

CONNECTIONS



Bringing CNS Members Together to Make Children's Lives Better



October 15-18, 2018
CHICAGO, ILLINOIS



CHILD NEUROLOGY SOCIETY

From the President



Jonathan Mink, MD, PhD
President, CNS

*Child Neurology
is truly leading the
way as we enter a new
era of neurological
therapeutics.
In this context,
I will have the
privilege of
representing the
Child Neurology
Society at
the upcoming
“Rare Access to
Critical Therapies”
Stakeholder Summit
on Friday,
October 5th.*

The Changing Face of Child Neurology

As we approach the 47th Annual Meeting, I wanted to take this opportunity to highlight some aspects of the Scientific Program. In my last message, I highlighted the Presidential Symposium “Child Neurology at the Forefront of Treatable Rare Diseases.” This topic has become increasingly timely as new therapies are on the verge of approval and others are just around the corner. Child Neurology is truly leading the way as we enter a new era of neurological therapeutics. In this context, I will have the privilege of representing the Child Neurology Society at the upcoming “Rare Access to Critical Therapies” Stakeholder Summit on Friday, October 5th. This summit is being convened jointly by Global Genes and the Child Neurology Foundation. Information is available at <https://globalgenes.org/act/>. As we continue to make progress, assuring access and affordability for these game-changing therapies will have to be a priority for child neurologists in partnership with our patients.

The Neurobiology of Disease in Children (NDC) Symposium this year will focus on Tourette Syndrome and related disorders. In the 10 years since Tourette Syndrome was previously the topic of the NDC symposium there have been substantial advances in understanding and therapeutic approaches to this disorder. We have other exciting symposia planned, including one focused on Spinal Muscular Atrophy, an area in which we have seen some of the most exciting and impactful advances in the past couple few years, and another on Precision Medicine in Epilepsy, a topic that is also timely in the face of

multiple recent advances. On Thursday, the final day of the meeting, there will be a morning symposium on Critical Care Neurology, and in the afternoon the Child Neurology Foundation Symposium will focus on Transitions to Adulthood for children with neurologic disorders. In addition to the large symposia, we have a diverse program of six breakfast seminars on tap. Submissions for Poster and Platform Presentations were exceptionally competitive this year, and I am excited to see and hear those presentations. Program Chair, Erika Augustine has added two new program elements designed to highlight outstanding work presented by CNS Junior Members: three Guided Poster Tours, featuring five posters each, and a “Best of Show” moderated poster session on Wednesday noon showcasing five of the top-ranked posters picked out by members of the Scientific Program Planning Committee.

Other Junior Member programming launched in the last few years and continuing this year, bigger and better than ever, include: 1) the 2018 Minority Research Scholars Program, a joint activity of the Child Neurologist Career Development Program (CNCDP), the CNS, and the NDC; 2) the 3rd Annual John M. “Jack” Pellock Resident Seminar on Epilepsy; 3) the NDC Young Investigators Program; and 4) Wednesday afternoon workshops and seminars for residents and medical students focused on career development, scientific presentation and publishing.

I look forward to see you in Chicago!

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

Editor: Daniel Bonthius, MD, PhD
Managing Editor: Roger Larson, CAE

Published Quarterly

CONNECTING WITH COLLEAGUES

New CNS Members (Joining in 2018)

Active Membership

Bakdash, Tarif
Cejas, Diana
Cohen, Jennifer
Davis, Cresha
Devinsky, Orrin
Fernandez, Luis
Foster, Timothy
Gabriel, Genevieve
Gleeson, Joseph
Holt, Rebecca
Huszar, Peter
Karnik, Kavitha
Khan, Atiya
Khuro, Abdul
Lee, Young Ah
Maitre, Nathalie
Mallack, Eric
Martelle, Jennifer
May, Alison
McSween, Tresa
Mitra, Sudeshna
Parikh, Sima
Patel, Payal
Philip, Nancy
Pshytychky, Amir
Saade, Dimah
Salman, Rashid
Sivaraman, Indu
Szuhay, Gabor
Tesoro, Ovector
Vargas, David
Vides, Manuel
Vishwas, Mellekate
Youn, Erica

Junior Membership

Abushama, Ahmed
Andrews, Alexander
Berman, Evelyn
Bruce, Adrienne
Buttle, Sarah
Cantu, Luis
Carbonell, Cristina
Castri, Paola
Cease, Andrew

Christenson, Kellie
Cohen, Nathan
Collen, James
Crockett, Cameron
Dang, Thuan
Dass, Shilpa
Diaz, Mayela
Duncan, Aubrey
Erdemir, Gozde
Ferrante, Leah
Fisher, Kristen
Forte, Jasmine
Fortin, Olivier
Fraser, Stuart
Freed, Abbey
Fridinger, Sara
Gall, Timothy
Gold, Jacquelyn
Gong, Paul
Gonzalez, Ernesto
Hamade, Maysa
Hanzlik, Emily
Haridas, Babitha
Hayes, Leslie
Hodoba, Nathaniel
Hong, William
Huff, Hanalise
Hull, Mariam
Hunter, Senyene
Innen, Katie
Johnson, Hannah
Jones, Stephen
Katz, Natalie
Kerr, Michelle
Klinger, Sarah
Kornbluh, Alexandra
Kousa, Youssef
Lancaster, Shannon
Leung, Celine
Lobanov, Oleg
Lutz, Katie
Mackenzie, Samuel
Madathil, Sujana
Manbeck, Christopher
Manberg, Stephanie
Martin, Matthew
Masterson, Haley

Matesanz, Susan
Mendez Sanchez, Adriana
Miller, Benjamin
Miller, Claire
Molinero, Isaac
Montalvo, Alexandra
Morrison-Levy, Nadine
Okonkwo, David
Oommen, Sherwin
Osman, Mohaned
Parkey, Adrienne
Patel, Shital
Patterson Gentile, Carlyn
Perez, Carlos
Pitts, Jennifer
Rishikesh, Malla
Ritter, David
Russo, Sam
Sandoval Karamian, Amanda
Sankhla, Neal
Schroeder, Andrew
Shah, Yash
Singh, Avantika
Solomon, Jessica
Spinner, Amanda
Squires, Melissa
Stevens, Clare
Swartwood, Shanna
Tanaka, Aileen
Thamann, Anna
Theroux, Liana
Troy, Elizabeth
Turner, Abigail
Valentine, Vinod
Vera, Alsono Zea
Vinarsky, Victoria
Wharton, Jessica
Whitehall, Robin
Wiegand, Sarah
Woehling, Mollie
Wong, Jeremy
Wood, Elizabeth
Wright-Jin, Elizabeth
Yang, JoJo
Yoon, Susanne
Younes, Andrea

Affiliate Membership

Bell, Stephanie
Dunaway, Sally
Jain, Vivek
Lahat, Eli
Leppert, Mary
Torres, Orlando

Medical Student Membership

Ayoub, Maya
Berroth, Margeaux
Brickman, Laura
Bowen, Aaron
Carrier, Ryan
Chandler, Erika
Charsar, Brittany
Crim, Rachel
Dinov, Darina
Goldfinger, Matthew
Goodman, Ariana
Gray, Erin
Helman, Guy
Jonokuchi, Alexander
Kahlon, Simran
Kaleka, Guneet
Kanmogne, Marlene
Kashima, Daniel
Keselman, Dennis
LaGrant, Brian
Lamberta, Laura
Lammert, Dawn
Lin, Egeria
McCabe, Corrine
Meyers, Nicholas
Mai, Jonathan
Moondra, Priyanka
Moore, Mary Cate
Nguyen, Samantha
Park, Carol
Radhakrishna, Sreya
Sadle, Jake
Ser, Eileen
Solinas, Greta
Sosa, Natasha
Trivedi, Aditi
Urbik, Veronica
Wang, Lucia
Wooten, Amelia



Forty-Seventh
CNS
ANNUAL MEETING

October 15-18, 2018
CHICAGO, ILLINOIS



CHILD NEUROLOGY SOCIETY



MINNESOTA
MEDICAL
ASSOCIATION



Welcome to Chicago!

Four Days, Four Great Ways to Meet Friends (New and Old)

1 Welcome Reception

Monday, October 15 | 6:00 pm-7:30 pm
Riverside Exhibit Hall

 **Ann & Robert H. Lurie
Children's Hospital of Chicago®**

Financial support provided by 2018 CNS Annual Meeting host institution, Ann & Robert H. Lurie Children's Hospital of Chicago

2 Legacy Reception

Monday, October 15 | 7:45 pm-9:30 pm
Grand Ballroom EF

- Drinks, Dessert, and a standing ovation for all those gathered who attended their first CNS meeting 25 or more years ago (before 1993)
- Presentation of five awards to venerable CNS members whose character and careers have significantly shaped the child neurology community in the past and present, and will continue to do so through colleagues and trainees long into the future.
- **Arnold P. Gold Foundation Humanism in Medicine Award:**
Audrey Foster-Barber, MD
Introduced by Heather Fullerton, MD
- **Roger & Mary Brumback Lifetime Achievement Award**
Alfred Spiro, MD
Introduced by Solomon Moshe, MD
Gerald Erenberg, MD
Introduced by A. David Rothner, MD
William Logan, MD
Introduced by O. Carter Snead, MD
- **Blue Bird Circle Outstanding Training Director Award**
Bruce K. Shapiro, MD
Introduced by Michael Johnston, MD

3 Exhibit and Poster R&R (Review and Refreshment)

Monday Welcome Reception 6:00-7:30 pm
(exhibits only)

Tuesday Lunch | 12:30-2:00 pm
(exhibits, posters, and Guided Poster Tour #1)

Tuesday Afternoon Child Neuro Forum | 4:30-6:00 pm
(exhibits, posters and Guided Poster Tour #2)
Wine & Cheese Served

Wednesday Breakfast | 7:00-8:15 am
(exhibits, posters, Guided Poster Tour #3)

4 Gala Reception

Wednesday, October 17
Columbus Ballrooms, 7:00-9:00 pm
(plenty of time for self-organized alumni receptions to follow)



MINNESOTA
MEDICAL
ASSOCIATION



WE'VE COME A LONG WAY SINCE MENDEL

Gene replacement therapy: A genetic evolution

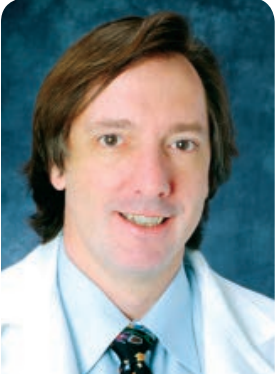
See how genetic research has progressed from Mendel's work with pea plants to notable advancements in medicine. Today, gene replacement therapy (GRT) is a therapeutic approach that is being investigated for its potential to treat monogenic diseases at their source.^{1,2}

Visit us at **Booth #109** and at
GRTzone.com/CNS2018 to learn more

References: 1. Gayon J. From Mendel to epigenetics: history of genetics. *C R Biol.* 2016;339(7-8):225-230.
2. Naldini L. Gene therapy returns to centre stage. *Nature.* 2015;526(7573):351-360.

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CNS Awards Committee Update



Nigel S. Bamford, MD
Chair,
CNS Awards Committee

THE CHILD NEUROLOGY SOCIETY WILL RECOGNIZE seven members at the 47th Annual CNS Meeting in Chicago with the presentation of the following awards:

Those honored were selected by the CNS Awards Committee and subsequently approved by the CNS Executive Committee. The CNS Awards Committee is composed of 16 standing members plus chair (3-5 year terms) and three past Phillip R. Dodge Young Investigator Award recipients (3-year terms). The committee membership draws from a breadth and depth of seniority and experience in pediatric neurology, and the constant influx of the prior three Young Investigator Awardees provide a fresh outlook each year.

The Awards Committee meets at the CNS Annual Meeting to consider nominations for the following year's Sachs, Hower, Lifetime Achievement, and Gold Humanism in Medicine Awards submitted by members of the Child Neurology Society. All CNS members are encouraged to submit nominations (the deadline for submitting nominations for 2018 awards was October 1). Application deadline for the 2019 CNS Philip R. Dodge Young Investigator Award is March 1, 2019.

Profiles of this year's award recipients, featured on pages 10-25 and on display in the registration foyer, were written by Drs. Neil Friedman, Thomas Lock, Solomon Moshe, John Mytinger, N. Paul Rosman, Michael Shevell, and David Urion.

The Arnold P. Gold Foundation Humanism in Medicine Award at the Child Neurology Society

Presented to

Audrey Foster-Barbor, MD

Monday evening, October 15

Introduction by Heather Fullerton, MD

CNS Roger and Mary Brumback Lifetime Achievement Awards

Presented to

Alfred Spiro, MD

Monday evening, October 15

Introduction by Solomon Moshe, MD

Presented to

Gerald Erenberg, MD

Monday evening, October 15

Introduction by A. David Rothner, MD

Presented to

William Logan, MD

Monday evening, October 15

Introduction by O. Carter Snead, MD

CNS Philip R. Dodge Young Investigator Award

Presented to

Christopher Elitt, MD, PhD

(with lecture to follow)

Wednesday morning, October 17

Introduction by Scott Pomeroy, MD, PhD

CNS Bernard Sachs Award

Presented to William Dobyns, MD

(with lecture to follow)

Wednesday morning, October 17

Introduction by Elliott Sherr, MD, PhD

CNS Hower Award

Presented to Bernard Maria, MD, MBA

(with lecture to follow)

Thursday morning, October 18

*Introduction by Nina Schor, MD, PhD
and Jordan Kaufman*



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about

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Arnold P. Gold Foundation Humanism in Medicine Award



Audrey Foster-Barber, MD, PhD

Presented Monday evening, October 15

AUDREY FOSTER-BARBER, MD, PHD

PROFILE WRITTEN BY JOHN MYTINGER, MD

Audrey Foster-Barber, MD, PhD is the 2018 Gold Humanism Award in Medicine recipient. Audrey is an Associate Professor of Child Neurology at the University of California, San Francisco (UCSF) Benioff Children's Hospital. She is a Florida native and graduated from Harvard College with a BA in biology (summa cum laude) in 1989. With the mentorship of Dr. J. Michael Bishop, she completed her MD and PhD (biochemistry) at UCSF in 1999. Prior to her residency, she worked as a postdoctoral fellow in Donna Ferriero's laboratory studying cytokine changes after birth asphyxia. Dr. Ferriero introduced Audrey to child neurology and became an important personal and professional mentor. After the completion of her child neurology residency at the UCSF in 2005, she joined the faculty there. In her early attending years, she was supported and mentored by Dr. T. Harrol Hutchison. Audrey recalls the compassionate relationships that

Dr. Hutchison made with patients and families as well as his wonderful balance of academic medicine and humanism.

While developing experience in the care of children with chronic, complex or life-limiting neurologic illnesses, Audrey developed expertise in neurologic symptom management at the end of life. She joined the Pain and Palliative Care Service and developed an outpatient neurology and genetic focused palliative care clinic (and) subsequently became board certified in Hospice and Palliative Medicine.

