PROGRAM OVERVIEW

48TH ANNUAL MEETING

NANOS 2022

February 12-17 • JW Marriott Austin • Austin, TX

Visit www.nanosweb.org for more information
NANOS 48th Annual Meeting Program

Saturday, February 12th

8:00 am – 12:00 pm  NANOS Board of Directors Meeting  Brazos
2:00 pm – 7:30 pm  Registration/Help Desk  Lone Star Foyer
4:00 pm – 5:00 pm  Neuro-Radiology Symposium  Lone Star DEFGH
6:00 pm – 9:30 pm  Welcome Reception and Line Dancing Lesson  Lone Star ABCD
All are welcome! Reconnect with your NANOS colleagues during the reception from 6:00 – 7:30 pm and then join us for a lesson in line dancing led by professionals. Heavy hors d’oeuvres provided at the reception.

Sunday, February 13th

6:30 am – 7:30 am  Breakfast  Griffin Hall
6:30 am – 5:30 pm  Registration/Help Desk  Lone Star Foyer
7:30 am – 9:30 am  Frank B. Walsh (I)  Lone Star DEFGH

Host: University of British Columbia
Chair: Jason Barton, MD, PhD, FRCPC
Committee Members: Jean Y. Chuo, MD, Kristopher Kowal, MD, Anastasia Neufeld, MD, FRCSC, DABO, Claire Sheldon, MD, PhD, Sara Ann Simpson, MD, FRCPC, and Salina Teja, MD, FRCSC

Expert Panel:
Neuroradiologist:  Manraj K.S. Heran, MD, FRCPC
Neuropathologist:  Veronica Hirsch-Reinshagen, MD, PhD, FRCPC

9:30 am – 10:00 am  Coffee Break  Griffin Hall
10:00 am – 12:00 pm  Frank B. Walsh (II)  Lone Star DEFGH
12:00 pm – 12:30 pm  Lunch  Griffin Hall
12:00 pm – 12:30 pm  International Relations Committee Meeting  Lone Star DEFGH
12:00 pm – 1:00 pm  Fellowship Directors Committee Meeting  Griffin Hall
12:30 pm – 2:30 pm  Meet the Poster Author: Descriptive Studies  Griffin Hall
12:30 pm – 1:30 pm  Odd Numbered Posters  Griffin Hall
1:30 pm – 2:30 pm  Even Numbered Posters  Griffin Hall

2:30 pm – 3:00 pm  Business Meeting  Lone Star DEFGH
3:00 pm – 5:15 pm  Frank B. Walsh (III)  Lone Star DEFGH
5:30 pm – 6:00 pm  Walsh Committee Meeting  Lone Star DEFGH
5:45 pm – 6:45 pm  Members-in-Training Reception  Lone Star DEFGH

Monday, February 14th

6:00 am – 6:45 am  Yoga  Griffin Hall
6:30 am – 7:30 am  Breakfast with Exhibitors  Griffin Hall
6:30 am – 7:30 am  Breakfast with the Novices  Griffin Hall
6:30 am – 5:00 pm  Registration/Help Desk  Lone Star Foyer
In the past several years, significant progress has been made in the understanding of the pathogenesis, clinical manifestations, and management of a variety of neuro-ophthalmic diseases. The goal of this session is to provide a review on the current status and new developments of five important disease processes: neurotrophic keratopathy, cerebrospinal fluid dynamics, multiple sclerosis, glaucoma and orbital inflammatory disease. Neurotropic keratopathy can be vision threatening and, in some patients, calcitrant to standard therapy. The indications and surgical technique of corneal neurotization will be discussed. The exact etiopathogenesis of idiopathic intracranial hypertension remains unclear. However, recent research has suggested that the central nervous system lymphatic and glymphatic systems may contribute to the development of elevated intracranial pressure. This complex issue will be presented with a focus on the current literature. The therapeutic armamentarium of multiple sclerosis continues to grow at an extraordinary and accelerated pace. New immunomodulating therapies will be reviewed, which provide physicians and patients alike with an unprecedented number of options. Glaucoma remains an enigma not only in terms of the cause but treatment. The diagnostic challenge of glaucomatous optic neuropathy mimicking other types of optic neuropathies will be discussed with an emphasis on clinical manifestations and a targeted evaluation. A wide variety of inflammatory conditions can affect the orbit. The diagnostic evaluation and treatment modalities of orbital inflammatory disease will be summarized.

