

41<sup>ST</sup> Annual  
NANOS MEETING  
PROGRAM

February 21-26, 2015  
Hotel del Coronado | San Diego, CA





## 41<sup>st</sup> Annual NANOS Meeting Schedule-at-a-Glance

### SATURDAY, FEBRUARY 21

10:00 a.m. – 4:00 p.m.  
2:00 p.m. – 8:00 p.m.  
6:00 p.m. – 7:30 p.m.

San Diego Zoo Safari Park Excursion  
Registration  
Opening Reception (all are welcome)

### LOCATION

Depart from Hotel del Coronado Lobby  
Ballroom Foyer  
Sun Deck

### SUNDAY, FEBRUARY 22

6:00 a.m. – 6:45 a.m.  
6:30 a.m. – 5:30 p.m.  
6:30 a.m. – 7:45 a.m.  
6:30 a.m. – 3:30 p.m.  
7:45 a.m. – 5:00 p.m.  
11:50 a.m. – 1:10 p.m.  
12:15 p.m. – 1:15 p.m.  
12:15 p.m. – 1:15 p.m.  
12:15 p.m. – 1:15 p.m.  
5:15 p.m. – 5:45 p.m.  
5:15 p.m. – 5:45 p.m.  
5:45 p.m. – 6:15 p.m.  
5:30 p.m. – 6:30 p.m.  
Evening

Yoga Class  
Registration  
Breakfast  
Exhibits  
FRANK B. WALSH SESSION [7.25 CME]  
Lunch (Included)  
Carrier Relations Committee Meeting  
Membership Retention and Recruitment Meeting  
Patient Advocacy Groups Liaison Committee Meeting  
Frank B. Walsh Committee Meeting  
Fellowship Director's Meeting  
Fellowship Committee Meeting  
Members-in-Training Program and Reception  
Dinner on your own

Spreckels Complex  
Ballroom Foyer  
Crown Room  
Crown Room  
Ballroom  
Crown Room  
Garden Room  
Executive Room  
Tudor Room  
Executive Room  
Hanover Room  
Hanover Room  
Garden Room

### MONDAY, FEBRUARY 23

6:00 a.m. – 6:45 a.m.  
6:30 a.m. – 12:30 p.m.  
6:30 a.m. – 7:30 a.m.  
6:30 a.m. – 12:15 p.m.  
7:00 a.m. – 7:30 a.m.  
7:00 a.m. – 7:30 a.m.  
7:30 a.m. – 9:30 a.m.  
9:30 a.m. – 10:00 a.m.  
10:00 a.m. – 12:00 p.m.  
12:15 p.m. – 12:45 p.m.  
12:15 p.m. – 1:30 p.m.  
1:30 p.m. – 3:30 p.m.  
2:00 p.m. – 4:30 p.m.  
2:30 p.m. – 4:30 p.m.  
  
3:00 p.m. – 5:00 p.m.  
5:00 p.m. – 7:00 p.m.

Yoga Class  
Registration  
Breakfast  
Exhibits  
NOVEL Editorial Board/Curriculum Committee Meeting  
Finance Committee Meeting  
Journal Club [2.0 CME]  
Coffee Break  
Hot Topics: To Boldly Go Where No Neuro-Ophthalmologist has Gone  
Archives Committee Meeting  
Women in Neuro-Ophthalmology (WIN) Meeting  
Optional Symposium: International Neuro-Ophthalmology [2 CME]  
Consortium of Pediatric Neuro-Ophthalmologists Meeting (CPNO)  
Optional Symposium: Hands on Workshop Utilizing the Prism Cover Test and Prism Therapeutics for the Diplopic Patient [2 CME]  
Young Neuro-Ophthalmologist (YONO) Forum  
SCIENTIFIC PLATFORM PRESENTATIONS: SESSION I [2 CME]

Spreckels Complex  
Ballroom Foyer  
Crown Room  
Crown Room  
Garden Room  
Executive Room  
Ballroom  
Crown Room  
Ballroom  
Executive Room  
Coronet Room  
Ballroom  
Garden Room  
  
Carousel 3  
Hanover Room  
Ballroom

### TUESDAY, FEBRUARY 24

6:00 a.m. – 6:45 a.m.  
6:30 a.m. – 12:30 p.m.  
6:30 a.m. – 7:30 a.m.  
6:30 a.m. – 7:30 a.m.  
6:30 a.m. – 12:15 p.m.  
7:00 a.m. – 7:30 a.m.  
7:00 a.m. – 7:30 a.m.  
7:30 a.m. – 12:00 p.m.  
9:15 a.m. – 9:30 a.m.  
9:30 a.m. – 10:00 a.m.  
12:15 p.m. – 4:15 p.m.  
12:15 p.m. – 4:15 p.m.  
12:15p.m. – 5:15 p.m.  
12:15 p.m. – 5:00 p.m.  
6:00 p.m. – 9:30 p.m.

Yoga Class  
Registration  
Breakfast  
JNO Editorial Board Meeting  
Exhibits  
YONO Committee Meeting  
CME Committee Meeting  
SCIENTIFIC PLATFORM PRESENTATIONS: SESSION II [3.75 CME]  
Update: The Journal of Neuro-Ophthalmology  
Coffee Break  
The USS Midway Tour  
San Diego Zoo Excursion  
Balboa Park/Museums Excursion  
NANOS Board Meeting  
Poster Session

Spreckels Complex  
Ballroom Foyer  
Crown Room  
Hanover Room  
Crown Room  
Garden Room  
Executive Room  
Ballroom  
Ballroom  
Crown Room  
Depart from Orange Avenue Lawn  
Depart from Orange Avenue Lawn  
Depart from Orange Avenue Lawn  
Windsor Room  
Grande Ballroom

### WEDNESDAY, FEBRUARY 25

6:30 a.m. – 12:30 p.m.  
6:30 a.m. – 7:30 a.m.  
7:00 a.m. – 7:30 a.m.  
7:30 a.m. – 9:30 a.m.  
9:30 a.m. – 9:45 a.m.  
9:45 a.m. – 11:00 a.m.  
11:00 a.m. – 11:10 a.m.  
11:10 a.m. – 12:00 p.m.  
12:15 p.m. – 1:30 p.m.  
1:30 p.m. – 3:30 p.m.  
2:30 p.m. – 5:30 p.m.  
4:30 p.m. – 5:30 p.m.  
4:30 p.m. – 5:30 p.m.  
4:30 p.m. – 5:30 p.m.  
5:30 p.m. – 6:30 p.m.  
5:30 p.m. – 6:30 p.m.  
5:30 p.m. – 6:30 p.m.  
6:45 p.m. – 10:00 p.m.

Registration  
Breakfast  
Annual NANOS Business Meeting (all encouraged to attend)  
Sizzling Hot Topic: The IIHTT: What Have We Learned? [2 CME]  
Coffee Break  
Mechanical Causes of Strabismus [1.25 CME]  
NOVEL Update  
Jacobson Lecture: Neuroendocrine Tumors In Neuro-Ophthalmology [1 CME]  
Research Committee Meeting Luncheon  
Optional Symposium: IIHTT- Weight Loss and Management [2 CME]  
Optional Symposium: Eye Movement and Vestibular Skills Transfer Session [3 CME]  
Abstract Committee Meeting  
International Relations Committee Meeting  
Productivity/Compensation Committee Meeting  
Bylaws Committee Meeting  
Patient Information Committee Meeting  
Publications Committee Meeting  
Annual NANOS Reception and Banquet

Ballroom Foyer  
Crown Room  
Ballroom  
Ballroom  
Crown Room  
Ballroom  
Ballroom  
Ballroom  
Garden Room  
Ballroom  
Carousel Room  
Garden Room  
Tudor Room  
Hanover Room  
Garden Room  
Tudor Room  
Hanover Room  
Windsor Lawn

### THURSDAY, FEBRUARY 26

6:30 a.m. – 12:30 p.m.  
7:00 a.m. – 8:00 a.m.  
8:05 a.m. – 12:32 p.m.  
9:44 a.m. – 10:14 a.m.

