom
10:00 am – 10:30 am	Morning Coffee Break	Arizona Foyer
10:30 am – 12:30 pm	Neuro-Ophthalmology Problems from Childhood to Adulthood [2.0 CME]	Tucson Ballroom

\*Advanced Registration Required



**NANOS  
MISSION  
STATEMENT:**

**The North American  
Neuro-Ophthalmology  
Society (NANOS) is  
dedicated to achieving  
inclusive excellence  
in the care of patients  
with neuro-ophthalmic  
diseases by the support  
and promotion of  
equitable education,  
research, and the practice  
of neuro-ophthalmology.**

# Welcome

Welcome to the North American Neuro-Ophthalmology Society (NANOS) 51<sup>st</sup> Annual Meeting in Tucson, Arizona. We are excited to have you here!

NANOS is a home for all neuro-ophthalmologists. The annual meeting will continue, as always, to provide a forum for everyone from across the globe to come together to share expertise and advance the field of Neuro-Ophthalmology through case discussions, didactic sessions, workshops, and networking opportunities. It promises to be the premier meeting for cutting-edge innovation and advances in Neuro-Ophthalmology.

The NANOS Scientific Program Committee has developed yet another outstanding program this year! It will feature symposia on *Neuro-Radiology*, *What's New – Literature Review*, *Delivering Neuro-Ophthalmic Care Around the World*, *Shaping the Future of Neuro-Ophthalmology*, *The Science and Clinical Practice of Supporting Patients Through Vision Loss*, *Skills Sessions on Neuro-Otology and Chemodenervation*, *Treatments Outside the Box*, *Neuro-Ophthalmology Problems From Childhood to Adulthood*, and fun Clinical knowledge challenges with the *Neuro-Ophthalmology Bowl*.

To accommodate the continual growth of high-quality abstract submissions, NANOS will host two Meet the Poster Author Sessions, including both Descriptive and Analytical Studies. Our platform sessions will feature the highest caliber of innovative scientific presentations.

Make sure to join us for the Welcome Reception and Awards Ceremony, sponsored by Viridian Therapeutics, Inc. on Saturday, March 15<sup>th</sup> at 6:00 pm. Hors d'oeuvres buffet and drink tickets printed with your badge will be accepted. The Awards Ceremony will begin at 6:45 pm. The Merit Awards, Dr. Ivy Dreizin WIN Leadership Grant, Hoyt Lecture Award, J. Lawton Smith Award, and Top NOVEL Contributors, will be revealed.

Don't forget to attend the Business Meeting and JNO update on Sunday, March 16<sup>th</sup> at 12:15 pm in Tucson Ballroom.

Breakfast (for meeting registrants only) will be provided daily. Lunch will be served on Sunday, March 16<sup>th</sup> at 12:45 pm in the Arizona Ballroom 7. The Poster Reception, sponsored by Catalyst Pharmaceuticals Inc., has moved to Monday evening: Enjoy appetizers and drinks as you soak up the cutting-edge research being presented. On Tuesday, March 18<sup>th</sup> at 5:30 we will have a networking reception immediately following the panel discussions. Meet someone new and learn about getting involved in NANOS.

Come and celebrate with us at the NANOS Banquet, Wednesday, March 19<sup>th</sup>! Enjoy a delicious Southwestern-style dinner buffet at 7:00 pm in The Starr Circle, enjoy the "Trio of Cultures" performances and then come to the DJ Dance Party at 10:00 pm in the Arizona Ballroom 7.

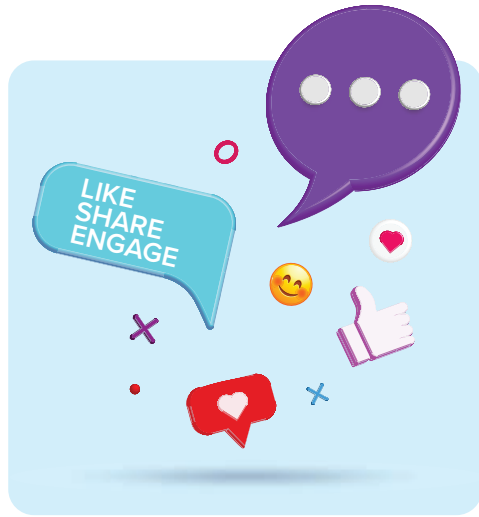
A sincere THANK YOU to the Scientific Program Committee, the Walsh Committee and Organizers, the Abstract Committee, the Development Committee, the NANOS Board of Directors, the Meeting Faculty, the NANOS Executive Office, and everyone else who generously donated their time and efforts to making this outstanding meeting possible. You are the reason this meeting can continuously be successful every year!

Welcome to the 2025 NANOS Annual Meeting. Enjoy!


**Peter A. Quirós, MD**  
NANOS President

## SOCIAL MEDIA

Stay connected with NANOS and enhance your experience by following us on **Facebook**, **Instagram**, **X/Twitter**, and **LinkedIn**. Use hashtags #NANOS #NANOS2025 #NANOSConnect #NANOSAnnualMeeting and don't forget to like, share, and engage.



### NANOS Social Media handles:

 Facebook (@NeuroOphthalmology)	 Instagram (@NANOSneuroop)
	
 X/Twitter (@NANOSTweets)	 LinkedIn (@NANOS)
	

## MOBILE APP INSTRUCTIONS

### STEP 1:

To access this year's Annual Meeting App, search for 'NANOS Connect' in your specific app store. (To download the app, you need to know your Apple ID or Google Play Store ID).



Scan here to access NANOS app

### STEP 2:

Download the app that has the same icon as the one seen below.



### STEP 3:

When you press the 'Login to NANOS' button you will be taken to the NANOS member login page.

### STEP 4:

Enter the NANOS login credentials you used when registering for the meeting. If you cannot remember your password, please reset it on the NANOS website [www.nanosweb.org](http://www.nanosweb.org).

### STEP 5:

After logging in, accept push notifications to receive important updates, including schedule changes and reminders.

Note: After a successful login, the 'NANOS Connect' app will re-open for you to use. Your browser may ask if you would like to open the 'NANOS Connect' app.

**Accept if it does.**

*Thank you Amgen for sponsoring the NANOS Mobile app!*

# TABLE OF CONTENTS



<b>General Information .....</b>	<b>4</b>
<b>Program Grid.....</b>	<b>7</b>
<b>Detailed Program.....</b>	<b>8</b>
<b>Supporter Recognition.....</b>	<b>24</b>
<b>Donor Recognition.....</b>	<b>25</b>
<b>Exhibitor Listing .....</b>	<b>28</b>

# GENERAL INFORMATION

## 2025 EXHIBITOR HOURS:

Location: **Foyer**

Set- up: Saturday, March 15th:	<b>9:00 am – 4:00 pm</b>
Sunday, March 16th:	<b>6:30 am – 5:00 pm</b>
Monday, March 17th:	<b>6:30 am – 7:30 pm</b>
Tuesday, March 18th:	<b>7:00 am – 3:45 pm</b>
Wednesday, March 19th:	<b>7:00 am – 12:30 pm</b>

Be sure to take advantage of exhibit hours to connect with our exhibitors—they are essential partners in making this meeting a success!

## NANOS REGISTRATION/HELP DESK HOURS:

Location: **Foyer**

Saturday, March 15th:	<b>1:00 pm – 7:30 pm</b>
Sunday, March 16th:	<b>6:30 am – 6:00 pm</b>
Monday, March 17th:	<b>6:30 am – 7:30 pm</b>
Tuesday, March 18th:	<b>7:00 am – 7:00 pm</b>
Wednesday, March 19th:	<b>7:00 am – 5:00 pm</b>
Thursday, March 20th:	<b>7:00 am – 1:00 pm</b>

## WIFI INSTRUCTIONS:

*Wi-Fi Instructions:*

**Network Name:** NANOS2025

**Passcode/Access Code:** Amgen2025  
(case-sensitive)

*Sponsored by Amgen*



## WELCOME ALL INTERNATIONAL ATTENDEES!

The International Relations Committee (IRC) is excited to connect with you at NANOS 2025!

**Networking Reception:** Meet fellow international attendees and NANOS members on Tuesday, March 18.

**Breakfast Tables:** Join IRC-hosted networking tables Monday, March 17, to share ideas with global peers.

**Mini Flags:** Pick up a flag sticker for your badge at registration to represent your home country!

We look forward to connecting with you!



## Join NANOS ANNUAL MEETING FUNDRAISER:

Give and Receive a NANOS-branded Travel Mug!

Join NANOS' Annual Meeting Fundraiser! Donate \$100 or more and get a NANOS Travel Mug, available for pickup onsite while supplies last!

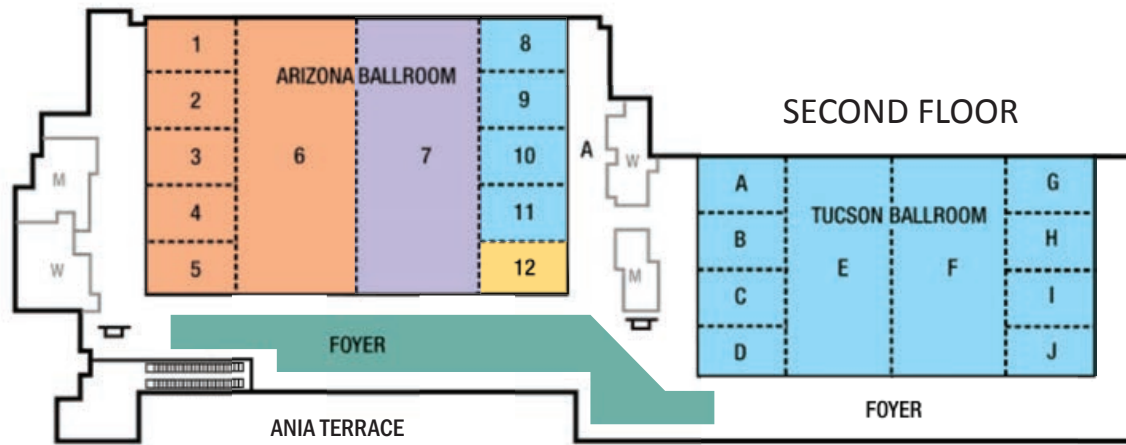


Visit  
<https://www.giveonsite.com/nanos/>  
or scan QR code to learn more.



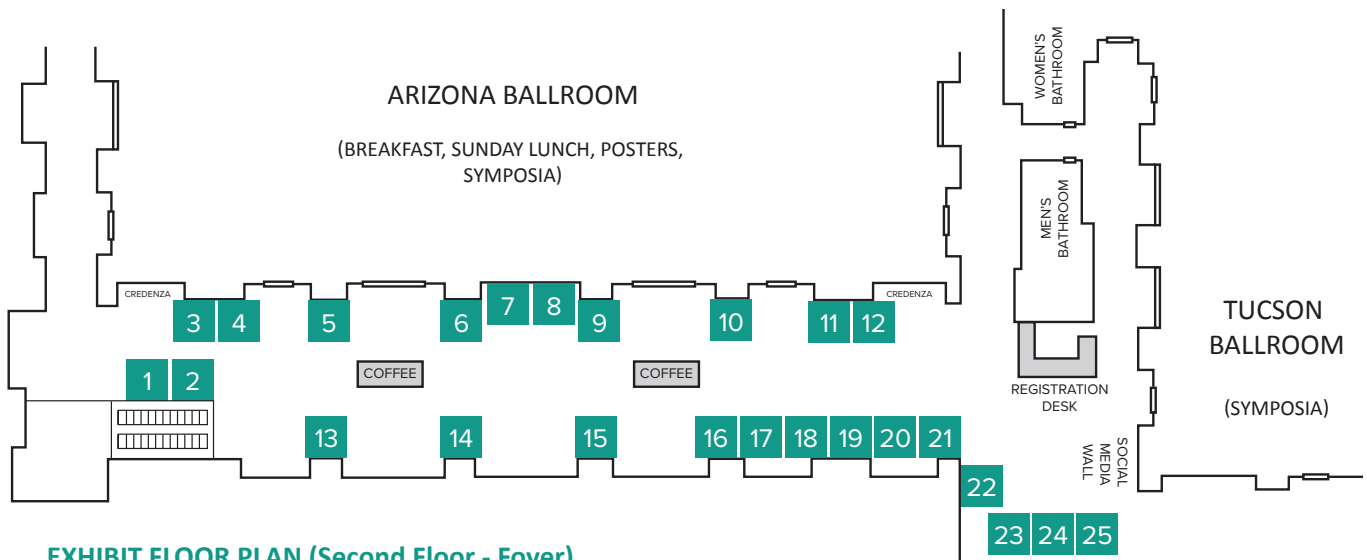
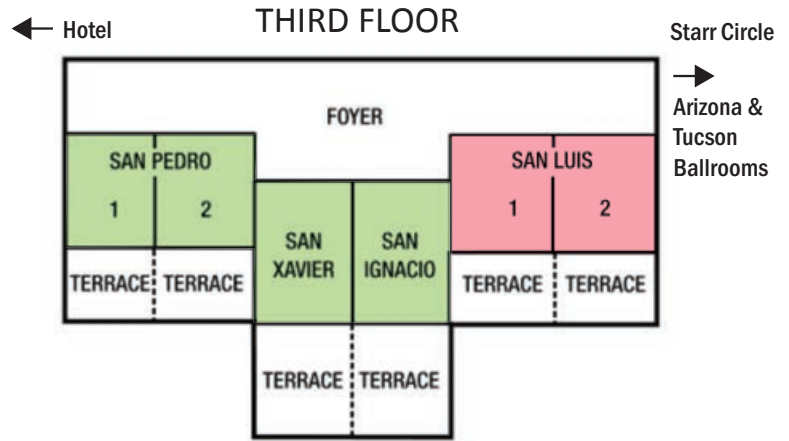
*NANOS is a 501(c)(3) not-for-profit organization and contributions are deductible to the extent allowed by law.*

