Fall 2022

# CONNECTIONS

CHILD NEUROLOGY SOCIETY

Bringing CNS Members Together to Make Children's Lives Better

## The Next 50 Years Begins

CNS Executive Director/CEO, Monique Terrell and CNS President, Bruce H. Cohen, MD

CONNECTING THRU COLLEAGUES, CAREERS, CRAFT, CALLING AND COMMUNITY

# TABLE OF CONTENTS


FEATURE

## 51st CNS Annual Meeting



pecn
Professors & Educators of Child Neurology

LETTER FROM THE PRESIDENT

**Cincinnati Bound!**

PAGE 88

## CONNECTING WITH...




CONNECTIONS MAGAZINE

*CNS Connections* is the official news magazine of the Child Neurology Society. The title references the passionate professional interest members share in neural connections and their passionate commitment to connecting to and staying connected with the peers, colleagues, mentors, mentees – and, above all else, friends – in the field with whom they share a career, a craft, a calling, and a community.



**Child Neurology Society**
1000 West Cty Rd. E, Suite 290
St. Paul, MN 55126
Tel: 651/486-9447
Fax: 651/486-9436
nationaloffice@childneurologysociety.org
www.childneurologysociety.org



EDITOR
Daniel Bonthius, MD, PhD

MANAGING EDITOR
Roger Larson, CAE

DESIGN & LAYOUT
Kimberlea Weeks | CEVA Design

*Published 3-4 times yearly*

BRUCE H. COHEN, MD, CNS PRESIDENT

# Cycles

As I approach the end of my first year serving as President of the CNS, I am struck by the overlapping cycles shaping and defining my tenure. This past year our Society transitioned from celebrating its first 50 years at the annual meeting in Boston ("The CNS: Past, Present and Future") to regathering for this year's meeting in Cincinnati ("Where the Next 50 Years Begins").

Paralleling and punctuating that transition has been the change in leadership that began last year in Boston when Roger Larson announced his wish to retire in 2022 after 40 years working for the CNS, the last 10 as its 2nd Executive Director, succeeding Mary Currey. Members attending this year's meeting in Cincinnati will have a chance to meet our new Executive Director/CEO, Monique Terrell. Ms. Terrell's selection was the final step of a 10-month national search conducted by our 12-member Search Committee working in conjunction with the Boston-based executive search firm, Isaacson Miller. Monique brings a broad range of skills to the job having filled numerous leadership positions at the College of American Pathologists, based in Chicago. She has been transitioning quickly into the role and looks forward to meeting members and gaining added momentum from those interactions in October. This transition in executive leadership has dominated my efforts for the last few months, even more so since the transition date of September 1st was decided. It has been an exciting and emotional few weeks, bringing Monique onboard and saying goodbye to Roger. I am so pleased that so many of you will have the chance to share that experience in Cincinnati as you welcome Monique and honor Roger at the Legacy Luncheon on Wednesday.

Other cycles include the annual election of new officers this past summer. The three new officers chosen in August by their colleagues to begin serving on the CNS Executive Committee in October are:

- President-Elect: Peter Kang, MD
- Councillor for the South: Diana Cejas, MD, MPH
- Councillor for the West: Alison Christy, MD, PhD

Peter will enter the four-year cycle of the presidency, serving his first year as President-Elect, replacing Phillip Pearl, MD as he completes the final year of his four-year cycle as Immediate Past-President. Diane will start her two-year term, replacing Audrey Brumback, MD, PhD, and Alison will succeed Sonia Partap, MD. These new officers join Lori Jordan, MD, PhD (Secretary Treasurer), Janet Soul, MD (Councillor for the Northeast), Sucheta Joshi, MD (Councillor for the Midwest), and myself (President).

It's hard to believe, but we are all just one week away from crossing paths in Cincinnati as this issue of *CNS Connections*

CNS
51st ANNUAL MEETING

Yasmin Khakoo, MD and
Bhooma Aravamuthan, MD, DPhil

gets posted on the CNS website. This year's meeting theme, appropriately, is "Where the Next 50 Years Begins". The Scientific Selection & Program Planning Committee, co-chaired by Yasmin Khakoo, MD and Bhooma Aravamuthan, MD, DPhil have worked hard to provide outstanding content, with great breadth and depth, throughout the meeting. I am particularly excited about two featured parts of the program: the Presidential Symposium on Thursday morning, and the "TED-style" talks to be presented throughout the meeting as part of the Young Members Forum put together over the summer by Drs. Alex Cohen and Ariel Lyons-Warren.

**Presidential Symposium**

This year's Presidential Symposium will focus on "Quality" and the importance of expanding our reach into every aspect of care delivery. Speakers include thought leaders on quality initiatives and its role in our practice recruited from within our Society and the AAN. This is not the first time a CNS president has stepped aside from focusing on some aspect of neuroscience in the Presidential Symposium. Ken Mack focused on "Practice Issues" five years ago in the Presidential Symposium kicking off the 2017 meeting in Kansas City. Five years later, the time is ripe for burrowing deeper into practice issues by taking a hard look at "Quality." As a disclaimer, I do not hold myself as any expert on the "Science of Quality"; I will be learning along with you from the experts at the podium and seated on the panel upfront. I have, however, spent my career cultivating a particular interest in CPT coding and payment policy. As national payment policy is rapidly shifting from the fee-for-service model to capitated care, the science that drives our clinical decision-making also must adapt to meet the additional pressure that frankly results in practice patterns different than those to which we are accustomed.

This major change in health care payments will require a shift from delivering an increasing volume of care towards a smart approach that requires a focus on a smart-systems approach to evaluation and management. The term *quality* as applied to healthcare is a broadly designed series of concepts defined by the

Link to 51st CNS Annual Meeting Schedule at a Glance

Institute of Medicine (now the National Academy of Medicine) as "the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge". These changes in our practice will require acceptance and recommendations based on using both human and AI review of data gathered. This will result in modeled care that we all can use uniformly in our practice.

Child Neurology, like many small specialties, is a bit late joining the game. But as one example, the use of quality technology has dramatically changed the world for children suffering from inflammatory bowel disease. I trust this symposium will lay the groundwork for increased interest and acceptance on the difficult road ahead.

**Young Members Forum**

A second major initiative that has me excited about the upcoming meeting in Cincinnati is a new program developed for our younger members. Initially referred to as the Junior and Early Career Development Initiative (JEDI), the program will gather in an open dedicated meeting space (located right below the general sessions meeting room for quick and easy access) for a series of brief talks and conversations constituting the first-ever "Young Members Forum". The program was developed by Alexander Cohen and Ariel Lyons-Warren, and features a series of approximately 25 TED-type talks with discussion to follow. Although this program is intended for the younger members of the CNS, there are no age restrictions to attend the forum. Child neurologists born before Roger started working for the CNS in 1982 are more than welcome to participate.

**51st Annual Meeting**

The official start of our Annual Meeting is the Opening Reception on Wednesday evening, from 6:00 pm – 7:30 pm, but there's a packed line-up of great events going on all-day Wednesday that I hope you will arrive early enough to consider attending, including:

**The Child Neurology Foundation Symposium (8:00 am – 11:00 am)**

This year's CNF workshop is entitled "Clinical Trials in Pediatric Neurology: Our Role in Improving Participation and Outcomes." This will be "Part 1" of a two-year program developed by the CNF for CNS members. This session will be presented in-person only and is sold out, but as is the case with all symposia and seminars, it will be recorded and can be viewed through December 1 on the virtual meeting platform by both those registering to attend live/in-person or virtually.

**Kenneth F. Swaiman Legacy Luncheon (11:30 am – 1:30 pm, immediately following the CNF symposium).**

Five "senior" awards and nine "junior" awards will be presented at the luncheon, underscoring the generational continuum inherent in the concept of "Legacy". Among the highlights of the award presentations will be those recognizing this year's Roger & Mary Brumback Lifetime Achievement Awardees: Jeffrey Buchhalter, MD, PhD, Michael Noetzel, MD and Roger Larson, CAE. Tragically, Michael Noetzel died after a brief illness weeks after learning he won this award; his family has graciously agreed to travel to our meeting to accept this award on his behalf following introductions by Chris Gurnett and Brad Schlaggar. Jeff Bucchalter, whom I have worked with and learned much from on practice issues throughout my career, will be introduced by Bill Trescher. And, Roger Larson, our recently retired Executive Director, will become the first non-neurologist to be presented this award; Roger will offer his reflections after introductions by Barry Kosofsky and Nina Schor. You will not want to miss these presentations and the opportunity they afford to learn not just about the lives and careers of those honored, but about ourselves as a Society – past, present, and future.

I hope you consider attending both events. There is a fee for each event, which only partially covers the room and catering expense. All proceeds from the Legacy Luncheon fee will be directed this year to fund 2022 and future years' Junior Member Awards renamed in honor of Dr. Tauen Chang, a past two-time Outstanding Junior Member awardee who passed away in June. Before leaving the conversation of the annual meeting, I am going to ask a favor of those attending the meeting: please take time to visit the exhibitor booths to thank them for their continued, critically important participation in and support for CNS Annual Meetings.


**Upcoming Membership Survey**

Before closing, I want to urge you to be alert to and participate in the upcoming membership survey that I have been talking about for the past 10 months. The survey was finalized about six months ago, but because of the sensitive nature of many of the survey items, has been "hung up" in an IRB. Once approved, this survey will be the basis of planning a host of child neurology initiatives, tools and reforms, from CNS on-line and meeting programming to members' individual practice patterns and compensation. I cannot emphasize enough how important your participation in this survey is as we continue to build programing for our membership and a viable future for our specialty.

**Thank you**

Finally, at the risk of repeating myself, I want to again thank Roger Larson for his nearly 40 years of dedication to our organization and the masterful craftsmanship he demonstrated in knitting and sustaining the fabric that binds us together within the CNS. Roger recognizes and writes about the many interwoven cycles of our existence, including, most recently, those rooted in Washington University in St. Louis. This year's Phillip R. Dodge (a giant at Wash U) Young Investigator Award will be presented to Bhooma Aravamuthan, MD, DPhil, a Wash U graduate and faculty member. This year too, we will honor and say a sad farewell to Michael Noetzel, MD, who spent his entire professional career at Wash U. Roger reminded me, as I was composing this letter to you, that I had just dropped my daughter off at Wash U, to begin her freshman year, as a biochemistry major--the 4th generation of Cohens attending that great institution.

Saying goodbye to Roger will be sad. Saying hello to his successor, Monique Terrell, will be a moment to look forward to and savor as we look to her and join with her in exploring the bright future that awaits the CNS beginning next week in Cincinnati, "Where the Next 50 Years Begins." ●

Link to 51st CNS Annual Meeting Schedule at a Glance

CNS EXECUTIVE DIRECTOR/CEO

**Monique Terrell**

# Letter from Executive Director

It is an incredible honor for me to lead and serve this great Society of ours. While we have seen great success, we want to do more. Our industry is grounded in tradition – but respects innovation. We are headed for greater places – as healthcare changes, we aim to evolve with it. Our job is to ensure that CNS thrives in the next 50 years.

As we start a new phase of our journey together, I want to share some background on myself and what inspires and motivates me.

**Who am I?**

I am 50ish. I've been married for 24 years, and we have three kids. I am a veteran of the U.S. Navy. Like you, what I do and how I think are shaped by my family and my overall life experiences. Many who know me say I am also defined by my curiosity and commitment to life-long learning. I buy more books than I can finish. I sign up for more online courses than I can complete. So family, curiosity, and desire for knowledge all define me.

**Why am I here?**

When deciding to join the CNS, four areas stood out most:

1. That patient care is first and foremost
2. The dedication demonstrated by the CNS professional staff team to assist members like you
3. A duty to the future of the specialty and,
4. Your commitment to leadership, diversity, equity, and inclusion.

We have a great team at the CNS, and I am excited to build upon that team as we continue to make it the premier organization for current and future child neurologists. We plan to grow the team, give people the resources they need, and continue to deliver the highest quality programs, products, and services to you.

Our plans for the CNS include:

- Strengthening the governance model with the board, committees, and SIGs
- Enhancing our digital footprint by expanding our social, mobile, and web experiences
- Growing opportunities for you to engage through new and expanded offerings
- Amplifying our operations and infrastructure that enables us to meet your needs as CNS members

This is going to be a team effort. And I am deeply grateful to the entire team here at the CNS – our Board Chair, Bruce Cohen, the Search Committee, and CNS professional staff – for their support and assistance in helping me transition into this position.

The CNS looks to meet the changing needs of our community. I hope we can count on you to join us as a future board, committee, and SIG member that drives innovation and strengthen the specialty. Share your expertise, experience, and research as a speaker or faculty member for our annual meetings, webinars, and podcasts or as an author for our new journal, *Annals of the Child Neurology Society* (ACNS).

If you have questions about CNS and our plans, don't hesitate to contact me anytime. You can reach me at smterrell@childneurologysociety.org.

Thank you. ●


# Sponsors

The Child Neurology Society thanks the following partners for their generous financial support.

## SILVER SPONSORS



## BRONZE SPONSORS










## LOCAL HOSTS





Thanks to the following for their support of CNS Award Lectures (Hower and Denckla) and PERF for the Pellock Seminar



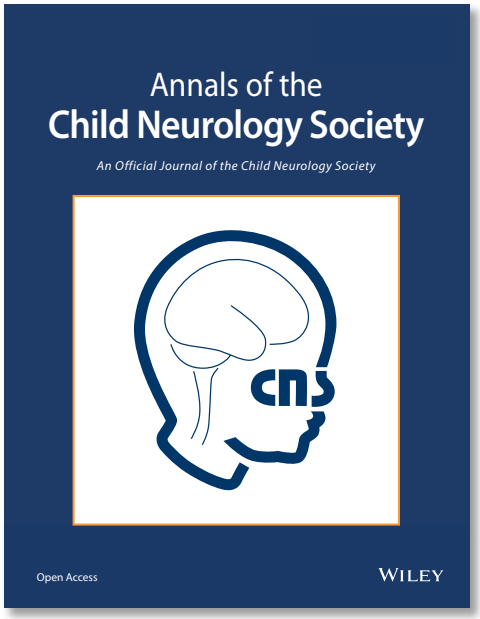
ACNS EDITOR-IN-CHIEF

**E. Steve Roach, MD**
University of Texas at Austin Dell Medical School

ACNS SENIOR ASSOCIATE EDITOR

**Phillip Pearl, MD**
Boston Children's Hospital and Harvard Medical School

Link to ACNS website.




# Announcing ACNS

## The *Annals of the Child Neurology Society* (ACNS) is Now Open for Business!

BY E. STEVE ROACH, MD

The *Annals of the Child Neurology Society* (ACNS) is now open for business, and we already have several excellent articles in the production queue. Based on the high quality of these first articles, ACNS should be a smashing success!

**Submission Process**

We have made the submission process as easy as possible. The Scholar One manuscript portal is straightforward. Although ACNS mirrors the format of *Annals of Neurology*, our flexible format policy allows you to use whatever manuscript format you like. As long as all the needed information is present, we can take care of the formatting.

- Wiley requires that at least one author include an ORCID account number.
- We are asking authors to suggest potential social media feeds, but this isn't mandatory.
- To reach the manuscript submission portal and the author guidelines, click the "Contribute" tab on the ACNS website (https://onlinelibrary.wiley.com/journal/28313267). You may also submit a manuscript directly at http://mc.manuscriptcentral.com/acns.

**Fees & Discounts**

The website also contains the publication fee schedule. As a reminder:

- CNS members receive a 20% discount on the publication fees for research and review articles.
- The CNS will pay the publication fee for articles whose first author is a Junior CNS member and for any article arising from a CNS award presentation.
- Wiley also has a program that heavily discounts the fee for authors in resource poor countries.

If you want to discuss the suitability of a manuscript topic prior to submission, please contact me (roache@austin.utexas.edu), the appropriate associate editor, or the journal's managing editor Christina Roth (AnnalsCNS@austin.utexas.edu). For those of you who are Twitter buffs, please follow @AnnalsCNS. The number of tweets will increase as more articles appear.

The CNS now has its own clinical journal, and with our determined efforts, ACNS will become a valuable resource for child neurologists everywhere. ●

# Letter from the Editor

## "Roger. Over and Out."

When I entered my early teens, back in the 1970's, a new fad emerged. Everybody's father suddenly bought a Citizen's Band ("CB") radio, which they mounted under the dashboards of their cars, most of which were station wagons or Ford LTDs. The CB radios were big black metal boxes, lined with chrome. Each had a hand-held microphone attached by a coiled wire and a built-in speaker that issued forth scratchy voices of travelers in other cars.

Our fathers told us that they bought the CB radios as a safety precaution, "in case there's an accident on the road and we need to communicate for help." But we all knew that the real purpose of those radios was to avoid speeding tickets. As our fathers sped down the highways, they would radio to each other the location of police ("smokeys" or "bears"), and everyone would slow down at that spot on the highway where the police were hiding, then speed up again. The CB radios were mostly a waste of time and money. The police soon figured out ways to avoid detection, and the CB radio users had a false sense of security that led them to drive even faster and end up with even bigger speeding fines than they otherwise would have.

The best part of using a CB radio was the jargon that went with it. To communicate on a CB radio, one had to learn a new "language." It was the language of truckers. "Kojak with a Kodak at the 120-yard stick" meant that there were police operating radar at the 120-mile marker. "Barney Fife sitting on the get in" meant that there was a county cop on the highway entrance ramp. And "putting the hammer down on a southbound clean shot" meant driving really fast to the south because no cops were around.

One of the best parts of this new language was the simple word "Roger." It was a positive word that meant a combination of "yes," "agree," and "thumbs up." "Roger that, good buddy" meant you agreed with whatever your friend just said.

CB radios disappeared decades ago. But the jargon that went with them stuck around for many of us. For me "Roger" will always mean an emphatic affirmative – "sure thing," "absolutely," "right on." Amazingly, this positive connotation of "Roger" lives on for me most strongly with the Child Neurology Society, where Roger Larson is – er, was – the Executive Director.

As Editor-in-Chief of *CNS Connections* for the past ten years, I have worked closely with Roger, and it has been a complete joy. Throughout my tenure at *CNS Connections*, Roger has served as the managing editor. By managing editor, I mean the guy who has done virtually all of the work – collected the articles, determined the layout, chosen the cover material, enforced the deadlines, and everything else. And he has always done this with a positive attitude and can-do approach. As editor, I have received a lot of compliments for this magazine. And, let's face it, *CNS Connections* is a really great magazine for a professional medical organization. It has substantial content, nice pictures, and a really professional feel. And this is all because of Roger.

As Executive Director of the CNS and managing editor of *CNS Connections*, Roger has personified the meaning of his own name. He has been affirmative and positive – just like the "Roger" – that, good buddy of the 70's CB lingo.

To everyone's regret, Roger is now retiring. No one will miss him more than me. To this positive, affirming, and upbeat friend I say "10-4, good buddy, catch you on the rebound." ●

*CNS CONNECTIOINS*
EDITOR

**Daniel J. Bonthius, MD, PhD**
Medical Director,
Pediatric Neurology
Levine Children's Hospital

*CNS CONNECTIOINS*
EDITOR

**Daniel J. Bonthius, MD, PhD**
Medical Director,
Pediatric Neurology
Levine Children's Hospital

**Figure 1.** Zara Levin, Dr. Levin's infant daughter, volunteers for a study, as a member of the typically developing control group, and has the specialized EEG apparatus in place, with 120 electrodes.

# Research Focus

## Investigating the Mysteries of Autism: April Levin, MD

Among all of the disorders that child neurologists diagnose and treat, autism is surely one of the least understood. Profoundly affecting millions of children, autism is a disorder whose biological underpinnings are obscure. For most cases of autism, the genes, biochemistry, connectional anatomy, and electrophysiologic abnormalities that underlie it remain unknown. Dr. April Levin aims to shed light into these dark corners of autism neurobiology.

Dr. Levin has had a long-standing interest in autism. As a high school student, she volunteered in the Special Olympics for children with autism. Later, as a college student, she served as a personal care assistant for a child with autism. These experiences piqued her interest in autism and revealed to her the deep impact that autism can have on an individual's life. During her residency in child neurology, she again encountered many children with autism and discovered how little was known regarding its etiology and how great the need was for child neurologists with an interest in autism. Thus, she decided to pursue autism as the focus of her research career.

An Assistant Professor in Child Neurology at Boston Children's Hospital, Dr. Levin is attempting to discover how the brain works differently in children with autism, compared to children who are developing typically. She hypothesizes that autism is a disorder of the way in which the brain autoregulates its responses to stimuli. According to this hypothesis, the problem with autism is one of gain control – how much the brain turns up or turns down its responses to stimuli.

Link to
CNS Research
Focus Library

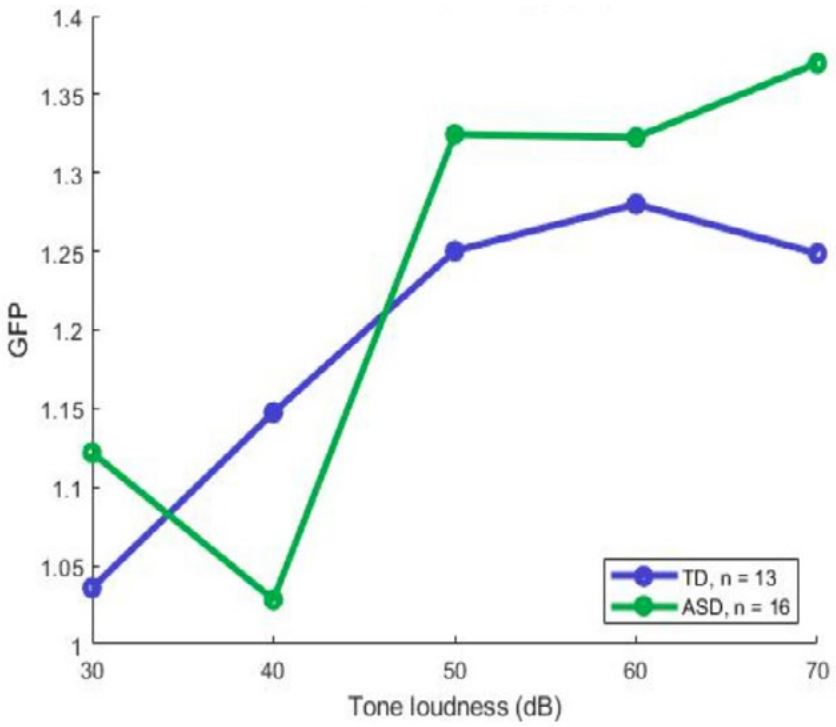



**Figure 2.** Input-output curve of EEG responses to auditory stimuli at different levels of loudness. Input (x-axis) is tones across a range of varying dB levels, and output is the global field potential (GFP 275-310 ms). Children with autism spectrum disorder (ASD) have a steep sigmoidal ("all-or-nothing ") response curve, with decreased responses to quieter tones but increased responses to louder tones, compared to typically developing (TD) individuals.

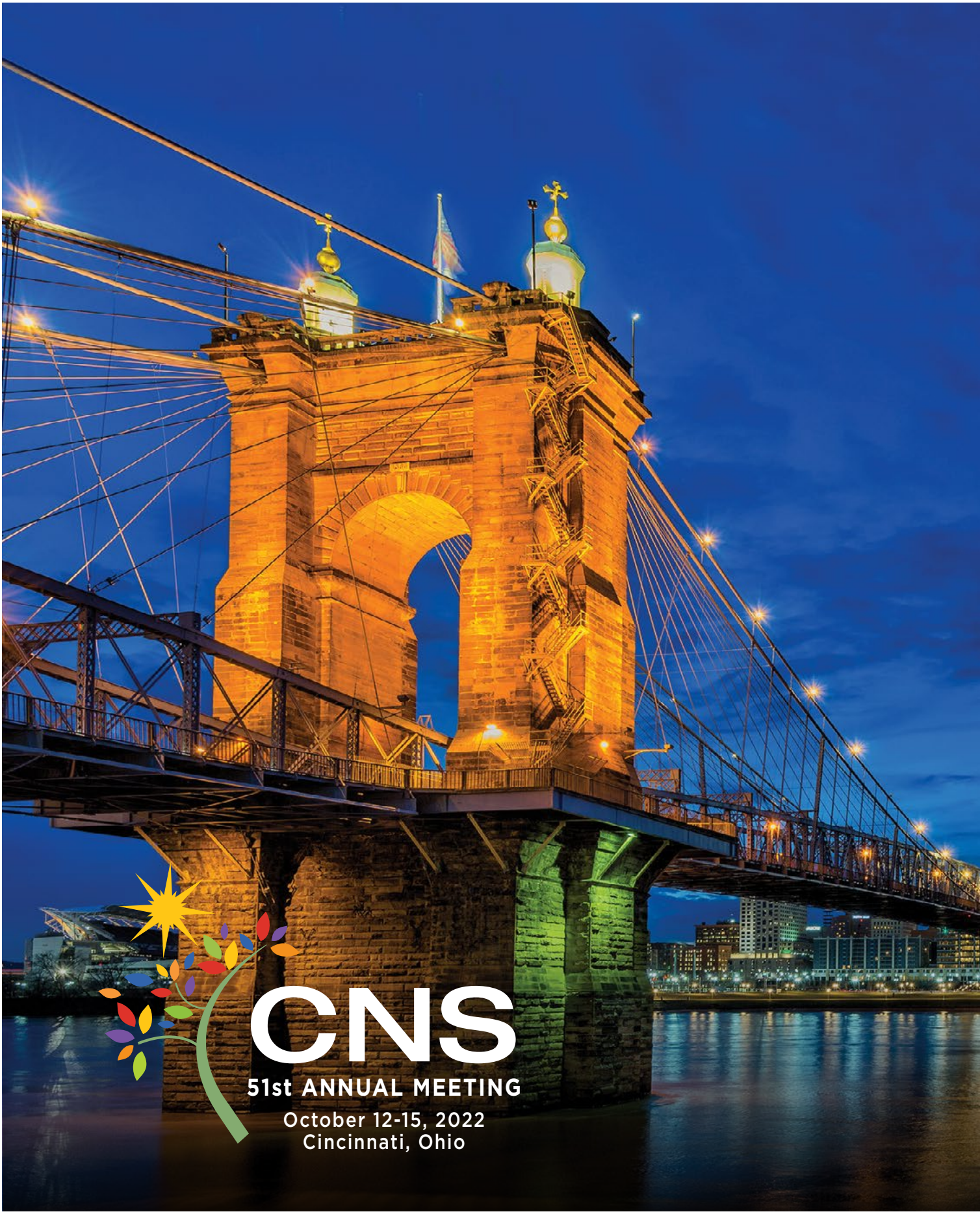
Dr. Levin has noted that individuals with autism have many paradoxical dichotomies in their responses and behaviors. For example, people with autism are at once both hypersensitive and hyposensitive to stimuli. In addition, while they often have highly restricted interests to which they can attend for prolonged periods, they also commonly have attention deficits and struggle to attend. In Dr. Levin's view, these seemingly opposite problems reflect deficits in brain autoregulation.

The principal technique that Dr. Levin utilizes in her autism research is computational EEG. She utilizes high-density EEG with 120 electrodes per subject and samples 1000 times per second, thus generating millions of data points within a few minutes of recording (figure 1). Through the use of computer analysis of EEG data, Dr. Levin seeks to understand how circuit-level brain dynamics are altered in autism. While it is not yet possible to identify an individual child with autism, based on EEG, analysis at a group level of children with autism reveals circuit-level abnormalities. Furthermore, Dr. Levin has found that analysis of groups of infants who will later develop autism have circuit dysfunction identifiable by EEG, even prior to the onset of behavioral manifestations of autism. Dr. Levin is striving to utilize dynamic EEG as a biomarker for autism.

Another technique that Dr. Levin utilizes is Evoked Related Potentials (ERP). Studying the ERP responses to tones, Dr. Levin has discovered that tones at different levels of loudness create an all-or-nothing response in patients with autism. In particular, she found that people with autism under-respond to quiet tones, but over-respond to loud tones and show very little modulation to tones in the middle range (figure 2). Thus, they respond either not at all, or at maximal levels, once again reflecting problems of autoregulation and control of gain in sensory responses.

Autism is one of the most enigmatic of all neurodevelopmental disorders. However, the novel and creative research by Dr. April Levin promises to reveal at least some of the secrets that make autism so perplexing. ●

**Editor's Note:**
Scientific enthusiasm alone does not make great discoveries. But it certainly helps. Dr. April Levin brims with enthusiasm regarding her research in autism. After a conversation with her, one feels certain that autism, complex though it may be, is no match for April Levin.


CNS
51st ANNUAL MEETING
October 12-15, 2022
Cincinnati, Ohio

# Welcome to Cincinnati

## 51st Annual Meeting of the Child Neurology Society
## *Where the Next 50 Years Begins*

Fifty years ago over 100 child neurologists made their way to Ann Arbor, Michigan for what would become the first meeting of the CNS. Last year in Boston, 11 of those child neurologists meeting in Ann Arbor also attended the 50th Annual Meeting of our organization, two of them virtually, nine of them in person. Three of those members spent their careers in Northeast Ohio. I was lucky enough to spend time with them as colleagues: Gerald Erenberg, MD was a partner for most of my tenure at the Cleveland Clinic; Morris Levinsohn, MD was in practice just east of Cleveland and I enjoyed covering his patients during his rare vacations; and G. Dean Timmons, MD was the first child neurologist to "plant the flag" in Northeast Ohio, starting the program at Akron Children's Hospital, my current employer. Ohio is home to many child neurologists and probably represents the highest concentration of child neurologists per capita. It is altogether fitting, then, that four of the prestigious Ohio programs have joined together to serve as local co-hosts for this year's meeting in Cincinnati, "Where the Next 50 Years Begins".

Major thanks and kudos to the CNS Scientific Selection and Program Planning Committee led by Program Chair, Yasmin Khakoo, MD and Associate Chair, Bhooma Aravamuthan, MD, DPhil for putting together a dynamic program rich in educational opportunities. Thanks as well to Alex Cohen, MD, PhD and Ariel Lyons-Warren, MD, PhD for jump-starting this year's junior member and early career programming with an innovative line-up of quasi-"Ted Talks" and Friday afternoon forums. As always, the rich science fare will be matched and counter-balanced by another area of excellence in the CNS: networking, collaboration, and community building. None of this could happen without our terrific National Office staff including Kathy Pavel, Emily McConnell, and Sue Hussman, who orchestrates every aspect of this meeting.

Finally, this year's meeting marks a turning point in CNS history as we offer thanks and say farewell to retiring Executive Director, Roger Larson and welcome our new Executive Director/CEO, Monique Terrell. I hope you all take the opportunity to meet Monique in Cincinnati and share with her your vision of the Society's past, present and future.

Bruce H. Cohen, MD
President

# 2022 Arnold P. Gold Foundation Humanism in Medicine Award

## Jorge Vidaurre, MD

BY JOHN MYTINGER, MD

Jorge Vidaurre MD is the recipient of the 2022 Arnold P. Gold Foundation Humanism in Medicine Award. Jorge is the Director of the Pediatric Clinical Neurophysiology program and EEG Laboratory at Nationwide Children's Hospital, The Ohio State University. He was born in El Salvador, where he received his Medical Doctorate degree at the Universidad Evangélica de El Salvador. He completed his Pediatric Neurology residency at The State University of New York (SUNY) Health Science Center in Brooklyn and his Clinical Neurophysiology fellowship at the Albert Einstein College of Medicine. During his training and early career, Jorge was influenced by wonderful advisors and mentors such as Nico Moshé, Shlomo Shinnar, E. Steve Roach, Joseph Marcus and many others.

After finishing his fellowship, Jorge returned to El Salvador and practiced medicine there for three years before accepting his current position at Nationwide Children's Hospital. Those early years shaped what would become a career of advocacy for medically underserved children and child neurologists working in low resource regions.

Tirelessly striving to improve access to care for underserved children, Jorge has spearheaded multiple infrastructure and educational endeavors. He has worked to improve access to EEG by helping to create EEG laboratories and coordinate the training of EEG technicians in Latin America and Africa. During the COVID-19 pandemic, he organized multiple international educational programs to support training in low-medium income countries, using virtual technology to overcome travel restrictions.

As Chair of the Child Neurology Society (CNS) International Affairs Committee since 2015, Jorge has planned, developed, and organized numerous educational and training programs directed to improve neurological care in low resource regions around the world, including Africa, Latin America, the Caribbean, and Asia. These programs have included regional symposia and training workshops for pediatric neurologists, EEG technicians, and primary care clinicians. With support from the CNS and members of the international community, he has worked to build infrastructure in Africa, the Caribbean, and Latin America. He has also fostered partnerships between a growing list of professional associations, including the CNS, International Child Neurology Association (ICNA), and International League Against Epilepsy (ILAE), developing multiple short and long-term outreach projects focused on improving pediatric epilepsy training in low-middle income countries. In recognition of his work on international educational programs, he was elected chair of the Education Task Force (2022-2026) of the ILAE, with the goal of creating a standard, sustainable, and multilingual EEG curriculum to be used by clinicians all over the world. In his role as the ICNA Educational Advisor, he has worked closely with the president and executive board on issues related to global educational projects.

Jorge has passionately worked to raise national and international awareness about the challenges faced by child neurologists practicing in low-middle income countries and has organized multiple global health symposia at

the American Epilepsy Society (AES) and CNS annual meetings. He is the current chair of the Global Health and International Special Interest Group of AES, promoting involvement of neurologists practicing in low resource settings to discuss important topics in child neurology and foster future collaborations. He has also given more than 100 international lectures (as invited speaker in different regions, including Europe, Africa, Asia, Latin America, and the Caribbean), often with a focus on the care of children in low-middle income countries.

In 2017, Jorge became part of the Ibero-American Child Neurology Society Executive Board and Education Committee. He serves as an editor for the organization's practice guidelines for the diagnosis and treatment of pediatric neurological disorders. These guidelines are published in Spanish with the goal of establishing more standardized practice in these regions. Recently, he was appointed ILAE's Regional Coordinator for Latin America. Within this latter role, Jorge is tasked with fostering collaborations between the ILAE and leaders in Latin America to develop projects leading to improved epilepsy care for children.

Jorge has positively influenced numerous national and international medical students, residents, fellows and younger colleagues, often serving as a mentor. He is a fellow of both the AES and the American Clinical Neurophysiology Society (ACNS), actively participating in the Professional Development Mentorship Program of the ACNS and the Mentor-Fellows Program of the AES.

From personal experience, I know Jorge to be a joyful, spiritual, and humble friend who shies away from awards or other forms of personal recognition. Yet, it remains important to recognize a career spent caring for the most vulnerable of populations. It is likewise important to recognize that Jorge's success was only achieved with the support from his wife Patricia and sons Danny (16) and Diego (18).

Where the Next 50 Years Begins

# 2022 Roger and Mary Brumback Lifetime Achievement Award

## Jeffrey Buchhalter, MD, PhD

BY DAVID URION, MD

It would be typical in biographical statements written for the occasion of one of our colleagues being given an august award for some manner of achievement that we march through a linear recounting of their career trajectory, assuming this will somehow explain to us how it is they won the glittering prize we, as a collective body, are about to bestow upon them. When we give awards for some scientific achievement, or some particular teaching prowess, or some singular accomplishment, that perhaps makes sense. We are headed in the direction of a singular event, or a particular part of a career.

This award, the CNS Roger and Mary Brumback Award for Lifetime Achievement in Child Neurology, is quite different. It acknowledges that the person we honor has spent the entirety of their professional life devoted to making the lives of children with neurologic disorders better, more manageable, more understandable, perhaps even more comfortable. It acknowledges a singular devotion to our craft and developing it in multi-faceted ways. It acknowledges the contributions that are manifestly public, as well as the hidden ones that are also necessary to move things along. It is a recognition that the individual does everything in their power to solve some challenge or problem that our patients and their families face day in and day out. It embraces the humble and the grand, the pedestrian but crucial things that stand in the way as well as the broad strokes of great insights and discoveries. It speaks to the totality of a professional life.

As such, this award speaks more to a person's character and temperament than it does to individual achievements and accomplishments. It speaks less to papers or books written and more to a way of living into a life. It speaks more to the "why" of a life than it does to the "what and where" of a life.

So, I will acknowledge the extraordinary places where Jeff was formed – UCLA, Harbor Hospital, Boston Children's Hospital. And the places he stopped along the way – CHOP, Mayo/Rochester, Phoenix Children's Hospital, Alberta Children's Hospital. These are all important and wonderful places, noble in their attributes and full of remarkable colleagues. But many live their professional lives in great places with wonderful colleagues, and they are not recognized for their lifetime achievement.

We should speak instead to the virtues he has embodied. An indefatigable drive to make the lives of children with neurologic disease, particularly epilepsy, better. A remarkable ability to connect with frightened parents and make them feel safer, and in good hands. As one who inherited quite a number of his patients when he left Boston Children's Hospital decades ago, I can testify to parents and children speaking of his kindness, his calm, and his manifest concern for their well-being.

We should speak of his unerring sense of what matters to us as a profession, even if some of the issues to which he applied his cogent thinking seemed nearly penitential for many of us. His efforts at rationalizing our coding and billing and establishing standards for what we do and how we should do it. He recognized this was important for us as a profession, but it was even more important for our transparent conduct towards the public.

We should speak of his efforts to advocate for all of us in addressing weighty matters such as SUDEP with families early in the course of our treatment of their children, as difficult

as that may prove to be. He never shied away from difficult conversations, with families or with colleagues. Consistently honest, and invariably kind. He is a model for us all.

We should speak of his early understanding of the importance of big data, and how it could be used to improve the care and lives of children across entire jurisdictions. When many of us thought that this was either a pernicious tool of those who would commodify our work even further, reduce it to measuring outcomes by winkle-picking data, he recognized that like any tool, it could be used for good or ill purpose. He invited us all to join him in using it to improve the health of all children, especially those who had not always had access to excellent care.

We should speak of his balance between rigorous professional demands and his family life, his devotion as a husband and father. Having been present when he and his wife first met, and knowing his two daughters, and the delight he so clearly feels about them, I can affirm that we can all marvel at the good fortune of this family, and how it was always in the forefront of his mind and heart.

We should speak of his good fellowship. Some of us have been fortunate enough in "the before time" to have embarked on splendid culinary adventures, either at CNS meetings or when being invited to speak in places he was serving. His ability to make disparate members of our tribe feel comfortable and welcomed at the table speaks to a vision of what we could all be as a group.

We should speak of his extraordinary wit and sharp sense of humor. Two scenes come readily to mind:

The first finds Jeff walking into a chaotic ED setting with a child in status epilepticus, EKG paper flying everywhere, much shouting, random Brownian motion on the part of residents. Realizing he had to assert some order on all this chaos, Jeff raises his voice clearly above the din: "No wait! Everybody mambo!" Then, as everybody pauses, puzzled by what they just heard, he quietly walks to the head of the stretcher and takes charge.

A second scene finds him being bedeviled by a neonatologist for some precise estimation of what an extreme premie's cognitive outcome might be. Jeff patiently explains the data we then had and its limitations, and being asked one more time for an estimate, sighs and says "Do I look like a burning bush?"

And so, on the occasion of Jeff being given this richly deserved honor, we can paraphrase Boswell's remark on Samuel Johnson: Whenever we find ourselves going down an unfamiliar road, we meet him on his way coming back.

# 2022 Roger and Mary Brumback Lifetime Achievement Award

## Roger B. Larson, CAE

BY BRUCE H. COHEN, MD AND PHILLIP L. PEARL, MD

Most deserving of a CNS Lifetime Achievement Award, the first ever bestowed on a non-physician, is Roger Larson: historian, editor, literary critic, author and, as of this conference, recently retired Executive Director of the Child Neurology Society. Ultimately embodying the CNS, Roger witnessed and contributed to our Society's growth and maturation from its early childhood through our 50th anniversary year.

The Midwestern roots of both Roger and the CNS are closely intertwined. The fourth of six children born to quiet, sweet-souled parents raised on neighboring farms in southern Minnesota, Roger grew up in Rochester, MN where his father worked for IBM for over 30 years – he comes by loyalty and longevity naturally. Roger graduated from Mayo High School in 1972, the same year the CNS was founded (and a year after 2018 CNS Sachs Awardee, Bill Dobyns, MD graduated from Mayo).

Roger began his freshman year majoring in American Studies at the University of Minnesota taking a seat in his first class in late September less than ¼ mile away from the academic offices where Ken Swaiman, MD, Larry Lockman, MD, and Mary Currey were busily composing, photocopying and sending out material for the 1st CNS meeting in Ann Arbor, MI. Roger would have graduated with a double-major in History and American Studies in 1976, but for reasons he characterizes as "too complicated, or cock-eyed, to explain," opted not to, choosing instead to be a perennial student taking grad level courses that interested him, spending hours drinking coffee and discoursing on books, film and culture with friends in the American Studies graduate program, and even more hours writing columns, serial fiction, and book & film reviews for the *Minnesota Daily* (the University's award-winning newspaper) and *City Pages* (Minneapolis/St. Paul's leading alternative weekly). He wrote for and alongside Michael Phillips, the *Chicago Tribune* film critic who succeeded the deceased Gene Siskel (of Siskel & Ebert, "At the Movies" fame; there's a story there that Roger may share at the Legacy Luncheon).

In 1981 Roger got a part-time job working for Larry Lockman, MD on a multi-clinical drug study for the treatment of Lennox-Gastaut, funded by Burroughs Wellcome. Mark Scher, MD was Chief Resident at the time. Close readers will see Roger acknowledged in the 2nd edition of Swaiman & Wright's *Pediatric Neurology: Principles and Practice*, the starting point for a four-decade labor of love "dotting i's, crossing t's, correcting spelling and inserting commas for child neurologists from morning 'til night."

Little by little, Roger started helping Mary Currey out on CNS business, first by processing abstracts (this being the snail mail, pre-fax era) and later membership applications. It is most likely Roger processed both of our membership applications, as we joined the Society in 1985 and 1986. He attended his first CNS Meeting in Halifax in 1988 (Bruce's 2nd, Phil's 1st) and recruited the first exhibitor to a CNS Annual Meeting the following year in San Antonio, setting the stage for what would later become a fixture at conferences bringing financial success. That and other parts of what became progressively bigger and better annual meetings is largely owing, he insists, to the quiet, steady excellence of Sue Hussman; Sue first joined the CNS as an independent contractor for the Joint CNS-ICNA Meeting in 1994 before later becoming a full-time staffer and for the past 10 years, Associate Director.

In 1989, when Marvin Fishman, MD was CNS President, Mary and Roger moved the CNS National Office out of the University of Minnesota's Pediatric Neurology Division and set up an independent office in a charming old brownstone building less than ½ mile from where Roger now lives. The office later moved to Shoreview, a suburb 10 miles north.

Roger passed on leaving the CNS for another job twice in the intervening years, both times because of the enormous loyalty and regard he had for the Presidents at the time: Joe Volpe, MD and Ann Tilton, MD. The rest is history.

Roger took the 4-page stapled "newsletter" in the early 90s and turned it into successively larger and more sophisticated iterations of what has become *CNS Connections*. He oversaw the development of the first CNS website in 1999 and has "survived" four subsequent website redevelopment projects. When Mary Currey retired in early 2012, the then CNS President, E. Steve Roach, MD asked Roger to become the 2nd CNS Executive Director (ED). His first meeting as ED was Huntington Beach, a trial-by-fire (or water) event when nearly 1/3 of the registered member had their flights delayed or cancelled by Hurricane Sandy working its way up the East Coast. It was at this meeting that he met Dr. Yasmin Khakoo's 8-year-old daughter, Aliya, who he vividly recalls earnestly handing him a $5 bill, thus becoming the youngest contributor to the Philip R. Dodge Young Investigator Award. Ten years later, at this year's Legacy Luncheon in Cincinnati, Aliya will become the first Dodge YIA contributor to receive the CNS Bhuwan Garg High School Neuroscience Award. Roger's life with the CNS is filled with many of these full-circle moments.

Roger has known or worked with all but one CNS President and all but six CNS Councillors (some, years after they first served). Many of us first met Roger at the annual meeting, usually somewhere near the registration desk, podium or posters. Developing relationships with young members is Roger's nature; for him, this is not "work." Those relationships often developed into fellowship that, over time, became friendships.

Among our most cherished hours each week are those spent Zooming with Roger. After a personal check-in, we would get down to business. There have been about 100 of those meetings by which we have developed a friendship. Roger has been a source of information on "the hows and whys and history of our society." We seemingly tapped Roger's memory almost daily searching for a piece of CNS history that is undocumented, yet important. The last question I (BHC) asked Roger a day before his retirement was "why do we spell *Councillor* (our elected regional board members) in such an odd manner?" It may have been the only time Roger was not sure of the answer. He presumes it may have something to do with Mary Currey's Canadian upbringing in Alberta.

Roger has never lost sight of the importance of our discipline and the Society's role in it: the commitment and value of the annual meeting allowing members at all ages and stages to present their "best stuff", and our collective role in ensuring the sustainability of the Society, our profession, and the children and families we serve. For those fortunate enough to serve on the Board, having the opportunity to get to know Roger better was a career highlight. A consistent highlight of BOD meetings was his always erudite introductory remarks, replete with poems, historical quotations and illustrative examples articulated beautifully.

The day will come when a new CNS President and 6 CNS Councillors will be elected that he has not known or worked with, but that's likely a decade or more off in the future. In the run-up to last year's 50th Anniversary meeting in Boston, Roger began sending an acrostic of daily *eConnections* messages ("Countdown to Boston"), with themes labelled alphabetically ascending from A to Z then back to A again. The collected entries (available on the CNS website) became a veritable history of the Society, with loads of heartwarming and illuminating anecdotes and photographs. It became increasingly obvious as the meeting drew closer – to him, and painfully, to us – that these were actually love letters written in the throes of saying goodbye.

We are so fortunate that Roger has been a part of us and we of him, and that we will have this opportunity to celebrate his legacy at this year's meeting. He will be joined by his wife, Buffy, a professional musician (trumpet) and music teacher at two bilingual inner city Minneapolis schools. Buffy and Roger first married a few months after he began working at the U of M (and the CNS). He will tell you that they flunked "Empty Nest Syndrome 101", separating and divorcing 7 years ago when he found himself devoting all of his "extra" non-parenting time to the CNS. Like many parts and stories told about his life, this one comes full circle. We are happy to report that Roger and Buffy found their way back together and remarried this past July, a few months before he retired from the CNS. They have two adult children: Soren, who lives in Minneapolis and travels around the country timing races, will be "stopping by" the Cincinnati meeting in between timing the Chicago Marathon on the 9th and the Columbus Marathon on the 16th; and Mekea, a New York-based graphic designer and photographer well known to CNS members from past annual meetings where she worked alongside CNS photographer, Suzanne Shaff, and coordinated videotaped CNS Conversations/Podcast sessions with the late Theresa Trapilo, a mainstay at CNS meetings going back to Dr. Volpe's presidency in 1994.

# 2022 Roger and Mary Brumback Lifetime Achievement Award

## Michael J. Noetzel, MD

BY CHRISTINA A. GURNETT, MD, PHD, BRADLEY L. SCHLAGGAR MD, PHD, AND JONATHAN W. MINK, MD, PHD

Michael Justin Noetzel, MD was born on April 3, 1951, and raised in Cleveland, Ohio. He died on February 20, 2022, just six weeks before his 71st birthday, and just over four months from his intended date of retirement from Washington University School of Medicine which would have also marked the 45th anniversary of his arrival in St. Louis. Over those 70+ years, Michael lived a remarkable life of kindness, generosity, and service to others.

Michael graduated in 1969 from St. Ignatius High School, in the Ohio City neighborhood of Cleveland. While at St. Ignatius, he was a standout scholar athlete lettering in football and baseball. He went on to attend Yale University where he was also a standout scholar athlete, lettering in football and baseball, and excelling in the former. As a freshman safety, he helped the 1969 Yale Bulldogs tie for first place in the Ivy League; he was named a member of the All-Ivy 1st Team in 1972. He was awarded the Woody Knapp Memorial Trophy, which is "given to that outstanding member of the football team who best typifies the cheerful dispositional, leadership qualities and unselfish devotion to others" – qualities that would characterize Michael throughout his life.

After graduating *cum laude* from Yale, Michael attended the University of Virginia School of Medicine, graduating in 1977, whereupon he moved to St. Louis for residency training in Pediatrics and Pediatric Neurology, joining the likes of Blaise Bourgeois, Joan Conry, Ed Kovnar, Tom Langan, and Bill Turk. Upon completing his training, he was appointed to the faculty of the Washington University School of Medicine in 1982, joining a Department of Pediatrics chaired by Philip Dodge and a Division of Pediatric Neurology directed by Arthur Prensky. Other faculty members in the Division at that time included Ed Dodson, Ruthmary Deuel, Steve Rothman, and Joe Volpe. Michael would go on to spend his entire 45-year career at Washington University and St Louis Children's Hospital. He was a pediatric neurologist who was a true "quintuple threat" – clinician, researcher, teacher, administrator, and role model. He had unparalleled personal qualities that allowed him to excel in all of those roles, while also maintaining his persona of a down-to-earth, "regular guy". Utilizing all of his talents, the Ivy League All-Star led St Louis Children's Hospital flag football and baseball teams to victories in the 1980s, perhaps the first and only time a neurologist filled this role at our hospital.

He was the Director of the Division of Pediatric and Developmental Neurology from 2007-2014 and the founder and Medical Director of the Neurorehabilitation Program and Therapy Services at St Louis Children's Hospital from 1990-2020. Although he planned to officially retire in July 2022, he was unwilling to retire his reflex hammer and was already on the schedule to teach as an Emeritus Professor in residents' clinic in the fall.