Registration  
Breakfast  
Glaucoma: The Other Optic Neuropathy [4 CME]  
Break

Ballroom Foyer  
Crown Room  
Ballroom  
Crown Room



Dear Conference Registrants:

**Welcome** to the 41<sup>st</sup> Annual NANOS Meeting at the Hotel del Coronado in San Diego, California!

Please join us for the Opening Reception on Saturday, February 21, from 6:00 – 7:30 pm, on the Hotel del Coronado's Sun Deck. The reception will feature complimentary cocktails and hors d'oeuvres.

The 2015 NANOS Syllabus (both USB and print format based on what you requested at the time of registration) will be distributed immediately following the Walsh Session on Sunday.

Breakfast for registrants only will be provided daily.

The CME meeting evaluation forms will be online only again this year. Further instructions are located on page 12. Please bring your computer if you want to complete the evaluation during the sessions. Complimentary Internet will be provided.

We hit record poster submissions again this year. Therefore, if you are a poster presenter, we encourage you to put up your poster starting at 12:00 pm on Sunday, February 22 in the Grande Ballroom. If you can't be at the meeting that early, please ask someone to put up the poster for you. We want to maximize the viewing! The poster session will take place on Tuesday, February 24 from 6:00 – 9:30 pm. *The event is complimentary for attendees but guests must purchase tickets. These will be available from the NANOS registration desk for \$50 per person.*

Be sure to attend the Business Meeting on Wednesday, February 25, at 7:00 am in the Ballroom. We will be reviewing society business and voting on new members; your input is needed.

Join us for the Annual Reception and Banquet on Wednesday, February 25, which will be held on the Hotel del Coronado Windsor Lawn from 6:45 – 10:00 pm. *Guests and children are welcome. This event is complimentary for attendees, but guest/spouse tickets are \$100.*

Finally, NANOS is partnering with the **American Glaucoma Society (AGS)** for a joint session on Thursday, February 26. NANOS will be hosting the morning session and AGS will be hosting the afternoon session. The morning session will focus on Glaucoma: Tearing Down the Wall. Some of the key features of the afternoon session are interactive sessions on current and hot topics, and multiple poster sessions, all with relevance to neuro-ophthalmologists. The registration for the AGS afternoon session is FREE for NANOS Members. **We strongly encourage all NANOS members to consider attending all day!**

I hope you enjoy the NANOS meeting and your stay at the Hotel del Coronado!

Nancy J. Newman, MD  
NANOS President

## Saturday, February 21

10:00 a.m. – 4:00 p.m.	San Diego Zoo Safari Park Excursion	Depart from Hotel del Coronado Lobby
2:00 p.m. – 8:00 p.m.	Registration	Ballroom Foyer
6:00 p.m. – 7:30 p.m.	Opening Reception (all are welcome)	Sun Deck

## Sunday, February 22

6:00 a.m. – 6:45 a.m.	Yoga Class	Spreckels Complex
6:30 a.m. – 5:30 p.m.	Registration	Ballroom Foyer
6:30 a.m. – 7:45 a.m.	Breakfast	Crown Room
6:30 a.m. – 3:30 p.m.	Exhibits	Crown Room
7:45 a.m. – 5:00 p.m.	<b>FRANK B. WALSH SESSION [7.25 CME]</b> <i>Co-Chairs: Benjamin J. Frishberg, MD &amp; Howard R. Krauss, MD</i> <i>Neuroradiologist: John Rhee, MD</i> <i>Neuropathologist: Yuki Takasumi, MD</i> <i>Additional Experts:</i> <i>Neurosurgeon: Daniel Kelly, MD</i> <i>Otorhinolaryngology/Head &amp; Neck Surgeon: Chester Griffiths, MD, FACS</i>	Ballroom

This session is designed to present a wide variety of Neuro-Ophthalmic cases to an audience of physicians with varying neuroscience backgrounds who have a common intellectual interest in the broad range of conditions that impact the human visual pathways and ocular motor systems.

The format is a clinicopathologic conference. Clinical cases will be presented by Neuro-Ophthalmologists with comments by a neuroradiologist, neuropathologist and other selected experts. Necropsy, surgical pathology, and neuroimaging will help illuminate clinical points. Cases will be discussed from clinical, anatomic, radiologic and pathologic aspects with emphasis on diagnosis, pathophysiology and management. Audience participation is encouraged.

Upon completion of this course, participants should be able to: 1) Recognize the varied presentations of Neuro-Ophthalmic disease; 2) Correlate the anatomic localization and histopathologic appearance with the clinical presentations; 3) Effectively use radiologic procedures in diagnosis; 4) Recognize both the value and limitations of neuropathology; and 5) Discuss newly described diseases and their connection to Neuro-Ophthalmology.

11:50 a.m. – 1:10 p.m.	Lunch (Included)	Crown Room
12:15 p.m. – 1:15 p.m.	Carrier Relations Committee Meeting	Garden Room
12:15 p.m. – 1:15 p.m.	Membership Retention and Recruitment Meeting	Executive Room
12:15 p.m. – 1:15 p.m.	Patient Advocacy Groups Liaison Committee Meeting	Tudor Room
5:15 p.m. – 5:45 p.m.	Frank B. Walsh Committee Meeting	Executive Room
5:15 p.m. – 5:45 p.m.	Fellowship Director's Meeting	Hanover Room
5:45 p.m. – 6:15 p.m.	Fellowship Committee Meeting	Hanover Room
5:30 p.m. – 6:30 p.m.	Members-in-Training Program and Reception (All Students, Residents and Fellows are encouraged to attend)	Garden Room

Evening                      Dinner on your own

## Monday, February 23

6:00 a.m. – 6:45 a.m.	Yoga Class	Spreckels Complex
6:30 a.m. – 12:30 p.m.	Registration	Ballroom Foyer
6:30 a.m. – 7:30 a.m.	Breakfast	Crown Room
6:30 a.m. – 12:15 p.m.	Exhibits	Crown Room
7:00 a.m. – 7:30 a.m.	NOVEL Editorial Board/Curriculum Committee Meeting	Garden Room
7:00 a.m. – 7:30 a.m.	Finance Committee Meeting	Executive Room
7:30 a.m. – 9:30 a.m.	Journal Club [2.0 CME] <i>Moderators: Rudrani Banik, MD &amp; Christian Lueck, PhD, FRACP, FRCP(UK)</i>	Ballroom

Clinicians are obliged to keep themselves up to date with what is happening in their various fields of practice. Granted the enormous progress being made in all areas of medicine, keeping abreast of relevant clinical trials and other new developments can be very challenging. This symposium is designed to assist practicing Neuro-Ophthalmologists by providing reviews of recent developments in four different areas: new therapies for multiple sclerosis, the relationship between phosphodiesterase-5 (PDE-5) inhibitors and non-arteritic anterior ischemic optic neuropathy (NAION), the neuro-ophthalmological relevance of bariatric surgery, and obstructive sleep apnea (OSA). Each expert will present a critical review followed by a summary of take-home points, leaving time available for audience comments, questions and discussion.

Upon completion of this course, attendees will have the evidence base to allow them to define: 1) The roles and relative positioning of the many new agents which have appeared (and some which are soon to appear) to treat multiple sclerosis; 2) The relationship between PDE-5 inhibitors and NAION; 3) Who should be referred for bariatric surgery and what complications may arise; and 4) The potential relevance of obstructive sleep apnea to Neuro-Ophthalmic conditions including idiopathic intracranial hypertension and NAION, how to detect OSA, and what to do if it is suspected.

The course is designed to address the following desirable physician attributes: Medical knowledge, practice-based learning and improvement, and patient care.