Early in her career, Audrey came to the realization that she was most fulfilled by caring for and educating others. With the support of Dr. Ferriero, Audrey made a career pivot away from basic science toward her passion – patient care and mentoring learners. This passion ultimately led her to become the child neurology residency program director at UCSF in 2009. Audrey has developed a curriculum that maximizes learning and enhanced learning opportunities using multidisciplinary education such as in collaborations with neurosurgery and radiology; she has received the UCSF Exceptional Physician Award for excellence in interdisciplinary communication and support. She also serves as the Outpatient Medical Director of the Pediatric Brain Center, a true multidisciplinary practice designed and supported by leaders in pediatric neurology and pediatric neurosurgery – in particular Child Neurology Division Chief, Heather Fullerton and Pediatric Neurosurgery Chief, Nalin Gupta. Her position as clinical director allows her to incorporate the interest

of her learners into the design and practice of a busy clinical service. Her experience in both basic science and clinical research makes her an ideal mentor for students and residents exploring career options. She has formally mentored 17 predoctoral students as well as 19 postdoctoral residents and fellows. She has received multiple teaching awards including the Department of Neurology Resident Education Award. In 2017, Audrey was named the Vice Chair of Education for the Department of Neurology.

While developing experience in the care of children with chronic, complex or life-limiting neurologic illnesses, Audrey developed expertise in neurologic symptom management at the end of life. She joined the Pain and Palliative Care Service and developed an outpatient neurology and genetic focused palliative care clinic. She subsequently became board certified in Hospice and Palliative Medicine. She was the medical director of the Pediatric Palliative Care Service at UCSF from 2009 to 2013 and a palliative care consultant at UCSF from 2013 to 2017. Since 2016, she has worked as an attending physician for the pediatric hospice team at Hospice by the Bay, providing home visits and team-based care for children with various neurologic and non-neurological diagnoses. Audrey provides compassionate care to patients facing end of life choices, helping families to balance the benefit and burden of care and to enhance quality of life. Some of her best moments come during palliative care home visits where she connects with families on a level that few physicians experience.

For all her accomplishments and contributions to the spirituality of humanity, Audrey's greatest success is her role as a mother, spouse, daughter and granddaughter. She draws strength and joy from the memory of her grandmother, Caroline O'Mohundro Foster, who was touched by neurological disease – first with the death of her first child due to myelomeningocele, and then in the loss of her husband to Alzheimer's disease. Audrey fondly recalls the calm and compassionate way her grandmother cared for others, including her husband. Like her grandmother, Audrey's passion for humanism has carried into her personal and professional life. She has been happily married to her true partner, Greg, for 26 years. Audrey and Greg are the proud parents of Brendan (22) and Lily (19).

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CNS Roger and Mary Brumback Lifetime Achievement Award



Gerald Erenberg, MD
Presented Monday
evening, October 15

GERALD ERENBURG, MD

PROFILE WRITTEN BY NEIL R. FRIEDMAN, MBCHB

Gerald (Gerry) Erenberg's modest, unassuming personality belies his extraordinary accomplishments as a gifted clinician, researcher, and innovator in child neurology. His impressive life's work presents a daunting challenge of being condensed into one or two pages. Gerry set down the foundations of a nascent department of Pediatric Neurology at the Cleveland Clinic when, having moved to Cleveland from New York in 1976, he and colleague, David Rothner, served as the sole practitioners in child neurology at the Clinic. The two colleagues soon went on to establish a robust, nationally recognized program in child neurology. Recognizing very early on that the field of child neurology was expanding, Gerry saw the need for subspecialization and for dedicated subspecialty clinics. Together with David Rothner, he established the Cleveland Clinic's Epilepsy, Spina Bifida, and Brain Tumor Clinics.

Born in Chicago in 1938 to immigrant parents, Gerry began his education at a neighborhood public school. As one would expect, Gerry excelled in school from the outset. However, with his characteristic humor, he describes how, even though he was designated "genius at work" in his high school graduation photo, he did manage to fail one course along the way – *handwriting*. As a consequence, he was required to spend an entire summer practicing the Palmer method of handwriting, which is why, he says, he is one of very few physicians in North America who has a legible handwriting. After completing high school and receiving a scholarship, Gerry began his undergraduate studies at the University of Illinois at Navy Pier (respectfully referred to as "Harvard on the Rocks" as it had been a naval training facility during WWII), transitioning directly to University of Illinois' College of Medicine in Chicago three years later. He received his MD degree in 1962.

During his Pediatric residency at Michael Reese Hospital in Chicago, where he served as Chief Resident in his third year, Gerry decided he would like to be a Child Neurologist to take care of developmentally disabled children. However, he would first join the Air Force as a

Medical Corps Pediatrician, stationed at Wright-Patterson AFB for several years during the Vietnam War before he had the opportunity to take his Fellowship in Pediatric Neurology. He received an NIH Fellowship in 1968 and began his Child Neurology training at Albert Einstein College of Medicine in the Bronx, New York, where his mentors included Isabelle Rapin, Al Spiro, Arthur Rose, Jerry Golden, and Joe French. His Fellowship colleagues included Bennett Shaywitz and SakkuBai Naidu. A noteworthy milestone in Gerry's journey as a child neurologist may perhaps be traced to Chicago the year before he began his Fellowship, when he worked as a pediatrician in the High-Risk Infants Program, part of President Johnson's Great Society initiative. His work there with infants at risk for medical or developmental problems led to an abiding interest in what was called at the time, Minimal Brain Dysfunction (MBD), and would eventually become known as ADHD, an area he explored further during his Fellowship, poring over all the literature he could find in the library and eventually publishing a commentary on the subject in the *Journal of Pediatrics* in 1972 ("Drug Therapy in Minimal Brain Dysfunction").

Upon completion of his Fellowship, Gerry was offered an appointment at Montefiore Hospital, where he worked with Jerry Golden and Joe French who had received a grant from the City of New York while Gerry was still a Fellow, to establish a multidisciplinary unit at Morrisania, a South Bronx City Hospital. Gerry himself was given the honor of establishing the Center for Child Development in 1971, for which he put together a team comprising a neighborhood paraprofessional, a nurse-coordinator, a speech pathologist, a Neuropsychologist with Spanish language fluency, and himself as physician. Inputting all the data they gathered on their first 400 patients, by means of the very basic computer technology available at the time, the team published the results in the *Cleveland Clinic Journal of Medicine*. This was the first such paper looking at developmentally disabled, disadvantaged preschool children, as well as school-aged children, in a low socio-economic setting. It was also the stepping stone to a remarkable career dedicated to neurodevelopmental and neurobehavioral disability in children.

In 1976, Gerry was promoted to Associate Professor of Neurology and Pediatrics at the Albert Einstein College of Medicine. He describes an atmosphere of uncertainty that prevailed at the time with regard to the future of grants for clinical research, as the city of New York was on the verge of bankruptcy. Always proactive, Gerry sought out other opportunities and, with his wife, and three children, made his way to Cleveland, Ohio, where his career at Cleveland Clinic took root.

Not long after moving to Cleveland, Gerry forayed into the subspecialty that would come to define much of his life's work in the coming years. Over a brief period of three months in 1977, Gerry saw no fewer than seven children with Tourette Syndrome (TS). This intrigued him, as TS was generally supposed to be a rare disorder. His subsequent publication of a series of 12 cases of TS marked the start of his notable clinical research in this field. This work led to his joining the Medical Advisory Board (MAB) of the Tourette Syndrome Association (TAS) in 1978, although Gerry wryly claims that it was his credentials as an erstwhile New Yorker that helped get him elected to what was at the time a notably New-York-dominated board. Within a few years, Gerry was appointed Chairman of the MAB, a position he retained until 2002. He also became a member of their Scientific Advisory Board, a group exclusively dedicated to assessing grant applications and making funding decisions. Gerry describes this era as a time of rapid growth in the field of TS, with burgeoning scholarship on the subject, and a growing understanding that, contrary to prior assumptions about the rarity of the condition, TS was actually a relatively common disorder.

Meanwhile, at Cleveland Clinic, Gerry had established the Learning Assessment Clinic by 1985, a "clinic without walls," as he puts it, where an educator-evaluator was appointed co-director. Gerry had the intuitive understanding that an educator, rather than any other kind of specialist, was best equipped to write recommendations for teachers to implement in schools. Gerry's remarkable ability to see beyond the circumscriptions of a particular specialty, to understand problems in a systems-wide way, has always been a valuable part of his make-up as a physician.

From there on, Gerry spent his entire career at the Cleveland Clinic, before fully retiring in 2015. While serving as a general child neurologist, he focused on building

and establishing clinics in TS, ADHD, autism, movement disorders, and learning disabilities. During this time, he saw over 1200 patients with Tourette syndrome. He had a prolific career, publishing 68 peer reviewed articles, 28 of which he first authored. Most of these were in the areas of learning disabilities, ADHD, and TS. Gerry was responsible for establishing the Pediatric Neurology Resident Training program at the Cleveland Clinic in which he served as director for eight years. He also served on numerous councils at the Clinic, including the first Bioethics Committee for 10 years, another significant area of medical interest for Gerry throughout his career.

Also noteworthy among the many highlights of Gerry's career is the fact that he attended the original meeting of the Child Neurology Society (CNS) in 1972, where he presented a paper on Rhabdomyolysis. He also served as Councillor from the Midwest and a member of the Child Neurology Executive Committee from 1977-1979. Together with Ron David, Gerry wrote the first CNS position paper circa 1980 on "The Role of the Neurologist in the Evaluation and Care of Children with Learning Disabilities". For six years, he served as the CNS liaison to the American Academy of Pediatrics Committee on Children with Disabilities, during which time he participated in the writing of multiple position papers, including the AAP position paper on "Dyslexia and the Eye" for which he was lead author. In keeping with his strong sense of the need to give back, Gerry served on the Boards of Trustees of a number of support organizations, including Tourette Syndrome Association, United Cerebral Palsy, Epilepsy Foundation, and the Spina Bifida support group.

Gerry's remarkable ability to see beyond the circumscriptions of a particular specialty, to understand problems in a systems-wide way, has always been a valuable part of his make-up as a physician.

Gerry married Shulamith (Shu) Ehrlich while in medical school. He and Shu remain devoted to each other and their three children and grandchildren. Gerry enjoys gardening, travel, and genealogy, and has continued to do volunteer work in the Jewish community, as well as pursuing ongoing adult education. Gerry is highly regarded for his sense of humor, integrity, kindness, and generosity as a friend, colleague, mentor, and teacher. Since those early days in 1976 when Gerry and David Rothner together constituted "the department" at Cleveland Clinic, medical science and technology have changed immeasurably, but in many ways, Gerry still is "the department," as he has made an indelible mark on the practice of Child Neurology at the Cleveland Clinic and in the profession of child neurology as a whole.

CNS Roger and Mary Brumback Lifetime Achievement Award



William Logan, MD
Presented Monday
evening, October 15

WILLIAM LOGAN, MD

PROFILE WRITTEN BY
MICHAEL SHEVELL, MDCM, FRCP

Bill Logan received an undergraduate degree from Illinois College and his medical degree from the University of Chicago. This was followed by extensive training in Pediatrics, Neurology, and Neuropharmacology at Johns Hopkins, Cincinnati Children's, Stanford, and the NIH. Following this training, Dr. Logan was recruited to the University of Virginia where he made significant contribution to our understanding of CSF neurotransmitters. In 1978 he went to Toronto to assume the position of Head of the Division of Neurology at the Hospital for Sick Children, following John Stobo Prichard, one of the founders of the specialty of child neurology. Bill held this position until 1994, rising to the rank of Full Professor, and has remained at Sick Kids in the Division of Neurology ever since as a staff neurologist. Of note, Bill took a year-long sabbatical in Boston following the end of his tenure as Division Head and basically redefined his career, gaining expertise in fMRI and MRI, which he has used to develop a program looking at cerebral blood flow in childhood stroke and pediatric movement disorders. Although Bill ostensibly 'retired' a few years ago, you would never know it, as he still makes enormous clinical and educational contributions to the Division of Neurology at SickKids.

Bill has been a pivotal and personal 'bridge' in the multiple close connections between Canadian child neurologists and the Child Neurology Society. Through roles and actions, both formal and informal, Bill has ensured that there is a vital continuing Canadian presence in this Society that has contributed to the diversity and growth in the specialty.

Dr. Logan has a long history of significant engagement with the Child Neurology Society. Starting in 1981 Bill was a member of the International Affairs Committee, where he served from 1981-1982 and 1989-1990. From 1991-1993, he was the Councillor from the Midwest on the CNS Executive Committee. Following this role, he served on the Training Committee from 1994-1995, before

returning to the International Affairs Committee from 1997-2005. Over this period, he also had a long tenure on the CNS Awards committee. His leadership within the CNS was paralleled by remarkable engagement in the growth of child neurology nationally and internationally. Dr. Logan served as president of the Canadian Association of Child Neurology (CACN) from 1995-1997. This leadership role followed his tenure of the CACN as secretary treasurer and then Vice President. At the International Child Neurology Association (ICNA), Bill served as an Executive Board Member, Secretary Treasurer, Vice President (North America), and Founding Editor and Chief of the ICNA website. Reflecting his unwavering dedication to the education of child neurologists in Canada, Bill held the prestigious position of an Examiner in Neurology for the Royal College of Physicians and Surgeons of Canada from 1984 to 1990. Earlier in his career, he served as an Associate Examiner in Neurology and Child Neurology for the American Board of Psychiatry and Neurology. He also has engaged in Medical Leadership more broadly, serving on the Council of the Ontario Medical Association. He has been on the Editorial Board of numerous journals including the Canadian Journal of Neurological Sciences, Neurology, and Pediatric Neurology.

Dr. Logan is an outstanding, empathetic and compassionate clinician. Through his clinical care, he exemplifies "humanism". He is a remarkably gifted teacher and invariably galvanizes the curiosity of the medical students, residents, fellows, and everyone else who is fortunate enough to be in the room.

Not reflected in his CV, but widely recognized by his peers, Bill has been a pivotal and personal 'bridge' in the multiple close connections between Canadian child neurologists and the Child Neurology Society. Through roles and actions, both formal and informal, Bill has ensured that there is a vital continuing Canadian presence in this Society that has contributed to the diversity and growth in the specialty.

Join us for a Satellite CME Seminar

What Constitutes a Clinically Meaningful Outcome in Pediatric Epilepsy?