Upon completion of this symposium, learners should be able to: (1) define the indications for corneal neurotization, (2) explain the role of the lymphatic and glymphatic system in cerebrospinal fluid dynamics, (3) identify new and important advancements in multiple sclerosis therapeutics, (4) differentiate glaucomatous from non-glaucomatous optic neuropathies, and (5) recognize the variety of different etiologies resulting in orbital inflammation.
the neuro-ophthalmic community. "Hot topics" will be presented by established experts and thought leaders for the respective conditions.

Upon completion of this symposium, learners should be able to: (1) recognize when a neuro-ophthalmic problem is related to COVID-19, (2) summarize the treatment of MOG-related disorders, and (3) state when a myasthenia gravis patient should be referred for thymectomy.

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<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Presenter(s)</th>
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<tr>
<td>10:00 am – 10:20 am</td>
<td>Patient-reported Outcome Measures in Neuro-Ophthalmic Clinical Research</td>
<td>Lindsey De Lott, MD, MS</td>
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<td>10:20 am – 10:40 am</td>
<td>COVID-19: Where Are We?</td>
<td>Cristiano Oliveira, MD</td>
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<td>10:40 am – 11:00 am</td>
<td>Treatment of MOG-Related Disorders</td>
<td>John J. Chen, MD, PhD</td>
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<td>11:00 am – 11:20 am</td>
<td>Myasthenia Gravis: Time for Thymectomy?</td>
<td>Judith Warner, MD</td>
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<td>11:20 am – 11:40 am</td>
<td>Mining for ODD using multimodal OCT</td>
<td>Steffen Hamann, MD, PhD</td>
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<td>11:40 am – 12:00 pm</td>
<td>Q&amp;A</td>
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12:00 pm – 1:45 pm | Lunch Break                                   |                                                |
12:15 pm – 1:15 pm | Industry Optional Symposia Slot | Lone Star ABC                                  |
1:30 pm – 3:15 pm  | Fostering Leadership and Mentorship in Neuro-ophthalmology: Evolving Concepts from Medical School to Retirement | Lone Star DEFGH                                 |

The importance of leadership through mentorship impacts every aspect of one’s neuro-ophthalmology career. This symposium will focus on fostering mentorship cultures and leadership opportunities by: introducing the concepts of mentorship from a 360-degree perspective; discussing approaches to recruitment of trainees into our discipline; highlighting diverse early career paths; exploring continued leadership roles outside the clinical sphere; and reflecting on later career contributions. Come for stories, discussion, and advice for all career stages. Attendance welcomed by all!

Upon completion of this symposium, learners should be able to: (1) identify the common perceived barriers to hosting medical students in a neuro-ophthalmology clinic, (2) describe ways to minimize barriers to hosting medical students in a neuro-ophthalmology clinic, (3) enumerate different neuro-ophthalmologist practice models, and (4) describe revenue-generating activities outside the clinic that can be gratifying for the neuro-ophthalmologist.

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<tr>
<th>Time</th>
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<th>Moderator(s)</th>
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<tr>
<td>1:30 pm – 1:35 pm</td>
<td>Introduction</td>
<td>Kimberly Winges, MD</td>
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<td>1:35 pm – 2:05 pm</td>
<td>How to Foster a Mentorship Culture</td>
<td>Kimberly Winges, MD and Nailyn Rasool, MD</td>
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<td>Panelists: Sangeeta Khanna, MD, Susan Mollen, FRCOphth and Barbara Yates, MD</td>
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<td>2:05 pm – 2:30 pm</td>
<td>How to Encourage Future Generations of Neuro-Ophthalmology Leaders Through the Medical Student and Resident Pipeline</td>
<td>Kevin Lai, MD, and Collin McClelland, MD</td>
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<td>Panelists: Courtney E. Francis, MD, Nancy J. Newman, MD and Peter Quiros, MD</td>
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<tr>
<td>2:30 pm – 3:10 pm</td>
<td>Seeking New Opportunities to Train and Lead Throughout One’s Career</td>
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Optional Symposium – Challenging Cases for Surgical Neuro-Ophthalmologists

Moderators: Ore-ofe Adesina, MD and Courtney E. Francis, MD
Panelists: Lauren Ditta, MD, Valerie Elmalem, MD, Howard R. Krauss, MD, SM, BEEE, Vivek Patel, MD, Roger Turbin, MD and Nicholas Volpe, MD

This symposium has been created to highlight the surgical aspects of our field and to educate neuro-ophthalmologists and trainees through the presentation and discussion of complex surgical neuro-ophthalmic case scenarios.

Upon completion of this symposium, learners should be able to: (1) recognize when surgical intervention can or should be applied to the management of neuro-ophthalmic patients, (2) compare and contrast surgical options for patients with neuro-ophthalmic diagnoses amenable to surgical intervention, and (3) identify gaps in understanding of surgical interventions for neuro-ophthalmic patients and utilize the skills gained to apply to patient care.