7:30 a.m. – 7:50 a.m.	<b>New Therapies for Multiple Sclerosis, Beyond the ABCs</b> , <i>Ari J. Green, MD</i>	
7:50 a.m. – 8:00 a.m.	<b>Q &amp; A</b>	
8:00 a.m. – 8:20 a.m.	<b>The Relationship Between PDE-5 Inhibitors and NAION</b> , <i>Howard D. Pomeranz, MD, PhD</i>	
8:20 a.m. – 8:30 a.m.	<b>Q &amp; A</b>	
8:30 a.m. – 8:50 a.m.	<b>Bariatric Surgery and the Neuro-Ophthalmologist</b> , <i>Heather Moss, MD, PhD</i>	
8:50 a.m. – 9:00 a.m.	<b>Q &amp; A</b>	
9:00 a.m. – 9:20 a.m.	<b>Obstructive Sleep Apnea and Neuro-Ophthalmic Conditions</b> , <i>Clare Fraser, MD</i>	
9:20 a.m. – 9:30 a.m.	<b>Q &amp; A</b>	
9:30 a.m. – 10:00 a.m.	Coffee Break	Crown Room

## Monday, February 23 (continued)

**10:00 a.m. – 12:00 p.m.**      **Hot Topics: To Boldly Go Where No Neuro-Ophthalmologist has Gone Before [2 CME]**      **Ballroom**  
*Moderators: Marc Dinkin, MD & Rod Foroozan, MD*

With every new observation and new technology comes the question: Should Neuro-Ophthalmologists change their understanding of a disease or their practice patterns or stick with the tried and true teachings of old? The purpose of this Hot Topics session is to address some of the more controversial questions of Neuro-Ophthalmology practice: Is there really a distinct syndrome of chronic relapsing inflammatory optic neuropathy? Is ocular fundus photography the wave of the future or are Neuro-Ophthalmologists better off teaching emergency room physicians old-fashioned direct ophthalmoscopy? Can Neuro-Ophthalmologists use the results of pharmacologic testing and examination findings to focus their imaging protocol for patients with Horner syndrome or should they maximize sensitivity with a “kitchen sink” approach? And finally, does the discovery of optic disc edema in astronauts undergoing long-duration space flight reflect a localized increase in retrolaminar pressure due to microgravity, and if so, can this knowledge inform the management of earth-bound patients with papilledema?

Upon completion of this course, participants should be able to: 1) Approach the diagnosis and treatment of the clinical entity of chronic relapsing inflammatory optic neuropathy (CRION); 2) Describe the data supporting the use of ocular fundus photography in the diagnosis and management of neuro-ophthalmological disorders in the emergency room and other clinical settings; 3) Outline an approach to imaging of patients with Horner syndrome; and 4) Recognize the changes affecting the optic nerve in the settings of high altitude and long-duration space flight.

This course is designed to procure the following desirable physician attributes: Employ evidence-based practice, work in interdisciplinary teams, and medical knowledge.

10:00 a.m. – 10:20 a.m. **Autoimmune Optic Neuropathies (Sorting it All Out)**, *Leonard A. Levin, MD, PhD*  
10:20 a.m. – 10:30 a.m. **Q&A**  
10:30 a.m. – 10:50 a.m. **Non-Mydriatic Fundus Photography**, *Beau Bruce, MD, PhD*  
10:50 a.m. – 11:00 a.m. **Q&A**  
11:00 a.m. – 11:20 a.m. **Imaging of Horner Syndrome**, *Grant Liu, MD*  
11:20 a.m. – 11:30 a.m. **Q&A**  
11:30 a.m. – 11:50 a.m. **Neuro-Ophthalmology of Outer Space**, *Andrew G. Lee, MD*  
11:50 a.m. – 12:00 p.m. **Q&A**

**12:15 p.m. – 12:45 p.m.**      **Archives Committee Meeting**      **Executive Room**

**12:15 p.m. – 1:30 p.m.**      **Women in Neuro-Ophthalmology (WIN) Meeting**      **Coronet Room**  
An optional lunch selection will be available for purchase. All are welcome to attend even without the purchase of a lunch.

**1:30 p.m. – 3:30 p.m.**      **Optional Symposium: International Neuro-Ophthalmology [2 CME]**      **Ballroom**  
*Moderators: Christian Lueck, PhD, FRACP, FRCP(UK) and Klara Landau, MD, FEBO*

In recent years, about 20% of the attendees at NANOS meetings live and practise in parts of the world outside North America. “International” neuro-ophthalmology differs from “North American” neuro-ophthalmology in several ways. For example, the patterns and prevalence of the various diseases vary with geographic location, and there is enormous variability in local facilities for clinical service delivery and research.

## Monday, February 23 (continued)

This symposium is designed to showcase international aspects of neuro-ophthalmology. It will focus on several different areas including the different profiles of neuro-ophthalmic disease in other parts of the world and the variable levels of service provision and education, particularly in the developing world. The symposium will provide the opportunity to foster international collaboration and increase the involvement of NANOS members at an international level.

Upon completion of this course, participants should be able to: 1) Recognize differences in prevalence of neuro-ophthalmic diseases between different countries; 2) Describe differences in service provision in different regions of the world; and 3) Determine how to foster international neuro-ophthalmologic collaboration.

- 1:30 p.m. – 2:00 p.m. **Neuro-Ophthalmology in South East Asia**, *John Crompton, MBBS, FRANZCO, FRACS*
- 2:00 p.m. – 2:12 p.m. **Neuro-Ophthalmology in Europe (France)**, *Caroline Tiliakete, MD, PhD*
- 2:12 p.m. – 2:24 p.m. **Neuro-Ophthalmology in Africa (East Africa)**, *Mike Burdon MB, BS, FRCOPH, MRCP*
- 2:24 p.m. – 2:36 p.m. **Neuro-Ophthalmology in the Middle East (Israel)**, *Ruth Huna-Baron, MD*
- 2:36 p.m. – 2:48 p.m. **Neuro-Ophthalmology in South America (Brazil)**, *Mário Monteiro MD, PhD*
- 2:48 p.m. – 3:00 p.m. **Neuro-Ophthalmology in Asia (Japan)**, *Satoshi Kashii, MD, PhD*
- 3:00 p.m. – 3:10 p.m. **The History of the International Neuro-Ophthalmology Society**, *Klara Landau, MD*
- 3:10 p.m. – 3:30 p.m. **Q & A**

**2:00 p.m. – 4:30 p.m.** **Consortium of Pediatric Neuro-Ophthalmologists Meeting (CPNO)** **Garden Room**  
*Facilitator: Grant Liu, MD*

The Consortium of Pediatric Neuro-Ophthalmologists (CPNO) was created to promote and advance pediatric neuro-ophthalmology by performing multi-center studies, providing a forum for research and clinical topics, and creating a sense of community to those specializing in pediatric neuro-ophthalmology. The meeting is open to anyone interested in children with neuro-ophthalmic problems. During this session multi-center research studies will be discussed, and cases relevant to these projects will be presented.

**2:30 p.m. – 4:30 p.m.** **Optional Symposium: Hands on Workshop Utilizing the Prism Cover Test and Prism Therapeutics for the Diplopic Patient [2 CME]** **Carousel 3**  
*Moderator: Mitchell B. Strominger, MD*

Evaluation and treatment of the diplopic patient is time consuming and demanding. Understanding how to perform the prism cover test, determining fusional amplitudes, differentiating phoria from tropia, use of the prism adaptation test, placing press on prisms, and prescribing prisms is an art. Unfortunately, many Neuro-Ophthalmologists have limited training in this area. During this workshop, short cases of patients with diplopia will be presented. Afterwards, the audience will divide up into stations run by strabismologists and orthoptists demonstrating the prism cover test, alternate prism cover test, manipulation of basic and complex prisms, prism adaptation testing, prescribing and placement of press on or ground in prisms, and indications for strabismus surgery as it pertains to each case.

Upon completion of this course, participants should be able to: 1) Explain the evaluation of diplopic patients where prisms are useful in diagnosis and treatment; 2) Compare the different types of prisms available and their utility in examining and treating patients with diplopia; and 3) Describe the different prism cover tests and their use in differentiating phoria from tropia.

- 2:30 p.m. – 2:35 p.m. **Introduction of the Faculty and Review of Symposia Learning Objectives**, *Mitchell B. Strominger, MD*
- 2:35 p.m. – 2:45 p.m. **The Prism Cover Test**, *Shelley Klein, CO*
- 2:45 p.m. – 2:55 p.m. **Prescribing incorporated or Fresnel Prisms**, *Mitchell B. Strominger, MD*

## Monday, February 23 (continued)

2:55 p.m. – 3:00 p.m. **Brief Case Presentations: Divergence Insufficiency, Convergence Insufficiency, 4<sup>th</sup> Nerve Palsy, 6<sup>th</sup> Nerve Palsy, Thyroid Orbitopathy, and Post Cataract Extraction Vertical Diplopia, Mitchell B. Strominger, MD**

3:00 p.m. – 4:30 p.m. **Break-Out Stations with Hands-On Case Demonstrations, Mitchell B. Strominger, MD, Shelley Klein, CO, Paul H. Phillips, MD, David Granet, MD, Shira L. Robbins, MD, and Erika Castro, CO**

**3:00 p.m. – 5:00 p.m. Young Neuro-Ophthalmologist (YONO) Forum Hanover Room**

While all are welcome to attend, this forum is specifically designed for residents, fellows and Neuro-Ophthalmologists in the early years of their career. The YONO Committee has incorporated last year's positive, constructive feedback and present a re-vamped format. The revised forum will have multiple rotating roundtable discussions in small groups facilitated by YONOs, who have just walked in your footsteps, to mid-career folks, who can shed light on the next steps ahead.