Tuesday, October 16, 2018

4:30 PM – 5:30 PM

Hyatt Regency Chicago

Michigan I, Concourse Level

East Tower

Program Chair

Renée A. Shellhaas, MD, MS (Program Chair)

Clinical Associate Professor of Pediatrics

Neurology Division

University of Michigan

C.S. Mott Children's Hospital

Ann Arbor, Michigan

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Postgraduate Institute
for Medicine



CNS Roger and Mary Brumback Lifetime Achievement Award



Alfred J. Spiro, MD
Presented Monday
evening, October 15

ALFRED J. SPIRO, MD

PROFILE WRITTEN BY SOLOMON L. MOSHÉ, MD

Dr. Alfred J. Spiro has been in the forefront of pediatric neurology, especially as it pertains to neuromuscular disorders, for over 50 years. He has made significant contributions to the science of medicine using a humanistic approach and simultaneously attracted and cultivated the new leaders for tomorrow.

Dr. Spiro graduated with his MD degree in 1955 from the University of Bern, Faculty of Medicine in Bern, Switzerland and then did his pediatric residency in Babies Hospital in Newark, New Jersey followed by a neurology residency at the Hospital of the University of Pennsylvania and child neurology residency at the Children's Hospital in Philadelphia. In between his residencies he was in active duty in the United States Public Health Service. He was appointed at Albert Einstein in July of 1966 and he remained with us for the rest of his career, developing an outstanding child neurology division and neuromuscular program beyond compare. Al was the director of child neurology at Einstein from 1980 to 1995. He trained scores of pediatric neurology. Although very interested in neuromuscular disorders, he made sure that all aspects of neurology were covered, providing an encyclopedic knowledge to the residents he trained.

From very early on Al was interested in neuromuscular diseases and he was the first to describe a variety of neuromuscular diseases using histochemistry. Indeed, he created one of the first histochemistry labs in the US, which was absolutely necessary before neurogenetic testing became available many decades later. He was and still is a master at muscle biopsy interpretation. He described a series of mitochondrial myopathies and these diseases can perhaps be best classified as "Spiropathies".

He was able to describe clinical features that made the diagnosis possible and the confirmation by detailed immunological studies. He made foundational contributions in the areas of congenital myopathies (myotubular, nemaline), Duchenne muscular dystrophy, myotonic dystrophy, sarcoglycanopathies, limb girdle muscular dystrophy and spinal muscular atrophy. He described unique features that aid in the diagnosis of neuromuscular diseases such as minipolymyoclonus in children with spinal muscular atrophy. Here as a brief reflection of the breadth and depth of Al's clinical work is his publication history, rich with case reports and case series that span the field of neuromuscular disorders:

- In 1965 (*JAMA Neurology*), he described a hereditary occurrence of nemaline myopathy, a disorder that had been identified by Shy et al. only two years before and that had appeared not to be hereditary in all other reports up to that time.
- In 1966 (*Arch Neurol*), Al reported his examination of an adolescent boy whose muscle biopsy revealed fetal-type myotubes instead of mature muscle cells, and thus described myotubular myopathy for the first time; now, the field recognizes the genetic abnormalities and complex relationships among various forms of myotubular and centronuclear myopathies.
- He reported in 1970 both a new mitochondrial myopathy (*JAMA Neurology*) and familial cases of hereditary spastic paraparesis with sensory neuropathy (*Dev Med Child Neurol*).
- As early as 1977, Al was offering diagnostic algorithms for the child with muscle weakness, a common and puzzling situation for clinicians.

- Limb-girdle muscular dystrophy, nemaline myopathy, adrenoleukodystrophy, myotonic dystrophy, amyotrophic lateral sclerosis, polymyositis, and of course Duchenne and Becker muscular dystrophies: all of these disorders came under Al's scrutiny, and he shared his findings with us

In his neuromuscular program, he included patients not only with muscular dystrophy or mitochondrial myopathies but all aspects of the neuromuscular disorders. He developed the first such clinic in the New York metropolitan area which grew over time and attracted the interest of many doctors keen to better understand neuromuscular diseases. He molded his neuromuscular clinic into a comprehensive, multi-disciplinary program that was a regional magnet for patients of all ages, newborn to elder, suffering from all types of neuromuscular disorders. The genetic maps we drew required multiple family members and multiple generations, more than might be recruited through a purely pediatric practice. He taught generations of trainees on the approach to the child with muscle weakness.

Al has excelled in all aspects of Child Neurology. Many of the students he mentored during his 15-year tenure as director of the Einstein/Montefiore program have advanced the field across a broad spectrum of specialized studies based on his original contributions. As a clinician, as a writer, and as a researcher, he always keeps in the forefront the needs of his patients. He does not let the rest of us forget for a moment that what we do impacts the lives of individuals. He has kept medicine humane even when few or no treatment options are available to offer to our patients.

On his retirement, after being on the faculty of the Albert Einstein College of Medicine for 51 years, a tree on the lawn in front of one of the main buildings was dedicated as a lasting, rooted reminder of the decades of Al's service

(see the photo with Marge, Al's wife of 56 years). The dedication was followed by a dinner at the Faculty Club.

With retirement, Al is able to have more adequate time to pursue his many non-medical interests. Photography has been a major interest since Al was a child. This includes both nature and general imaging in which Al competes in an active camera club. Going to the Metropolitan Opera or viewing performances in HD in a local theater with Marge has been a tradition for several decades. Reading and museum-going also have been major interests for many years.

Al and Marge, who when they met was a head nurse at Babies' Hospital at Columbia Presbyterian and in her later years a school nurse, have three adult children. Melissa is a Land Preservation Coordinator in eastern Long Island trying to keep development from changing the semi-rural nature of the area. Amanda, an Einstein graduate, is a pediatrician in New Hampshire married to another Einstein graduate, an orthopedic surgeon. John is a neurobiologist in New York married to a pediatrician. When possible, the children and four grandchildren gather for what has become their traditional lobster dinner at their summer home in the North fork of eastern Long Island. One of Al and Marge's grandchildren is the recipient of a Fulbright Fellowship to teach in Malaysia.

Al's overall excellence in clinical care, academic productivity, teaching and ability to bring people together is unsurpassed. While widely acclaimed as a leader in the field of pediatric neuromuscular diseases, he has never gotten the credit he deserves because he is such a low-key guy, instinctively downplaying his accomplishments. Until now. With tremendous pride, the Child Neurology Society is recognizing his achievements by bestowing on him the 2018 Child Neurology Society Roger and Mary Brumback Lifetime Achievement Award.

As a clinician, as a writer, and as a researcher, he always keeps in the forefront the needs of his patients. He does not let the rest of us forget for a moment that what we do impacts the lives of individuals. He has kept medicine humane even when few or no treatment options are available to offer to our patients.

CNS/PCN Blue Bird Circle Training Director Award



Bruce K. Shapiro, MD
*Presented Monday,
October 15*

BRUCE K. SHAPIRO, MD

PROFILE WRITTEN BY THOMAS M. LOCK, MD

Bruce Shapiro's early years were spent as the oldest of three children of a middle class family in Brooklyn, New York. His family moved to Long Island where he attended high school. Due to Bruce's early interest in medicine, he left Long Island at 17 and enrolled in the AB/MD program at Boston University. This was a time of turmoil during the Vietnam War and the emerging sexual revolution. His dormitory was near Fenway Park which, at time, opened its gates every game for free admission in the 7th inning. Bruce rapidly became a Red Sox fan! Bruce's senior year of medical school was highlighted by his marriage to Elizabeth. Bruce and Elizabeth now have three adult children and six grandchildren.

Bruce decided on Children's Hospital National Medical Center for his pediatric training. He thrived in the residency program. He served as chief resident in 1974-75 and during this time, debated which career pathway he would choose following his residency. He considered fellowships in infectious disease and child development. A fellow resident asked him if he had heard of the child development program that Dr. Arnold Capute was running at the Kennedy Institute. Dr Shapiro subsequently arranged a meeting with Dr. Capute and the rest is history.

Bruce completed a fellowship in Developmental Pediatrics at the John F. Kennedy Institute from 1975-1977. His training was as a fellow and as a junior faculty member was under the direction of Dr. Arnold Capute, the "Father of Developmental Pediatrics". He quickly became involved in multiple research projects, including the Primitive Reflex Profile, which led to the publication of a monograph and many peer reviewed articles. During this very hectic and exhilarating time, Bruce was

placed in charge of bringing bagels and cream cheese to Saturday research meetings at the institute.

Bruce's long and productive career is best understood in the context of the groundbreaking interdisciplinary environment at the Kennedy Krieger Institute (KKI) and Johns Hopkins University (JHU). The KKI has for the past 50 years had core funding as a member of University Centers for Excellence in Developmental Disabilities (UCEDD) and Leadership Education in Neurodevelopmental and Related Disabilities (LEND), programs that provide graduate level interdisciplinary training as well as interdisciplinary services and care. Bruce has served as Director and PI/Associate Director of the KKI LEND program since 1977, serving 200 trainees per year from 14 core disciplines.

It was in this environment that Drs. Capute and Shapiro developed the vision and path forward for the new specialty of Neurodevelopmental Disabilities. Bruce was a key contributor in the efforts to establish recognition of Neurodevelopmental Disabilities by the American Board of Medical Subspecialties (ABMS). This effort required obtaining the support and cooperation of the American Board of Pediatrics and the American Board of Psychiatry and Neurology (ABPN). Dr. Shapiro established the first Neurodevelopmental Disabilities residency that was approved by the Accreditation Council for Graduate Medical Education (ACGME). Since 2009, Bruce has served as a member of the American Board of Psychiatry and Neurology (ABPN) Neurodevelopmental Disabilities Examination Committee, and as Chair of the committee since 2011. He has also served as a member of the ABPN Steering Committee since 2011, and has been a member of the ACGME Neurodevelopmental Disabilities Milestones Working Group.

Dr. Shapiro has been course director since 2005 and member of the program committee for the annual national Spectrum of Developmental Disabilities conference at JHU for the past 40 years. He served as Chair of the JHU Continuing Medical Education Advisory Board from 2009-2014 and Pediatric Residency Review Committee from 1994-2010.

Bruce has authored over 49 peer reviewed manuscripts, 63 book chapters or monographs, and six books in the field of neurodevelopmental disabilities.

Bruce currently is the Arnold J. Capute MD, MPH Chair in Neurodevelopmental Disabilities, Kennedy Krieger Institute and Johns Hopkins University. He was awarded the Capute Award by the American Academy of Pediatrics in 2010.

Bruce has been a valued mentor for over 120 specialists in Neurodevelopmental Disabilities and Post-Doctoral trainees. His mentees have held faculty positions at prestigious university hospitals throughout the United States and the world. Some have gone on to head large university based interdisciplinary institutes, centers and NDD residencies. Bruce has also been a mentor for directors of other programs in their efforts to achieve accreditation.

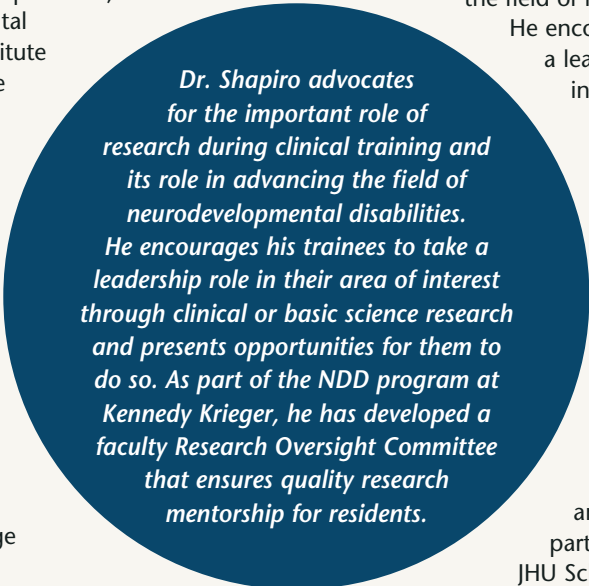
His trainees describe Bruce as approachable, modest, respectful, and firm when appropriate. He inspires critical thinking in patient care, academic pursuits, and healthcare policies. His residents feel motivated to grow their fund of knowledge by reading about their patients and diagnoses, doing original research, and developing treatment plans.

Dr. Shapiro trains and supports each trainee to incorporate their personal interests and career goals to individualize their training. Examples of this include facilitating outside electives, recommending interdisciplinary courses at the school of public health and business school, and promoting professional connections for potential mentorship. He further supports work-life balance for his trainees, allowing for flexibility in cases of family or medical leave.

Dr. Shapiro advocates for the important role of research during clinical training and its role in advancing the field of neurodevelopmental disabilities.

He encourages his trainees to take a leadership role in their area of interest through clinical or basic science research and presents opportunities for them to do so. As part of the NDD program at Kennedy Krieger, he has developed a faculty Research Oversight Committee that ensures quality research mentorship for residents.

Bruce's dedication has not only shown in his founding a new program and tackling the required stacks of forms and paperwork. He has built partnerships with faculty at the JHU School of Medicine, with whom this training is a collaboration, greatly enriching both sides. He has wrangled opinionated residents, ready to revise the program from the get-go, and held the course, even while making substantive changes over time in response to trainee feedback. He has mentored residents in how to engage with the phenomenal resources of their own institutions, and the community beyond.



Dr. Shapiro advocates for the important role of research during clinical training and its role in advancing the field of neurodevelopmental disabilities. He encourages his trainees to take a leadership role in their area of interest through clinical or basic science research and presents opportunities for them to do so. As part of the NDD program at Kennedy Krieger, he has developed a faculty Research Oversight Committee that ensures quality research mentorship for residents.

CNS Bernard Sachs Award



William B. Dobyns, MD
(with friend and fellow child
neurologist, Elliott Sherr,
MD, PhD.)

*Presented Wednesday
morning, October 17*

WILLIAM B. DOBYNS, MD

PROFILE WRITTEN BY JOHN MYTINGER, MD

William B. Dobyns, MD is the 2018 Bernard Sachs Awardee. He is a prolific physician-scientist and mentor with influential contributions to the fields of child neurology, developmental neuroscience, and human genetics. Bill is the second son of an Air Force physician and Army nurse who met in the aftermath of WWII. His childhood years criss-crossed the continent, culminating in graduation from high school in Rochester, Minnesota where his father was an Orthopedic Surgeon at the Mayo Clinic. He graduated from the University of Michigan in 1974 and received his medical degree from Mayo Medical School in 1978. He completed pediatrics training (and met his future wife, Sara) at the Gundersen Clinic and Lutheran Hospital in LaCrosse, Wisconsin from 1978 to 1980. He went on to a pediatric neurology residency at Baylor College of Medicine from 1980 to 1983, a program then led by Marv Fishman who proved to be a wonderful mentor as well as a strong supporter of his early interest in research. He also began a productive collaboration with cytogeneticist Dr. David Ledbetter; their work led to the discovery of chromosome 17 deletions in Miller-Dieker syndrome. He completed a fellowship in medical genetics at the Mayo Graduate School of Medicine in 1985, becoming one of the first physicians to complete combined training in pediatric neurology and genetics.