Michael's scientific accomplishments were as vast as the variety of conditions managed by child neurologists, and reflected his recognition of the power of collaborative, multicenter research. He received a Clinical Investigator Development Award from the NIH in 1984. He went on to play an important role in several major NIH-funded trials including the Diabetes Control and Complication Trial and Silent Cerebral Infarct Multi-Center Clinical Trial focusing on sickle cell disease. Both studies resulted in landmark publications in the *New England Journal of Medicine* that continue to guide the management of these diseases today. Recently chosen to serve a 5-year term on the International Pediatric Stroke Study Publications Committee, Michael was looking forward to influencing the field even during retirement.

Michael was an active participant in the Child Neurology Society, serving as Councillor for the Midwest from 2001-2003. He rarely missed a meeting, where former colleagues and trainees looked forward to seeing him every year.

Michael received numerous awards for his research and teaching, including the 2013 Distinguished Clinician Award from Washington University and the 2020 John Doronzo

Memorial Award for Clinical Excellence from the Brain Injury Association of Missouri.

Throughout his career, he became known as an outstanding educator to hundreds of medical students, residents, and fellows. His generosity of spirit and time was extraordinary as he exemplified the mentor whose door was always open. He was deeply invested in building the careers and success of all those around him.

Michael had immense respect for the expertise of those on his team. An excellent case in point is the Neurorehabilitation Program at St. Louis Children's Hospital, which he founded and built. The team was quite large, including physical therapists, occupational therapists, speech language pathologists, pharmacists, care coordinaors, nurses, nurse practitioners, psychologists, social workers, school teachers, art and music therapists, nutritionists, and child life specialists. Michael led that team by making sure that for everyone around that table, their voice and expertise was heard, their concerns heeded, and that their contributions to the care of the patient and family were recognized, respected, and integrated into the plan.

For those of us who worked with him for many years, he was the quintessential servant leader. Michael embodied this concept of leadership, which came naturally to him. He was an exceptional and empathic listener, who modeled ownership. His humble demeanor belied the wisdom he delivered, often with a chuckle and a twinkle in his eye. He experienced immense joy from the success of his trainees and junior faculty. By contrast, he seemingly never demonstrated elation over his own success. His humility, yoked to a strong sense of purpose, was ever present. Michael had an understated way of making us all better physicians and, frankly, better human beings.

From playing softball in Forest Park men's league, ski trips with family to coaching his daughter's grade school basketball teams where he was known to wear the same "lucky" vest every game (even though they rarely won), and planting trees in St Louis as part of Forest ReLeaf of Missouri, Michael enjoyed a life rich with love, service, and purpose. Known as "Dutch" by his grandkids, he led them in games of whiffleball, funny photo contests, and was even filmed playing slip n' slide in the backyard. Michael is survived by his wife (Mary), children (Evan, Justin, Katie, and Anna), and 8 grandchildren.

Late in 2021, Michael's colleague and former trainee, Laura Jansen, had the honor of telling him that he had been selected to receive the 2022 Roger and Mary Brumback Lifetime Achievement Award from the Child Neurology Society. In response to the congratulatory notes sent by colleagues and former trainees, Michael replied "…when a lifetime achievement award is given to an individual physician, it reflects to a significant degree the environment in which that physician practices medicine. In my case, for nearly 45 years, I have been blessed to pursue a career in Child Neurology surrounded by truly great leaders and mentors, and kind and dedicated healthcare providers…I cherish my association with each and every one of you."

Michael's impact on the discipline of child neurology, Washington University, St. Louis Children's Hospital, his students and trainees, and the lives of his countless patients will be measured in generations. His generous spirit and kindness will be sorely missed by all who had the opportunity to know him.

# 2022 CNS-PECN Training Director Award

## Timothy Lotze, MD

BY GARY CLARK, MD

Dr. Timothy Lotze grew up in Houston, Texas. While completing his physics degree at Texas A&M University (Class of 1991), Tim felt the pull of medicine. This was in part because of his father's distinguished career in obstetrics and gynecology along with a desire to directly help people in need. While attending the University of Texas Health Science Center in San Antonio, Tim found an early love for neuroscience in medical school and initially considered pursuing adult neurology. However, his love for working with children steered him into a categorical pediatrics residency in 1995 at Nationwide Children's Hospital (then known as Columbus Children's Hospital). Through the course of this residency, Tim found child neurology to be an ideal career for his interests and set his sights on training at Baylor College of Medicine to achieve that goal. Prior to coming to Baylor, Tim spent an extra year in Columbus serving as the Chief Resident in pediatrics from 1998-1999. This year was highly influential in developing his interest for clinical education and established a foundation upon which he continued to develop his skills in this area.

Upon completion of his residency training in child neurology in 2002, Tim joined the faculty at Baylor College of Medicine and Texas Children's Hospital. While early in his career, he started to develop his clinical interest and expertise in neuromuscular disorders and pediatric multiple sclerosis. He remained active in training the child neurology residents at Baylor, however, to include ongoing development of residency program activities. Back in those days of paper charts and limited computer technology, he created an early electronic medical record system that utilized Microsoft Access to document resident encounters as well as to track various diagnoses and capture faculty billing on inpatient rounds. Tim received the ACGME Marvin Dunn Award in 2008, when he presented this work at the ACGME annual meeting.

When Tim was offered the opportunity to serve as the Child Neurology Residency Program Director in 2005, he jumped at the chance. Over the subsequent 17 years, Tim has continued to build and refine the residency program into one of the best in the country. Tim has led the program through a variety of enhancements to include expanding from two to five hospital-funded residency slots per year (two of which are reserved for basic neuroscience pathway residents) and the incorporation of the Neurodevelopmental Disabilities residency into the curriculum. With the onset of the Covid pandemic, Tim was instrumental in helping the program to quickly pivot resident education and clinical activities into an online format.

Tim has continually worked with colleagues in pediatrics and adult neurology to assure the residents are receiving the best education while making sure to meet ACGME and ABPN requirements. Leveraging the resources available at Texas Children's Hospital, Tim continually refined the education programs to help assure that residents in training would be ready for modern practice. Examples of this include increasing resident exposure to genetics and gene therapy, fetal neurology, neurocritical care, neuroimmunology, and palliative care.

Tim has also promoted scholarship amongst the residents through teaching critical evaluation of the literature, research methodology, and presentation and writing skills. Nearly all graduates have presented at national meetings as well as published in peer-reviewed journals; most of these publications are collaborative with other residents as well as faculty within the Division.

Tim has rare qualities that make him invaluable as a program director. Tim is a leader, is well-organized, utilizes technology optimally to leverage complicated systems in medicine, is an outstanding physician, a great teacher, a visionary, has a wonderful sense of humor and is the ultimate professional. He inspires trainees to love to learn and to be the very best child neurologist and neurodevelopmental disabilities specialist. Tim engenders a love of learning and a professional approach to the practice of medicine. He finds his greatest satisfaction in helping others to be successful, and this is especially true when it comes to the residents that he has helped to train. He blends clinical teaching with humor and

establishes an environment that promotes a growth mindset. The American Neurological Association (ANA) recognizes institutions that get the most students to go into neurology, and Baylor College of Medicine has been recognized for many years as top in the US, largely due to Tim's efforts in student teaching. Through his modeling, residents aspire to likewise become clinical and educational leaders in the field, and many of the graduates have achieved that goal.

Tim is consistently ranked as one of our top teachers at Texas Children's Hospital and Baylor College of Medicine. In 2009, he simultaneously received two Rose Fulbright Awards from the College in recognition of Education Leadership as well as Evaluation and Teaching. That same year, he was inducted into the Baylor Academy of Distinguished Educators. His ongoing hard work and success in educational leadership led to him receiving the American Academy of Neurology Program Director Recognition Award in 2016. A letter of support from a former trainee at that time stated:

*"Dr. Lotze's professionalism, dependence on evidence-based medicine, and patient compassion and advocacy has strongly influenced me during my training. He has been a model not only in his role as a teacher but more as an example. … He was also key in teaching me how to care for a complex patient with an organized systematic approach, while not losing sight of the family and the child."*

As part of his nomination for the PECN Program Director Award, his former chief residents made this key observation about a key quality in Tim's leadership:

*"It has always been clear to us that Dr. Lotze has a primary interest: the wellbeing of his patients and the residents in the child neurology and neurodevelopmental disabilities programs. He takes an active role in overcoming obstacles – allowing residents to outline the changes requested and following it with effective execution, prioritizing the resident's success and wellness over all other administrative interests and clinical service obligations. When residents propose programmatic changes to Dr. Lotze, he always responds with "why not?" in place of "why?" This simple act of allowing residents to advocate for themselves and entrusting them with their own education epitomizes the care and guidance he provides trainees on their journey of growth to become the best child neurologists they can be."*

This statement speaks to Tim's recognition and support for his residents and the faculty to be active participants in the ongoing construction and development of the program. This shared responsibility provides everyone with an opportunity for improving the quality of the program as well as a sense of accomplishment when effective change is made.

Another former chief resident made this observation, which speaks to Tim's open and giving nature:

*"He has always had an "open door" policy, and wholeheartedly assists trainees in overcoming personal and professional challenges. Certainly, being a program director has its fair share of crises and stumbling blocks, but Dr. Lotze manages to approach any issues with a professional, level-headed mindset, and optimistic attitude. I found this to be of utmost importance and I have tried to emulate his example while I co-managed such issues as a Chief Resident. All of this to say, that it is abundantly clear that Dr. Lotze truly cares about each individual in his training program and sees to it that their educational as well as personal needs are met."*

Tim has done all of the above while developing his nationally recognized expertise in neuromuscular and neuroinflammatory disorders. He is one of our busiest clinicians but is always ready to volunteer to take more service time, especially when this involves teaching, mentoring and being an outstanding example to our trainees. His dedication to the success of our large Child Neurology training program has no doubt been the driving force of its evolution and continued growth. I believe his innovative, holistic-minded, and supportive approach to the trainees and program make him one of the best residency program directors of Child Neurology in the country, and thus fully deserving of this award.

## 2022 Martha Bridge Denckla Award

# Michael Shevell, MDCM, FRCPC, FCAHS

BY STEVEN PAUL MILLER, MDCM, MAS, FRCPC

Michael Shevell was born in Côte Saint-Luc, Quebec, Canada in 1958. He received a DEC in Health Sciences from Marianopolis College in 1977, followed by an undergraduate degree in physiology (1980) and medicine (1984) at McGill University. He was inspired to pursue a career in Neurology through the integration of basic science, anatomy, and clinical cases in the Med I Central Nervous System course. He pursued residency in pediatrics and pediatric neurology at the Montreal Children's Hospital (MCH) and McGill with Drs. Gordon Watters, Bernard Rosenblatt, Kenneth Silver and Frederick Andermann. He acknowledges their engaged mentorship, dedication, and thoughtful teaching efforts for driving a passion to do even better for each child in his care.

Michael gravitated over time to the neurology of newborns and its relation to later neurodevelopmental disabilities. When Michael was training in neurology in the 1980's, the real excitement was molecular genetics, so he pursued a fellowship in Dr. David Rosenblatt's lab, focused on rare inborn errors of metabolism, learning the vocabulary of genetics. Through this training, he recognized the importance of phenotyping as central to understanding genotypes. Michael's first paper in this area was on a deeply phenotyped cohort of children with benign familial neonatal seizures. When he obtained his first faculty position at MCH, he immediately developed a database to catalogue all the patients he encountered in his Pediatric Neurology practice. This database proved fundamental in his subsequent studies on the outcomes of neonates with encephalopathy. His contributions to defining the phenotypes of common neurological disorders of the young child is foundational to his contributions to the care of children with neurodevelopmental disabilities. Michael's trainees will all recall his encouragement to listen to and observe the child and family in their care.

Training in pediatric neurology in the 1980's Michael was impressed by how doors were "not just opening up – they were flung wide open" with the introduction of MRI and molecular diagnostics. He recalls seeing the first MRI that he had ordered for a clinical indication, and "seeing the answer right there." Impressed by the MRI window to the developing brain, he considered molecular genetics to be a comparable cellular window. As his interests developed, Michael reflects the transition of his interests from the protein to the "bigger picture" of the child in their family.

Michael's contributions to child health were synergistic with Dr. Annette Majnemer, his life partner. Michael and Annette started working together in the 1990's, early in their respective careers. Interweaving their individual perspectives, they focused on the relationship between the neonatal neurologic and OT examinations with neurodevelopmental outcomes and on the etiology of global developmental delay. With both Michael and Annette grounding their work in the real-world questions being asked by clinicians and families in the Pediatric Neurology clinic, their collaboration grew over the next two decades with combined and independent research endeavors. Working with Annette, Michael "put the 'neuro' into neuro-disability" research and clinical care. His seminal studies influenced the early identification of disability, identifying children at risk for neurodevelopmental sequelae and possible predictive factors, and characterizing novel childhood disability sub-types. Michael's academic activities consistently linked intrinsic (biologic, functional) and extrinsic (family, environmental) determinants of developmental disability, including the first observations of neuro-behavioral abnormalities in neonates with congenital heart disease even prior to surgery. Concurrently, Michael became increasingly engaged in addressing ethical and historical issues related to care provision. Together, his work provided a scientific rationale for the evaluation of childhood disability, and broadly influenced the practice of child neurology.

Complementing his impactful program of research is Michael' passion for mentoring young people and trainees.

He has supervised close to 50 pediatric neurology trainees, and numerous research trainees. He lectures internationally, across dozens of countries, as an invited expert and visiting professor, raising awareness of neurodevelopmental disabilities and reminding us all of the importance of attending to the whole child in our care and their family. Michael's success as an educator and mentor is best reflected in the leadership roles his trainees and mentees have assumed and in crossing child-health disciplines; he has instilled a commitment to mentorship in each of his mentees, amplifying his impact as an educator.

Michael is also a passionate advocate for child health locally, nationally and internationally. For example, his leadership role in NeuroDevNet emphasizes the imperative to collaborate with various professional disciplines, methodologies, and perspectives to address and solve problems. Michael served in leadership roles for the Child Neurology Society including as Councillor for the Northeast (2017-2019), Awards Committee Member (2016-2019), and Chair of the Ethics Committee (1997-2009). He received the Child Neurology Society's Hower Award in 2014, one of our Society's highest recognitions, given annually to a person whom the Child Neurology Society deems has contributed greatly to the further understanding of neurological problems of childhood through research, teaching, clinical application, and leadership.

Michael has been similarly active in the International Child Neurology Association, including a long stint on its Executive Board, and Chairing the Scientific Programming Committee for the Xth (Montreal, 2006) and XIIIth (Iguazu Falls, 2014) World Congresses. Most recently, he has been appointed as a Fellow of the Canadian Academy of Health Sciences, elected on the basis of his demonstrated leadership, creativity, distinctive commitment to advance academic health sciences.

With this breadth of perspective and recognition by his university and peer communities, Michael became Chairman of the Department of Pediatrics at McGill and Pediatrician-in-Chief of the Montreal Children's Hospital in 2011. He served in this impactful role until 2021, overseeing the move of the department into a new hospital and robustly expanding scholarship and training activities throughout all sectors of departmental activities. Through this role he took particular pride in the success and diversity of the faculty that were recruited and supported. In our discussions, Michael also reflects how this leadership experience afforded him a broader view of the world that relates to how he sees his research contributions: striving to ensure his work is continuously meaningful and relevant in terms of outcomes that are relevant to the child and family.

Michael's chief interests in his life outside of child neurology are his wife Annette, and their daughters, Allison and Meaghan. Allison is now a pediatric intensive care physician and is currently pursuing a Master's in Epidemiology at McGill University, with a focus on investigating long-term outcomes after pediatric critical illness. Meaghan, after graduate studies in Human Rights, first coordinated the Global Child McGill research group and is now a consultant in the Equity, Diversity & Inclusion practice of an international firm that evaluates the effectiveness of programs established by NGOs throughout the world.

Where the Next 50 Years Begins

# 2022 Philip R. Dodge Young Investigator Award

## Bhooma Aravamuthan, MD, DPhil

BY CHRISTINA A GURNETT, MD, PHD

Bhooma was born to Lakshmi and Rajagopalan Aravamuthan, just in time to be acknowledged in her father's PhD thesis. Her mother is a talented painter and musician, with her artistic talents displayed in national forums in India. Her father, after growing up without running water, spent 25+ years as an endowed chemical engineering professor before retiring this year. She is a product of their love, grit, and determination to succeed.

Bhooma was broadly interested in neuroscience from a young age, but that passion crystallized as an undergraduate when she learned that her uncle had been diagnosed with Parkinson's disease. She began looking for labs doing translational research in Parkinson's disease and found one at Oxford. While applying for MD/PhD programs she, on a lark, applied for a prestigious George C. Marshall scholarship to fund a research degree at Oxford. When she was awarded the Marshall Scholarship, both the NIH and Washington University in St. Louis (WashU) graciously funded a somewhat unorthodox training program: Bhooma did her DPhil (Oxford's terminology for PhD) in the labs of Tipu Aziz at Oxford and Judie Walters at NIH. She then did her MD in St. Louis as a part of WashU's Medical Scientist Training Program. To this day, she continues to take a deep breath before beginning to explain her training pathway to others.

During her DPhil, Bhooma began combining human subjects and animal model-based research to answer clinically relevant questions about neurologic disease – an approach that is evident in her current work. Using diffusion tensor imaging under the guidance of Heidi Johansen-Berg at Oxford, she demonstrated the ability to trace anatomically relevant connections from the subthalamic and pedunculopontine nuclei in the human brain. She subsequently studied the spike-timing relationships between these nuclei and the motor cortex in the parkinsonian rat brain under Dr. Walters' guidance at the NIH. She combined these data in her thesis to hypothesize ideal deep brain stimulation targets and stimulation frequencies for people with Parkinson's disease.

She continued her study of pedunculopontine nucleus electrophysiology while obtaining her MD at WashU, recording from awake macaques during vestibular perturbations in Dora Angelaki's lab. She used this experience to consider the role of the pedunculopontine nucleus in falls in people with Parkinson's disease, bask in the advice and guidance of yet another strong woman mentor, and definitively learn that she never wanted to work with macaques again. Entering the clinical portion of her medical school training, she remained resolute in pursuing a career as an adult movement disorders physician scientist.

However, formative experiences with pediatric neurology changed her mind. Her floor attendings were Doug Larsen and Anne Connolly, both expert clinicians and renowned educators. Doug suggested that she shadow Jan Brunstrom in the Cerebral Palsy Center and Anne suggested she meet Mike Noetzel at Pediatric Rehabilitation Rounds. After working with kids with cerebral palsy (CP) and their families repeatedly during her intern year, Bhooma committed herself to a career focused on understanding movement disorders in people with CP. Eager to learn about the effect on basal ganglia circuitry following hypoxic-ischemic injury to the developing brain, she joined the lab of Mish Shoykhet as a second year pediatrics resident. She recorded single units in the basal ganglia of young rats following cardiac arrest, intercalating these overnight recording shifts with night shifts in the hospital.

She carried this focus with her to Boston Children's Hospital where she began her child neurology training. She quickly developed ideas and methods to quantify dystonia in CP. As an NINDS R25 recipient under the mentorship of Seward Rutkove, she optimized electromyography and nerve conduction study analogues of spasticity and dystonia in rodents following neonatal hypoxic-ischemic injury. She used this data to write for the newly re-configured CNCDP-K12 award, then in its second year, which she was awarded. After neurology training and a movement disorders fellowship in

Boston, she returned to WashU as faculty in 2018 to join the CP Center that first piqued her interest in the field.

Following this already promising trajectory, Bhooma's star has meteorically risen. She is now widely regarded as a national expert in dystonia in CP. Her work has been featured in flagship journals including *Annals of Neurology*, *Neurology*, and *Pediatrics* and continues to span human subjects and animal-model based approaches. She methodically elucidates the features clinicians use to diagnose dystonia in people with CP and then uses these features to characterize dystonia in her newly developed mouse models of neonatal brain injury. She uses diverse techniques including machine learning-based pose estimation, chemogenetics, and calcium imaging to dissect the pathophysiology of dystonia in these animal models. In addition to the 2022 Dodge Young Investigator Award, her work garnered her the 2022 American Academy of Neurology Jon Stolk Award in Movement Disorders, the first time this award has been given to a pediatric neurologist. She has presented her work in diverse and illustrious forums including at the recent NINDS/NICHD Workshop on Cerebral Palsy and at a briefing to the United States Congressional Neuroscience Caucus.

Bhooma is also a respected thought leader in the CP field. Her work on CP diagnosis and increased need for neurologist involvement in the care of people with CP has helped ignite renewed interest in CP at CNS. Her scientific leadership is evidenced by her co-chairing the Scientific Planning Committees for CNS and the American Academy of Cerebral Palsy and Developmental Medicine (AACPDM) in 2023, perhaps the first time these positions have been held by the same person across these two societies. As an advocate and member of the AAN Inclusion, Diversity, Equity, Anti-racism, and Social Justice (IDEAS) subcommittee, she champions disability rights on behalf of her colleagues and the families she cares for in clinic. Much of her recent work has focused on partnering with people with CP and their caregivers to define the research agenda and to give them a voice as partners in "community driven research."

In addition to her scientific accolades, Bhooma has already become a supportive mentor for an unprecedented number of undergraduate students, medical students, and clinical fellows, who flock to her burgeoning research group to capture some of her positive energy. With a never-ending list of ideas for new innovative research projects, she sets high expectations for her trainees who have uniformly had highly productive and rewarding research experiences. Her trainees describe her as being "fully dedicated to their success" and "always making time for them, even if it means meeting late at night on Zoom with her adorable kids playing around her." Clinical trainees also find humor in her obsession with the Queen square reflex hammer, often quoting her famous Twitter rant about it being the little black dress of reflex hammers that never goes out of style.

Bhooma repeatedly begins her talks by stating that dystonia in CP is her "professional love", but a bio about her would be incomplete without recognition of her personal loves. She often claims that her work-life balance is achieved only because they are, by nature, both intertwined. She is happily married to Dan Weber, an adult epileptologist, and is proud mom to twin sons and a daughter, Singam, Neel, and Andal. Though her children were not born in time to be acknowledged in her doctoral thesis, Bhooma is surely proud to acknowledge them here.

Where the Next 50 Years Begins

## 2022 Bernard Sachs Award

# Steven Paul Miller, MDCM, MAS, FRCPC

BY MICHAEL ISRAEL SHEVELL, MDCM, FRCPC, FAAN, FANA, FCAHS

Steven Miller was born and raised in Côte Saint-Luc, Quebec, a demographically unique proximate suburb of Montreal. After achieving expedited entry into medical school, Steven received his medical degree from McGill University in 1995 and completed his residency in pediatric neurology at the Montreal Children's Hospital in 2000, where he gratefully acknowledged the educational influences of Gordon Watters, Frederick Andermann, Bernard Rosenblatt, Michael Shevell and Chantal Poulin. Steven's future promise and impact was evident by his being awarded the Holmes Gold Medal for his graduating class, indicating his rank as the top student over the entire 4 year medical school curriculum. Quite a feat as McGill is Canada's top-ranked Medical-Doctoral university. He further excelled in his residency by publishing, remarkably, 15 peer-reviewed papers during his pediatric neurology training.

Following residency training, Steven went to UCSF to follow his passion in neonatal neurology where he undertook a combined clinical and research fellowship with former Sachs Awardee, Donna Ferriero. This was followed by Faculty appointments first at UCSF, then at the University of British Columbia in Vancouver, and from 2012 till 2022 at the Hospital for Sick Children (Toronto). While in Vancouver, Steven held a prestigious Canada Research Chair in Neonatal Neuroscience and a Canadian Institute for Health Research (CIHR) Clinician-Scientist Award. The move to Toronto saw Steven being awarded the Bloorview Children's Hospital Foundation Chair in Pediatric Neuroscience and promotion to Full Professor in the Department of Pediatrics at the University of Toronto. He also assumed the Directorship of the Division of Pediatric Neurology at the Hospital for Sick Children (HSC), replacing former Sachs Awardee, O. Carter Snead III (2005), as well as the Headship of the Centre for Brain & Mental Health at HSC.

The Sachs Award is meant to recognize an individual of "international stature" for "leading research in neuroscience with relevance to the care of children with neurological disorders". Steven's body of research has been driven by his passion to improve the care and outcome of the vulnerable at-risk infants who populate our NICUs and bear a disproportionate burden of morbidity encountered in clinical pediatric neurology practice. Steven has utilized cutting edge, and continually evolving, imaging techniques and modalities to further our understanding of disturbed brain development in not one, but three discrete populations of interest that collectively form the majority of at-risk newborns; preterm infants, infants with congenital heart disease, and term asphyxiated newborns. Through carefully designed protocols coupled with well-defined longitudinal clinically relevant outcomes, Steven has demonstrated in each of these groups the influence of modifiable environmental factors encountered in clinical care on brain structure and function. These environmental factors have included infections, cardiorespiratory parameters, and the frequency of painful procedures experienced by a critically ill newborn. Most recently, his research draws attention to the importance of social disparities to understanding why neonates with similar brain injuries often have widely divergent neurological outcomes. For each of these factors identified, clinical applicability is evident that, when applied to the NICU care setting, will improve outcomes for a significant subset of children who eventually experience neurodevelopmental disabilities. Taken together, his research has established the "importance of the everyday" experience of critically ill newborns on brain development and subsequent neurodevelopmental outcomes.

Standard metrics testify to Steven's research impact. Over 220 peer reviewed publications, over 25 chapters/invited papers (including the chapter on hypoxic-ischemic brain injury in the term newborn in the 6th Edition of Swaiman's definitive textbook, and the chapter on white matter injury in *Avery's Textbook of Neonatology*), and one co-edited reference book on acquired brain injury in the fetus and newborn. His h index is currently 80, his papers have been cited over 20,000 times, and he currently has 67 papers with more than 100

citations. Steven has received numerous operating grants from both North American national granting agencies (NIH/NIHNDS, CIHR) as well as varied Foundations (March of Dimes, Gerber, American Heart Association). Of particular note is his role as one of three co-Principal Investigators of the Child-BRIGHT Strategy for Patient Oriented Research (SPOR) network. This is a $25 million dollar 5-year grant that represents the largest dollar value child health research effort in Canadian history. This national network features as its *raison d'etre* family engagement to drive a research program in brain-based disabilities targeting challenges relevant to the lives of affected families. He has also been appointed by his peer community to the Institute Advisory Board of the Canadian Institute of Health Research (CIHR), Institute of Human Development and Child and Youth Health (IHDCYH), and now serves as its Vice-Chair. This is the highest level of pediatric research governance nationally in Canada. He is presently an Associate Editor of *Pediatric Research*, one of child health's leading research-focused journals.

The secret for Steven's extraordinary success as a researcher is his ability to leverage his intelligence and passion to work collaboratively. He is skilled at bringing together and creating complementary teams that involve families, clinicians, basic scientists, imaging experts (acquisition & analysis), and rehabilitation professionals. He is **always thinking** about the next question to be asked, extrapolating both from the acquired science and the observations of an astute clinician. These attributes are also evidenced in his leadership activities. For example, the Centre for Brain & Mental Health at HSC that he led for a decade of stupendous growth now brings together over 1500 faculty, staff and trainees to collaboratively improve the brain health and mental health children and youth.

Steven's excellence and leadership has been recognized by numerous awards including the Physician Researcher Award for Scientific Accomplishment HSC (2021), Newburger-Bellinger Award (2016), the Prichard Award from the International Child Neurology Association (2014), the Young Alumni Award from the Faculty of Medicine of McGill University (2011), and the Medal in Medicine from the Royal College of Physicians & Surgeons of Canada (2010). Most recently, he was awarded the 2021 Children's Healthcare Canada Award for Individual Leadership for his efforts to improve the health of children nationally.

The Sachs Awardee must also be an "outstanding teacher and scholar". A testament to Steven's teaching ability that is self-evident is his frequent national and international speaking invitations, which number over 80 in the past 5 years alone. He is a sought out mentor and graduate studies and fellowship supervisor. He has also contributed enormously to his scholarly community, having served as President of the prestigious Society for Pediatric Research (2013-2014) and Chair of the CNS Scientific Program Committee (2009-2011). Steven is passionate about fostering the success of academic Child Neurologists in North America and beyond. He has trained over 35 neonatal neurology fellows; his graduates are presently thriving in diverse academic faculty roles. His colleagues have recognized his education contributions with the 2019 CanMEDS Excellence award. As his long-time mentor, I have been especially proud of his thorough commitment to mentorship through continually fostering the career development of his trainees across multiple levels of experience and a number of disciplines.

Recently Steve has begun a new phase in his personal and professional trajectory, having assumed in April 2022 the Chair of the Department of Pediatrics at the University of British Columbia and Pediatrician-in-Chief at the British Columbia Children's Hospital. Given his intelligence, passion and energy, one can only anticipate an impactful and transformative mandate at this institution.

His professional world aside, Steve is a devoted family man. He has an extraordinary life partnership with Mina Matsuda-Abedini, a highly respected pediatric nephrologist. Together they have raised two children, Hana and Sam. Hana is starting university studies at McGill University and Sam is a high school student. Steve can without fail be found in attendance in support of their extra-curricular activities.

## 2022 Hower Award

# Leon G. Epstein, MD

BY MATTHEW KIRSCHEN, MD, PHD

The Child Neurology Society has chosen Leon G. Epstein, MD as the 2022 Hower Award recipient for his contributions to the CNS and his achievements as an accomplished academic neuroscientist, gifted educator, master clinician, and forward-thinking neuroethicist. Dr. Epstein is the ideal choice for this award as he serves as a role model for child neurologists and trainees worldwide.

Dr. Epstein was born in the Bronx and grew up in a working-class neighborhood before moving to Levittown on Long Island, New York. After graduating high school, he traveled to Michigan where he intended to major in aerospace engineering at the University of Michigan. However, due to his insatiable curiosity, his studies took him on a journey through philosophy, politics, and eventually to medicine. He graduated from Detroit's Wayne State University School of Medicine in 1973 and subsequently completed an internship in pediatrics at St. Joseph's Mercy Hospital, University of Michigan. He ventured to the University of Arizona for his residency in Neurology and then back to New York in 1976 for his fellowship in Child Neurology at Columbia Presbyterian Medical Center under the mentorship of Sidney Carter.

Dr. Epstein's first faculty appointment was as an assistant professor of Pediatrics and Neurology at the State University of New York at Stony Brook in 1978. Two years later, he transitioned to the University of Medicine and Dentistry of New Jersey (UMDMJ) to join Richard Koenigsberger and became an Associate Professor and Director of the Neurology Clinic at Children's Hospital of New Jersey. During this time, Dr. Epstein cultivated his interest in neurovirology with a particular interest in the neurologic manifestations of HIV in children. He reported the first series of children with AIDS in the United States. These children were born to HIV-infected mothers and had neurologic manifestations including a progressive encephalopathy.

To further his skill set and address the pathogenesis of HIV in the nervous system, Dr. Epstein spent time in the 1980s as a visiting scientist at the National Institute of Neurological Disorders and Stroke (NINDS) in Carleton Gajdusek's Laboratory for Central Nervous System Studies, and in the University of Amsterdam's Human Retrovirus Laboratory. Dr. Epstein's ensuing work included seminal papers on the pathophysiology of HIV infection in the brain. He conducted groundbreaking studies that identified HIV-1 infection of macrophages/microglia in the brain and demonstrated that brain inflammatory pathways were important in causing HIV-induced brain injury. He also served as a consultant to the CDC, surgeon general, and WHO regarding HIV in children.

In 1989, Dr. Epstein left New Jersey for the University of Rochester School of Medicine where he continued his HIV-focused neurovirology work as the Director of the Laboratory of Molecular Neurovirology. His work has been NIH-funded since 1986. He was the Principal Investigator of several multi-center studies evaluating cognitive impairment in HIV infected individuals, including the Northeastern AIDS Dementia study and a project using quantitative MRI to develop neuroimaging biomarkers of HIV-related cognitive decline. Dr. Epstein has led several clinical trials aimed at treating HIV-associated cognitive decline. To further these efforts, he received a Fulbright scholarship and spent a year in Chester Beatty's laboratory at the Institute for Cancer Research at the University of London.

Dr. Epstein's research has also demonstrated the impact of viral infections, and Human Herpesvirus-6 (HHV-6) in particular, for their role in causing febrile seizures in young

children. He was a co-investigator in the large prospective Consequences of Prolonged Febrile Seizures in Childhood (FEBSTAT) study, which determined that infections with either HHV-6 or -7 account for one-third of cases of febrile status epilepticus.

In 1999, Dr. Epstein left the University of Rochester to become the Division Head of Neurology at the Ann and Robert H. Lurie Children's Hospital of Chicago. He is currently the Derry A. and Donald L. Shoemaker Professor of Pediatrics and Neurology at the Northwestern University Feinberg School of Medicine. He has served in a variety of leadership roles, including Associated Program Director for the Northwestern University General Clinical Research Center and Medical Director for the Clinical Research Unit, a part of the Northwestern University Clinical and Translational Science Institute. He is beloved by his faculty and scores of trainees. His trainees claim that he is the most approachable department chair in the country and appreciate his participation in educational conferences, sharing countless teaching pearls (even if his discussion points are long-winded).

Dr. Epstein has a longstanding interest in biomedical ethics. He chaired the Child Neurology Society Ethics Committee and has been a member, for more than a decade, of the Ethics, Law, and Humanities Committee (ELHC), a combined committee of the American Academy of Neurology (AAN), the American Neurological Association (ANA) and the CNS, serving as Chair since 2019. In this role, he has co-authored AAN position statements concerning ethical issues including neuroenhancement, brain death, clinical research, physician-assisted death, drug pricing, social media, health disparities, and racial justice. During the sometimes tense deliberations to construct these position statements, he is a keen listener, sensitive to the perspectives of all stakeholders, and a masterful facilitator of often opposing opinions. He leads by example and creates an environment where people respect one another. He is kind and patient, always willing to seek out the good in people and give them the benefit of the doubt.

On a personal level, he has been married for over 40 years to Jane Holl, MD MPH, a pediatrician and health services researcher; they have three adult sons. Dr. Epstein has endless curiosity. He loves to ask questions and generate excitement and curiosity in others. His curiosity extends beyond his clinical work and is evidenced by how he enriches his life by hiking in and climbing alpine mountains and building and playing acoustic guitars.

Dr. Epstein is devoted to his patients, colleagues, students, and our larger community. He has a strong social conscience and works tirelessly as an advocate for neurologic health, especially for children with disabilities and chronic neurologic illness. His academic accomplishments, leadership skills, teaching, and clinical skills set the bar high for those of us who follow in his path.

Where the Next 50 Years Begins

# Outstanding Junior Member Award Renamed to Honor Tae Chang

## Presented at Kenneth F. Swaiman CNS Legacy Luncheon

*Reservation/Ticket required*

**Taeun Chang, MD (1971-2022)**

*The CNS Executive Committee unaimously approved renaming the Outstanding Junior Member Awards in honor of Tauen Chang, MD following her untimely passing last spring.*

*Since its inception in 1996, four awards have been presented to residents at each CNS Annual Meeting for work submitted to the Scientific Selection Committee. Tae was one of the first and one of the few residents to win the award twice (2002 and 2003). This year's first Tae Chang Junior Member Awards will be presented at the October 12 Legacy Luncheon, with all proceeds from luncheon ticket sales going to the newly renamed Tauen Chang Outstanding Junior Member Award. Below is the announcement written by Drs. William Gaillard and Phillip Pearl for the June 19 "eConnections".*

Dear Fellow CNS Members:

It is with a heavy heart that we sadly announce the death of Taeun Chang, MD on June 18, 2022 from complications of a diagnosis of cancer that she received in late 2020. Tae was a beloved faculty member at Children's National, where she spent her entire career after starting her child neurology residency in 2000. She attended MIT in Cambridge, MA for her undergraduate degree, the George Washington University School of Medicine, and pediatric residency at the Children's Hospital in Pittsburgh. Tae held the rank of Professor of Neurology and Pediatrics at GW, and received the 2022 Children's National Hospital Clinical Research Mentoring Award. An exceptional neonatal neurologist, she was selfless in fostering and supporting the careers of those around her. The many, many accolades from mentees, describing her effects on their careers and lives, are heartwarming, and can be summarized by the words in the nomination packet from Roger Packer MD, Senior Vice President, Center for Neuroscience Research, and her longtime chair and mentor at Children's National:

"…in both patient care and research, Dr. Chang has acted as a role model for both her colleagues in neurology and for two generations of pediatric neurology fellows, many of whom not only learned from Dr. Chang, but followed her path as a clinical/translational researcher in child neurology, especially neonatal neurology. She championed their professional development, involving them in ongoing studies and has always been available to trainees and peers, both within neurology and neonatology…These activities and her personal guidance, as well as encouragement with a focus on true academic productivity, has resulted in many trainees entering the neonatal neurology discipline and pursuing academic careers."

Most striking was the anecdote that Tae shared with us at the Saturday morning symposium on Fetal Neurology during the 2019 Child Neurology Society in Charlotte (photo above), when she explained that a couple decided to continue their pregnancy following Dr. Chang's fetal consultation, and named their baby after her. What a legacy!

We mourn the early loss of this colleague and friend.

William Davis Gaillard, MD
Chief, Child Neurology,
Children's National Hospital
Associate Director, Center for Neuroscience, Children's National Research Institute

Phillip L. Pearl, MD
Immediate Past President,
Child Neurology Society
Children's National 1997-2013
Boston Children's Hospital 2014-present

(L-R): Children's National Hospital colleagues, Tauen Chang, MD (2002 & 2003 Outstanding Junior Member Award); Adeline Vanderver, MD (2003 CNS Outstanding Junior Member Award); William D. Gaillard, MD (Chief, Child Neurology); and Andrea Gropman (1996 & 1998 CNS Outstanding Junior Member Award)

## Tauen Chang Outstanding Junior Member Award

**Mekka Garcia**
NYU Langone Health

**Laura Gilbert**
Washington University

**Riley Kessler**
Children's Hospital of Philadelphia

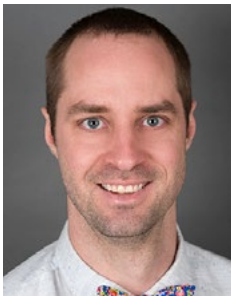
**Ezgi Saylam**
Nationwide Children's Hospital

## Tauen Chang Outstanding Junior Member Post Graduate Award

**Travis Larsh**
Cincinnati Children's Hospital Medical Center

**Avantika Singh**
Boston Children's Hospital

## M. Richard Koenigsberger Scholarship



**Stephen Chrzanowski**
Boston Children's Hospital

## AAP Section on Neurology Trainee Travel Award

**Alexis Karlin**
Children's Hospital of Philadelphia

## Bhuwan Garg High School Student Neuroscience Prize

**Aliya Fisher**
New York, NY

# Bernard D'Souza International Fellowship Award

The Child Neurology Society is pleased to present the 2022 Bernard D'Souza International Fellowship Awards to Dr. Robert K. Sebunya, from Uganda, and Dr. Paulina C. Tejada, from Chile. Drs. Sebunya and Tejada were actually selected among a strong field of applicants in 2021, but COVID-related travel restrictions precluded their attending the 50th CNS Annual Meeting in Boston. Both D'Souza Fellows will present their work on posters displayed in the Exhibit Hall, and both will give talks as part of the Thursday afternoon Global Neurology symposium organized by CNS International Affairs Committee Chair, Jorge Vidaurre, MD. As part of the fellowship award, funded by years of accumulated (and wisely invested) $10 check-off contributions included as part of CNS members' annual dues, Drs. Sebunya and Tejada will spend a week completing clerkships at Nationwide Children's Hospital under the direction of Dr. Vidaurre before returning to their research and patients in Uganda and Chile.

**Robert K. Sebunya**
Kampala, Uganda

**Paulina C. Tejada**
Santiago, Chile

Child Neurology FOUNDATION
Creating a Community of Support

CNF Young Researcher Grants and Medical Student Scholarship profiles appear on pages 85-87.

CHILD NEUROLOGY SOCIETY

## A Note of Thanks to the ABPN

On behalf of the CNS, we would like to thank the American Board of Psychiatry and Neurology (ABPN) for a generous $100,000 grant in support of non-CNS member educational access in 2022 to the CNS Lifelong Learning website and annual meeting. Recognizing the disruptive impact COVID-19 has had and continues to have on continuing education and recertification plans for child and adult neurologists, the ABPN grant will enable all ABPN diplomates (whether or not they are CNS members) to access CNS remote self-assessment exams and CNS annual meeting CME content at member rates.

Bruce Cohen, MD
President

Monique Terrell
Executive Director

PTC PINPOINT™

# Offering no-charge genetic testing to aid in a differential diagnosis

Not knowing the underlying cause of a child's signs and symptoms can be challenging for families. The PTC Pinpoint™ testing program is designed to help by offering:

- **No-charge testing for neurotransmitter disorders and cerebral palsy (CP) of unknown etiology**
- **Genetic counseling post testing**
- **Family follow-up testing**

PTC Therapeutics and Invitae have partnered to provide no-charge genetic testing, genetic counseling, and family screening programs for individuals with a suspected neurotransmitter disorder, such as Aromatic L-amino Acid Decarboxylase (AADC) deficiency or CP of unknown etiology.

**For more information, please visit PTCPinpoint.com.**



PTC THERAPEUTICS™ INVITAE

CNS
51st ANNUAL MEETING

# Kenneth F. Swaiman CNS Legacy Luncheon

## Presentation of 2022 Awards

Wednesday, October 12, 11:30 AM – 1:30 PM

*Reservation/Ticket required*

### Arnold P. Gold Foundation Humanism in Medicine Award

**Presented to Jorge Vidaurre, MD**
Introduced by E. Steve Roach, MD

### Bernard D'Souza International Fellows Award

**Robert K. Sebunya, MD, M.Phil**
**Kampala, Uganda**

**Paulina C. Tejada, MD**
**Chile, Santiago, Chile**
Introduced by Jorge Vidauarre, MD; Chair,
CNS International Affairs Committee

### Roger & Mary Brumback Lifetime Achievement Awards

**Presented to Jeffrey Buchhalter, MD, PhD**
Introduced by William Trescher, MD

**Presented to Roger Larson, CAE**
Introduced by Barry Kosofsky, MD, PhD and
Nina Schor, MD, PhD

**Presented to Michael Noetzel, MD**
(accepted by his daughter, Anna Noetzel)
Introduced by Christina Gurnett, MD, PhD

### CNS-PECN Training Director Award

**Presented to Tim Lotze, MD**
Introduced by Michael Lopez, MD

### Presentation of 2022 Junior Member Awards

Where the Next 50 Years Begins

Join Us for a **Biogen-Sponsored** Product Theater

# The Latest NURTURE Trial Data on Pediatric Patients: Potential Benefits of Early Treatment With SPINRAZA® (nusinersen)

Spinal muscular atrophy (SMA) is a progressive, genetic neuromuscular disease with a broad spectrum of severity in children and adults. Individuals with SMA have an urgent need for diagnosis and treatment.

Come listen to our SMA experts, Dr. Diana Castro and Dr. Gyula Acsadi, to learn about the potential benefits of early therapeutic intervention and the efficacy and safety of SPINRAZA in presymptomatic infants.[1,2] We will then explore the latest data from the NURTURE study in presymptomatic infants, including its study design, baseline characteristics, and primary and secondary outcomes.[3]

**FEATURING:**

**Diana Castro, MD**
*Neurologist and Neuromuscular Physician*
Founder of Neurology Rare Disease Center
Fort Worth, Texas

**Gyula Acsadi, MD, PhD**
*Pediatric Neurologist*
*Chief of Pediatric Neurology*
Connecticut Children's Medical Center
Hartford, Connecticut

October 12, 2022 | **3:00 PM - 4:00 PM EDT**

**Duke Energy Center, Exhibit Floor, Level 1**

## Please visit us at booth 1913

to learn more about the recent data on SPINRAZA in presymptomatic infants with SMA.[3,4]

## INDICATION

SPINRAZA® (nusinersen) is indicated for the treatment of spinal muscular atrophy (SMA) in pediatric and adult patients.

## IMPORTANT SAFETY INFORMATION

**Coagulation abnormalities and thrombocytopenia**, including acute severe thrombocytopenia, have been observed after administration of some antisense oligonucleotides. Patients may be at increased risk of bleeding complications.

In the sham-controlled studies for patients with infantile-onset and later-onset SMA, 24 of 146 SPINRAZA-treated patients (16%) with high, normal, or unknown platelet count at baseline developed a platelet level below the lower limit of normal, compared to 10 of 72 sham-controlled patients (14%). Two SPINRAZA-treated patients developed platelet counts <50,000 cells per microliter, with the lowest level of 10,000 cells per microliter recorded on study day 28.

**Renal toxicity**, including potentially fatal glomerulonephritis, has been observed after administration of some antisense oligonucleotides. SPINRAZA is present in and excreted by the kidney. In the sham-controlled studies for patients with infantile-onset and later-onset SMA, 71 of 123 SPINRAZA-treated patients (58%) had elevated urine protein, compared to 22 of 65 sham-controlled patients (34%).

**Laboratory testing and monitoring to assess safety** should be conducted. Perform a platelet count, coagulation laboratory testing, and quantitative spot urine protein testing at baseline and prior to each dose of SPINRAZA and as clinically needed.

Severe hyponatremia was reported in an infant treated with SPINRAZA requiring salt supplementation for 14 months.

Cases of rash were reported in patients treated with SPINRAZA.

SPINRAZA may cause a reduction in growth as measured by height when administered to infants, as suggested by observations from the controlled study. It is unknown whether any effect of SPINRAZA on growth would be reversible with cessation of treatment.

**The most common adverse reactions** (≥20% of SPINRAZA-treated patients and ≥5% more frequently than in control patients) that occurred in the infantile-onset controlled study were lower respiratory infection and constipation. Serious adverse reactions of atelectasis were more frequent in SPINRAZA-treated patients (18%) than in control patients (10%). Because patients in this controlled study were infants, adverse reactions that are verbally reported could not be assessed. The most common adverse reactions that occurred in the later-onset controlled study were pyrexia, headache, vomiting, and back pain. Post-lumbar puncture syndrome has also been observed after the administration of SPINRAZA.

**Please see the Brief Summary of Prescribing Information on the following pages.**

**References**

**1.** Govoni A, et al. *Mol Neurobiol*. 2018;55(8):6307-6318. **2.** Finkel RS, et al. *N Engl J Med*. 2017;377(18):1724. **3.** Crawford TO, et al. Oral presentation at: Muscular Dystrophy Association, 4th Clinical and Scientific Conference; March 13-16, 2022. Accessed April 19, 2022. **4.** SPINRAZA Prescribing Information. Cambridge, MA: Biogen.

Biogen


225 Binney Street, Cambridge, MA 02142

SPINRAZA® (nusinersen) injection 12 mg/5 mL

# SPINRAZA® (nusinersen) injection, for intrathecal use
# Brief Summary of Full Prescribing Information

## 1 INDICATIONS AND USAGE
SPINRAZA is indicated for the treatment of spinal muscular atrophy (SMA) in pediatric and adult patients.

## 2 DOSAGE AND ADMINISTRATION
### 2.1 Dosing Information
SPINRAZA is administered intrathecally by, or under the direction of, healthcare professionals experienced in performing lumbar punctures.

Recommended Dosage
The recommended dosage is 12 mg (5 mL) per administration.

Initiate SPINRAZA treatment with 4 loading doses. The first three loading doses should be administered at 14-day intervals. The 4th loading dose should be administered 30 days after the 3rd dose. A maintenance dose should be administered once every 4 months thereafter.

Missed Dose
If a loading dose is delayed or missed, administer SPINRAZA as soon as possible, with at least 14-days between doses and continue dosing as prescribed.

If a maintenance dose is delayed or missed, administer SPINRAZA as soon as possible and continue dosing every 4 months.

### 2.2 Important Preparation and Administration Instructions
SPINRAZA is for intrathecal use only.

Prepare and use SPINRAZA according to the following steps using aseptic technique. Each vial is intended for single dose only.

Preparation
- Store SPINRAZA in the carton in a refrigerator until time of use.
- Allow the SPINRAZA vial to warm to room temperature (25°C/77°F) prior to administration. Do not use external heat sources.
- Inspect the SPINRAZA vial for particulate matter and discoloration prior to administration. Do not administer SPINRAZA if visible particulates are observed or if the liquid in the vial is discolored. The use of external filters is not required.
- Withdraw 12 mg (5 mL) of SPINRAZA from the single-dose vial into a syringe and discard unused contents of the vial.
- Administer SPINRAZA within 4 hours of removal from vial.

Administration
- Consider sedation as indicated by the clinical condition of the patient.
- Consider ultrasound or other imaging techniques to guide intrathecal administration of SPINRAZA, particularly in younger patients.
- Prior to administration, remove 5 mL of cerebrospinal fluid.
- Administer SPINRAZA as an intrathecal bolus injection over 1 to 3 minutes using a spinal anesthesia needle *[see Dosage and Administration (2.1)]*.
  Do not administer SPINRAZA in areas of the skin where there are signs of infection or inflammation *[see Adverse Reactions (6.3)]*.

### 2.3 Laboratory Testing and Monitoring to Assess Safety
Conduct the following laboratory tests at baseline and prior to each dose of SPINRAZA and as clinically needed *[see Warnings and Precautions (5.1, 5.2)]:*
- Platelet count
- Prothrombin time; activated partial thromboplastin time
- Quantitative spot urine protein testing

## 3 DOSAGE FORMS AND STRENGTHS
Injection: 12 mg/5 mL (2.4 mg/mL) nusinersen as a clear and colorless solution in a single-dose vial.

## 4 CONTRAINDICATIONS
None.

## 5 WARNINGS AND PRECAUTIONS
### 5.1 Thrombocytopenia and Coagulation Abnormalities
Coagulation abnormalities and thrombocytopenia, including acute severe thrombocytopenia, have been observed after administration of some antisense oligonucleotides.

In the sham-controlled studies for patients with infantile-onset and later-onset SMA, 24 of 146 (16%) SPINRAZA-treated patients with high, normal, or unknown platelet count at baseline developed a platelet level below the lower limit of normal, compared to 10 of 72 (14%) sham-controlled patients.