Scientific Platform Session I

Tuesday, February 15th

Yoga
Breakfast with Exhibitors
Breakfast with the Novices
Registration/Help Desk
JNO Editorial Board Meeting
Scientific Platform Session II
Coffee with Exhibitors
Scientific Platform Session III
Afternoon free for activities
Industry Optional Symposia Slot
YONO Forum
Meet the Poster Author: Analytical Studies

(Heavy hors d’oeuvres buffet included. Guest must purchase tickets for $150 per person from the Registration Desk.)

Odd Numbered Posters
Even Numbered Posters
Abstract Committee Meeting
Defects in mitochondrial metabolism result in a heterogeneous group of genetic disorders characterized by marked variability in clinical presentation. Uncovering the underlying causative mutations is challenging, complicated by the fact that two sets of genomes, the nuclear and mitochondrial genomes, can contribute to disease pathogenesis. This session will provide a clinically oriented overview of the latest advances made in uncovering the genetic basis of mitochondrial disorders, their variable phenotypes, including both ocular and extraocular manifestations, and the emerging treatment options that are being evaluated.

Upon completion of this symposium, learners should be able to: (1) describe the common genetic defects underlying mitochondrial disease, (2) recognize the ocular and extraocular manifestations of mitochondrial disease, and (3) discuss current and emerging treatments for mitochondrial disease.

Mitochondrial Optic Neuropathies – Expanding Genotypes and Phenotypes, Rustum Karanjia, MD, PhD

Mitochondrial Genetics – from Genes to Disease Mechanisms, Valerio Carelli, MD, PhD

Myopathies and Cerebral Dysfunction, Michio Hirano, MD

Current Treatment Strategies and Future Prospects for Mitochondrial Disease, Nancy J. Newman, MD and Michio Hirano, MD

Coffee with Exhibitors

Does My Patient Need Surgery/A Procedure? Indications, Outcomes, and More!

Moderators: Madhu Agarwal, MD and Valerie Elmalem, MD

Everchanging interventions provide the opportunity to understand best options for patients in our current practice. This symposium is dedicated to exploring surgical treatment options for a variety of neuro-ophthalmic conditions including idiopathic intracranial hypertension, strabismus and orbital lesions. As interventions become more varied and complex, the neuro-ophthalmologist must review novel and current surgical strategies for these patients.
Upon completion of this symposium, learners should be able to: (1) demonstrate the utility of optic nerve sheath fenestration and shunting in idiopathic intracranial hypertension, (2) differentiate between various surgical approaches to the orbit, (3) assess various surgical strategies for strabismus in a case-based approach, and (4) analyze endovascular techniques in idiopathic intracranial hypertension.

10:00 am – 10:18 am  
**Nuts and Bolts of Shunts: What to Tell My Patient About Them**, Tonya Stefko, MD

10:18 am – 10:36 am  
**Orbital Surgery: Approaches and Outcomes**, Howard R. Krauss, MD, SM, BEEE

10:36 am – 10:54 am  
**Endovascular Treatments of Neuro-Ophthalmic Disorders**, Marc Dinkin, MD

10:54 am – 11:12 am  
**Advanced Strabismus for the Non-Surgeon**, Madhura Tamhankar, MD

11:12 am – 11:30 am  
Q&A

11:30 am – 12:00 pm  
**JACOBSON Lecture – The Power of Connection**, Lone Star DEFGH, Fiona Costello, MD

The 2022 Dr. Daniel Jacobson Lecture presented by Dr. Fiona Costello will highlight how the visual system provides a model of central nervous system (CNS) inflammatory disorders, through which mechanisms of brain injury and repair may be better understood.

Upon completion of this symposium, learners should be able to: (1) discuss current challenges in distinguishing optic neuritis subtypes, (2) review the role of the visual system in capturing mechanisms of CNS injury, (3) highlight future directions in developing visual biomarkers in multiple sclerosis and related disorders, and (4) describe the power of connection, from the inception of an idea to a worldwide network.