Bill began his first faculty position as Assistant Professor at the Medical College of Wisconsin from 1985 to 1989. He then made a series of professional moves (probably more than he would have preferred) that exposed him to a wide range of mentors and research opportunities. He was promoted to Associate Professor in 1989 with his move to Indiana University School of Medicine where he stayed until 1992. He next moved to the Twin Cities with an appointment at the University of Minnesota Medical School from 1992 to 1998, where he was able to significantly expand his research program with strong and consistent

support from Drs. Ken Swaiman, Phyllis Sherr, and Larry Lockman. With the mentorship of Larry Lockman, Bill was awarded his first successful NIH grant as Principal Investigator. In 1999, he was promoted to Professor at the University of Chicago where he opened his first research laboratory as primary investigator. It was here that he recruited and began a very productive and longstanding scientific collaboration with Dr. Kathy Millen. Finally, in 2010, he and Dr. Millen were recruited to join an expanding Neuroscience research unit at Seattle Children's Research Institute and the University of Washington School of Medicine, where his contributions to our field continue.

Bill's research interests are wide-ranging and include studies of a large and diverse group of developmental brain disorders that include brain malformations as well as pediatric epilepsy, movement disorders, autism and severe autism-plus disorders (developmental encephalopathies), medical and molecular genetics, and most recently genetic mosaicism underlying developmental brain and vascular disorders. With work over many years, he developed expertise in both brain imaging and molecular genetics, using these as essential tools to define the nature and underlying causes of many genetic and non-genetic developmental disorders. He has achieved extensive private and public grant funding including consistent NIH grant funding since 1989. He has given more than 150 invited lectures and published 370 manuscripts as well as 45 chapters and reviews. His lifetime key research collaborators have been Drs. Elizabeth Ross (who first taught him how to write a grant!), David Ledbetter, Jeff Golden, Joe Gleeson, Jim Barkovich, Elliott Sherr and especially Kathy Millen. With his colleagues and collaborators, Bill has contributed to:

- The initial recognition and or primary definition of numerous well known clinical syndromes (Miller-Dieker syndrome (MDS), Walker-Warburg syndrome, Smith-Magenis syndrome [SMS], Baraitser-Winter cerebrofrontofacial syndrome, Joubert syndrome, X-linked lissencephaly

with abnormal genitalia, Warburg Micro syndrome, megalencephaly-capillary malformation syndrome, megalencephaly-polymicrogyria-polydactyly-hydrocephalus syndrome, coloboma-renal syndrome, rapid-onset dystonia-parkinsonism and more).

- The discovery of three important microdeletion syndromes (17p13.3 [MDS], 17p11.2 [SMS] and 16p11.2 [autism and other neurodevelopmental phenotypes]).
- The delineation of many more disease-causing copy number variants.
- The discovery of 22 causative gene mutations associated with diverse developmental neurological disorders.
- Co-discovery of another 30 genes (most associated with developmental brain disease).
- Many other studies defining various neurological disease and syndromes often with state-of-the-art genotype-phenotype correlations.

For nearly three and a half decades, Bill's contributions have helped to establish the field of Developmental Neurogenetics. His interest in brain malformation began during his child neurology training under Dr. Marvin Fishman at Baylor College of Medicine in Houston when he saw his first three patients with lissencephaly, two found to have structural abnormalities of chromosome 17p13. In the subsequent years, he gathered data on patients across the country and began to differentiate syndromes with CT and then MRI. This work was the basis for future genetic studies that have led to the discovery of many genes associated with lissencephaly (*LIS1*, *YWHAE*, *DCX*, *ARX*, *ACTB*, *ACTG1*, *CRADD* and most recently *MACF1*). Bill coined the term 'malformation of cortical development' and contributed heavily to our understanding of this large group of malformations. More recently, his laboratory has used whole exome sequencing technology to discover five causative genes (*PIK3CA*, *PIK3R2*, *AKT3*, *CCND2*, *MTOR*) in the pathway underlying megalencephaly, hemimegalencephaly and focal cortical dysplasia type.

Bill's research interests are wide-ranging and include studies of a large and diverse group of developmental brain disorders that include brain malformations as well as pediatric epilepsy, movement disorders, autism and severe autism-plus disorders (developmental encephalopathies), medical and molecular genetics, and most recently genetic mosaicism underlying developmental brain and vascular disorders.

Dr. Kathy Millen has been Bill's most vital career collaborator (first at the University of Chicago and now at Seattle Children's and the University Washington in Seattle). Using a mouse model of hemimegalencephaly, this collaboration has recently reported a rapidly reversible epilepsy using a PI3K-specific inhibitor. This collaboration has also led to the discovery of the first three genes associated with Dandy-Walker malformation (*ZIC1*, *ZIC4* and *FOXC1*). Bill has also played an important role in the delineation of malformation of the early forebrain such as holoprosencephaly, agenesis of the corpus callosum, septo-optic dysplasia as well as congenital and early life hydrocephalus. This work has included the delineation of phenotypes, gene discovery, and genotypic-phenotypic correlations.

In addition to his important scientific contributions, Bill has been an effective mentor to many successful neurology and genetic residents (32), graduate students (5), and post-doctoral fellows (17). His mentored grant funding includes four K or equivalent awards (Alex Paciorkowski [K08], Hannah Tully [KL2], Ghayda Mirzaa [K08], and Jimmy Bennett [Burroughs Wellcome Fund Career Award]). Some of his greatest satisfaction has come from his trainees continuing research in developmental brain disorders after leaving his lab.

With Bill's depth of knowledge in brain development and malformation, he was perfectly positioned to understand and educate us about congenital Zika syndrome. In addition to several recent publications on this topic, his presentation of Zika syndrome was a timely highlight of the 2016 Child Neurology Society meeting in Vancouver BC.

Bill's friends and colleagues know him as engaging, focused and energetic – characteristics that led to a successful life and career. He is (or, according to Bill, was) a good athlete, playing competitive table tennis in college and subsequently transitioning to tennis and other racquet sports. Dr. Dobyns is married to Sara Dobyns and they have two children together, Catherine and Timothy, as well as two grandchildren, Gavin and Beckett Pardo.

CNS Philip R. Dodge Young Investigator Award



Christopher Elitt, MD, PhD

Presented Wednesday morning, October 17

CHRISTOPHER ELITT, MD, PhD

PROFILE WRITTEN BY DAVID URION, MD

This year's Phillip R. Dodge Young Investigator Award recipient is Christopher Michael Elitt, MD, PhD of Boston Children's Hospital and Harvard Medical School. The award will support his ongoing investigations into the cellular mechanisms of brain injury in premature infants, and the development of novel therapies to prevent or mitigate those injuries.

As is so often the case, the confluence of personal experience and early mentoring led Dr. Elitt towards his career as a child neurologist and developmental neurobiologist. As Pasteur pointed out, chance favors the prepared mind. One of his younger brothers sustained a bilirubin-induced brain injury shortly after birth, and Chris therefore had a very direct knowledge of and perspective on the consequences for a child and family of dealing simultaneously with a movement disorder, significant language difficulties, and challenging neurobehavioral issues.

As an undergraduate at Brown University, he fell under the spell of neuroscience when he took an introductory course taught by Mark Bear. He chose neuroscience as his major, and worked in the perinatal brain research laboratory of Barbara Stonestreet. He did an honors thesis here, and began his serious examination of the premature brain here, learning the fundamentals of immunohistochemistry and scientific writing. He stayed on in the lab for a year after graduation, and by the time he left he had two publications and a platform presentation at the Society for Pediatric Research Meeting under his belt.

The Medical Scientist Training Program, funded by the National Institutes of Health, was a perfect fit as the next step on his path, and Chris went to the University of Pittsburgh. He did his dissertation with Brian Davis, PhD and collaborated closely with Karen Albers, PhD. His work led to the discovery that two Transient Receptor Potential (TRP) channels were upregulated in the overexpressed state of a Glial Cell-Line Derived Neurotrophic Factor (Artemin) in a mouse model, and thus revealed an important mechanism of chronic pain, as well as opening effective lines of potential therapies. This fundamentally translational aspect to Dr. Elitt's research has continued as a theme throughout his subsequent career.

Chris then came to Boston, both to work in the lab of Paul Rosenberg, MD, PhD studying injury and death mechanisms in oligodendroglia, as well as to be part of the larger efforts of Dr. Joseph Volpe's Program Project Grant studying white matter injury in the premature brain. Chris also completed his rigorous clinical training, doing two years of general pediatrics in the Boston Combined Residency Program, followed by three years of neurology and child neurology in the Boston Children's Hospital program, and then two years of Fetal-Neonatal Neurology fellowship with Dr. Janet Soul. His continued scientific productivity in the context of such a clinically demanding training program is testimony to his organizational skills, stamina, and sustained vision. As one who was his frequent clinical supervisor, I can testify that his clinical work never flagged despite his rigorous lab schedule. And we can see from the fruits of his science that his clinical training was never an impediment to his scientific creativity and productivity.

This award recognizes a career trajectory that has already showed extraordinary discipline and sustained effort in the direction of developing reliable biomarkers for potential white matter injury in the premature brain, with an eye towards how those might also be used for meaningful intervention and prevention.

Chris continued to study TRP channels, now in the context of oligodendroglia, and with special attention to the interaction with zinc biology and homeostasis. His work in this domain, for which he has been awarded the DYIA, shows exciting promise as a mechanism for both understanding one of the bases of white matter injury in the premature brain, as well as potential therapies to mitigate that injury.

Chris continues to work as a clinical neurologist, doing both fetal consults in the Advanced Fetal Care Center at Boston Children's Hospital, as well as in the Neonatal Neurology outpatient clinic. He has developed strong collaborative ties with colleagues in neonatology, such as Dr. Mandy Belfort, which speaks to his long-term commitment to tie basic science research to clinical care and the development of new therapies.

This award recognizes a career trajectory that has already showed extraordinary discipline and sustained effort in the direction of developing reliable biomarkers for potential white matter injury in the premature brain, with an eye towards how those might also be used for meaningful intervention and prevention. This is translational neuroscience, from bench to bedside and back again, as it should be practiced. Chris, and his work, represent a career the Child Neurology Society is proud to honor and award the Philip R. Dodge Young Investigator Award, and also serves as a model for other young physician-scientists coming along.

As a society, we applaud his patient and exacting work, as we honor Chris and his family.

ACNN Awards

Presented at ACNN Meeting on Tuesday, October 16;
Announced at CNS Meeting on Tuesday morning, October 16



**Claire Chee Excellence in
Child Neurology Nursing Award**
Cheryl Cahill, MSN, CNRN



Nurse Practitioner Award
Scott B. Turner, DNP, FNP-C



Innovative Practice Award
Angelina Koehler, MA, CPNP

D'Souza Fellowship Award



**Bernard J. D'Souza
International Fellowship Award**

Suvasini Sharma, MD, DM
Presented on Tuesday morning, October 16
by Jorge Vidaurre, MD, Chair,
CNS International Affairs Committee

Nominate Future Award Recipients

Nominations for all major CNS career awards can be entered on the CNS website year-round. A 500-word summary statement of support, along with up to three letters of support and the nominee's CV qualifies individuals for review by the Awards Committee for the following awards:

- Arnold P. Gold Foundation Humanism in Medicine Award
- CNS-PCN Blue Bird Circle Training Director Award
- Hower Award
- Bernard Sachs Award
- Roger & Mary Brumback Lifetime Achievement Award (2-3 given each year)

CNS Hower Award



Bernard L. Maria, MD,
MBA

*Presented Thursday
morning, October 18*

BERNARD L. MARIA, MD, MBA

PROFILE WRITTEN BY N. PAUL ROSMAN, MD

Since the birth of the Child Neurology Society in 1972, Bernie Maria has been one of the most visionary and scientifically productive of the Society's more than 2,000 members. He has assumed important leadership positions in a number of major medical centers. The challenges that he has chosen to undertake and the successes that he has achieved continue to escalate with remarkable rapidity.

Bernie speaks of his dad, Maurice, as "my hero." Maurice is a hyper-alert, humorous and intuitive man, a Professor of Marketing Emeritus at the University of Montreal Business School. He affectionately refers to his son as, "little Bernie," commenting that at age 10 months, Bernie weighed 30 pounds, which his father says was "all muscle" – so much so, that no one could lift him up!

Bernie's performance in grade school was uneven. As a matter of fact, in 6th grade, he was felt to have "homework-associated ADD," which was later explained by Bernie's scheduling his homework so that he could always do it while watching the Tonight Show with Johnny Carson.

Outside of school, responding to sub-zero Canadian winters, Bernie's favorite sports were skiing and ice hockey. Alas, his skills were something short of Olympic caliber, so he decided to become a serious student.

Bernie did his undergraduate work in Health Sciences and Business in Montreal, Canada. He then considered entering the field of Dentistry, but quickly changed his mind after failing one of the admission prerequisites – carving a tooth from a block of chalk. Bernie's tooth might most charitably be graded as a "disaster," said to resemble an extra body part from some prehistoric animal!

Following this misstep, Bernie found his true calling in the field of Medicine, where he excelled as a medical student at the University of Sherbrooke in Quebec, Canada, a highly

sought-after medical school because of its innovative curriculum. This was followed by two years of residency in Pediatrics at the Montreal Children's Hospital, McGill University, and then a three-year residency in Pediatric Neurology at the Johns Hopkins Hospital, under the direction of one of the former giants in Pediatric Neurology, John Freeman. Bernie refers to his training by John as a "game changer." He remembered vividly that John advised: "Be a listener; ask tough questions if they are needed; stand up for your principles." Bernie then completed two years as a Pediatric Fellow in Neuro-Oncology, at the University of Texas, MD Anderson Cancer Center, Houston, TX, following which he spent two years at the University of Toronto, Canada as an Assistant Professor in Pediatrics, Neurology and Hematology/Oncology at the Hospital for Sick Children.

In 1990, Bernie was recruited to the University of Florida, College of Medicine, in Gainesville, FL, as the youngest Division Chief in Pediatric Neurology in the country and the founding Director of their Pediatric Brain Tumor program. During the 11 years that he served as Division Chief, he obtained an MBA from the University of Gainesville, with focus on strategic management. At the Medical Center in Gainesville, Bernie was granted tenure in 1995 and was promoted to full Professor in 1998.

This was followed by Bernie's appointment, in 2001, as Chief of the Division of Child Development and Neurology, Chairman of the Department of Child Health and Pediatrician-in-Chief of Children's Hospital, University of Missouri School of Medicine, Columbus, MO.

In 2003, Bernie moved to the Medical University of South Carolina, Charlestown, SC as Founding Executive Director of the Charles P. Darby Children's Research Institute, the largest pediatric research space in the Carolinas. Additionally, he was Associate Director of the Neuroscience Institute at the Medical Center. During his tenure at the University, he fostered collaboration among multiple biological disciplines, hired 150 investigators and their staff, and he almost tripled their annual extramural funding for

children's research. Also, with a colleague, he established a developmental neuro-oncology laboratory, with particular focus on treatment of CNS tumors.