In the sham-controlled study in patients with later-onset SMA (Study 2), two SPINRAZA-treated patients developed platelet counts less than 50,000 cells per microliter, with a lowest level of 10,000 cells per microliter recorded on study day 28.

Because of the risk of thrombocytopenia and coagulation abnormalities from SPINRAZA, patients may be at increased risk of bleeding complications.

Perform a platelet count and coagulation laboratory testing at baseline and prior to each administration of SPINRAZA and as clinically needed.

### 5.2 Renal Toxicity
Renal toxicity, including potentially fatal glomerulonephritis, has been observed after administration of some antisense oligonucleotides. SPINRAZA is present in and excreted by the kidney *[see Clinical Pharmacology (12.3)]*. In the sham-controlled studies for patients with infantile-onset and later-onset SMA, 71 of 123 (58%) of SPINRAZA-treated patients had elevated urine protein, compared to 22 of 65 (34%) sham-controlled patients. Conduct quantitative spot urine protein testing (preferably using a first morning urine specimen) at baseline and prior to each dose of SPINRAZA. For urinary protein concentration greater than 0.2 g/L, consider repeat testing and further evaluation.

## 6 ADVERSE REACTIONS
The following serious adverse reactions are described in detail in other sections of the labeling:
- Thrombocytopenia and Coagulation Abnormalities *[see Warnings and Precautions (5.1)]*
- Renal Toxicity *[see Warnings and Precautions (5.2)]*

### 6.1 Clinical Trials Experience
Because clinical trials are conducted under widely varying conditions, adverse reaction rates observed in the clinical trials of SPINRAZA cannot be directly compared to rates in clinical trials of other drugs and may not reflect the rates observed in practice.

In clinical studies, 346 patients (47% male, 76% Caucasian) were treated with SPINRAZA, including 314 exposed for at least 6 months, 258 exposed for at least 1 year, and 138 exposed for at least 2 years. The safety of SPINRAZA was studied in presymptomatic infants with SMA; pediatric patients (approximately 3 days to 16 years of age at first dose) with symptomatic SMA; in a sham-controlled trial in infants with symptomatic SMA (Study 1; n=80 for SPINRAZA, n=41 for control); in a sham-controlled trial in children with symptomatic SMA (Study 2; n=84 for SPINRAZA, n=42 for control); an open-label study in presymptomatic infants (Study 3, n=25) and other studies in symptomatic infants (n=54) and later-onset patients (n=103). In Study 1, 58 patients were exposed for at least 6 months and 28 patients were exposed for at least 12 months. In Study 2, 84 patients were exposed for at least 6 months and 82 patients were exposed for at least 12 months.

**Clinical Trial in Infantile-Onset SMA (Study 1)**
In Study 1, baseline disease characteristics were largely similar in the SPINRAZA-treated patients and sham-control patients except that SPINRAZA-treated patients at baseline had a higher percentage compared to sham-control patients of paradoxical breathing (89% vs 66%), pneumonia or respiratory symptoms (35% vs 22%), swallowing or feeding difficulties (51% vs 29%), and requirement for respiratory support (26% vs 15%).

The most common adverse reactions that occurred in at least 20% of SPINRAZA-treated patients and occurred at least 5% more frequently than in control patients were lower respiratory infection and constipation. Serious adverse reactions of atelectasis were more frequent in SPINRAZA-treated patients (18%) than in control patients (10%). Because patients in Study 1 were infants, adverse reactions that are verbally reported could not be assessed in this study.

**Table 1. Adverse Reactions that Occurred in at Least 5% of SPINRAZA Patients and Occurred at Least 5% More Frequently or At Least 2 Times as Frequently Than in Control Patients with Infantile-Onset SMA (Study 1)**

| Adverse Reactions | SPINRAZA 12 mg[1] N=80 % | Sham-Procedure Control N=41 % |
|---|---|---|
| Lower respiratory infection[2] | 55 | 37 |
| Constipation | 35 | 22 |
| Teething | 18 | 7 |
| Urinary tract infection | 9 | 0 |
| Upper respiratory tract congestion | 8 | 2 |
| Ear infection | 6 | 2 |
| Flatulence | 5 | 2 |
| Decreased weight | 5 | 2 |

[1] Loading doses followed by 12 mg (5 mL) once every 4 months

[2] Includes adenovirus infection, bronchiolitis, bronchitis, bronchitis viral, corona virus infection, Influenza, lower respiratory tract infection, lower respiratory tract infection viral, lung infection, parainfluenzae virus infection, pneumonia, pneumonia bacterial, pneumonia influenzal, pneumonia moraxella, pneumonia parainfluenzae viral, pneumonia pneumococcal, pneumonia pseudomonal, pneumonia respiratory syncytial viral, pneumonia viral, and respiratory syncytial virus bronchiolitis.

**Clinical Trial in Infantile-Onset SMA (Study 1) (cont'd)**
In an open-label clinical study in infants with symptomatic SMA, severe hyponatremia was reported in a patient treated with SPINRAZA requiring salt supplementation for 14 months.

Cases of rash were reported in patients treated with SPINRAZA. One patient, 8 months after starting SPINRAZA treatment, developed painless red macular lesions on the forearm, leg, and foot over an 8-week period. The lesions ulcerated and scabbed over within 4 weeks, and resolved over several months. A second patient developed red macular skin lesions on the cheek and hand ten months after the start of SPINRAZA treatment, which resolved over 3 months. Both cases continued to receive SPINRAZA and had spontaneous resolution of the rash.

SPINRAZA may cause a reduction in growth as measured by height when administered to infants, as suggested by observations from the controlled study. It is unknown whether any effect of SPINRAZA on growth would be reversible with cessation of treatment.

**Clinical Trial in Later-Onset SMA (Study 2)**
In Study 2, baseline disease characteristics were largely similar in the SPINRAZA-treated patients and sham-control patients except for the proportion of SPINRAZA-treated patients who had ever achieved the ability to stand without support (13% vs 29%) or walk with support (24% vs 33%).

The most common adverse reactions that occurred in at least 20% of SPINRAZA-treated patients and occurred at least 5% more frequently than in control patients were pyrexia, headache, vomiting, and back pain.

**Table 2. Adverse Reactions that Occurred in at Least 5% of SPINRAZA Patients and Occurred at Least 5% More Frequently or At Least 2 Times as Frequently Than in Control Patients with Later-Onset SMA (Study 2)**

| Adverse Reactions | SPINRAZA 12 mg[1] N=84 % | Sham-Procedure Control N=42 % |
|---|---|---|
| Pyrexia | 43 | 36 |
| Headache | 29 | 7 |
| Vomiting | 29 | 12 |
| Back pain | 25 | 0 |
| Epistaxis | 7 | 0 |
| Fall | 5 | 0 |
| Respiratory tract congestion | 5 | 2 |
| Seasonal allergy | 5 | 2 |

[1] Loading doses followed by 12 mg (5 mL) once every 6 months

Post-lumbar puncture syndrome has also been observed after administration of SPINRAZA.

### 6.2 Immunogenicity

As with all oligonucleotides, there is potential for immunogenicity. The detection of antibody formation is highly dependent on the sensitivity and specificity of the assay. Additionally, the observed incidence of antibody (including neutralizing antibody) positivity in an assay may be influenced by several factors, including assay methodology, sample handling, timing of sample collection, concomitant medications, and underlying disease. For these reasons, comparison of the incidence of antibodies to nusinersen in the studies described below with the incidence of antibodies in other studies or to other products may be misleading.

The immunogenic response to nusinersen was determined in 294 patients with post-baseline plasma samples evaluated for anti-drug antibodies (ADAs). Seventeen patients (6%) developed treatment-emergent ADAs, of which 5 were transient,12 were considered to be persistent. Persistent was defined as having one positive test followed by another one more than 100 days after the first positive test. In addition, "persistent" is also defined as having one or more positive samples and no sample more than 100 days after the first positive sample. Transient was defined as having one or more positive results and not confirmed to be persistent. There are insufficient data to evaluate an effect of ADAs on clinical response, adverse events, or the pharmacokinetic profile of nusinersen.

### 6.3 Postmarketing Experience

The following adverse reactions have been identified during post-approval use of SPINRAZA. Because these reactions are reported voluntarily from a population of uncertain size, it is not always possible to reliably estimate their frequency or establish a causal relationship to drug exposure.

Serious infections associated with lumbar puncture, such as meningitis, have been observed. Hydrocephalus, aseptic meningitis, and hypersensitivity reactions (e.g. angioedema, urticaria, rash) have also been reported.

## 8 USE IN SPECIFIC POPULATIONS

### 8.1 Pregnancy
Risk Summary
There are no adequate data on the developmental risk associated with the use of SPINRAZA in pregnant women. When nusinersen was administered by subcutaneous injection to mice throughout pregnancy and lactation, developmental toxicity (long-term neurobehavioral impairment) was observed at all doses tested *(see Data)*. In the U.S. general population, the estimated background risk of major birth defects and miscarriage in clinically recognized pregnancies is 2 to 4% and 15 to 20%, respectively. The background risk of major birth defects and miscarriage for the indicated population is unknown.

Data
*Animal Data*
When nusinersen (0, 3, 10, or 25 mg/kg) was administered subcutaneously to male and female mice every other day prior to and during mating and continuing in females throughout organogenesis, no adverse effects on embryofetal development were observed. Subcutaneous administration of nusinersen (0, 6, 12.6, or 25 mg/kg) to pregnant rabbits every other day throughout organogenesis produced no evidence of embryofetal developmental toxicity.

When nusinersen (1.4, 5.8, or 17.2 mg/kg) was administered to pregnant female mice by subcutaneous injection every other day throughout organogenesis and continuing once every six days throughout the lactation period, adverse neurobehavioral effects (alterations in locomotor activity, learning and memory deficits) were observed when offspring were tested after weaning or as adults. A no-effect level for neurobehavioral impairment was not established.

### 8.2 Lactation
Risk Summary
There are no data on the presence of nusinersen in human milk, the effects on the breastfed infant, or the effects of the drug on milk production. Nusinersen was detected in the milk of lactating mice when administered by subcutaneous injection. The developmental and health benefits of breastfeeding should be considered along with the mother's clinical need for SPINRAZA and any potential adverse effects on the breastfed infant from SPINRAZA or from the underlying maternal condition.

### 8.4 Pediatric Use
The safety and effectiveness of SPINRAZA in pediatric patients from newborn to 17 years have been established *[see Clinical Studies (14.1)]*.

Juvenile Animal Toxicity Data
In intrathecal toxicity studies in juvenile monkeys, administration of nusinersen (0, 0.3, 1, or 3 mg/dose for 14 weeks and 0, 0.3, 1, or 4 mg/dose for 53 weeks) resulted in brain histopathology (neuronal vacuolation and necrosis/cellular debris in the hippocampus) at the mid and high doses and acute, transient deficits in lower spinal reflexes at the high dose in each study. In addition, possible neurobehavioral deficits were observed on a learning and memory test at the high dose in the 53-week monkey study. The no-effect dose for neurohistopathology in monkeys (0.3 mg/dose) is approximately equivalent to the human dose when calculated on a yearly basis and corrected for the species difference in CSF volume.

### 8.5 Geriatric Use
Clinical studies of SPINRAZA did not include sufficient numbers of subjects aged 65 and over to determine whether they respond differently from younger subjects.

## 17 PATIENT COUNSELING INFORMATION
Thrombocytopenia and Coagulation Abnormalities
Inform patients and caregivers that SPINRAZA could increase the risk of bleeding. Inform patients and caregivers of the importance of obtaining blood laboratory testing at baseline and prior to each dose to monitor for signs of increased potential for bleeding. Instruct patients and caregivers to seek medical attention if unexpected bleeding occurs *[see Warnings and Precautions (5.1)]*.

Renal Toxicity
Inform patients and caregivers that SPINRAZA could cause renal toxicity. Inform patients and caregivers of the importance of obtaining urine testing at baseline and prior to each dose to monitor for signs of potential renal toxicity *[see Warnings and Precautions (5.2)]*.

Manufactured for:
Biogen
Cambridge, MA 02142

# INTERACTIVE TAKEDA BRAIN


## Experience the Takeda Medical Affairs Booth in Augmented Reality!

## #1919



VV-MEDMAT-72657. 08/2022.

Takeda

# Learning Objectives

## The 2022 CNS Scientific Program

The CNS Scientific Program is designed by and is primarily intended for child neurologists and professionals in other fields of study related to neurologic and developmental disorders in children and adolescents. "As a result of attending this meeting the physician will be better able to care for children with neurological disease through an understanding of recent advances in neuroscience, neuro-diagnostics and therapeutics relevant to child neurology."

## Accreditation Statement

This activity has been planned and implemented in accordance with the accreditation requirements and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint providership of the Minnesota Medical Association and Child Neurology Society. The Minnesota Medical Association (MMA) is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

The Minnesota Medical Association designates this live and enduring activity for a maximum of 30.75 AMA PRA Category 1 Credit(s)™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

# Schedule at a Glance

All meetings/sessions at The Duke Energy Center

SESSIONS highlighted in maroon are offered for CME credit as part of the CNS Scientific Program.

**Live-streamed sessions:**
Legacy Luncheon
SYMPOSIUM II - VI
Award Lectures

## Tuesday, October 11

| *START* | *END* | *MEETING/SESSION* | *ROOM ASSIGNED* |
|---|---|---|---|
| 7:00 AM | 6:00 PM | Nursing Room | 210 |
| 12:00 PM | 8:00 PM | Speaker Ready Room | 250 |
| 12:00 PM | 7:00 PM | CNS Registration | Main Foyer |
| 12:30 PM | 2:15 PM | CNS Pellock Resident Seminar on Epilepsy (Pre-registration required/SOLD OUT) | 206 |
| 2:00 PM | 6:00 PM | Poster Drop-Off/Pick-Up | Main Foyer |
| 3:15 PM | 5:15 PM | Pellock Resident Seminar on Epilepsy Breakout Sessions 1-7 | TBA |
| 6:00 PM | 9:00 PM | Pellock Resident Seminar on Epilepsy Reception & Dinner | 200&205 |

## Wednesday, October 12

| *START* | *END* | *MEETING/SESSION* | *ROOM ASSIGNED* |
|---|---|---|---|
| 7:00 AM | 7:30 PM | Speaker Ready Room | 250 |
| 7:00 AM | 7:30 PM | CNS Registration | Main Foyer |
| 7:00 AM | 7:00 PM | Poster Drop-Off/Pick-Up | Main Foyer |
| 7:00 AM | 6:00 PM | Nursing Room | 210 |
| 8:00 AM | 2:00 PM | Program Coordinators of Child Neurology | 237 |
| 8:00 AM | 5:00 PM | International Pediatric Stroke IPSS | 236 |
| 8:00 AM | 11:00 AM | Symposium I: CNF Symposium: Clinical Trials in Pediatric Neurology | Junior Ballroom AB |
| 11:30 AM | 1:30 PM | Kenneth F. Swaiman CNS Legacy Luncheon | Grand Ballroom |
| 1:00 PM | 2:30 PM | CNS Pellock Resident Seminar on Epilepsy (Pre-registration required/SOLD OUT) | 206 |
| 1:30 PM | 5:00 PM | Neuromodulation SIG – Meet & Greet/Sign-up | 234 |
| 2:00 PM | 3:30 PM | PECN Business Meeting (PECN Members only) | Junior Ballroom CD |
| 2:00 PM | 7:30 PM | EXHIBITS & POSTER REVIEW | Exhibit Hall A |
| 3:00 PM | 4:00 PM | Industry Sponsored Product Theater: Biogen | Exhibit Hall A |
| 3:30 PM | 5:30 PM | Pellock Resident Seminar on Epilepsy Breakout Sessions 1-7 | TBA |
| 3:30 PM | 5:30 PM | PECN CME Program: Educational Tools | Junior Ballroom CD |
| 6:00 PM | 7:30 PM | Welcome Reception | Exhibit Hall A |
| 7:30 PM | 8:30 PM | Neurogenetics SIG – Networking Hour | 264 |
| 7:30 PM | 8:30 PM | TBI SIG – Networking Hour | 251 |
| 8:00 PM | 10:00 PM | Movement Disorders Video Rounds | Junior Ballroom CD |

## EXHIBITS & POSTER REVIEW

### EXHIBIT HALL

**WEDNESDAY**
**2:00 PM-7:30 PM**

**6:00 PM - 7:30 PM**
**Welcome Reception**

Welcome Reception
*Supported by local Ohio hosts: Akron Children's Hospital, Cincinnati Children's Hospital Medical Center, Nationwide Children's Hospital, and University Hospitals: Rainbow Babies & Children*

**THURSDAY**
**11:30 AM-7:00 PM**
**Lunch served**
**12:45 AM-2:00 PM**
Poster Review

**Wine & Cheese Reception**
5:30 PM-7:00 PM
Poster Review

## Thursday, October 13

| START | END | MEETING/SESSION | ROOM ASSIGNED |
|---|---|---|---|
| 6:00 AM | 7:00 PM | Speaker Ready Room | 250 |
| 7:00 AM | 7:00 PM | CNS Registration | Main Foyer |
| 7:00 AM | 6:00 PM | Nursing Room | 210 |
| 7:00 AM | 8:00 AM | ACNS Editorial Board Meeting | 207-208 |
| 7:00 AM | 8:00 AM | Industry Sponsored Product Theater: Marinus | 206 |
| 7:00 AM | 9:00 AM | Platform Session I | Junior Ballroom AB |
| 7:00 AM | 9:00 AM | Platform Session II | Junior Ballroom CD |
| 7:00 AM | 9:00 AM | Platform Session III | 230-233 |
| 8:00 AM | 5:00 PM | Program Coordinators of Child Neurology | 237 |
| 8:00 AM | 4:00 PM | Association of Child Neurology Nurses (ACNN) | 264 |
| 9:30 AM | 12:15 PM | Symposium II Presidential Symposium: Quality and Capitated Care | Grand Ballroom |
| 11:30 AM | 7:00 PM | EXHIBITS & POSTER REVIEW | Exhibit Hall A |
| 12:30 PM | 2:30 PM | Industry Sponsored Satellite Symposium: Miller Medical Communications | 200&205 |
| 12:30 PM | 2:00 PM | Guided Poster Tour #1 | Exhibit Hall A |
| 12:30 PM | 4:00 PM | Functional Neurological Disorders (FND) SIG – Meet & Greet/Sign-up | 203 |
| 12:30 PM | 4:00 PM | Neurogenetics SIG – Meet & Greet/Sign-up | 201 |
| 12:30 PM | 4:00 PM | Neuroimmune Disorders SIG – Meet Greet/Sign-up | 211 |
| 12:30 PM | 4:00 PM | TBI SIG – Meet & Greet/Sign-up | 251 |
| 12:30 PM | 2:00 PM | Lunch (Exhibits & Poster Review) | Exhibit Hall A |
| 12:30 PM | 1:30 PM | Industry Sponsored Product Theater: Genentech | Exhibit Hall A |
| 2:30 PM | 3:00 PM | Martha Bridge Denckla Award Lecture: Michael Shevell, MDCM, FRCP, FCAHS | Grand Ballroom |
| 3:00 PM | 5:15 PM | Symposium III: Global Neurology: Impact of COVID-19 Pandemic and Natural Disasters | Grand Ballroom |
| 3:00 PM | 7:00 PM | Poster Drop-Off/Pick-Up | Main Foyer |
| 5:00 PM | 7:00 PM | Guided Poster Tour #2 | Exhibit Hall A |
| 5:30 PM | 7:00 PM | Poster Review: Authors present (Wine & Cheese Reception) | Exhibit Hall A |
| 5:30 PM | 7:00 PM | Industry Sponsored Satellite Symposium: PTC Therapeutics | 200&205 |
| 6:00 PM | 7:00 PM | Industry Sponsored Product Theater: Alexion | Exhibit Hall A |
| 7:30 PM | 8:30 PM | Demyelinating Disease SIG – Networking Hour | 201 |
| 7:30 PM | 8:30 PM | Functional Neurological Disorders (FND) SIG – Networking Hour | 203 |
| 7:30 PM | 8:30 PM | Headache SIG – Networking Hour | 202 |
| 7:30 PM | 8:30 PM | Neurodevelopment Disorders SIG – Networking Hour | 212 |
| 7:30 PM | 8:30 PM | Neuroimmune Disorders SIG – Networking Hour | 211 |

# Schedule at a Glance

SESSIONS highlighted in maroon are offered for CME credit as part of the CNS Scientific Program.

Industry Sponsored Sessions are accredited through independent CME providers and/or are Product Theaters offering no CME credit. See pages 64-66 for more information.

## Friday, October 14

| START | END | MEETING/SESSION | ROOM ASSIGNED |
|---|---|---|---|
| 7:00 AM | 6:00 PM | Speaker Ready Room | 250 |
| 7:00 AM | 6:00 PM | CNS Registration | Main Foyer |
| 7:00 AM | 4:00 PM | Poster Drop-Off/Pick-Up | Main Foyer |
| 7:00 AM | 6:00 PM | Nursing Room | 210 |
| 7:00 AM | 8:30 AM | Pediatric Neurology Journal – Editorial Board Meeting | 207-208 |
| 7:30 AM | 11:00 AM | Fetal Neurology SIG – Meet & Greet/Sign-up | 251 |
| 8:00 AM | 5:00 PM | Program Coordinators of Child Neurology | 237 |
| 8:00 AM | 8:15 AM | Child Neurology Foundation (CNF) Research Award/Grants Presentations | Grand Ballroom |
| 8:15 AM | 8:45 AM | Philip R. Dodge Young Investigator Award Lecture: Bhooma Aravamuthan, MD, DPhil | Grand Ballroom |
| 8:30 AM | 3:30 PM | Association of Child Neurology Nurses (ACNN) | 264 |
| 8:45 AM | 9:30 AM | Bernard Sachs Award Lecture: Steven Paul Miller, MDCM, MAS, FRCPC | Grand Ballroom |
| 9:45 AM | 12:00 PM | Symposium IV: Ethics: Neuropalliative Care Across the Age Spectrum | Grand Ballroom |
| 12:00 PM | 1:30 PM | Lunch | Junior Ballroom ABCD & Meeting Room 230-233 |
| 12:00 PM | 2:00 PM | Industry Sponsored Satellite Symposium: Takeda | 200&205 |
| 12:30 PM | 1:45 PM | Seminar 1: Cerebral Palsy: What is CP? A Consensus-Based Approach | Junior Ballroom AB |
| 12:30 PM | 1:45 PM | Seminar 2: Neurodevelopmnetal Disorders: Challenges in Sickle Cell Disease | Junior Ballroom CD |
| 12:30 PM | 1:45 PM | Seminar 3: Neuro-Oncology: Acute Neuro-toxicities in Childhood Cancer Patients | 230-233 |
| 12:30 PM | 4:00 PM | Cerebral Palsy SIG – Meet & Greet/Sign-up | 204 |
| 12:30 PM | 4:00 PM | Demyelinating Disease SIG – Meet & Greet/Sign-up | 201 |
| 12:30 PM | 4:00 PM | Headache SIG – Meet & Greet/Sign-up | 202 |
| 12:30 PM | 4:00 PM | Neurodevelopment Disorders SIG – Meet & Greet/Sign-up | 251 |
| 2:15 PM | 4:30 PM | Symposium V: Neuroimmunilogy: Pediatric Neuroimmunological Diseases | Grand Ballroom |
| 4:30 PM | 5:00 PM | CNS Business Meeting | Grand Ballroom |
| 5:00 PM | 5:45 PM | Junior Member Forum | Junior Ballroom CD |
| 5:30 PM | 7:00 PM | Industry Sponsored Satellite Symposium: GeneDX | 200&205 |
| 5:45 PM | 6:30 PM | Junior Member Seminar 1: Medical Students: Finding a Residency | Junior Ballroom C/D |
| 5:45 PM | 6:30 PM | Junior Member Seminar 2: Residents: Finding a Fellowship | Junior Ballroom A/B |
| 5:45 PM | 6:30 PM | Junior Member Seminar 3: Residents & Fellows: Getting your First Job | Junior Ballroom A/B |
| 6:15 PM | 7:00 PM | Scientific Program Committee Meeting | 207-208 |
| 6:30 PM | 7:30 PM | Fetal Neurology SIG – Networking Hour | 251 |
| 6:30 PM | 7:30 PM | Neuromodulation SIG – Networking Hour | 234 |
| 7:00 PM | 9:00 PM | Closing Gala Reception | Junior Ballroom & Foyer |

## Saturday, October 15

| START | END | MEETING/SESSION | ROOM ASSIGNED |
|---|---|---|---|
| 6:00 AM | 12:00 PM | Speaker Ready Room | 250 |
| 7:00 AM | 12:00 PM | CNS Registration | Main Foyer |
| 7:00 AM | 4:15 PM | Nursing Room | 210 |
| 7:00 AM | 8:15 AM | Seminar 4: Education: Incorporating Patients & Families into Research | Junior Ballroom AB |
| 7:00 AM | 8:15 AM | Seminar 5: Fetal Neurology: Advances in Fetal Neurology | Junior Ballroom CD |
| 7:00 AM | 8:15 AM | Seminar 6: Diversity: Disability in Child Neurology: Society, Medicine and the Person | 230-233 |
| 8:45 AM | 9:30 AM | Hower Award Lecture: Leon G. Epstein, MD | Grand Ballroom |
| 9:45 AM | 12:00 PM | Symposium VI: Behavioral Neurology: Anxiety and Mood Disorders Co-occurring with Neurologic Disorders | Grand Ballroom |
| 12:15 PM | 4:15 PM | Biomedical Writing Workshop (Pre-registration required/SOLD OUT) | 264 |
| 12:15 PM | 4:15 PM | CNS Clinical Research Annual Workshop 2022 – Clinical Trial Design (Pre-registration required/SOLD OUT) | 207-208 |
| 3:30 PM | 4:15 PM | Clinical Research Breakout Sessions 1-6 | TBA |

## CME CREDIT

All credits earned must be claimed/requested once, at the end of the meeting.

- Please complete survey form on Survey Monkey after attending all sessions for which you are requesting credit, whether live in Cincinnati or on virtual meeting platform.
- All CME accredited livestream sessions are recorded and will be available on the virtual platform OnDemand from November 1- December 1, 2022.
- Complete online survey to claim CME credit by December 15 (11:59 pm EST)

CME certificate (pdf) will be sent to the email address following completion, beginning December 1.

No CME credit for 2022 will be issued for surveys completed after December 15, 2022.

**https://www.surveymonkey.com/r/2022_CNS_CME_survey**

# 51st Annual Meeting of the CNS Scientific Program

Times & Rooms Subject to Change (check online Virtual Program)

## WEDNESDAY
## October 12

**8:00 AM – 11:00 AM**
**SYMPOSIUM I:**
**CHILD NEUROLOGY FOUNDATION SYMPOSIUM: CLINICAL TRIALS IN PEDIATRIC NEUROLOGY: OUR ROLE IN IMPROVING PARTICIPATION AND OUTCOMES** (I/V/O)

*Supported by the Child Neurology Foundation*

COURSE DESCRIPTION

This 3-hour interactive symposium, is designed to raise participant awareness of the importance of clinical trials to the child neurology community and to identify strategies to overcome existing barriers to accessing clinical trials for children with neurologic conditions. We will describe ethical considerations in clinical trials and possible patient participation. Participants will also learn best practices for engaging and supporting patients before, during and after their clinical trial journey.

LEARNING OBJECTIVES

As a result of this educational session, participants will be able to:

- Identify strategies to overcome existing barriers to accessing clinical trials for children with neurologic conditions.
- Utilize best practices for engaging and supporting patients before, during and after their clinical trial journey.

IMPACT STATEMENTS

This educational session helped me to identify changes I could make in my practice related to:

- Identifying clinical trials that will benefit my patients.
- Effectively recommending and discussing clinical trials to my patients

ORGANIZER:
Child Neurology Foundation

**Welcome**
Anup D. Patel, MD, FAAN, FAES
Nationwide Children's Hospital, The Ohio State University, Columbus, OH

Erika Fullwood Augustine, MD, MS
Kennedy Krieger Institute, Baltimore, MD

**The Importance of Clinical Trials to Patients**

***How Clinical Trials can Impact Patient Outcomes***
Tracy Dixon-Salazar, PhD
Lennox-Gastaut Syndrome (LGS) Foundation, San Diego, CA

***Common Barriers to Patient Involvement in Clinical Trials***
Kimbra Edwards, PhD
CISCRP, Boston, MA

**The Critical Roles of the Provider**

***The Importance of Clinician Involvement and Possible Roles***
Bruce H. Cohen, MD, FAAN
Akron Children's Hospital; Akron, OH

***Typical Barriers and Practical Considerations to Clinicians in Fulfilling these Roles***
E. Martina Bebin, MD, MPA
University of Alabama at Birmingham, Birmingham, AL

***Supporting Patients: Best Practices for Discussing Clinical Trials with Patients***
Shafali Spurling Jeste, MD
Children's Hospital Los Angeles, Los Angeles, CA

***Avoiding Common Mistakes in Discussions***
Ariel M Lyons-Warren, MD PhD
Baylor College of Medicine, Houston, TX

**11:30 AM – 1:30 PM**
**KENNETH F. SWAIMAN CNS LEGACY LUNCHEON** (I/V/O)

**Awards Presented**

***Arnold P. Gold Foundation Humanism in Medicine Award***
Jorge Vidaurre, MD
Columbus, OH

***Bernard D'Souza International Fellowship Awards***
Robert K. Sebunya, M.D, M.phil
Uganda Martyrs University Nkozi, Mother Kevin Post Graduate School, Kampala, Uganda

Paulina C. Tejada, MD
Pontificia Universidad Católica de Chile, Santiago, Chile

***Roger & Mary Brumback Lifetime Achievement Award***
Jeffrey Buchhalter, MD, PhD
Phoenix, AZ

Roger Larson, CAE
St. Paul, MN

Michael Noetzel, MD
St. Louis, MO
(presented posthumously)

***CNS/PECN Training Director Award***
Tim Lotze, MD
Baylor College of Medicine, Texas Children's Hospital, Houston, TX

SESSIONS highlighted in maroon are designated for CME credit.
Agenda and amount of CME credits available are subject to change.

*Bhuwan Garg High School Neuroscience Award*
Aliya Fisher
New York, NY

*Tauen Chang Junior Member Awards*
Mekka Garcia, MD

Laura Gilbert, DO, MBA

Riley Kessler, MD

Ezgi Saylam, MD

*Tauen Chang Outstanding Junior Member Post-Grad Awards*
Travis Larsh, MD
Avantika Singh, MD

*M. Richard Koenigsberger Scholarship*
Stephen Chrzanowski, MD

*AAP Section of Neurology Travel Grant*
Alexis Karlin, MD

**2:00 PM – 3:30 PM**
**PROFESSORS & EDUCATORS OF CHILD NEUROLOGY (PECN)**

**BUSINESS MEETING** (I)

**Introduction and Agenda**
Nancy Bass, MD
University Hospitals of Cleveland/ Rainbow Babies and Children's Hospital, Case Western Reserve University School of Medicine, Cleveland, OH

**Preference Signaling and the Match**
Margie Ream, MD, PhD
Nationwide Children's Hospital, Columbus, OH

**Forgivable Family Leave for Trainees with Q&A**
Margie Ream, MD, PhD

**RRC Change: Program Director Minimum FTE Support with Q&A**
Danny Rogers, MD, PhD
University of New Mexico, Albuquerque, NM

**Match Report**
Leon Dure, MD
Heersink School of Medicine, University of Alabama at Birmingham, Birmingham, AL

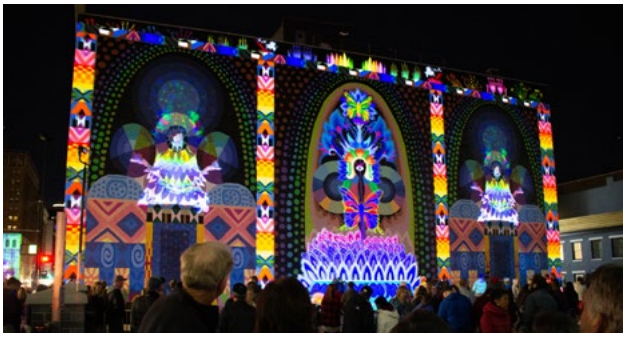
**CNCDP-K12 Report**
Bradley L. Schlaggar MD PhD
Kennedy Krieger Institute, Baltimore, MD

**Minority Research Scholars Program**
Erika Fullwood Augustine, MD, MS
Kennedy Krieger Institute, Baltimore, MD

**Updates AAP Section of Pediatric Neurology**
Tim Lotze, MD
Baylor College of Medicine, Texas Children's Hospital, Houston, TX

**Updates AAN Section of Child Neurology with Q&A**
David E. Mandelbaum, MD, PhD
Alpert Medical School of Brown University, Providence, RI

## CINCINNATI NOTE OF INTEREST



### BLINK – A Festival of Light & Art: October 13-16, 2022

Sometimes you get lucky. This is one of those times. Blink is a four-night annual outdoor art festival in Cincinnati that just happens to kick off on the 2nd night (Thursday) of the CNS Annual Meeting. The combination of innovative street art, projection mapping and light-based transformation of the city's classic architectural facades has become a nationally celebrated cultural magnet drawing ambulatory crowds and creating a vibe not unlike Austin, TX in 2013 on Halloween. (BTW: the city will fill up fast, so book your flights and sleeping rooms early).

WEDNESDAY | CONTINUED

**3:30 PM – 5:30 PM**
**PECN: CME PROGRAM: EDUCATIONAL TOOLS** (I/O)

COURSE DESCRIPTION

Since 2020 educational tools have evolved to include the best of both worlds including the virtual/digital platforms, exponential use of social media, and the sharing of resources across institutions. Many trainees across the country have taken advantage of participating in didactic lectures given virtually in numerous institutions. Webinars and podcasts have made their way into the day to day education of trainees and practicing child neurologists alike. Understanding and navigating the digital and social media milieu has never been more vital to our profession. Our first session aims to arm the participant with the knowledge to navigate these tools. In addition, new innovative ways of combining forces for education of our trainees as well as hybrid learning and interviewing is here to stay. With changes in harmonized milestones for resident education, ensuring trainees are receiving comprehensive exposure to the significance of equity and diversity is of vital importance. In addition, training directors have expressed the difficulty they experience in covering all the topics that are vital to residency education. In this course, the importance and impact of social media in various aspects of the career of a child neurologist, a review of a proposed curriculum in ethics for our trainees and the incorporation of topics around LGBTQ+ education will be presented.

LEARNING OBJECTIVES

As a result of this educational session, participants will be able to:

1. Upon completion of this session, attendees will be able to identify the roles and benefits of the most commonly used social media platforms in child neurology.
2. Upon completion of this session, attendees will learn important features of a child neurology ethics curriculum and the ways to implement this in their current training programs.
3. Upon completion of this session, attendees will demonstrate knowledge of LGBTQ+ topics relating to resident education and how to implement these topics into their training curriculum.

IMPACT STATEMENT

This educational session will help attendees to identify changes they can make in their practices and resident education related to:

1. Innovative use of social media platforms, development and implementation of an ethics curriculum specific to child neurology concerns as well as increasing their own knowledge of matters surrounding LGBTQ+ issues in residency education and patient care to result in improvements in their current practice.

**PECN Digital Committee and Social Media Tools**
Jaclyn Martindale, DO
Wake Forest University School of Medicine, Winston-Salem, NC

Kathryn Idol Xixis, MD
University of Virginia, Charlottesville, VA

Jessica Goldstein, MD
University of Minnesota, M Health Fairview Masonic Children's Hospital, Minneapolis, MN

**Development of a Child Neurology Ethics Curriculum**
William D. Graf, MD
Connecticut Children's, University of Connecticut, Farmington, CT

**LGBTQ: Tools for Residency Education**
Jonathan Strober, MD
UCSF Benioff Children's Hospital, San Francisco, CA

**2:00 PM – 7:30 PM**
**EXHIBIT HALL** (I)

**6:00 PM – 7:30 PM**
**WELCOME RECEPTION** (I)
*Hosted by select Ohio training programs*

**8:00 PM – 10:00 PM**
**MOVEMENT DISORDERS VIDEO ROUNDS** (I)
(Formerly Movement Disorders SIG)

SESSIONS highlighted in maroon are designated for CME credit.
Agenda and amount of CME credits available are subject to change.

## THURSDAY
## October 13

**7:00 AM – 9:00 AM**
**PLATFORM I, II & III** (I)

**9:30 AM – 12:15 PM**
**SYMPOSIUM II:**
**PRESIDENTIAL SYMPOSIUM: QUALITY AND CAPITATED CARE**
(I/V/O)

COURSE DESCRIPTION
Just as healthcare has been dramatically changed by advances in molecular, genetic and systems neurosciences, there have been concurrent changes in methods of healthcare delivery and reimbursement that affect the practicing child neurologist.

LEARNING OBJECTIVES
As a result of this educational session, participants will be able to:
1. Understand how quality improvement methodology can improve the clinical outcomes of patients and potentially result in increased reimbursement for clinical services.
2. Understand how the American Academy of Neurology develops and implements quality measures.
3. Know how learning healthcare systems can provide knowledge to improve patient outcomes that is not possible with single center efforts.

IMPACT STATEMENTS
This educational session will help attendees to identify changes they can make in their practices related to:
1. Implement quality improvement projects based upon established pediatric quality measures.
2. Joining or creating pediatric learning healthcare systems to improve patient outcomes.
3. Assuring that care is provided in a manner that is equitable in order to eliminate existing disparities.

ORGANIZER
Bruce H. Cohen, MD, FAAN

CO-ORGANIZER
Jeffrey Buchhalter, MD, PhD
University of Calgary,
Cumming School of Medicine,
Calgary, Canada

**Introduction and Discussion of the Importance of QI/QM to CNS Members**
Bruce H. Cohen, MD, FAAN

**Creating a Quality Improvement Ecosystem at AAN**
Lyell K. Jones, Jr. MD
Mayo Clinic, Rochester, MN

**Development of Child Neurology QMs at AAN**
Bhooma Aravamuthan, MD, DPhil
Washington University
School of Medicine,
St. Louis, MO

**Description of Rationale and Requirements for a Learning Health System (LHS)**
Jeffrey Buchhalter, MD, PhD
University of Calgary,
Cumming School of Medicine,
Calgary, Canada

**Descriptions of LHS in Pediatrics**
Anup D. Patel, MD, FAAN, FAES

**LHS for Peds/Adult Epilepsy: Early Wins**
Zachary M. Grinspan, MD, MS
Weill Cornell Medicine, New York, NY

**Leveraging LHS to Study Health Care Disparities**
Fiona Baumer, MD, MS
Stanford University School of Medicine,
Palo Alto, CA

**Q&A**
Bruce H. Cohen, MD, FAAN

**11:30 AM – 7:00 PM**
**EXHIBIT HALL** (I)

**12:30 PM – 2:00 PM**
**EXHIBITS, POSTER REVIEW & GUIDED POSTER TOUR #1** (I)

**2:30 PM – 3:00 PM**
**MARTHA BRIDGE DENCKLA AWARD LECTURE** (I/V/O)
Michael Shevell, MDCM, FRCP, FCAHS
Montreal Children's Hospital,
McGill University Montreal,
Quebec, Canada

Where the Next 50 Years Begins

THURSDAY | CONTINUED

**3:00 PM – 5:15 PM**
**SYMPOSIUM III: GLOBAL NEUROLOGY: THE GLOBAL SITUATION OF CHILD NEUROLOGY PRACTICE DURING THE COVID 19 PANDEMIC AND OTHER NATURAL DISASTERS. CLINICAL CARE AND EDUCATION** (I/V/O)

COURSE DESCRIPTION

This symposium will provide a global overview of the status of the child neurology practice during the COVID 19 pandemic, with emphasis in poor resource regions (low, middle, and high- income countries). The diverse panel of speakers have extensive experience in international neurology and practice in different regions, including Latin America, Africa, Caribbean, and USA. Therefore, they will present an expanded view of the current situation of pediatric neurology.

LEARNING OBJECTIVES

As a result of this educational session, participants will be able to:

1. Describe the impact of the actual COVID 19 pandemic in the practice of Child Neurology, globally
2. Understand the use of technology in providing neurological care, specially to children and families with restricted access to care

IMPACT STATEMENTS

This educational session will help attendees to identify changes they can make in their practices related to:

1. Use of virtual platforms to facilitate access to care
2. Delivering neurological care during the current pandemic, when access may be limited by use of available technology

ORGANIZER

Jorge Vidaurre, MD
Nationwide Children's Hospital,
The Ohio State University,
Columbus, OH

**Chikungunya, Zika and COVID: Neurological Consequences and Impact in Child Neurology Care Across Latin America**
Paulina C. Tejada, MD
Bernard D'Souza International Fellow
Pontificia Universidad Católica de Chile, Santiago, Chile

**Building Child Neurology Capacity in Africa During Disruptive Disasters: Ideas for Low Resourced Communities**
Robert K. Sebunya, M.D, M.phil
Bernard D'Souza International Fellow
Uganda Martyrs University Nkozi,
Mother Kevin Post Graduate School,
Kampala, Uganda

**Practicing Child Neurology on Conflict Zones. Lessons Learned.**
Volodymyr Kharytonov, MD PhD
Clinical Hospital "Psychiatry",
Kyiv, Ukraine

**The Potential for Device Technology Use in Healthcare: Applicability During Times of Reduced Access**
Dave Clarke, MBBS
Dell Medical School,
University of Texas at Austin, Austin, TX

**5:30 PM – 7:00 PM**
**EXHIBITS, POSTER REVIEW (WINE & CHEESE) & GUIDED POSTER TOUR #2** (I)

## CINCINNATI NOTE OF INTEREST


### National Underground Railroad Freedom Center

The National Underground Railroad Freedom Center is described as "a museum of conscience, an education center, a convener of dialogue, and a beacon of light for inclusive freedom around the globe." The museum is located in downtown Cincinnati, a short walk away from the CNS Meeting, on the banks of the Ohio River, the great natural barrier that separated the slave states of the South from the free states of the North.

## FRIDAY
## October 14

**8:00 AM – 8:15 AM**
**AWARD PRESENTATIONS & GENERAL SESSION** (I/V/O)

*Child Neurology Foundation/ PERF Scientific Grant & Award Announcements*

**8:15 AM – 8:45 AM**
**PHILIP R. DODGE YOUNG INVESTIGATOR AWARD LECTURE**
(I/V/O)
Bhooma Aravamuthan, MD, DPhil
Washington University School of Medicine, St. Louis, MO

**8:45 AM – 9:30 AM**
**BERNARD SACHS AWARD LECTURE**
(I/V/O)
Steven Paul Miller, MDCM, MAS, FRCPC
University of British Columbia (BC), BC Children's Hospital, Vancouver, British Columbia, Canada

**9:45 AM – 12:00 PM**
**SYMPOSIUM IV: ETHICS: NEUROPALLIATIVE CARE ACROSS THE AGE SPECTRUM** (I/V/O)

COURSE DESCRIPTION
Palliative care emphasizes a holistic interdisciplinary approach to the physical, psychological, social, and spiritual health and well-being of neonates, children, adolescents, and adults living with serious illness, and support for their families and caregivers. Although the lay public often equates palliative care to hospice care, the clinical domains of palliative care encompass more than end-of-life care. This symposium reviews clinical palliative care practice guidelines and addresses important questions about "specialty" palliative care: How is neuropalliative care different than primary palliative care? How is pediatric neuropalliative care different than traditional care in child neurology? Can neuropalliative care begin at birth – or even before birth? Do we "palliate" symptoms when we offer patients promising new therapies? Do the goals of neuropalliative care vary depending on the diagnosis, stage, or severity of a neurological disorder? We discuss essential elements of neuropalliative care including diagnostic certainty, prognostic certainty (versus managing clinical uncertainty), family-centered communication, shared decision-making, and the management of pain and suffering in any care setting. This symposium will emphasize many special ethical issues in neuropalliative care such as those relating to disorders of consciousness, progressive loss of cognitive abilities or decisional capacity, and irreversible paralysis. The symposium stratifies neuropalliative care across the age spectrum. A neuro-oncologist will discuss methods of delivering bad news, assessing and explaining prognosis, assisting patients and families in the process of decision- making, and setting limits when certain types of care are objectively futile. Three child neurologists will respectively discuss pediatric, neonatal, and antenatal neuropalliative care issues such as severe neurological impairment in children and adolescents; withdrawal of life-sustaining interventions in neonates in the NICU; and care options for parents whose mid-trimester fetus has been diagnosed with a major malformation or life-limiting neurogenetic disorder. We highlight the 2022 "Clinical Guidance in Neuropalliative Care Position Statement" endorsed by the CNS.

LEARNING OBJECTIVES
As a result of this educational session, participants will be able to:
1. Identify the various domains of palliative care and their key themes.
2. Integrate essential elements of communication, prognostication and shared decision-making into clinical practice along with special ethical considerations in neuropalliative care as it relates to disorders of consciousness.

IMPACT STATEMENTS
This educational session will help attendees to identify changes they can make in their practices related to:
1. The domains of specialty palliative care.
2. Communicating prognostic certainty versus clinical uncertainty.

ORGANIZER
William D. Graf, MD
Connecticut Children's, University of Connecticut, Farmington, CT

**Neuropalliative Care in Adults**
Lynne P. Taylor, MD
Alvord Brain Tumor Center, University of Washington, Seattle, WA

**Antenatal Neuropalliative Care**
William D. Graf, MD

**Neuropalliative Care in Neonates**
Monica Lemmon, MD
Duke University School of Medicine, Durham, NC

**Neuropalliative Care in Children with Severe Neurological Disorders and Neurodevelopmental Disabilities**
Audrey Foster-Barber, MD, PhD
University of California, San Francisco, San Francisco, CA

SESSIONS highlighted in maroon are designated for CME credit.
Agenda and amount of CME credits available are subject to change.

zolgensma®
(onasemnogene abeparvovec-xioi)
suspension for intravenous infusion

# The one-time-only dose to stop SMA progression

ZOLGENSMA is a gene therapy for pediatric patients less than 2 years of age with spinal muscular atrophy (SMA), that is delivered as a single-dose, 1-hour intravenous infusion[1]

## Event-free survival

91% (20/22) of patients were alive and free of permanent ventilation at the 14-months-of-age study visit, **a primary endpoint**, and at 18 months of age[2,a-c]

## Motor milestones achieved

59% (13/22) of patients achieved the ability to sit without support for ≥30 seconds at the 18-month study visit, **a primary endpoint**[2,a]

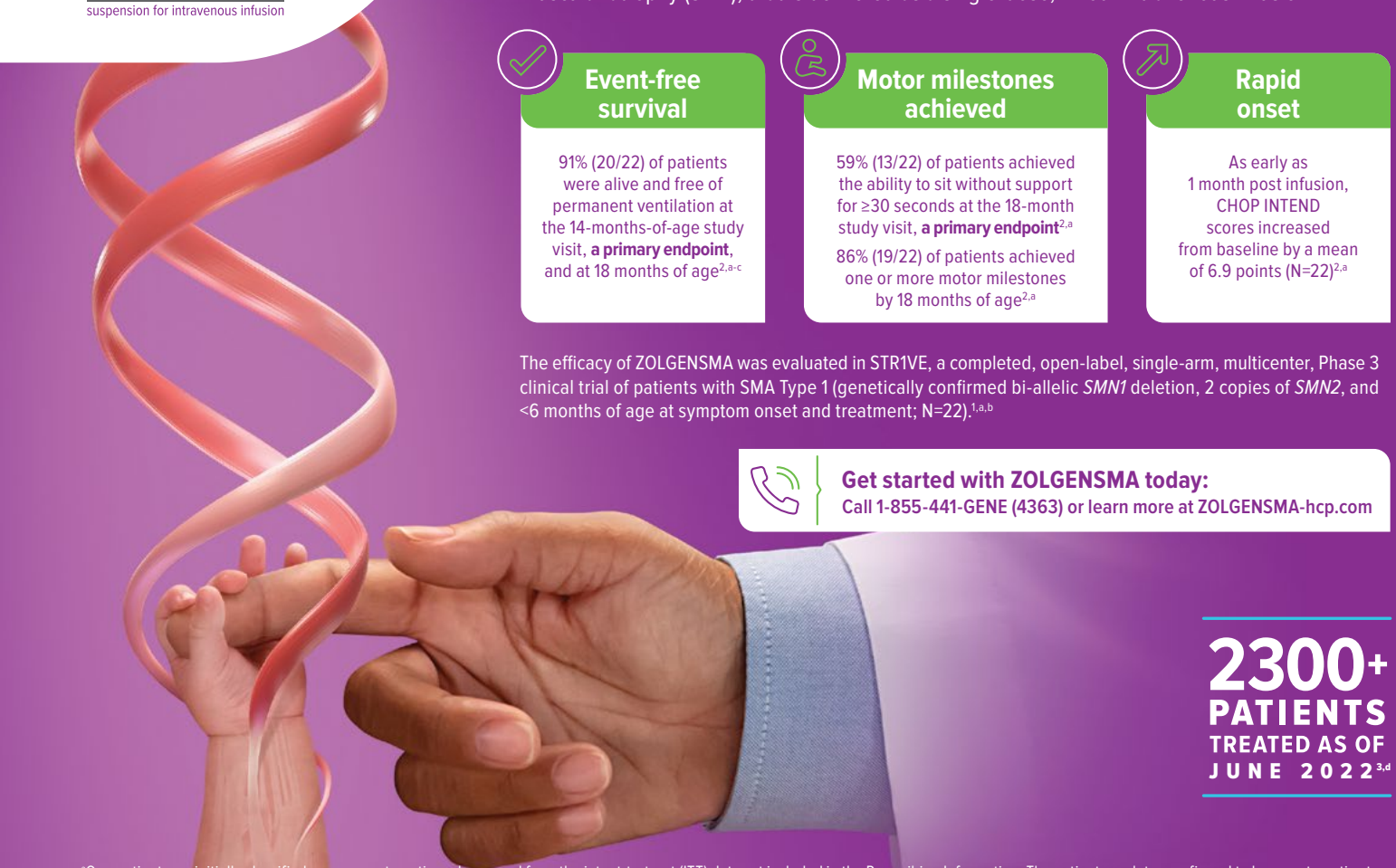
86% (19/22) of patients achieved one or more motor milestones by 18 months of age[2,a]

## Rapid onset

As early as 1 month post infusion, CHOP INTEND scores increased from baseline by a mean of 6.9 points (N=22)[2,a]

The efficacy of ZOLGENSMA was evaluated in STR1VE, a completed, open-label, single-arm, multicenter, Phase 3 clinical trial of patients with SMA Type 1 (genetically confirmed bi-allelic *SMN1* deletion, 2 copies of *SMN2*, and <6 months of age at symptom onset and treatment; N=22).[1,a,b]

**Get started with ZOLGENSMA today:**
**Call 1-855-441-GENE (4363) or learn more at ZOLGENSMA-hcp.com**



**2300+ PATIENTS TREATED AS OF JUNE 2022**[3,d]

[a]One patient was initially classified as presymptomatic and removed from the intent-to-treat (ITT) data set included in the Prescribing Information. The patient was later confirmed to be symptomatic at baseline and included in the final ITT analysis.[4]

[b]One patient died at age 7.8 months due to respiratory failure, which was considered unrelated to treatment. One patient withdrew consent at 11.9 months of age; this patient required permanent ventilation at 11.0 months prior to withdrawal of consent. One patient discontinued participation at the age of 18.0 months, before the month 18 end-of-study visit, due to an adverse event of respiratory distress, which was considered unrelated to treatment.[2]

[c]Event is defined as death or the need for permanent ventilatory support consisting of ≥16 hours of respiratory assistance per day continuously for ≥14 days in the absence of an acute reversible illness, excluding perioperative ventilation.[1]

[d]Globally including clinical trials, commercially, and through the managed access programs.[3]

## Indication and Important Safety Information

### Indication

ZOLGENSMA is an adeno-associated virus vector-based gene therapy indicated for the treatment of pediatric patients less than 2 years of age with spinal muscular atrophy (SMA) with bi-allelic mutations in the *survival motor neuron 1* (*SMN1*) gene.