1:00 pm – 2:30 pm  
**WIN Forum: Vestibular and Ocular Motor Skills Transfer**, Lone Star ABC

Moderator: Dan Gold, DO  
Facilitators: Aileen Antonio, MD, Shannon Beres, MD, Anthony Brune, DO, Marc Dinkin, MD, Eric Eggenberger, DO, MSEpi, Caroline Froment Tilikte, MD, PhD, Kemar Green, DO, Scott N. Grossman, MD, Nicholas E. F. Hač, MD, David E. Hale, MD, Jorge Kattah, MD, Mark Morrow, MD, Olwen C. Murphy, MD, MBBCh, David Newman-Toker, MD, PhD, Sashank Prasad, MD, John Pula, MD, Veeral Shah, MD, PhD, and Konrad P. Weber, MD

This symposium will provide a practical ocular motor/vestibular hands-on experience. With the help of roughly 18 NANOS members with expertise in the field, there will be 6 stations for the following: VOR testing, Positional Testing of Posterior Semicircular Canals, Positional Testing of Horizontal Semicircular Canals, Provocative Testing (nystagmus elicitation), Gaze Testing (ocular alignment, saccades, smooth ocular pursuit, and smooth eye-head tracking), and Nystagmus Interpretation.

Upon completion of this symposium, learners should be able to: (1) perform the HINTS exam (head impulse [VOR], nystagmus [naming and interpretation], test of skew [alignment]), (2) perform other ocular motor (saccades, pursuit, eye-head tracking) and provocative testing (head-shaking) to aid in
localization, (3) apply the diagnostic Dix-Hallpike and supine roll positional maneuvers with proper technique, and (4) implement the most appropriate therapeutic maneuver.

6:30 pm – 12:00 am Banquet Lone Star DEFGH

Thursday, February 17th

6:30 am – 12:00 pm Registration/Help Desk Lone Star Foyer
6:30 am – 7:30 am Breakfast Griffin Hall
7:30 am – 9:30 am Functional Disorders and the Lone Star DEFGH Neuro-Ophthalmologist

Moderators: Norah Lincoff, MD and Meagan D. Seay, DO

This symposium will clarify the definition of functional neurologic disorder (FND) and explore how it may present to a neuro-ophthalmologist. FND, previously known as “conversion disorder”, can include a constellation of symptoms, including sensory symptoms, fatigue states, change in mental status, movement disorders, as well as seizure. It is a separate entity from malingering, in which patients knowingly feign symptomatic illness. Treatment of FND usually necessitates a multidisciplinary team approach of physicians in neurology, psychiatry, and physical therapists. We will review the condition, treatment recommendations, and the differential diagnosis of this complicated disorder.

Upon completion of this symposium, learners should be able to: (1) understand the etiology of FND and how it differs from malingering, (2) establish a broad differential diagnosis and ensure accuracy in making a diagnosis of FND, and (3) increase awareness of treatments for FND.

7:30 am – 8:00 am Classification of Functional Disorders and Role of Modern Neuroimaging, Jeffrey P. Staab, MD, MS
8:00 am – 8:22 am Functional Visual Loss: Diagnosis, Pearls, and Pitfalls, Gregory Van Stavern, MD
8:22 am – 8:45 am Delusions, Hallucinations, and Functional Neurologic Disorders: What are the “Connections”? Victoria S. Pelak, MD
8:45 am – 9:15 am Treatments and Outcomes: Jeffrey P. Staab, MD, MS
9:15 am – 9:30 am Q&A

9:30 am – 10:00 am Coffee Break Lone Star Foyer
10:00 am – 12:00 pm Complex Cases in Pediatric Lone Star DEFGH Neuro-ophthalmology: Avoiding Mimickers, Missteps, and Misdiagnosis

Moderators: Shannon Beres, MD and Gena Heidary, MD, PhD

This symposium will examine pitfalls in management and diagnosis to be avoided in pediatric neuro-ophthalmology through a case-based format. Eight clinical cases will be presented with a focus on arriving at the correct diagnosis and evidence based best practices with respect to treatment and management of pediatric neuro-ophthalmic disease.
Upon completion of this symposium, learners should be able to (1) recognize common errors in diagnosis in pediatric neuro-ophthalmic disease and (2) apply most up to date evidence towards best practices in treatment and management of pediatric neuro-ophthalmic disease.

10:00 am – 10:15 am  A Boy with Decreased Vision, Paul H. Phillips, MD
10:15 am – 10:30 am  The Child With Blurred Vision, Allison Liu, MD, PhD
10:30 am – 10:45 am  Visual Loss, Behavioral Changes, and Overlooking, Michael Brodsky, MD
10:45 am – 11:00 am  Papilledema, Papillitis, or Papillopathy? - Optic Disc Findings in a Child With Alstrom Syndrome, Melinda Y. Chang, MD
11:00 am – 11:15 am  A Berr to Manage, Eric D. Gaier, MD, PhD
11:15 am – 11:30 am  Doc, I Really Can’t See! Mays El Dairi, MD
11:30 am – 11:45 am  Case Presentation, Steven F. Stasheff, MD, PhD
11:45 am – 12:00 pm  Double Vision, Double Again, Virender Sachdeva, MS, DNB