In 2009, Bernie was recruited to the Medical College of Georgia as Chairman of Pediatrics and Pediatrician-in-Chief at the Children's Hospital of Georgia in Augusta, where he opened a children's research unit and significantly increased their funding for translational research. His Pediatric Department received the Outstanding Clinical Science Teaching Award during four of the five years that Bernie served as Chair. During that time, Bernie obtained funding for three endowed Chairs and secured support to build a new Ronald McDonald House on campus.

Most recently, in 2014, Bernie accepted a position as Director of the newly-created Division of Child Neurology and Developmental Medicine at the Goryeb Children's Hospital, Morristown, NJ, where he also serves as Director of their Neuro-Oncology program. In addition to establishing a new brain tumor program at the Hospital, he has also opened a new autism center.

In Morristown, Bernie is presently Professor of Pediatrics and Neurology at the Sidney Kimmel Medical College of Thomas Jefferson University, Philadelphia, PA.

Bernie's extensive research contributions have focused primarily on clinical and basic neuro-oncology. Particularly well known is his work with hyaluronan antagonists in the management of central nervous system gliomas. Paralleling his neuro-oncology research have been studies of ciliopathies, including Joubert syndrome and other hindbrain malformations, with identification of alterations in ciliary genes in a number of these disorders. It's ironic that Bernie was first to describe the pathognomonic neuroradiological "molar tooth sign" in Joubert syndrome, despite his having failed, years before, his chalk tooth test, when considering entering dental school!

Perhaps most of us in the Child Neurology Society identify Bernie with his superb annual symposia on the Neurobiology of Disease in Children (NDC), focusing on neurological disorders that are often challenging to treat, and with many lessons to teach. These conferences, begun

in 2001, with continuous NIH funding through 2020, are the first (and many say the best) scientific session at the Annual Meeting of the Child Neurology Society. To date, these symposia have focused on the following disorders: Neurofibromatosis (x2), Leukodystrophies (x2), Tuberous Sclerosis Complex, Rett Syndrome, Tourette Syndrome (x2), Spinal Muscular Atrophy, CNS Tumors, Prematurity and later Cerebral Palsy, Muscular Dystrophy, Cerebrovascular Diseases, Childhood Ataxia, Batten Disease, Mitochondrial Diseases, Autism Spectrum Disorders, and Epileptic Encephalopathy. The proceedings of the NDC symposia have included more than 180 publications, with Bernie a contributor in 33.

Perhaps most of us in the Child Neurology Society identify Bernie with his superb annual symposia on the Neurobiology of Disease in Children (NDC), focusing on neurological disorders that are often challenging to treat, and with many lessons to teach. These conferences, begun in 2001, with continuous NIH funding through 2020, are the first (and many say the best) scientific session at the CNS Annual Meeting.

Bernie has served as a member of 20 scientific societies and as an Editor and/or reviewer for two dozen medical journals. He has had 87 funded research grants, many with innovative research on the biology and treatment of childhood brain tumors. He has contributed 137 articles to high level peer-reviewed journals, and he has been Guest Editor of 22 scholarly books and monographs, to which he has contributed 42 chapters. Bernie is also Editor of *Current Management in Child Neurology* (four editions) and a Co-Editor of the latest edition of *Textbook of Child Neurology* (Menkes, Sarnat and Maria). He has mentored 27 medical students as research assistants and he has trained 16 post-doctoral Fellows.

Bernie re-married in 2015, having met his wife, Shari, a ladies fashion wear consultant, in 1980. He has a grown son, Alex, who works in Information Technology.

In addition to his remarkable energy and productivity, Bernie has been a great leader with a sparkling personality. He radiates enthusiasm and good cheer, brightening the world of everyone around him and in an entirely selfless fashion. He has motivated a great many people to reach for the stars. The world of Child Neurology has been blessed to have Bernie Maria as one of our most outstanding "triple threats" – an excellent clinician, an engrossing teacher, and a superb researcher. The luster from previous Hower Award recipients burns ever more brightly by the addition of Bernie Maria to their ranks.

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RETHINK YOUR APPROACH TO
CONVULSIVE SEIZURE FREEDOM

For patients with epilepsy 12 years of age and older for the treatment of partial-onset seizures (POS) with or without secondarily generalized seizures and adjunctive therapy in the treatment of primary generalized tonic-clonic (PGTC) seizures

Please see Important Safety Information, including a **Boxed WARNING** for Serious Psychiatric and Behavioral Reactions, on adjacent page.
Please see Brief Summary of Prescribing Information on following pages.

IMPORTANT SAFETY INFORMATION

WARNING: SERIOUS PSYCHIATRIC AND BEHAVIORAL REACTIONS

- Serious or life-threatening psychiatric and behavioral adverse reactions including aggression, hostility, irritability, anger, and homicidal ideation and threats have been reported in patients taking FYCOMPA®
- These reactions occurred in patients with and without prior psychiatric history, prior aggressive behavior, or concomitant use of medications associated with hostility and aggression
- Advise patients and caregivers to contact a healthcare provider immediately if any of these reactions or changes in mood, behavior, or personality that are not typical for the patient are observed while taking FYCOMPA or after discontinuing FYCOMPA
- Closely monitor patients particularly during the titration period and at higher doses
- FYCOMPA should be reduced if these symptoms occur and should be discontinued immediately if symptoms are severe or are worsening

SERIOUS PSYCHIATRIC AND BEHAVIORAL REACTIONS

In the partial-onset seizures clinical trials, hostility- and aggression-related adverse reactions occurred in 12% and 20% of patients randomized to receive FYCOMPA at doses of 8 mg and 12 mg per day, respectively, compared to 6% of patients in the placebo group. These effects were dose-related and generally appeared within the first 6 weeks of treatment, although new events continued to be observed through more than 37 weeks. These effects in FYCOMPA-treated patients led to dose reduction, interruption, and discontinuation more frequently than placebo-treated patients. Homicidal ideation and/or threat have also been reported postmarketing in patients treated with FYCOMPA. The combination of alcohol and FYCOMPA significantly worsened mood and increased anger. Patients taking FYCOMPA should avoid the use of alcohol. Patients, their caregivers, and families should be informed that FYCOMPA may increase the risk of psychiatric events. Patients should be monitored during treatment and for at least one month after the last dose of FYCOMPA, and especially when taking higher doses and during the initial few weeks of drug therapy (titration period) or at other times of dose increases. Similar serious psychiatric and behavioral events were observed in the primary generalized tonic-clonic (PGTC) seizure clinical trial.

SUICIDAL BEHAVIOR AND IDEATION

Antiepileptic drugs (AEDs), including FYCOMPA, increase the risk of suicidal thoughts or behavior in patients. Anyone considering prescribing FYCOMPA or any other AED must balance the risk of suicidal thoughts or behavior with the risk of untreated illness. Epilepsy and many other illnesses for which AEDs are prescribed are themselves associated with morbidity and mortality and an increased risk of suicidal thoughts and behavior. Patients, their caregivers, and families should be informed of the risk and advised to monitor and immediately report the emergence or worsening of depression, suicidal thoughts or behavior, thoughts about self-harm and/or any unusual changes in mood or behavior. Should suicidal thoughts and behavior emerge during treatment, consider whether the emergence of these symptoms in any given patient may be related to the illness being treated.

DIZZINESS AND GAIT DISTURBANCE

FYCOMPA caused dose-related increases in events related to dizziness and disturbance in gait or coordination. Dizziness and vertigo were reported in 35% and 47% of patients in the partial-onset seizure trials randomized to receive FYCOMPA at doses of 8 mg and 12 mg per day, respectively, compared to 10% of placebo-treated patients. Gait disturbance related events were reported in 12% and 16% of patients in the partial-onset seizure clinical trials randomized to receive FYCOMPA at doses of 8 mg and 12 mg per day, respectively, compared to 2% of placebo-treated patients. These adverse reactions occurred mostly during the titration phase. These adverse reactions were also observed in the PGTC seizure clinical trial.

SOMNOLENCE AND FATIGUE

FYCOMPA caused dose-dependent increases in somnolence and fatigue-related events. Somnolence was reported in 16% and 18% of patients in the partial-onset seizure trials randomized to receive FYCOMPA at doses of 8 mg and 12 mg per day, respectively, compared to 7% of placebo-treated patients. Fatigue-related events were reported in 12% and 15% of patients in the partial-onset seizure trials randomized to receive FYCOMPA at doses of 8 mg and 12 mg per day, respectively, compared to 5% of placebo-treated patients. These adverse reactions occurred mostly during the titration phase. These adverse reactions were also observed in the PGTC seizure clinical trial. Patients should be advised against engaging in hazardous activities requiring mental alertness, such as operating motor vehicles or dangerous machinery, until the effect of FYCOMPA is known.

FALLS

Falls were reported in 5% and 10% of patients in the partial-onset seizure clinical trials randomized to receive FYCOMPA at doses of 8 mg and 12 mg per day, respectively, compared to 3% of placebo-treated patients.

DRUG REACTION WITH EOSINOPHILIA AND SYSTEMIC SYMPTOMS (DRESS)

DRESS, also known as **multiorgan hypersensitivity**, has been reported in patients taking AEDs, including FYCOMPA. DRESS may be fatal or life-threatening. DRESS typically, although not exclusively, presents with fever, rash, lymphadenopathy, and/or facial swelling, in association with other organ system involvement. If signs or symptoms are present, immediately evaluate the patient and discontinue FYCOMPA if an alternative etiology for signs or symptoms cannot be established.

WITHDRAWAL OF AEDs

A gradual withdrawal is generally recommended with AEDs to minimize the potential of increased seizure frequency, but if withdrawal is a response to adverse events, prompt withdrawal can be considered.

MOST COMMON ADVERSE REACTIONS

The most common adverse reactions in patients receiving FYCOMPA ($\geq 5\%$ and $\geq 1\%$ higher than placebo) include dizziness, somnolence, fatigue, irritability, falls, nausea, weight gain, vertigo, ataxia, headache, vomiting, contusion, abdominal pain, and anxiety.

DRUG INTERACTIONS

FYCOMPA may decrease the efficacy of contraceptives containing levonorgestrel. Plasma levels of FYCOMPA were decreased when administered with moderate and strong CYP3A4 inducers, including, carbamazepine, phenytoin, or oxcarbazepine. Multiple dosing of FYCOMPA 12 mg per day enhanced the effects of alcohol on vigilance and alertness, and increased levels of anger, confusion, and depression. These effects may also be seen when FYCOMPA is used in combination with other CNS depressants.

PREGNANCY AND LACTATION

Physicians are advised to recommend that pregnant patients taking FYCOMPA enroll in the North American Antiepileptic Drug (NAAED) Pregnancy Registry. Caution should be exercised when FYCOMPA is administered to pregnant or nursing women as there are no adequate data on the developmental risk associated with use in pregnant women, and no data on the presence of perampanel in human milk, the effects on the breastfed child, or the effects of the drug on milk production.

HEPATIC AND RENAL IMPAIRMENT

Use in patients with severe hepatic or severe renal impairment is not recommended. Dosage adjustments are recommended in patients with mild or moderate hepatic impairment. Use with caution in patients with moderate renal impairment.

DRUG ABUSE AND DEPENDENCE

FYCOMPA is a Schedule III controlled substance and has the potential to be abused and lead to drug dependence.

Please see Brief Summary of Prescribing Information on following pages.



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Fycompa™
(perampanel) TABLETS 2•4•6•8•10•12 mg
ORAL SUSPENSION 0.5 mg/mL



FYCOMPA® (perampanel) tablets, for oral use, CIII
FYCOMPA® (perampanel) oral suspension, CIII
Initial U.S. Approval: 2012

Brief Summary of Full Prescribing Information dated July 2017

WARNING: SERIOUS PSYCHIATRIC AND BEHAVIORAL REACTIONS

- **Serious or life-threatening psychiatric and behavioral adverse reactions including aggression, hostility, irritability, anger, and homicidal ideation and threats have been reported in patients taking FYCOMPA.**
- **These reactions occurred in patients with and without prior psychiatric history, prior aggressive behavior, or concomitant use of medications associated with hostility and aggression.**
- **Advise patients and caregivers to contact a healthcare provider immediately if any of these reactions or changes in mood, behavior, or personality that are not typical for the patient are observed while taking FYCOMPA or after discontinuing FYCOMPA.**
- **Closely monitor patients particularly during the titration period and at higher doses**
- **FYCOMPA should be reduced if these symptoms occur and should be discontinued immediately if symptoms are severe or are worsening.**

WARNINGS AND PRECAUTIONS

Serious Psychiatric and Behavioral Reactions In the controlled partial-onset seizure clinical trials, hostility- and aggression-related adverse reactions occurred in 12% and 20% of patients randomized to receive FYCOMPA at doses of 8 mg and 12 mg per day, respectively, compared to 6% of patients in the placebo group. These effects were dose-related and generally appeared within the first 6 weeks of treatment, although new events continued to be observed through more than 37 weeks. FYCOMPA-treated patients experienced more hostility- and aggression-related adverse reactions that were serious, severe, and led to dose reduction, interruption, and discontinuation more frequently than placebo-treated patients. In general, in placebo-controlled partial-onset seizure clinical trials, neuropsychiatric events were reported more frequently in patients being treated with FYCOMPA than in patients taking placebo. These events included irritability, aggression, anger, and anxiety, which occurred in 2% or greater of FYCOMPA-treated patients and twice as frequently as in placebo-treated patients. Other symptoms that occurred with FYCOMPA and were more common than with placebo included belligerence, affect lability, agitation, and physical assault. Some of these events were reported as serious and life-threatening. Homicidal ideation and/or threat were exhibited in 0.1% of 4,368 FYCOMPA-treated patients in controlled and open label trials, including non-epilepsy trials. Homicidal ideation and/or threat have also been reported postmarketing in patients treated with FYCOMPA. In the partial-onset seizure clinical trials, these events occurred in patients with and without prior psychiatric history, prior aggressive behavior, or concomitant use of medications associated with hostility and aggression. Some patients experienced worsening of their pre-existing psychiatric conditions. Patients with active psychotic disorders and unstable recurrent affective disorders were excluded from the clinical trials. The combination of alcohol and FYCOMPA significantly worsened mood and increased anger. Patients taking FYCOMPA should avoid the use of alcohol. Similar serious psychiatric and behavioral events were observed in the primary generalized tonic-clonic seizure clinical trial. In healthy volunteers taking FYCOMPA, observed psychiatric events included paranoia, euphoric mood, agitation, anger, mental status changes, and disorientation/confusional state. In the non-epilepsy trials, psychiatric events that occurred in perampanel-treated patients more often than placebo-treated patients included disorientation, delusion, and paranoia. Patients, their caregivers, and families should be informed that FYCOMPA may increase the risk of psychiatric events. Patients should be monitored during treatment and for at least 1 month after the last dose of FYCOMPA, and especially when taking higher doses and during the initial few weeks of drug therapy (titration period) or at other times of dose increases. Dose of FYCOMPA should be reduced if these symptoms occur. Permanently discontinue FYCOMPA for persistent severe or worsening psychiatric symptoms or behaviors and refer for psychiatric evaluation. **Suicidal Behavior and Ideation** Antiepileptic drugs (AEDs), including FYCOMPA, increase the risk of suicidal thoughts or behavior in patients taking these drugs for any indication. Patients treated with any AED for any indication should be monitored for the emergence or worsening of depression, suicidal thoughts or behavior, and/or any unusual changes in mood or behavior. Pooled analyses of 199 placebo-controlled clinical trials (mono- and adjunctive therapy) of 11 different AEDs showed that patients randomized to one of the AEDs had approximately twice the risk (adjusted Relative Risk 1.8, 95% CI: 1.2, 2.7) of suicidal thinking or behavior compared to patients randomized to placebo. In these trials, which had a median treatment duration of 12 weeks, the estimated incidence of suicidal behavior or ideation among 27,863 AED-treated patients was 0.43%, compared to 0.24% among 16,029 placebo-treated patients, representing an increase of approximately one case of suicidal thinking or behavior for every 530 patients treated. There were four suicides in drug-treated patients in the trials and none in placebo-treated patients, but the number is too small to allow any conclusion about drug effect on suicide. The increased risk of suicidal thoughts or behavior with AEDs was observed as early as 1 week after starting drug treatment with AEDs and persisted for the duration of treatment assessed. Because most trials included in the analysis did not extend beyond 24 weeks, the risk of suicidal thoughts or behavior beyond 24 weeks could not be assessed. The risk of suicidal thoughts or behavior was generally consistent among drugs in the data analyzed. The finding of increased risk with AEDs of varying mechanisms of action and across a range of indications suggests that the risk applies to all AEDs used for any indication. The risk did not vary substantially by age (5-100 years) in the clinical trials analyzed. Table 1 shows absolute and relative risk by indication for all evaluated AEDs.