**Limitations of Use**

The safety and effectiveness of repeat administration or the use in patients with advanced SMA (e.g., complete paralysis of limbs, permanent ventilator dependence) has not been evaluated with ZOLGENSMA.

## Important Safety Information

### BOXED WARNING: Acute Serious Liver Injury and Acute Liver Failure

**Acute serious liver injury, acute liver failure, and elevated aminotransferases can occur with ZOLGENSMA. Patients with preexisting liver impairment may be at higher risk. Prior to infusion, assess liver function of all patients by clinical examination and laboratory testing (e.g., hepatic aminotransferases [aspartate aminotransferase (AST) and alanine aminotransferase (ALT)], total bilirubin, and prothrombin time). Administer a systemic corticosteroid to all patients before and after ZOLGENSMA infusion. Continue to monitor liver function for at least 3 months after infusion.**

### WARNINGS AND PRECAUTIONS

**Thrombocytopenia**

Transient decreases in platelet counts, some of which met the criteria for thrombocytopenia, were typically observed within the first two weeks after ZOLGENSMA infusion. Monitor platelet counts before ZOLGENSMA infusion and on a regular basis for at least 3 months afterwards.

**Thrombotic Microangiopathy**

Cases of thrombotic microangiopathy (TMA) were reported approximately 1 week after ZOLGENSMA infusion. Obtain baseline creatinine and complete blood count before ZOLGENSMA infusion. Following infusion, monitor for thrombocytopenia as well as other signs and symptoms of TMA. Consult a pediatric hematologist and/or pediatric nephrologist immediately to manage if clinically indicated.

**Elevated Troponin-I**

Increases in cardiac troponin-I levels were observed following ZOLGENSMA infusion. Monitor troponin-I before ZOLGENSMA infusion and on a regular basis for at least 3 months afterwards.

### ADVERSE REACTIONS

The most commonly observed adverse reactions (incidence ≥5%) in clinical studies were elevated aminotransferases and vomiting.

**Please see Brief Summary of Prescribing Information on the adjacent page.**

**References: 1.** ZOLGENSMA [prescribing information]. Bannockburn, IL: Novartis Gene Therapies, Inc; 2022. **2.** Day JW, Finkel RS, Chiriboga CA, et al. Onasemnogene abeparvovec gene therapy for symptomatic infantile-onset spinal muscular atrophy in patients with two copies of SMN2 (STR1VE): an open-label, single-arm, multicentre, phase 3 trial. *Lancet Neurol.* 2021;20(4):284-293. **3.** Data on file. Novartis Gene Therapies, Inc. 2022. **4.** Data on file. AveXis, Inc. 2020.

NOVARTIS



For US healthcare professionals only.
08/2022 US-ZOL-22-0146

**ZOLGENSMA® (onasemnogene abeparvovec-xioi)** **Rx Only**
**Suspension for intravenous infusion**
**Brief Summary of the Full Prescribing Information.**
**See Full Prescribing Information.**

**BOXED WARNING: ACUTE SERIOUS LIVER INJURY AND ACUTE LIVER FAILURE**

- **Acute serious liver injury, acute liver failure, and elevated aminotransferases can occur with ZOLGENSMA.**
- **Patients with preexisting liver impairment may be at higher risk.**
- **Prior to infusion, assess liver function of all patients by clinical examination and laboratory testing (e.g., hepatic aminotransferases [aspartate aminotransferase (AST) and alanine aminotransferase (ALT)], total bilirubin, and prothrombin time). Administer systemic corticosteroid to all patients before and after ZOLGENSMA infusion. Continue to monitor liver function for at least 3 months after infusion.**

## INDICATIONS AND USAGE

ZOLGENSMA is an adeno-associated virus vector-based gene therapy indicated for the treatment of pediatric patients less than 2 years of age with spinal muscular atrophy (SMA) with bi-allelic mutations in the *survival motor neuron 1 (SMN1)* gene.

**Limitation of Use:** The safety and effectiveness of repeat administration of ZOLGENSMA or the use in patients with advanced SMA (e.g., complete paralysis of limbs, permanent ventilator dependence) has not been evaluated.

## DOSAGE AND ADMINISTRATION

**For single-dose intravenous infusion only.**

The recommended dosage of ZOLGENSMA is $1.1 \times 10^{14}$ vector genomes per kilogram (vg/kg) of body weight.

- Administer ZOLGENSMA as an intravenous infusion over 60 minutes.
- Postpone ZOLGENSMA in patients with concurrent infections until the infection has resolved. Clinical signs or symptoms of infection should not be evident at the time of ZOLGENSMA administration.
- Starting one day prior to ZOLGENSMA infusion, administer systemic corticosteroids equivalent to oral prednisolone at 1 mg/kg of body weight per day for a total of 30 days. At the end of the 30-day period of systemic corticosteroid treatment, check liver function by clinical examination and by laboratory testing. For patients with unremarkable findings, taper the corticosteroid dose gradually over the next 28 days. If liver function abnormalities persist, continue systemic corticosteroids (equivalent to oral prednisolone at 1 mg/kg/day) until findings become unremarkable, and then taper the corticosteroid dose gradually over the next 28 days or longer if needed. Do not stop systemic corticosteroids abruptly. If liver function abnormalities continue to persist ≥ 2 × ULN after the 30-day period of systemic corticosteroids, consult a pediatric gastroenterologist or hepatologist.

## WARNINGS AND PRECAUTIONS

### Acute Serious Liver Injury, Acute Liver Failure or Elevated Aminotransferases

Acute serious liver injury, acute liver failure and elevated aminotransferases can occur with ZOLGENSMA. Hepatotoxicity (which may be immune-mediated), generally manifested as elevated ALT and/or AST levels and at times as acute serious liver injury or acute liver failure, has been reported with ZOLGENSMA use. In order to mitigate potential aminotransferase elevations, administer systemic corticosteroid to all patients before and after ZOLGENSMA infusion. Immune-mediated hepatotoxicity may require adjustment of the corticosteroid treatment regimen, including longer duration, increased dose, or prolongation of the corticosteroid. Patients with preexisting liver impairment or acute hepatic viral infection may be at higher risk of acute serious liver injury/acute liver failure. Patients with ALT, AST, or total bilirubin levels (except due to neonatal jaundice) > 2 × ULN have not been studied in clinical trials with ZOLGENSMA. The risks and benefits of infusion with ZOLGENSMA in patients with preexisting liver impairment should be weighed carefully against the risks of not treating the patient. Although in the clinical trials and in postmarketing experience, asymptomatic aminotransferase elevations were very commonly reported, in the managed access program and in the postmarketing setting, cases of acute serious liver injury and acute liver failure have been reported. Some patients have experienced elevations in ALT and AST > 20 × ULN, prolonged prothrombin time and have been symptomatic (e.g., vomiting, jaundice), which resolved with the use of prednisolone, sometimes requiring prolonged duration and/or a higher dose. If acute serious liver injury or acute liver failure is suspected, consult a pediatric gastroenterologist or hepatologist. Prior to ZOLGENSMA infusion, assess liver function by clinical examination and laboratory testing (hepatic aminotransferases [AST and ALT], total bilirubin level, and prothrombin time). Continue to monitor liver function for at least 3 months after ZOLGENSMA infusion (weekly for the first month, and then every other week for the second and third months, until results are unremarkable).

### Thrombocytopenia

Transient decreases in platelet counts, some of which met the criteria for thrombocytopenia, were typically observed within the first two weeks after ZOLGENSMA infusion. Monitor platelet counts before ZOLGENSMA infusion and on a regular basis afterwards (weekly for the first month; every other week for the second and third months until platelet counts return to baseline).

### Thrombotic Microangiopathy

Cases of thrombotic microangiopathy (TMA) were reported approximately one week after ZOLGENSMA infusion in the post-marketing setting. TMA is characterized by thrombocytopenia, microangiopathic hemolytic anemia, and acute kidney injury. Concurrent immune system activation (e.g., infections, vaccinations) was identified in some cases. Monitor platelet counts, as well as signs and symptoms of TMA, such as hypertension, increased bruising, seizures, or decreased urine output. In case these signs and symptoms occur in the presence of thrombocytopenia, further diagnostic evaluation for hemolytic anemia and renal dysfunction should be undertaken. If clinical signs, symptoms and/or laboratory findings consistent with TMA occur, consult a pediatric hematologist and/or pediatric nephrologist immediately to manage TMA as clinically indicated.

### Elevated Troponin-I

Increases in cardiac troponin-I levels (up to 0.176 mcg/L) were observed following ZOLGENSMA infusion in clinical trials. The clinical importance of these findings is not known. However, cardiac toxicity was observed in animal studies. Monitor troponin-I before ZOLGENSMA infusion and on a regular basis for at least 3 months afterwards (weekly for the first month, and then monthly for the second and third months until troponin-I level returns to baseline). Consider consultation with a cardiologist, if troponin elevations are accompanied by clinical signs or symptoms.

## ADVERSE REACTIONS

The safety data described in this section reflect exposure to ZOLGENSMA in four open-label studies conducted in the United States, including one completed clinical trial, two ongoing clinical trials, and one ongoing observational long-term follow-up study of the completed trial. A total of 44 patients with SMA received intravenous infusion of ZOLGENSMA, 41 patients at or above the recommended dose, and 3 patients at a lower dose. The patient population ranged in age from 0.3 months to 7.9 months at the time of infusion (weight range 3.0 kg to 8.4 kg). The most frequent adverse reactions (incidence ≥ 5%) observed in the 4 studies were elevated aminotransferases* 27.3% (12/44) and vomiting 6.8% (3/44).

*Elevated aminotransferases include elevation of alanine aminotransferase (ALT) and/or aspartate aminotransferase (AST). In the completed clinical trial, one patient (the first patient infused in that study) was enrolled prior to the protocol amendment instituting administration of prednisolone before and after ZOLGENSMA infusion.

One patient in an ongoing non-United States clinical trial initially presented with respiratory insufficiency 12 days after ZOLGENSMA infusion and was found to have respiratory syncytial virus (RSV) and parainfluenza in respiratory secretions. The patient had episodes of serious hypotension, followed by seizures, and was found to have leukoencephalopathy (brain white matter defects) approximately 30 days after ZOLGENSMA infusion. The patient died after withdrawal of life support 52 days after ZOLGENSMA infusion.

### Immunogenicity

In ZOLGENSMA clinical trials, patients were required to have baseline anti-AAV9 antibody titers of ≤ 1:50, measured using an enzyme-linked immunosorbent assay (ELISA). Evidence of prior exposure to AAV9 was uncommon. The safety and efficacy of ZOLGENSMA in patients with anti-AAV9 antibody titers above 1:50 have not been evaluated. Perform baseline testing for the presence of anti-AAV9 antibodies prior to ZOLGENSMA infusion. Retesting may be performed if anti-AAV9 antibody titers are reported as > 1:50.

Following ZOLGENSMA infusion, increases from baseline in anti-AAV9 antibody titers occurred in all patients. In the completed clinical trial, anti-AAV9 antibody titers reached at least 1:102,400 in every patient, and titers exceeded 1:819,200 in most patients. Re-administration of ZOLGENSMA in the presence of high anti-AAV9 antibody titer has not been evaluated.

## DRUG INTERACTIONS

Where feasible, adjust a patient's vaccination schedule to accommodate concomitant corticosteroid administration prior to and following ZOLGENSMA infusion. Certain vaccines, such as MMR and varicella, are contraindicated for patients on a substantially immunosuppressive steroid dose (i.e., ≥ 2 weeks of daily receipt of 20 mg or 2 mg/kg body weight of prednisone or equivalent). Seasonal RSV prophylaxis is not precluded.

## USE IN SPECIAL POPULATIONS

### Pediatric Use

Administration of ZOLGENSMA to premature neonates before reaching full-term gestational age is not recommended, because concomitant treatment with corticosteroids may adversely affect neurological development. Delay ZOLGENSMA infusion until the corresponding full-term gestational age is reached. There is no information on whether breastfeeding should be restricted in mothers who may be seropositive for anti-AAV9 antibodies. The safety of ZOLGENSMA was studied in pediatric patients who received ZOLGENSMA infusion at age 0.3 to 7.9 months (weight range 3.0 kg to 8.4 kg). The efficacy of ZOLGENSMA was studied in pediatric patients who received ZOLGENSMA infusion at age 0.5 to 7.9 months (weight range 3.6 kg to 8.4 kg).

### Hepatic Impairment

ZOLGENSMA therapy should be carefully considered in patients with liver impairment. Cases of acute serious liver injury and acute liver failure have been reported with ZOLGENSMA in patients with preexisting liver abnormalities. In clinical trials, elevation of aminotransferases was observed in patients following ZOLGENSMA infusion.

## PATIENT COUNSELING INFORMATION

See the ZOLGENSMA Full Prescribing Information for the Patient Counseling Information.

**Please visit ZOLGENSMA-HCP.com for Full Prescribing Information, including Boxed Warning.**

Manufactured by, Packed by, Distributed by:
Novartis Gene Therapies, Inc.
2275 Half Day Road, Suite 200
Bannockburn, IL 60015 USA

U.S. License No. 2250

zolgensma®
(onasemnogene abeparvovec-xioi)
suspension for intravenous infusion

NOVARTIS



11/2021 US-ZOL-19-0202 V4

FRIDAY | CONTINUED

**12:30 PM – 1:45 PM**
**SEMINAR 1:**
**CEREBRAL PALSY: WHAT IS CP? A CONSENSUS-BASED APPROACH** (I)

COURSE DESCRIPTION

Cerebral palsy (CP) is the most common motor disability of childhood and is formally defined as "a group of permanent disorders of the development of movement and posture, causing activity limitation, that are attributed to non-progressive disturbances that occurred in the developing fetal or infant brain" (*Dev Med Child Neurol* 2007). Yet, we have shown ongoing variability in how we diagnose CP (*Pediatrics* 2021). We have demonstrated that neurologists and neurodevelopmentalists play an important role in CP diagnosis (*Neurology* 2020) and that the diagnostic views of people with CP differ from the views of these practitioners (*Dev Med Child Neurol* 2022). Parallel to this work, a recent CNS Open Forum Thread exemplifies the passion that our membership has in reaching a new consensus on a key question: "What is CP?". Though previous symposia and seminar presentations at CNS have established that this question remains an open one and have provided didactic discussions on the topic, this year we propose addressing this question directly with involvement of the CNS membership – a gap highlighted by the Open Forum thread. The goal of our workshop is to use a group-think approach to determine the key uncertainties held by the CNS membership regarding the definition of CP. We have recruited renowned leaders in this field with academic, advocacy, and personal experience with CP. These leaders will facilitate breakout sessions to discuss uncertainties regarding:

1. The meaning of "non-progressive" – Michael Shevell
2. The meaning of "developing fetal or infant brain" – Ann Tilton
3. Contributions of different etiologies to CP – Michael Kruer
4. The meaning of a CP diagnosis for community members and other stakeholders – Paul Gross

We will summarize the breakout group discussions at the end of the workshop to reach a new comprehensive consensus on what the CNS membership's addressable concerns are regarding the current definition of CP.

LEARNING OBJECTIVES

As a result of this educational session, participants will be able to:

1. Outline the current consensus definition of CP
2. List the key uncertainties regarding interpretation of the current consensus definition of CP

IMPACT STATEMENTS

This educational session will help attendees to identify changes they can make in their practices related to:

1. Conferring a CP diagnosis
2. Understanding the meaning of a CP diagnosis for the patients I treat and their caregivers

ORGANIZER

Bhooma Aravamuthan, MD, DPhil
Washington University School of Medicine, St. Louis, MO

**The Meaning of "Non-progressive"**
Michael Shevell, MDCM, FRCP, FCAHS
Montreal Children's Hospital, McGill University Montreal, Quebec, Canada

**The Meaning of "Developing Fetal or Infant Brain"**
Ann Tilton, MD
LSU Health Sciences Center New Orleans, New Orleans, LA

**Contributions of Different Etiologies to CP**
Michael Kruer, MD
Phoenix Children's Hospital, Phoenix, AZ

**The Meaning of a CP Diagnosis for Community Members and Other Stakeholders**
Paul Gross, BA
President, CEO & Co-Founder; Cerebral Palsy Research Network, Greenville, SC

**12:30 PM – 1:45 PM**
**SEMINAR 2:**
**NEURODEVELOPMENTAL DISORDERS: NEUROLOGICAL AND NEURODEVELOPMENTAL CHALLENGES IN SICKLE CELL DISEASE: STROKE AND BEYOND** (I/O)

COURSE DESCRIPTION

Sickle cell disease is an inherited hematological disorder that affects millions of people globally. Despite sickle cell disease being one of the first genetic diseases discovered, many child neurologists and neurodevelopmental physicians are not aware of the heavy neurological burden of this disease and therapeutic options with neurological and developmental implications. While increased risk of stroke and stroke prevention recommendations are widely known, people living with sickle cell disease also have high rates of other neurological and neurodevelopmental complications, even in the absence of brain injury. We will describe the neurological complications, neuroimaging findings, and neurodevelopmental challenges in sickle cell disease across the lifespan. Our first

SESSIONS highlighted in maroon are designated for CME credit.
Agenda and amount of CME credits available are subject to change.

speaker will discuss current research and guidelines with regards to stroke risk and prevention in children and adults with sickle cell disease, nationally and globally, as well as other neurological complications seen in this disorder, including seizures and headaches. Our second speaker will discuss current neuroimaging research exploring cerebral physiology, metabolism, and fMRI and new and existing sickle cell disease therapeutics and their impact on the brain in sickle cell disease. Our third speaker will discuss rates and features of neurodevelopmental disorders in sickle cell disease and current neurodevelopmental screening guidelines. Due to therapeutic advances in the last 50 years, more people with sickle cell disease are surviving into adolescence and adulthood. It is essential that child neurologists and neurodevelopmental physicians are aware of the neurological, neurocognitive, and neurodevelopmental complications of this common inherited disease as appropriate medical, developmental, and cognitive screening practices are essential to improving care and reducing health disparities for these patients across the lifespan.

LEARNING OBJECTIVES

As a result of this educational session, participants will be able to:

1. Identify current guidelines and practice regarding management of stroke, headache, and seizures in sickle cell disease.
2. Discuss current research regarding neuroimaging in sickle cell disease.
3. Identify current guidelines and practice regarding recommendations for neurocognitive and developmental screening in sickle cell disease.

IMPACT STATEMENTS

This educational session will help attendees to identify changes they can make in their practices related to:

1. Care of children with sickle cell disease and stroke, seizures, and headaches.
2. Care of children with sickle cell disease and neurocognitive and/or developmental issues.

ORGANIZER

Eboni Lance, MD, PhD,
Kennedy Krieger Institute,
Baltimore, MD

**Update on Neurological Complications of Sickle Cell Disease: Stroke Risk and Prevention, Headaches, and Seizures**
Lori Jordan, MD, PhD
Vanderbilt University Medical Center,
Nashville, TN

**Advanced Neuroimaging and New Therapeutics in Sickle Cell Disease**
Melanie Fields, MD, MSCI
Washington University, St. Louis, MO

**Neurodevelopmental Disorders and Developmental Screening in Sickle Cell Disease**
Eboni Lance, MD, PhD

## 12:30 PM – 1:45 PM
## SEMINAR 3: NEURO-ONCOLOGY: A CASE-BASED APPROACH TO ACUTE NEURO-TOXICITIES IN CHILDHOOD CANCER PATIENTS
(I/O)

COURSE DESCRIPTION

As new and effective treatments emerge, neurologists are increasingly called upon to recognize, evaluate, and treat acute and chronic neurologic toxicities of both traditional and newer therapies for childhood cancer and brain tumors. These therapies can include the newer targeted agents as well as immunotherapies that are used in a broad range of pediatric cancers. Emerging treatments are also used for treatment of complications associated with the tumor predisposition syndromes such as neurofibromatosis type 1 and tuberous sclerosis complex (TSC), both of which are disorders commonly managed by child neurologists. In this symposium, we offer an overview of the main acute neurological toxicities of medical treatments for childhood cancers, including traditional chemotherapy, targeted chemotherapies, and immunotherapies. We will use a case-based approach to discuss acute neuro-toxicities of traditional chemotherapy agents such as methotrexate, targeted agents such as MEK and mTOR inhibitors, and immunotherapies such as check-point inhibitors and CAR-T cell therapies. As use of these newer agents increases, there are increasing data available regarding the breadth of these toxicities as well as up-to-date management recommendations.

LEARNING OBJECTIVES

As a result of this educational session, participants will be able to:

1. Identify and treat acute toxicities of the treatments for nervous system tumors
2. Identify and treat the acute neurological toxicities of agents used to treat pediatric cancers.

IMPACT STATEMENTS

This educational session helped me to identify changes I could make in my practice related to:

1. Targeted agents
2. The diagnosis and management of acute neurological toxicities of chemotherapy for childhood cancers.

ORGANIZER

Cynthia J. Campen, MD, MScE
Stanford University, Stanford, CA

FRIDAY | CONTINUED

MODERATOR
Sonia Partap, MD, MS
Stanford University & Lucile Packard Children's Hospital, Palo Alto, CA

**Traditional Chemotherapy Agents**
Nicole Ullrich, MD, PhD, FAAN
Boston Children's Hospital, Boston, MA

**Targeted Agents**
Cynthia J. Campen, MD, MScE

**Immunotherapy**
Juliane Gust, MD PhD
Seattle Children's,
University of Washington, Seattle, WA

**2:15 PM – 4:30 PM**
**SYMPOSIUM V: NEUROIMMUNOLOGY: ADVANCEMENTS IN PEDIATRIC NEUROIMMUNOLOGICAL DISEASES** (I/V/O)

COURSE DESCRIPTION
The field of neuroimmunology is changing rapidly both in the clinic and in research including in pediatric neuroimmunological disorders. This symposium will provide the latest diagnostic, evaluation, management, and treatment of pediatric neuroinflammatory disorders. Pediatric multiple sclerosis (MS), neuromyelitis optica spectrum disorder, anti-MOG antibody associated disease (MOGAD), transverse myelitis, acute flaccid myelitis (AFM), and autoimmune encephalitis will be discussed. Treatment of MS including recent clinical trials in pediatric MS will be highlighted. MOGAD is a recently described entity causing different neuroinflammatory phenotypes and recent international guidelines on MOGAD will be presented. Acute flaccid myelitis (AFM) can mimic and be mimicked by other inflammatory disorders, so features to distinguish AFM from other disorders will be described. Increased awareness of autoimmune encephalitis, such as anti-NMDA receptor autoimmune encephalitis (anti-NMDARE), is occurring with providers and in the community. Recent international consensus treatment guidelines for pediatric anti-NMDARE will be reviewed. Moreover, the presentations will address how neuroinflammatory disorders affect patients and their caregivers. The recent international consensus guidelines and research advancements for these diseases will be included to improve clinical implementation of these guidelines.

LEARNING OBJECTIVES
As a result of this educational session, participants will be able to:
1. Describe characteristics and evaluation of different demyelinating and neuroinflammatory disorders in children
2. Discuss treatment and management of different neuroinflammatory diseases in children, including multiple sclerosis, neuromyelitis optica spectrum disorders, anti-MOG associated disorder, acute flaccid myelitis (AFM) and mimickers of AFM, and autoimmune encephalitis

IMPACT STATEMENTS
This educational session will help attendees to identify changes they can make in their practices related to:
1. Evaluation of a patient with suspected neuroinflammatory disease, including which ancillary tests are useful and interpretation of test results
2. Management of pediatric inflammatory diseases, including inpatient and outpatient evidence-based treatments, based upon recent research studies

ORGANIZER
Grace Gombolay, MD
Emory University,
Children's Healthcare of Atlanta,
Atlanta, GA

**Multiple Sclerosis and Neuromyelitis Optica Spectrum Disorders**
Tanuja Chitnis, MD
Mass General Brigham,
Harvard Medical School, Boston, MA

**Myelin Oligodendrocyte Glycoprotein Associated Disorders**
Giulia Fadda, MD
McGill University,
Montreal, Quebec, Canada

**Acute Flaccid Myelitis and Mimickers**
Teri Schreiner, MD MPH
Children's Hospital Colorado,
University of Colorado, Aurora, CO

**Anti-NMDA Receptor Encephalitis and Other Autoimmune Encephalitis**
Grace Gombolay, MD

**4:30 PM – 5:00 PM**
**CNS BUSINESS MEETING** (I)

**5:45 PM – 6:30 PM**
**JUNIOR MEMBER SEMINARS** (I)

**6:15 PM – 7:00 PM**
**SCIENTIFIC PROGRAM & PLANNING COMMITTEE MEETING** (I)

**7:00 PM – 9:00 PM**
**CLOSING GALA** (I)

SESSIONS highlighted in maroon are designated for CME credit.
Agenda and amount of CME credits available are subject to change.

## SATURDAY
## October 15

**7:00 AM – 8:15 AM**
**SEMINAR 4:**
**EDUCATION:**
**STUDYING WHAT MATTERS: INCORPORATING PATIENTS AND FAMILIES INTO PEDIATRIC NEUROLOGY RESEARCH** (I/O)

COURSE DESCRIPTION

Historically, patients and their families have primarily served as the subjects and beneficiaries of research in child neurology. It is increasingly clear that parents and patients should also play a key role in defining research priorities, study conception and design, data analysis and interpretation, and helping results reach a broad audience. Yet, questions remain about how to best include parents and patients in the research process. In this seminar, we will discuss how to practically involve parents in research. Our three speakers have first-hand experience in patient-centered research and dissemination. Betsy Pilon, Executive Director of Hope for HIE, will use her expertise to highlight the power of patient and caregiver advocacy groups in facilitating and disseminating research. Dr. Renee Shellhaas will share her experience working with diverse stakeholders, including her experience co-leading the PERF, PCORI, and NIH-funded studies of the Neonatal Seizure Registry. Dr. Adam Hartman, will share how to align proposals with funding priorities in patient-centered design. The session will conclude with a panel question and answer session, moderated by Dr. Monica Lemmon.

LEARNING OBJECTIVES

As a result of this educational session, participants will be able to:

1. Outline key principles of patient-centered research
2. Identify ways to incorporate parents and advocacy groups into all aspects of research, including study design, protocol implementation, analysis, and results dissemination.

IMPACT STATEMENTS

This educational session will help attendees to identify changes they can make in their practices related to:

1. Identifying key principles of patient-engaged research design
2. Incorporating parents and advocacy groups into study design, protocol implementation, data analysis, and results dissemination

ORGANIZER

Monica Lemmon, MD
Duke University School of Medicine, Durham, NC

**The Power of Parents and Advocacy Groups**
Betsy Pilon, Executive Director
Hope for HIE, West Bloomfield, MI

**Incorporating Stakeholders into Study Design and Analysis: Lessons from the Neonatal Seizure Registry**
Renée Shellhaas, MD, MS
Michigan Medicine, University of Michigan, Ann Arbor, MI

**Aligning Proposals with Funding Priorities in Patient-centered Design**
Adam L. Hartman, MD
NINDS, NIH, Rockville, MD

**7:00 AM – 8:15 AM**
**SEMINAR 5:**
**FETAL NEUROLOGY: ADVANCES IN FETAL NEUROLOGY: EMERGING IDEAS AND FUTURE LANDSCAPE** (I/O)

COURSE DESCRIPTION

Fetal neurology is a rapidly evolving field and continues to advance with more accurate prenatal diagnoses, and improvements in neuroimaging and genetic testing. Increasing number of fetal neurologic consultations across the US allows for earlier characterization of critical/sensitive periods of developmental neuroplasticity by identifying fetuses and neonates at risk for adverse outcomes and neurodevelopmental disabilities. Increasing numbers of fetal neurological disorders such as congenital brain malformations (disorders of cortical migration, agenesis of corpus callosum, posterior fossa malformations), genetic conditions, prenatal brain injuries (stroke, hemorrhage), or congenital infections are diagnosed in this critical/sensitive period. Timelier and more effective neurotherapeutic interventions can potentially be developed that prevent or mitigate disorders, lowering the burden of neurologic disorders across life span.

The Fetal Neurology Consortium was founded in 2020 and has identified several challenges faced by the interdisciplinary team of clinicians who must recognize and overcome diagnostic limitations while offering accurate and compassionate prenatal counseling and management guidance into postnatal years. This symposium is being submitted as part of efforts of the consortium to disseminate knowledge on advances in fetal neurology. The sessions will include presentations in the areas of advances and future scope of fetal neuroimaging, neurogenetics and neurotherapeutics.

The course is designed for fetal-neonatal neurologists, child neurologists and trainees with special interest in the field of fetal and perinatal neurology, perinatology, and early origin of neurologic disorders.

LEARNING OBJECTIVES

As a result of this educational session, participants will be able to:

1. Define advances in the field of fetal neurology focusing on neuroimaging and neurogenetics.
2. Identify emerging neurotherapeutics for prenatally diagnosed neurologic disorders.

SATURDAY | CONTINUED

IMPACT STATEMENTS

This educational session will help attendees to identify changes they can make in their practices related to:

1. Diagnostic work up for fetal neurologic disorders.
2. Complexities in prenatal counselling and management of fetal neurologic disorders.

ORGANIZER

Sonika Agarwal, MBBS, MD
Children's Hospital of Philadelphia, Perelman School of Medicine at the University of Pennsylvania, Philadelphia, PA

**Fetal Neurology Consortium and Registry Workgroup – Fetal Neurology Program Survey Results**
Sonika Agarwal, MBBS, MD

**Advances in Fetal Neurogenetics: Emerging Ideas and Future Landscape**
Lisa Emrick, MD
Baylor College of Medicine, Houston, TX

**Advances in Fetal Neuroimaging: Emerging Ideas and Future Landscape**
Tomo Tarui, MD
Tufts Medical Center, Boston, MA

**Advances in Fetal Neurotherapeutics and Interventions**
David Neal Franz, MD
Cincinnati Children's Hospital/University of Cincinnati College of Medicine, Cincinnati, OH

**7:00 AM – 8:15 AM**
**SEMINAR 6: DIVERSITY: DISABILITY IN CHILD NEUROLOGY: SOCIETY, MEDICINE AND THE PERSON** (I/O)

COURSE DESCRIPTION

Health care disparities are real and profound for people with disabilities. Just as racism plays an important role in perpetuating health care disparities, so does ableism. For example, a recent survey of physicians found that only 41% were very confident about their ability to provide the same quality of care to patients with disability (Iezzoni et al. 2021). As child neurologists, our intimate roles caring for disabled children make addressing ableism in our field an imperative. In this symposium, we will consider disability and ableism in the contexts of society, medicine and self/family. Appropriate language and frameworks for thinking about disability will be introduced. Participants will learn practical tools so that their child neurology practice can progress beyond disease management and include optimizing function and promoting inclusion in society as part of routine neurologic care.

Specifically, Dr. Kim will introduce our topic by defining ableism, providing examples, and introduce different models for framing disability. Dr. Christy will discuss ableism in medicine, including the historical evolution of the language we use to describe disability, and how ableism from physicians contributes to health disparities for disabled people (Lezzoni et al. 2021). Dr. Cejas will discuss personal/internal ableism: how disabled people holding these views about themselves impacts their health, and how physicians can help, as well as introducing tools that can help us think about an individual's function(International Classification of Funct...; Rosenbaum and Gorter 2012). Finally, Dr. Barber will offer discussions of two illustrative cases to highlight these various perspectives on disability and moderate a discussion among the audience and all speakers.

LEARNING OBJECTIVES

As a result of this educational session, participants will be able to:

1. Recognize that ableism is omnipresent and identify ableism in society, in medicine, and in personal/family dynamics.
2. Begin the process of changing the culture of child neurology to decrease ableism and improve neurologic care for children with disabilities.

IMPACT STATEMENTS

This educational session will help attendees to identify changes they can make in their practices related to:

1. Using up-to-date, precise and respectful language when talking about disability with professional colleagues, patients, their families, and in society.
2. Moving beyond disease management for our patients to include optimizing function and promoting inclusion in society as part of routine neurologic care.

ORGANIZER

Danielle Guez Barber, MD PhD
Children's Hospital of Philadelphia, Philadelphia, PA

**An Introduction to Disability and Ableism**
Young-Min Kim, MD
Loma Linda University Children's Hospital, Loma Linda, CA

**History of Ableism in Child Neurology**
Alison Christy, MD, PhD
Providence Health and Services, Portland, OR

SESSIONS highlighted in maroon are designated for CME credit.
Agenda and amount of CME credits available are subject to change.

**Ableism and the Individual**
Diana M. Cejas, MD, MPH
University of North Carolina at Chapel Hill, Carolina Institute for Developmental Disabilities, Chapel Hill, NC

**Panel Discussion, Q&A and Case Studies**

MODERATOR
Danielle Guez Barber, MD PhD

- Diana M. Cejas
- Alison Christy, MD, PhD
- Young-Min Kim, MD

**8:45 AM – 9:30 AM**
**HOWER AWARD LECTURE** (I/V/O)
Leon G. Epstein, MD
Ann & Robert Lurie H. Children's Hospital of Chicago, Chicago, IL

**9:45 AM – 12:00 PM**
**SYMPOSIUM VI: BEHAVIORAL NEUROLOGY: SPANNING THE DIVIDE: ANXIETY AND MOOD DISORDERS CO-OCCURRING WITH NEUROLOGIC DISORDERS** (I/V/O)

COURSE DESCRIPTION
Anxiety and mood disorders commonly co-occur with neurologic disorders of childhood. These psychiatric symptoms arise from shared neural circuits, often interact with neurologic symptoms, and can negatively impact quality of life in our patients. In this session, we will review the increased prevalence of mental health disorders in neurologic conditions and the role of Child Neurologists in recognizing and managing symptoms. We will discuss the shared neural mechanisms of movement, motivation, emotions and behavior. In addition, we will use movement disorders (tic disorders) and epilepsy (Tuberous Sclerosis) as models for how neurologic symptoms and psychiatric symptoms can coexist and impact each other. Finally, we will discuss the rising prevalence of anxiety and mood disorders in children and adolescents and the impact on child neurology patients. Given the high rates of co-occurring psychiatric conditions in neurologic disorders, it is important that we have the tools to recognize symptoms and understand how to approach management in our patients.

LEARNING OBJECTIVES
As a result of this educational session, participants will be able to:
1. Understand the neurophysiology underlying the close relationship between neurologic disorders and psychiatric symptoms.
2. Understand the role of child neurologist in the care of patients with neurologic disorders and co-occurring psychiatric symptoms.

IMPACT STATEMENTS
This educational session will help attendees to identify changes they can make in their practices related to:
1. Identification of anxiety and mood disorders in youth with neurologic disorders
2. Understanding the relationship between psychiatric and neurologic symptoms in youth

ORGANIZER
Jennifer Vermilion, MD
University of Rochester, Rochester, NY

**Overlapping Neural Circuits in Movement Disorders and Mood Disorders: Implications for Diagnosis and Treatment**
Jonathan W. Mink, MD, PhD
University of Rochester, Rochester, NY

**Tourette Syndrome: Bridging the Border between Neurology and Psychiatry**
Jennifer Vermilion, MD

**Tuberous Sclerosis Complex Associated Neuropsychiatric Disorders: Insights and Opportunities**
Tanjala T. Gipson, MD
University of Tennessee Health Sciences Center, Memphis, TN

**Understanding and Addressing Psychiatric Comorbidities in Child Neurology**
Devin C. McNulty, PhD
Ann & Robert H. Lurie Children's Hospital, Northwestern University Feinberg School of Medicine, Chicago, IL

**12:15 PM – 4:15 PM**
**CNS CLINICAL RESEARCH ANNUAL WORKSHOP 2022 – PEDIATRIC NEUROLOGY CLINICAL TRIALS – TRIAL DESIGN** (I)

COURSE DESCRIPTION
This course is a 4 hour clinical research workshop providing interactive training on specific research methodology topics to support clinical research engagement by all CNS members regardless of prior clinical research experience.

LEARNING OBJECTIVES
As a result of this educational session, participants will be able to:
1. Have an understanding of different types of clinical trials including the strengths and weaknesses of each study type as it applies to their specific area of research
2. Support their clinical research by identifying correct statistical analysis methods and study design specific sources of funding.

IMPACT STATEMENTS
This educational session helped me to identify changes I could make in my practice related to:
1. Initiate new clinical research projects.
2. Meaningful engage in existing clinical research projects.

**I** = In-Person **V** = Virtual **O** = On Demand (thru November 15)

ORGANIZER
Ariel Maia Lyons-Warren, MD, PhD
Baylor College of Medicine,
Houston, TX

CO-ORGANIZERS
Josh Bonkowsky, MD, PhD
University of Utah School of Medicine,
Primary Children's Hospital,
Salt Lake City, UT

Janet Soul, MDCM, FRCPC
Boston Children's Hospital,
Harvard Medical School,
Boston Mass, Boston, MA

Angela Hewitt, MD, PhD
University of Rochester Medical Center,
Rochester, NY

Daniel Calame, MD, PhD
Baylor College of Medicine,
Houston, TX

**Welcome**
Ariel Maia Lyons-Warren, MD, PhD

**Introduction to Clinical Research Study Design**
Jennifer Vermilion, MD
University of Rochester,
Rochester, NY

*Breakout Sessions*

**Finding the Right Grant for Your Clinical Research Study**
Adam L. Hartman, MD

**Statistics by Study Design: Selecting the Right Type of Analysis for your Clinical Research Study**
Paul S. Horn, PhD
Cincinnati Children's Hospital
Medical Center, Cincinnati, OH

*Coffee Break & Networking*

**How to Get Involved in Multi-Site Clinical Research Trials**
Darcy Krueger, MD PhD
Cincinnati Children's Hospital
Medical Center, Cincinnati, OH

**Q&A**

**12:15 PM – 4:15 PM**
**BIOMEDICAL WRITING WORKSHOP**
(I)

COURSE DESCRIPTION
This interactive workshop for novice writers offers techniques to promote better manuscripts and enhance the likelihood of publication. Topics include avoiding writer's block, responding effectively to revision requests, and practical techniques to improve writing clarity. Numerous text examples illustrate practical ways to improve manuscript writing and organization skills, and the relaxed atmosphere promotes audience participation.

LEARNING OBJECTIVES
As a result of this educational session, participants will be able to:
1. Recognize barriers to successful publication
2. Develop strategies for overcoming writer's block
3. Be able to more effectively revise manuscripts and respond to reviewers and editors
4. Understand the requirements for republication, use of patient materials and privacy concerns

IMPACT STATEMENTS
This educational session helped me to identify changes I could make in my practice related to:
1. Publication of clinical and research articles that promote progress medicine by disseminating new ideas and information.
2. More efficiently planning and creating of manuscripts and interacting effectively with journal editors.

ORGANIZER AND PRESENTER
E. Steve Roach, MD
University of Texas Dell Medical School,
Austin, TX

**Introduction: Why Manuscripts are Rejected**
E. Steve Roach, MD

**Outwitting Writer's Block**
E. Steve Roach, MD

*Break*

**Revising Manuscripts & Responding to Reviews**
E. Steve Roach, MD

**Rules of the Road: Permissions, Consents, and Other Potholes**
Phillip L. Pearl, MD
Boston Children's Hospital,
Boston, MA

**Meet the Editors**
- Yasmin Khakoo, MD, FAAN
  Memorial Sloan Kettering Cancer Center, Weill Cornell Medical College, New York, NY
- E. Steve Roach, MD
- Phillip L. Pearl, MD

SESSIONS highlighted in maroon are designated for CME credit.
Agenda and amount of CME credits available are subject to change.

# Industry-Sponsored Satellite Sessions

**Industry Sponsored Satellite Sessions are independently staged and accredited or non-accredited educational or product theater events. A gateway fee making them accessible to attendees is paid by the presenters.**

## WEDNESDAY
## October 12

### PRODUCT THEATER 1:
**Biogen: The Latest NURTURE Trial Data on Pediatric Patients**

**Wednesday, October 12, 3:00 PM - 4:00 PM**
**Exhibit Hall A, Duke Energy Center**

**Speakers**
Diana Castro, MD
Neurologist and Neuromuscular Physician
Founder of Neurology and Neuromuscular Care Center
Founder of Neurology Rare Disease Center
Denton, TX

Gyula Acsadi, MD, PhD
Pediatric Neurologist, Chief of Pediatric Neurology
Connecticut Children's Medical Center
Hartford, CT

## THURSDAY
## October 13

### PRODUCT THEATER 2:
**A Treatment Option for Seizures Associated with CDKL5 Deficiency Disorder (CDD)**

**Thursday, October 13, 7:00 AM – 8:00 AM**
**Room 206, Duke Energy Center**

This presentation will review the data of a randomized, controlled trial that evaluated the efficacy and safety of an antiseizure treatment in patients with refractory epilepsy associated with CDKL5 deficiency disorder (CDD).

M. Scott Perry, MD
Head of Neurosciences
Director, Jane and John Justin Institute for Mind Health
Medical Director, Genetic Epilepsy Clinic
Cook Children's Medical Center

### PRODUCT THEATER 3:
**GENENTECH: EVRYSDI**

**Thursday, October 13, 12:30 PM – 1:30 PM**
**Exhibit Hall A, Duke Energy Center**

Join us at an interactive symposium about Evrysdi to explore community and expert perspectives

### SATELLITE SEMINAR 1:
**Practical Clinical Management of Lennox-Gastaut Syndrome**

**Thursday, October 13, 2022**
**12:30 PM – 1:00 PM: On-site Check-in and Lunch**
**1:00 PM – 2:30 PM: Satellite CME Seminar**
**Rooms 200 & 205, 2nd Floor, Duke Energy Center**

**PRE-REGISTER AT** www.millermeded.com/LGS
Pre-registration does not guarantee seating. On-site registration may be available, space permitting.

**Program Overview**
Lennox-Gastaut syndrome (LGS) is a debilitating developmental and epileptic encephalopathy (DEE) characterized by multiple seizure types, diffuse slow spike-and-wave complexes on encephalograms, and cognitive impairment. Most patients are treatment-refractory and have life-long disability. Drop seizures are hallmark features of LGS, most notably tonic seizures. However, most patients will develop between 3 and 5 seizure types which wax and wane during disease progression. Generalized tonic clonic seizures (GTCs) are commonly observed and, even though they can occur at any point during the syndrome manifestations, usually occur in later stages of LGS. In addition to being associated with bodily injury and hospitalizations, GTCs are a primary risk factor for SUDEP (sudden unexpected death in epilepsy). In addition, as in other DEEs, LGS patients are significantly affected by developmental delays and behavioral issues. In this seminar we will review LGS and its clinical diagnosis and management, with practical focus on rational therapy choices that optimize patient management and may affect long-term outcomes.

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

- Review clinical features and diagnostic challenges associated with Lennox-Gastaut syndrome
- Discuss seizure end points in clinical trials of Lennox-Gastaut syndrome and how they translate into clinical practice
- Review secondary outcomes that are unique to Lennox-Gastaut syndrome management and reasonable expectations for patient care

**Faculty**
Katherine Nickels, MD (Program Chair)
Associate Professor of Neurology
Mayo Clinic
Rochester, Minnesota

M. Scott Perry, MD
Head of Neurosciences
Jane and John Justin Institute for Mind Health
Cook Children's Medical Center
Fort Worth, Texas

Joseph E. Sullivan, MD
Professor of Neurology and Pediatrics
University of California, San Francisco (UCSF)
Director
UCSF Benioff Children's Hospital
Pediatric Epilepsy Center of Excellence
San Francisco, California

**CREDITS AVAILABLE**
Physicians – maximum of 1.50 *AMA PRA Category 1 Credit*(s)™

Jointly provided by Postgraduate Institute for Medicine and Miller Medical Communications, LLC.

**Grant Source:** This live activity is supported by an independent educational grant from Zogenix, Inc.

## SATELLITE SEMINAR 2:
### A Spotlight on the Management of AADC Deficiency: Experience With Investigational Intraputaminal Gene Replacement Therapy

**Thursday, October 13, 2022**
**5:30 PM – 7:00 PM**
**Rooms 200 & 205, 2nd Floor, Duke Energy Center**

**PRE-REGISTER AT: https://cvent.me/gnaMbn**

**Speakers**
Jennifer O'Malley, MD, PhD
Stanford University School of Medicine

Sudhakar Vadivelu, DO
Cincinnati Children's Hospital

Richard Poulin & Judy Wei
Parents of a child with AADC deficiency

**Grant Source:** PTC Therapeutics

## PRODUCT THEATER 4:
### Alexion: Pediatric Cases of Neurofibromatosis Type 1 (NF1) With Symptomatic, Inoperable Plexiform Neurofibromas (PN)

**Thursday, October 13, 6:00 PM – 7:00 PM**
**Exhibit Hall A, Duke Energy Center**

**Program Description**
Alexion invites you to a branded presentation featuring 3 cases of pediatric patients with Neurofibromatosis Type 1 with symptomatic, inoperable Plexiform Neurofibromas (NF1 PN). The presentation will discuss patient diagnosis, treatment, and care.

**Speaker**
Audrey Green-Murphy, DO, MSc
Co-Director NF Clinic
Valley Children's Hospital
Madera, CA

Pediatric Hematology-Oncology, Pediatric Neuro-Oncology

Dr Green-Murphy is a board-certified pediatric hematologist/oncologist and fellowship trained pediatric neuro-oncologist in Central CA. She is a member of Children's Oncology Group and currently serves as a Sub-PI for her institution. Her clinical interests include pediatric neuro-oncology, neurofibromatosis type 1, neurofibromatosis type 2/schwannomatosis syndrome, brain tumor survivorship, cancer predisposition syndromes, evidence-based treatment of children with underlying genetic syndromes, and increasing access to care for rural/underserved patients with cancer predisposition syndromes.

## FRIDAY
## October 14

### SATELLITE SEMINAR 3:
**The Latest Update on Metachromatic Leukodystrophy: Screening, Diagnosis, and Emerging Treatments to Improve Quality of Life of Patients**

**Friday, October 14, 12:00 PM – 2:00 PM**
**Room: 200/205**

**Pre-registration link:** www.cmeoutfitters.com/CNS2022

**Speakers**
Florian S. Eichler, MD – Moderator
Associate Professor of Neurology
Massachusetts General Hospital
Harvard Medical School
Boston, MA

Laura A. Adang, MD, PhD
Assistant Professor of Child Neurology
Children's Hospital of Philadelphia
Philadelphia, PA

Rachel E. Hickey, MS, LCGC
Genetic Counselor, Care Coordinator of Leukodystrophy Clinic
Ann & Robert H. Lurie Children's Hospital of Chicago
Chicago, IL

**Grant Source:** Supported by an educational grant from Takeda Pharmaceuticals U.S.A., Inc.

**Session links provided on virtual platform and on CNS website 2022 Annual Meeting page**

### SATELLITE SEMINAR 4:
**Ending the Diagnostic Odyssey Genetic Diagnosis in Children Affected by Epilepsy**

**Friday, October 14**
**5:00 PM registration**
**5:30 PM - 7:00 PM educational session**
**Room: 200/205**

**Pre-registration link: https://na.eventscloud.com/website/44418/**

Pre-registration does not guarantee seating. On-site registration may be available, space permitting.