# MAP



## SECOND & THIRD FLOORS

- Symposia & Skills Session
- Board Meeting & Committee Meetings
- Poster Sessions
- Exhibits/Coffee Breaks
- Breakfast, NANOS Sunday Lunch, Symposia & Skills Session
- Speaker Ready Room
- Meeting Rooms



## EXHIBIT FLOOR PLAN (Second Floor - Foyer)

- |  |                                       |  |
|--|---------------------------------------|--|
| 1. Tourmaline Bio  | 9. Viridian Therapeutics, Inc.        | 19. neuroClues                                     |
| 2. Benign Essential Blepharospasm Research Foundation                  | 10. Amgen TEPEZZA                     | 20. Alexion, AstraZeneca Rare Disease - US Medical |
| 3. University of Iowa, Department of Ophthalmology and Visual Sciences | 11. argenx                            | 21. Fresnel Prism and Lens Co.                     |
| 4. UCB   | 12. Catalyst Pharmaceuticals, Inc.    | 22. Amgen Medical                                  |
| 5. Genentech   | 13. LHON Project                      | 23. SpringWorks Therapeutics                       |
| 6. Topcon Healthcare, Inc.   | 14. Alexion, AstraZeneca Rare Disease | 24. Optego Vision                                  |
| 7. UCB Medical   | 15. Neuroptek                         | 25. Acelyrin                                       |
| 8. machineMD   | 16. Amgen UPLIZNA                     |  |
|  | 17. Diagnosys LLC                     |  |
|  | 18. Immunovant                        |  |



## CME



In support of improving patient care, this activity has been planned and implemented by Medical Education Resources (MER) and North American Neuro-Ophthalmology Society (NANOS). MER is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC), to provide continuing education for the healthcare team.

### STATEMENT OF NEED

The purpose of the North American Neuro-Ophthalmology Society's Continuing Medical Education (CME) program is to present neuro-ophthalmologists with quality lifelong learning opportunities to promote improvement and change in physician practices, performance, and competence needed to provide the best possible neuro-ophthalmic care for their patients.

### EDUCATIONAL OBJECTIVES

After completing this activity, the participant should be better able to:

- Identify recent advances in the diagnosis and treatment of neuro-ophthalmic diseases.
- Identify advances in key areas of cutting-edge research and technology in neuro-ophthalmology.
- Apply skills and techniques from the educational sessions into their daily practice.

### TARGET AUDIENCE

This activity has been designed to meet the educational needs of neuro-ophthalmologists (neurologists and ophthalmologists) involved in the care of patients with neuro-ophthalmic disorders.

### DISCLOSURE OF RELEVANT FINANCIAL RELATIONSHIPS

Medical Education Resources ensures balance, independence, objectivity, and scientific rigor in all our educational activities. In accordance with this policy, MER identifies relevant financial relationships with its instructors, content managers, and other individuals who are in a position to control the content of an activity. Reported relevant financial relationships are mitigated by MER to ensure that all scientific research referred to, reported, or used in a CE activity conforms to the generally accepted standards of experimental design, data collection, and analysis. MER is committed to providing learners with high-quality CE activities that promote improvements or quality in health care and not the business interest of an ineligible company.

### CREDIT DESIGNATION

Medical Education Resources designates this live activity for a maximum of *33.75 AMA PRA Category 1 Credits™*. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Jointly provided by Medical Education Resources and the North American Neuro-Ophthalmology Society.

### ABPN Self-Assessment Credit

The American Board of Psychiatry and Neurology (ABPN) has reviewed the 2025 NANOS Annual Meeting and has approved this activity as part of a comprehensive Self-Assessment (SA) CME activity, which is mandated by the ABMS as a necessary component of Continuing Certification.

### ABO Self-Assessment Credit

As of 2023, American Board of Ophthalmology (ABO) is no longer participating in the ACCME collaboration. We are no longer able to upload ABO credit directly through the ACCME site. Diplomats will self-report and attest to the amount of credit they claim when submitting credit. Complete information regarding the ABO Self-Assessment CME Maintenance of Certification requirements is available at: <https://abop.org/maintain-certification/>

### How to Claim CME for the 2025 NANOS Annual Meeting


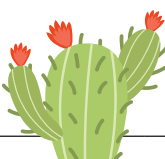

Claiming CME is as easy as 1-2-3:

1. Download the NANOS Meetings mobile app "NANOS Connect" from your device's app store or go to <https://www.nanosweb.org/cme2025>.
2. Click on the CME button in the mobile app or CME webpage to complete the meeting evaluation.
3. Once completed, you will be given a link to download your CME certificate. You will also receive an email confirmation with the link to your certificate.
4. If claiming Maintenance of Certification (MOC) credits, you must complete the Pre-Test and Post-Test and self-report this data as it is separate from ACCME reporting.



# NANOS 2025 ANNUAL MEETING PROGRAM GRID

**NEW!** Your Quick-Guide to Daily Events – Stay on Track Effortlessly!

	SATURDAY	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	
<b>AM Activity</b>			Yoga	Fun Run/Walk	Yoga		
<b>Breakfast Meetings</b>		JNO Editorial Board Meeting	NOVEL/Editorial Board /Curriculum Committee Meeting	Research Committee Meeting	DEI Committee Meeting IRC Committee Meeting WIN Steering Committee Meeting		
	NANOS Sponsored Breakfast						
<b>Breakfast Tables</b>	YONO Breakfast with Experts						
		Breakfast with International Colleagues					
<b>Breakfast Programs</b>	Descriptive Posters Preview (no author standby)	Analytical Poster Preview (no author standby)		Analytical Posters Encore (no author standby)	Analytical Posters Encore (no author standby)		
	Breakfast with Exhibitors						
<b>AM Session</b>	Walsh I Thomas Carlow Distinguished Service Award Presentation	What's New? Literature Review		Global Perspectives: Delivering Neuro-Ophthalmic Care Around the World NOVEL Update	Insight: The Science and Clinical Practice of Supporting Patients Through Vision Loss; Therapy When There Is No Cure	Treatments Outside the Box	
	Morning Coffee Break						
	Walsh II NANOS Business Meeting/JNO Update	Scientific Platforms I		Scientific Platforms III	Neuro-Ophthalmology Bowl Jacobson Lecture	Neuro-Ophthalmology Problems from Childhood to Adulthood	
<b>Lunch</b>	Registration opens	NANOS Sponsored Lunch	<i>Sponsored Lunch Symposia: Lambert-Eaton Myasthenic Syndrome</i> <i>Sponsored lunch symposia: Exploration of FcRn Pathway Inhibition in Thyroid Eye Disease</i>		<i>Sponsored Lunch CME: Case Challenges in TED: Applying the Latest Innovations in Practice</i>		
<b>Lunch Meeting</b>		Fellowship Directors Committee Meeting		Demonstration of Neuro-Op Value Committee Meeting	Optic Disk Drusen Studies Consortium Meeting		
<b>PM Session</b>	A Taste of Neuro-Ophthalmology: Cases with the Experts (trainees only)	Descriptive Posters (author standby)	<u>Member Submitted Symposium:</u> The Cerebellum in Neuro-Ophthalmology	<u>Member Submitted Symposium:</u> Difficult Strabismus and the Neuro-Ophthalmologist	<u>Member Submitted Symposium:</u> How to Implement a Non-Mydriatic Retinal Camera in General Emergency Departments and in Neurology Clinics	<u>Member Submitted Symposium:</u> Teaching Does Not Equal Learning! How to Become a Master Educator	Skills Session: Neuro-Otology meets Neuro-Ophthalmology Session A Skills Session: Chemodenervation meets Neuro-Ophthalmology Session A
	Neuro-Radiology Symposium	Afternoon Coffee Break				Skills Session: Neuro-Otology meets Neuro-Ophthalmology Session B Skills Session: Chemodenervation meets Neuro-Ophthalmology Session B	
		Walsh III	Scientific Platforms II		Shaping the Future of Neuro-Ophthalmology: Panel Discussions		
<b>Early Evening</b>	Walsh Practice & Orientation	Walsh Committee Meeting	Analytical Poster Reception (author standby)		Networking Happy Hour Reception	Consortium of Pediatric Neuro-ophthalmologists Meeting	
<b>Evening</b>	Welcome Reception & Awards	Members in Training Reception (trainees & educators only)			Abstract Committee Meeting	Banquet + Entertainment	
<b>Late Night</b>					After-Party		

 Pre-registration required

 NANOS Social events included with full meeting registration

 Invitation only

 Limited capacity, first come first serve

 No scheduled activities

# PROGRAM

## Fun Fact:

Most of Arizona doesn't observe daylight saving so during the NANOS meeting, Arizona is 3 hours behind the US eastern coast & the same time as the US west coast.



• • • TIMES ARE LISTED IN PACIFIC STANDARD TIME (PT) • • •

## SATURDAY, MARCH 15<sup>TH</sup>

- 8:00 am – 12:00 pm      **NANOS Board of Directors Meeting** (board members only) ..... San Luis
- 1:00 pm – 7:30 pm      **Registration/Help Desk**..... Foyer
- 2:00 pm – 7:30 pm      **Descriptive Posters Set-Up** ..... Arizona Ballroom 1-6  
 Descriptive posters are encouraged to be set up on Saturday to allow meeting attendees to preview them during Sunday breakfast. If presenters are unable to meet these times, they may set up their posters as soon as they are onsite during registration desk hours. We kindly ask all presenters to ensure their posters are displayed prior to the start of the poster session on Sunday at 1:00 pm to avoid any disruption. Thank you for your understanding and cooperation!
- 2:30 pm – 3:45 pm      **A Taste of Neuro-Ophthalmology: Cases with Experts** (Trainees only)..... Arizona Ballroom 7  
*Moderator: Nancy Newman, MD*  
*Faculty: Steven Galetta, MD, Valerie Biousse, MD, Andrew G. Lee, MD, Vivek Patel, MD*
- Join us for a **trainees-only** (medical students, residents, fellows-in-training) whirlwind tour through the many ways one can practice neuro-ophthalmology as illustrated by case presentations. Emergency care, complex diagnoses, multi-disciplinary care, surgical care and translational science will be highlighted.
- 4:00 pm – 5:00 pm      **Neuro-Radiology Symposium: Anatomy and Pathology of the Ophthalmic Segment of the Trigeminal Nerve: Focus on Perineural Tumor Spread (PTS) [1.0 CME]** ..... Tucson Ballroom  
*Moderator: Mays El-Dairi, MD*  
*Speaker: Philip R. Chapman, MD*
- Upon completion of this session, participants should be able to:
- (1) Review normal anatomy of ophthalmic division of trigeminal nerve (V1) and its relationship to adjacent structures in the orbit.
  - (2) Understand the role of this nerve in perineural tumor spread of cancer around the orbit, especially cutaneous malignancy.
  - (3) Examine subtle or early cases that can be challenging.
- 5:00 pm – 6:00 pm      **Walsh Practice & Orientation** (Walsh presenters & moderators only) ..... Tucson Ballroom  
*Mandatory for all Walsh presenters and moderators.*

6:00 pm – 9:00 pm **Welcome Reception & Awards** .....Ania Terrace  
*Sponsored by Viridian Therapeutics, Inc.* (bad weather: Arizona Ballroom and Foyer)

Reconnect with your NANOS colleagues and enjoy some music and great food. There will be lawn games available for the young (at heart) organized by the YONO committee. The Dr. Ivy Dreizin WIN Leadership Development Grant, the Thomas & Susan Carlow Young Investigator Award, Hoyt Lecture Award, Merit Awards, Lawton Smith Award (JNO), and Top NOVEL Contributors will be presented. Don't miss out on this exceptional opportunity to network while experiencing the vibrant and unique culture of Tucson. Heavy hors d'oeuvres buffet, included with meeting registration, and drink tickets printed with your badge will be accepted. Guest tickets are available for purchase (\$150 adult, \$50 children) with online registration or onsite at the Registration Desk.