Table 1. Risk by indication for antiepileptic drugs in the pooled analysis

Indication	Placebo Patients with Events per 1000 Patients	Drug Patients with Events per 1000 Patients	Relative Risk: Incidence of Events in Drug Patients/ Incidence in Placebo Patients	Risk Difference: Additional Drug Patients with Events per 1000 Patients
Epilepsy	1.0	3.4	3.5	2.4
Psychiatric	5.7	8.5	1.5	2.9
Other	1.0	1.8	1.9	0.9
Total	2.4	4.3	1.8	1.9

The relative risk for suicidal thoughts or behavior was higher in clinical trials for epilepsy than in clinical trials for psychiatric or other conditions, but the absolute risk differences were similar for the epilepsy and psychiatric indications. Anyone considering prescribing FYCOMPA or any other AED must balance the risk of suicidal thoughts or behavior with the risk of untreated illness. Epilepsy and many other illnesses for which AEDs are prescribed are themselves associated with morbidity and mortality and an increased risk of suicidal thoughts and behavior. Should suicidal thoughts and behavior emerge during treatment, the prescriber needs to consider whether the emergence of these symptoms in any given patient may be related to the illness being treated. **Neurologic Effects** Dizziness and Gait Disturbance FYCOMPA caused dose-related increases in events related to dizziness and disturbance in gait or coordination. In the controlled partial-onset seizure clinical trials, dizziness and vertigo were reported in 35% and 47% of patients randomized to receive FYCOMPA at doses of 8 mg and 12 mg per day, respectively, compared to 10% of placebo-treated patients. The gait disturbance related events (including ataxia, gait disturbance, balance disorder, and abnormal coordination) were reported in 12% and 16% of patients randomized to

receive FYCOMPA at doses of 8 mg and 12 mg per day, respectively, compared to 2% of placebo-treated patients. Elderly patients had an increased risk of these adverse reactions compared to younger adults and pediatric patients. These adverse reactions occurred mostly during the titration phase and led to discontinuation in 3% of FYCOMPA-treated patients compared to 1% of placebo-treated patients. These adverse reactions were also observed in the primary generalized tonic-clonic seizure clinical trial. **Somnolence and Fatigue** FYCOMPA caused dose-dependent increases in somnolence and fatigue-related events (including fatigue, asthenia, and lethargy). In the controlled partial-onset seizure clinical trials, 16% and 18% of patients randomized to receive FYCOMPA at doses of 8 mg and 12 mg per day, respectively, reported somnolence compared to 7% of placebo patients. In the controlled partial-onset seizure clinical trials, 12% and 15% of patients randomized to receive FYCOMPA at doses of 8 mg and 12 mg per day, respectively, reported fatigue-related events compared to 5% of placebo patients. Somnolence or fatigue-related events led to discontinuation in 2% of FYCOMPA-treated patients and 0.5% of placebo-treated patients. Elderly patients had an increased risk of these adverse reactions compared to younger adults and pediatric patients. In the controlled partial-onset seizure clinical trials, these adverse reactions occurred mostly during the titration phase. These adverse reactions were also observed in the primary generalized tonic-clonic seizure clinical trial. **Risk Amelioration** Prescribers should advise patients against engaging in hazardous activities requiring mental alertness, such as operating motor vehicles or dangerous machinery, until the effect of FYCOMPA is known. **Falls** An increased risk of falls, in some cases leading to serious injuries including head injuries and bone fracture, occurred in patients being treated with FYCOMPA (with and without concurrent seizures). In the controlled partial-onset seizure clinical trials, falls were reported in 5% and 10% of patients randomized to receive FYCOMPA at doses of 8 mg and 12 mg per day, respectively, compared to 3% of placebo-treated patients. Falls were reported as serious and led to discontinuation more frequently in FYCOMPA-treated patients than placebo-treated patients. Elderly patients had an increased risk of falls compared to younger adults and pediatric patients. **Drug Reaction with Eosinophilia and Systemic Symptoms (DRESS)/Multiorgan Hypersensitivity** Drug Reaction with Eosinophilia and Systemic Symptoms (DRESS), also known as Multiorgan hypersensitivity, has been reported in patients taking antiepileptic drugs, including FYCOMPA. DRESS may be fatal or life-threatening. DRESS typically, although not exclusively, presents with fever, rash, lymphadenopathy, and/or facial swelling, in association with other organ system involvement, such as hepatitis, nephritis, hematological abnormalities, myocarditis, or myositis sometimes resembling an acute viral infection. Eosinophilia is often present. Because this disorder is variable in its expression, other organ systems not noted here may be involved. It is important to note that early manifestations of hypersensitivity, such as fever or lymphadenopathy, may be present even though rash is not evident. If such signs or symptoms are present, the patient should be evaluated immediately. FYCOMPA should be discontinued if an alternative etiology for the signs or symptoms cannot be established. **Withdrawal of Antiepileptic Drugs** There is the potential of increased seizure frequency in patients with seizure disorders when antiepileptic drugs are withdrawn abruptly. FYCOMPA has a half-life of approximately 105 hours so that even after abrupt cessation, blood levels fall gradually. In epilepsy clinical trials FYCOMPA was withdrawn without down-titration. Although a small number of patients exhibited seizures following discontinuation, the data were not sufficient to allow any recommendations regarding appropriate withdrawal regimens. A gradual withdrawal is generally recommended with antiepileptic drugs, but if withdrawal is a response to adverse events, prompt withdrawal can be considered.

ADVERSE REACTIONS

Clinical Trials Experience Because clinical trials are conducted under widely varying conditions, adverse reaction rates observed in the clinical trials of a drug cannot be directly compared to rates in the clinical trials of another drug and may not reflect the rates observed in clinical practice. **Partial-Onset Seizures** A total of 1,038 patients receiving FYCOMPA (2, 4, 8, or 12 mg once daily) constituted the safety population in the pooled analysis of the placebo-controlled trials (Studies 1, 2, and 3) in patients with partial-onset seizures. Approximately 51% of patients were female, and the mean age was 35 years. **Adverse Reactions Leading to Discontinuation** In controlled clinical trials (Studies 1, 2, and 3), the rate of discontinuation as a result of an adverse reaction was 3%, 8%, and 19% in patients randomized to receive FYCOMPA at the recommended doses of 4 mg, 8 mg, and 12 mg per day, respectively, and 5% in patients randomized to receive placebo. The adverse reactions most commonly leading to discontinuation ($\geq 1\%$ in the 8 mg or 12 mg FYCOMPA group and greater than placebo) were dizziness, somnolence, vertigo, aggression, anger, ataxia, blurred vision, irritability, and dysarthria. **Most Common Adverse Reactions** Table 2 gives the incidence in the controlled clinical trials (Studies 1, 2, and 3) of the adverse reactions that occurred in $\geq 2\%$ of patients with partial-onset seizures in the FYCOMPA 12 mg dose group and more frequent than placebo (in order of decreasing frequency for the 12 mg dose group). The most common dose-related adverse reactions in patients receiving FYCOMPA at doses of 8 mg or 12 mg ($\geq 4\%$ and occurring at least 1% higher than the placebo group) included dizziness (36%), somnolence (16%), fatigue (10%), irritability (9%), falls (7%), nausea (7%), ataxia (5%), balance disorder (4%), gait disturbance (4%), vertigo (4%), and weight gain (4%). For almost every adverse reaction, rates were higher on 12 mg and more often led to dose reduction or discontinuation.

Table 2. Adverse Reactions in Pooled Placebo-Controlled Trials in Patients with Partial-Onset Seizures (Studies 1, 2, and 3) (Reactions $\geq 2\%$ of Patients in Highest FYCOMPA Dose (12 mg) Group and More Frequent than Placebo)

	Placebo n=442 %	FYCOMPA		
		4 mg n=172 %	8 mg n=431 %	12 mg n=255 %
Dizziness	9	16	32	43
Somnolence	7	9	16	18
Headache	11	11	11	13
Irritability	3	4	7	12
Fatigue	5	8	8	12
Falls	3	2	5	10
Ataxia	0	1	3	8
Nausea	5	3	6	8
Vertigo	1	4	3	5
Back pain	2	2	2	5
Dysarthria	0	1	3	4
Anxiety	1	2	3	4
Blurred vision	1	1	3	4
Gait disturbance	1	1	4	4
Weight gain	1	4	4	4
Cough	3	1	1	4
Upper respiratory tract infection	3	3	3	4
Vomiting	3	2	3	4
Hypersomnia	0	1	2	3
Anger	<1	0	1	3
Aggression	1	1	2	3
Balance disorder	1	0	5	3
Diplopia	1	1	1	3
Head injury	1	1	1	3
Hypoesthesia	1	0	0	3
Pain in extremity	1	0	2	3
Constipation	2	2	2	3

Table 2. Adverse Reactions in Pooled Placebo-Controlled Trials in Patients with Partial-Onset Seizures (Studies 1, 2, and 3) (Reactions $\geq 2\%$ of Patients in Highest FYCOMPA Dose (12 mg) Group and More Frequent than Placebo) (cont.)

Myalgia	2	1	1	3
Coordination abnormal	0	1	<1	2
Euphoric mood	0	0	<1	2
Confusional state	<1	1	1	2
Hyponatremia	<1	0	0	2
Limb injury	<1	1	1	2
Mood altered	<1	1	<1	2
Arthralgia	1	0	3	2
Asthenia	1	1	2	2
Contusion	1	0	2	2
Memory impairment	1	0	1	2
Musculoskeletal pain	1	1	1	2
Oropharyngeal pain	1	2	2	2
Paraesthesia	1	0	1	2
Peripheral edema	1	1	1	2
Skin laceration	1	0	2	2

Primary Generalized Tonic-Clonic Seizures A total of 81 patients receiving FYCOMPA 8 mg once daily constituted the safety population in the placebo-controlled trial in patients with primary generalized tonic-clonic seizures (Study 4). Approximately 57% of patients were female, and the mean age was 27 years. In the controlled primary generalized tonic-clonic seizure clinical trial (Study 4), the adverse reaction profile was similar to that noted for the controlled partial-onset seizure clinical trials (Studies 1, 2, and 3). Table 3 gives the incidence of adverse reactions in patients receiving FYCOMPA 8 mg ($\geq 4\%$ and higher than in the placebo group) in Study 4. The most common adverse reactions in patients receiving FYCOMPA ($\geq 10\%$ and greater than placebo) were dizziness (32%), fatigue (15%), headache (12%), somnolence (11%), and irritability (11%). The adverse reactions most commonly leading to discontinuation in patients receiving FYCOMPA 8 mg ($\geq 2\%$ and greater than placebo) were vomiting (2%) and dizziness (2%).

Table 3. Adverse Reactions in a Placebo-Controlled Trial in Patients with Primary Generalized Tonic-Clonic Seizures (Study 4) (Reactions $\geq 4\%$ of Patients in FYCOMPA Group and More Frequent than Placebo)

	Placebo n=82 %	FYCOMPA 8 mg n=81 %
Dizziness	6	32
Fatigue	6	15
Headache	10	12
Somnolence	4	11
Irritability	2	11
Vertigo	2	9
Vomiting	2	9
Weight gain	4	7
Contusion	4	6
Nausea	5	6
Abdominal pain	1	5
Anxiety	4	5
Urinary tract infection	1	4
Ligament sprain	0	4
Balance disorder	1	4
Rash	1	4

Weight Gain Weight gain has occurred with FYCOMPA. In controlled partial-onset seizure clinical trials, FYCOMPA-treated adults gained an average of 1.1 kg (2.5 lbs) compared to an average of 0.3 kg (0.7 lbs) in placebo-treated adults with a median exposure of 19 weeks. The percentages of adults who gained at least 7% and 15% of their baseline body weight in FYCOMPA-treated patients were 9.1% and 0.9%, respectively, as compared to 4.5% and 0.2% of placebo-treated patients, respectively. Clinical monitoring of weight is recommended. Similar increases in weight were also observed in adult and pediatric patients treated with FYCOMPA in the primary generalized tonic-clonic seizure clinical trial. **Elevated triglycerides** Increases in triglycerides have occurred with FYCOMPA use. **Comparison of Sex and Race** No significant sex differences were noted in the incidence of adverse reactions. Although there were few non-Caucasian patients, no differences in the incidence of adverse reactions compared to Caucasian patients were observed. **Postmarketing Experience** The following adverse reactions have been identified during post approval use of FYCOMPA. 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. **Dermatologic:** Drug Reaction with Eosinophilia and Systemic Symptoms (DRESS). **Psychiatric:** Acute psychosis, hallucinations, delusions, paranoia, delirium, confusional state, disorientation, memory impairment.