3:00 p.m. – 4:00 p.m. **All you ever wanted to know about becoming a Neuro-Ophthalmologist: For Trainees, Residents, and Fellows**

**Table 1:** Finding A Job/Negotiating Contracts (Neuro Based), *Janet Rucker, MD*

**Table 2:** Expertise On Private Practice And Academic Models, *Madhu Agarwal, MD*

**Table 3:** Ophthalmology Perspective On N-O, *Julie Falardeau, MD*

**Table 4:** Neurology Perspective On N-O, *Greg Van Stavern, MD*

4:00 p.m. – 5:00 p.m. **So now I have a job, where do I go from here? For junior attendees in private practice or academics in their first 5 years out of training**

**Tables 1 & 2:** Academic Advancement/Career Navigation, *Kathleen B. Digre, MD & Mark L. Moster, MD*

**Table 3:** Navigating Your Practice, Keeping Up On Your Academics/Administrative Skills, *Preston C. Calvert, MD*

**Table 4:** Dollars And Sense: Billing And Coding For Neuro-Ophthalmology, *Matthew Kay, MD*

**Table 5:** Private Practice/Academic Neuro-Ophthalmology Perspective, JNO/Publishing Advice, *Lanning Kline, MD*

**5:00 p.m. – 7:00 p.m. SCIENTIFIC PLATFORM PRESENTATIONS: SESSION I [2 CME] Ballroom**

## Tuesday, February 24

6:00 a.m. – 6:45 a.m.	Yoga Class	Spreckels Complex
6:30 a.m. – 12:30 p.m.	Registration	Ballroom Foyer
6:30 a.m. – 7:30 a.m.	Breakfast	Crown Room
6:30 a.m. – 12:15 p.m.	Exhibits	Crown Room
6:30 a.m. – 7:30 a.m.	JNO Editorial Board Meeting	Hanover Room
7:00 a.m. – 7:30 a.m.	YONO Committee Meeting	Garden Room
7:00 a.m. – 7:30 a.m.	CME Committee Meeting	Executive Room

**7:30 a.m. – 12:00 p.m. SCIENTIFIC PLATFORM PRESENTATIONS: SESSION II [3.75 CME] Ballroom**

**9:15 a.m. – 9:30 a.m. Update: The Journal of Neuro-Ophthalmology**

*Lanning Kline, MD, Editor-in-Chief & Jason Roberts, PhD, Managing Editor*



## Tuesday, February 24 (continued)

9:30 a.m. – 10:00 a.m.	Coffee Break	Crown Room
12:15 p.m. – 4:15 p.m.	The USS Midway Tour	Depart from Orange Avenue Lawn
12:15 p.m. – 4:15 p.m.	San Diego Zoo Excursion	Depart from Orange Avenue Lawn
12:15 p.m. – 5:15 p.m.	Balboa Park/Museums Excursion	Depart from Orange Avenue Lawn
12:15 p.m. – 5:00 p.m.	NANOS Board Meeting	Windsor Room
6:00 p.m. – 9:30 p.m.	<b>POSTER SESSION</b> <i>Guests are welcome. Event is complimentary for attendees but guests must purchase tickets. Tickets are available for purchase for \$50 per person.</i>	Grande Ballroom

## Wednesday, February 25

6:30 a.m. – 12:30 p.m.	Registration	Ballroom Foyer
6:30 a.m. – 7:30 a.m.	Breakfast	Crown Room
7:00 a.m. – 7:30 a.m.	Annual NANOS Business Meeting (all encouraged to attend)	Ballroom
7:30 a.m. – 9:30 a.m.	<b>Sizzling Hot Topic: The IIHTT: What Have We Learned? [2 CME]</b> <i>Moderators: Michael Wall, MD &amp; Kathleen B. Digre, MD</i>	Ballroom

This symposium is designed to give NANOS members detailed results and discussion of the IIHTT. The primary and secondary study outcomes including adverse events and treatment failures will be discussed. The 6 month outcome of changes in the OCT and quality of life measures will be presented along with the effects of weight loss in the context of all of the findings.

Upon completion of this course, participants should be able to: 1) Discuss the four main outcomes of the IIHTT (visual field MD, papilledema grade, QoL and CSF pressure; 2) Describe when acetazolamide-plus-diet should be considered as a treatment; 3) Describe 3 side effects to be aware of in recommending acetazolamide therapy; 4) Describe key OCT findings in IIH; 5) Recommend weight loss to patients with IIH and understand its importance in treatment of IIH; and 6) List 3 aspects of quality of life that will need to be addressed in patients with IIH.

7:30 a.m. – 8:00 a.m.	<b>What Have We Learned from the Idiopathic Intracranial Hypertension Treatment Trial,</b> <i>Michael Wall, MD</i>
8:00 a.m. – 8:10 a.m.	<b>Q&amp;A</b>
8:10 a.m. – 8:20 a.m.	<b>Quality of Life in IIHTT Subjects 6 Months after Diagnosis and Treatment,</b> <i>Kathleen B. Digre, MD</i>
8:20 a.m. – 8:25 a.m.	<b>Q&amp;A</b>
8:25 a.m. – 8:35 a.m.	<b>Treatment of Failures in the Idiopathic Intracranial Hypertension Treatment Trial,</b> <i>Julie Falardeau, MD</i>
8:35 a.m. – 8:40 a.m.	<b>Q&amp;A</b>
8:40 a.m. – 8:50 a.m.	<b>Safety and Tolerability of Acetazolamide: The IIHTT Experience,</b> <i>Martin ten Hove, MD, M.Eng, FRCSC</i>
8:50 a.m. – 8:55 a.m.	<b>Q&amp;A</b>
8:55 a.m. – 9:05 a.m.	<b>Change in Body Weight after a 6-Month Telephone Weight Loss Intervention in Normal Weight, Overweight, and Obese Subjects with the Idiopathic Intracranial Hypertension,</b> <i>Betty Kovacs, MS, RD</i>
9:05 a.m. – 9:10 a.m.	<b>Q&amp;A</b>
9:10 a.m. – 9:30 a.m.	<b>Panel Discussion</b>