**SUNDAY, MARCH 16<sup>TH</sup>**

6:30 am – 6:00 pm **Registration/Help Desk**..... Foyer

6:30 am – 5:00 pm **Exhibit Hours**..... Foyer

6:30 am – 7:30 am **Breakfast with Exhibitors**..... Arizona Ballroom & Foyer

6:30 am – 7:30 am **Descriptive Posters Preview (no author standby)** ..... Arizona Ballroom 1-6

6:30 am – 7:30 am **YONO Breakfast with Experts**..... Arizona Ballroom 7  
 - Career pathways for the neurology trained NO  
 - Career pathways for the ophthalmology trained NO  
 - Building a workforce for the future

6:30 am – 7:30 am **JNO Editorial Board Meeting (JNO editorial board members only)**..... San Luis

**57<sup>th</sup> Frank B. Walsh Symposium**

**Host:** Duke University/University of Vermont

**Lead Host:** Chantal J. Boisvert, OD, MD

**Host Committee Members:**

*Mays El-Dairi, MD, Sidney Gospe III, MD, PhD; N. Troy Tagg, MD; Philip Skidd, MD*

**Expert Panel:**

*Neuroradiologist: Philip R. Chapman, MD*

*Neuropathologist: John DeWitt, MD, PhD*

These sessions will present complex cases that impact the visual pathways and ocular motor systems. The format is a clinicopathologic conference. Clinical cases will be presented by neuro-ophthalmologists with comments by invited experts in neuro-radiology and neuro-pathology. Neuroimaging, laboratory, and surgical pathology data will illustrate clinical points. Cases will be discussed from clinical, anatomic, radiologic, and pathologic aspects with emphasis on diagnosis, pathophysiology, and management.

Upon completion of these sessions, participants should be able to:

- (1) Describe the varied clinical presentations of neuro-ophthalmic disease.
- (2) Formulate effective diagnostic testing strategies for complex neuro-ophthalmic cases including the use of new diagnostic tests.
- (3) Explain the value and limitations of neuropathology and neuroimaging.
- (4) Identify newly described neuro-ophthalmic diseases in clinical practice.

7:30 am – 9:30 am **Frank B. Walsh I [2.0 CME]** ..... Tucson Ballroom  
*Moderators: Mays El-Dairi, MD & N. Troy Tagg, MD*

7:30 am – 7:45 am **Welcome/Introduction**, Heather Moss, MD, PhD, John Chen, MD, PhD, Lindsey De Lott, MD, MS and Chantal J. Boisvert, OD, MD

7:45 am – 8:05 am **Blasting Through the Walls**, Tais Estrela, MD

8:05 am – 8:25 am **Follow Your Gut**, Ruben Jauregui, MD

8:25 am – 8:45 am **What Goes Around Comes Around**, Kathleen Louis-Gray, MD, PhD

8:45 am – 9:05 am **An Infiltrator in Our Midst**, Neena Cherayil, MD

9:05 am – 9:25 am **Behind the Swollen Disc**, Ari August, BA

9:25 am – 9:30 am **Wrap Up**, Mays El-Dairi, MD & N. Troy Tagg, MD

# PROGRAM

9:30 am – 9:45 am	<b>Thomas Carlow Distinguished Service Award Presentation</b> ..... Tucson Ballroom <i>Presented by: Larry Frohman, MD</i>
9:45 am – 10:15 am	<b>Morning Coffee Break with Exhibitors</b> ..... Foyer <i>Sponsored by Acelyrin</i>
10:15 am – 12:15 pm	<b>Frank B. Walsh II [2.0 CME]</b> ..... Tucson Ballroom <i>Moderators: Chantal J. Boisvert, OD, MD &amp; Philip Skidd, MD</i>
10:15 am - 10: 20 am	<b>Introduction</b> , Chantal J. Boisvert, OD, MD & Philip Skidd, MD
10:20 am – 10:40 am	<b>Gut is Going On?</b> , Danijel Pericic, MD, MS
10:40 am – 11:00 am	<b>It’s Easy as ABCDCMV</b> , Michael Trainer, MD
11:00 am – 11:20 am	<b>Cutting Through the Pink Tape</b> , Murphy Lu, MD, MBA
11:20 am – 11:40 am	<b>Multiple Sclerosis Treatment Goes Viral</b> , Sehrish Momin, MBBS
11:40 am – 12:00 pm	<b>Under the Surface</b> , Betty Situ, MD, MPH
12:00 pm – 12:15 pm	<b>Wrap-Up</b> , Chantal J. Boisvert, OD, MD & Philip Skidd, MD
12:15 pm – 12:45 pm	<b>NANOS Business Meeting &amp; JNO Update</b> (all invited) ..... Tucson Ballroom
12:45 pm – 1:45 pm	<b>Lunch</b> (provided by NANOS)..... Arizona Ballroom 7
12:45 pm – 1:45 pm	<b>Fellowship Directors Committee Meeting</b> (lunch provided/committee members only) ..... San Luis
1:00 pm – 3:00 pm	<b>Meet the Poster Author: Descriptive Studies</b> ..... Arizona Ballroom 1-6
1:00 pm – 2:00 pm	Session I: Authors standing by odd numbered posters
2:00 pm – 3:00 pm	Session II: Authors standing by even numbered posters
3:00 pm – 4:00 pm	Descriptive Posters Break-Down. Remaining descriptive posters not removed by authors by 4:00 pm will be removed by NANOS staff between 4:00 pm and 5:00 pm and will be stored in the registration desk area until the end of the NANOS 51 <sup>st</sup> Annual Meeting.
<p>In this poster session, the first authors of case reports and case series will be available to answer questions about their posters in person. This is a great opportunity to interact with trainees and expand your knowledge about interesting and unusual presentations of neuro-ophthalmologic conditions.</p>	
2:45 pm – 3:15 pm	<b>Afternoon Coffee Break with Exhibitors</b> ..... Foyer <i>Sponsored by Acelyrin</i>
3:15 pm – 5:15 pm	<b>Frank B. Walsh III [2.0 CME]</b> ..... Tucson Ballroom <i>Moderators: Mays El-Dairi, MD &amp; Sidney Gospe III, MD, PhD</i>
3:15 pm – 3:35 pm	<b>No Warming Out of This One</b> , Carter Suryadevara, MD, PhD
3:35 pm – 3:55 pm	<b>A Kid, a Fever, and A Whole Lot of Optic Nerve Drama</b> , Nitsan Duvdevan-Strier, MD
3:55 pm – 4:15 pm	<b>Dancing with “Peggy”</b> , Arens Taga, MD
4:15 pm – 4:35 pm	<b>TRUE FANS Will Stand By You, No MATTER What!</b> , Hyun Jun Kim, MD
4:35 pm – 4:55 pm	<b>The Eyes Have It</b> , Raghu Mudumbai, MD
4:55 pm – 5:05 pm	<b>Wrap-up</b> , Mays El-Dairi, MD & Sidney Gospe III, MD, PhD
5:05 pm – 5:15 pm	<b>Closing Remarks</b> , John Chen, MD, PhD and Lindsey De Lott, MD, MS
5:00 pm – 6:00 pm	<b>Analytical Posters Set Up</b> ..... Arizona Ballroom 1-6 Analytical posters are encouraged to be set up on Sunday during this time so meeting attendees can preview them at Monday breakfast. They can remain on display until Wednesday morning. If presenters are unable to meet these times, we kindly ask all presenters to ensure their posters are displayed prior to the start of the poster session on Monday at 5 pm to avoid any disruption. Thank you for your understanding and cooperation!
5:30 pm – 6:00 pm	<b>Walsh Committee Meeting</b> (committee members only).....Arizona 8-11

6:00 pm – 7:00 pm **Members-in-Training Reception** (trainees & educators only) ..... Ania Terrace  
(bad weather: San Pedro)

All Students, Residents, and Fellows-in-Training, NANOS Board of Directors, Fellowship Directors, Student Clerkship, and Neurology and Ophthalmology Residency Directors are invited to this reception. This event is a great opportunity to network and connect with NANOS leadership and Fellowship Directors.



**Fun Fact:**

Tucson is a UNESCO City of Gastronomy – It was the first U.S. city to earn this title due to its rich culinary history that blends Native American, Mexican, and Spanish influences. Don't leave without trying a Sonoran Hot Dog!



**MONDAY, MARCH 17<sup>TH</sup>**

6:30 am – 7:30 pm	<b>Registration/Help Desk</b> .....	Foyer
6:30 am – 7:30 pm	<b>Exhibit Hours</b> .....	Foyer
6:00 am – 6:45 am	<b>Yoga with the NANOS President</b> (advanced registration required).....	Ania Lawn
6:30 am – 7:30 am	<b>Breakfast with Exhibitors</b> .....	Arizona Ballroom Foyer
6:30 am – 7:30 am	<b>YONO Breakfast with Experts</b> .....	Arizona Ballroom 7
	- Finding a Great Mentor	
	- What I Wish I Knew Earlier in My Practice	
6:30 am – 7:30 am	<b>Breakfast with International Colleagues</b> .....	Arizona Ballroom 7
6:30 am – 7:30 am	<b>Analytical Posters Preview</b> (no author standby).....	Arizona Ballroom 1-6
6:30 am – 7:30 am	<b>NOVEL/Editorial Board/Curriculum Committee Meeting</b> (committee members only).....	San Pedro
7:30 am – 9:30 am	<b>What's New – Literature Review [2.00 CME]</b> .....	Tucson Ballroom
	<i>Moderators: Julie Falardeau, MD &amp; Marc Dinkin, MD</i>	
7:30 am – 7:35 am	<b>Introduction, Julie Falardeau, MD &amp; Marc Dinkin, MD</b>	
7:35 am – 8:00 am	<b>What's New in Retina? Amani Fawzi, MD</b>	
8:00 am – 8:30 am	<b>What's New in Neuro-Vascular Neurology? John Paddock, MD</b>	
8:30 am – 9:00 am	<b>What's New in Eye Pain? A Cornea Perspective, Anat Galor, MD, MSPH</b>	
9:00 am – 9:30 am	<b>What's New in Neuro-Immunology? Fiona Costello, MD, FRCPC</b>	

This session will highlight recent findings from key articles focusing on retinal disorders, corneal neuropathic pain, neuro-vascular disorders, and neuro-immunology. By reviewing and discussing the latest knowledge/research, we aim to enhance clinical practice in neuro-ophthalmology.

Upon completion of this session, participants should be able to:

- (1) Review new concepts related to selected retinal diseases, including advancements in imaging modalities.
- (2) Discuss new insights into corneal neuropathic pain, including its mechanisms, diagnosis, and management strategies.
- (3) Identify best practices for diagnosing and managing neuro-vascular disorders.
- (4) Discuss diagnostic criteria, biomarkers, and emerging therapies related to neuro-immunology.

# PROGRAM

9:30 am – 10:00 am	<b>Morning Coffee Break with Exhibitors</b> ..... Arizona Foyer
10:00 am – 12:00 pm	<b>Scientific Platform Session I [2.0 CME]</b> ..... Tucson Ballroom <i>Moderators: Stacy Pineles, MD &amp; Samuel Spiegel, MD</i>
10:00 am – 10:15 am	<b>Demographic, Clinical and Imaging Characteristics of Newly Diagnosed Optic Pathway Gliomas Associated with NF1: Results from the International Multicenter NF1-OPG Natural History Study</b> , <i>Robert Avery, DO</i>
10:15 am – 10:30 am	<b>Lack of Clinically Significant Ocular Toxicity in Children Treated with Mitogen-activated Protein Kinase Kinase Inhibitors</b> , <i>Connor Dallas</i>
10:30 am – 10:45 am	<b>FALCON: A Prospective Natural History Study in Patients with Optic Atrophy 1-Associated Autosomal Dominant Optic Atrophy</b> , <i>Raghu Mudumbai, MD</i>
10:45 am – 11:00 am	<b>Artificial Intelligence Can Differentiate Causes of Optic Disc Edema Using Unsegmented OCTs</b> , <i>David Szanto, MD</i> (nominee for best abstract by a student)
11:00 am – 11:15 am	<b>Flavoprotein Fluorescence Imaging As a Novel Method To Quantify Disease Burden In Optic Disc Drusen</b> , <i>Rishita Pujari, MD</i>
11:15 am – 11:30 am	<b>Time-Driven Activity-Based Costing of Outpatient STAT vs. ED Neuroimaging for Optic Disc Edema</b> , <i>Florian H. Guillot, MD</i>
11:30 am – 11:45 am	<b>Non-Mydriatic Ocular Fundus Imaging on Consecutive Patients Presenting to a General Emergency Department (ED) with Vision Complaints</b> , <i>Jessica McHenry, MD</i> (nominee for best abstract by a student)
11:45 am – 12:00 pm	<b>Long-Term Outcomes of Bilateral Injection of Lenadogene Nolparvovec Gene Therapy for Leber Hereditary Optic Neuropathy</b> , <i>Nancy Newman, MD</i> (Late Breaking)

In the scientific platform sessions, investigators will present results of clinical trials, epidemiologic studies, and basic science research that will advance the field of neuro-ophthalmology. The sessions focus on treatments, diagnostic techniques, and mechanistic investigations that have the potential to improve our understanding and management of neuro-ophthalmic conditions.

Upon completion of these sessions, participants should be able to:

- 1) Describe findings of natural history studies, prospective observational studies, and clinical trials in the field of neuro-ophthalmology.
- 2) List novel ophthalmic imaging techniques that can be applied to neuro-ophthalmic conditions.
- 3) Discuss potential applications of genetic testing and artificial intelligence for diagnosis and prognostication of neuro-ophthalmologic disorders.