DRUG INTERACTIONS

Contraceptives With concomitant use, FYCOMPA at a dose of 12 mg per day reduced levonorgestrel exposure by approximately 40%. Use of FYCOMPA with contraceptives containing levonorgestrel may render them less effective. Additional non-hormonal forms of contraception are recommended. **Moderate and Strong CYP3A4 Inducers** The concomitant use of known moderate and strong CYP3A4 inducers including carbamazepine, phenytoin, or oxcarbazepine with FYCOMPA decreased the plasma levels of perampanel by approximately 50-67%. The starting doses for FYCOMPA should be increased in the presence of moderate or strong CYP3A4 inducers. When these moderate or strong CYP3A4 inducers are introduced or withdrawn from a patient's treatment regimen, the patient should be closely monitored for clinical response and tolerability. Dose adjustment of FYCOMPA may be necessary. **Alcohol and Other CNS Depressants** The concomitant use of FYCOMPA and CNS depressants including alcohol may increase CNS depression. A pharmacodynamic interaction study in healthy subjects found that the effects of FYCOMPA on complex tasks such as driving ability were additive or supra-additive to the impairment effects of alcohol. Multiple dosing of FYCOMPA 12 mg per day also enhanced the effects of alcohol to interfere with vigilance and alertness, and increased levels of anger, confusion, and depression. These effects may also be seen when FYCOMPA is used in combination with other CNS depressants. Care should be taken when administering FYCOMPA with these agents. Patients should limit activity until they have experience with concomitant use of CNS depressants (e.g., benzodiazepines, narcotics, barbiturates, sedating antihistamines). Advise patients not to drive or operate machinery until they have gained sufficient experience on FYCOMPA to gauge whether it adversely affects these activities.

USE IN SPECIFIC POPULATIONS

Pregnancy Exposure Registry There is a pregnancy exposure registry that monitors pregnancy outcomes in women exposed to antiepileptic drugs (AEDs), such as FYCOMPA, during pregnancy. Encourage women who are taking FYCOMPA during pregnancy to enroll in the North American Antiepileptic Drug

(NAAED) Pregnancy Registry by calling 1-888-233-2334 or visiting <http://www.aedpregnancyregistry.org>. **Risk summary** There are no adequate data on the developmental risk associated with use in pregnant women. In animal studies, perampanel induced developmental toxicity in pregnant rat and rabbit at clinically relevant doses. In the U.S. general population the estimated background risk of major birth defects and miscarriage in clinically recognized pregnancies is 2-4% and 15-20%, respectively. The background risk of major birth defects and miscarriage for the indicated population is unknown. Oral administration of perampanel (1, 3, or 10 mg/kg/day) to pregnant rats throughout organogenesis resulted in an increase in visceral abnormalities (diverticulum of the intestine) at all doses tested; maternal toxicity was observed at the mid and high doses. In a dose-ranging study at higher oral doses (10, 30, or 60 mg/kg/day), embryo lethality and reduced fetal body weight were observed at the mid and high doses tested. The lowest dose tested (1 mg/kg/day) is similar to a human dose of 8 mg per day based on body surface area (mg/m²). Upon oral administration of perampanel (1, 3, or 10 mg/kg per day) to pregnant rabbits throughout organogenesis, embryo lethality was observed at the mid and high doses tested; the no-effect dose for embryo-fetal developmental toxicity in rabbit (1 mg/kg/day) is approximately 2 times a human dose of 8 mg per day based on body surface area (mg/m²). Oral administration of perampanel (1, 3, or 10 mg/kg per day) to rats throughout gestation and lactation resulted in fetal and pup deaths at the mid and high doses (associated with maternal toxicity) and delayed sexual maturation in males and females at the highest dose tested. No effects were observed on measures of neurobehavioral or reproductive function in the offspring. The no-effect dose for pre- and postnatal developmental toxicity in rat (1 mg/kg/day) is similar to a human dose of 8 mg per day based on body surface area (mg/m²). **Lactation Risk summary** There are no data on the presence of perampanel in human milk, the effects on the breastfed child, or the effects of the drug on milk production. Perampanel and/or its metabolites are excreted in rat milk, and are detected at concentrations higher than that in maternal plasma. The developmental and health benefits of breastfeeding should be considered along with the mother's clinical need for FYCOMPA and any potential adverse effects on the breastfed child from FYCOMPA or from the underlying maternal condition. **Females and Males of Reproductive Potential Contraception** Use of FYCOMPA may reduce the efficacy of hormonal contraceptives containing levonorgestrel. Advise women taking FYCOMPA who are using a levonorgestrel-containing contraceptive to use an additional non-hormonal form of contraception while using FYCOMPA and for a month after discontinuation. **Pediatric Use** The safety and efficacy of FYCOMPA for the treatment of partial-onset seizures in pediatric patients 12 years of age and older was established by three randomized double-blind, placebo-controlled, multicenter studies, which included 72 pediatric patients between 12 and 16 years of age exposed to FYCOMPA. The safety and efficacy of FYCOMPA for the adjunctive therapy of primary generalized tonic-clonic seizures in pediatric patients 12 years of age and older was established in a single randomized double-blind, placebo-controlled, multicenter trial (n=164), which included 11 pediatric patients 12 to 16 years of age exposed to FYCOMPA; an additional 6 patients were treated with FYCOMPA in the open label extension of the study. The safety and effectiveness of FYCOMPA in pediatric patients less than 12 years of age have not been established. **Juvenile Animal Data** Oral administration of perampanel (1, 3, 3/10/30 mg/kg/day; high dose increased on postnatal days [PND] 28 and 56) to young rats for 12 weeks starting on PND 7 resulted in reduced body weight, reduced growth, neurobehavioral impairment (water maze performance and auditory startle habituation) at the mid and high doses, and delayed sexual maturation at the high doses. CNS signs (reduced activity, incoordination, excessive grooming/scratching), pup death, decreased hindlimb splay, and decreased hindlimb grip strength were observed at all doses. Effects on pup body weight, pup growth, hindlimb splay, impairment in the water maze performance, and auditory startle persisted after dosing was stopped. A no-effect dose for postnatal developmental toxicity was not identified in this study. Oral administration of perampanel (1, 5.5/10 mg/kg/day; high dose increased on PND 56) to juvenile dogs for 33 weeks, starting on PND 42, resulted in CNS signs (incoordination, excessive grooming/licking/scratching, spatial disorientation, and/or ataxic gait) at all doses tested. **Geriatric Use** Clinical studies of FYCOMPA did not include sufficient numbers of patients aged 65 and over to determine the safety and efficacy of FYCOMPA in the elderly population. Because of increased likelihood for adverse reactions in the elderly, dosing titration should proceed slowly in patients aged 65 years and older. **Hepatic Impairment** Use of FYCOMPA in patients with severe hepatic impairment is not recommended, and dosage adjustments are recommended in patients with mild or moderate hepatic impairment. **Renal Impairment** Dose adjustment is not required in patients with mild renal impairment. FYCOMPA should be used with caution in patients with moderate renal impairment, and slower titration may be considered. Use in patients with severe renal impairment or patients undergoing hemodialysis is not recommended.

DRUG ABUSE AND DEPENDENCE

Controlled Substance FYCOMPA contains perampanel and is listed as a Schedule III controlled substance. **Abuse** Prescription drug abuse is the intentional non-therapeutic use of a drug, even once, for its rewarding psychological or physiological effects. Drug addiction, which develops after repeated drug abuse, is characterized by a strong desire to take a drug despite harmful consequences, difficulty in controlling its use, giving a higher priority to drug use than to obligations, increased tolerance, and sometimes physical withdrawal. Drug abuse and drug addiction are separate and distinct from physical dependence (for example, abuse may not be accompanied by physical dependence). Studies of human abuse potential were performed to evaluate the abuse potential of FYCOMPA (8 mg, 24 mg, and 36 mg) as compared to alprazolam C-IV (1.5 mg and 3 mg), and oral ketamine C-III (100 mg) in recreational polydrug users. Supra-therapeutic doses of FYCOMPA 24 and 36 mg produced responses for "Euphoria" that were similar to ketamine 100 mg and alprazolam 3 mg. For "High," FYCOMPA 24 mg and 36 mg produced responses comparable to ketamine 100 mg and significantly higher than both doses of alprazolam on a visual analog scale (VAS). "Drug Liking," "Overall Drug Liking," and "Take Drug Again" for FYCOMPA were each statistically lower than ketamine 100 mg. In addition, for "Bad Drug Effects," FYCOMPA 24 mg and 36 mg produced responses significantly higher than ketamine 100 mg. For "Sedation," FYCOMPA 24 and 36 mg produced responses similar to alprazolam 3 mg and higher than ketamine 100 mg. Additionally, on VAS measures related to dissociative phenomena such as "Floating," "Spaced Out," and "Detached," FYCOMPA at supra-therapeutic doses produced responses similar to ketamine 100 mg and greater than both doses of alprazolam tested. Of note, due to somnolence a number of subjects had missing data around T_{max} of FYCOMPA. The above described data might represent an underestimate of FYCOMPA's effects. The duration of effects of higher doses of FYCOMPA on the majority of measures was much greater than alprazolam 3 mg and ketamine 100 mg. In this study, the incidence of euphoria following FYCOMPA administration 8 mg, 24 mg, and 36 mg was 37%, 46%, 46%, respectively, which was higher than alprazolam 3 mg (13%) but lower than ketamine 100 mg (89%). **Dependence** Physical dependence is characterized by withdrawal symptoms after abrupt discontinuation or a significant dose reduction of a drug. The potential for FYCOMPA to produce withdrawal symptoms has not been adequately evaluated.

OVERDOSAGE

There is limited clinical experience with FYCOMPA overdose. The highest reported overdose (approximately 264 mg) was intentional. This patient experienced serious adverse reactions of altered mental status, agitation, and aggressive behavior and recovered without sequelae. In general, the adverse reactions associated with overdoses were similar to the reactions at therapeutic doses with dizziness reported most frequently. There were no reported sequelae. There is no available specific antidote to the overdose reactions of FYCOMPA. In the event of overdose, standard medical practice for the management of any overdose should be used. An adequate airway, oxygenation, and ventilation should be ensured; monitoring of cardiac rhythm and vital sign measurement is recommended. A certified poison control center should be contacted for updated information on the management of overdose with FYCOMPA. Due to its long half-life, the reactions caused by FYCOMPA could be prolonged.



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CNS Award Presentations

The Next Generation has Arrived

Nearly 200 residents and fellows and another 40 medical students will be among the 1100 attendees in Chicago for the 47th Annual CNS Meeting. Included in these numbers are more than 40 young researchers participating in the NIH-supported Child Neurologist Career Development Program retreat, and the 70 PGYS residents enrolled in the 3rd Annual John. M. "Jack" Pellock Resident Seminar on Epilepsy scheduled on the front end of the meeting. The five Outstanding Junior Member awardees and two Outstanding Junior Member Post-Graduate awardees pictured below, as well as the AAP Neurology Section Travel Awardee and M. Richard Koenigsberger Scholarship recipient are among the record high 82 residents presenting as first/primary author of a scientific poster at this year's meeting. This year's Bernard D'Souza International Fellowship Awardee, Dr. Suvasina Sharma, from New Delhi, India will also be presenting a poster highlighting her research and the ongoing challenge confronting child neurologists in India.

Review hours for engaging these and other young child neurologists in conversation about their research is scheduled on Tuesday (12:30 pm-2:00 pm and 4:30 pm-6:00 pm) and Wednesday (7:00 am-8:15 am). Posters are also viewable on-line before, during and after the annual meeting; refer to the CNS website or meeting app to for link to the display site. Enhancing this year's poster review are two new programs: Guided Poster Tours featuring seasoned child neurologists walking through a select 4-6 posters with their Junior Member author, and a "one-hour "Best of Show" moderated poster session on Wednesday noon featuring the five best posters submitted by Junior Members as determined by the Scientific Program Committee.

All Junior Member Awards will be presented on Wednesday morning, October 17 before the General Session (Dodge and Sachs lectures).

The Bernard D'Souza Fellowship Award will be presented on Tuesday morning, October 16.

CNS Outstanding Junior Member Awards (Post-Graduate division)



Bhooma Aravamuthan, MD, PhD; Boston Children's Hospital



Elena Pinchefsky, MD, PhD; McGill University



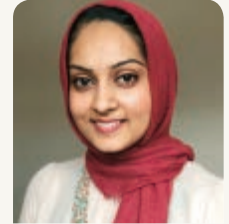
Suvasini Sharma, MD, DM; New Delhi, India



Amy Shyteyman



Kerri Neville, MD; University of Michigan



Tayyba Anwar, MD; Children's National Medical Center

Bernard D'Souza International Fellowship Award

CNS Bhuwan Garg High School Neuroscience Award

AAP Section on Neurology Trainee Travel Award

M. Richard Koenigsberger Scholarship

CNS Outstanding Junior Member Awards



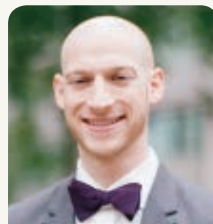
Adrienne Bruce, MD; Cincinnati Children's Hospital



Sara Fridinger, MD; Children's Hospital of Philadelphia



Melissa Hutchinson, MD; Children's Hospital of Philadelphia



Jeffrey Strelzik, MD; Children's National Medical Center



Elizabeth Troy, MD; Children's Hospital of Colorado

Three Concurrent Sessions

Tuesday, October 16, 12:00 pm-12:45 pm

- 80 seats available by pre-registration
- Box lunches for pre-registrants in room
- 30 minute Networking/Organizational meeting for each SIG will follow in each room

Meet the Experts #1: HEADACHE

Columbus IJ

Part 1: Case Reports

Presenters:

A. David Rothner, MD; Cleveland Clinic
Kenneth Mack, MD, PhD; Mayo Clinic

Part 2: Debate: Should CGRP therapy be used in children?

Presenters:

Alma R. Bicknese, MD; Ann and Robert M.
Lurie Children's Hospital of Chicago
Heidi Blume, MD, MPH; Seattle Children's
Hospital
Christopher Oakley, MD; Johns Hopkins
University School of Medicine

Course description

Enumab is the first anti-CGRP receptor antibody that is FDA approved for Migraine prevention. Since its release in June 2018 it has been widely prescribed in adults. More antibody therapy modulating CGRP are in the pipeline for release. Should anti-CGRP antibodies be used in children? This session will review the pathophysiology of CGRP, followed by a debate on the pros and cons of using this therapy in children.

Meet the Experts #2: NEURODEVELOPMENTAL/ NEUROGENETICS

Columbus GH

Course description:

Newborn screening (NBS) programs began in the 1960's with phenylketonuria (PKU) screening. NBS is now a public health activity that screens for over 30 disorders across the US. All disorders identified by NBS are chronic conditions that requiring ongoing care by multiple medical specialties. Yet child neurologists and neurodevelopmental specialists have

not played a consistent role in NBS until recently with the addition of disorders that require ongoing and consistent neurologic care. We will discuss these newly added disorders, including X-linked adrenoleukodystrophy and spinal muscular atrophy, the guidelines of care that are currently available but also evolving, and the new responsibilities and challenges these disorders will create.