## Wednesday, February 25 (continued)

<b>9:30 a.m. – 9:45 a.m.</b>	<b>Coffee Break</b>	<b>Crown Room</b>
<b>9:45 a.m. – 11:00 a.m.</b>	<b>Mechanical Causes of Strabismus [1.25 CME]</b> <i>Moderators: Stacy Pineles, MD &amp; Nicholas J. Volpe, MD</i>	<b>Ballroom</b>
<p>This symposium will present a case initiated discussion of a variety of topics covering the entire spectrum of mechanical, non-neurogenic strabismus in adults and children. Speakers will discuss various broad etiologic categories of mechanical strabismus, focusing on recent literature, state-of-the-art diagnostic techniques, favorite methods of distinguishing mechanical and neurogenic strabismus, anecdotal experience, and treatment options. Topics will be introduced by a short clinical case illustrating the overlap of mechanical and neurogenic strabismus with careful emphasis on differential diagnosis.</p> <p>Upon completion of this course, participants will have an increased understanding of mechanical causes of strabismus and describe how to differentiate mechanical from neurological causes of strabismus. Specifically, they will describe: 1) Emerging concepts in the pathogenesis of “divergence insufficiency” esotropia as a form of mechanical strabismus; 2) How various ocular surgeries can be complicated by post-operative restrictive strabismus; 3) Pathological processes of the eye muscles that can cause vertical and horizontal restrictive strabismus; 4) The presentation of various congenital processes that cause mechanical strabismus in children and adults; and 5) How strabismus from orbital and peri-orbital disease presents and differs from neurologic causes of strabismus.</p>		
9:45 a.m. – 10:15 a.m.	<b>Sagging Eye Syndrome and Distance Esotropia in the Elderly</b> , <i>Joseph L. Demer MD, PhD</i>	
10:15 a.m. – 10:24 a.m.	<b>Pathological Processes of Eye Muscles</b> , <i>Stacy Pineles, MD</i>	
10:24 a.m. – 10:33 a.m.	<b>Mechanical Strabismus Following Ocular Surgery</b> , <i>R. Michael Siatkowski, MD</i>	
10:33 a.m. – 10:42 a.m.	<b>Congenital Processes that Cause Incomitant Strabismus</b> , <i>Gena Heidary MD, PhD</i>	
10:42 a.m. – 10:51 a.m.	<b>Orbital and Periorbital Disease Causing Mechanical Strabismus</b> , <i>Nicholas J. Volpe, MD</i>	
10:51 a.m. – 11:00 a.m.	<b>Panel Discussion</b>	
<b>11:00 a.m. – 11:10 a.m.</b>	<b>NOVEL Update</b>	<b>Ballroom</b>
<b>11:10 a.m. – 12:00 p.m.</b>	<b>Jacobson Lecture: Neuroendocrine Tumors In Neuro-Ophthalmology [1 CME]</b> <i>Presenter: Thomas Slamovits, MD</i>	<b>Ballroom</b>
<b>12:15 p.m. – 1:30 p.m.</b>	<b>Research Committee Meeting Luncheon</b>	<b>Garden Room</b>
<b>1:30 p.m. – 3:30 p.m.</b>	<b>Optional Symposium: IIHTT- Weight Loss and Management [2 CME]</b> <i>Moderator: Kathleen B. Digre, MD</i> <i>Speakers: Betty Kovacs, MS, RD &amp; Shana McCormack, MD</i>	<b>Ballroom</b>

The recently published idiopathic intracranial hypertension treatment trial (IIHTT) recommends weight loss along with acetazolamide to treat idiopathic intracranial hypertension. While most Neuro-Ophthalmologists advise weight loss to patients who are overweight or obese, most are unsure of what to recommend for achieving this. Successful weight loss and maintenance requires diet, physical activity, and behavior modification, along with a strong support system. Most diets fail to provide this and doctors are not trained to address all of these, so patients are unsuccessful with long-term maintenance. In this session we will review the basic principles of weight loss including the physiology, the roles of diet, exercise, and behavior modification. We will differentiate between the facts vs fiction of weight loss and maintenance.

## Wednesday, February 25 (continued)

We will also review evidence-based weight loss strategies and programs with the goal that each Neuro-Ophthalmologist has a practical action plan that fits their type of clinic population.

Upon completion of this course, participants should be able to: 1) Describe basic principles of weight loss—the myths and realities behind them; 2) Address what the IIHTT taught us about weight loss and what works for women and men with IIH; 3) Be able to list reputable weight loss strategies and programs and find these resources; and 4) Have a practical action plan on how to approach weight loss in their practice setting (private practice, academic, multi-specialty); and 5) Discuss weight loss strategies in children.

**2:30 p.m. – 5:30 p.m.                      Optional Symposium: Eye Movement and Vestibular Skills Transfer Session [3 CME]**  
*Moderators: Janet Rucker, MD and David Newman-Toker, MD, PhD*                      **Carousel Room**

Dizziness and visual symptoms resulting from abnormal eye movements are common chief complaints in a Neuro-Ophthalmology practice and etiologies range from benign to ominous. The examination skill set required for optimal localization and accurate diagnosis demands familiarity with pattern recognition, special techniques for elicitation of exam signs, and identification of subtle abnormalities. Further, the ideal exam skill set for such symptoms encompasses overlapping areas of neuro-ophthalmologic and neuro-otologic expertise. This skills transfer session will provide a hands-on learning opportunity, supplemented with video examples of pathology, during participant rotation through stations for each of the following skills: vestibular ocular reflex assessment, positional testing of posterior and horizontal semicircular canals, provocative testing techniques for nystagmus elicitation, gaze testing of dynamic eye movements such as saccades and smooth pursuit, and interpretation of nystagmus patterns.

Upon completion of this course, participants should be able to: 1) Competently perform core neuro-vestibular examination skills; 2) Distinguish peripheral vestibular disorders from brainstem and cerebellar disease based on examination findings; and 3) Correctly identify nystagmus patterns.

2:30 p.m. – 2:55 p.m.    **Introduction to the Vestibular Exam (with ARS),** *David Newman-Toker, MD*  
2:55 p.m. – 4:50 p.m.    **Hands-on Training Sessions (6 station rotations, 15 minutes each / 2 minutes to rotate with additional time to revisit stations after formal rotations)**  
**VOR Testing,** *David Newman-Toker, MD, PhD and John Pula, MD*  
**Positional Testing of Posterior Semicircular Canals,** *Eric R. Eggenberger, DO and Preston C. Calvert, MD*  
**Positional Testing of Horizontal Semicircular Canals,** *Luis Mejico, MD and Kevin Kerber, MD*  
**Provocative Testing (nystagmus elicitation),** *Jorge C. Kattah, MD and Catherine Cho, MD*  
**Gaze Testing (ocular alignment, saccades, smooth ocular pursuit, and smooth eye-head tracking),** *Janet Rucker, MD and Matthew Thurtell, MD*  
**Nystagmus Interpretation,** *Marc Dinkin, MD and Mark J. Morrow, MD*  
4:50 p.m. – 5:30 p.m.    **Unknown Case Presentation and Summary,** *Jorge C. Kattah, MD*

<b>4:30 p.m. – 5:30 p.m.</b>	<b>Abstract Committee Meeting</b>	<b>Garden Room</b>
<b>4:30 p.m. – 5:30 p.m.</b>	<b>International Relations Committee Meeting</b>	<b>Tudor Room</b>
<b>4:30 p.m. – 5:30 p.m.</b>	<b>Productivity/Compensation Committee Meeting</b>	<b>Hanover Room</b>
<b>5:30 p.m. – 6:30 p.m.</b>	<b>Bylaws Committee Meeting</b>	<b>Garden Room</b>
<b>5:30 p.m. – 6:30 p.m.</b>	<b>Patient Information Committee Meeting</b>	<b>Tudor Room</b>
<b>5:30 p.m. – 6:30 p.m.</b>	<b>Publications Committee Meeting</b>	<b>Hanover Room</b>
<b>6:45 p.m. – 10:00 p.m.</b>	<b>Annual NANOS Reception and Banquet</b> Event is casual.	<b>Windsor Lawn</b>

## Thursday, February 26

6:30 a.m. – 12:30 p.m.      **Registration**      **Ballroom Foyer**  
7:00 a.m. – 8:00 a.m.      **Breakfast**      **Crown Room**

8:05 a.m. – 12:32 p.m.      **Open Angle Glaucoma: Tearing Down the Wall [4 CME]**      **Ballroom**  
*Moderators: Helen V. Danesh-Meyer, MD, PhD, FRANZCO & Mark L. Moster, MD*

This symposium is a combined program of AGS (American Glaucoma Society) and NANOS aiming to clarify the relationship between glaucoma and other optic neuropathies.

The structure of the symposium is divided into 3 sections: 1) Establishing whether there is a difference between high tension glaucoma and normal tension glaucoma. This section will explore the contribution of intraocular pressure to glaucoma as well other factors that might be contributory; 2) Differentiating glaucoma from other optic neuropathies and deciding whom to image with MRI; and 3) Looking at glaucoma as a neurodegenerative disorder and reviewing issues of neuroprotection and neuroregeneration.

Upon completion of this course, participants should be able to: 1) Identify important contributions to glaucomatous damage other than intraocular pressure; 2) Identify which glaucoma patients should be evaluated for other causes of optic neuropathy; and 3) Identify areas of research ripe for collaboration between glaucoma and neuro-ophthalmologic researchers.