12:00 pm – 1:00 pm	<b>Lunch (on your own or join one of the lunch symposia)</b>
12:00 pm – 1:00 pm	<b>Lambert-Eaton Myasthenic Syndrome (LEMS): An Often-Misdiagnosed Condition with Ophthalmic Signs and Symptoms</b> ..... Arizona Ballroom 7 <i>*This non-CME lunch symposium is an industry-sponsored activity organized by Catalyst Pharmaceuticals, Inc. The NANOS Program Committee was not involved in the planning of this event.</i> <i>Moderator/Faculty: Andrew Lee, MD</i>

This presentation will focus on Lambert-Eaton Myasthenic Syndrome (LEMS) and the clinical signs and symptoms of this neurologic paraneoplastic syndrome. Ophthalmic symptoms that may lead to the recognition of LEMS, differential diagnosis, as well as an FDA-approved treatment option will be discussed.



Become a member by  
April 30th, 2025 and  
get 20% off

12:00 pm – 1:00 pm

**Exploration of FcRn Blockade in Thyroid Eye Disease**..... Arizona Ballroom 8-11

*\*This non-CME lunch symposium is an industry-sponsored activity organized by argenx and is intended for healthcare professionals only. The NANOS Program Committee was not involved in the planning of this event.*

*Speakers: Erika F. Brutsaert, MD, Kimberly P. Cockerham, MD, FACS & Vivek R. Patel, MD, FRCSC*

TED is a frequently misdiagnosed inflammatory autoimmune disease, characterized by persistent physical manifestations and challenges to patient quality of life. Join us for an engaging symposium to explore the biology behind the burden of TED, with a focus on the role of autoantibodies in its pathophysiology and as a potential therapeutic target. Our expert faculty will also provide an overview of a Phase 3 clinical study investigating efgartigimod alfa in TED. Efgartigimod alfa rHuPH20 is not approved by the FDA for the treatment of patients with TED, as safety and efficacy have not been established.

1:00 pm – 2:30 pm

**Member Submitted Symposium: The Cerebellum in Neuro-Ophthalmology [1.5CME]**..... Arizona Ballroom 7

*Director: Ali Hamedani, MD, MHS*

1:00 pm – 1:05 pm

**Introduction**, *Ali Hamedani, MD, MHS*

1:05 pm – 1:25 pm

**Cerebellar Control of Eye Movement**, *Dan Gold, DO*

1:25 pm – 1:45 pm

**Management of Visual Symptoms Due to Cerebellar Disease**, *Janet Rucker, MD*

1:45 pm – 2:05 pm

**Genetic and Degenerative Cerebellar Ataxias: Diagnosis and Therapeutic Advances**,  
*Ali Hamedani, MD, MHS*

2:05 pm – 2:20 pm

**Retinal and Optic Nerve Disease in Inherited Ataxia Syndromes**, *Greg Van Stavern, MD*

2:20 pm – 2:30 pm

**Q&A**

The cerebellum plays a central role in the coordination of eye movement, and many eye movement abnormalities due to cerebellar disease present to the neuro-ophthalmologist for evaluation. Symptoms such as double vision and oscillopsia can be visually disabling, and in addition to treating these symptoms, neuro-ophthalmologists are often tasked with identifying the cause of cerebellar dysfunction, including potential autoimmune, genetic, and degenerative etiologies. This symposium provides a comprehensive overview of neuro-ophthalmic manifestations of cerebellar disease, including the cerebellar control of eye movement, treatment of visual symptoms due to cerebellar disease, approach to diagnosis of cerebellar ataxia, and retinal and optic nerve disease in inherited ataxia syndromes.

Upon completion of this session, participants should be able to:

- (1) Describe common eye movement abnormalities associated with cerebellar disease and their mechanisms.
- (2) Formulate a diagnostic approach to cerebellar disease presenting to the neuro-ophthalmologist.
- (3) Summarize recent advances in the diagnosis and treatment of visual symptoms related to cerebellar ataxia.

**Fun Fact:**

**A Stargazer's Paradise** – Tucson has some of the **darkest night skies** in the U.S. due to strict light pollution laws, making it a top location for **astronomy** and home to the **Kitt Peak National Observatory!**



Join the new and improved NANOS Community by scanning this QR code.

# PROGRAM

1:00 pm – 2:30 pm **Member Submitted Symposium: Difficult Strabismus and the Neuro-Ophthalmologist [1.5 CME]**..... Tucson Ballroom  
*Director & Moderator: Jason Peragallo, MD; Moderator: Paula Grigorian, MD*

1:00 pm – 1:05 pm **Introduction:** *Jason Peragallo, MD*  
 1:05 pm – 1:23 pm **Patient Selection and Ethics,** *Lauren Ditta, MD*  
 1:23 pm – 1:41 pm **Oops, I Wish I Hadn't Done That,** *Paul Phillips, MD*  
 1:41 pm – 1:59 pm **When Small Amounts of Torsion Need Treatment,** *Jonathan Holmes MD*  
 1:59 pm – 2:17 pm **Strabismus Surgery in the Setting of Orbital and Cavernous Sinus Disease: Pearls and Pitfalls,**  
*Federico Velez MD & Jason Peragallo, MD*  
 2:17 pm – 2:30 pm **Q&A**

Neuro-ophthalmologists frequently manage patients with diplopia and strabismus. The neuro-ophthalmologist may treat strabismus medically or surgically or refer the patient to a provider who can provide surgical management. This symposium will address complex situations in strabismus management, including unexpected outcomes, appropriate patient selection for strabismus surgery, management of expectations around strabismus surgery, and management of the patient with torsion or complex orbital and cavernous sinus disease. Familiarity with the management of strabismus resulting from neuro-ophthalmic pathologies is important for improving outcomes and proper counseling of patients. Basic and advanced surgical techniques for treatment of strabismus will be discussed. This symposium is co-sponsored by the American Association for Pediatric Ophthalmology and Strabismus Adult Strabismus Committee.

Upon completion of this session, participants should be able to:

- (1) Evaluate patients with strabismus and determine appropriate plans of action to address particular patient needs and situation.
- (2) Revise treatment strategies when unexpected outcomes occur.
- (3) Distinguish when torsion becomes a barrier to successful strabismus outcomes and apply strategies to overcome this.
- (4) Identify risk factors for poor outcomes in complicated orbital and intracranial disease leading to cranial nerve palsies and strabismus.

2:30 pm – 3:00 pm **Afternoon Coffee Break with Exhibitors** ..... Arizona Foyer

3:00 pm – 5:00 pm **Scientific Platform Session II [2.0 CME]** ..... Tucson Ballroom  
*Moderators: Valerie Biousse, MD & Ali Hamedani, MD, MHS*

3:00 pm – 3:15 pm **THRIVE and THRIVE-2 Phase 3 Trials: Efficacy and Safety at 15 Weeks of Veligrotag (VRDN-001), a Full Antagonist Antibody to IGF-1R, in Thyroid Eye Disease (TED),** *Kimberly P. Cockerham, MD*  
 3:15 pm – 3:30 pm **Phase 3 Myasthenia Gravis Inebilizumab Trial (MINT): Efficacy and Safety Results in Patients with Generalized MG,** *Richard J. Nowak, MD*  
 3:30 pm – 3:45 pm **Prevalence and Clinical Features of Spinocerebellar Ataxia 27B in Patients with Idiopathic Downbeat Nystagmus at a Tertiary Care Center,** *Leigh A. Rettenmaier, MD* (nominee for best abstract by a fellow in training)  
 3:45 pm – 4:00 pm **Characteristics of Eye Movement Disorders in Adult-Onset Autoimmune and Paraneoplastic Neurological Syndromes,** *Natthapon Rattanathamsakul, MD*  
 4:00 pm – 4:15 pm **Advancing Otolith Function Assessment: Integrating Artificial Intelligence with Video-Oculography (VOG) for Enhanced Vestibular Diagnosis,** *Krishna N. Mukunda, MD*  
 4:15 pm – 4:30 pm **Non-Invasive Identification of Alzheimer's Disease Through Ocular Analysis Utilizing Raman Spectroscopic Data Analysis,** *Nitza Goldenberg-Cohen, MD*  
 4:30 pm – 4:45 pm **In Vivo Transfer of Glial Mitochondria to Retinal Neurons,** *Sidney Gospe III, MD, PhD*  
 4:45 pm – 5:00 pm **Retinal Input to Macaque Superior Colliculus Derives from Branching Axons Projecting to the Lateral Geniculate Nucleus,** *Jonathan C. Horton, MD, PhD*

5:00 pm – 7:00 pm **Analytical Studies Poster Reception**..... Arizona Ballroom 1-7  
*Sponsored by Catalyst Pharmaceuticals, Inc.*

5:00 pm – 6:00 pm Session I: Authors standing by odd numbered posters  
 6:00 pm – 7:00 pm Session II: Authors standing by even numbered posters

In this poster session, first authors of clinical trials, epidemiologic studies, quality improvement projects, and basic science studies will be available to answer questions about their posters in person. Come learn about the cutting-edge research being conducted by your NANOS colleagues! Light hors d'oeuvres buffet and ticketed drink bar included with meeting registration. Guests may purchase tickets for \$100 per person online or onsite.






**Fun Fact:**  
 It's Home to the Saguaro Cactus – Tucson is surrounded by Saguaro National Park, which protects the iconic giant saguaro cacti found only in the Sonoran Desert.

**TUESDAY, MARCH 18<sup>TH</sup>**

7:00 am – 7:00 pm	<b>Registration/Help Desk</b> .....	Foyer
6:30 am – 3:45 pm	<b>Exhibit Hours</b> .....	Arizona Foyer
6:30 am – 7:30 am	<b>Fun Run/Walk</b> (advanced registration required) .....	Starr Circle
	Get ready to move and make memories at our 5K Run/Walk or 1 Mile Run/Walk! Whether you are a dedicated runner or just here for a good time, this event is all about fun, fitness, and friendship. All abilities are welcome – so bring your enthusiasm, enjoy the scenery, and let’s make this Run/Walk unforgettable together! The event will take place in the Tucson Mountain Park, which is situated adjacent to the JW Marriott Starr Pass Resort. All registered participants will receive a special NANOS water bottle to stay hydrated and keep as a souvenir. Pre-registration prior to March 17th, 2025, at 7:30 PM, required.	
7:00 am – 8:00 am	<b>Breakfast with Exhibitors</b> .....	Arizona Ballroom Foyer
7:00 am – 8:00 am	<b>YONO Breakfast with Experts</b> .....	Arizona Ballroom 7
	- Designing a Career in Surgical Neuro-Ophthalmology - Academic vs Private Practice vs Hybrid Models of Practice	
7:00 am – 8:00 am	<b>Analytical Posters Encore</b> (no author standby).....	Arizona Ballroom 1-6
7:00 am – 8:00 am	<b>Research Committee Meeting</b> (committee members only) .....	San Luis



**Connect with us anytime on the YONO Platform!**

**Highlights for Young Neuro-ophthalmologists @NANOS2025**

The YONO Committee is excited to bring trainees and early-career neuro-ophthalmologists together with engaging activities and networking.

- Welcome Reception (Saturday): Meet us for fun lawn games and intros; families are welcome (tickets for non-NANOS registrants available for purchase)!
- Breakfast Tables on Sunday, Monday, Tuesday and Wednesday (6:30 am-7:30 am): Start your morning with informal roundtable discussions with career experts.
- Members in Training Reception (Sunday): Network with peers and leaders in neuro-ophthalmology.
- “How to Become a Master Educator” Session (Tuesday): Boost your teaching skills in this interactive session.
- Panel discussions with Stephen McLeod, MD, CEO of AAO (Tuesday): Insights on career and leadership.



## Fun Fact:

Tucson is a city where **history, tradition, and cultures blend beautifully** - a true reflection of the **Trio of Cultures (Native American Culture, Spanish Influence and Mexican Heritage)** that shaped it, creating a cultural richness that makes it one of the most fascinating and diverse destinations in the Southwest!



8:00 am – 10:00 am	<p><b>Delivering Neuro-Ophthalmic Care Around the World [2.00]</b> ..... Tucson Ballroom</p> <p><i>Moderators: Michael Lee, MD &amp; Steffen Hamann, MD, PhD</i></p>
8:00 am – 8:05 am	<b>Introduction:</b> <i>Michael Lee, MD &amp; Steffen Hamann, MD, PhD</i>
8:05 am – 8:15 am	<b>Neuro-Ophthalmology Practice and Healthcare Accessibility in Korea,</b> <i>Hyun Jin Shin, MD, PhD</i>
8:15 am – 8:25 am	<b>Neuro-Ophthalmology in the Global South: What Works Where Resources are Limited,</b> <i>Umapathi Thirugnanam, MD</i>
8:25 am – 8:35 am	<b>Delivering Neuro-Ophthalmic Care: The United States Experience,</b> <i>Kevin E. Lai, MD</i>
8:35 am – 8:45 am	<b>Neuro-Ophthalmology in Latin America,</b> <i>Alvaro Mejia-Vergara, MD</i>
8:45 am – 8:55 am	<b>Interdisciplinary Neuro-Ophthalmology and Neuro-Otology Patient Care – the Zürich Model,</b> <i>Konrad P. Weber, MD</i>
8:55 am – 9:05 am	<b>Neuro-Ophthalmology Workforce/Pipeline in South Asia,</b> <i>Aastha T. Kapila, MD, DM</i>
9:05 am – 9:15 am	<b>Innovative Care Models: Group Consultations in IIH and Quality Improvement Implementation,</b> <i>Sui H. Wong, MBBS, MD, FRCP</i>
9:15 am – 9:45 am	<b>Keynote: Workforce Challenges in Ophthalmology and Beyond,</b> <i>Stephen McLeod, MD</i>
9:45 am – 10:00 am	<b>Q&amp;A</b>

This symposium will highlight how neuro-ophthalmic care varies domestically and internationally. Speakers will discuss the unique challenges and opportunities particular to their region. In addition, the symposium will address specialized clinical care models for idiopathic intracranial hypertension and dizziness. The symposium concludes with a keynote address discussing workforce challenges in ophthalmology by the Chief Executive Officer of the American Academy of Ophthalmology, *Stephen McLeod, MD*.