**Speakers**
Neil A. Hanchard, MD, PhD
Adjunct Associate Professor
Department of Molecular and Human Genetics
Baylor College of Medicine
Houston, Texas

Ingo Helbig, MD
Assistant Professor of Neurology
Perelman School of Medicine at the University of Pennsylvania
Philadelphia, Pennsylvania

J. Michael Graglia, MBA, MA
PATIENT ADVOCATE
Co-Founder & Managing Director
SynGAP Research Fund
Palo Alto, California

Lacey Smith, MS, CGC
Genetic Counseling Program Manager
Epilepsy Genomics at Boston Children's Hospital
Boston, Massachusetts*With special guest and parent advocate Mike Graglia

**Grant Source:** Supported by an independent educational grant from GeneDx|Sema4

Evrysdi®
risdiplam 60 mg powder for oral solution

# An invitation

**Join us** at an interactive symposium about Evrysdi to explore community and expert perspectives

**Thursday, October 13**
**12:30 pm to 1:30 pm ET**

**Exhibit Hall,**
**Duke Energy Convention Center**
**Cincinnati, OH**

Visit us at **Booth #2013**

To learn more about Evrysdi, visit **Evrysdi-hcp.com**

Genentech
*A Member of the Roche Group*

ALERT

# What other symptoms of **Rett syndrome** are asking for your attention?

## Rett syndrome is a rare neurodevelopmental disorder that primarily affects girls[1]

With no FDA-approved treatment for Rett syndrome (RTT), treatment is symptomatic and supportive.[1,2] But there are additional challenges of daily life with RTT that can take a physical and emotional toll on caregivers[3,4]—including symptoms like syndrome-related behaviors, breathing issues, mood disturbances, and nighttime behaviors.[5,6]

**Considering these and other manifestations of Rett syndrome may greatly impact care**—giving voice to the unique challenges and unspoken needs of this disorder.

**Together with caregivers, you can help identify more opportunities for collaborative and comprehensive care for individuals with Rett syndrome.**

**Uncover the full impact of Rett syndrome.**

**Visit us at Booth #1724**

**References: 1.** National Institute of Neurological Disorders and Stroke. Rett syndrome fact sheet. Accessed August 2, 2022. https://www.ninds.nih.gov/rett-syndrome-fact-sheet **2.** Gold WA, Krishnarajy R, Ellaway C, et al. Rett syndrome: a genetic update and clinical review focusing on comorbidities. *ACS Chem Neurosci.* 2018;9(2):167-176. **3.** Mori Y, Downs J, Wong K, et al. Longitudinal effects of caregiving on parental well-being: the example of Rett syndrome, a severe neurological disorder. *Eur Child Adolesc Psychiatry.* 2019;28(4):505-520. **4.** Palacios-Ceña D, Famoso-Pérez P, Salom-Moreno J, et al. "Living an obstacle course": a qualitative study examining the experiences of caregivers of children with Rett syndrome. *Int J Environ Res Public Health.* 2019;16(41):1-13. **5.** Fu C, Armstrong D, Marsh E, et al. Consensus guidelines on managing Rett syndrome across the lifespan. *BMJ Paediatr Open.* 2020;4(1):e000717. doi:10.1136/bmjpo-2020-000717 **6.** Killian JT, Lane JB, Lee H-S, et al. Caretaker quality of life in Rett syndrome: disorder features and psychological predictors. *Pediatr Neurol.* 2016;58:67-74.



ACADIA

# The CNS Junior and Early Career Forum

BY ALEXANDER COHEN, MD, PHD AND ARIEL LYONS-WARREN, MD, PHD

The Junior and Early Career Forum was born out of a recent "International Collaboration of the Young Members" spanning the international child neurology organizations including ICNA, AOCNA, ACNA, EPNS, and the CNS. Representatives from each of the international/regional child neurology societies have been meeting for over a year to share ideas and discuss new programs that could benefit Junior Child Neurologists worldwide; the CNS is represented by Dr. Alexander Cohen and Dr. Ariel Lyons-Warren. Several ideas have been taken root that will, we hope, increase international collaboration and foster Global Neurology connections. One feature of many of the international child neurology associations is a separate organization or forum to give a voice to junior and early career members.

The CNS has long supported a number of programs highlighting and benefitting our trainees and early career members, including:

1. free Medical Student/Resident Trainee Membership and reduced rate meeting attendance;
2. the CNS Bhuwan Garg High School Neuroscience Prize and multiple Outstanding Junior Member awards at the Annual Meeting;
3. the Child Neurologist Career Development Program (CNCDP-K12) and Minority Research Scholars Program;
4. the John M. "Jack" Pellock Resident Seminar on Epilepsy for CN and NDDD residents in their final year of training; and
5. Early Career Research Awards including CNF and PERF partner program grants and the Philip R. Dodge Young Investigator Award.

In addition to these awards and programs that highlight and support early research and academic achievement, the Child Neurology Society is now expanding its junior member and early career programming this year with a new set of brief career-focused talks interwoven throughout the meeting, that will also be given by early/mid-career members with the theme of "things I knew last year". These will be held in a dedicated "open" meeting space immediately below the main meeting room (Grand Ballroom A/B) to allow attendees to listen in between scientific sessions while they grab coffee, tea, and snacks. Topics range from practical issues such as: what to look for in a first job offer, how to network at a meeting, how to find a mentor, and when and how to ask for a raise. There will also be multiple opportunities to meet current and past award winners as well as editors of the top child neurology journals.

Finally, we will also be hosting a new junior member and early career open forum on Friday night, before the closing reception, to discuss topics and needs particular to our trainee and junior faculty members well as leadership opportunities. This open forum will conclude with breakout sessions for our trainee members on:

1. Choosing your Residency Program;
2. Finding a Fellowship Position; and
3. Finding Your First Job.

All of these talks and opportunities are open to all who consider themselves in training, early career….or just "young at heart". We look forward to seeing everyone in Cincinnati!

| Date | Time | Topic |
|---|---|---|
| | | **Launching Your Career** |
| Wed | 3:00 PM | What to look for in a job offer: young academic perspective |
| Wed | 3:15 PM | What to look for in a job offer: young private practice perspective |
| | | *(30 min break)* |
| | | **Managing Your Career** |
| Wed | 4:00 PM | When and how to ask for a raise in academia |
| Wed | 4:15 PM | When and how to ask for a raise in private practice |
| | | *(30 min break)* |
| | | **Meet the Award Winners** |
| Wed | 5:00 PM | Meet the award winner #1: Monica Lemmon |
| Wed | 5:10 PM | Meet the award winner #2: Nina Schor |
| Wed | 5:20 PM | Meet the award winner #3: Kenneth Mack |
| | | **Making New Friends** |
| Thur | 5:00 PM | How to network at a meeting |
| Thur | 5:15 PM | Do I need a recruiter? |
| | | **Meet the Editors** |
| Fri | 12:00 PM | Meet the Editor #1: Yasmin Khahkoo |
| Fri | 12:10 PM | Meet the Editor #2: Renee Shellhaas |
| Fri | 12:20 PM | Meet the Editor #3: Marc Patterson |
| | | **Finding Your Yoda** |
| Fri | 1:45 PM | How to find mentors at your (existing/new) institution |
| Fri | 2:00 PM | How to become a good mentor |
| | | **Following the Money** |
| Fri | 4:30 PM | Effort, Salary, and Fractions |
| Fri | 4:45 PM | How to read a P&L statement |

# Duke Energy Convention Center Exhibit Hall A

## EXHIBITS & POSTER REVIEW

### EXHIBIT HALL

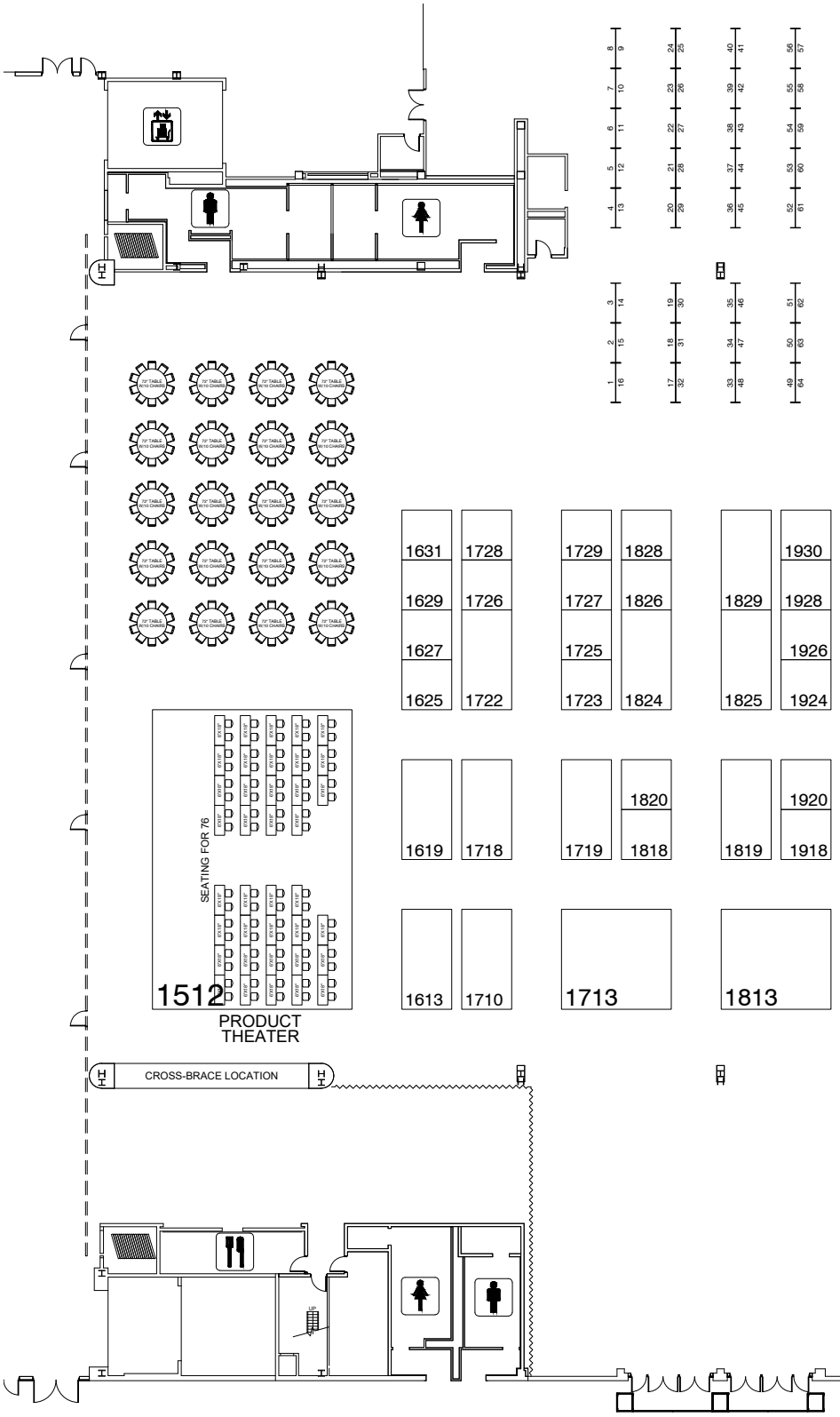
**WEDNESDAY**
**2:00 PM-7:30 PM**

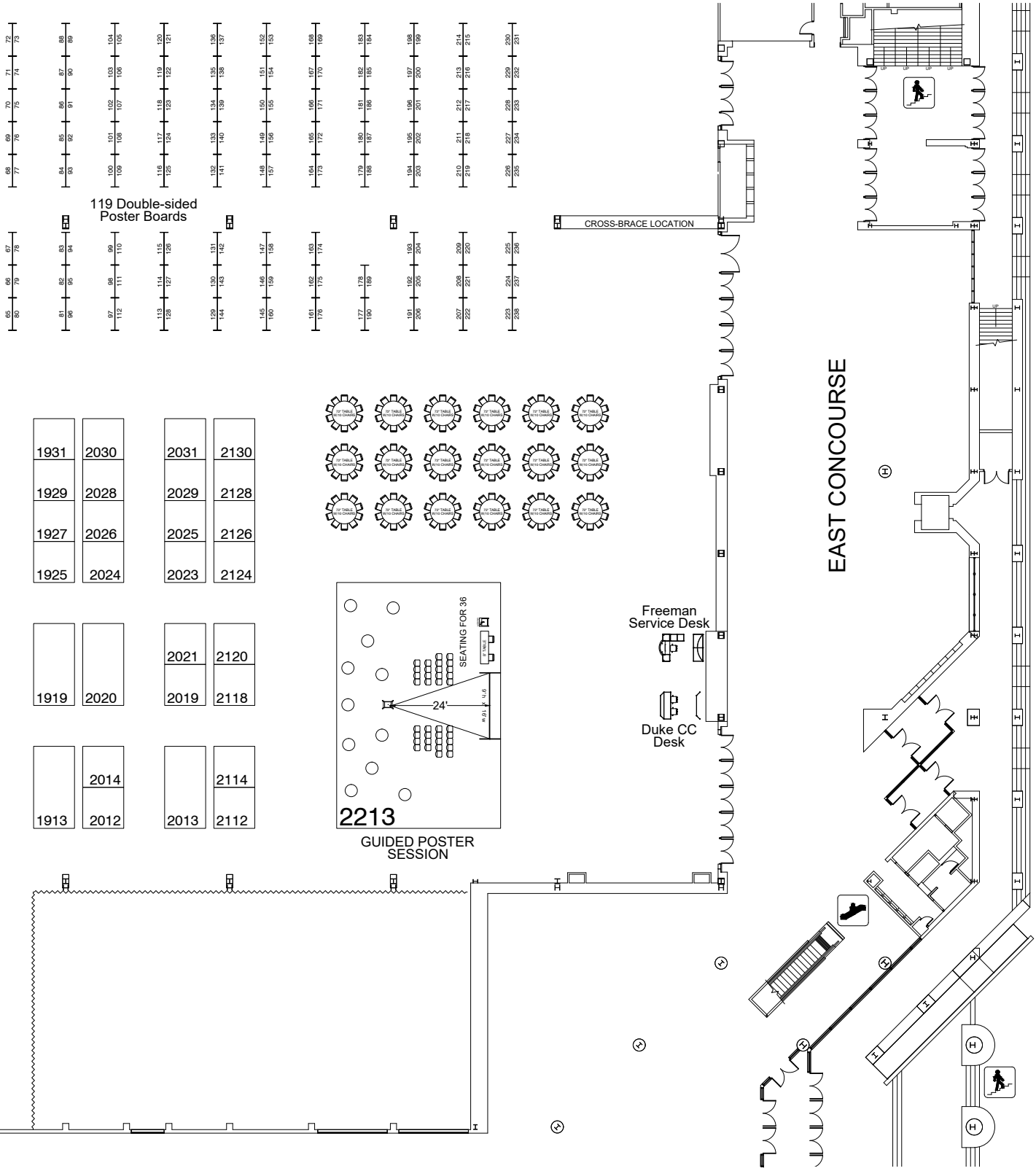
**6:00 PM - 7:30 PM**
**Welcome Reception**
**Supported by local Ohio hosts:**

- Akron Children's Hospital
- Cincinnati Children's Hospital
- Nationwide Children's Hospital
- University Hospitals: Rainbow Babies & Children

**THURSDAY**
**11:30 AM-7:00 PM**
Lunch served
12:45 AM-2:00 PM
Poster Review

**Wine & Cheese Reception**
**5:30 PM-7:00 PM**
Poster Review




119 Double-sided
Poster Boards
CROSS-BRACE LOCATION
EAST CONCOURSE
Freeman
Service Desk
Duke CC
Desk
SEATING FOR 36
24'
2213
GUIDED POSTER
SESSION

# Exhibitors

### Abbvie (#1728)

AbbVie's mission is to discover and deliver innovative medicines that solve serious health issues today and address the medical challenges of tomorrow. We strive to have a remarkable impact on people's lives across several key therapeutic areas. For more information about AbbVie, please visit us at www.abbvie.com. Follow abbvie on Twitter, Facebook, Instgram, YouTube and LinkedIn.

### Acadia Pharmaceuticals, Inc. (#1722 & #1924)

Acadia is trailblazing breakthroughs in neuroscience to elevate life through science. For more than 25 years we have been working at the forefront of healthcare to bring vital solutions to people who need them most. For more information, visit us at www.acadia-pharm.com.

BRONZE SPONSOR

### Alexion, AstraZeneca Rare Disease (#2029 & #2128)

Alexion, AstraZeneca Rare Disease focuses on serving patients and families affected by rare diseases through the discovery, development and commercialization of life-changing medicines. Our research efforts are in novel molecules and targets in the complement cascade and its development efforts on hematology, nephrology, neurology, metabolic disorders, cardiology and ophthalmology.

ALEXION
AstraZeneca Rare Disease

### American Board of Psychiatry & Neurology, Inc. (ABPN) (#2014)

The American Board of Psychiatry and Neurology serves the public interest and the professions of psychiatry and neurology by promoting and assessing the competence of psychiatrists and neurologists and by establishing standards for initial and continuing certification programs.

### Amneal Pharmaceuticals (#2019)

Amneal Pharmaceuticals is focused on the development, manufacturing and distribution of specialty and generic drug products. Amneal markets a portfolio of branded pharmaceutical products in the U.S., with a primary focus on central nervous system and endocrine disorders.

### Association of Child Neurology Nurses (ACNN) (#1927)

The Association of Child Neurology Nurses is an international nonprofit organization of nurses and other health care professionals caring for children with neurological conditions. The ACNN provides educational opportunities at national and regional conferences, nursing excellence awards, research support, newsletters, and online membership contacts for networking. Additional information and how to join can be found at www.neurologynurses.org.

### Astellas Gene Therapies (#1729)

Astellas Gene Therapies is an Astellas Center of Excellence developing genetic medicines with the potential to deliver transformative value for patients. Based on an innovative scientific approach and industry leading internal manufacturing capability and expertise, we are currently exploring three gene therapy modalities: gene replacement, exon skipping gene therapy, and vectorized RNA knockdown.

### Atlantic Health System (#2021)

Atlantic Health System is powered by a workforce of more than 18,000 members and 4,800 affiliated physicians dedicated to building healthier communities. Serving more than half of the state of New Jersey, Atlantic Health is comprised of more than 500 site of care all with a mission to design and deliver high quality innovative and personalized health care, to improve lives for patients, consumers and caregivers.

### Biocodex, Inc. (#2118)

Biocodex, Inc. is the U.S. subsidiary of Biocodex, a family-owned multi-international pharmaceuticals company founded in France in 1953, with proven expertise in treatment for the central nervous system. As the maker of DIACOMIT, we are dedicated to providing education and support to our healthcare providers, affected individuals, and their families.

BRONZE SPONSOR

### Biogen (#1913)

At Biogen, our mission is clear: we are pioneers in neuroscience. Biogen discovers, develops and delivers worldwide innovative therapies for people living with serious neurological and neurodegenerative diseases as well as related therapeutic adjacencies.

Biogen

### BioMarin Pharmaceutical Inc. (#1718)

BioMarin is a world leader in developing and commercializing innovative therapies for rare diseases driven by genetic causes. With a 20-year history, BioMarin remains steadfast to its original mission – to bring new treatments to market that will make a big impact on small patient populations. Visit www.biomarin.com to learn more.

### Bionano Genomics (#1920)

Bionano Genomics is a provider of genome analysis solutions that can enable researchers and clinicians to reveal answers to challenging questions in biology and medicine. Through Lineagen, we provide genetic testing and counseling services for patients with clinical presentations consistent with neurodevelopmental disorders. For more information, visit: www.lineagen.com.

### Cadwell Industries, Inc. (#2028)

Cadwell is listening to our customers and responding to the ever-changing needs of brain monitoring. Arc EEG Software supports all three Arc systems: Apollo+, Essentia, and Zenith, to enable at-home ambulatory EEG, clinical EEG, in-hospital EEG, and high channel-count intracranial monitoring with direct cortical stimulation for epilepsy monitoring and neurosurgery.

### Children's Hospital Los Angeles (#2030)

Children's Hospital Los Angeles is the No. 1 pediatric hospital in California, No. 1 on the West Coast and among top 10 in the nation ranked by *U.S. News & World Report*. Care is led by world-class physicians who are faculty members of the Keck School of Medicine of USC.

### Children's National Hospital (#2124)

Children's National Hospital, based in Washington, D.C., was established in 1870 to help every child grow up stronger. Today, it is the No. 5 children's hospital in the nation, #3 for Neurology and ranked in all specialties evaluated by *U.S. News & World Report*, transforming pediatric medicine for all children.

LOCAL HOST

### Cincinnati Children's (#2130)

With some of the nation's most respected physicians and researchers, Cincinnati Children's Division of Neurology is a leader in the latest research and treatment advances. The depth and breadth of our expertise, along with the novel therapies and clinical trials available, attract patients from across the country and around the world.

Cincinnati Children's

### Epilepsy Alliance Ohio/Epilepsy Alliance America (#1926)

Since 1953, the Epilepsy Alliance Ohio has been dedicated to supporting those impacted by epilepsy in local communities by confronting the spectrum of challenges created by seizures. This is accomplished through direct services such as support groups, counseling services, camps, group homes, advocacy and much more. EAO is a proud founding member of Epilepsy Alliance America.

### Fulgent Therapeutics, LLC (#1826)

Fulgent Genetics is a full-service genomic testing company built around a foundational technology platform. Through our diverse testing menu, Fulgent is focused on transforming patient care in oncology, anatomic pathology, infectious and rare diseases, and reproductive health.

BRONZE SPONSOR

### GeneDx – Sema4 (#1613)

GeneDx, LLC., is an industry leader in genomics and genetic testing. For over 20 years, GeneDx has been at the forefront of genetic innovation, pioneering new technologies and gene discovery, enabling greater diagnostic accuracy for patients and families. When experience matters, GeneDx is your answer.

GeneDx | sema4

BRONZE SPONSOR

### Genentech (#2013)

Considered the founder of the industry, Genentech, now a member of the Roche Group, has been delivering on the promise of biotechnology for more than 40 years. Genentech is a biotechnology company dedicated to pursuing groundbreaking science to discover and develop medicines for people with serious and life-threatening diseases.

Genentech
*A Member of the Roche Group*

### Glut1 Deficiency Foundation (#1725)

The Glut1 Deficiency Foundation is a nonprofit patient advocacy organization dedicated to improving lives in the Glut1 Deficiency community through our mission of increased awareness, improved education, advocacy for patients and families, and support and funding for research.

# Exhibitors

### Invitae (#1619)

Invitae's mission is to bring comprehensive genetic information into mainstream medical practice to improve the quality of healthcare for billions of people. Our goal is to aggregate the world's genetic tests into a single service with higher quality, faster turnaround time and lower prices. Visit www.invitae.com.

SILVER SPONSOR

### Jazz Pharmaceuticals (#1819)

Jazz Pharmaceuticals is a global biopharmaceutical company whose purpose is to innovate to transform the lives of patients and their families. Within our neuroscience portfolio, a priority focus area is exploring treatment options for rare and severe forms of epilepsy through our world-leading GW Cannabinoid Platform. Jazz is headquartered in Dublin, Ireland and has employees around the globe, serving patients in nearly 75 countries.

Jazz Pharmaceuticals

### LivaNova (#1829)

As pioneers of the VNS Therapy™ system, we continue to advance medical device solutions for people affected by drug-resistant epilepsy. We strive to help where it counts, where it truly matters the most. Sharp, responsive and effective – at LivaNova we serve health and improve lives.

### Mallinckrodt Pharmaceuticals (#1631)

Mallinckrodt is a global business consisting of multiple wholly owned subsidiaries that develop, manufacture, market and distribute specialty pharmaceutical products and therapies. To learn more about Mallinckrodt, visit www.mallinckrodt.com.

BRONZE SPONSOR

### Marinus Pharmaceuticals, Inc. (#2012)

Marinus is a commercial stage pharmaceutical company dedicated to the development of innovative therapeutics for seizure disorders.

MARINUS

### MedTech International Group (#1629)

MedTech International Group is a mission-driven company. For us, that means providing world-class LED illumination solutions that help doctors and healthcare professionals around the world. Based in Houston, Texas, MedTech International Group has emerged as a leader in LED illumination for over 5 years and expanded our products for a variety of medical, dental, and veterinary practitioners.

### National Institute of Neurological Disorders and Stroke (NINDS) (#2023)

The National Institute of Neurological Disorders and Stroke (NINDS), part of the National Institutes of Health (NIH), provides information about research support, common data elements, clinical trials, a Migraine Trainer app, and free publications for patients and their families on epilepsy, cerebral palsy, headache, brain injury, and other neurological disorders.

### National Organization for Disorders of the Corpus Callosum (#2126)

The National Organization for Disorders of the Corpus Callosum (NODCC) is a 501(c)(3) nonprofit established in 2002 for individuals with disorders of the corpus callosum, their families and professionals. The NODCC has become the leading organization for disorders of the corpus callosum seeking to raise the profile, understanding and acceptance of these disorders through education, networking, advocacy, and being a catalyst for research.

LOCAL HOST

### Nationwide Children's Hospital (#1710)

Nationwide Children's is ranked among the top 10 best children's hospitals for Neurology and Neurosurgery by US News. Unique areas of focus include stroke, intracranial hypertension, spinal muscular atrophy and muscular dystrophy – including groundbreaking clinical and translational research. We are also top 10 in NIH funding among freestanding children's hospitals.

NATIONWIDE CHILDREN'S
*When your child needs a hospital, everything matters.*

### Neurelis, Inc. (#1719 & #1723)

Neurelis, Inc. is an innovation-driven neuroscience company focused on the development and commercialization of product candidates and innovative delivery technologies for the broader central nervous system (CNS), including epilepsy and psychiatry. In 2020, Neurelis reached a milestone in patient care with its first FDA-approved treatment. For information, please visit http://www.neurelis.com.

### Neurogene Inc. (#1727)

At Neurogene, our focus is to develop life-changing genetic medicines for patients and their families affected by rare, devastating neurological diseases. Our mission is to turn devastating neurological diseases into treatable conditions, to improve the lives of patients and families impacted by these rare diseases.

### Neurotech, LLC (#2031)

Neurotech specializes in EEG services: in-home long-term aEEG, continuous hospital EEG monitoring, and research. Accredited by the Joint Commission, our in-home, long-term EEG monitoring services improve our patients' comfort and provide a cost-effective alternative to a hospital stay. Neurotech cEEG Partners provides hospitals with continuous EEG monitoring in the ICU and EMU to improve patient outcomes.

### Nobelpharma America (#1627)

Nobelpharma America is focused on the commercialization of pharmaceuticals and medical devices that expand treatment options for people with rare diseases. In 2019, NPA became the first wholly owned global subsidiary of Nobelpharma Co., Ltd., which is based in Tokyo Japan.

### Novartis Gene Therapies (#1713)

Novartis Gene Therapies is reimagining medicine to transform the lives of people living with rare genetic diseases. Utilizing cutting-edge technology, we are working to turn promising gene therapies into proven treatments. We are powered by an extensive manufacturing footprint, in capacity and expertise, enabling us to bring gene therapy to patients around the world at quality and scale.

### NS Pharma (#1928)

NS Pharma is a highly focused, research-driven biopharmaceutical company working in rare diseases. Our current goal is to optimize the potential of exon-skipping therapy in treating Duchenne muscular dystrophy (DMD).

### Parent Project Muscular Dystrophy (#2026)

Parent Project Muscular Dystrophy fights to end Duchenne. We accelerate research, raise our voices to impact policy, demand optimal care for every family, and strive to ensure access to approved therapies. Our Decode Duchenne program provides free genetic testing (diagnostic and carrier) for families living in the US or Canada.

### Passage Bio (#2120)

Passage Bio is a clinical-stage genetic medicines company on a mission to provide life-transforming therapies for patients with CNS diseases with limited or no approved treatment options. As we work with speed and tenacity, we are always mindful of patients who may be able to benefit from our therapies.

### Pediatrix Medical Group (#2024)

Pediatrix Medical Group is a provider of maternal-fetal, newborn and pediatric subspecialty services. Starting as a single neonatology practice in 1979, we have evolved into a multi-specialty medical group – capable of delivering a women's and children's continuum of care – meeting the needs of our patients and hospital partners.

## BRONZE SPONSOR

### PTC Therapeutics, Inc. (#1818 and #1820)

PTC is a science-driven, global biopharmaceutical company focused on the discovery, development and commercialization of clinically differentiated medicines that provide benefits to patients with rare disorders. Our mission is to provide access to best-in-class treatments for patients who have an unmet medical need. To learn more, please visit www.ptcbio.com.

PTC THERAPEUTICS™

### Religen Inc. (#2114)

ReligenDX is focused on developing diagnostic solutions in Mitochondrial Medicine, Neurological Disease, and Genetics. We work with parents, patients, advocacy organizations, and healthcare providers to find solutions while developing and implementing new and innovative diagnostic testing, playing a pivotal role in the overall course of treatment.

### RosmanSearch (#1931)

RosmanSearch is a highly specialized recruitment firm. Our mission is to place quality providers with quality practices, academic departments and hospitals nationwide. We are the only search firm in the country with dedicated teams specializing solely in neurosurgery, neurology and urology.

### Sanford Health (#2025)

Sanford Health, the largest rural health system in the United States, is dedicated to transforming the health care experience and providing access to world-class health care in America's heartland. The integrated health system has 47 medical centers, 2,800 Sanford physicians and advanced practice providers, 170 clinical investigators and research scientists and world clinics in 8 countries around the globe.

### Sarepta Therapeutics (#1825)

Sarepta Therapeutics is on an urgent mission: engineer precision genetic medicine for rare diseases that devastate lives and cut futures short. Our focus is on Duchenne and limb-girdle muscular dystrophies, and we have 40+ programs in development across 3 technologies – gene therapy, RNA and gene editing.

### Sentynl Therapeutics (#1930)

Sentynl Therapeutics is a U.S.-based biopharmaceutical company focused on bringing innovative therapies to patients living with rare diseases. With a focus on commercialization, Sentynl looks to source effective and highly differentiated products across a broad spectrum of therapeutic areas to address unmet needs. Sentynl is committed to the highest ethical standards and compliance with all applicable laws, regulations, and industry guidelines.

# Exhibitors

### The Sturge-Weber Foundation (#1929)

The SWF will be exhibiting the latest SWS research updates, annual events program calendar, educational materials and patient engagement events. Learn more about partnership opportunities to advance quality of life and care.

BRONZE SPONSOR

### Takeda (#1919)

Takeda is a patient-focused, values-based, R&D-driven global biopharmaceutical company committed to bringing Better Health and a Brighter Future to people worldwide. Our passion and pursuit of potentially life-changing treatments for patients are deeply rooted in our distinguished history in Japan since 1781.


### Texas Children's Hospital (#1925)

The Neuroscience Center at Texas Children's Hospital is comprised of pediatric neurologists, neurosurgeons, neuropsychologists and neurophysiologists. Our comprehensive team of experts provide care for patients from across the United States and around the world with a diverse array of neurological conditions ranging from the most common to the most complex.

### Travere Therapeutics (#1625)

Travere Therapeutics is a biopharmaceutical company dedicated to identifying, developing and delivering life-changing therapies to people living with rare disease.

### UCB, Inc. (#1813 and #1918)

UCB is a global biopharmaceutical company committed to discovering and developing innovative medicines that transform the lives of people living with severe diseases.

### United Mitochondrial Disease Foundation (#1726)

Every 30 minutes, a child is born who will develop a mitochondrial disease by age 10, although the actual number of children born with the disease is thought to be much higher. The United Mitochondrial Disease Foundation powers the research, education, and support that is advancing treatments for patients and families affected by mitochondrial disorders. Visit umdf.org for more information.

### Upsher-Smith Laboratories, LLC (#1824)

Upsher-Smith Laboratories, LLC is a trusted U.S. pharmaceutical company striving to improve the health and lives of patients through an unwavering commitment to high-quality products and sustainable growth. For more information, visit www.upsher-smith.com.

### UT Health Austin Pediatric Neurosciences at Dell Children's (#2112)

UT Health Austin Pediatric Neurosciences at Dell Children's, has assembled a team of highly specialized clinicians to treat children and adolescents with medical conditions of the central nervous system. Our inter institutional partnership with Dell Medical School at The University of Texas at Austin allows for multidisciplinary collaborations.

### Variantyx, Inc. (#1828)

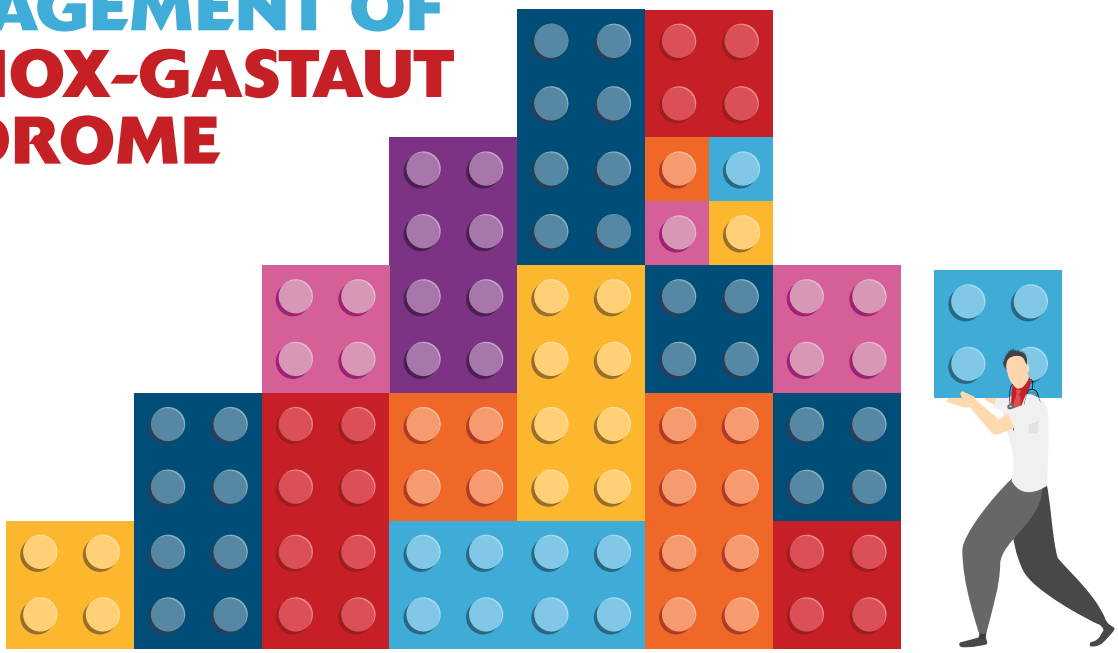
Variantyx is a precision medicine company using a whole genome analysis platform to provide state-of-the-art diagnostic solutions for rare genetic disorders. Our Genomic Unity® testing portfolio includes genome, exome, and phenotype-driven analyses. Learn more about our comprehensive testing for patients with neurological disorders at www.variantyx.com.

### Xenon Pharmaceuticals (#2020)

Xenon Pharmaceuticals is a clinical stage biopharmaceutical company committed to developing innovative therapeutics to improve the lives of patients with neurological disorders. We are advancing a novel product pipeline of neurology therapies to address areas of unmet medical need, with a focus on epilepsy. For more information, please visit www.xenon-pharma.com.

JOIN US FOR A SATELLITE CME LUNCH SEMINAR

# PRACTICAL CLINICAL MANAGEMENT OF LENNOX-GASTAUT SYNDROME



## THURSDAY, OCTOBER 13, 2022

**12:30 PM – 2:30 PM**

Duke Energy Center
Rooms 200 & 205, 2nd Floor


**PROGRAM CHAIR**

**Katherine Nickels, MD**
*Associate Professor of Neurology*
Mayo Clinic
Rochester, Minnesota


**PRE-REGISTER AT:**

**www.millermeded.com/LGS**

Pre-registration does not guarantee seating.
On-site registration may be available, space permitting.

This activity has been approved for *AMA PRA Category 1 Credit*(s)™.

Jointly provided by Postgraduate Institute for Medicine and Miller Medical Communications, LLC.

Postgraduate Institute for Medicine

Miller Medical Communications, LLC.


This live activity is supported by an independent educational grant from Zogenix, Inc.

*CNS CONNECTIOINS*
EDITOR

**Daniel J. Bonthius, MD, PhD**
Medical Director,
Pediatric Neurology
Levine Children's Hospital


# Child Neurology Synapses

## To Vaccinate or Not to Vaccinate?

"Neurological events reported after COVID-19 vaccines: an analysis of vaccine adverse event reporting system." Frontera JA, Tamborska AA, Doheim MF, et al. *Annals of Neurology* 91: 756-771, 2022.

**What the researchers did:**

The fact is widely – but not universally – accepted within the medical community that vaccination against SARS-CoV-2 is the best strategy to prevent COVID. Despite the promotion of COVID vaccination by most physicians, some people in the US and world-wide are reluctant to receive the inoculation. A fear of neurological side effects may be one factor that makes some people reticent to receive the vaccine and some physicians reticent to encourage it. To examine the risk of COVID vaccine-induced neurologic problems, an international team of researchers utilized the US Vaccine Adverse Event Reporting System (VAERS) to determine the incidence of neurological events following COVID vaccination. VAERS is a database co-managed by the US Centers for Disease Control and Prevention (CDC) and Food and Drug Administration (FDA) to track vaccine-induced adverse events reported by clinicians, patients, and vaccine manufacturers. The researchers determined the incidence of a wide spectrum of neurological events reported to VAERS within 42 days of COVID vaccination, during the first ~6 months of 2021. The researchers chose 42 days because they considered this the most plausible timeframe in which neurological events could be associated with prior vaccination. The study included people aged 12 years and older because 12 years was the minimum age for which COVID

vaccines were FDA-approved during the study's timeframe. To determine if the incidence of neurologic events depended on the form and manufacturer of vaccine, the Pfizer (mRNA), Moderna (mRNA), and Janssen (adenovirus vector) vaccines were compared. To determine whether the observed incidence rates of individual neurologic disorders following vaccination exceeded expected values, comparisons were made with age-matched pre-COVID background incidence rates. The rates of neurologic disorders following vaccination were also compared to those induced by the infection itself.

**What the researchers found:**

During the study period, more than 306 million COVID vaccine doses were administered. Of these, 0.10% resulted in reported adverse events, of which one-third were neurological. Thus, reported neurologic events occurred in 0.03% of all vaccine doses administered. The median age of people with reported adverse neurologic events was 50 years, and 71% were female. The median time of onset of the symptoms was one day post-inoculation. The most frequently reported adverse neurological events were headache, fatigue, dizziness, and syncope. The most severe adverse neurologic events following vaccination included Guillain-Barre Syndrome (GBS), cerebral venous thrombosis (CVT), transverse myelitis, and acute disseminated encephalomyelitis (ADEM), each of which occurred in less that one per million vaccine doses, overall. Worsening of an already-existing neurological condition was very rare and was reported in 0.03 per million doses of vaccine. Although adverse neurologic events were rare for all three manufacturers, significantly more such events were reported following Janssen vaccination than either Pfizer or Moderna. When compared to pre-COVID background rates, GBS, CVT, and seizures all occurred at modestly increased rates (>1.5-fold) following Janssen vaccination, but not following Pfizer or Moderna. Thus, inoculation with the Janssen vaccine did lead to increased reporting of some neurologic events. However, when compared with rates of adverse neurologic events induced by COVID infection itself, all three vaccines were highly protective. Rates of adverse neurologic events following vaccination were between 132 and 617-fold lower than those induced by COVID infection.

**What the research means:**

This research study provides compelling evidence that the risk of a neurologic adverse event following COVID vaccination is low. Guillain-Barre syndrome, cerebral venous thrombosis, and seizure might all occur at some increased rate following vaccination, especially the Janssen vaccination, but the risk for all of these is still low. Most importantly, the risk of an adverse neurologic event is way lower from the vaccine that from the infection itself. For child neurologists, this study does have some important limitations. Probably most important among these is the fact that the study included only people aged 12 years and up. Thus, the study provides no information regarding our younger patients. Furthermore, VAERS is a passive reporting system that is subject to reporting bias and under-reporting. I doubt that every person with a headache or dizziness following vaccination gets reported to VAERS. However, for the more serious adverse events, such as GBS and CVT, the rate of reporting to VAERS is probably much higher and the picture much more complete. Despite these caveats, the evidence is very strong: from a neurologic standpoint, the benefits of COVID vaccination outweigh the risks. ●

Link to CNS Synapses Library

# Child Neurology Synapses

## Facing the Facts: Bell's Palsy and Lyme-related Facial Palsy

BY DANIEL J. BONTHIUS, MD, PHD, *CNS CONNECTIONS* EDITOR

"Differentiating Bell's palsy from Lyme-related facial palsy." Guez-Barber D, Swami SK, Harrison JB, McGuire JL. *Pediatrics* 149 (6):e2021053992.

**What the researchers did:**

Acute onset unilateral peripheral facial palsy is a common problem observed by pediatricians and child neurologists. However, despite the high frequency with which facial palsy is diagnosed and treated, many questions regarding this disorder remain unanswered. Among these questions are the following: What are the etiologies of facial palsy in children? What proportion of children with facial palsy have a full recovery and over what time course? What clinical factors can be used to distinguish Bell's palsy from Lyme-related facial palsy? And do corticosteroids aid in the recovery from pediatric facial palsy? To address these questions, a team of researchers conducted a retrospective chart review of children with acute-onset unilateral peripheral facial palsy. The study was conducted in Philadelphia, a city in the region of the country in which Lyme disease is endemic.

**What the researchers found:**

306 children were included in this cohort study. The great majority were diagnosed either with Bell's palsy (68%) or Lyme-related facial palsy (27%). The remaining etiologies, each of which constituted only a small proportion, included otitis media, parotitis, mastoiditis, lymphadenitis, oncologic (leukemia or medulloblastoma), and trauma. Several features tended to distinguish Bell's palsy from Lyme-related facial palsy. Children with Bell's palsy presented consistently throughout the year, while those with Lyme-related facial palsy presented almost exclusively between June and November – a time period reflecting seasonal trends in Lyme disease and risk of tick exposure. Children with Bell's palsy rarely had a systemic prodrome preceding the facial palsy, while those with Lyme-related facial palsy very commonly had a systemic prodrome, which included fever, headache, malaise, arthralgias, and myalgias. Thus, season of presentation and systemic prodrome were clinical factors that helped distinguish Bell's palsy from Lyme-related facial palsy. Of the 82 children with Lyme-related facial palsy, only 25 (30%) had a rash consistent with erythema migrans, and only 3 (less than 4%) had a documented history of a tick bite. Thus, lack of erythema migrans and lack of tick bite were not reliable factors for excluding Lyme-related facial palsy. Neuroimaging and lumbar puncture were performed on a substantial proportion of children with facial palsy, but neither of these procedures yielded information that impacted clinical management. The vast majority (>99%) of the patients with Bell's palsy or Lyme-related facial palsy had eventual resolution of their facial weakness by 76 days after facial palsy onset. The extent and tempo of this resolution did not appear to differ among those who did or did not receive treatment with corticosteroids. Thus, the study demonstrated that the outcome of facial palsy – whether due to Bell's palsy or Lyme disease – is favorable and suggests that corticosteroids are not necessary for resolution of facial palsy in children.

**What the research means:**

This study helps guide the diagnosis and management of children with acute onset unilateral facial palsy. In particular, the study demonstrated that presentation during the months of June-November and presence of a systemic prodrome favors Lyme-related facial palsy over Bell's palsy. Identification of these factors that can distinguish Bell's palsy from Lyme disease is critically important because the latter requires antibiotic treatment while the former does not. Another valuable finding of practical importance is the fact that neuroimaging and lumbar puncture were of no diagnostic value in isolated facial palsy. Thus, these expensive, time-consuming, and unpleasant steps can be avoided in most cases of facial palsy. The retrospective nature of this study does limit its value, however, especially regarding the usefulness of steroids. Because this was a retrospective study in which outcome was determined subjectively and at non-standardized times after treatment, it was not possible to determine whether corticosteroids affected the rate and extent of recovery from Bell's palsy or Lyme-related facial palsy. Thus, the role of corticosteroids for the treatment of facial palsy remains unknown. ●

# Child Neurology Synapses

## Winner by a Nose: Intranasal Stem Cells for Perinatal Ischemic Strokes

BY DANIEL J. BONTHIUS, MD, PHD, *CNS CONNECTIONS* EDITOR

"Feasibility and safety of intranasally administered mesenchymal stromal cells after perinatal arterial ischemic stroke in the Netherlands (PASSIoN): a first-in-human, open-label intervention study." Baak LM, Wagenaar N, van der Aa NE, et al. *Lancet Neurology* 21: 528-536, 2022.

**What the researchers did:**

Perinatal arterial ischemic stroke (PAIS) has an incidence of 1 in 1000 live newborns and is a common cause of long-term neurological and developmental deficits. Depending on the specific artery involved and the size of the infarction, PAIS leads to hemiplegic cerebral palsy, cognitive impairment, language deficits, visual field cuts, and epilepsy. The outcomes of PAIS are often poor, in part, because no treatments are available to alleviate the injuries. In animal models, intranasal administration of stem cells has shown promising results with reduction in infarct size, along with improved motor and cognitive outcomes. However, until now, no clinical trials have been conducted utilizing intranasally administered stem cells for the treatment of PAIS in humans. As an important first step toward exploring the use of stem cells for the treatment of PAIS in newborns, a group of researchers in the Netherlands has conducted a study in which they administered bone marrow-derived allogeneic mesenchymal stromal cells (MSCs) to neonates with PAIS. The cells were derived from a healthy 12-year-old male donor. The cells (approx. 50,000,000 in number) were administered as a single dose intranasally to newborns within 7 days of detection of a PAIS. The principal goal of the study was to determine the feasibility and safety of administering MSCs intranasally to newborns with PAIS.

**What the researchers found:**

Ten neonates were enrolled in the study. In all 10 cases, the researchers were able to transfer the babies to the treating hospital, repeat the MRI scan, and administer the stem cells within 7 days of presentation of stroke signs. Thus, the research revealed that administration of mesenchymal stromal cells to neonates with strokes in a timely manner is feasible. Intranasal administration of mesenchymal stromal cells was well tolerated by all ten neonates. There were no serious adverse events or signs of toxicity in any of the neonates immediately after treatment or during the 3-month follow up period. Except for one baby who had a brief low-grade fever that self-resolved, there were no problems with vital signs, no illnesses, and no abnormal findings on blood inflammation markers. A significant increase in platelet counts was observed, but counts were uniformly within the normal physiologic range. At the 3-month follow-up MRI scan, there were no unexpected structural cerebral abnormalities, such as tumors, infections, or hemorrhages. Thus, the research revealed that intranasal administration of mesenchymal stromal cells to neonates with strokes is safe.

**What the research means:**

This research demonstrated for the first time that it is feasible to administer stem cells intranasally to neonates with arterial ischemic strokes and that this process can be done safely. In one sense, this is a big step forward, as it paves the way toward further consideration of stem cells for the treatment of perinatal arterial ischemic strokes, and, perhaps, for other diseases of the neonatal brain, such as hypoxic-ischemic encephalopathy or intracranial hemorrhage. In another sense, however, this research reminds us of how little we know regarding the use of stem cells for diseases of the infant brain. We do not know whether the cells must be engrafted into the host tissue to produce their potential benefit or whether they act as freely circulating cells. We do not know the mechanism by which the cells might produce their effects. Do they secrete growth factors or anti-inflammatory molecules? Do they reduce apoptotic cell death? Also unknown are the optimal source of the stem cells, the time after injury at which they would optimally be injected, and the best route through which they should be administered. Most importantly, it is unknown whether stem cells are even helpful in an injured neonatal brain. These vast unknowns, however, should not deter scientists or clinicians. We have to start somewhere. In light of the fact that we currently have no treatment for arterial ischemic strokes in neonates, further research into the use of stem cells is clearly warranted and may lead to profound changes in the practice of medicine and in the outcome of neonates with strokes. ●

# Child Neurology Synapses

## Calm Down!
## Valproic Acid Levels Over 100 are OK.

BY DANIEL J. BONTHIUS, MD, PHD, *CNS CONNECTIONS* EDITOR

"Valproic acid serum concentration and incidence of toxicity in pediatric patients." Young MR, Bisaccia EK, Romatseva L, Hovey SW. *J Child Neurol* 37: 461-470, 2022.

**What the researchers did:**

Valproic acid (VPA) is a fundamentally important weapon in the battle against epilepsy. This medication is especially useful for pediatric neurologists treating childhood-onset refractory generalized epilepsies. However, the usefulness of VPA may be limited by its potential adverse effects. Chief among these are thrombocytopenia, liver toxicity, and hyperammonemia. Most of the adverse effects of VPA are dose-dependent, and the clinician is guided in the dosing of VPA by the measurement of serum drug levels. The therapeutic range of VPA for pediatric patients is generally considered to be 50-100 ug/ml. The US Food and Drug Administration cites this range as the traditionally accepted therapeutic range in its labeling of VPA, and many physicians dose their patients with the goal of adhering to this range in their clinical practice. However, epilepsy remains refractory in some patients whose serum levels are within this traditional therapeutic range, thus pushing clinicians to consider higher doses whose levels will exceed the therapeutic ceiling. The question arises whether the risk of adverse effects will be greater in those pediatric epilepsy patients with VPA levels that exceed 100 ug/ml than in those with lower levels. To address this question, Dr. Young and her colleagues at Rush University in Chicago conducted a retrospective observational cohort study of pediatric epilepsy patients between the ages of 2 and 21 years old who were treated with VPA. The study examined patients who were on VPA maintenance therapy over a span of at least 90 days and who had at least 3 serum VPA concentrations measured. The researchers then grouped the patients into serum concentration ranges of 50-80 ug/ml, 80-100 ug/ml, and 100-120 ug/ml, based on where most of each patient's concentration measurements fell. In these groups, they measured the incidence of thrombocytopenia (platelet count less than 50,000/ml), hepatic dysfunction (elevation of liver enzymes above 3x normal), and hyperammonemia (ammonia level higher than 94 ug/dl). Because VPA toxicity could be age-dependent, the researchers also analyzed the data by age group, including prepubescent (2-8.9 years), pubescent (9-14.9 years) and postpubescent (15-21 years) groups.