8:05 a.m. – 8:10 a.m.      **Introduction**

8:10 a.m. – 9:44 a.m.      **IOP and Other Issues in Glaucoma**

- 8:10 a.m. – 8:17 a.m.      **Case: Is it Glaucoma?**, *Marlene R. Moster, MD*
- 8:17 a.m. – 8:25 a.m.      **What is Glaucoma: Clinically, Functionally, and Pathologically?**, *Paul L. Kaufman, MD*
- 8:25 a.m. – 8:33 a.m.      **The Role of IOP in Glaucoma**, *M. Roy Wilson, MD, MS*
- 8:33 a.m. – 8:41 a.m.      **Phenotypic Differences in Normal vs. High Tension Glaucoma**, *Jonathan S. Myers, MD*
- 8:41 a.m. – 8:49 a.m.      **Is Normal Tension Glaucoma Different than High Tension Glaucoma? Vascular and Autonomic Dysfunction**, *Louis R. Pasquale, MD, FARVO*
- 8:49 a.m. – 8:57 a.m.      **Is Normal Tension Different from High Tension: Genetic/Epidemiological Factors**, *Janey Wiggs, MD, PhD*
- 8:57 a.m. – 9:05 a.m.      **Role of Intracranial Pressure in Glaucoma**, *Timothy McCulley, MD*
- 9:05 a.m. – 9:13 a.m.      **Miscellaneous (Autoimmune, Scleral Factors/Myopia, Sleep Apnea)**, *Martin B. Wax, MD*
- 9:13 a.m. – 9:29 a.m.      **Pro and Con Debate: We Should Eliminate the Normal Tension in Glaucoma**  
*Pro: Robert N. Weinreb, MD; Con: Robert Ritch, MD*
- 9:29 a.m. – 9:44 a.m.      **Discussion**

9:44 a.m. – 10:14 a.m.      **Break**      **Crown Room**

10:14 a.m. – 11:15 a.m.      **Clinical Differences Between Glaucoma and Other Optic Neuropathies**

- 10:14 a.m. – 10:22 a.m.      **The Morphological Difference Between Glaucoma and Other Optic Neuropathies**, *Claude Burgoyne, MD*
- 10:22 a.m. – 11:15 a.m.      **Case Presentations**, *Helen V. Danesh-Meyer, MD, PhD, FRANZCO and Mark L. Moster, MD*  
**Panel:** *Peter Savino, MD, Valérie Biousse, MD, Anne L. Coleman, MD, PhD, and Richard Lee, MD, PhD*



## Thursday, February 26 (continued)

### 11:15 a.m. – 12:32 p.m. The Neurology of Glaucoma

11:15 a.m. – 11:23 a.m. **Glaucoma as a Neurological Disease**, *Helen V. Danesh-Meyer, MD, PhD, FRANZCO*

11:23 a.m. – 11:31 a.m. **The Brain in Glaucomatous Optic Neuropathy: Evidence for Trophic-Factor Mediated Self-Repair**, *David J. Calkins, PhD*

11:31 a.m. – 11:39 a.m. **What are the Common Neurodegenerative Pathways Relevant to Glaucoma?**  
*Stuart J. McKinnon, MD, PhD*

11:39 a.m. – 11:47 a.m. **Neuro-Protection in Glaucoma: Where are We Going?** *Leonard A. Levin, MD, PhD*

11:47 a.m. – 11:55 a.m. **Neuro-Regeneration for Glaucoma and other Optic Neuropathies**,  
*Jeffrey Goldberg, MD, PhD*

11:55 a.m. – 12:03 p.m. **Mitochondrial Disease and Glaucoma**, *Alfredo A. Sadun, MD, PhD*

12:03 p.m. – 12:19 p.m. **Debate: Non-IOP Lowering Therapies will be the Future of Glaucoma Management.**  
**Pro:** *Harry Quigley, MD*; **Con:** *Christopher A. Girkin, MD, MSPH, FACS*

12:19 p.m. – 12:32 p.m. **Q & A**

### 2:00 p.m. – 5:30 p.m. AGS/NANOS Afternoon Session

Ballroom

AGS will lead the afternoon collaboration with NANOS. The scientific session will feature the following topics: 1) The Pathogenesis of Optic Neuropathy: Glaucoma vs. The Rest and; 2) Optic Nerve Imaging: New Parameters and Techniques, a platform presentation session, poster viewing and an afternoon break.

\*\*Please note that the CME credits for this session will be provided through AGS.

ACCREDITATION: This activity has been planned and implemented in accordance with the Essential Areas and Policies of the Accreditation Council for Continuing Medical Education (ACCME) through sponsorship of the North American Neuro-Ophthalmology Society. NANOS is accredited by the ACCME to provide continuing medical education (CME) for physicians. The North American Neuro-Ophthalmology Society NANOS designates this live activity for a maximum of 32.25 *AMA PRA Category 1 Credit(s)*<sup>™</sup>. Physicians should claim only the credit commensurate with the extent of their participation in the activity.



## 2015 NANOS Annual Meeting Evaluation

The NANOS 2015 Annual Meeting Evaluation will be online only. The evaluation can be completed during the meeting or before **Monday, March 16**. An official CME form will be emailed to you three weeks after the meeting.

**Total Annual Meeting Credits: 32.25 Credit(s)**<sup>™</sup>

To Access the NANOS 2015 Annual Meeting Evaluation, you can use the following link or scan the QR code to the left.

<http://nanos2015.sur-sys.com/>

To Download a QR Code Reader:

1. Open your App Store and download a 'QR Code Reader'
2. Open the QR barcode app on your smartphone, and choose "scan from camera" or "scan QR code" from the main menu

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## GROUND TRANSPORTATION

Travel time between the airport and the hotel is approximately 20 minutes. To arrange for private car transportation, please contact LaCosta Limousine at 1-888-299-5466. Approximate taxi fare from the San Diego International Airport to the Hotel del Coronado is \$30 each way.

View the NANOS website for additional transportation options, directions from the airport, and further details.

## SOCIAL FUNCTIONS

### SATURDAY, FEBRUARY 21

**San Diego Zoo Safari Park- \$110                      10:00 a.m. – 4:00 p.m.**

**\*Price includes admission and transportation. Departure location will be from the Orange Avenue lawn which is located to the left of the Hotel del Coronado front entrance.**

With over 2,000 acres of wildlife preserve including upwards of 4,000 rare and endangered animals housed in habitats replicating their native homelands, the San Diego Zoo Safari Park offers education and entertainment. Nairobi Village is home to two dynamic interactive exhibits: the Hidden Jungle, where you can mingle with exotic butterflies and tropical hummingbirds, and Lorikeet Landing, a walk-through aviary for feeding nectar to rainbow lorikeets. Nairobi Village also features an expansive gorilla grotto for a large troop of lowland gorillas and the Animal Care Center, which encompasses a baby animal nursery, exhibits for koalas and small primates, and a petting corral with exotic deer, antelope, and goats.



The Africa Tram Safari is an experience aboard an open air tram that runs on bio diesel. Complete with an interactive island research station, primate island, giraffe feeding station, and safari surprises, it brings people closer to the animals in a way not even an African safari can replicate! The Journey into Africa tour is designed to give you a glimpse of the amazing diversity found there.

#### **Opening Reception**

**6:00 p.m. – 7:30 p.m.**

Please join us for the Opening Reception on the Sun Deck at Hotel del Coronado. All are welcome to attend the opening reception, which features complimentary cocktails and several food stations.

### SUNDAY, FEBRUARY 22

#### **Members-in-Training Program and Reception**

**5:30 p.m. – 6:30 p.m.**

New to Neuro-Ophthalmology? All students, residents and fellows are encouraged to attend!



## SOCIAL FUNCTIONS (continued)

### MONDAY, FEBRUARY 23

#### WIN Luncheon

12:15 p.m. – 1:30 p.m.

Join your colleagues for the Women in Neuro-Ophthalmology (WIN) Luncheon & Meeting. However, all are welcome to attend even without the purchase of a lunch.

WIN Lunch Option: California Citrus Salad with Orange Balsamic Vinaigrette  
Vegetable and Cheese Ravioli, Wild Mushrooms and Asparagus Cream, Asiago cheese Sauce  
Fresh Rolls and Butter  
Seasonal Fruit Panna Cotta  
Coffee, Decaffeinated Coffee, Specialty 7 Herbal Teas, Ice Tea

#### Young Neuro-Ophthalmologist Forum

3:00 p.m. – 5:00 p.m.