Upon completion of this session, participants should be able to:

- (1) Identify challenges facing ophthalmology in the United States.
- (2) Discuss innovative care models for idiopathic intracranial hypertension and dizziness.
- (3) Describe neuro-ophthalmic care in Latin America, South Korea, and Singapore.

10:00 am – 10:05 am	<b>NOVEL Update</b> ..... Tucson Ballroom <i>Presented by: Meagan Seay, DO</i>
10:05 am – 10:30 am	<b>Morning Coffee Break with Exhibitors</b> ..... Arizona Foyer
10:30 am – 12:30 pm	<b>Scientific Platform Session III [2.0 CME]</b> ..... Tucson Ballroom <i>Moderators: Michael Gilhooley, MB, PhD, FRCOphth &amp; Paula Grigorian, MD</i>
10:30 am – 10:45 am	<b>Pocket Steroids for MOGAD Relapses: a Prospective Study</b> , <i>John J. Chen, MD, PhD</i>
10:45 am – 11:00 am	
11:00 am – 11:15 am	<b>Prevalence of Multiple Sclerosis, Neuromyelitis Optica, and Myelin Oligodendrocyte Associated Disease in Patients with Optic Neuritis: a United States Large Database Study</b> , <i>Alexander S Kwok, MD</i> (nominee for best abstract by a resident)
11:15 am – 11:30 am	
11:30 am – 11:45 am	<b>A Phase III Randomized Controlled Trial Of Intravenous Alteplase Initiated Within 4.5 Hours Of Central Retinal Artery Occlusion (CRAO). The THEIA Study</b> , <i>Valérie Biousse, MD</i>
11:45 am – 12:00 pm	
12:00 pm – 12:15 pm	<b>Is There a Pharmacogenomic Basis to Ethambutol Optic Neuropathy?</b> , <i>Shweta Singhal, MD</i>
12:15 am – 12:30 pm	
12:30 pm – 1:30 pm	<b>Demonstration of Neuro-Op Value Committee Meeting</b> (committee members only) ..... San Pedro
12:30 pm – 1:30 pm	<b>Lunch</b> (on your own or join the lunch symposium)
12:30 pm – 1:30 pm	<b>Case Challenges in TED: Applying the Latest Innovations in Practice [1.0 CME]</b> ..... Arizona 7 <i>* This continuing education activity is provided by Vindico Medical Education and is supported by educational funding provided by Amgen. The NANOS Program Committee was not involved in the organization of this event.</i> <i>Activity Chair: Andrew G. Lee, MD, Faculty: Madhura Tamhankar, MD, Ana Carolina Victoria, MD</i>

Thyroid eye disease (TED) is a complex autoimmune disorder that can cause eye pain, double vision, and potential vision loss. The diverse presentation often leads to delays in diagnosis and suboptimal treatment. The pathophysiology of TED involves the activation of thyroid-stimulating hormone receptor (TSHR) and insulin-like growth factor-1 receptor (IGF-1R) on orbital fibroblasts, contributing to inflammation and tissue remodeling. The management of TED requires a multidisciplinary approach, addressing both thyroid dysfunction and ocular manifestations. Treatment options range from local and lifestyle interventions for mild cases to glucocorticoids, orbital radiation, and surgery for more severe or stable disease. Biologic therapies, like IGF-1R inhibitors, have demonstrated efficacy in reducing proptosis and inflammation, with emerging therapies targeting B cells, interleukin-6, and mammalian target of rapamycin (mTOR) pathways. Given the evolving treatment landscape, collaboration among ophthalmologists, endocrinologists, and other specialists is essential to optimize patient outcomes. In this CE activity, expert faculty review the utilization of advanced diagnostic methods to improve the differential diagnosis, presenting the latest clinical data to optimize treatment strategies for patients with TED.

Upon successful completion of this activity, participants should be better able to:

- (1) Utilize advanced diagnostic methods to improve the timely differential diagnosis of TED in patients.
- (2) Apply the latest clinical data to optimize treatment strategies for patients with TED, including current and emerging therapies.

Share your vision for NANOS 2026!  
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1:30 pm – 3:00 pm      **Member Submitted Symposium: How to Implement a Non-Mydriatic Retinal Camera in General Emergency Departments and in Neurology Clinics [1.5 CME]** ..... Tucson Ballroom  
*Director: Valerie Biousse, MD, Speakers: Aubrey Gilbert, MD, Nancy Newman, MD, Oana Dumitrascu, MD, Mung Yan (Amy) Lin, MD, Kevin Yan, MD*

This symposium will discuss the implementation of non-mydriatic fundus cameras (color and OCT) in general Emergency Departments and Neurology Clinics. This will be an interactive session moderated by speakers who have experience with such implementation.

Upon completion of this session, participants should be able to:

- (1) Summarize the rationale supporting the need to deploy non-mydriatic ocular fundus cameras in non-ophthalmic settings such as Emergency Departments and Neurology Clinics where eye care providers are not readily available.
- (2) Discuss the advantages and disadvantages of various types of cameras in the ED.
- (3) Review potential outcome measures to assess the impact of non-mydriatic retinal cameras in EDs.

1:30 pm – 3:00 pm      **Member Submitted Symposium: Teaching Does Not Equal Learning! How to Become a Master Educator [1.5 CME]** ..... Arizona Ballroom 7  
*Director: Andrew Melson, MD*

1:30 pm – 1:35 pm      **Introduction**, *Andrew Melson, MD*  
 1:35 pm – 1:50 pm      **A Primer on Adult Learning Theory as It Pertains to Medical Education**, *Nailyn Rasool, MD*  
 1:50 pm – 2:10 pm      **Giving Good Feedback and Developing Faculty**, *Karl Golnik, MD, MEd*  
 2:10 pm – 2:25 pm      **How to Manage the Struggling Learner**, *Andrew Melson, MD*  
 2:25 pm – 2:45 pm      **Personal Efficiency Strategies to Make Time for Teaching**, *Andrew G. Lee, MD*  
 2:45 pm – 3:00 pm      **Q&A**

In this symposium, we aim to provide our colleagues with new skills and techniques to educate a variety of learners in response to the changing culture and dynamics of medical education. We will also focus on practical strategies to provide high quality feedback, optimize personal efficiency and learn to manage struggling learners. We will provide links to established resources for further learning opportunities and ongoing faculty development. We hope to empower our colleagues to become master educators, a critical skill by which we bring excitement to the field of neuro-ophthalmology and inspire the next generation of learners and young physicians to choose our incredible subspecialty as their career of choice.

Upon completion of this session, participants should be able to:

- (1) Describe fundamental adult learning theory and understand its relevance to medical education, particularly the value of a flipped classroom model.
- (2) Demonstrate improved ability to provide meaningful, actionable feedback/evaluation to learners and similarly utilize existing resources to appraise one’s own mastery of teaching.
- (3) Identify and manage struggling learners.
- (4) Employ practice management and personal efficiency strategies to optimize teaching opportunities and prepare for academic promotion.

3:00 pm – 3:30 pm      **Afternoon Coffee Break with Exhibitors** ..... Arizona Foyer

3:30 pm – 5:30 pm      **Shaping the Future of Neuro-Ophthalmology [2.0 CME]** ..... Tucson Ballroom

3:30 pm – 3:35 pm      **Welcome & Introduction**, *Amanda Henderson, MD*  
 3:35 pm – 4:30 pm      **Developing Our Workforce Panel Discussion**  
*Moderators: Sangeeta Khanna, MD & Nailyn Rasool, MD, FRCPC, FRCSC*  
*Panelists: Stephen McLeod, MD, Aimee Szewka, MD, Steven Galetta, MD & Ore Ofe O. Adesina, MD*



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- 4:30 pm – 5:25 pm     **Developing Our Field Panel Discussion**  
*Moderators: Barbara Yates, MD & Andrew Melson, MD*  
*Panelists: Stephen McLeod, MD, Mark Moster, MD, Larry Frohman, MD & Courtney Francis, MD*
- 5:25 pm – 5:30 pm     **Wrap Up, Amanda Henderson, MD**

In this symposium, we will discuss key issues pertinent to pipeline, leadership and career development important for recruitment and retention of neuro-ophthalmologists. We will explore avenues for advocacy that each of us individually, and as a professional society can take to improve key areas of concern in our field. We are joined by a special guest, Stephen McLeod, CEO of the AAO, who will provide organizational insight into leadership opportunities and advocacy for neuro-ophthalmology.

Upon completion of this session, participants should be able to:

- (1) Summarize tools for inclusive leadership development for all neuro-ophthalmologists of diverse backgrounds and interests.
- (2) Explain opportunities for career development and inspiration for recruitment to improve the “neuro-ophthalmology pipeline”.
- (3) Discuss the key issues impacting neuro-ophthalmology and how you can be a part of the solution.

5:30 pm – 6:30 pm     **Networking Reception** ..... Ania Terrace

Meet someone new and discover ways to get involved with NANOS and learn more about the world of neuro-ophthalmology, all in a relaxed, welcoming atmosphere. Drink tickets will be accepted, and cash bar will be available.

6:30 pm – 7:30 pm     **Abstract Committee Meeting** (committee members only) ..... San Luis


**WEDNESDAY, MARCH 19<sup>TH</sup>**

- 7:00 am – 5:00 pm     **Registration/Help Desk**..... Foyer
- 7:00 am – 12:30 pm   **Exhibit Hours**..... Foyer
- 6:00 am – 6:45 am     **Yoga with NANOS President** (advanced registration required) ..... Ania Lawn
- 7:00 am – 8:00 am     **Breakfast with Exhibitors**.....Arizona Ballroom Foyer
- 7:00 am – 8:00 am     **YONO Breakfast with Experts**..... Arizona Ballroom 7  
 - How to Build a Thriving Practice
- 7:00 am – 8:00 am     **Analytical Posters Encore** (no author standby)..... Arizona Ballroom 1-6
- 7:00 am – 8:00 am     **International Relations Committee Meeting** (committee members only)..... San Pedro
- 7:00 am – 8:00 am     **DEI Committee Meeting** (committee members only)..... San Luis
- 7:15 am – 8:00 am     **WIN Steering Committee Meeting** (committee members only) ..... Arizona 8
- 8:00 am – 11:30 am   **Analytical Posters Break-Down** ..... Arizona Ballroom 1-6  
 All analytical posters not previously removed by authors will be removed by NANOS staff between 11:30 am 12:30 pm and will be stored in the registration desk area until the end of the NANOS 51st Annual Meeting.

**Make the most of your time with Women in Neuro-ophthalmology at NANOS!**

- Networking Session – Stop by the WIN table at Tuesday evening’s reception to connect and learn more about upcoming initiatives.
- Informal Mixer – Join us Tuesday at 9:00 pm for a casual mixer after dinner (location will be announced on the on-line community) to unwind, network, and build lasting connections.
- Stay Engaged Year-Round – Keep an eye on the WIN online community for exciting updates on our WIN Leadership Book Club and WIN Leadership Speaker Series. Great opportunities to grow and lead!

We can’t wait to see you there!



**Join the WIN  
on-line  
community!**

# PROGRAM

8:00 am – 10:00 am	<b>Insight: The Science and Clinical Practice of Supporting Patients Through Vision Loss; Therapy When There is No Cure [2.0 CME]</b> ..... Tucson Ballroom <i>Moderators: Melissa Ko, MD, MBA, FAAN &amp; Guy Jirawuthiworavong, MD, MA</i>
8:00 am – 8:05 am	<b>Introduction</b> , <i>Melissa Ko, MD, MBA, FAAN &amp; Guy Jirawuthiworavong, MD, MA</i>
8:05 am – 8:35 am	<b>Integrating Palliative Care Into Neuro-Ophthalmology Practice</b> , <i>Benzi Kluger, MD, MBA, FAAN</i>
8:35 am – 9:00 am	<b>Neuroscience of Compassion, (Integrating Grief &amp; Loss)</b> , <i>Agnes Wong, MD, PhD</i>
9:00 am – 9:25 am	<b>Adult Case Study (Video) With Panel Discussion, Case introduction:</b> <i>Jeffrey Gluckstein, MD</i>
9:25 am – 9:50 am	<b>Pediatric Case Study With Parent Interview Followed by Panel Discussion, Case Introduction:</b> <i>Sam Spiegel, MD</i>
9:50 am – 10:00 am	<b>Q&amp;A</b>

As neuro-ophthalmologists, we are frequently confronted with diagnosing and communicating to our patients the difficult news that their vision loss is irreversible and without cure. Patients seek our compassionate support as they journey through grief and loss of their visual impairment/blindness. Our expert panel, comprised of a neuro-ophthalmologist/scientist/chaplain and a neuro palliative care physician, will provide didactics on the neuroscience of grief/loss along with compassion/mental training, the integration of palliative care into neuro-ophthalmology and the practical tools we can employ in clinic when caring for a distressed patient practice. This will be followed by video and live interviews with patients for our expert panel to discuss and to illustrate the principles of neuro palliative care in the neuro-ophthalmic setting.