**What the researchers found:**

The study included 124 patients. Fifty-six of these patients were maintained in the concentration range of 50-80 ug/mL, 44 patients in the range 80-100 ug/mL, and 24 patients in the range 100-120 ug/mL. The incidence of thrombocytopenia, liver dysfunction, and hyperammonemia did not differ significantly across the VPA concentration ranges. These adverse events did not occur at a higher rate in the patients sustained at the higher serum VPA concentrations than in those at the lower concentrations. In fact, the rate of these adverse events was low in all of the different concentration groups. Furthermore, the rates of these adverse events did not depend on age.

**What the research means:**

Many times, I have received a panicky text message from the hospital lab about one of my patients stating "!!Toxic Blood Level – valproic acid level = 110 !!" and the clear implication that I need to do something about it. This research provides insight regarding VPA levels that I have suspected for a long time, namely that a level above 100 is not necessarily a bad thing. This research clearly suggests that valproic acid levels as high as 120 ug/ml do not carry a greater risk of serious adverse effects than do lower levels. There are several important limitations regarding this study that must be kept in mind, however. First, it was a retrospective study. How and why patients ended up with the VPA doses and blood levels that they did is not known. Possibly, the patients with the higher blood levels tolerated lower doses without side effects and were, thus, allowed to receive the higher doses. If this is the case, then this could represent an acquisition bias, and the freedom from side effects in some would not necessarily be experienced by all. Second, the maximum concentration studied was only 120 ug/ml. Some clinicians allow for VPA concentrations as high as 150 ug/ml. This study provides no insight into the safety of VPA levels over 120 ug/ml. Despite these caveats, this research provides strong evidence that VPA blood levels over 100 are often tolerable and harmless. For some patients, VPA blood levels that high might also be helpful and necessary. ●


CNS
51st ANNUAL MEETING
Where the Next
50 Years Begins


CNS
ANNUAL MEETING
Where the Next
50 Years Begins


Wednesday, October 12 - Saturday, October 15, 2022
Duke Energy Center • Cincinnati, Ohio

CNF PRESIDENT

**Anup Patel, MD**
President
Child Neurology Foundation

# Child Neurology Foundation

BY ANUP PATEL, MD, CNF PRESIDENT

It's that time of year again – fall. Where those of us who are college football fans (Go Buckeyes!) are in our glory. Many of us obsessed with caffeine can now enjoy it with a blast of pumpkin spice. And we all eagerly await time together during the annual CNS convention! I'd like to join my close colleague and friend, Bruce Cohen, in welcoming you to the CNS Annual Meeting. It continues to be such an honor to work with Bruce as we both lead our respective organizations – Bruce with the CNS, and me with the Child Neurology Foundation (CNF). While our Missions are synergistic, we still hear feedback of the need for further clarity on the scope of each. For now, I'd like to offer clarity for CNF and how, in particular, we aim to help you every day in your practice.

The Child Neurology Foundation (CNF) serves as a connective hub for the entire child neurology community: patients, families, caregivers, and providers. We provide families with credible resources, tools, education, and connections to support once they leave your clinic or institution. We know your time in clinic is busy and searching for the right patient education or community support for your patient can be time consuming. Therefore, think of us at CNF. Send your patients and families to us and allow us to walk with them – providing the right resource, at the right time, in the right way, and in the right place.

Refer your patients to CNF, so we can:

- Share patient-centric, health literate disease primer information through our Disease Directory (https://www.childneurologyfoundation.org/disorder-directory/)
- Connect to our trained Patient Support Specialists who will access a national network to refer families to community-based resources, such as financial aid, care coordination, food, clothing, transportation assistance, and more. (https://www.childneurologyfoundation.org/family-support/)
- Provide emotional support to families who are searching for a diagnosis, newly diagnosed or facing a new milestone on their journey. (https://www.childneurologyfoundation.org/family-support/)
- Help support families prepare for their visits with you and your child neurology team. (https://www.childneurologyfoundation.org/child-neurologist-new-visit-toolkit/).

For more information on how CNF can help support you, please visit www.childneurologyfoundation.org or email me directly at anup.patel@nationwidechildrens.org . Together, we are all Child Neurology!

Link to
CNF Website

**PERF Shields Grantee:**
**Angela Hewitt, MD, PhD; University of Rochester, Rochester, New York**

Angela Hewitt, MD, PhD, is a Senior Instructor, whose research uses electrophysiology measures such as EEG, EMG, and local field potential recordings to better understand the pathophysiology of dystonia and how deep brain stimulation (DBS) effectively treats it. Her goal is to develop improved neuromodulation therapies for her patients, including how to predict optimal DBS settings for individual patients and strategies for identifying who will respond well to DBS. In clinic, she sees patients who have movement disorders starting in childhood, including tics, Tourette syndrome, stereotypies, dystonia, Parkinsonism, chorea, ataxia, tremor, myoclonus, and other movement disorders. In her adult DBS clinic, she sees patients who have transitioned from the pediatric DBS program.

Dr. Hewitt completed undergraduate and masters studies in biomedical engineering at the University of Wisconsin-Madison. She then earned her MD and PhD degrees through the Medical Scientist Training Program at the University of Minnesota. She is co-founder of the Child Neurology Society Neuromodulation Special Interest Group, and is also active in the Dystonia Coalition, Peds DBS Think Tank, and Child Neurology Research Committee.

Dr. Angela Hewitt's project "Identifying Neurophysiological Biomarkers To Optimize Deep Brain Stimulation (DBS) For Dystonia" will chronically record local field potential (LFP), EEG, and EMG data from subjects before and during DBS therapy. Dr. Hewitt will be mentored by Dr. Jonathan Mink and Dr. Karlo Lizarraga for this project.

**PERF Elterman Grantee:**
**Divakar Singh Mithal, MD, PhD; Ann & Robert H. Lurie Children's Hospital, Chicago, Illinois**

From early in his training, Dr. Mithal was fascinated by every aspect of the brain. After an undergraduate degree in Brain and Cognitive Sciences from MIT, he pursued an MD-PhD degree at Northwestern University Feinberg School of Medicine. During his PhD he studied the role of chemokines, typically thought of as mediators of inflammation, in brain development. The possibility of studying neuro-inflammatory conditions in the developing brain led him to pursue a residency in Child Neurology, but during his clinical training he became interested in two additional aspects of neurology. Firstly, he saw that genetic causes of disease were an increasingly important aspect of neurology, and he became fascinated by a specific subset of these diseases that impair cellular metabolism in the brain. Secondly, and linked to the first observation, he became interested in the most acute and severe forms of neurologic illness, those that required management in a critical care setting. In particular, he began to see an emerging pattern where children severely affected by genetic disorders often require critical care while also lacking any targeted therapies for their specific genetic disorder. The clinical observations led him to pursue post-doctoral research in mitochondrial metabolism, supervised by Dr. Navdeep Chandel at Northwestern University. He also completed an advanced clinical fellowship in Pediatric NeuroCritical Care at the Ann and Robert H. Lurie Children's Hospital of Chicago. He is now a junior faculty member at Northwestern and Lurie, where he is expanding his niche as a physician-scientist at the intersection mitochondrial diseases and NeuroCritical

Child Neurology FOUNDATION
Creating a Community of Support

care by studying basic aspects of mitochondrial metabolism in the neuronal subpopulations.

The central hypothesis for this project is that GABAergic interneurons rely on the TCA cycle through mitochondrial complex I NAD+ regeneration. The proposed experiments will test whether NAD+ regeneration improves neuronal survival or directly alters GABA metabolism. By combing In Vitro and In Vivo methods, the project seeks to provide detailed analysis of mechanisms linking inhibitory interneuron metabolism and mitochondrial function. A deeper understanding of mitochondrial metabolism in neuronal subpopulations may uncover novel therapeutic strategies for PMDs, particularly those with neurologic manifestations.

**Neurodevelopmental Disability Scholarship Recipient:**
**Dominic Julian, MD/PhD Candidate; University of Arizona College of Medicine, Phoenix, Arizona**

Dominic's fascination with the brain began in high school with his younger sister's traumatic brain injury and continued through his master's degree when he watched his grandfather struggle with Alzheimer's. While working at Nationwide Children's Hospital and The Ohio State University before matriculating to medical school, Dominic became inspired by the time he spent working with children receiving gene therapy for neuromuscular disorders, as well as the time he spent in the research lab using stem cells to model neurodegenerative and developmental conditions such as epilepsy. Seeing the synergistic impact that scientists could make in the lab and that the physicians and healthcare team could make clinically made Dominic incredibly excited about becoming a physician-scientist within the field of child neurology. As an MD/PhD student at the University of Arizona College of Medicine – Phoenix, he is pursuing his dream. No matter which specialty involving the brain he ends up deciding to enter following medical school, Dominic hopes to blend my time as a scientist and physician both during and beyond residency. He would love to lead a translational research lab to better understand neurological disorders where our questions and focuses are framed by the patients whom he acknowledges he will be incredibly privileged to take care of as a doctor.

**Swaiman Scholarship Recipient:**
**Daniel Connolly, MD/PhD Candidate; University of Pennsylvania, Perelman School of Medicine, Philadelphia, Pennsylvania**

Daniel is pursuing MD-PhD training to prepare for a career devoted to improving our understanding of childhood neurological disorders through basic research and applying this knowledge in clinical practice. As a future physician-scientist, he hopes to be deeply involved in this process, developing new knowledge in the laboratory and helping apply it in the clinic. After completing training, he plans to pursue a career in academic medicine, spending time in the lab studying basic mechanisms of childhood neurological disorders and the rest of his time in the clinic seeing children affected by these conditions. Daniel hopes to make meaningful improvements in the lives of my future patients and their families and hopes that his discoveries in the lab will positively impact the lives of many future patients as well.

**Swaiman Scholarship Recipient:**
**Alyssa Edwards, MD Candidate; Case Western Reserve University, School of Medicine, Cleveland, Ohio**

Alyssa Edwards is a second-year medical student at Case Western Reserve University School of Medicine. She holds an MPH as well as a BA in cognitive science and a minor in psychology from Case Western Reserve University. Alyssa's past and current research interests are in autism spectrum disorder, neuroimaging, global health, and health disparities in individuals with developmental disabilities.

She is currently working with Dr. Alexander Cohen at Boston Children's Hospital on a study where she will use coordinate network mapping

to determine brain networks most associated with stimulant use in patients with ADHD. Alyssa is excited for a career in which she can continue to follow her passions for neurodevelopmental disabilities with hopes of making a significant impact in the field of child neurology.

**Swaiman Scholarship Recipient: Geetanjali Rajamani, MD Candidate; University of Minnesota Medical School, Minneapolis, Minnesota**

"As my first year at the University of Minnesota Medical School draws to a close, I have been able to reflect on the variety of clinical specialties I have been exposed to. In particular, child neurology stands out to me. I am mesmerized by the capacity of the human brain to perform functions we take for granted in a matter of milliseconds; I enjoy the puzzle-like manner in which neurologists correlate clinical symptoms to brain anatomy. I hope to use my love for the human brain to help children with neurologic conditions go on to live beautiful lives. I aspire to have a career in which I can make meaningful clinical impact on kids and advance research regarding devastating neurologic diseases." ●

Child Neurology FOUNDATION
Creating a Community of Support

PECN PRESIDENT

**Nancy Bass, MD**
President
Professors & Educators
of Child Neurology

# Cincinnati Bound!

## Greetings PECN Members

BY NANCY BASS, MD, PECN PRESIDENT

As the meeting in Cincinnati approaches, I am reflecting on my time spent as President of the Professors and Educators of Child Neurology. A special shout out to Steve Roach who nominated me for this position and encouraged me to pursue this opportunity. In addition, I want to thank Roger Larson for all his support, help and advice these last two years; his guidance has been invaluable. I look forward to working with the new Executive Director, Monique Terrell.

I have enjoyed this time working with all of you and trying to make a difference in the many issues facing the education and training of our future colleagues. During this time, we changed the name of our organization, adding the word "Educators" to emphasize our core commitment to including and serving educational leaders in our specialty. That commitment is reflected in our significant revision of the by-laws to further expand membership, which will positively impact the PECN's mission and members moving forward.

With virtual learning and recruitment taking the forefront these last two years, we have seen progress in getting PECN into the digital and social media realm with the formation of the Digital Committee, led by Jackie Martindale. Be sure to check out the PECN page on the following Social Media sites:

https://twitter.com/thepecn
www.instagram.com/the_pecn
https://www.tiktok.com/@the_pecn

Link to
PECN
Website

**Newly Elected Board of Directors**
Voting ended September 15 with the following colleagues being elected to serve on the PECN Board of Directors:

**President-Elect**
(4-year term):
Soe Mar, MD, MBBS, MRCP
St, Louis Children's Hospital

**Secretary-Treasurer**
(4-year term):
Donald Gilbert, MD
Cincinnati Children's Hospital

**Director at Large**
(Child Neurology;
2-year term):
Kathryn Xixis, MD
University of Virginia Children's Hospital

**Director at Large**
(Child Neurology;
1-year term):
Adam Wallace, MD
University of Wisconsin Health/
University of Wisconsin School of Medicine

**Director at Large** (Neurodevelopmental Disabilities; 1-year term):
Miya Asato, MD
Kennedy Krieger Institute

**PECN Programming in Cincinnati**

I am also very excited to announce the CME program for the October 2022 meeting immediately following the PECN Annual Business Meeting (in the same room).

The first talk will be given by the PECN Digital Committee, which includes Jackie Martindale (Chair), Kathryn Xixis and Jessica Goldstein. They will be presenting "The PECN and Social Media: Tools and Technology Used by Learners."

The next presentation will be by William Graff discussing a "Child Neurology Ethics Curriculum: Webinar Based." This is an exciting opportunity to hear about development of a much needed standardized child neurology specific ethics curriculum.

Jonathan Strober will be giving us an important presentation on "LGBTQ+ Issues in Resident Education."

In closing, I have sincerely enjoyed this time serving as the president of the PECN. I am excited to continue on the Board of Directors as the past president after the October meeting. Thank you to our membership for all you do to promote the training of our residents. I look forward to seeing you all in Cincinnati!

**CNS-PECN Training Director Award**

This year's winner of the CNS-PECN Training Director Award is Tim Lotze. As you know, Tim served as the PECN President before me. Tim is an amazing educator, mentor and colleague as described in beautiful detail by the supporting letters from trainees and colleagues. Tim was also the recipient last year of the AAN Training Director Award last year! I want to personally congratulate Tim for this accomplishment and also send congratulations to all who were nominated for this award. The award will be presented at the Legacy Luncheon on Wednesday, October 12, 11:30 am-1:30 pm.

See complete profile on page 24
.

Professors & Educators of Child Neurology

**PECN Annual Business Meeting**
**Wednesday, October 12**
**2:00 - 3:00 PM**

Link to PECN Twitter

Link to PECN Instagram

Link to PECN Tiktok

# Personnel Registry

## Positions Available in Child Neurology

CNS PERSONNEL REGISTRY

## Arizona

**Pediatric Neurology Opportunity with Semi-Academic Private Practice in Tucson**

An established private practice committed to providing high-quality, patient-centered care is seeking a board-certified or board-eligible pediatric neurologist to join its team. This position offers the ability to work within can organization that is home to Southern Arizona's largest + longest-standing group practice dedicated to the treatment of neurological disorders

**Opportunity Highlights:**

- Autonomy to run your practice how you desire
- Partnership track opportunity
- Work within a successful, efficiently run practice
- Join three other practicing pediatric neurologists amongst other specialists
- Onsite neurophysiology lab
- Semi-academic component but with higher compensation in a private practice model – earn $275,000 annually
- Multispecialty group that includes neurosurgery, adult neurology, pediatric neurology, neuro-oncology, interventional pain management, radiation oncology, neurotology, audiology, and inpatient neurology

**Community Information:**
Surrounded by gorgeous mountains and a nearby national park, Tucson is filled with breathtaking scenery and endless opportunities for adventure. Offering a remarkable quality of life as well as consistent sunshine and warm weather throughout the year, it's an ideal place to call home.

- Family-friendly community with welcoming individuals who value a sense of community
- A low cost of living in inviting neighborhoods
- Excellent public + private schools
- Ample amenities right at your fingertips – an international airport, arts + cultural attractions, incredible shops and restaurants, and much more
- An outdoor enthusiast's dream – enjoy hiking, biking, golfing, fishing, kayaking, and more year-round

Qualifications:

- Candidates must be eligible for medical licensure in the State of Arizona and must be board eligible or certified in Pediatric Neurology.
- Medical degree required

For immediate consideration please inquire with an updated copy of your CV so we can discuss the position by phone. Also, inform me of your best available times to speak. I look forward to your reply and thank you for your review. Please do not delay as we anticipate a significant response.

Please contact Gabriel Wallace at medcareers@merritthawkins.com or at 866-406-0269 and reference PNE-142215

---

**CHILD NEUROLOGY WITH LEADING HEALTH CARE SYSTEM:**
**Phoenix Metro, AZ**

Banner Children's Specialists (BCS), a multispecialty group within Banner Health, is actively recruiting Child Neurologists. The Neurosciences Division at Banner Children's Specialists is expanding to meet the needs of a growing pediatric community. Through a collaborative arrangement between the University of Arizona and Banner Medical Group, the Banner Children's Neurology group serves as the primary pediatric neurology service at the two pediatric hospital campuses for inpatient and outpatient clinics.

**Essential Functions and Qualifications:**
The team seeks BC/BE Pediatric Neurologists to become active members of the pediatric neurology clinical care team, primarily practicing general child neurology. Our goal is to work closely with Neuropsychologists

## Personnel Registry Advertising

AD PLACEMENT
Ads may be placed in the CNS Connections magazine with rates for text-only ads beginning at $250.

Graphic ads begin at $850 for 1/4 page (email/call for rates).

Ads placed in magazine may also be placed on CNS Website for $75 ($275 for non-members).

Deadline for placement in the next issue is **December 1.**

TO POST AN AD:
Go to
www.childneurologysociety.org
Click "Post a Position"

Link to
Post a Position

and Neurosurgeons to provide quality general neurology care to the community. We seek candidates who meet the following qualifications:

- Graduate of an accredited, four–year medical school and an accredited post-graduate residency program in Pediatrics and Neurology
- Eligibility for credentialing as part of the Banner Children's Specialists to include BE/BC Neurology with Special Qualifications in Child Neurology, active license, or ability to obtain a license in Arizona, and current DEA registration
- Experience with general child neurology. Interest or additional training in specific subspecialty areas such as headaches, epilepsy (not seizure disorders), neuromuscular disorders, neonatal or neurodevelopmental neurology is a plus!
- Demonstrated ability to collaborate within a team setting and communicate effectively

Banner Children's Neurology consists of two locations – BDMC and BTMC

Our pediatric neurology practice currently comprises 6 neurologists and 3 NPs at two sites within the greater Phoenix area.

Banner Thunderbird Medical Center (BTMC). The 890,000-square-foot acute-care facility is on 33 acres on the southwest corner of 55th Avenue and Thunderbird Road in Glendale, Arizona. A recently completed $290 million expansion project added a spacious and comfortable main lobby, a patient/family library, a heart and vascular center, state-of-the-art surgical suites, and a 200-bed patient tower to the campus. The new tower includes a new Emergency Department and all-private rooms. 40-bed pediatric inpatient units, pediatric ER, 35-bed NICU, and 6-bed PICU.

BDMC, located in Mesa, AZ, is just 15 minutes away from Banner Ocotillo Medical Center. Banner Desert is dedicated to a high-tech, high-touch philosophy of care that has helped us become the hospital of choice for the East Valley communities for nearly 50 years. We offer state-of-the-art technology in all departments like our da Vinci surgical robots. The facility has 639-beds, and a level 3 NICU.

Banner Health is one of the largest non-profit healthcare systems in the country with 30 hospitals, including the University of Arizona academic hospitals in Tucson and Phoenix, 6 long-term care centers, and many outpatient clinics in six Western states. Our physicians work in highly integrated and innovative environments. Banner promotes collaborative team-oriented workplaces and clinical settings that focus on providing excellent patient care. Excellent compensation package includes incentives and relocation assistance; great location, and ample opportunities to grow professionally.

PLEASE SUBMIT YOUR CV FOR IMMEDIATE CONSIDERATION, TO: doctors@bannerhealth.com For questions, please call Barbara Doty, Physician & Provider Recruitment, at 520-694-6036. Visit our website at: www.bannerhealth.com We are open to sponsoring H1b visas.

The safety of our team members and patients is of utmost importance, so Banner is requiring the COVID-19 vaccine for all team members. As members of the health care field, we are in the business of caring for people, so we take seriously our commitment to ensure our patients and teams are safeguarded from this rapidly changing and dangerous disease.

As an equal opportunity and affirmative action employer, Banner University Medical Group (BUMG) recognizes the power of a diverse community and encourages applications from individuals with varied experiences and backgrounds. BUMG is an EEO/AA - M/W/D/V Employer.

CNS PERSONNEL REGISTRY

# Arkansas

**Pediatric Neurology Faculty Opportunity**

On behalf of Freedom Perkins, Jr., MD, Section Chief, Pediatric Neurology at Arkansas Children's Hospital (ACH), CareerPhysician, a leader in academic pediatric search is pleased to inform you of the national effort to identify qualified faculty to join a renowned neurology division providing expert care for children suffering from a wide range of neurological disorders throughout the state of Arkansas.

**Opportunity Highlights:**

- Arkansas Children's Hospital is the state's only comprehensive children's medical center. Care resources are deployed broadly across the state with the main campus in Little Rock comprised of a 336-bed facility including a Level I trauma center; 3 ICUs and a Level 4 NICU.
- The pediatric neurology division at ACH is home to 13 physicians, 2 PhD neuroscientists, 2 APRNs., post-doctoral fellows and a child neurology residency program. The neurology section has a broad base of sub-specialization including: a very active Level 4 NAEC epilepsy center; a Parent Project Muscular Dystrophy certified care center; a Cure SMA Center of Excellence; Spasticity Program; Comprehensive Headache Center; Neurodevelopmental Disabilities; Movement Disorders and more.
- Led by William Steinbach MD, Pediatrics is the largest department at UAMS and dedicated to a

collaborative, healthy culture and investing in faculty growth, which includes a dedicated mentoring program for junior faculty that aligns early career physicians with resources and institution leaders to provide coaching and guidance while fostering career advancement.
- Our faculty enjoy a diverse practice which includes inpatient service, outpatient clinic, teaching and research time as well as working with underserved populations 4 days each month at our ACH campus in Jonesboro.
- The patient mix includes a broad spectrum of neurologic disorders and acuity, including epilepsy, headache disorders, movement disorders, neurodevelopment, spasticity, and stroke with opportunities to focus on subspecialty areas of interest.
- The city of Little Rock doesn't disappoint offering plenty for outdoor enthusiasts, including great weather and numerous city parks with paved running/walking trails, bike paths, fishing, private and public golf courses, sports facilities, and picnic areas. Families interested in arts and culture will love the Arkansas Museum of Fine Arts and the Little Rock Zoo, as well as a variety of community events throughout the year, including the Cheese Dip Festival, Riverfest, Jazz in the Park and many more. The character in the thriving downtown district, coupled with a mature culinary scene and charming neighborhoods make Little Rock an ideal destination for families, singles, and culinary enthusiasts in search of a unique and flourishing metro to call home.
- Compensation package for this role includes a competitive guaranteed salary (based on rank), sign-on bonus, tremendous benefits and a retirement package that includes an institutional match program.

For more details about this opportunity, or if you would like to recommend an individual(s) who exemplifies the qualities we are seeking in a candidate, please contact Mark Lozano at mark@careerphysician.com, or at 469-553-9311. All interactions will remain confidential, and no inquiries will be made without the consent of the applicant. UAMS and Arkansas Children's Hospital is an AA/EOE/ADA employer committed to excellence through diversity.

CNS PERSONNEL REGISTRY

# California

**Associate or Full Professor (Ladder Rank, In-Residence) Pediatric Neurologist and Neuro-Oncologist Clinician Scientist/Translational Scientist**

University of California San Diego

Application Window

Open date: June 9th, 2022

Next review date: Sunday, Jul 10, 2022 at 11:59pm (Pacific Time)

Apply by this date to ensure full consideration by the committee.

Final date: Friday, Jun 9, 2023 at 11:59pm (Pacific Time)

Applications will continue to be accepted until this date, but those received after the review date will only be considered if the position has not yet been filled.

Position Description:

The Department of Neurosciences at the University of California San Diego (UCSD) (http://neurosciences.ucsd.edu/) is committed to academic excellence and diversity within the faculty, staff and student body and is recruiting a Pediatric Neurologist or Pediatric Neuro-Oncologist for a Ladder Rank (Tenured) faculty position at the Associate or Full Professor level focused in the field of neuro-oncology and experimental therapeutics.

UCSD Neurosciences is a global leader in basic and clinical research into the cause, effects, and treatment of neurological disorders, and has made a substantial investment and commitment to developing an internationally recognized academic program in neuro-oncology (spanning the cutting edge of molecular genetics to clinical therapeutics and community outreach). Teaching and mentorship opportunities will be available in the UCSD School of Medicine and in various Graduate Programs, including the highly-rated UCSD Graduate Program in Neurosciences.

The Division of Pediatric Neurology at UCSD and the Rady Children's Hospital (https://www.rchsd.org/) provides comprehensive neurological clinical care to the children of San Diego County and beyond. At present, the Division is comprised of 24 child neurologists and an extensive team of trainees and allied health professionals. Excellence in clinical care, education and research spans all subspecialty areas of pediatric neurology, including but not limited to epilepsy, neurodevelopmental disorders, stroke, brain injury, headache, neonatal neurology, movement disorders, demyelinating disorders, neurogenetics, and neuromuscular disorders.

The highly collaborative Division of Pediatric Hematology/Oncology at UCSD and Rady Children's Hospital includes 20 faculty members, some of whom are trained Pediatric Neuro-Oncologists. In addition to the Neuro-Oncology Program, there are comprehensive programs for Hematopoietic Stem Cell Transplantation & Cellular Therapy, Hemophilia, Sickle Cell Disease & Hemoglobinopathies, Long Term Follow-up of Cancer Survivors, and Cancer Genetics. The Hematology/Oncology Division faculty are members of the UC San Diego National Cancer Institute-designated Comprehensive Cancer Center, COG, CTN, BCC, PBMTC, and PNOC, and have an Alliance with the St. Jude Children's Research Hospital for conducting joint clinical research.

The Rady Children's Multidisciplinary Neuro-Oncology Program is the only program in the San Diego region providing comprehensive care to children and young adults with brain and spinal cord tumors. Comprehensive care is provided for more than 500 children with newly diagnosed or previously treated central nervous system tumors (one of the highest-volume programs in California). State-of-the-art treatment is provided for both newly diagnosed and recurrent tumors. Advanced neurosurgery procedures, targeted radiation oncology and the latest biologic therapies are available

to patients through a robust alliance with the UC San Diego Moores Cancer Center and research collaborations with the Sanford Burnham Prebys Medical Discovery Institute and The Scripps Research Institute.

The successful candidate will be expected to:

(1) establish a multi-disciplinary and extramurally funded clinical and/or translational research program in any area of pediatric neuro-oncology;

(2) collaborate with members comprising a comprehensive clinical-academic neuro-oncology program based primarily at the Rady Children's Hospital and UCSD, one that further comprises a multitude of clinical trials, molecular tumor board, proton therapy, and funded clinical fellowship positions (through the the Gordon Fellowship in Pediatric Neuro-Oncology), among many other elements;

(3) contribute to both outpatient and inpatient clinical services on a part-time basis as a pediatric neurologist, in primary and/or consultative capacities;

(4) engage with researchers and clinicians in expanding the experimental therapeutics platforms for novel drug discovery based on the neurobiology of identified genetic mutations linked to pediatric brain tumors;

(5) promote campus- and community-wide collaborations with all major clinical and academic stakeholders vested in any aspect of pediatric neuro-oncology;

(6) help expand training and education programs at all levels that will attract the top talent from around the world;

(7) engage both professional and private lay organizations having shared visions and goals for the advancement of diagnosis, care and awareness, and for optimizing long-term outcomes, of patients affected by pediatric brain tumors;

(8) work as a leading advocate and spokesperson for pediatric neuro-oncology at the local, regional, national and international levels; and

(9) carry a major leadership role in national/international professional societies within the field of pediatric neuro-oncology (such as the Society for Neuro-Oncology and the Child Neurology Society), as well as key research sponsors such as the National Institutes of Health and private foundations.

Further, the successful candidate will have a unique opportunity to work with a large group of clinicians, scientists and other healthcare professionals within the county-wide Rady Children's Hospital network and the Rady Children's Institute for Genomic Medicine (RCIGM), and many other organizational/research entities at UCSD (including the Altman Clinical Translational Research Institute, the Skaggs School of Pharmacy, as well as other UCSD Departments such as Pediatrics, Pharmacology and Medicine). RCIGM is an international leader in translational genomics and boasts the world's leading ultra-rapid whole genome sequencing platform (https://www.radygenomics.org/). The candidate will also have an opportunity to benefit from the broad collaborative spirit that exists within the large and diverse body of neuroscientists and strong partnerships developed with the Sanford Research Consortium, and the Salk Research Institute (among many others), and the superb regional biopharmaceutical, biotechnology and gene therapy partners. The successful candidate may be considered for an endowed chair (the Nathan Gordon Chair in Neuro-Oncology at the Rady Children's Hospital).

The appropriate series and appointment at the Associate or Full Professor level will be based on the candidate's qualifications and experience. Series will include 50% Ladder Rank / 50% In-Residence with secured extramural funding or 100% Ladder Rank. Salary is commensurate with qualifications and based on University of California pay scales.

A link to full descriptions of each series is provided for your review:

Ladder Rank Professor - see: http://www.ucop.edu/academic-personnel-programs/_files/apm/apm-220.pdf

In-Residence Professor - see: http://www.ucop.edu/academic-personnel-programs/_files/apm/apm-270.pdf

References may be requested from all finalists.

As a member of the Health Sciences Compensation Plan, the appointee should be aware that there are limitations on outside professional activities and clinical moonlighting is expressly prohibited. Additional information can be found here: https://www.ucop.edu/academic-personnel-programs/_files/apm/apm-671.pdf

Department: http://neurosciences.ucsd.edu/

Unit: https://www.radygenomics.org/

**Qualifications:**

- Basic qualifications (required at time of application)
- Candidates must possess a MD or MD/PhD degrees or equivalent in Health related fields.
- Candidates must have or be eligible for a California medical license or equivalent certification/permit as determined by the Medical Board of California.
- Candidates must also have completed formal accredited Pediatrics or Neurology residency training, and be Board-Certified/Board-Eligible in Pediatric Hematology/Oncology or in Neurology with special qualification in Pediatric Neurology or equivalent certification from another professional association.
- Candidates must have certification in clinical or research fellowship training in Pediatric Hematology/Oncology or Neuro-Oncology.
- Candidates must have demonstrated clinical-academic expertise and accomplishments in the focused field of neuro-oncology and experimental therapeutics.

**Preferred Qualifications:**
Candidates with additional advanced degree such as an MSc, MPH or equivalent are preferred.

**Application Requirements**
**Document requirements**

- Curriculum Vitae – Your most recently updated C.V.
- Cover Letter
- Statement of Contributions to Diversity – Applicants should

summarize their past or potential contributions to diversity. See our http://facultydiversity.ucsd.edu/recruitment/contributions-to-diversity.html site for more information.
- Authorization to Release Form – Authorization to Release Form Applicants must complete, sign and upload this form. See Institutional Reference Check (https://aps.ucsd.edu/recruitment/background_check/https://aps.ucsd.edu/recruitment/background_check/) for more information.
- Misc / Additional (Optional)

**Apply link: https://apptrkr.com/3138258**
**Help contact: mailto:fmarciel@ucsd.edu**

**Campus Information:**
The University of California, San Diego is an Equal Opportunity/Affirmative Action Employer advancing inclusive excellence. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability, age, covered veteran status, or other protected categories covered by the UC nondiscrimination policy.

As a condition of employment, you will be required to comply with the University of California https://urldefense.proofpoint.com/v2/url?u=https-3A__policy.ucop.edu_doc_5000695_SARS-2DCoV-2D2-5FCovid-2D19&d=DwMFAg&c=-35OiAkTchMrZOngvJPOeA&r=1p1nm8oXgrOSQJxpyYfrXMGHr6J-ypOFoP1GKhgxjL0&m=qhl8BcUTOwmd2jWDIXuc2XjxPABC4ZVnlN69zNDdFRQ&s=rX3pS2swVYTSmC79uUmBjYUZrZa6ed0uN24HWzAIVzM&e=.

All Covered Individuals under the policy must provide proof of Full Vaccination or, if applicable, submit a request for Exception (based on Medical Exemption, Disability, and/or Religious Objection) or Deferral (based on pregnancy) no later than the applicable deadline. Please refer to Appendix F, Section II.C. of the policy for the deadlines applicable to new University of California employees. (Capitalized terms in this paragraph are defined in the policy.) Federal, state, or local public health directives may impose additional requirements.

The University of California prohibits https://smokefree.ucsd.edu/ use at all University controlled properties.

The UC San Diego Annual Security & Fire Safety Report is available online at: https://www.police.ucsd.edu/docs/annualclery.pdf. This report provides crime and fire statistics, as well as institutional policy statement & procedures. Contact the UC San Diego Police Department at (858) 534-4361 if you want to obtain paper copies of this report.

To apply, please visit: https://apptrkr.com/3138258



jeid-e22248c69636764ba5dae18b27068f21

---

**Child Neurologist Opportunities with Kaiser Permanente in Northern California**

Fulfilling the promise of medicine

Kaiser Permanente / The Permanente Medical Group

The Permanente Medical Group, Inc. (TPMG – Kaiser Permanente Northern California) is one of the largest medical groups in the nation with over 9,000 physicians, 22 medical centers, numerous clinics throughout Northern and Central California, and an over 75-year tradition of providing quality medical care. We currently have the following opportunities available for Child Neurologists to join a group of Child Neurologists and Child Neurology RN Case Managers:

BC/BE CHILD NEUROLOGISTS

Opportunities in Roseville, California

- Epileptology (full-time): Seeking a candidate with an Epileptology background.
- General (contract): Subspecialty expertise such as Epileptology, Neuromuscular, Neuroimmunology, Headache, or other is a welcome addition, but not required for this general child neurology position.

We have a busy outpatient practice with strong ancillary support for video visits, telephone visits, and clinic visits in our Roseville hub and 7 satellite clinics in Northern & Central California. Our broad geographic coverage leads to care for a wide range of neuropathology. Inpatient call in our Children's Hospital (32-bed pediatric ward, 10-bed PICU, and 60-bed level 3 NICU) is one week in four.

You will join our vibrant 30+ Pediatric Subspecialty department family (11 medical and 6 surgical pediatric specialties) with whom we collaborate closely to integrate patient care. We are part of a larger regional group of Pediatric Neurologists and Surgical Pediatric Epileptologists in Kaiser Permanente Northern California. The right candidate will have a strong team mentality, broad exposure within pediatric neurology, excellent empathic bedside manner, and a desire to innovate Child Neurology care in a supportive environment.

Roseville is one of the North Valley's most prosperous cities and offers an idyllic location at the base of the Sierra Nevada foothills with a climate that's ideal for those who love to enjoy the outdoors all year long. Located an easy driving distance from some of California's most popular recreational attractions, including Lake Tahoe, Folsom Lake and the Napa Valley wine country, the regional also offers affordable home prices, a reasonable cost-of-living, great schools and scenic surroundings.

**A FEW REASONS TO CONSIDER A PRACTICE WITH TPMG:**
- Work-life balance focused practice, including flexible schedules and unmatched practice support
- We can focus on providing excellent patient care without managing overhead and billing.
- We demonstrate our commitment to a culture of equity, inclusion, and diversity by hiring physicians that reflect and celebrate the diversity of people and cultures. We practice in an environment with patients at the center and deliver culturally responsive and compassionate care to our member populations.
- Multi-specialty collaboration with a mission-driven integrated health care delivery model.
- An outstanding electronic medical record system that allows flexibility in patient management

- We have a very rich and comprehensive Physician Health & Wellness Program.
- We are Physician-led and develop our own leaders.
- Professional development opportunities in teaching, research, mentorship, physician leadership, and community service.

**EXTRAORDINARY BENEFITS:**
- Competitive compensation and benefits package, including comprehensive medical and dental
- Moving allowance and home loan assistance – up to $200,000 (approval required)
- Malpractice and tail insurance
- Paid holidays, sick leave, education leave
- Shareholder track
- Three retirement plans, including pension

For more information or to apply, please visit our website at: tpmg.permanente.org

If you are interested, please contact: Judy Padilla, Regional Recruiter, Physician Recruitment Services, at: Judy.G.Padilla@kp.org or 510-625-5915. We are an EOE/AA/M/F/D/V Employer. VEVRAA Federal Contractor

**Connect With Us:**
Facebook: @TPMGPhysicianCareers

LinkedIn: /company/the-permanente-medical-group/

Twitter: @TPMGDocCareers

Instagram: @TPMGPhysicianCareers

---

**Child Neurology Translational Researcher**

The Division of Child Neurology in the Department of Neurology and Neurological Sciences at Stanford University seeks a child neurologist or neuroscientist to be appointed at the Assistant Professor or Associate Professor level in the University Tenure Line (UTL), University Medical Line (UML), or Non-Tenure Line Research (NTLR), depending on qualifications. Desirable applicants should bring expertise in translational research focused on acquired brain injury of childhood, in areas such as stroke, concussion, brain tumors, or neonatal brain injury. Faculty line and rank will be determined by the qualifications and experience of the successful candidate.

- The predominant criterion for appointment in the University Tenure Line is a major commitment to research and teaching.
- The major criteria for appointment for faculty in the University Medical Line shall be excellence in the overall mix of clinical care, clinical teaching, scholarly activity that advances clinical medicine, and institutional service appropriate to the programmatic need the individual is expected to fulfill.
- The major criterion for appointment for faculty in the Non-tenure Line (Research) is evidence of high-level performance as a researcher for whose special knowledge a programmatic need exists.

The successful candidate will have an opportunity to interact across the wide range of clinical,

translational, and basic science programs offered at Stanford. The position requires a strong commitment to scholarly work and should include a highly specific focus on laboratory-based translational research and scholarship relevant to injury of the central nervous system resulting from diseases processes of childhood and complementary to the subspecialty foci the Division. Necessary qualifications include a PhD, MD, or MD/PhD, and, if appropriate, Board certification or eligibility from the ABPN (with Special Competence in Child Neurology), eligibility for a California medical license, and suitable clinical, teaching and scholarship experience. A trajectory of obtaining intra- and extramural grants is desirable.

The Division of Child Neurology is a rapidly growing program at Stanford University with over 35 faculty and a large scholarly footprint in basic and translational science, as well as investigator-initiated clinical trials and correlative research, which attracts extramural funding from a full range of federal agencies and foundations. There are well-established subspecialty foci in stroke, traumatic brain injury, neuro-oncology, neonatal neurology, and epilepsy, among multiple other programs.

Applications will be reviewed beginning immediately and accepted until position is filled.

Stanford is an equal employment opportunity and affirmative action employer. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability, protected veteran status, or any other characteristic protected by law. Stanford welcomes applications from all who would bring additional dimensions to the University's research, teaching and clinical missions.

The Neurology Department, School of Medicine, and Stanford University value faculty who are committed to advancing diversity, equity, and inclusion. Candidates may optionally include as part of their research or teaching statement a brief discussion of how their work will further these ideals.

Applicants should submit a curriculum vitae, candidate statement (no longer than three pages) describing research and teaching activities and interests, and names with contact information of three references to Stanford FSAT system: https://facultypositions.stanford.edu/en-us/job/493405/child-neurology-translational-researcher-assistant-professor-or-associate-professor

**Contact:**
Jackie Loesch
jackiel@stanford.edu

---

**UCSF Fresno Child Neurology**

UCSF Fresno and Central California Faculty Medical Group (CCFMG) are currently recruiting for faculty in Pediatric Neurology at the Assistant, Associate or Full Professor rank. The successful candidate must have completed a residency, be board-eligible/board-certified in Pediatrics or Psychiatry & Neurology. Completion of subspecialty training in neurology care is preferred.

The responsibilities include teaching residents and students and providing

specialty care to pediatrics' patients. Interest or experience in patient-centered research is desirable. Academic rank and salary will be consistent with the successful candidate's professional background. UCSF Fresno's medical education program sees patients at Community Regional Medical Center and has very successful faculty practice sites.

The program is based in Fresno, California, where residents enjoy a high standard of living combined with a low cost of living. The result is a quality of life uniquely Californian, yet surprisingly affordable. Limitless recreational opportunities and spectacular scenery is all accessible in a community with abundant affordable housing. While there is much to see and do in Fresno, the city is ideally located for fast, convenient getaways to the majestic Sierra (just 90 minutes away) as well as the scenic Central Coast, just two and one-half hours away. Fresno is the only major city in the country with close proximity to three national parks, including renowned Yosemite National Park.

**Website:**
https://universitymds.com

**Contact:**
Stephanie Delgado
stephanie.delgado@ccfmg.org

---

**Pediatric Epileptologist**

I am a PERMANENTE PHYSICIAN.

A dedicated doctor who believes in pursing dreams, creating hope, and driving progress.

While every physician at the Southern California Permanente Medical Group has their own personal and professional ambitions, they all share a common vision: to transform the practice of medicine. Every day, they work hand in hand – with each other and their patients – to achieve outcomes that elevate the level of care across our organization and, ultimately, our nation.

**PEDIATRIC EPILEPTOLOGIST**
Opportunities in Southern California

The Kaiser Permanente Southern California Medical Group (SCPMG) is seeking a fellowship-trained board eligible/board certified Pediatric Epileptologist to join a well-established, growing group. We offer comprehensive multidisciplinary support across the region, including a Ketogenic Dietician, a full range of pediatric neurology and pediatric epilepsy services, as well as a well-balanced call schedule and working environment.

**Within the Southern California Permanente Medical Group (SCPMG) we have:**

- A NAEC-accredited Level IV Pediatric Epilepsy Center (Los Angeles)
- Three Tertiary Care Medical Centers (Los Angeles, Orange County, San Bernardino County)
- Three Pediatric Centers of Excellence (Downey, Los Angeles, San Bernardino County)

SCPMG is an organization with strong values, which provides our physicians with the resources and support systems to ensure they can focus on practicing medicine, connecting with one another, and providing the best possible care to their patients. In Southern California, you'll enjoy amazing recreational activities, spectacular natural sceneries, and an exceptional climate.

**SCPMG is proud to offer its physicians:**

- An organization that has served the communities of Southern California for more than 65 years
- A physician-led practice that equally emphasizes professional autonomy and cross-specialty collaboration
- Comprehensive administrative support
- An environment that promotes excellent service to patients
- A fully implemented electronic medical record system
- An excellent salary, comprehensive benefits and partnership eligibility after 3 years

We invite you to make a difference in the communities we serve.

For consideration or to apply, please visit our website at https://scpmgphysiciancareers.com/specialty/neurology/.

For questions or additional information, please contact Michelle Johnson at 800-541-7946 or Michelle.S1.Johnson@kp.org. We are an AAP/EEO employer.

The Answer to Health Care in America.

**Contact:**
Michelle Johnson
Michelle.S1.Johnson@kp.org

---

**Chief of Division of Pediatrics Neurology**

University of California Los Angeles

Requisition Number: JPF07182

The Department of Pediatrics at the David Geffen School of Medicine at UCLA and the UCLA Mattel Children's Hospital seeks candidates to serve as the Chief of the Division of Neurology. This is a full-time tenured position, at the rank of associate or full professor rank. The successful candidate will be a creative and dynamic individual with excellent leadership, research, teaching, administrative and communication skills. Responsibilities will include working to expand and enhance the research, educational and clinical activities of the division including supervising and mentoring faculty towards gaining independence in research and in developing and implementing clinical pediatric policies. Strong background in research and scholarship is required. Applicants must be board certified or board eligible for Psychiatry and Neurology with special qualifications in Child Neurology. The applicant must have a M.D. or equivalent. Compensation for the position is competitive. Individuals with a history of and commitment to mentoring trainees from underrepresented minorities are encouraged to apply.

Cultural North Star. The shared values of the DGSOM are expressed in the Cultural North Star, which

was developed by members of our community and affirms our unswerving commitment to doing what's right, making things better, and being kind. These are the standards to which we hold ourselves, and one another. Please read more about this important DGSOM program at https://medschool.ucla.edu/cultural-north-star.

UC Regents Statement on Ethical Values and Standards of Conduct. All aspects of searches are confidential and all candidates are expected to review and abide by UC Regents Policy 1111 on Statement on Ethical Values and Standards of Conduct https://regents.universityofcalifornia.edu/governance/policies/1111.html.

Qualified applicants please send a CV and letter of interest to this link: https://apptrkr.com/3268144

The University of California is an Equal Opportunity/Affirmative Action Employer. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability, age or protected veteran status. For the complete University of California nondiscrimination and affirmative action policy, see: UC Nondiscrimination & Affirmative Action Policy, https://policy.ucop.edu/doc/4000376/DiscHarassAffirmAction

---

**Medical Director, Epilepsy at CHOC Children's**

Children's Healthcare of Orange County (CHOC) seeks a nationally recognized pediatric neurology epileptologist to serve as the Medical Director, Epilepsy for CHOC Children's Neuroscience Institute.

CHOC Children's is an extensive regional pediatric healthcare network, affiliated with University of California, Irvine committed to defining the future of pediatric medicine and ranked as one of the Best Children's Hospitals in six categories, including neurology and neurosurgery, by *U.S. News & World Report*.

CHOC Children's Neuroscience Institute is one of the leading pediatric programs in the nation, providing comprehensive evaluation, treatment and surgical care for infants to teens with disorders of the brain, spine, muscles and central and peripheral nervous systems. The Neuroscience Institute has six Centers of Excellence and nine Programs. CHOC Children's, the first children's hospital in California, is a Level 4 epilepsy center by NEAC and continues to serve as a national leader in pediatric epilepsy care.

The Medical Director, Epilepsy will serve as part of a dynamic group committed to the growth, expansion, and success of CHOC Children's as a nationally recognized destination for pediatric care, research, and medical education. The Medical Director will serve in a clinical leadership role to develop, grow, and manage epilepsy services. The Medical Director will foster and mentor existing providers, attracting high performing physicians, establish high quality, evidence-based practices, and further develop referral relationships throughout the region. The Medical Director will direct the Epilepsy Fellowship Program and support the University of California, Irvine/CHOC Children's NIH Funded Epilepsy Research Project.

The successful candidate will be an accomplished clinician with demonstrated success in supporting clinical, research and academic activities for pediatric epilepsy. Current Board certification and the ability to obtain an unrestricted California medical license is required.

**Qualified candidates should contact and submit their CV to:**
Todd Wozniak, CIR, CRA
Senior Vice President, Managing Consultant
4 City Place Drive, Suite 300
St. Louis, MO 63141
T 314.236.4493

---

**Clinician Educator-Child Neurology-Stroke and Fetal/Neonatal Neurology**

The Division of Child Neurology in the Department of Neurology and Neurological Sciences at Stanford University School of Medicine is seeking two board-eligible or board-certified neurologists to join the Department as a Clinical Assistant Professor, Clinical Associate Professor, or Clinical Professor in the Clinician Educator line. Desirable applicants should bring expertise in pediatric stroke or fetal and neonatal neurology. Faculty rank will be determined by the qualifications and experience of the successful candidate.

The major criterion for appointment, reappointment and promotion for Clinician Educators is excellence in the overall mix of clinical care and clinical teaching appropriate to the programmatic needs the individual is expected to fulfill. Successful applicants will be encouraged to interact with the wide range of clinical, translational, and basic science programs at Stanford.

Responsibilities will include care of general and subspecialty neurology patients, and teaching of medical students, residents and clinical fellows. For qualified candidates, opportunities are available to participate in research, quality improvement, and development of innovative care programs. Faculty will work in our hospital and clinics at Lucile Packard Children's Hospital (LPCH) and/or outreach sites in the San Francisco Bay Area

**QUALIFICATIONS:**
Candidates must have an MD or equivalent. Fellowship training in a neurology subspecialty, such as autonomic disorders, child neurology, general (comprehensive) neurology, intraoperative neurophysiologic monitoring, movement disorders, neurobehavior/dementia, neurocritical care, or neurohospitalist is highly desirable. Necessary qualifications include board certification or eligibility (ABPN), eligibility for a California medical license, and suitable clinical and teaching experience.

**APPLICATION INSTRUCTIONS:**
Review of applications will be conducted on a rolling basis.

Interested candidates should send a copy of their curriculum vitae, and a statement/ letter of intent outlining their specialty interest to the secure web portal listed below for each subspecialty:

Child Neurology – Pediatric Stroke: https://facultypositions.stanford.edu/en-us/job/493444/clinician-educator-child-neurology-pediatric-stroke

Child Neurology – Fetal & Neonatal Neurology: https://facultypositions.stanford.edu/en-us/job/493445/clinician-educator-child-neurology-fetal-neonatal-neurology

The Department of Neurology and Neurological Sciences, School of Medicine, and Stanford University value faculty who are committed to advancing diversity, equity, and inclusion. Candidates may optionally include as part of their research or teaching statement a brief discussion of how their work will further these ideals.

Equal Employment Opportunity Statement

Stanford University is an equal opportunity employer and is committed to increasing the diversity of its faculty. It welcomes nominations of applications from women, members of minority groups, protected veterans and individuals with disabilities, as well as from others who would bring additional dimensions to the university's research, teaching and clinical missions.

**Contact:**
Julie Ng
Julieng@stanford.edu

---

**Clinical Neurology (Pediatric Epileptologist) Faculty Position – CHLA**

Division of Neurology
Children's Hospital Los Angeles
Keck School of Medicine
University of Southern California

The Division of Neurology, Children's Hospital Los Angeles and the Keck School of Medicine of the University of Southern California (USC) are actively seeking pediatric epileptologists as full-time faculty members.