While all are welcome to attend, this forum is specifically designed for residents, fellows and Neuro-Ophthalmologists in the early years of their career. The YONO Committee has incorporated last year's positive, constructive feedback and present a re-vamped format. The revised forum will have multiple rotating roundtable discussions in small groups facilitated by YONOs, who have just walked in your footsteps, to mid-career folks, who can shed light on the next steps ahead.

3:00 p.m. – 4:00 p.m. **All you ever wanted to know about becoming a Neuro-Ophthalmologist: For trainees, residents, and fellows**

4:00 p.m. – 5:00 p.m. **So now I have a job, where do i go from here? For junior attendees in private practice or academics in their first 5 years out of training**

### TUESDAY, FEBRUARY 24

**\*The USS Midway Tour, San Diego Zoo, and Balboa Park/Museum pricing includes admission, transportation, and a boxed lunch. All excursions will depart from the Orange Avenue lawn which is located to the left of the Hotel del Coronado front entrance.**

#### USS Midway Tour - \$75

12:15 p.m. – 4:15 p.m.

Guests will have a once-in-a-lifetime opportunity as they step onto a genuine Naval Aircraft Carrier for a fascinating tour of the USS Midway. A coveted opportunity, the privilege of actually boarding one of these impressively immense ships is truly unique. Over ten football fields in length, the USS Midway was built as the largest seagoing vessel in the world—the first ship too big to cross the Panama Canal. Her patriotically inspiring history in service stands as a testament to United States military achievement. Guests will have the opportunity to explore the USS Midway, on a self-guided audio tour featuring 60 exhibits including 24 restored aircraft. The Midway docents, many of whom are Midway veterans, will provide interactive, storytelling at many of the areas on the ship. Wear comfortable shoes, suitable for stairs and ladders; a light jacket is recommended on the Flight Deck.



## SOCIAL FUNCTIONS (continued)

### San Diego Zoo - \$100

12:15 p.m. – 4:15 p.m.

The San Diego Zoo is renowned all over the world for its expansive collection of the rarest animals on earth housed in an intimate setting of exotic botanical foliage. The visit will include a narrated bus safari, taking you into the lush, sweeping canyons and countless animal enclosures. Take a plunge into the arctic as you get a glimpse of the Polar Bears dancing in the cold ice-filled waters. Otherwise, take a stroll through Tiger River, a misty path where along the way you'll encounter hundreds of reptiles and mammals and possibly come within a clawing distance of a Sumatran Tiger. See the spectacular Gorilla Tropics, one of the most popular exhibits. Guests can board a thrilling ride on the skyfari aerial tram and enjoy a panoramic, bird's eye perspective. Apart from wildlife, the park houses an extensive and highly acclaimed collection of plants, orchids, palms, coral trees, and more.

### Balboa Park/Museums - \$110

12:15 p.m. – 5:15 p.m.



Balboa Park is San Diego's premier colonial landmark. Stretching over 1,400 acres nestled in the hills of downtown, this urban park houses 85 cultural and recreational organizations, including seventeen museums. Balboa Park is a cultural Mecca, the largest concentration of museums and cultural institutions outside The Mall in Washington, D.C. A day pass with admission to your choice of any (4) museums – each guest can customize their day and select the museums they personally wish to visit. The museums include: Natural History Museum, Reuben H. Fleet Science Center, Mingei International Art Museum, Museum of Photographic Arts,

Air & Space Museum, Centro Cultural de la Raza; World Beat Center, Hall of Champions Sports Museum, Model Railroad Museum, Automotive Museum, and the Veteran's Memorial Center Museum.

## TUESDAY, FEBRUARY 24

### Poster Session

6:00 p.m. – 9:30 p.m.

This year's Poster Session will include a reception and dinner. Event is complimentary for attendees, but guests must purchase tickets. Tickets are available for purchase for \$50 per person. The buffet will open at 6:00 p.m. Authors will present their posters between 6:45 p.m. and 8:15 p.m. Odd numbered posters: 6:45 p.m. – 7:30 p.m., Even numbered posters: 7:30 p.m. – 8:15 p.m.

## WEDNESDAY, FEBRUARY 25

### Annual NANOS Reception and Banquet

6:45 p.m. – 10:00 p.m.

The Annual Meeting Banquet will take place on the Windsor Lawn and beach front of the Hotel del Coronado. Join your colleagues for a fun, casual evening of socializing, dining and beach side bonfires at the NANOS Annual Reception and Banquet. Guests and children are welcome. Event is complimentary for attendees but guests must purchase tickets. Tickets are available for purchase for \$100 per person. Beach appropriate shoes are highly recommended.

### GUEST MEETING LOUNGE AREA

Available 9:00 a.m. – 11:00 a.m.

### Sunday February 21-Wednesday, February 25

Relax and enjoy the company of other guests in the 'Garden Patio' located in the center of the Hotel del Coronado.

**NANOS would like to thank the following Supporters for their generous contribution:**

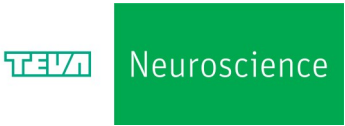
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To access the NANOS Mobile App:

1. Visit your smartphone's app store and search for MA eProgram
2. Download and open the mobile app.
3. Scan the QR code below OR enter the following the login information:  
Username: **nanos**  
Password: **nanos**



**Features:**

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- Faculty Listing
- Exhibitor and Support Guide
- Program Search function
- Abstracts
- Help Information (CME, presenter instructions, etc.)



**NANOS REGISTRATION/HELP DESK HOURS:**

Location:	<b>Ballroom Foyer</b>
Saturday:	<b>2:00 p.m. – 8:00 p.m.</b>
Sunday:	<b>6:30 a.m. – 5:30 p.m.</b>
Monday–Thursday	<b>6:30 a.m. – 12:30 p.m.</b>

**DIETARY NEEDS:**

**KOSHER:** *The Place Catering* offers private Kosher meal options that can be delivered directly to the Hotel del Coronado. See information below to learn more about their services and to place your orders.

***The Place Catering***

P: (858) 549-7000

E: [theplace@sandiegokosher.com](mailto:theplace@sandiegokosher.com)

W: <http://www.sandiegokosher.com/#services>

**SPECIAL REQUIREMENTS:** NANOS fully complies with the legal requirements of the Americans with Disabilities Act and the rules and regulations thereof.

**WIFI Instructions:**

1. Select the wireless network **“HOTELDEL-MEETING”**
2. Start your Internet browser and go to a public website
3. Enter the following access code:  
**nanos2015**
4. Accept “Terms of Service”

**Complimentary WIFI coverage will be available in all Meeting Rooms at the Hotel del Coronado.**

# NANOS would like to thank the following Exhibitors:

## EXHIBITOR HOURS:

This year's Exhibit Hall is located in the **Crown Room**. The Exhibit Hall will be open during the days and times listed below. All of your breakfasts and breaks will be held in the Exhibit Hall, so be sure to take advantage and visit the exhibitors.

**Sunday, February 22, 6:30 a.m. – 3:30 p.m.**

**Monday and Tuesday, February 23-24, 6:30 a.m. – 12:15 p.m.**

### **Diagnosys, LLC—Booth 11**

Phone: (978) 845-1600

Fax: (978) 458-1775

Email: support@diagnosysllc.com

www.diagnosysllc.com

Powerful enough to do any known test in ophthalmic electrophysiology, yet simple enough to use in any setting, our equipment is designed to smoothly transition new diagnostic protocols from the research lab to the clinic. Building on this connection to research, our new clinical products bring you the most powerful, up-to-date diagnostic protocols available.

### **Eye Care and Cure—Booth 8**

4646 South Overland Drive

Tucson, AZ 85714

Phone: (800) 486-6169

Fax: (877) 321-1267

Email: ldillon@eyecareandcure.com

www.eyecareandcure.com

From pharmaceuticals to medical supplies and instruments, Eye Care and Cure provides everything you need for your practice. This year at NANOS we will be featuring the Extra-Ocular Motility Monitor (EOMM), a dynamic system for quick, accurate and reproducible evaluations and measurements in patients with double vision and adult-onset strabismus.