Upon completion of this session, participants should be able to:

- (1) Explain the neuroscience behind compassion and mental training.
- (2) Identify patient distress and employ clinical tools to approach the distressed patient.
- (3) Apply and integrate principles of neuro palliative care into neuro-ophthalmic practice.

10:00 am – 10:30 am	<b>Morning Coffee Break with Exhibitors</b> ..... Arizona Foyer
10:30 am – 12:00 pm	<b>Neuro-Ophthalmology Bowl [1.5 CME]</b> ..... Tucson Ballroom <i>Moderators: Sashank Prasad, MD &amp; Collin McClelland, MD</i> <i>Competitors: Mary Labowsky, MD, Andrew Fischer, MD, Nelli Galoyan, MD, Evan Jameyfield, MD, Michael Carper, MD, Brian Chou, MD, MA, Michael Gilhooley, MB, PhD, FRCOphth &amp; Tatiana Deveney, MD</i>

This session is a fun, interactive ‘quiz show’ format where 2 teams of contestants will test their diagnostic acumen over a series of challenging neuro-ophthalmological case presentations. The audience will be able to play along to see who lands at the top of the leader board. Interesting, practical teaching points will accompany each case to solidify important clinical concepts and take-home messages.

Upon completion of this session, participants should be able to:

- (1) Identify important details from patient histories, examinations, and diagnostic testing to make uncommon neuro-ophthalmological diagnoses.
- (2) Review knowledge about the historical description, current scientific understanding, and emerging treatment options for these conditions.

12:00 pm – 12:30 pm	<b>Jacobson Lecture: From Castro to Quantum Mechanics: A Tunnel of Love [0.5 CME]</b> .... Tucson Ballroom <i>Alfredo A. Sadun, MD, PhD (introduction by Deborah Friedman, MD)</i>
12:30 pm – 1:30 pm	<b>Lunch</b> (on your own)
12:30 pm – 1:30 pm	<b>Optic Disc Drusen Study (ODDS) Consortium Meeting</b> ..... San Luis



The NANOS Patient Information Committee has created valuable resources for you and your patients. Access them by scanning this QR code.

## Skills Sessions (limited capacity)

We are thrilled to bring you two unique and engaging skills sessions at this year’s NANOS Annual Meeting! These interactive sessions are designed to provide hands-on learning opportunities you won’t want to miss.

To accommodate as many attendees as possible, each session will be offered twice. Admission to these interactive skills sessions will be first come first serve. Be sure to arrive early to secure your place! **Spaces are Limited!**

	Rooms: Arizona 8-11 & Tucson C & D	Room: Arizona 7
1:30 pm – 3:00 pm	Neuro-otology meets neuro-ophthalmology [1.5 CME]	Chemodenervation meets neuro-ophthalmology [1.5 CME]
3:15 pm – 4:45 pm	Neuro-otology encore [1.5 CME]	Chemodenervation encore [1.5 CME]

1:30 pm – 3:00 pm                    **Skills Session: Neuro-Otology meets Neuro-Ophthalmology [1.5 CME]** ..... see above  
 & 3:15 pm – 4:45 pm                *Moderators: Dan Gold, DO, Konrad Weber, MD & João Lemos MD, PhD*

- Station 1 (15 min): **OKN/Saccades**, David Hale, MD & Caroline Froment, MD, PhD
- Station 2 (15 min): **Nystagmus**, Jorge Kattah, MD & Shannon Beres, MD
- Station 3 (15 min): **Saccadic Intrusions**, Janet Rucker, MD
- Station 4 (15 min): **Pursuit, VORS, vVOR**, Anthony Brune, DO & Scott Grossman, MD
- Station 5 (15 min): **VOR/vHIT**, Konrad Weber, MD, Kristen Steenerson, MD & Roksolyana Tourkevich, MD
- Station 6 (15 min): **Skew Deviation**, João Lemos, MD, PhD, David E. Newman-Toker, MD, PhD, Dan Gold, DO

This will be a predominantly hands-on clinical skills transfer course, emphasizing the importance of the ocular motor examination in neuro-ophthalmology. This course will cover how to properly perform eye movement examination maneuvers, as well as their Interpretation. Participants will be assigned a starting station upon arrival and will rotate through each station during the session.

Upon completion of this session, participants should be able to:

- (1) List the essential components of the eye movement examination.
- (2) Apply the eye movement examination efficiently and effectively in patients with and without ocular motor dysfunction.
- (3) Interpret the eye movement examination to distinguish normal from abnormal, and to assist with localization.

1:30 pm – 3:00 pm                    **Skills Session: Chemodenervation meets Neuro-ophthalmology [1.5 CME]** ..... see above  
 & 3:15 pm – 4:45 pm                *Moderators: Lindsey DeLott, MD, MS & Billi Wallace, MD*

- 1:30 pm – 1:45 pm & 3:15 pm – 3:30 pm **Overview**, Wayne Cornblath, MD
- 1:45 pm – 1:55 pm & 3:30 pm – 3:40 pm **Chemodenervation for Headache**, Judith Warner, MD
- 1:55 pm – 2:05 pm & 3:40 pm – 3:50 pm **Chemodenervation for Facial Spasms**, Neil Miller, MD
- 2:05 pm – 2:15 pm & 3:50 pm – 4:00 pm **Other Applications of Chemodenervation**, Kimberly Cockerham, MD
- 2:15 pm – 2:35 pm & 4:00 pm – 4:20 pm **Break Out Session A, B, or C (participant’s choice)**
- 2:40 pm – 3:00 pm & 4:25 pm – 4:45 pm **Break Out Session A, B, or C (participant’s choice)**

**Break Out Session A: Injection Practice (facial spasm):** Hands on practice for those interested in adding chemodenervation procedures for facial spasms to their practice and those looking to enhance their injection skills alongside other learners.

**Break Out Session B: Injection Site Identification (migraine):** Hands on practice for those interested in adding chemodenervation procedures for migraine to their practice and those looking to enhance their injection skills alongside other learners.

**Break Out Session C: Advanced Discussion:** For participants that want to discuss complex issues (e.g., dose titrations, handling side effects, etc.) or practice other other chemodenervation procedures (e.g., strabismus)

*Faculty: Billie Wallace, MD, Wayne Cornblath, MD, Scott Forman, MD, Ben Frishberg, MD, Milena Stosic, MD, Lindsey De Lott, MD, MS, Judith Warner, MD, Stacy Smith, MD, Deborah Friedman, MD, Kimberly Cockerham, MD, Prem Subramanian, MD, PhD, Ore Ofe O. Adesina, MD, Marc Levin, MD, PhD, Peter Quiros, MD, Neil Miller, MD, FACS, Evan Schloss, MD, Michelle Riggins, MD, Kevin Lai, MD, Susan Mollan, MBChB, FRCOphth*

# PROGRAM

Chemodenervation Meets Neuro-Ophthalmology is a hybrid didactic and hands-on skills transfer session. The didactic portion will discuss available toxins and techniques for several common and less common neuro-ophthalmic conditions including migraine, facial dystonias/spasms, and strabismus. The hands-on portion will allow participants to work in small groups to practice injection techniques on provided models and to participate in advanced discussion for less common toxin applications under the guidance of experienced group leaders. This course is designed for those who are interested in adding chemodenervation procedures to their clinical practice as well as those who have experience with chemodenervation but hope to further enhance their skills.

Upon completion of this session, participants should be able to:

- (1) Discuss available toxins, appropriate injection preparation, and billing.
- (2) Describe injection techniques, documentation, outcomes, and potential complications of toxin injection for facial spasm, headache/migraine, and other less common neuro-ophthalmic applications.
- (3) Objective 3 Learners will identify injection sites, demonstrate proper injection techniques, and discuss less common applications in small group skills transfer sessions.

5:00 pm – 6:00 pm	<b>Consortium of Pediatric Neuro-Ophthalmologists (CPNO) Meeting</b> .....San Luis
6:30 pm – 10:00 pm	<b>Banquet and Trio of Cultures Entertainment</b> ..... Starr Circle
6:30 pm	Arrival, Networking, Drinks
7:00 pm	Dinner
	<p>Trio of Cultures Show - Native American Hoop Dance                  Welcome by NANOS President                  Trio of Cultures Show - Ballet Folklorico                  Abstract Awards and Announcements                  Trio of Cultures Show - Loop Rawlins - Trick Roper</p>
10:00 pm – 12:00 am	<b>After Party with a DJ</b> ..... Arizona Ballroom 7

Join us for an unforgettable evening to enjoy a delicious dinner and “Trio of Cultures” entertainment under the stars. After dinner, keep the night alive with dancing from 10:00 pm until midnight! Included with meeting registration. Guest tickets for the banquet and afterparty are available for purchase at \$175 and children’s tickets are available for \$75 with online registration or onsite at the NANOS Registration Desk.

### NANOS: Embracing Diversity, Building Unity

NANOS is a community for all neuro-ophthalmologists, unified through our unique strengths and differences.

#### How Can You Help?

- Celebrate Our Diversity: Embrace our varied backgrounds to foster a more inclusive community.
- Share Your Story: Update your membership info via QR code to help us know you better!

Let’s keep NANOS welcoming for everyone!  
*(Login Required)*





## THURSDAY, MARCH 20<sup>TH</sup>

7:00 am – 1:00 pm	<b>Registration/Help Desk</b> ..... Foyer
7:00 am – 8:00 am	<b>Breakfast</b> ..... Arizona Ballroom 7
8:00 am – 10:00 am	<b>Treatments Outside the Box [2.0 CME]</b> ..... Tucson Ballroom <i>Moderators: Vivek Patel, MD &amp; Zoe Williams, MD</i>
8:00 am – 8:05 am	<b>Introduction</b> , <i>Vivek Patel, MD &amp; Zoe Williams, MD</i>
8:05 am – 8:25 am	<b>Will Food Help Me?</b> <i>Rudrani Banik, MD</i>
8:25 am – 8:45 am	<b>Will a Procedure Help Me?</b> <i>Bradley Katz, MD, PhD</i>
8:45 am – 9:05 am	<b>Will Glasses Help Me?</b> <i>Kimberly Wings, MD</i>
9:05 am – 9:25 am	<b>Will Eye Drops Help Me?</b> <i>Jane Bailey, MD</i>
9:25 am – 9:45 am	<b>Will Devices Help Me?</b> <i>Joseph Rizzo, MD</i>
9:35 am – 10:00 am	<b>Q&amp;A</b>

The over-arching goal of this session is to highlight potential treatments and strategies to address common questions every neuro-ophthalmologist encounters in clinical practice. Relying on the expertise of our speakers, our moderators will lead a discussion in multiple areas including dietary factors relevant to neuro-ophthalmic conditions, the role of dietary supplements, potentially helpful in-office and surgical procedures such as botulinum toxin, therapeutic injections, vision therapy, and stem cell transplantation, optical strategies to correct diplopia, improve adaptation to homonymous visual field loss, and address photophobia, topical agents for the treatment of ocular surface disorders resulting in eye pain, monocular diplopia, visual blurring, ptosis, presbyopia and anisocoria and potentially promising strategies for functional visual restoration using assistive devices and artificial vision technologies.

Upon completion of this session, participants should be able to:

- (1) Evaluate evidence-based dietary changes to reduce vision loss, inflammation, and cognitive impairment.
- (2) Discuss the role of stem cell transplantation and vision therapy.
- (3) Describe optical techniques for managing patients with binocular vision disorders, nystagmus, and visual field loss.
- (4) Describe pharmacologic options to address common clinical presentations including ptosis, anisocoria and presbyopia.

10:00 am – 10:30 am	<b>Morning Coffee Break</b> ..... Arizona Foyer
10:30 am – 12:30 pm	<b>Neuro-Ophthalmology Problems From Childhood to Adulthood [2.0 CME]</b> ..... Tucson Ballroom <i>Moderators: Melinda Chang, MD &amp; Jason Peragallo, MD</i>
10:30 am – 10:35 am	<b>Introduction</b> , <i>Melinda Chang, MD &amp; Jason Peragallo, MD</i>
10:35 am – 11:00 am	<b>Optic Pathways Gliomas</b> , <i>Robert Avery, DO</i>
11:00 am – 11:30 am	<b>Cortical Visual impairment</b> , <i>Gena Heidary, MD, PhD</i>
11:30 am – 12:00 pm	<b>Optic Nerve Hypoplasia + Inherited Optic Neuropathies</b> , <i>Mark Borchert, MD</i>
12:00 pm – 12:30 pm	<b>Amblyopia</b> , <i>Eric D. Gaier, MD, PhD</i>

Many pediatric neuro-ophthalmologic conditions persist as patients age, and considerations in adulthood may differ from childhood. In this session, we will discuss the diagnosis, management, and complications of optic pathway gliomas, cerebral/cortical visual impairment (CVI), congenital optic neuropathies, and amblyopia in various stages of life.