Division of Neurology:

The Division of Neurology is part of the Neurosciences Service Line (the Neurological Institute) which has been highlighted as a key service line by the hospital. The Division of Neurology is currently undergoing rapid expansion with the development of comprehensive clinical general and sub-specialty child neurology programs as well as enhancement of its research and academic portfolio. A brand-new 23,000 sq. feet integrated outpatient center for the Divisions of Neurology and Neurosurgery opened in the Spring of 2021. The goal of the Neurologic Institute is to offer comprehensive and integrated neurologic services in a patient-centered environment. As we enter the next phase of growth in the Southern California market and beyond, we are looking to recruit additional faculty members to join our team.

CHLA is a busy urban teaching hospital with a diverse patient population. There is a very active outpatient neurology clinic with subspecialty programs in neuromuscular disorders, epilepsy, movement disorders, neuro-intensive care, pediatric stroke, neurocutaneous disorders, demyelinating disorders, and neurodevelopmental disorders. Our faculty currently provide outpatient clinical services to CHLA main campus and five satellite clinic locations within the greater Los Angeles area. The division ACGME-approved child neurology residency program accepts three child neurology residents annually and operates in collaboration with the KSOM LAC + USC/University Hospital. Furthermore, there is ongoing clinical research within our general child neurology and subspecialty programs.

**Comprehensive Epilepsy Program**
We are rapidly growing our Comprehensive Epilepsy Program and are actively seeking epileptologists to join as full-time faculty members. The Comprehensive Epilepsy Center has Level 4 certification – the highest afforded – from the National Association of Epilepsy Centers. Our current pediatric epileptologists are double Board-certified in neurology and epilepsy, with specialty training in pediatric seizure disorders. We have a busy epilepsy surgery program offering ECoG-guided resections, phase II studies with implanted grids/strips and depths, stereo-EEG, EEG source localization and minimally invasive laser ablation. CHLA has an active outpatient EEG lab, a dedicated 6-bed pediatric EMU, wired video EEG playroom and neuro-critical care EEG monitoring service. Our Comprehensive Epilepsy Program includes a spectrum of multi-disciplinary Epilepsy Surgery, Ketogenic Diet Therapy, Epilepsy Genetics and New Onset Seizure Clinics. The CHLA Center for Personalized Medicine has a strong relationship with our epilepsy team and all testing for epilepsy genetic syndromes can be performed in-house with support from affiliated genetic counselors. In addition, the Division of Neurology has an ACGME-approved pediatric epilepsy fellowship program which accepts two fellows annually. Experience with CURRY software, stereoelectroencephalography and transcranial magnetic stimulation preferred.

**Positions available**
Medical Director (full-time) – Comprehensive Epilepsy Program

Clinical Assistant/Associate/Full Professor of Neurology and Pediatrics (Clinician Educator) -- Please apply using the following link: https://usccareers.usc.edu/job/los-angeles/clinical-assistant-associate-full-professor-of-neurology-and-pediatrics-clinician-educator-chla/1209/8827943376

Faculty (full-time)

Clinical Assistant/Associate Professor of Neurology and Pediatrics (Clinician Educator) -- Please apply using the following link: https://usccareers.usc.edu/job/los-angeles/clinical-assistant-associate-or-professor-of-neurology-and-pediatrics-clinician-educator-chla/1209/34085598096

---

Academic appointment through the Keck School of Medicine of USC is available at a level appropriate to training and experience. CHLA and USC strongly values diversity and is committed to

equal opportunity in employment. Women and men, and members of all racial and ethnic groups, people with disabilities, and veterans are encouraged to apply.

USC is an equal opportunity, affirmative action employers. The division greatly values diversity and is committed to building a vibrant and culturally diverse community of faculty that best reflects the patients and families that we serve. Individuals from underrepresented groups in medicine are especially encouraged to apply.

**For inquiries, please contact:**
Diana Babayan, MPH, MBA
Associate Director, Neurological Institute
Children's Hospital Los Angeles
dbabayan@chla.usc.edu
323-361-8963

---

**Pediatric Epileptologist**

The Department of Neurology, University of California at Davis, School of Medicine, is recruiting a Pediatric Epileptologist with expertise in reading pediatric and neonatal EEGs for a full-time faculty position.

Primary responsibilities of the position include inpatient and outpatient clinical care; teaching medical students, residents, and epilepsy fellows; developing research and creative work; and providing university/public service.

The candidate will deliver inpatient care at the UC Davis Children's Hospital and Pediatric Epilepsy Monitoring Unit and outpatient care at the Midtown Neurology Specialty clinic.

The position is available in the Health Sciences Clinical Professor (HSCP) or Clinical Neurology series at the Assistant, Associate, or Full rank commensurate with experience.

The UC Davis Children's Hospital is the Sacramento region's only nationally ranked, comprehensive hospital for children. It has the Central Valley's only Level 1 pediatric trauma center and emergency department with board-certified physicians in more than 30 subspecialties. It has a 49-bed Neonatal Intensive Care Unit (NICU), is a Level III nursery, and cares for infants from throughout Northern California. The NICU averages more than 500 admissions per year while the 24-bed Pediatric Intensive Care Unit (PICU) averages more than 1000 admissions annually. The Pediatric Epilepsy Monitoring Unit (EMU) is a four-bed unit within the Children's Hospital.

The UC Davis Department of Neurology and UC Davis Health teaching hospital are nationally ranked in *US News & World Report*. UC Davis is an NAEC Level 4 Epilepsy Center. The Department of Neurology's Child Neurology section has six physicians, including three pediatric epileptologists, nurse practitioner, and social worker.

**Website:**
https://recruit.ucdavis.edu/JPF04624

**Contact:**
Joe Valadez
jvaladez@ucdavis.edu

---

**Assistant Professor in Residence – NeuroImaging and Metabolic NeuroPlasticity in the Developing Brain**

The University of California, Irvine, Department of Pediatrics is recruiting a translational research scholar for a faculty position in the area of the developmental origins of health and disease. The successful candidate will be an outstanding researcher employing sophisticated brain imaging modalities to understand the contributions of early-life experiences and metabolic factors to brain development and disease origins. The candidate should have an established training and an accomplishment track-record in the foundation and implementation of pre-and postnatal in-vivo magnetic resonance imaging (MRI), and the evident ability to amalgamate large data sources from collaborative studies to decipher the influence of metabolic and experiential factor's on the trajectories of brain structure and connectivity. Preference will be given to candidates with background and expertise in Physics and Biomedical Engineering, and evident technical accomplishments in novel methodologies pertaining to MRI techniques in of the developing brain. This is an academic senate appointment expected to be at the Assistant Professor level. Salary will be commensurate with training and experience. UC Irvine, located in Orange County, with a population of more than three million, has a long and distinguished tradition of excellence in translational medical science.

Requirements – Successful candidates must have a Ph.D., M.D., or equivalent doctoral-level degree, a background in physics and/or Biomedical Engineering, a stellar record of research accomplishments apparent from scholarly publications commensurate with experience, and a demonstrated success with extramural

funding, particularly NIH awards. It is expected that the successful candidate will develop an independent research program, secure extramural funding, and participate in interdisciplinary research and training focused on brain development in the context of cognitive and mental health and disease.

**TO APPLY:**
Please log onto UC Irvine's RECRUIT located at https://recruit.ap.uci.edu/apply/07896. Applicants should complete an online application profile and upload the following application materials electronically to be considered for the position:

1. Curriculum Vitae
2. Cover letter
3. A description of current research and future plans
4. Teaching Statement
5. Inclusive Excellence Activities Statement
6. Reference: 3 to 5, Contact Information only

**For more information, please visit https://recruit.ap.uci.edu/JPF07896**

**Contact:**
Stephanie Brandos
stephan6@hs.uci.edu

# District of Columbia

Pediatric Neurologist (Full-time)

The Mid-Atlantic Permanente Medical Group (MAPMG) proudly provides the highest quality integrated care for over 800,000 members in Virginia, Maryland, and the District of Columbia. We invite applications for a specialist in Pediatric Neurologist at our Capitol Hill Medical Center located in Washington, DC.

In collaboration with the Kaiser Foundation Health Plan of the Mid-Atlantic States, we provide high-quality, patient-centered health care. Through this partnership, our physicians are part of an industry-leading health care delivery model, having access to advanced technological tools and receiving comprehensive practice support.

MAPMG physicians are salaried, without the pressures of alternative payment models or fee-for-services. Our members have easy access to specialists and medical records, thus allowing you to treat the whole patient.

**What You Can Expect:**
- Outpatient: M-F, 8-5pm
- Hybrid model (office & telemedicine) provide care via video call, phone, and email
- Dedicated EEG reading time

Minimum Requirements:
- MD or DO
- Board Certified or Eligible in Pediatrics & Neurology
- Currently licensed or able to obtain licenses in the District of Columbia, Maryland, and Virginia

MAPMG Physicians:
- Practice patient-centered, culturally competent medical care
- Communicate thoughtfully (listen, educate, advocate)
- Lead with integrity
- Value teamwork
- Are transparent and honest
- Go "above and beyond" for their patients

**We Provide You:**
- Competitive compensation
- Comprehensive benefits include 100% employer-funded medical and dental insurance premiums, a pension plan and 401(k), life insurance, and annual leave
- Complete professional liability coverage provided at no cost, 100% reimbursement for obtaining and maintaining board certification, continuing medical education reimbursement, and in-house CME opportunities
- Clinical support team
- A concierge service that works directly with you to apply for all required state, CDS, and DEA licenses

**Equity, Inclusion, and Diversity:**
MAPMG continuously works to identify and mitigate healthcare inequities, and that starts with providing an inclusive, supportive environment for our physicians. We encourage applicants of any race, color, religion, sex, sexual orientation, gender identity, or national origin who value diversity and will commit to practicing culturally competent healthcare.

**Website:**
https://recruiting.ultipro.com/MAP1002MAPMG/JobBoard/9c5b2d47-fac0-4e56-9f06-b9cc2013276d/OpportunityDetail?opportunityId=eb4624f2-9bb0-45ef-8f09-259e9f7bed8d

**Contact:**
Renita Shaw
Renita.N.Shaw@kp.org

---

**Pediatric Neurologist (PRN/Hourly)**

The Mid-Atlantic Permanente Medical Group (MAPMG) proudly provides the highest quality integrated care for over 800,000 members in Virginia, Maryland, and the District of Columbia. We invite applications for a part-time specialist in Pediatric Neurologist at our Capitol Hill Medical Center located in Washington, DC.

In collaboration with the Kaiser Foundation Health Plan of the Mid-Atlantic States, we provide high-quality, patient-centered health care. Through this partnership, our physicians are part of an industry-leading health care delivery model, having access to advanced technological tools and receiving comprehensive practice support.

MAPMG physicians are salaried, without the pressures of alternative payment models or fee-for-services. Our members have easy access to specialists and medical records, thus allowing you to treat the whole patient.

**What You Can Expect:**
- Hybrid model (office & telemedicine) provide care via video call, phone, and email
- Dedicated EEG reading time

Minimum Requirements:
- MD or DO
- Board Certified or Eligible in Pediatrics & Neurology
- Currently licensed or able to obtain licenses in the District of Columbia, Maryland, and Virginia

**MAPMG Physicians:**
- Practice patient-centered, culturally competent medical care
- Communicate thoughtfully (listen, educate, advocate)
- Lead with integrity
- Value teamwork
- Are transparent and honest
- Go "above and beyond" for their patients

**We Provide You:**
- Competitive compensation
- Complete professional liability coverage provided at no cost, 100% reimbursement for obtaining and maintaining board certification, continuing medical education reimbursement, and in-house CME opportunities
- Clinical support team
- A concierge service that works directly with you to apply for all required state, CDS, and DEA licenses

**Equity, Inclusion, and Diversity:**
MAPMG continuously works to identify and mitigate healthcare inequities, and that starts with providing an inclusive, supportive environment for our physicians. We encourage applicants of any race, color, religion, sex, sexual orientation, gender identity, or national origin who value diversity and will commit to practicing culturally competent healthcare.

**Website:**
https://recruiting.ultipro.com/MAP1002MAPMG/JobBoard/9c5b2d47-fac0-4e56-9f06-b9cc2013276d/Opportunity/OpportunityDetail?opportunityId=ea28cd7a-2453-4e40-ab60-706d240fb020

**Contact:**
Renita Shaw
Renita.N.Shaw@kp.org

CNS PERSONNEL REGISTRY

# Florida

**SEE FLORIDA AD on page 103**

---

### Director of Pediatric Epilepsy / Johns Hopkins All Children's Hospital

Johns Hopkins All Children's Hospital (JHACH) in St. Petersburg, Florida seeks a Pediatric Epileptologist to lead our established program. Requirements include board certification in child neurology with fellowship training in epilepsy or clinical neurophysiology. JHACH is a 259-bed teaching hospital, ranked as a *U.S. News & World Report* Best Children's Hospital (2022-2023) in multiple pediatric specialties led by the neurology and neurosurgery programs, which achieved the hospital's highest ranking ever. We are also ranked as the #1 Children's Hospital in the Tampa Bay region. JHACH is the only US hospital outside the Baltimore/Washington, D.C. location that is part of the Johns Hopkins Medicine system.

Our NAEC Level IV Epilepsy Center provides the full spectrum of epilepsy services, and we specialize in the comprehensive evaluation of patients who have difficult-to-treat epilepsy. The practice is limited to the evaluation of intractable epilepsy for advanced procedures such as epilepsy surgery, vagus nerve stimulation, ketogenic diet, complex medication management and clinical trials. We have an active epilepsy surgery program supported by the largest team of pediatric neurosurgeons in Florida. Members of our team have extensive experience with our state-of-the-art technologies including the robotic ROSA device, Monteris LITT laser ablation, and responsive neurostimulation. The epilepsy monitoring unit has six beds, integrated on the neurosurgery/neurology ward.

As members of the Johns Hopkins All Children's Institute for Brain Protection Sciences, our Pediatric Epilepsy and Child Neurology team regularly draws upon the expertise of specialists in Neurosurgery, Neuroimaging, Neuro-oncology and Neuropathology. This multidisciplinary institute unites clinicians, researchers and educators in a comprehensive program to promote optimal neurodevelopment early in life. The $100 million Research and Education Building houses our graduate medical education and simulation programs, as well as an expanded biorepository. Members of the faculty consistently participate in the education of Neurology and Pediatrics residents and our Neuro-Oncology fellowship provides faculty with additional opportunities for teaching and research. In addition to providing clinical care, participation in research will be strongly supported and encouraged. Qualified candidates are eligible for an academic appointment at Johns Hopkins University School of Medicine (academic rank is open and commensurate with experience).

We offer a competitive salary and exceptional benefits package including medical malpractice insurance, relocation assistance, paid vacation, paid time and expenses for CME, 403(B) retirement plan, short and long-term disability coverage, and life insurance. The Tampa-St. Petersburg region is a premier place to work and live, offering year-round sunshine, abundant cultural and recreational activities, sports venues, excellent schools, and an affordable cost of living. We are centrally located to many of Florida's amenities, only minutes from Tampa and the beautiful gulf beaches, two hours from Orlando and four hours from Miami.

**To confidentially learn more details, please contact:**
Joe Bogan
Providence Healthcare Group
817-424-1010 (direct dial)
jbogan@provdoc.com

---

### Pediatric Neurohospitalist – Johns Hopkins All Children's Hospital

Johns Hopkins All Children's Hospital (JHACH) in St. Petersburg, Florida is recruiting an additional pediatric neurohospitalist for our rapidly expanding Child Neurology Program. JHACH is a 259-bed teaching hospital, ranked as a *U.S. News & World Report* Best Children's Hospital (2022-2023) in multiple pediatric specialties led by the neurology and neurosurgery programs, which achieved the hospital's highest ranking ever. We are also ranked as the #1 Children's Hospital in the Tampa Bay region. JHACH is the only US hospital outside the Baltimore/Washington, D.C. location that is part of the Johns Hopkins Medicine system.

Pediatric neurohospitalists will work a schedule of 7 days on – focusing on neurology consultations in the pediatric NICU, PICU, pediatric floor, and EC. The service week is followed by 7 days off. The following week entails seeing hospital and Emergency Center (EC) follow-up patients in the continuity clinic. We seek a well-trained child neurologist who is comfortable providing a wide spectrum of pediatric neurology care including long term EEG with video. JHACH is designated a NAEC Level 4 epilepsy center. Clinical neurophysiology trained neurologists are encouraged to apply.

As members of the Johns Hopkins All Children's Institute for Brain Protection Sciences, our Pediatric Epilepsy and Child Neurology teams draw upon the expertise of specialists in Neurosurgery, Neuroimaging, Neuro-oncology and Neuropathology. This multidisciplinary institute unites clinicians, researchers and educators in a comprehensive program to promote optimal neurodevelopment early in life. The $100 million Research and Education Building houses our graduate medical education and simulation programs, as well as an expanded biorepository facility. Members of the faculty participate in the education of Neurology, Neurosurgery and Pediatrics residents and fellows. Our Neuro-Oncology fellowship provides

faculty with additional opportunities for teaching and research. We are currently in the process of planning for a Pediatric Neurology Residency Program to start in 2024.

In addition to providing clinical care, participation in research will be strongly supported and encouraged. Qualified candidates are eligible for an academic appointment at Johns Hopkins University School of Medicine (academic rank is open and commensurate with experience).

The Tampa-St. Petersburg region is a premier place to work and live, offering year-round sunshine, abundant cultural and recreational activities, sports venues and excellent schools. We are centrally located to many of Florida's amenities, only minutes from Tampa and the beautiful gulf beaches, two hours from Orlando and four hours from Miami.

**To confidentially learn details, please contact:**
Joe Bogan
Providence Healthcare Group
817-424-1010 (office)
jbogan@provdoc.com

Johns Hopkins All Children's Hospital and its affiliates are an Equal Opportunity/ Affirmative Action employer. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity and expression, age, national origin, mental or physical disability, genetic information, veteran status, or any other status protected by federal, state, or local law.

---

**Division Chief – Child Neurology / Johns Hopkins All Children's Hospital**

Johns Hopkins All Children's Hospital (JHACH) in St. Petersburg, Florida seeks a division chief to lead our established and expanding program. JHACH is a 259-bed teaching hospital, ranked as a *U.S. News & World Report* Best Children's Hospital (2022-2023) in multiple pediatric specialties led by the neurology and neurosurgery programs, which achieved the hospital's highest ranking ever. We are also ranked as the #1 Children's Hospital in the Tampa Bay region. JHACH is the only US hospital outside the Baltimore/Washington, D.C. location that is part of the Johns Hopkins Medicine system. We seek an experienced and innovative leader to grow and expand our academic mission and clinical programs.

The ideal candidate will be a strong clinician/academician who is interested in incorporating both into their practice. You will work within a dynamic academic environment located on an expanding clinical campus in St. Petersburg. As members of the Johns Hopkins All Children's Institute for Brain Protection Sciences, our Pediatric Epilepsy and Child Neurology teams draw upon the expertise of specialists in Neurosurgery, Neuroimaging, Neuro-oncology and Neuropathology. This multidisciplinary institute unites clinicians, researchers and educators in a comprehensive program to promote optimal neurodevelopment early in life. The $100 million Research and Education Building houses our graduate medical education and simulation programs, as well as an expanded biorepository facility. Members of the faculty participate in the education of Neurology, Neurosurgery and Pediatrics residents and fellows. Our Neuro-Oncology fellowship provides faculty with additional opportunities for teaching and research. We are currently in the process of planning for a Pediatric Neurology Residency Program to start in 2024.

In addition to providing clinical care, participation in research will be strongly supported and encouraged. Qualified candidates are eligible for an academic appointment at Johns Hopkins University School of Medicine (academic rank is open and commensurate with experience).

The Tampa-St. Petersburg region is a premier place to work and live, offering year-round sunshine, abundant cultural and recreational activities, sports venues and excellent schools. We are centrally located to many of Florida's amenities, only minutes from Tampa and the beautiful gulf beaches, two hours from Orlando and four hours from Miami.

**To confidentially learn details, please contact:**
Joe Bogan
Providence Healthcare Group
817-424-1010 (office)
jbogan@provdoc.com

Johns Hopkins All Children's Hospital and its affiliates are an Equal Opportunity/ Affirmative Action employer. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity and expression, age, national origin, mental or physical disability, genetic information, veteran status, or any other status protected by federal, state, or local law.

---

**Child Neurologist, AdventHealth for Children**

The Walt Disney Pavilion at AdventHealth for Children is looking for a dynamic and energetic pediatric neurologist to join a fast growing multidisciplinary pediatric neuroscience program to help further develop general and subspecialty neuroscience programs.

Currently, the pediatric neuroscience center at AdventHealth for Children has a level IV comprehensive epilepsy center, sleep center, multidisciplinary neurofibromatosis clinic, Tuberous Sclerosis Complex clinic, congenital neurosurgery clinic, and craniofacial clinic supported by a strong group of neuroradiologists and neuropsychologists. The hospital has a 20 bed dedicated neuroscience inpatient unit with an embedded 8 bed epilepsy monitoring unit which will grow to 24 beds in a newly renovated neuroscience floor. Diagnostic facility includes a state-of-art 3T MRIs, PET, SPECT, and MEG center.

Responsibilities of the new physician will include our comprehensive general neurology service in both inpatient and outpatient settings. Subspecialty program interests can certainly be developed as well (neuromuscular, neonatal, neurocutaneous syndrome, movement disorder, and spasticity).

Working with an expanding and committed children's hospital, an established and successful Level IV Peds Epilepsy program with a strong referral base, a dedicated inpatient unit, a strong employed physician multi-specialty group, a family-centered practice atmosphere, the ability to build and shape a program, and a competitive benefits / compensation package are just a few of the many reasons why this is an excellent career opportunity to consider.

Requirements of the position:

Board certified or board eligible through the American Board of Psychiatry and Neurology with special qualification in child neurology

Strong communication skills with patient first mindset

**Contact:**
Jason Junker
Jason.Junker@AdventHealth.com

---

**Child Neurology in Southeast Florida**

Child Neurology Physician Opportunity – Hollywood, FL

Joe DiMaggio Children's Hospital is seeking a pediatric neurologist to join a group of 10 pediatric neurologists, three of which are specialized in epilepsy. Interested physicians should be BE/BC in neurology with special qualification in child neurology. Additional fellowship training is welcomed although not required. Research initiatives will be fully and actively supported through the Office of Human Research, though this is not a requirement of the position.

About Joe DiMaggio Children's Hospital

Joe DiMaggio Children's Hospital (JDCH) is a 226 bed free-standing children's hospital in Hollywood, Broward County, Florida located near Fort Lauderdale. The hospital is currently undergoing a 4-story vertical expansion to double the number of floors and to continue to meet its commitment to providing the highest quality and safest care for children in the region. This expansion is scheduled to open the Fall of 2022 and includes a new CVICU and Cardiac Step Down Unit as well as state-of-the-art ORs and cath labs.JDCH is one of six hospitals that are part of Memorial Healthcare System, the third largest public health system in the country. Memorial delivers nearly 14,000 babies per year in three hospitals and has 132 Neonatal Intensive Care Unit (NICU) beds – both Level II and III services (the state of Florida does not yet have a separate designation for Level IV care).JDCH serves over 375,000 children per year from around the state. Approximately 100,000 children are cared for in our three emergency rooms across the county per year. JDCH's services continue to grow with the opening of the new specialty center/ambulatory surgery center in Palm Beach County in 2018 and a new ambulatory pavilion in Miramar, near Miami-Dade County which will open in 2022.

To see full job description and/or submit your CV for consideration, please visit memorialphysician.com. Additional information about Joe DiMaggio Children's Hospital can be found at jdch.com.

**Pediatric Neurologist**

Tallahassee, FL, United States

**JOB DESCRIPTION**
Nemours Children's Health, Jacksonville is seeking a Pediatric Neurologist to join our team at our multi-specialty clinic located in Tallahassee, FL.

This key position represents an outstanding opportunity to help facilitate the continued growth phase of Nemours in Florida. The Pediatric Neurologist will have the ability to read sleep, EEG, as well as EMG. This opportunity offers a great work/life balance with minimal call responsibility.

This position will be fully integrated into the Pediatric Neurology team at NCH, Jacksonville. Our team consists of 8 board-certified pediatric neurologists including 3 with additional certification in epilepsy, 2 in sleep medicine, 1 in neuromuscular disorders and 1 in neuro-immunology. All of our neurology faculty hold academic appointments at Mayo Clinic School of Medicine. We also offer a pediatric neurology residency program in conjunction with Mayo School of Medicine.

The successful candidate must be eligible for unrestricted Florida License, and have completed a Pediatric Neurology Residency (or Neurodevelopmental Disabilities Residency) and be ABPN Certified/Eligible in Pediatric Neurology.

**Interested candidates should send their formal CV to:**
Zac Wilberger, Physician Recruiter
Nemours Children's Health
zac.wilberger@nemours.org

Nemours Children's Health is an internationally recognized, multi-site pediatric healthcare system built upon a centralized, efficient and collaborative infrastructure committed to improving the health of all children. The mission of Nemours is to improve the health and health care of children by seeking new approaches to the prevention, diagnosis, and treatment of childhood diseases, and to educate the next generation of leaders in children's health.

**ABOUT US**
As one of the nation's premier pediatric health care systems, we've made a promise to do whatever it takes to prevent and treat even the most disabling childhood conditions. It's a promise that extends beyond our nationally recognized clinical treatment to an entire integrated spectrum of research, advocacy, education, and prevention.

Equity, diversity, and inclusion guide our growth and strategy. We are looking for individuals who are passionate about, and committed to, leading efforts to provide culturally relevant care, reducing health disparities, and helping build a diverse and inclusive environment. All Nemours Associates are expected to ensure that these philosophies are embedded in their day-to-day work with colleagues, patients and families.

Nemours aspires to have its workforce and providers reflect the rich diversity of the communities we serve. Candidates of diverse backgrounds, race and ethnicity, religion, age, gender, sexual orientation, and those committed to working with diverse populations and conversant in multicultural values are strongly encouraged to apply. To review the Nemours Anti-Racism Statement, go to: https://www.nemours.org/about/anti-racism-statement.html .

To learn more about Nemours and our commitment to treat every child as if they were our own, visit us at www.nemours.org.

**ABOUT THE TEAM**
At Nemours, our physicians work together – across specialties, clinics, and hospitals – to give children care that's among the safest, most caring, and compassionate. This unique collaboration has earned Nemours a place among the most respected pediatric health care systems in the nation.

As part of a pediatric health system with both clinical and academic partnerships, we are 100% focused on ensuring a healthier future for children. We strive for excellent outcomes across all of our medical and surgical specialties – and we measure these outcomes in order to provide consistent, top-rated care.

Nemours physicians are committed to family-centered care and to making families true partners in every aspect of a child's treatment and care.

**Website:**
https://epyz.fa.us2.oraclecloud.com/hcmUI/CandidateExperience/en/sites/CX_1/requisitions/preview/3281/?keyword=3281&mode=location

CNS PERSONNEL REGISTRY

# Hawaii

Live, Work & Play in Beautiful Hawaii as a Pediatric Neurologist!

The Hawaii Pacific Health Medical Group in partnership with the University of Hawai'i John A. Burns School of Medicine are seeking a highly motivated Pediatric Neurologist for an employment model.

Responsibilities include clinical care at Kapi'olani Medical Center for Women & Children and outpatient care through referrals. Participation in research and teaching through the University of Hawai'i, John A. Burns School of Medicine is also available. Candidates should be Board Certified or eligible to sit for boards in neurology. Competitive salary and full benefits.

The Hawai'i Pacific Health Medical Group is comprised of over 700 employed physicians and advanced practice providers. Together with our four medical centers (Kapi'olani, Pali Momi, Straub, and Wilcox) and more than 50 convenient clinic locations statewide, our nonprofit health system is one of the state's largest health care providers. Our network of physicians and specialists work together to provide a distinctive and effective model of coordinated care for maintaining the health and wellness of our patients.

Competitive salary and full benefits are combined with the advantages of an integrated group practice with the cultural diversity, superb lifestyle, excellent climate and year-round activities of one of the happiest and healthiest places in the country!

Please attach a resume and/or curriculum vitae with a cover letter when you submit an online application, or mail both to: Ruthie Reyes, Physician Recruiter, at ruthier@kapiolani.org or via US Mail at: 1319 Punahou Street, Executive Suite, 1st floor, Honolulu, HI 96826

CNS PERSONNEL REGISTRY

# Illinois

**We are seeking a Full Time Pediatric Neurologist to join our team at Advocate Children's Hospital in Park Ridge, IL**

Advocate Children's Hospital is one of the largest network providers of pediatric services in Illinois. A major referral center for infants and children, our two main campuses in Oak Lawn and Park Ridge combine some of the country's most respected medical talent with exceptional and compassionate care, making us a premier pediatric provider in the Midwest.

**Position Highlights:**

- Join 3 other pediatric neurologists
- 1:4 call, evenings & weekends
- 1:4 Inpatient coverage (5-6 days per month)
- Outpatient responsibilities at our Park Ridge campus (primary site), with some satellite presence in the nearby communities
- Strong support staff of nurses & medical assistants
- All pediatric sub-specialists on-site at Park Ridge
- Resident & medical student interaction
- In-office procedures including interpreting EEGs
- This position offers a competitive salary, sign-on bonus, relocation package, annual CME allowance, full malpractice coverage, and full benefits including a 401K match

**About Advocate Aurora Health**
Advocate Aurora Health is one of the largest not-for-profit integrated health systems in the country. Our integrated delivery model allows our clinicians to offer state-of-the-art, top tier quality care throughout eastern Wisconsin and northern and central Illinois.

Our supportive staff and leadership are committed to an autonomous practice environment and continuously strive to be on the forefront of managing the changing healthcare landscape, advances in technology and innovative approaches to providing impeccable outcomes for our patients.

**Please email your CV to**
Emilee Gabrielson, Physician Recruiter, Emilee.gabrielson@aah.org

CNS PERSONNEL REGISTRY

# Iowa

**Pediatric Epileptologist**

University of Iowa Stead Family Department of Pediatrics seeks a Pediatric Epileptologist. Appointment rank is open and may be to either the tenure track or clinical (non-tenure) track consistent with clinical experience and research interest. Appointment rank to Associate of Pediatrics (non-tenure track) may also be considered. The individual selected will join the Division of Child Neurology to provide pediatric epilepsy patient care, teaching, and consultative services. The candidate will participate in providing clinical services to include VNS/RNS/DBS programing, intraoperative neurophysiologic monitoring, bedside long term EEG monitoring, and routine EEG.

**Requirements:**
Must hold an MD/DO degree, or equivalent

Board certified/eligible in Neurology with Special Qualification in Child Neurology

Fellowship training in Clinical Neurophysiology and/or Pediatric Epilepsy

License or eligible for licensure in the State of Iowa

Demonstrated commitment to diversity, equity and inclusion in the work environment

**Desirable qualifications:**
Interest and/or expertise in advanced epilepsy evaluation and management, including ketogenic diet, deep brain stimulation, responsive neurostimulation, vagus nerve stimulation (VNS), epilepsy surgery evaluation, invasive EEG monitoring including stereo-EEG

Experience in patient-oriented research

Teaching competence in pediatric neurology for medical students and residents

Evidence of scholarly activity

Strong oral and written communication and interpersonal skills

The Division of Pediatric Neurology is a growing part of the Department of Pediatrics with 11 faculty and 5 APPs including 4 clinical neurophysiologists/epileptologists. A robust clinical and basic science research program is present and expanding. We offer all therapeutic options for epilepsy with a dedicated pediatric neurology dietician, pharmacist, research assistant, and genetic counselor. Our recently opened (February 2017) free-standing pediatric hospital offers 7 pediatric HD-camera equipped epilepsy monitoring beds. We have an active epilepsy surgical program with robot assisted s-EEG implantation, source localization, LITT, DBS, VNS, and soon RNS experience. The division has an active outpatient neurology clinic with programs in neuromuscular disorders (MDA), epilepsy (including ketogenic diet clinic), neuro-intensive care, neonatal neurology, headache, tuberous sclerosis complex, and new onset seizure clinics. Our pediatric neurology residency currently accepts one resident per year with a submitted application to take 2 residents per year.

The University of Iowa Carver College of Medicine is one of the top biomedical research institutions in the nation and ranked 39th overall by the 2020 *U.S. News & World Report* and 16th among public medical schools for NIH funding in FY20. Stead Family Department of Pediatrics ranked 25th in NIH funding among all public pediatric departments nationwide in FY20. The ACGME-accredited pediatric residency program at the Children's Hospital trains 47 pediatric residents.

The Stead Family Department of Pediatrics comprises the medical and research staff of University of Iowa Stead Family Children's Hospital, one of the nation's top-ranked pediatric care and research institutions. It is the only university-affiliated hospital in Iowa devoted solely to the care of infants, children, and young adults, and is Iowa's only accredited Level 1 Regional Resource Pediatric Trauma Center. In 2019-2020 University of Iowa Stead Family Children's Hospital ranked in six pediatric specialties in the Best Children's Hospitals *U.S. News & World Report*, including neonatology, orthopedics, diabetes and endocrinology, nephrology, neurology and neurosurgery, and is the only hospital in Iowa to be nationally ranked by *U.S. News & World Report* for children's care.

**For more information contact:**
Aaron D. Boes, M.D., PhD
Associate Professor of Pediatrics
Division Director of Child Neurology
aaron-boes@uiowa.edu

**Visit us on the web at: www.uichildrens.org.**

To apply for this position please visit The University of Iowa website at http://jobs.uiowa.edu , requisition number 74290.

The University of Iowa is an equal opportunity I affirmative action employer. All qualified

applicants are encouraged to apply and will receive consideration for employment free from

discrimination on the basis of race, creed, color, national origin, age, sex, pregnancy, sexual

orientation, gender identity, genetic information, religion, associational preference, status as a

qualified individual with a disability, or status as a protected veteran.

CNS PERSONNEL REGISTRY

# Kentucky

**Academic Pediatric Epileptologist**

Norton Children's Neuroscience Institute, affiliated with the University Of Louisville School Of Medicine, and a part of Norton Children's Medical Group, is seeking a full-time board-certified/board-eligible Pediatric Epileptologist, with an academic role at the assistant or associate professor level. This is a unique opportunity to join a dynamic, interdisciplinary team of professionals, including 16 child neurologists, 4 of whom are pediatric epileptologists, and 10 advanced practice providers, 5 of whom sub-specialize in epilepsy.

Norton Children's Neuroscience Institute provides a comprehensive, multidisciplinary approach to treating epilepsy and seizures. Our team uses state-of-the-art diagnostic tools and offers advanced technologies, such as neuroimaging, VNS, RNS, DBS, and surgical robotics. The Norton Children's Hospital Comprehensive Epilepsy Center is a Level 4 epilepsy center, the highest rating available from the National Association of Epilepsy Centers. In addition to comprehensive diagnostics and treatment options, Norton Children's has several epilepsy subspecialty clinics, including new-onset seizure, refractory epilepsy, neuromodulation (RNS), ketogenic diet, and tuberous sclerosis clinics.

Norton Children's Neuroscience Institute and the University of Louisville shares a vision with Norton Children's Medical Group to grow and further expand our practice and UofL's child neurology division. The ideal the candidate would have opportunities to work closely with medical students, residents, and fellows.

**About the position:**
- Develop the growth and expansion of relevant Norton Children's multidisciplinary epilepsy clinics
- Academic position opportunity within the UofL School of Medicine Division of Neurology, teaching residents and medical students
- Board certified or board eligible and fellowship trained in pediatric epilepsy required
- Opportunities for career growth, with guidance from experienced mentors
- Competitive salary and academic rank commensurate with experience

**Why Norton Healthcare for your career:**
- Integrated academic clinical care model focused on translating clinical research to state-of-the-art bedside care
- Comprehensive research support services provided across all pediatric services lines through Norton Children's Research Institute, affiliated with the UofL School of Medicine
- Market share leader in the region
- Strong history rooted in robust training programs for medical students, residents and fellows
- Named 2021's Top Workplace in the region by the Louisville Courier-Journal
- Named No. 10 on Healthiest Employers' 2021 list of Healthiest 100 Workplaces in America and the No. 1 extra-large employer in Kentucky

Norton Healthcare is an Equal Opportunity Employer M/F/Disability/Veteran/Sexual Orientation/Gender Identity

To discuss this opportunity contact Tracy Shaughnessy at (502) 609-3672 or tracy.shaughnessy@nortonhealthcare.org.

CNS PERSONNEL REGISTRY

# Louisiana

**SEE LOUISIANA AD at right.**

CNS PERSONNEL REGISTRY

# Maryland

**Assistant Professor**

The Department of Microbiology and Immunology at the University of Maryland School of Medicine is recruiting an Assistant Professor on the non-tenure track with expertise in the use of induced pluripotent stem cell (iPSC) technology for disease modeling.

**Qualifications:**
Candidates must have a Ph.D., and publications using iPSC to model neurodegeneration in GBA/Parkinson's disease. The successful candidate will be expected to contribute to ongoing research projects, as well as develop their own research program over time, and additionally will provide supervision to staff and fellows within the laboratory. The expected rank for this position will be Assistant Professor, however, final rank and tenure status will be commensurate with selected candidate's experience.

**The link to apply for this position is:**
https://umb.taleo.net/careersection/jobdetail.ftl?job=220001BZ&lang=en

UMB is an equal opportunity/affirmative action employer. All qualified applicants will receive consideration for employment without regard to sex, gender identity, sexual orientation, race, color, religion, national origin, disability, protected Veteran status, age, or any other characteristic protected by law or policy. We value diversity and how it enriches our academic and scientific community and strive toward cultivating an inclusive environment that supports all employees.

If you need reasonable accommodation for a disability, for any part of the recruitment process, please contact us at https://www.umaryland.edu/jobs/ and let us know the nature of your request and your contact information. Please note that only inquiries concerning a request for reasonable accommodation will be responded to from this email address.

**Contact:**
Ricardo Feldman
RFeldman@som.umaryland.edu

CNS PERSONNEL REGISTRY

# Massachusetts

**Child Neurologist**

Cortica is looking for a Pediatric Neurologist to join our growing multi-disciplinary team in Boston!

At Cortica, one unified team of clinicians deliver treatment programs customized for each child. Services include: Pediatric Neurology, Behavior Therapy, Feeding Therapy, Routine & Ambulatory EEG, Music Therapy, Child-Teen-Sibling and Family Counseling, Parent Training, Speech-Language Therapy, Physical Therapy, Early Intervention, Nutritional Counseling, Occupational Therapy.

Approximately 50% of our patient population has a diagnosis of autism. Other diagnoses include cerebral palsy, intellectual disability, global developmental delay, inborn errors of metabolism, traumatic brain injury, stroke, epilepsy, tic disorder, ADHD, sensory processing disorder, OCD, and anxiety.

We are seeking a full-time physician to join our team. First and foremost, this job is about being an extraordinary physician. Compassion for this unique population and a dedication to upholding the highest standard of medical care is essential.

Apply today to learn more

**Website:**
https://www.Corticacare.com

**Contact:**
Steve Harrington
sharrington@corticacare.com

## PEDIATRIC NEUROLOGIST

The Department of Neurology at LSU Health Shreveport in Shreveport, Louisiana seeks a BC/BE Pediatric Neurologist for a full-time faculty position at an academic rank determined by level of experience and qualifications. This position comes with an attractive compensation package: guaranteed base salary as well as supplemental pay determined by productivity and potential grants. We are looking for a person committed to both patient care and academic development. The successful candidate will join our Pediatric Neurology Division Director and two other Pediatric Neurology faculty. Our resources include an Epilepsy Monitoring Unit with an Epilepsy Surgery program and a certified Sleep Lab with a fellowship program. This position involves an active role in medical student and Neurology resident education as well as participation in departmental activities including supervision of resident clinics, grand rounds and didactic conferences. We are able to sponsor J-1 visas.

*We are an equal opportunity employer and all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, disability status, protected veteran status, or any other characteristic protected by law.*

**Letters of interest/CV should be directed to Dedrick Jordan, MD, PhD, MSQM, MBA, Professor and Chair, Department of Neurology, LSU Health Shreveport, 1501 Kings Hwy., P.O. Box 33932, Shreveport, LA 71130. dedrick.jordan@lsuhs.edu**

LSU Health SHREVEPORT | Department of Neurology

www.lsuhs.edu

**Child Neurologist**

CHILD NEUROLOGIST
BOSTON CHILDREN'S HOSPITAL

The Department of Neurology at Boston Children's Hospital is seeking applicants for a Child Neurologist who focuses on research and clinical care of children with movement disorders. The successful applicant will join a thriving Department of Neurology comprised of 96 faculty members. The candidate must possess an MD degree or equivalent and be board eligible/certified in Neurology with Special Qualification in Child Neurology. The successful applicant will be appointed at a Harvard Medical School rank (Instructor, Assistant or Associate Professor) commensurate with experience, training, achievements and a commitment to teaching Harvard students. The candidate should have a strong history of impactful research and outstanding clinical care.

**Interested candidates should forward their curriculum vitae to:**
Marguerite Burke
Department of Neurology
Boston Children's Hospital
BCH 3443
300 Longwood Avenue
Boston, Massachusetts 02115

Marguerite.burke@childrens.harvard.edu

We are an equal opportunity employer and all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, disability status, protected veteran status, gender identity, sexual orientation, pregnancy and pregnancy-related conditions or any other characteristic protected

**UMass Faculty Appointment – General Ped Neurology or Subspecialty Niche Practice**

The Department of Pediatrics at the University of Massachusetts Medical School and its clinical partner UMass Memorial Children's Medical Center, seek exceptional board eligible or board certified Pediatric Neurologist!

The University of Massachusetts Medical School is consistently ranked one of the top ten primary care teaching programs nationally and is committed to major expansions in many areas of basic and clinical research as well as valuing promotion of clinical excellence. The UMass Memorial Children's Medical Center, a member of the Children's Hospital Association, is the only tertiary care hospital for children in central MA and offers comprehensive Pediatric services.

**Our Pediatric Neurology faculty:**

- Enjoy the opportunity to participate in population health for a large catchment area with a varied pathology,
- Practice general Pediatric Neurology or focus their practice on growing and developing a niche/subspecialty area of interest,
- Work with Pediatric, Adult Neurology and Child and Adolescent Psychiatry residents and enjoy extensive collaborative research opportunities in this stimulating and collegial academic environment,
- Receive a competitive salary and incentives which optimize inpatient and outpatient care as well as a generous benefits package.

Known as "Heart of the Commonwealth", Worcester is the second-most populous city in New England after Boston. Locals and visitors alike enjoy the Worcester Art Museum, EcoTarium, and two historical theaters – Mechanics Hall and Hanover Theater. A center of higher education, Worcester is home to eight separate colleges and universities.

**Contact:**
Selena Dickherber
314-887-4922 (text capability)

**Pediatric Movement Disorders & Neurogenetics Fellowship**

**Location:**
Boston Children's Hospital (primary affiliation) & Massachusetts General Hospital

**Duration:**
12-months (July 1st 2023 – June 30th 2024)

**Prerequisites:**
Applicants must hold an M.D. or M.D./Ph.D. degree, must have completed a residency program in child neurology by July 2023, and must be eligible for a medical license in Massachusetts.

**Clinical Training:**
The goal of this clinical training program is to provide fellows with the skills to become experts in the diagnosis and treatment of pediatric movement disorders, with a particular focus on genetic movement disorders. The core component consists of evaluating patients in the Movement Disorders Program at Boston Children's Hospital and select clinics at Massachusetts General Hospital. The program also includes training in neurogenetics, rare disease research, precision medicine approaches, and specialized techniques and procedures for movement disorders, such as deep brain stimulation and botulinum toxin injections.

**Application:**
The application should consist of a cover letter, personal statement (1-page), curriculum vitae, list of publications, and two letters of recommendation. Copies of USMLE certification; ECFMG certification (if applicable) and visa status (if not a citizen / permanent resident of the U.S) should be provided.

Applications should be submitted as a single PDF to darius.ebrahimi-fakhari@childrens.harvard.edu by December 31, 2022.

CNS PERSONNEL REGISTRY

# Michigan

**Pediatric Neurology Neurocritical Care, Neonatology, Neuro-Oncology, Epilepsy, and Headache Faculty Positions Michigan Medicine – the University of Michigan**

The Department of Pediatrics is seeking six clinical faculty members in the Division of Pediatric Neurology at the University of Michigan in Ann Arbor. Candidates must have MD or DO degrees, be board-certified or board-eligible in Neurology with special qualification in Child Neurology, and hold or have the ability to obtain the appropriate medical licenses in the State of Michigan. Our preferred subspecialty applicants will be engaged in or have completed appropriate subspecialty fellowships or have had at least three years of clinical practice in these subspecialties.

The Pediatric Neurology Division at Mott Children's Hospital provides comprehensive diagnostic services and treatment for children with neurologic disorders. The Division currently includes 25 faculty members with diverse clinical and scholarly interests. Mott Children's Hospital has 26 PICU, 20 Cardiothoracic ICU, 59 NICU, and 128 general care beds. We have an inpatient epilepsy monitoring service run separately from the consultation services. The Division is supported by eight nurse practitioners, three ketogenic dieticians, an epilepsy care coordinator, an epilepsy surgery coordinator, nurses, and social workers. Our research assistants support both multicenter and local clinical research studies. The University of Michigan provides outstanding environments for clinical care, for student and resident education, and for translational, health services, and basic research.

These positions are posted as Clinical Assistant Professor/Clinical Associate Professor/Clinical Professor. Rank of the selected candidate is dependent upon qualifications. Research funding will be taken into consideration while determining clinical effort.

The University of Michigan, the Department of Pediatrics, and the Division of Pediatric Neurology are committed to having our staff and faculty represent a breadth of perspectives to better serve both our patients and the University community. Therefore, Michigan Medicine seeks to recruit and retain a diverse workforce as a reflection of our commitment to serve the diverse people of Michigan and to maintain the excellence of the University. We welcome applications from anyone who would bring additional dimensions to the University's research, teaching, and clinical mission, including women, members of minority groups, protected veterans, and individuals with disabilities. The Department of Pediatrics, like the University of Michigan as a whole, is committed to a policy of nondiscrimination and equal opportunity for all persons and will not discriminate against any individual because of race, color, national origin, age, marital status, sex, sexual orientation, gender identity, gender expression, disability, religion, height, weight, or veteran status. The University of Michigan is an Equal Employment Opportunity/Affirmative Action Employer.

COVID-19 vaccinations are now required for all University of Michigan students, faculty, and staff across all three campuses, including Michigan Medicine. This includes those working or learning remotely. More information on this policy is available on the Campus Blueprint website or the U-M Dearborn and U-M Flint websites.

**Interested physicians should send their personal statement and CV to:**
Steven Leber, MD, PhD
Division Director, Pediatric Neurology
12-733D Mott Children's Hospital
Ann Arbor, MI 48109-4279
Tel: 734-936-4179
Email: leber@med.umich.edu

CNS PERSONNEL REGISTRY

# Minnesota

**Pediatric Neurologist**

Join the authority in medicine and partner with the nation's best hospital (*U.S. News & World Report* 2021-2022), ranked #1 in more specialties than any other care provider. At Mayo Clinic, we believe there is a better path to healing that humanizes the practice of health care and inspires hope in the people who need it most. You will be part of an amazing diverse team committed to solving the most serious and complex medical challenges – one patient at a time.

Mayo Clinic is the leading academic medical center in the world and is consistently ranked as the #1 hospital and #1 in more specialties than any other hospital by *U.S. News & World Report*. Mayo Clinic continuously drives innovation and excellence on the world stage with a strong commitment to our primary value – the needs of the patient come first – delivering the highest quality, safety, and experience at a sustainable cost.

The Division of Child Neurology at Mayo Clinic in Rochester, MN is seeking a Child Neurologist with fellowship-training in Pediatric Headache to join our practice and lead the headache practice into the future.

The Division of Child Neurology includes 13 child neurologists representing a diverse range of specialty expertise. We are closely affiliated with both the Department of Neurology, which includes over 100 board certified neurologists offering highly skilled, state-of-the art neurological care, and the Mayo Clinic Children's Center, a multi-disciplinary group practice that focuses on providing comprehensive, high quality, compassionate medical and surgical care to children and adolescents. The Center includes 200 pediatric specialty physicians, scientists and researchers – spanning 30 medical and surgical departments – who provide care for over 50,000 children and teens each year.

Our practice offers Botox injections for children 13 years and older and nerve blocks for those 16 and older, allowing an opportunity for interested candidates to be involved in such procedures. Our child and adolescent neurology residency training programs are ranked in the top 10 on Doximity and the adult neurology program has headache fellows that rotate in the pediatric clinic.

Candidates should have both a strong interest in clinical practice with a subspecialty focus and a track record, or high potential, of academic success in research or education within these areas. The candidate must demonstrate strong interpersonal skills and capacity to work collaboratively. Candidates must be an M.D. or D.O. (or foreign equivalent) with a Minnesota license or eligibility for a Minnesota license. Candidates must be APBN board certified in Neurology or FRCPC in Pediatric Neurology. Mayo Clinic is located in the heart of Rochester, Minnesota, a vibrant, friendly city that provides a highly livable environment for more than 34,000 Mayo staff and students. The city is consistently ranked among the best places to live in the United States because of its affordable cost of living, healthy lifestyle, excellent school systems, and exceptionally high quality of life. Mayo Clinic is ranked No.1 in the nation by *U.S. News & World Report* (2021-2022 Best Hospitals).