### **Fresnel Prism & Lens Co.—Booth 4**

10810 Nesbitt Ave South

Bloomington, MN 55437

Phone: (952) 496-0432

Fax: (952) 403-7900

Email: info@fresnelprism.com

www.fresnel-prism.com

Fresnel Prism & Lens Co. offers invaluable and affordable products used by Neuro-Ophthalmologists in patient evaluation and treatment. 3M Press-On Prisms, Fresnel Prism Trial Sets, Bangerter Occlusion Foils & Occlusion Patches are just a few. New items: Prism Adapter and Nomo-graph Kit. Yes, Low Tech but they work!

### **Haag-Streit USA—Booth 10**

3535 Kings Mills Road

Mason, OH 45040

Phone: (513) 336-7255

Fax: (513) 336-7260

Email: clizzard@haag-streit-usa.com

www.haag-streit-usa.com

Haag-Streit USA provides a wide array of LED slit lamps with video and digital capture; the new Lenstar LS 900 optical biometer; EyeCap Imaging System; the new Octopus 900 perimeters; Reliance chairs and instrument stands; Clement Clarke hand-held slit lamps and tonometers.

### **Heidelberg Engineering Company Description—Booth 6**

1808 Aston Avenue Suite 130

Carisbad, CA 92008

Phone: (800) 931-2230

Fax: (760) 536-7100

Email: salesUSA@HeidelbergEngineering.com

www.HeidelbergEngineering.com

Heidelberg Engineering is a pioneer in diagnostic imaging. SPECTRALIS® Multi-Modality Diagnostic Imaging with confocal scanning laser ophthalmoscopy, optical coherence tomography, angiography, and autofluorescence imaging capabilities, adds new dimensions to assessing axonal loss and tracking neurodegeneration in the retina. Our goal is to help researchers better understand how retinal structure and function may relate to systemic neurodegenerative diseases.

### **i2eye Diagnostics Limited—Booth 7**

9 Edinburgh Bioquarter

Edinburgh EH16 3UX, United Kingdom

Phone: (608) 632-0914

Email: steve.elfrink@i2eyediagnosics.com

www.i2eyediagnosics.com

i2eye is at the forefront of objective visual testing. The company is pioneering technology for assessing vision in patients who, for reason of physical or mental impairment, are unable to participate in conventional testing. At NANOS the company will be showcasing its SVOP eye-tracker perimeter and its video assisted Vector technology.

### **LHON Project at UMDF—Booth 16**

8085 Saltsburg Road, Suite 201

Pittsburgh, PA 15237

Phone: (760) 518-3184

Email: LHONpoince@aol.com

www.LHON.ORG

The **LHON Project at UMDF** is building a global LHON patient community. We offer an annual conference, monthly teleconferences, and individual support/education. We guide affected individuals and their families to neuro-ophthalmologists, genetic counselors and disability services. We engage the patient community to conduct fundraising in support of LHON research.

### **RETILAB-Roland Consult –Booth 9**

1570 St. Paul Avenue

Gumee, IL

Phone: (815)-239-6420

Fax: (815) 385-3720

Email: kevin.m@retilab.com

www.retilab.com

RETILAB's Electro-Diagnostic Systems accurately map RNFL, pathway and neurological dysfunction – locally, layer by layer and with pinpoint specificity – providing valuable information about the location and nature of sub-clinical and pathological changes in visual & neurocognitive health. Each multi-modality RETILAB system can be tailored to specialty requirements. Learn More at Booth 9.



## NANOS would like to thank the following Exhibitors:

### **M&S Technologies, Inc.—Booth 3**

5715 West Howard Street  
Niles, IL 60714  
Phone: (847) 763-0500  
Fax: (847) 763-9170  
Email: pmcguire@mstech-eyes.com  
www.mstech-eyes.com

M&S Technologies is a software development company dedicated to bringing you the very best products in the industry. Our Smart System computerized vision testing systems bring accuracy, science and ease of use that is truly unmatched. The tests, algorithms and protocols have all been peer reviewed and tested by key professionals and scientists in the industry. We believe in treating our customers in the same manner that we would expect to be treated; we truly are not satisfied until you are.

### **Merz Neurosciences –Booth 12**

4215 Tudor Lane  
Greensboro, NC 27410  
Phone: (336) 856-2003  
Fax: (336) 856-0107  
Email: info@merz.com  
www.merzusa.com

Merz Neurosciences is a specialty healthcare company that develops and commercializes innovative treatment solutions in aesthetics, dermatology and neurology in the U.S. and Canada. Our ambition is to become a recognized leader in the treatment of movement disorders, and in aesthetics and dermatology.

### **Novartis Pharmaceuticals –Booth 5**

1 Health Plaza  
East Hanover, NJ 07936  
Phone: (888) NOW-NOVA  
www.novartis.com

Novartis Pharmaceuticals is dedicated to discovering, developing, manufacturing and marketing prescription drugs that help meet our customers' medical needs and improve their quality of life.

### **OtoSim, Inc. - Booth 2**

101 College Street, Suite 300  
Toronto, Canada  
Phone: (647) 255-1321  
Fax: (416) 673-665  
Email: chris@otosim.com  
www.otosim.com

OtoSim Inc offers Otoscopy and Ophthalmoscopy training & simulation systems. Through hands-on simulation devices, databases of clinical scenarios, and enhanced interactivity between the instructor and student(s), OtoSim training systems enable trainees to quickly & effectively develop confidence in their practical otoscopy and ophthalmoscopy skills to excel in the clinical environment.

### **Richmond Products –Booth 13**

4400 Silver Avenue SE  
Albuquerque, NM 87108  
Phone: (505) 275-2406  
Fax: (810) 885-8319  
Email: sales@richmondproducts.com  
www.richmondproducts.com

Focusing on Neuro and Pediatric Ophthalmology, Richmond Products is an innovator in the manufacture of eye examination products. Products address Ocular Motility, Visual Field, Contrast Sensitivity, Disease Detection, and Binocular Vision.

### **TEVA Neurosciences –Booth 11**

11100 Nail Avenue  
Overland Park, KS 66211  
Phone: (913) 777-3328  
Fax: (215) 795-4195  
Email: scott.bischoff@tevapharm.com  
www.tevausea.com

Teva Pharmaceuticals, Inc. is committed to increasing access to high-quality healthcare by developing, producing and marketing affordable generic drugs as well as innovative and specialty pharmaceuticals and active pharmaceutical ingredients. Teva's specialty medicine businesses focus on the therapeutic areas of CNS including pain, respiratory, oncology, and women's health.

### **Voxeleron, LLC –Booth 15**

4695 Chabot Drive, Suite 200  
Pleasanton, CA 94588  
Phone: (925) 558-2755  
Email: contact@voxeleron.com  
www.voxeleron.com

Voxeleron develops world-class medical image analysis software, specializing in optical coherence tomography (OCT) applications. Our product portfolio includes InSight OCT for animal imaging and Orion™, device-independent software for human retinal imaging. We are committed to advancing the capabilities of OCT analysis, accelerating the pace of discovery in clinical research.

### **Wolters Kluwer—Booth 1**

2001 Market Street  
Philadelphia, PA 19103  
Phone: (215) 521-8200  
Email: customerservice@lww.com  
www.lww.com

Wolters Kluwer is a leading publisher of medical, health, and science publications, including Journal of Neuro-Ophthalmology. We offer an extensive selection of medical books, journals and electronic media for physicians, nurses, specialized clinicians and students. Please visit our booth to browse our comprehensive product line.

### ***Back Again This Year! 2015 NANOS Exhibitor Raffle***

Don't forget to get your raffle card stamped as you visit with the exhibitors. Once your raffle card is complete, drop it off at the Registration Desk by **12:00 pm on Wednesday** and you will be eligible for prize drawings including: **iPad, GoPro, or Gift Cards**

# Almost a billion people suffer from neurologic conditions worldwide.



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# Save the Dates

## FUTURE NANOS MEETINGS:



**2016** **42ND ANNUAL MEETING**  
**NANOS**  
February 27 - March 3, 2016  
JW Starr Pass Marriott • Tucson, AZ



**2017** **43RD ANNUAL MEETING**  
**NANOS**  
April 1 - April 6, 2017  
Washington Marriott Wardman Park • Washington, DC



**2018** **44TH ANNUAL MEETING**  
**NANOS**  
February 24 - March 1, 2018  
Hilton Waikoloa Village - Waikoloa Village, • Hawaii, The Big Island

*See You There!*