Upon completion of this session, participants should be able to:

- (1) List the endocrinopathies that are associated with optic nerve hypoplasia and the age range at which endocrine testing is indicated.
- (2) Describe the differences between cerebral/cortical visual impairment (CVI) in children and cortical blindness in adults.
- (3) Discuss the potential advantages of binocular treatments for amblyopia.

**See you at the 52<sup>nd</sup> NANOS Annual Meeting at the Boston Marriott Copley Place in Boston, MA,  
March 20-24th, 2026!**

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Robert Ross (*In Memory of Charles F. Holcomb Jr.*)

Abbie M Segal-Andrews (*In Memory of*

*Norman J. Schatz, MD*)

Myrna Sherman (*In Memory of Norman J. Schatz, MD*)

Richard Sogg, MD

Cherie Wachter (*In Memory of Norman J. Schatz, MD*)

Kimberly Winges, MD

Wen Y. Helena Wu-Chen, MD

## CONTRIBUTORS \$1- \$99

Andrew Berman, MD

Steve Bonwit, PTA (*In Honor of Gina Kim*)

Karen Calhoun (*In Memory of Charles Forrest Holcomb Jr.*)

Yanjun Chen, MD, PhD

Maria Germaine (*In Memory of Charles Forrest Holcomb Jr.*)

Todd A. Goodglick, MD

Steven Grosser, MD

Cyvi Levin (*In Memory of Norman J. Schatz, MD*)

Robert Lesser, MD

James R. Lewis, MD

Tristan MacDonald (*In Memory of*

*Charles Forrest Holcomb Jr.*)

Piotr Molski, MD

Julio A. Rodriguez-Padilla, MD

Helen M. Widzer, MD (*In Memory of Norman J. Schatz, MD*)

Samuel M. Winn (*In Memory of Norman J. Schatz, MD*)



# DONOR RECOGNITION/ABSTRACT AWARD

NANOS would like to thank the following individuals for participating in our 2024 Annual Meeting Fundraiser.

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## ABSTRACT AWARD NOMINEES IN 2025:

### Fellow-in-training category:

Leigh Rettenmaier  
Rafaella Penteado  
Cathy Zhong  
Daniela Teijelo  
Amy (Mung Yan) Lin

### Resident category:

Nathan Arboleda  
Alexander Kwok  
Yusuf Ahmed  
Abdullah al-Ani  
Andrea Salazar Camelo

### Student Category:

David Szanto  
Jessica McHenry  
Pavel Loginovic  
Preetham Bachina  
Chris Zajner

*The award announcement is scheduled to take place at the NANOS Banquet on March 19, 2025.*

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## EDUCATION:

NANOS is the premier source of the Neuro-Ophthalmology education in North America.

- Discounted registration for the Annual Meeting offering up to 30 CME credits
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## NETWORKING AND PROFESSIONAL DEVELOPMENT:

NANOS connects medical professionals who practice Neuro-Ophthalmology in their day-to-day clinical practice and provide opportunities for involvement on committees and the Board of Directors.

- Networking opportunities with fellow professionals
- Listing in the member directory
- Posting rights to the scientific discussion listservs, NANOSnet and YONOnet
- Leadership and volunteer opportunities on NANOS committees and the Board
- Voting rights
- Complimentary job postings and career planning tools



## RESEARCH:

NANOS provides annual subscription to the Journal of Neuro-Ophthalmology (JNO) and access to Neuro-Ophthalmology Virtual Education Library (NOVEL).

- Subscription to JNO
- Abstract submission and presentation opportunities
- Research Assistance Program
- Research Grant programs



## ADVOCACY:

NANOS represents the interests of Neuro-Ophthalmologists in the AMA House of Delegates, collaborates with AAO and AAN, and tackles issues that impact the subspecialty.

- Representation in the AMA House of Delegates, with access to the AMA policy-making bodies to present a unified position on issues pertaining to Neuro-Ophthalmology
- Involvement in the process of creating guidelines for the performance of different Neuro-Ophthalmology procedures in the workup of patients with neuro-ophthalmic disorders
- Advocacy and counsel on Neuro-Ophthalmology issues
- Practice management tips and tools for Neuro-Ophthalmologists.

## What do you treasure most in your NANOS membership?

Before joining NANOS, I thought of medicine as something which was an individual endeavor. Since being part of this organization, I recognize we work together to build our specialty and honor the traditions of those who have set the foundation. – *John Pula*

The opportunity to interact with a community that has a practice just like you and hence understands the complexity of care and that sometimes diagnosis is not straightforward. – *A new member of NANOS*

NANOS membership has provided me with unparalleled networking and career-advancement opportunities while providing resources that also benefit my clinical practice. I truly look forward to the annual meeting each year – it's like a career family reunion! – *Devin Mackay*

NANOS connects neuro-ophthalmologists not only in North America but all over the world, and informs the members about the new developments by the JNO and Annual Meeting. It also helps to solve difficult and interesting cases by discussing them through the NANOSNET. I am proud of being a member of NANOS. – *An International member of NANOS.*

I always find the annual meetings excellent. So nice to get CME hours that are relevant to what I do every day. – *Marybeth Grazko*

Visit [www.nanosweb.org](http://www.nanosweb.org) to become a member and get involved with NANOS today!

# EXHIBITORS

**Fun Fact:**  
The "Sunniest City" in the U.S. – Tucson gets more than 350 days of sunshine per year, making it one of the sunniest places in the country!

## Exhibitor Hours

Location: Foyer

Sunday, March 16: 6:30 am – 5:00 pm  
Monday, March 17: 6:30 am – 7:30 pm  
Tuesday, March 18: 7:00 am – 3:45 pm  
Wednesday, March 19: 7:00 am – 12:30 pm

## Tourmaline Bio

<https://www.tourmalinebio.com/about/info@tourmalinebio.com>  
1-800-736-3001  
27 West 24th Street, Suite 702, New York, NY 10010

**TOURMALINE**

1

Tourmaline is a late-stage clinical biotechnology company driven by our mission to develop transformative medicines that dramatically improve the lives of patients with life-altering immune and inflammatory diseases. In doing so, we seek to develop medicines that have the potential to establish new standards-of-care in areas of high unmet medical need.

## Benign Essential Blepharospasm Research Foundation

[www.blepharospasm.org](http://www.blepharospasm.org)  
[charlene@blepharospasm.org](mailto:charlene@blepharospasm.org)  
409-832-0788  
P O Box 12468, Beaumont, TX 77726-2468



2

Benign Essential Blepharospasm Research Foundation funds and promotes medical research in the search for the cause, treatments, and cure of blepharospasm and other related disorders, provides support, education, and referrals to persons with these disorders, and disseminates information and serves as an authoritative resource to the medical community and the general public.

## University of Iowa, Department of Ophthalmology and Visual Sciences

<https://medicine.uiowa.edu/eye/>  
[edward-linton@uiowa.edu](mailto:edward-linton@uiowa.edu)  
615-517-8997  
Dr. Edward Linton 200 Hawkins Drive,  
Iowa City, IA 52242



3

The University of Iowa Department of Ophthalmology and Visual Sciences has developed a virtual reality web application for medical education. This platform allows students and trainees to explore eye anatomy and disease states, including the retina and optic nerve, through an immersive stereoscopic viewer, enhancing understanding and engagement in ophthalmology.

## UCB (4 and 7)

[www.ucb.com](http://www.ucb.com)  
[UCBCares@ucb.com](mailto:UCBCares@ucb.com)  
844-599-2273  
1950 Lake Park Drive, Smyrna, GA 30080



4

UCB, Brussels, Belgium is a global biopharmaceutical company focused on the discovery and development of innovative medicines and solutions to transform the lives of people living with severe diseases of the immune system or of the central nervous system. UCB is listed on Euronext Brussels (symbol: UCB).

## Genentech

[www.enspryng-hcp.com](http://www.enspryng-hcp.com)  
1-844-NSPRYNG



5

Genentech pioneered the biotech industry and revolutionized how we treat some of the world's most complex health problems. Today, we remain dedicated to pursuing breakthrough research, developing lifechanging medicines, unlocking advances in data and technology, and partnering across society to take on systemic issues that stand in the way of better healthcare for all.

## Topcon Healthcare, Inc.

<https://topconhealthcare.com>  
[topconhealthcare@topcon.com](mailto:topconhealthcare@topcon.com)  
201-599-5100  
111 Bauer Dr. Oakland, NJ 07436



6

Topcon Healthcare's vision is to empower providers with smart and efficient technologies for enhanced patient care. Leading the technology revolution in healthcare, we offer the latest integrated solutions, including advanced multi-modal imaging, vendor-inclusive data management, and ground-breaking remote diagnostic technology. A globally oriented business, Topcon is focused on developing solutions toward solving societal challenges in the megadomains of healthcare, agriculture, and infrastructure. In healthcare, these challenges include increasing eye disease, rising medical costs, access to healthcare, and physician shortages. By investing in value-driven innovations, Topcon works to enable people to enjoy good health and a high quality of life.

**UCB Medical**

See #4 for contact info/description.

**7****machineMD**

www.machine.md

info@machinemd.com

(857) 353-8483

1 Broadway, Cambridge, MA 02142

**8**

machineMD is a medical device company on a mission to improve the measurement of brain function. The company's first product, neos®, provides a fast, automated, and quantitative assessment of eye movements, pupillary function, and visual field.

**Viridian Therapeutics, Inc.**

info@viridiantherapeutics.com

617-927-9284

Viridian Therapeutics, Inc. 221 Crescent Street  
Suite 103A, Waltham, MA 02453

**9**

Viridian Therapeutics is developing potential best-in-class medicines for people living with autoimmune and rare diseases, including multiple clinical candidates for the treatment of thyroid eye disease (TED). Viridian aims to advance VRDN-001 as a differentiated intravenous therapy and VRDN-003 as a potential best-in-class subcutaneous therapy for the treatment of TED.

LinkedIn: <https://www.linkedin.com/company/viridiantx/>

X: [www.twitter.com/ViridianThera](https://twitter.com/ViridianThera)

**Amgen TEPEZZA (10, 16 and 22)**

www.amgen.com

805-447-1000

One Amgen Center Drive, Thousand Oaks, CA 91320

**10**

Amgen harnesses the best of biology and technology to fight the world's toughest diseases, and make people's lives easier, fuller and longer. We helped establish the biotechnology industry, and we remain on the cutting-edge of innovation, using technology and human genetic data to push beyond what's known today.

**argenx**

www.argenx.com

argenxcongresses@medforce.net

33 Arch Street 32nd Floor Boston, MA 02110

**11**

argenx is a global immunology company committed to improving the lives of people living with severe autoimmune diseases, such as generalized myasthenia gravis (gMG), by translating immunology breakthroughs into potential new medicines. argenx has offices in Belgium, the United States, Japan, and Geneva. Visit us at [www.argenx.com](http://www.argenx.com). Follow us on LinkedIn and Twitter.

**Catalyst Pharmaceuticals, Inc.**

<https://catalystpharma.com>

info@catalystpharma.com

305-420-3200

Catalyst Pharmaceuticals, Inc. 355 Alhambra Circle,  
Suite 801 Coral Gables, FL 33134

**12**

Catalyst is committed to developing and commercializing novel medicines for patients living with rare and difficult to treat neurological diseases.

**LHON Project**

<https://www.lhon.org>

LHONpoince@aol.com

760-518-3184

8085 Saltsburg Road Suite 201 Pittsburgh, PA 15237

**13**

LHON Project connects the global LHON community. We work to advance LHON research. Education and support are provided to LHON patients, family members and friends. Our annual LHON Conference brings together 150-200 LHON community members, with the 2025 event taking place in St Louis, MO June 19-21.

**Alexion, AstraZeneca Rare Disease**

www.alexion.com

medinfo@alexion.com

475-230-2596

121 Seaport Boulevard, Boston, MA, 02210

**14**

As a leader in rare diseases for 30 years, Alexion is focused on serving patients and families affected by rare diseases and devastating conditions through the discovery, development and commercialization of life-changing medicines. Alexion focuses its research efforts on novel molecules and targets in the complement cascade and its development efforts on hematology, nephrology, neurology, metabolic disorders, cardiology and ophthalmology.

**Neuroptek**

<https://neuroptek.com>

bnp@neuroptek.com

+1 (204)-202-3932

3 St Anne's Rd, Winnipeg, Manitoba

**15**

Neuroptek is a cutting-edge company specializing in the development of advanced diagnostic tools for neurological and visual impairments. Focused on innovation, their flagship device, EyeMirage, combines visual testing to provide precise, data-driven insights. Neuroptek aims to revolutionize brain health diagnostics, particularly for aging populations and neurological disorders.

**Amgen UPLIZNA (10, 16 and 22)**

See #10 for contact info/description.

**16**

# EXHIBITORS

## Diagnosys LLC

<https://www.diagnosysllc.com>  
mail@diagnosysllc.com  
978-458-1600  
55 Technology Dr. Suite 100



17

At Diagnosys, we design advanced ERG and VEP electrophysiology technology that can be useful for the evaluation of demyelination, compression, and inflammatory conditions of the optic nerve. Additionally, our Sweep VEP offers a reliable, objective method for evaluating visual acuity in both adults and children.