Our multi-disciplinary group practice focuses on providing high quality, compassionate medical care. We are the largest integrated, not-for-profit medical group practice in the world with approximately 3,800 physicians and scientists across all locations working in a unique environment that brings together the best in patient care, groundbreaking research, and innovative medical education. Mayo Clinic Health System connects Mayo Clinic's respected expertise with Mayo's community-focused multispecialty groups in 75 communities. We offer a highly competitive compensation package, which includes exceptional benefits

**Website:**
https://ars2.equest.com/?response_id=33a91031b913acf93a4e771143314de0

**Contact:**
Mayo Clinic
mayo@equest.com

---

**Pediatric Neurologist – Movement Disorders**

Join the authority in medicine and partner with the nation's best hospital (*U.S. News & World Report* 2022-2023), ranked #1 in more specialties than any other care provider. At Mayo Clinic, we believe there is a better path to healing that humanizes the practice of health care and inspires hope in the people who need it most. You will be part of an amazing diverse team committed to solving the most serious and complex medical challenges – one patient at a time.

Mayo Clinic is the leading academic medical center in the world and is consistently ranked as the #1 hospital and #1 in more specialties than any other hospital by *U.S. News & World Report*. Mayo Clinic continuously drives innovation and excellence on the world stage with a strong commitment to our primary value – the needs of the patient come first – delivering the highest quality, safety, and experience at a sustainable cost.

The Division of Child Neurology at Mayo Clinic in Rochester, MN is seeking a Child Neurologist with fellowship-training in Movement Disorders to join our practice and lead the pediatric movement disorder practice into the future.

The Division of Child Neurology includes 13 child neurologists representing a diverse range of specialty expertise. We are closely affiliated with both the Department of Neurology, which includes over 100 board certified neurologists offering highly skilled, state-of-the art neurological care, and the Mayo Clinic Children's Center, a multi-disciplinary group practice that focuses on providing comprehensive, high quality, compassionate medical and surgical care to children and adolescents. The Center includes 200 pediatric specialty physicians, scientists and researchers – spanning 30 medical and surgical departments – who provide care for over 50,000 children and teens each year.

We have strong collaboration with the adult movement disorders group and have a movement disorders laboratory as well as a strong deep brain stimulation program. Our child and adolescent neurology residency training programs are ranked in the top 10 on Doximity.

Candidates should have both a strong interest in clinical practice with a subspecialty focus and a track record, or high potential, of academic success in research or education within these areas. The candidate must demonstrate strong interpersonal skills and capacity to work collaboratively.

Candidates must be an M.D. or D.O. (or foreign equivalent) with a Minnesota license or eligibility for a Minnesota license. Candidates must be APBN board certified in Neurology. Mayo Clinic is located in the heart of downtown Rochester, Minnesota, a vibrant, friendly city that provides a highly livable environment for more than 34,000 Mayo staff and students. The city is consistently ranked among the best places to live in the United States because of its affordable cost of living, healthy lifestyle, excellent school systems and exceptionally high quality of life.

**Website:**
https://ars2.equest.com/?response_id=3eb783e5d7f16cb8ded313253eb00ac3

---

**Pediatric Neurologist – Neurometabolic**

Join the authority in medicine and partner with the nation's best hospital (*U.S. News & World Report* 2021-2022), ranked #1 in more specialties than any other care provider. At Mayo Clinic, we believe there is a better path to healing that humanizes the practice of health care and inspires hope in the people who need it most. You will be part of an amazing diverse team committed to solving the most serious and complex medical challenges – one patient at a time.

Mayo Clinic offers a variety of employee benefits. For additional information please visit Mayo Clinic Benefits. Eligibility may vary.

The Division of Child Neurology at Mayo Clinic in Rochester, MN is seeking a Child Neurologist with fellowship-training in Neurometabolic Disorders to join our practice and lead the pediatric neurometabolic practice into the future.

The Division of Child Neurology includes 13 child neurologists representing a diverse range of specialty expertise. We are closely affiliated with both the Department of Neurology, which includes over 100 board certified neurologists offering highly skilled, state-of-the art neurological care, and the Mayo Clinic Children's Center, a multi-disciplinary group practice that focuses on providing comprehensive, high quality, compassionate medical and surgical care to children and adolescents. The Center includes 200 pediatric specialty physicians, scientists and researchers – spanning 30 medical and surgical departments – who provide care for over 50,000 children and teens each year.

Our child and adolescent neurology residency training program is ranked in the top 10 on Doximity.

Candidates should have both a strong interest in clinical practice with a subspecialty focus and a track record, or high potential, of academic success in research or education within these areas. The candidate must demonstrate strong interpersonal skills and capacity to work collaboratively.

Candidates must be an M.D. or D.O. (or foreign equivalent) with a Minnesota license or eligibility for a Minnesota license. Candidates must be APBN board certified in Neurology or FRCPC in Pediatric Neurology. Mayo Clinic is located in the heart of downtown Rochester, Minnesota, a vibrant, friendly city that provides a highly livable environment for more than 34,000 Mayo staff and students. The city is consistently ranked among the best places to live in the United States because of its affordable cost of living, healthy lifestyle, excellent school systems and exceptionally high quality of life.

**Website:**
https://ars2.equest.com/?response_id=638d60f63e2c5569eace42fb4cba7d18

CNS PERSONNEL REGISTRY

# New York

**Assistant or Associate Professor, Pediatric Neurology, Weill Cornell Medicine Department of Pediatrics (General Child Neurology)**

Pediatric Neurology

Position Title: Faculty, Division of Child Neurology (General Child Neurology)

Location: New York, NY

Assistant or Associate Professor, Pediatric Neurology, Weill Cornell Medicine Department of Pediatrics

The Division of Child Neurology at Weill Cornell Medical College is seeking a full-time pediatric neurology physician for a faculty position in the Division to expand our busy and growing pediatric neurology program. This position will include clinical responsibilities at New York Presbyterian – Weill Cornell Medical Center in Manhattan, NY. The Division provides a wide range of clinical services in conjunction with a vibrant research program in developmental neurosciences as a component of the Tri-institutional program with Rockefeller University and Memorial Sloan-Kettering Cancer Center. The Division participates in an ACGME-accredited child neurology residency program and pediatric epilepsy fellowship.

Responsibilities include inpatient and outpatient service locations. Academic activities will include the teaching of pediatric neurology and adult neurology residents, as well as medical students. Successful applicants should be BC / BE in Child Neurology. An interest in clinical and/or translational research is welcomed. The position offers a competitive salary and benefits package and academic rank commensurate with experience.

Diversity is one of Weill Cornell Medicine's core values and is essential to achieving excellence in patient care, research, and education. We welcome applications from candidates who share our commitment to fostering a culture of fairness, equity, and belonging. Weill Cornell Medicine is an Equal Employment Opportunity Employer, providing equal employment opportunities to all qualified applicants without regard to race, sex, sexual orientation, gender identity, national origin, color, age, religion, protected veteran or disability status, or genetic information.

**All interested applicants, please email a CV, description of clinical and academic interests, and the names of 3 references to:**
Zachary Grinspan, MD MS
Interim Chief, Child Neurology
Director of Pediatric Epilepsy
Department of Pediatrics, Weill Cornell Medicine
Email: Zag9005@med.cornell.edu

Weill Cornell Medical College is an employer and educator recognized for valuing AA/EOE/M/F/Protected Veterans, and Individuals with Disabilities.

www.cornellpediatrics.org

www.med.cornell.edu

---

**Pediatric Neurology Opportunities at Northwell Health/CCMC**

The Division of Pediatric Neurology at the Steven and Alexandra Cohen Children's Medical Center of New York has the following openings for BC/BE Pediatric Neurologists subspecializing in:

- General Pediatric Neurology @ our Westchester Location
- Neonatal Neurology/ Critical Care Neurology @ our New Hyde Park Location

The Division of Pediatric Neurology is comprised of 12 Pediatric Neurologists, 4 NPs, two social workers, a neuropsychologist, one research assistant, and a ketogenic diet specialist, and has an ACGME-approved residency training program (two per year). It also has an ACGME approved pediatric epilepsy fellowship training program (one per year). Faculty also participate in the curriculum of the General Pediatric Residency Training Program. We offer a robust clinical and scholastic experience in a family centered region of New York. We have a dedicated 10 bed neuroscience unit (Level 4 NAEC) for our surgical patients, and perform stereoEEG assisted by our robot ROSA. We also have a three bed sleep lab. We have opportunities in multiple locations across the metropolitan region. We

oversee 40,000 deliveries per year in the Northwell Health system. Faculty have appointments at Zucker School of Medicine at Hofstra/Northwell. We have an active research program with intramural and extramural funding, and ongoing several drug studies. Learn more about the division in this video: https://youtu.be/ZpQB5uFMPHY.

The Steven and Alexandra Cohen Children's Medical Center (CCMC) is the largest pediatric teaching hospital in the New York metropolitan region. It is the tertiary pediatric medical center of Northwell Health and it is the only Level-1 Pediatric Trauma Center on Long Island. Today, it is the largest pediatric teaching hospital in the region, treating over 230,000 children per year and serving 1.8 million children in Brooklyn, Queens, Nassau, and Suffolk counties. CCMC is committed to a center of excellence in pediatric neurology including a newly renovated Epilepsy Monitoring Unit (NAEC level 4) opened in 2016. We are proud to have been selected as one of "America's Best Children's Hospitals" by *U.S. News & World Report* for 10 years in a row.

Northwell Health has 23 hospitals and more than 750 outpatient locations throughout the Metro New York area and beyond, Northwell Health serves over 11 million people and is one of the largest and most diverse academic medical centers in the nation. In addition to the renowned tertiary clinical resources that we offer, our faculty also enjoys access to the scholastic and research resources of the Feinstein Institute for Medical Research and strategic affiliation with the nationally renowned Cold Spring Harbor laboratory. No matter where you choose to live, from the family-centered suburbs of Long Island to the glitter and buzz of Manhattan to the serene beauty of the Atlantic coast, the New York metropolitan area offers something for everyone.

If you choose to join us, you will find not only a great career opportunity, but also great lifestyle options. An academic appointment at The Zucker School of Medicine at Hofstra/Northwell is commensurate with experience. Northwell is proud to offer a highly competitive salary and generous benefits package.

**For further information and to apply, please email:**
OPR@northwell.edu, or contact Dr. Sanjeev Kothare, Division Director for Child Neurology, skothare@northwell.edu.

EOE M/F/D/V

---

**ACGME Clinical Neurophysiology/ EEG Fellowship – Child Neurology**

ACGME Clinical Neurophysiology/EEG Fellowship – Child Neurology

The Department of Pediatrics at Weill Cornell Medicine/NewYork Presbyterian Hospital in Manhattan, New York is recruiting for a ACGME Clinical Neurophysiology/EEG Fellowship in the Division of Child Neurology starting July 2023.

Fellows are exposed to the wide spectrum of pediatric epilepsy. They will also have an opportunity to work with pediatric and adult epilepsy faculty that come from diverse backgrounds and who are dedicated to teaching. Fellow responsibilities include reading pediatric inpatient and ICU EEGs, and EMU studies. Fellows also rotate in the routine EEG laboratory, during which they read both pediatric and adult EEGs. Fellows spend six weeks on the adult EEG inpatient service.

Fellows attend a weekly epilepsy clinic, during which they have continuity of care. There is a weekly combined pediatric and adult epilepsy conference and a pediatric EEG teaching conference, which fellows are encouraged to lead.

There is an expanding pediatric and adult surgical program. Fellows are exposed to ECoG-guided resections, intracranial surgical monitoring with subdural grids/strips/depth electrodes, sEEG, vagal nerve stimulation, and laser guided thermal ablation for epilepsy. We also have a robust and expanding dietary/ketogenic diet program.

Fellows will participate in a research project under the guidance of a mentor. Our pediatric epilepsy faculty lead several national research projects, including federally funded multi-centered studies. Motivated fellows have successfully presented their work at national conferences and published their results in peer-reviewed journals.

**Requirements:**
Applicants should have completed an ACGME-approved residency in Child Neurology.

Additional requirements can be discussed upon contact.

All interested residents should send their CV and letters of reference to the program director for the pediatric epilepsy track, Srishti Nangia, MD at srn9001@med.cornell.edu

Diversity is one of Weill Cornell Medicine's core values and is essential to achieving excellence in patient care, research, and education. We welcome applications from candidates who share our commitment to fostering a culture of fairness, equity, and belonging. Weill Cornell Medicine is an Equal Employment Opportunity Employer, providing equal employment opportunities to all qualified applicants without regard to race, sex, sexual orientation, gender identity, national origin, color, age, religion, protected veteran or disability status, or genetic information

www.cornellpediatrics.org

www.med.cornell.edu

CNS PERSONNEL REGISTRY

## Ohio

**SEE OHIO AD at right.**

**Child Neurologist**

The Center for Pediatric Neurosciences at Cleveland Clinic is seeking candidates for a new position in General Pediatric Neurology with interest in Pediatric Headache Management. Fellowship Training in Pediatric Headache Management preferred but not required. Candidates must be Board Certified/Eligible in Pediatric Neurology and have an interest in headache management.

Pediatric Neurosciences is a clinically active section within a large academic Neurological Institute that includes a robust group of pediatric specialists including neurosurgery, epilepsy, psychiatry and psychology. The group also works collaboratively with the entire Pediatric Institute and participates in several coordinated care clinics.

Candidates should exhibit interest in clinical practice, resident, fellow and medical student teaching, as well as clinical research.

This dynamic position commands an extremely competitive salary enhanced by an attractive benefits package including but not limited to:

- Excellent medical, dental, vision coverage
- Comprehensive disability and life insurance benefits
- Medical malpractice & tail coverage provided
- Generous time away coverage for vacation, sick time, holidays and CME meeting time
- Highly competitive retirement plans with employer contribution
- Faculty appointment available at the Cleveland Clinic Learner College of Medicine commensurate with experience

Interested candidates, please include your current CV and cover letter with your application.

**Contact:**
Alex Riegelsberger
Riegela3@ccf.org

**Website:**
https://www.practicematch.com/CareerCenter/Opportunities/Find.cfm?OpportunityID=568922&RemainEmbedded=1&NewSearch=true

Division Chief, Pediatric Neurology and Epilepsy

On behalf of Dr. Marlene Miller, Pediatrician-in-Chief for University Hospitals and Chair of the Department of Pediatrics at University Hospitals Rainbow Babies & Children's Hospital (UH/RBC), CareerPhysician, the national leader in academic pediatric leadership recruitment, has initiated a national search to identify an inspiring leader to serve in the role as Division Chief, Pediatric Neurology and Epilepsy.

The incoming Chief will have the responsibility of establishing and implementing a vision that encompasses the mission values of UH/RBC: To Heal, To Teach, To Discover.

**Opportunity Highlights:**

- The new Chief will have the built-in benefit of joining a well-established and cohesive culture experienced throughout the Division with a tremendous opportunity for clinical growth including the development

**Child Neurologist/Neurophysiologist**

Dayton Children's Hospital, a freestanding, Level I trauma center children's hospital in Dayton, Ohio, is recruiting for a child neurologist fellowship trained in neurophysiology.

We are looking for an exceptionally motivated child neurologist with additional training in neurophysiology who can participate in our epilepsy surgery program, intraoperative neuro-monitoring program and our outpatient clinics and EMU.

Dayton Children's is the only area hospital with a full-service child neurology center, and with 13,000 visits and nearly 4,000 tests annually, our department is one of the busiest in the hospital. We are a group of 7 neurologists and are assisted by four nurse practitioners and three clinical care coordinators. EEG technologists, triage nurses and office personnel complete our team. We offer all modalities of diagnostic testing including epilepsy and epilepsy monitoring services and have established neurorehabilitation, epilepsy, Tourette's, neuromuscular and headache programs. We have a busy Epilepsy Monitoring Unit and an active ketogenic diet program as well as the support of 3 pediatric neurosurgeons who participate in the epilepsy surgery program. We have nine multi-disciplinary clinics and an intra-operative neuro-monitoring program.

Dayton Children's serves a pediatric population of 510,000 from a 20-county region of central and southwestern Ohio and eastern Indiana. An eight-story, 260,000-square-foot patient care tower sits in the center of the hospital's main campus. The south campus includes a medical office building, a pediatric emergency department, an outpatient surgery center, a Sleep Lab and Kids Express Care along with the pre-existing urgent care center.

The Wright State University Boonshoft School of Medicine department of pediatrics and its residency program are based at Dayton Children's. All of our physicians have the opportunity to hold faculty appointments at the Boonshoft School of Medicine and to teach medical students and residents. Residents in adult neurology, pediatrics, medicine/pediatrics, family practice, child psychiatry, emergency medicine, orthopedics, and surgery train at Dayton Children's.

Known as the birthplace of aviation, Dayton is home to some of the best private and public schools in the state, a vibrant arts and entertainment community and a beautiful system of parks, trails and river corridors. For additional information, visit www.dayton.com


For additional information, contact:
Sharisse Cook, MBA, HRM
Physician Recruitment
Dayton Children's Hospital
1 Children's Plaza
Dayton, OH 45404-1815
cooks3@childrensdayton.org
www.childrensdayton.org

of a multi-disciplinary headache clinic, new onset seizure clinic, and an integrated epilepsy and mental health program in collaboration with neuropsychology and psychiatry.
- New, state-of-the art 6-bed pediatric dedicated epilepsy monitoring unit (EMU). The EMU is a level 4 NAEC accredited center performing over 700 video EEGs annually.
- Recently developed NeuroNICU service focusing on the care and management of neonates with neurological disorders.
- Established ACGME accredited Pediatric Neurology residency program.
- Eligibility for academic rank at the Associate/Professor level and be board certified in Child Neurology.
- Recognized as the top ranked children's hospital in northern Ohio, UH/RBC is a 244-bed, Level 1 Pediatric Trauma Center and principal referral center for Ohio and the region.
- Academic affiliation with Case Western Reserve University School of Medicine.

For more details about this opportunity, or if you would like to recommend an individual(s) who exemplifies the qualities we are seeking in a candidate, please contact Marcel Barbey at marcel@careerphysician.com. All interactions will remain confidential, and no inquiries will be made without the consent of the applicant.

UH/RBC is an AA/EOE/ADA employer committed to excellence through diversity.

CNS PERSONNEL REGISTRY

## Oklahoma

Chief of Pediatric Neurology – Leadership Opportunity – Excellent Health System with an Outstanding Reputation

Saint Francis Health System, Oklahoma's most extensive health system, is seeking a Chief of Pediatric Neurology. The successful candidate will be a leader committed to children's health and advancing the mission of the Children's Hospital at Saint Francis through education, mentorship, and clinical excellence with a vision toward the development of future program growth. The candidate must demonstrate a personal style that facilitates communication, collaboration, continuous quality improvement, and trust, along with strong leadership, administrative, and management abilities.

Opportunity Highlights:

Advance the mission of the Children's Hospital at Saint Francis through education, mentorship, and clinical excellence with a vision toward the development of future program growth

Excellent health system with an outstanding reputation in the community with the only dedicated children's hospital in the area

Excellent support onsite and through teleneurology partnership

Health system ranked by Forbes as one of America's Best Large Employers in 2021

Tulsa has an overall grade of A- and is named one of the best places to live in Oklahoma (Niche)

Staff positions are also available

**Community Highlights:**
Tulsa, Oklahoma, is one of the best-kept secrets of the South Central region. It's Oklahoma's second-largest city, where Southern comfort and cosmopolitan style converge. Tulsa boasts world-class cultural attractions, including the Philbrook Museum of Art and Gilcrease Museum. The city stands tall with its magnificent art deco treasures, Route 66 gems, and the Cesar Pelli-designed BOK Center.

**Website:**
https://www.merritthawkins.com/candidates/job-search/job-details/tulsa-ok-physicians-neurology-child-neurology-pediatric-neurology-2417062/

**Contact:**
medcareers@merritthawkins.com

CNS PERSONNEL REGISTRY

## Pennsylvania

**Child Neurologist at Lehigh Valley Health Network**

This is truly an extraordinary time to join the Lehigh Valley Health Network. LVHN is one of the nation's most advanced health networks, offering comprehensive care in 95 clinical specialties. We are the region's largest employer and the health care provider of choice for more people in the region. Love Where You Work!

**Pediatrics Overview:**
- The Department of Pediatrics at LVHN Children's Hospital includes physicians in 30 specialties, a large general pediatric group, and dedicated hospitalist & intensivists.
- The Children's Hospital has a 30-bed inpatient unit, a 40-bed Level IV NICU, 12-bed Level II PICU, Level II pediatric trauma center and 27-bed pediatric ER
- LVHN offers a cohesive work environment, a busy clinical practice and the opportunity to be involved in teaching pediatric residents and medical students, and an academic appointment at the University of South Florida.
- LVHN is a nationally recognized physician-led network with a medical staff of 1,200, more than half of whom are employed.

**Job Details:**
- M-F 8-5pm clinic
- No holidays or weekends
- Blend of Inpatient & Outpatient
- Excellent work life balance

**Job Qualifications:**
- A network champion for Neurology and a passion for the clinical work
- Must be Board Eligible or Board Certified
- A current PA Medical License or ability to obtain one is required

**Benefits & Perks:**
- Attractive Work Schedule & Starting Bonus
- Highly Competitive compensation with a superb benefits package
- Low-cost health insurance for employees and their families
- Generous CME allowance and time
- Top-tier retirement programs

**Website:**
https://www.lvhn.org/about-us

**Contact:**
Kyle Rickert
Kyle_A.rickert@lvhn.org

---

**Assistant Professor of Clinical Neurology**

Children's Hospital of Philadelphia and the Department of Neurology at the Perelman School of Medicine at the University of Pennsylvania seek candidates for several Assistant Professor positions in the non-tenure academic clinician track. Applicants must have an M.D. or equivalent degree. We are recruiting board-eligible or board-certified Child Neurologists to facilitate the new Neuroscience Center's expansion.

The Neuroscience Center integrates world-renowned specialists in Child Neurology and Neurosurgery to provide precise diagnoses, individualized clinical care, and cutting-edge surgical treatments to achieve groundbreaking discoveries.

Teaching responsibilities may include bedside teaching and oversight of observers, medical students, residents, and fellows in a clinical setting, and formal lecture opportunities within the department.

Clinical responsibilities may include a blend of outpatient clinic in the CHOP satellites and inpatient service at the CHOP Philadelphia Campus as well as the Middleman Family Pavilion at the CHOP King of Prussia Campus. CHOP Neurology satellite outpatient clinics include several Pennsylvania-based locations in Chalfont, Abington, Lancaster, Bryn Mawr, and King of Prussia, as well as New Jersey-based practice locations in Voorhees and Princeton.

We seek child neurologists with broad clinical skills who are interested in a dynamic practice combining clinical excellence with academic and teaching opportunities. Neurologists with expertise in epilepsy/clinical neurophysiology, headache, neonatal neurology, critical care neurology, and inpatient neurology are especially encouraged to apply.

**Program Highlights:**
Join a team of 63 Child Neurology attending physicians and scientists.

Our ACGME-accredited 5-year child neurology residency program matches 7 residents per year.

The CHOP Philadelphia Campus is home to a dedicated 24-bed inpatient Neuroscience Unit staffed by an interdisciplinary team with specialized training in pediatric neuroscience. This state-of-the-art unit houses the Epilepsy Monitoring Unit and is specially equipped to meet the unique medical and surgical needs of infants, children, and young adults with neurological and neurosurgical conditions. The CHOP Philadelphia Campus is also home to large neonatal, pediatric, and cardiac intensive care units, along with extensive ED and Ward neurology consultation.

The Pennsylvania-based CHOP satellites are located in the suburbs of Philadelphia. The CHOP King of Prussia Hospital opened in January 2022 and is 45 minutes from the main campus. The goal of the hospital is to increase access for patients to high-quality care by CHOP providers convenient to their homes. Additional child neurologists will allow for expansion of inpatient neurologic care and a 4-bed epilepsy monitoring unit in this new community hospital.

**For more information, contact**
Ashley Rees-Jones at reesjonesa@chop.edu or apply for the position here:
https://apply.interfolio.com/109414

We seek candidates who embrace and reflect diversity in the broadest sense. The University of Pennsylvania and Children's Hospital of Philadelphia are EOEs. Minorities/women/individuals with disabilities/protected veterans are encouraged to apply.

---

**Pediatric Neurologist**

The Department of Pediatrics at the University of Pittsburgh Physicians, UPMC Children's Hospital of Pittsburgh, and UPMC Harrisburg are now recruiting physicians in pediatric neurology to expand clinical services in the Harrisburg, Pennsylvania, area.

The candidate must have completed pediatric fellowship training and be board-certified/eligible in pediatric neurology.

Affiliated faculty status at the University of Pittsburgh will be offered commensurate with experience and achievement. A very competitive salary and benefits package will be offered as well.

**About South Central Pennsylvania:**
- Features both rural and suburban living and boasts an abundance of sports, arts, cultural events, and entertainment.
- Close to historically significant areas such as Gettysburg and world-famous Hersheypark and Hershey's Chocolate World.
- Offers top-rated public schools, blue-ribbon private schools, and some of Pennsylvania's top colleges and universities.
- Area school districts are consistently ranked in the top 20% of Pennsylvania.
- With affordable homes – a composite cost of living index of 99.7 as compared to 101.2 in Philadelphia – it's a great place to grow a career and family.
- Listed among Forbes.com "America's Most Livable Cities," and ranked in *U.S. News & World Report's* "Best Cities to Live," it's an easy daytrip to New York City, Philadelphia, Pittsburgh, Baltimore, and Washington, D.C.

**About UPMC in Central Pa:**
- UPMC in Central Pa. is a nationally recognized leader in providing high-quality, patient-centered health care services in central Pennsylvania and surrounding rural communities.
- As part of the UPMC not-for-profit

system, UPMC in Central Pa. cares for more than 1.2 million area residents yearly, providing life-saving emergency care, essential primary care, and leading-edge diagnostic services.
- UPMC in Central Pa. includes seven acute care hospitals with 1,245 licensed beds, over 200 outpatient clinics and ancillary facilities, more than 2,900 physicians and allied health professionals, and approximately 13,400 employees.
- It is a health care hub serving Dauphin, Cumberland, Perry, York, Lancaster, Lebanon, Juniata, Franklin, Adams, and parts of Snyder counties.
- UPMC was named as one of the "150 Top Places to Work in Healthcare" for 2022 by Becker's Healthcare. For inclusion on this list, hospitals, health systems, and health care companies must demonstrate initiatives and commitment to promote diversity within the workforce, employee engagement, and professional growth.

PI190961005

**Website:**
https://www.click2apply.net/V7XyAWukDAlbqHjw5hbJeA

**Contact:**
bordnerdm2@upmc.edu

CNS PERSONNEL REGISTRY

# Tennessee

### Assistant Professor, Vanderbilt University Medical Center

Hiring Pediatric Neurologists to join a large and well established academic practice. Predominantly clinical positions to address increasing demand in Nashville TN, a fast growing and fun area to live. General neurologists as well as epilepsy and movement disorder trained neurologists especially encouraged to apply.

**Website:**
https://www.childrenshospitalvanderbilt.org/service-line/pediatric-neurology

**Contact:**
Kevin Ess

CNS PERSONNEL REGISTRY

# Texas

### Medical Director of Neurology & Rehabilitation Medicine

Scottish Rite for Children's pediatric specialists are at the forefront of their profession and are recognized globally for their leadership. Our Neurology & Rehabilitation Medicine division is seeking a board-certified, fellowship-trained Pediatric Neurologist to lead this dynamic team. This key leader will report to our Chief of Staff. Faculty appointment ranking in Child Neurology through The University of Texas Southwestern (UTSW) Medical Center will be based on experience.

As an institution committed to caring for complex neurological conditions, the team conducts ongoing research to provide the most innovative treatment to this patient population. Our team collaborates with Pediatric Orthopedics, Pediatric Rheumatology, Pediatric Anesthesia, Pediatric Developmental Disabilities, and other medical team members to provide care to the whole child. Inpatient and outpatient care is provided to Scottish Rite for Children patients.

**For additional information or questions, please contact:**
Megan Mattingly, Department Director
215-559-8658
Megan.Mattingly@tsrh.org
Steve Sparagana, M.D., Medical Director
214-559-7828
Steve.Sparagana@tsrh.org

**Duties/Responsibilities:**
Provide leadership, direction, and strategic planning for all aspects of patient care, research and education of the Neurology and Rehabilitation Medicine Division consistent with the mission of Scottish Rite for Children

Provide exceptional medical care as a staff Neurologist and Neurophysiologist as well as oversight and quality control for all medical care delivered by the Neurology and Rehabilitation Medicine Division staff ensuring the team's work is delivered with effectiveness, accuracy, and efficiency and within the standards of excellence for the organization

Supervise, evaluate, and mentor other staff and consulting neurologists; make recommendations for the hiring and promoting staff neurologists and advanced practice professionals

Work collaboratively with the Director of Neurology and Rehabilitation Medicine in developing and administering the operating budget; developing and implementing protocols and procedures; ensuring that the department and staff meet goals and expectations

Work collaboratively with the Director of Child Neurology at UTSW to develop and implement pediatric neurology training programs

Represent Pediatric Neurology and Rehabilitation Medicine and maintain working relationships with the UTSW Medical Center as well as other medical providers and colleagues

Participate in neurological education

Participate on institution-wide committees, as appointed

Teach child and adult neurology residents

Participate in clinical research

This staff member may be required to perform other reasonably related duties assigned by the immediate supervisor or other management. The company reserves the right to revise or change job duties as business requirement dictate. It is mutually agreed that this job does not constitute a written or implied contract of employment and is not all inclusive of all required opportunities and challenges.

**Required Skills/Abilities:**
Candidates must be eligible for licensure to practice Medicine in Texas

Board certified in Child Neurology, with subspecialty in Clinical Neurophysiology through the American Board of Psychiatry and Neurology, the American Board of Clinical Neurophysiology, or American Board of Electrodiagnostic Medicine

**About Neurology and Rehabilitation Medicine:**
Neurology and Rehabilitation Medicine cares for children ages birth to 18 years of age, and every child seen by this team receives world-renowned care with the ultimate goal of helping them live a more independent life. Diagnostic categories include neurological disorders such as: Epilepsy, Gait Disorders, Tuberous Sclerosis Complex, Cerebral Palsy, Holoprosencephaly (HPE), Charcot-Marie Tooth Disease (CMT) and other related conditions. The vast majority of this department's patients are referred from the organization's numerous orthopedists as well as from colleagues in Pediatric Developmental Disabilities and Rheumatology. Direct referrals for our department include tuberous sclerosis complex, holoprosencephaly and hereditary spastic paraparesis.

As an institution committed to caring for complex neurological conditions, the team conducts ongoing research to provide the most innovative treatment to this patient population. Our team collaborates with Pediatric Orthopedics, Pediatric Rheumatology, Pediatric Anesthesia, Pediatric Developmental Disabilities, and other medical team members to provide care to the whole child. Inpatient and outpatient care is provided to Scottish Rite for Children patients.

Work Schedule and Hours of Work
Monday - Friday, On-Call schedule

CNS PERSONNEL REGISTRY

## Utah

**Physician-Scientist**

We are seeking qualified, diverse physician-scientists. Qualified candidates should be early or mid-career; with a proven publication record; demonstrated or high likelihood of extramural funding; and synergy with on-going programs such as epilepsy, genetic therapies, neuromuscular, neonatal, or leukodystrophy. New faculty will join a dynamic growing program serving a catchment area of 1.7 million children; living in the lifestyle-friendly intermountain west; and working at the highly regarded Primary Children's Hospital. Opportunities for endowed and start-up support are available. Faculty will be members of the University of Utah/Department of Pediatrics. Qualified candidates must be Board Qualified/Board Certified in Neurology with Specialization in Child Neurology.

Interested individuals can apply for the position by sending a cover letter and CV to the division chief, Josh Bonkowsky, M.D., Ph.D., at joshua.bonkowsky@hsc.utah.edu.We support and encourage applications from diverse backgrounds.

CNS PERSONNEL REGISTRY

## Vermont

**Assistant/Associate/Professor – Pediatric Neurologist**

The Department of Neurological Sciences at the Robert Larner, M.D. College of Medicine (LCOM) at the University of Vermont (UVM) and the University of Vermont Medical Center (UVMMC) are seeking to recruit a Board Certified/Board Eligible fellowship-trained pediatric neurologist to join an expanding program.

This full-time position is associated with a faculty appointment in the Department of Neurological Sciences at the rank of either Assistant Professor, Associate, or Professor, as appropriate, based on previous experience and academic rank. A successful applicant will have the opportunity to develop collaborative programs in pediatric neurology and neurodevelopmental disabilities within the Departments of Neurological Sciences and Pediatrics, thereby furthering the clinical, educational, and research missions of LCOM, UVM, and UVMMC.

The UVMMC is located in Burlington and serves as Vermont's only academic medical center. Burlington is a small but vibrant community on the shores of Lake Champlain between the Adirondack and Green Mountains. The area offers year-round recreational opportunities, safe communities, and excellent schools, while Burlington itself is frequently cited as among the most livable cities in the United States.

UVM is especially interested in candidates who can contribute to the diversity and excellence of the academic community through their research, teaching, and/or service. Applicants are requested to include in their cover letter information about how they will further this goal. UVM is an Equal Opportunity/Affirmative Action Employer. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability, protected veteran status, or any other category legally protected by federal or state law. The University encourages applications from all individuals who will contribute to the diversity and excellence of the institution. The application receipt and review process will begin immediately and continue until the position is filled.

Interested individuals should please apply online for position #00025621 at www.uvmjobs.com. Any questions concerning this position can be directed to Peter Bingham, M.D. via email at peter.bingham@uvmhealth.org or by telephone at 802-656-5176.

For more information regarding the Department of Neurological Sciences, please visit our website at https://www.med.uvm.edu/neuro/home.

CNS PERSONNEL REGISTRY

## Washington

**Assistant Professor without Tenure – Pediatric Neurologist (Epilepsy)**

**Position Description**
The Department of Neurology at the University of Washington School of Medicine is seeking to hire a pediatric epileptologist with an interest in ICU neuromonitoring. The Division of Pediatric Neurology at Seattle Children's Hospital has approximately 30 faculty,

including nine epileptologists and multiple subspecialty programs. This is a full-time appointment at the rank of Assistant Professor WOT (without tenure by reason of funding). Assistant Professors are eligible for multi-year appointments that align with a 12-month service period (July 1-June 30). Faculty with 12-month service periods are paid for 11 months of service over a 12-month period (July-June), meaning the equivalent of one month is available for paid time off. University of Washington faculty engage in teaching, research and service. This position will require active participation in clinical and teaching programs.

The anticipated start date of this appointment is July 1, 2023.

**Qualifications**
Requirements include MD, DO, or foreign equivalent degree, eligibility for medical licensure in the State of Washington, and certification or eligibility for certification by the American Board of Psychiatry and Neurology in Neurology with Special Qualification in Child Neurology as well as in Clinical Neurophysiology and/or Epilepsy. The successful candidate will be expected to have strong clinical skills in general pediatric neurology, clinical neurophysiology and epilepsy and expertise with EEG monitoring in the ICU environment.

In order to be eligible for University sponsorship for an H-1B visa, graduates of foreign (non-U.S.) medical schools must show successful completion of all three steps of the U.S. Medical Licensing Exam (USMLE), or equivalent as determined by the Secretary of Health and Human Services.

**Application Instructions**
Applicants should upload a Diversity statement, letter of interest, CV and the names and addresses of three references: https://apply.interfolio.com/107692

---

**Assistant Professor without Tenure, Pediatric Neurology (Epilepsy)**

The Department of Neurology at the University of Washington School of Medicine is seeking to hire a pediatric epileptologist to join the Division of Pediatric Neurology at Seattle Children's Hospital. The Division of Pediatric Neurology has approximately 30 faculty, including nine epileptologists and multiple subspecialty programs.

This position will include EEG reading, epilepsy monitoring, neurology and epilepsy consultations, and clinic. It will also have shared supervision of adult and pediatric neurology residents and neurophysiology fellows. Positive factors for consideration include, but are not limited to, experience in epilepsy surgery.

This is a full-time, 12-month service period appointment (July 1 – June 30) at the Assistant Professor rank (without tenure by reason of funding). Assistant professors are eligible for multi-year appointments that align with a 12-month service period (July 1-June 30). Faculty with 12-month service periods are paid for 11 months of service over a 12-month period (July-June), meaning the equivalent of one month is available for paid time off. University of Washington faculty engages in teaching, research, and service. This position will require active participation in clinical and teaching programs, and offers opportunities to participate in basic science and clinical research in epilepsy.

The anticipated start date of this appointment is October 1, 2022.

**Qualifications**
Requirements include MD, DO, or foreign equivalent degree, eligibility for medical licensure in the State of Washington, and certification or eligibility for certification by the American Board of Psychiatry and Neurology in Neurology with Special Qualification in Child Neurology as well as in Clinical Neurophysiology and/or Epilepsy. The successful candidate will be expected to have strong clinical skills in general pediatric neurology, clinical neurophysiology and epilepsy.

In order to be eligible for University sponsorship for an H-1B visa, graduates of foreign (non-U.S.) medical schools must show successful completion of all three steps of the U.S. Medical Licensing Exam (USMLE), or equivalent as determined by the Secretary of Health and Human Services.

**Application Instructions**
Applicants should upload a Diversity Statement, a letter of interest, CV, and the names and addresses of three references: apply.interfolio.com/104392

---

**Associate Professor or Professor, Mitochondrial Neurologist**

The Department of Neurology at the University of Washington School of Medicine is hiring a pediatric neurologist specializing in mitochondrial disorders to join the Program for Mitochondrial Medicine and Metabolism in the Division of Pediatric Neurology. This program combines expert clinical care and clinical research based at Seattle Children's Hospital with pre-clinical research based at Seattle Children's Research Institute. This is a full-time, 12-month service period appointment (July 1 - June 30), at the Associate Professor rank (without tenure), but candidates with exceptional qualifications may be considered for appointment at the rank of or Professor (without tenure), commensurate with experience. This position will require active participation in, and leadership of, clinical and teaching programs. University of Washington faculty engages in teaching, research, and service.

The anticipated start date of this appointment is November 1, 2022.

**Qualifications**
This position will require to have strong clinical skills in general pediatric neurology, expertise in the diagnosis and management of mitochondrial disorders, and experience with clinical trial recruitment and management.

Requirements include MD, DO, or foreign equivalent degree, eligibility for medical licensure in the State of Washington, and certification or

eligibility for certification by the American Board of Psychiatry and Neurology in Neurology with Special Qualification in Child Neurology.

In order to be eligible for University sponsorship for an H-1B visa, graduates of foreign (non-U.S.) medical schools must show successful completion of all three steps of the U.S. Medical Licensing Exam (USMLE), or equivalent as determined by the Secretary of Health and Human Services.

**Application Instructions**
Applicants should upload a Diversity statement, letter of interest, CV and the names and addresses of three references: apply.interfolio.com/104570

---

**Assistant Professor – Pediatric Neuro-Oncologist**

The Department of Neurology at the University of Washington School of Medicine is hiring a pediatric neurologist to specialize in Neuro-Oncology in the Division of Pediatric Neurology at Seattle Children's Hospital. The division comprises 30 faculty and multiple subspecialty programs. This is a full-time, 12-month (July 1- June 30) service period appointment, at the Assistant Professor rank (without tenure due to funding) in the clinician educator pathway. Assistant Professors are eligible for multi-year appointments that align with a 12-month service period (July 1-June 30). Faculty with 12-month service periods are paid for 11 months of service over a 12-month period (July-June), meaning the equivalent of one month is available for paid time off. This position will be expected to demonstrate strong clinical skills in general pediatric neurology and pediatric neuro-oncology and will require active participation in clinical and teaching programs. University of Washington faculty engage in teaching, research and service.

The anticipated start date for this position is July 1, 2023.

**Qualifications**
Requirements include MD, DO, or foreign equivalent degree, eligibility for medical licensure in the State of Washington, and certification or eligibility for certification by the American Board of Psychiatry and Neurology in Neurology with Special Qualification in Child Neurology.

In order to be eligible for University sponsorship for an H-1B visa, graduates of foreign (non-U.S.) medical schools must show successful completion of all three steps of the U.S. Medical Licensing Exam (USMLE), or equivalent as determined by the Secretary of Health and Human Services.

**Application Instructions**
Applicants should upload a Diversity statement, letter of interest, CV and the names and addresses of three references: https://apply.interfolio.com/88319

---

**Assistant Professor, Pediatric Neurologist (Epilepsy)**

The Department of Neurology at the University of Washington School of Medicine is seeking to hire an outstanding pediatric epileptologist to join the Division of Pediatric Neurology at Seattle Children's Hospital. This position is part of a new regional Tele-Neurology program. This is a full-time, 12-month position at the Assistant Professor rank (without tenure by reason of funding) in the clinician teacher academic pathway. Assistant Professors without tenure are eligible for multi-year appointments that align with a 12-month service period (July 1-June 30). Faculty with 12-month service periods are paid for 11 months of service over a 12-month period (July-June), meaning the equivalent of one month is available for paid time off. University of Washington faculty engage in teaching, research and service. This position will require active participation in clinical and teaching programs in the Department.

The anticipated start date of this appointment is July 1, 2023.

**Qualifications**
Requirements include MD, DO, or foreign equivalent degree, eligibility for medical licensure in the State of Washington, and certification or eligibility for certification by the American Board of Psychiatry and Neurology in Neurology with Special Qualification in Child Neurology. The successful candidate will be expected to have strong clinical skills in general pediatric neurology, clinical neurophysiology and epilepsy

In order to be eligible for University sponsorship for an H-1B visa, graduates of foreign (non-U.S.) medical schools must show successful completion of all three steps of the U.S. Medical Licensing Exam (USMLE), or equivalent as determined by the Secretary of Health and Human Services.

**Application Instructions**
Please use link to apply with letter of interest, diversity statement, curriculum vitae, and the names and addresses of three references): https://apply.interfolio.com/102409

CNS PERSONNEL REGISTRY

# West Virginia

**Pediatric Epileptologist Opportunity: New Children's Hospital, Academic Setting, Close to Metropolitan Areas**

West Virginia University School of Medicine and the Department of Pediatrics seeks a Pediatric Epileptologist qualified for appointment at the Assistant Professor, Associate Professor, or Professor rank. The successful candidate will be expected to practice in Morgantown, WV.

**The Opportunity:**
WVU Medicine maintains a Level IV Comprehensive Epilepsy Program. The Epilepsy Center includes hardwired video-EEG monitoring units for both adults and pediatrics. The facility also features neuroimaging support including functional MRI and quantitative PET scans.

- Practice child neurology with a special emphasis in pediatric epileptology
- Clinical duties: outpatient clinic, inpatient consults, and staffing the Epilepsy Monitoring Unit

- Professional reads of both local and outreach EEGs are anticipated
- Active involved in the teaching of medical students and residents

Qualifications:

- MD or DO degree or foreign equivalent
- Eligible to obtain a state medical license
- Board certified / eligible in Child Neurology and Epilepsy

**About Us:**
WVU Medicine Children's Hospital is the premier site within the state for primary through tertiary care of children and will be relocating to a new 150 bed facility set to open in September 2022. The department has close working relationships with colleagues in the pediatric surgical subspecialties, pediatric neuropsychology, and neuroradiology. The department is committed to providing excellent clinical care to the children of West Virginia, a collegial academic environment that fosters professional growth, and high-quality teaching to our students and house staff.

The Division of Pediatric Neurology joins in the collaborative efforts of the WVU Rockefeller Neuroscience Institute, which is made of up a team of 170 dedicated faculty in Neurology, Neurosurgery, and Behavioral Medicine and Psychiatry, in providing compassionate patient care and advanced medicine through education, research, and outreach in the many diverse communities we serve. The Institute spearheads efforts to develop innovative solutions for neurological and psychiatric conditions across the lifespan.

WVU Medicine is West Virginia University's affiliated health system, West Virginia's largest private employer, and a national leader in patient safety and quality, anchored by its flagship hospital, J.W Ruby Memorial Hospital in Morgantown, a 700+ bed academic medical center that offers tertiary and quaternary care. WVU Medicine has more than 1,000 active medical staff members who serve hundreds of thousands of people each year from across the state of West Virginia and the nation.

**The Community:**
Morgantown, West Virginia is located just over an hour south of Pittsburgh, PA and three hours from Washington, D.C. and Baltimore, MD. Morgantown is consistently rated as one of the best small metropolitan areas in the country for both lifestyle and business climate. The area offers the cultural diversity and amenities of a large city in a safe, family-friendly environment. There is also an excellent school system and an abundance of beautiful homes and recreational activities.

For additional questions, please contact Megan Core, Senior Physician Recruiter, megan.core@wvumedicine.org.

West Virginia University & University Health Associates are an AA/EO employer – Minority/Female/Disability/Veteran – and WVU is the recipient of an NSF ADVANCE award for gender equity.

CNS PERSONNEL REGISTRY

# Wisconsin

**Pediatric Neurologist Opportunity in Marshfield, Wisconsin at Flagship Location**

Marshfield Medical Center in Marshfield, Wisconsin is seeking a BC/BE Pediatric Neurologist to join a well-established practice located in the Department of Neurology. Position is full time but can support someone interested in part-time work. The ideal candidate is eager to participate in a multispecialty group that provides patient-centered care rooted in evidence-based medicine. Subspecialty expertise is valuable but not required. The practice includes a full range of outpatient services including general Pediatric Neurology, epilepsy, headaches, CP, movement disorders along with inpatient PICU, NICU, and Pediatrics inpatient consults at our adjoining Children's Hospital. Join a collegial team of physicians, a great support staff, working with highly trained Pediatric subspecialists on-site. Call is 1:3 weeks. Outreach to other sites anticipated. Large referral base in Central and Western Wisconsin.

**Marshfield Children's Hospital**
Our 56-bed Children's Hospital is Central Wisconsin's only accredited pediatric hospital, and one of only four in Wisconsin. It is equipped with the latest technology, more than 40 pediatric specialties and board-certified pediatric hospitalists, intensivists, and neonatologists. Certified child life specialists ensure children receive the emotional support they may need to cope with their treatment during their hospital stay. The hospital has 24 bed level 3 NICU with 24/7 neonatology support and normal newborn nursery; 8 bed PICU with 24/7 pediatric intensivist support including sedation services; 26 bed pediatric acute beds including 8 bed Heme-Onc positive pressure rooms and 24/7 pediatric hospitalist support. Marshfield Children's is an ACS Verified Level 2 Pediatric Trauma Program and a member of the Children's Oncology Group (COG).

Accepting J1 visa waiver candidates for 2023.

**Compensation and Benefits**

- Competitive salary
- Lucrative bonus and/or stipend during training
- 4 weeks of vacation and 2 weeks CME to start
- $5,800 CME annual allowance
- Health, Dental, Life, Disability, and Occurrence Based Malpractice insurance
- Generous retirement plan; 401(k) plan with match and 457(b) plan
- Up to $20,000 relocation support

MCHS strongly encourages our physicians to be involved in medical education and research to continue building our strong foundation of patient care, research and education for years to come.

Marshfield Clinic Research Institute: http://www.marshfieldresearch.org/

Marshfield Clinic Division of Education: https://www.marshfieldclinic.org/education

Marshfield Clinic Health System physicians and staff are motivated by our mission to enrich lives. We serve more than 350,000 unique patients each year through accessible, high quality health care, research and education. With more than 1,600 providers in 170 medical specialties and subspecialties as well as over 13,000 employees in 65 clinical locations in 45 communities serving Wisconsin and Michigan's Upper Peninsula, Marshfield Clinic Health System is nationally recognized for innovative practices and quality care.

**For more information, please contact:**
Shelly Van Vonderen, Physician Recruiter
715-660-1367
vanvonderen.shelly@marshfieldclinic.org

CNS PERSONNEL REGISTRY

# Canada

**Pediatric Neurologist**

Dalhousie University & IWK Health Centre

Halifax, Nova Scotia, Canada

The Division of Neurology, in the Department of Pediatrics at Dalhousie University and the IWK Health Centre, invite applications for a full-time Pediatric Neurologist at the assistant, associate or full professor level. The individual will join a team of 4 neurologists. The physician will primarily provide clinical service across the full spectrum of pediatric neurology. Subspecialty interest or fellowship training would be considered an asset.

The successful candidate will be expected to participate in research and/or teaching activities in an academic environment; a developed interest in either would be considered an asset, but a previous academic appointment is not a requirement. Divisional members provide neurological care for the children/youth of the Maritime provinces (population approximately 1.9 million). The successful candidate will be expected to participate in the on-call coverage for general pediatric neurology.

Academic qualifications include an MD (or equivalent) and board certification in Pediatric Neurology (Canadian FRCPC or eligibility). Eligibility for medical licensure in the province of Nova Scotia is essential.

Dalhousie University and the neighboring IWK Health Centre are located in the heart of Halifax https://discoverhalifaxns.com/ , a growing, cosmopolitan port city and the capital of Nova Scotia. We are fortunate to be surrounded by the natural beauty of the Atlantic Ocean, trails, lakes and farmland. All of this and the low cost of living, makes Nova Scotia one of the most enjoyable places to live in Canada. https://www.novascotia.com/

Interested applicants should submit a current CV and a statement outlining their academic, teaching and research interests. Candidates should also provide the names and contact information for three referees (two of which must be academic). The name and contact information of a Program Director is also required if a graduate in the past 5 years, or if first academic appointment).

Applications will be accepted until October 13, 2022

To apply for this position, please go to: http://dal.peopleadmin.ca

Dalhousie University is committed to fostering a collegial culture grounded in diversity and inclusiveness. The university encourages applications from Indigenous persons, persons with a disability, racially visible persons, women, persons of minority sexual orientations and/or gender identity, and all candidates who would contribute to the diversity of our community. For more information, please visit www.dal.ca/hiringfordiversity

# We look forward to seeing you...

*...at the Duke Energy Center in Cincinnati, Ohio and to partnering with you at future CNS Annual Meetings.*

**52nd CNS Annual Meeting**

**October 4 - October 7, 2023**
**Vancouver, BC, Canada**

**53rd CNS Annual Meeting**

**November 11-14, 2024**
**San Diego, California**