## Immunovant

<https://www.immunovant.com>  
fieldmedicalaffairs@immunovant.com  
210-865-4506  
320 W 37th Street, 6th Floor New York, NY 10018



18

We are a clinical-stage immunology company, dedicated to enabling normal lives for people with autoimmune diseases. As trailblazers in anti FcRn technology, we are developing innovative, targeted therapies to meet the complex and variable needs of people with autoimmune diseases.

## neuroClues

<https://neuroclues.com>  
info@neuroclues.com  
+32(0)493417333  
Avenue Jean Monnet 1, 1348 Louvain-la-Neuve, Belgium



19

NeuroClues' ambition is to become the brain's stethoscope. Our mission is to empower clinicians with Biomarkers allowing them to identify Neurological Disorders (such as Parkinson's Disease, Alzheimer's Disease and Multiple Sclerosis) more accurately. Our starting point is a portable eye-tracking lab that provides non-invasive, quantitative information in just a few minutes.

## Alexion, AstraZeneca Rare Disease - US Medical

[www.alexion.com](http://www.alexion.com)  
medinfo@alexion.com  
475-230-2596  
121 Seaport Blvd, Boston, MA 02210



20

As a leader in rare diseases for 30 years, Alexion is focused on serving patients and families affected by rare diseases and devastating conditions through the discovery, development and commercialization of life-changing medicines. Alexion focuses its research efforts on novel molecules and targets in the complement cascade and its development efforts on hematology, nephrology, neurology, metabolic disorders, cardiology and ophthalmology.

## Fresnel Prism and Lens Co.

<https://www.fresnel-prism.com>  
info@fresnelprism.com  
952-496-0432  
10810 Nesbitt Ave S. Bloomington MN 55437



21

Fresnel Prism and Lens Co. is an international supplier of specialty eye care products utilized by professionals to diagnose & treat patients afflicted by various vision disorders. Founded as a distributor of the 3M Press-On prisms, today's product line has evolved to include products addressing the needs of vision practitioners.

## Amgen Medical (10, 16 and 22)

See #10 for contact info/description.



22

## SpringWorks Therapeutics

[www.springworkstx.com](http://www.springworkstx.com)  
info@springworkstx.com  
203-883-9490  
100 Washington Blvd Stamford, CT 06902



23

People with Cancer can't wait. Let's go! The full potential of targeted oncology is waiting to be unlocked. That's why we relentlessly pursue every possibility to create new cancer breakthroughs and power our approach with people who think hard, care hard and act with urgency. At SpringWorks, we bring tenacity to work every day because patients need answers now.

## Optego Vision

<https://optego.com>  
email@optego.com  
866-678-6723  
4525 South Coach Drive Tucson, AZ 85714



24

Optego Vision specializes in the design, manufacturing and distribution of a comprehensive range of eye care products. Optego's product line-up includes proprietary items such as the Phake-i® surgical practice eye, the EpiGlare® glare tester and the Optego® Fresnel stick-on prisms. Other product categories include eye shields, occluders, and post-mydratic eyewear.

## Acelyrin

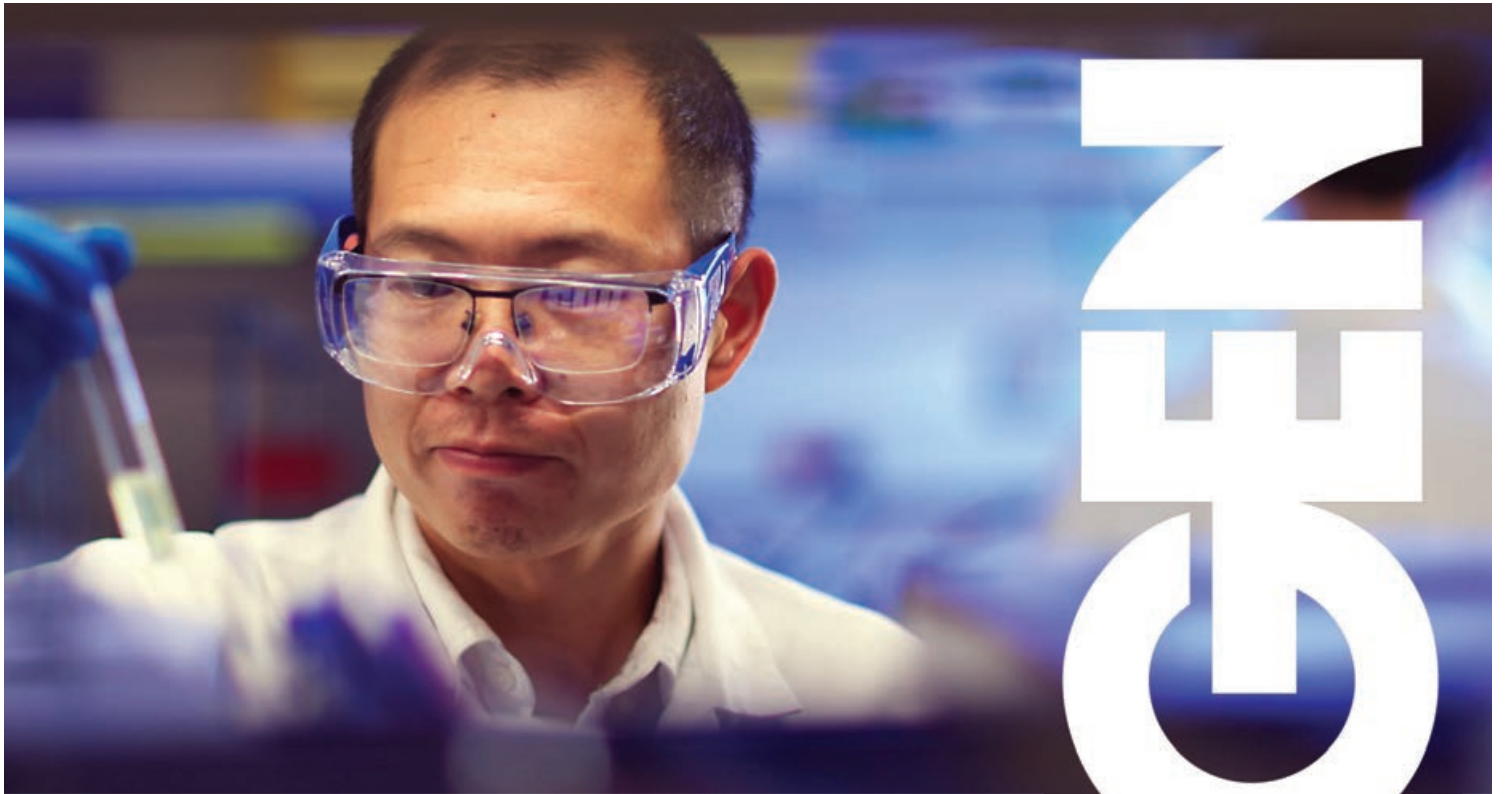
<https://www.acelyrin.com>  
info@acelyrin.com  
4149 Liberty Canyon Road Agoura Hills, CA 91301



25

ACELYRIN, INC. is focused on providing patients life-changing new treatment options by identifying, acquiring, and accelerating the development and commercialization of transformative medicines. ACELYRIN's lead program, lonigutamab, is a subcutaneously delivered monoclonal antibody targeting IGF-1R being investigated for the treatment of thyroid eye disease (TED).





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# Lambert-Eaton Myasthenic Syndrome (LEMS): An Often Misdiagnosed Condition With Ophthalmic Signs and Symptoms\*

featuring



**Andrew Lee, MD**

Houston Methodist neuro-ophthalmologist

- **Chair**, Houston Methodist Hospital Blanton Eye Institute Department of Ophthalmology
- **Professor of Ophthalmology, Neurology, and Neurosurgery**, Houston Methodist Institute for Academic Medicine

**Monday, March 17, 2025**  
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LEM-0472-1 January 2025

\*This non-CME lunch symposium is an industry-sponsored activity organized by Catalyst. The NANOS Program Committee was not involved in the planning of this event.

**LEMS**  
*aware*



# Exploration of FcRn blockade in thyroid eye disease

An argenx symposium at the NANOS 51<sup>st</sup> Annual Meeting

12:00–1:00 pm MST

March 17, 2025

Arizona Ballroom 8-11

JW Marriott Tucson Starr Pass Resort & Spa, Tucson, Arizona

Lunch will be provided



## Erika F. Brutsaert, MD, MPH

Medical Director,  
Clinical Development,  
argenx

## Kimberly P. Cockerham, MD, FACS

Director of Neuro-Ophthalmology,  
Sharp Neuroscience Center,  
Sharp Grossmont Hospital, La Mesa, CA

## Vivek R. Patel, MD

Vice-Chair, Academic Affairs;  
Professor of Clinical Ophthalmology;  
Chief, Neuro-Ophthalmology and Adult Strabismus,  
School of Medicine, Gavin Herbert Eye Institute,  
University of California, Irvine, CA

**TED is a frequently misdiagnosed inflammatory autoimmune disease, characterized by persistent physical manifestations and challenges to patient quality of life.<sup>1,2</sup>**

Join us for an engaging symposium to explore the biology behind the burden of TED, with a focus on the role of autoantibodies in its pathophysiology and as a potential therapeutic target. Our expert faculty will also provide an overview of a Phase 3 clinical study investigating efgartigimod alfa in TED.

*At argenx, we are committed to science and patients. We bring together our antibody engineering expertise and pioneering researchers to translate immunological breakthroughs into differentiated therapies for rare diseases. Visit the argenx booth to learn more.*

**Efgartigimod alfa rHuPH20 is not approved by the FDA for the treatment of patients with TED, as safety and efficacy have not been established.**

FACS, Fellow of the American College of Surgeons; FcRn, neonatal fragment crystallizable receptor; FDA, US Food and Drug Administration; MPH, Master of Public Health; NANOS, North American Neuro-Ophthalmology Society; rHuPH20, recombinant human hyaluronidase PH20; TED, thyroid eye disease.

1. Smith TJ, et al. *Front Endocrinol (Lausanne)*. 2023;14:1283374; 2. Alsuhaibani AH and Nerad JA. *Semin Plast Surg*. 2007;21(1):65–73.

This medical symposium is funded and organized by argenx and is intended for healthcare professionals only.

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ACTIVE TED



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CHRONIC TED



THRIVE and THRIVE-2 Phase 3 trials both meet primary endpoint!



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TED development  
program and ongoing  
clinical trials

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VRDN-2400183

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of the eye

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# Journal of Neuro-Ophthalmology



**Editor-in-Chief:**  
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***Journal of Neuro-Ophthalmology*** keeps pace with important advances in all spheres of the neurologic and ophthalmologic sciences. Clinicians and researchers worldwide report on recent developments in diagnosing and treating ophthalmologic, neurologic, endocrine, inflammatory, and neoplastic conditions affecting the oculomotor and visual systems.

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\*2023 Journal Citation Reports (Clarivate Analytics, 2024)

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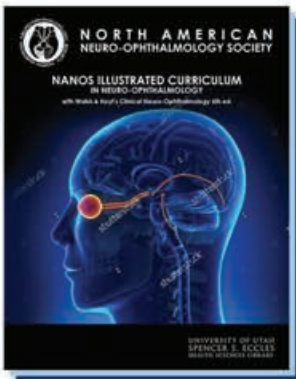
# Neuro-Ophthalmology Virtual Education Library: NOVEL

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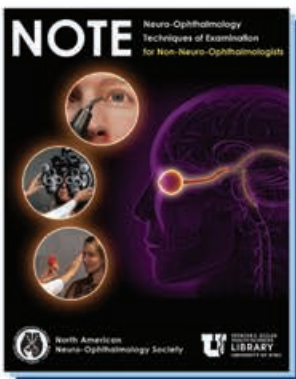
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- Collection of 20,000 neuro-ophthalmology learning materials peer-reviewed by NANOS NOVEL Editorial Board
- Proceedings of the NANOS Annual Meeting & JNO
- Contributions from NANOS members encouraged
- Current Gaps: <https://novel.utah.edu/submissions>



## NANOS Illustrated Curriculum (IC)

- Created by NANOS Curriculum and NOVEL committees
- Includes Walsh & Hoyt 6th Edition
- Includes NANOS Examination Techniques (NExT)
- 2,234 files of neuro-ophthalmology learning materials, organized by curriculum outline



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- Participate on committees
- Publish learning materials
- Contribute to NANOS goals

Contact NOVEL Team  
[novel@lists.utah.edu](mailto:novel@lists.utah.edu)



**NEW!** Shorter NANOS meetings in 2026 & 2027

# SAVE THE DATES

## NANOS ANNUAL MEETINGS

2026

52<sup>ND</sup> NANOS ANNUAL MEETING

**Boston, MA**

Boston Marriott Copley Place

MARCH  
20-24

Saturday morning start

2027

53<sup>RD</sup> NANOS ANNUAL MEETING

**San Diego, CA**

Sheraton, San Diego Hotel & Marina

MARCH  
19-23

### New in 2026!

**Friday evening, March 20** – Badge Pickup

**Saturday morning, March 21** – Official Programming Start

**Saturday night, March 21** – Welcome Reception & Awards

**Throughout the event** – Concurrent Sessions

**Noon, Tuesday, March 24** – Program Conclusion

SHARE  
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FOR 2026  
HERE