Presenters:

Miya Asato, MD; Children's Hospital of
Pittsburgh
Lisa Emrick, MD; Texas Children's Hospital
Jennifer Kwon, MD, MPH; University of
Rochester

Agenda:

12:00 pm-12:05 pm: Welcome (Dr. Miya Asato) and introduction of speakers and brief overview of NBS (Presenters: Dr. Jennifer Kwon and Dr. Lisa Emrick)

12:05 pm-12:25 pm: Junior CNS members will present 3 cases of infants diagnosed with rare treatable conditions by NBS.

A "metabolic NBS referral" that results in a diagnosis of cobalamin c deficiency.

This case will highlight issues of:

- Expanded secondary conditions covered in NBS
- How NBS referrals are made
- Short-term follow-up and confirmatory testing
- Long-term neurodevelopmental follow-up and treatment

A case of X-linked adrenoleukodystrophy (X-ALD) that will describe the:

- Complicated nature of X-ALD long-term follow-up
- Guidelines recently developed to standardize MRI surveillance for cerebral ALD

A case of spinal muscular atrophy (SMA) that will review:

- Current guidelines for short-term confirmatory testing
- Timing of nusinersen treatment.

12:25 pm-12:45 pm: Discussion of these cases and how the addition of these disorders to NBS programs create new responsibilities and opportunities for child neurologists.

Meet the Experts #3: SLEEP

Columbus KL

Course description:

This will be an interactive, case-based discussion on sleep-wake problems encountered in common childhood neurological disorders. Each topic will be covered in 5-8 minutes. Some topics that the presenters intend to cover are:

1. Interpreting the nocturnal polysomnogram report – Suresh Kotagal, MD
2. Sleep in autism, case discussion – Kiran Maski, MD
3. Nocturnal spells – Kiran Maski, MD
4. Sleep in epilepsy – Suresh Kotagal, MD
5. Hypersomnia: state of the art – Kiran Maski, MD
6. Headache syndrome and sleep – Suresh Kotagal, MD.
7. Q & A – attendees and presenters

PRESENTERS:

Suresh Kotagal, MD; Mayo Clinic
Kiran Maski, MD, MPH; Boston
Children's Hospital

Scientific Program Planning Committee

Congratulations and Thanks!



CNS Board of Directors

Bottom (L-R): Peter Kang (Councillor), Mary Zupanc (Councillor), Gary Clark (PCN President)

Top (L-R): Bruce Cohen (Secretary-treasurer), Ken Mack (CNS Past-President), Jon Mink (CNS President), Don Gilbert (Councillor), Michael Shevell (Councillor)

Scientific Program Planning Committee



Erika Augustine
(Chair)



Gyula Acsadi



Nigel Bamford



Brenda Banwell



Joanna Blackburn



Keith Coffman



Alex Cohen



David Dredge



Leon Dure



Howard Goodkin



Ajay Gupta



Shafali Jeste



Yasmin Khakoo



Karl Kuban



Laura Lehman



Warren Lo



Ganesh Mochida



Marc Patterson



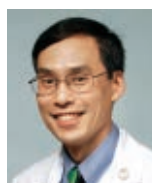
Toni Pearson



Eugene
Schnitzler



Carl Stafstrom



Liu Lin Thio



Laura Tochen



Keith Van Haren



Yvonne Wu

Schedule at a Glance

All meetings/sessions at Hyatt Regency

Friday, October 12, 2018

<i>Start</i>	<i>End</i>	<i>SIG/COMM</i>	<i>Room Assigned</i>
10:00 AM	10:30 AM	CNCDP-K12 Executive Meeting	Roosevelt Common Area
10:00 AM	5:00 PM	CNDCP-K12/NSADA Registration	Roosevelt Common Area
1:00 PM	1:15 PM	CNCDP-K12/NSADA Retreat	Roosevelt Common Area

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Saturday, October 13, 2018

<i>Start</i>	<i>End</i>	<i>SIG/COMM</i>	<i>Room Assigned</i>
6:00 AM	5:00 PM	CNDCP-K12/NSADA Registration	Roosevelt Common Area
7:00 AM	6:00 PM	CNCDP-K12/NSADA Retreat	Roosevelt Common Area
8:00 AM	12:00 PM	MRSP Group Meeting	Roosevelt Common Area

Sunday, October 14, 2018

<i>Start</i>	<i>End</i>	<i>SIG/COMM</i>	<i>Room Assigned</i>
6:00 AM	5:00 PM	CNDCP-K12/NSADA Registration	Roosevelt Common Area
7:00 AM	6:00 PM	CNCDP-K12/NSADA Retreat	Roosevelt Common Area
8:00 AM	12:00 PM	MRSP Group Meeting	Roosevelt Common Area
2:00 PM	6:00 PM	CNS Registration	Grand Registration
2:00 PM	6:00 PM	Poster Drop-Off	Grand Registration
4:00 PM	6:00 PM	Speaker Ready Room	Grand Salon 2A
6:00 PM	9:00 PM	Pellock Resident Seminar Reception/Dinner & Opening Lecture	Michigan 1ABC
6:00 PM	8:00 PM	ACNN Reception	Columbus EF
8:00 PM	10:00 PM	NDC Faculty & Young Investigators Reception	Michigan 2

EXHIBITS & POSTER REVIEW

RIVERSIDE EXHIBIT HALL

MONDAY 6:00 PM-7:30 PM

Welcome Reception
Supported by Ann and Robert H. Lurie Children's Hospital of Chicago

TUESDAY 11:30 AM-6:00 PM

Lunch served
12:30 PM-2:00 PM
Guided Poster Tour #1

Wine & Cheese Reception
4:30 PM-6:00 PM
Guided Poster Tour #2

WEDNESDAY 7:00 AM-10:30 AM

Breakfast served
7:00 AM-8:15 AM
Guided Poster Tour #3

Monday, October 15, 2018

<i>Start</i>	<i>End</i>	<i>SIG/COMM</i>	<i>Room Assigned</i>
6:00 AM	6:00 PM	CNS Registration	Grand Registration
6:00 AM	6:00 PM	Poster Drop-Off	Grand Registration
6:00 AM	10:00 PM	Podcast/Videocast 1	Grand Suite 1
6:00 AM	10:00 PM	Podcast/Videocast 2	Grand Suite 3
6:00 AM	7:30 PM	Speaker Ready Room	Grand Salon 2A
6:00 AM	10:00 PM	Nursing Room	Roosevelt Boardroom

Schedule at a Glance

SESSIONS highlighted in maroon are offered for CME credit as part of the CNS Scientific Program. Satellite sessions are accredited through independent CME providers, not the CNS.

All meetings/sessions at Hyatt Regency

8:00 AM	5:00 PM	Program Coordinators of Child Neurology	Roosevelt 1AB
7:00 AM	5:00 PM	Pellock Resident Seminar	Michigan 1 ABC
6:45 AM	7:30 AM	Symposium I: NDC Continental Breakfast	Grand Ballroom Foyer
7:45 AM	5:00 PM	Symposium I: NDC Tourette Syndrome	Grand Ballroom CD
12:45 PM	1:45 PM	Symposium I: NDC Lunch	Grand Ballroom EF
8:00 AM	4:00 PM	ACNN Meeting	Columbus CD
8:00 AM	5:00 PM	International Pediatric Stroke IPSS	Michigan 3
2:00 PM	5:00 PM	PCN Meeting	Columbus GH
6:00 PM	7:30 PM	Opening/Welcome Reception	Riverside Exhibit Hall
7:30 PM	10:00 PM	AAP Section of Neurology Executive Committee	Michigan Boardroom
7:45 PM	9:30 PM	Legacy Reception	Grand Ballroom EF
7:45 PM	10:00 PM	Movement Disorders SIG	Grand Ballroom AB

Tuesday, October 16, 2018

EXHIBITS & POSTER REVIEW

RIVERSIDE EXHIBIT HALL

MONDAY

6:00 PM-7:30 PM

Welcome Reception
Supported by Ann
and Robert H. Lurie
Children's Hospital
of Chicago

TUESDAY

11:30 AM-6:00 PM

Lunch served
12:30 PM-2:00 PM
Guided Poster Tour #1

Wine & Cheese
Reception

4:30 PM-6:00 PM

Guided Poster Tour #2

WEDNESDAY

7:00 AM-10:30 AM

Breakfast served
7:00 AM-8:15 AM

Guided Poster Tour #3

<i>Start</i>	<i>End</i>	<i>SIG/COMM</i>	<i>Room Assigned</i>
6:00 AM	6:00 PM	CNS Registration	Grand Registration
6:00 AM	9:00 AM	Poster Drop-Off	Grand Registration
6:00 AM	6:00 PM	Podcast/Videocast 1	Grand Suite 1
6:00 AM	6:00 PM	Podcast/Videocast 2	Grand Suite 3
6:00 AM	6:00 PM	Speaker Ready Room	Grand Salon 2A
6:00 AM	10:00 PM	Nursing Room	Roosevelt Boardroom
6:15 AM	7:00 AM	Continental Breakfast	Grand Ballroom Foyer
7:00 AM	8:15 AM	Breakfast Seminar 1: Brain Death	Grand Ballroom AB
7:00 AM	8:15 AM	Breakfast Seminar 2: Neonatal Seizure Trials	Grand Ballroom CD
7:00 AM	8:15 AM	Breakfast Seminar 3: Movement Disorders	Grand Ballroom EF
8:00 AM	2:00 PM	Program Coordinators of Child Neurology	Roosevelt 1AB
8:15 AM	8:45 AM	CNS AM Break	Grand Ballroom Foyer
8:45 AM	11:45 AM	Symposium II: Presidential Symposium Contemporary Issues in Rare Diseases	Grand Ballroom
11:30 AM	6:00 PM	Exhibits & Poster Review	Riverside East/West
12:00 PM	12:45 PM	Meet the Expert: Headache (followed by SIG meeting)	Columbus GH
12:00 PM	12:45 PM	Meet the Expert: Neurodevelopmental/ Neurogenetics SIG (followed by SIG meeting)	Columbus IJ
12:00 PM	12:45 PM	Meet the Expert: Sleep (followed by SIG meeting)	Columbus KL
12:45 PM	2:00 PM	Lunch – with Exhibits, Posters, and Guided Poster Tour #1	Riverside Exhibit Hall
9:00 AM	1:45 PM	ACNN Meeting	Columbus CD
12:45 PM	1:45 PM	International Affairs Committee	Michigan 3
12:45 PM	1:45 PM	Research Committee	Columbus H

12:45 PM	1:45 PM	Membership Committee	Monroe Boardroom 2
12:45 PM	1:45 PM	Legislative Affairs Committee	Monroe Boardroom 3
12:45 PM	1:45 PM	Finance Committee	Monroe Boardroom 4
12:45 PM	1:45 PM	Awards Committee	Michigan 1A
12:45 PM	1:45 PM	Ethics Committee	Michigan 1B
12:45 PM	1:45 PM	Practice Committee	Michigan 1C
2:00 PM	4:00 PM	Symposium III: Contemporary Management of Spinal Muscular Atrophy – Transitioning from reactive care to proactive care in molecular era	Grand Ballroom
4:00 PM	5:30 PM	Child Neuro News Break Poster Review (Wine & Cheese Reception); Guided Poster Tour #2	Riverside Exhibit Hall
5:15 PM	6:00 PM	Archives Committee	Monroe Boardroom 1

Wednesday, October 17, 2018

<i>Start</i>	<i>End</i>	<i>SIG/COMM</i>	<i>Room Assigned</i>
6:00 AM	6:00 PM	Podcast/Videocast 1	Grand Suite 1
6:00 AM	6:00 PM	Podcast/Videocast 2	Grand Suite 3
6:00 AM	10:00 PM	Nursing Room	Roosevelt Boardroom
6:30 AM	7:00 PM	CNS Registration	Grand Registration
6:30 AM	5:00 PM	Speaker Ready Room	Grand Salon 2A
7:00 AM	8:15 AM	Continental Breakfast w/ Exhibits, Posters, and Guided Poster Tour #3	Riverside Exhibit Hall
7:00 AM	10:30 AM	Exhibits & Poster Review	Riverside Exhibit Hall
8:00 AM	5:30 PM	Program Coordinators of Child Neurology	Roosevelt 1AB
8:30 AM	10:15 AM	Platform Session 1	Grand Ballroom AB
8:30 AM	10:15 AM	Platform Session 2	Grand Ballroom CD
8:30 AM	10:15 AM	Platform Session 3	Grand Ballroom EF
9:00 AM	2:00 PM	ACNN	Columbus CD
10:15 AM	10:45 AM	CNS AM Break	Grand Ballroom Foyer
10:45 AM	11:00 AM	CNS Award Presentations & CNF Grant/Awards Presentations	Grand Ballroom
11:00 AM	12:15 PM	Philip R. Dodge Young Investigator & Bernard Sachs Award Lectures	Grand Ballroom
12:30 PM	1:45 PM	Best of Show	Columbus IJKL
12:30 PM	1:45 PM	CNS Lunch	Grand Ballroom Foyer
12:45 PM	1:30 PM	Neonatal Neurology SIG	Columbus AB
12:45 PM	1:30 PM	Autonomic Disorders SIG	Michigan 2

Schedule at a Glance

SESSIONS highlighted in maroon are offered for CME credit as part of the CNS Scientific Program. Satellite sessions are accredited through independent CME providers, not the CNS.

All meetings/sessions at Hyatt Regency

12:45 PM	1:30 PM	International Affairs SIG	Michigan 3
12:45 PM	1:30 PM	Traumatic Brain Injury SIG	Randolph 3
2:15 PM	4:15 PM	Symposium IV: Precision Medicine: Epilepsy, the Next Frontier	Grand Ballroom
4:00 PM	6:00 PM	Poster Pick-up	Grand Registration
4:30 PM	5:00 PM	CNS Business Meeting	Grand Ballroom
4:30 PM	5:15 PM	Junior Member Seminar 1: Med Students: Finding a Residency	Michigan 1A
4:30 PM	5:15 PM	Junior Member Seminar 2: Residents: Finding a Fellowship	Michigan 1B
4:30 PM	5:15 PM	Junior Member Seminar 3: Residents & Fellows: Getting your First Job	Michigan 1C
4:30 PM	5:30 PM	Education SIG	Michigan 3
5:30 PM	6:15 PM	Meet the Editors	Michigan 1B
6:00 PM	6:45 PM	Scientific Program Committee	Michigan 2
7:00 PM	9:00 PM	Closing Reception	Columbus

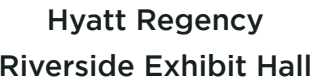
Thursday, October 18, 2018

<i>Start</i>	<i>End</i>	<i>SIG/COMM</i>	<i>Room Assigned</i>
6:00 AM	1:00 PM	CNS Registration	Grand Registration
6:30 AM	12:00 PM	Speaker Ready Room	Grand Salon 2A
6:00 AM	4:00 PM	Nursing Room	Roosevelt Boardroom
7:00 AM	10:00 AM	Poster Pick-Up	Grand Registration
7:00 AM	8:15 AM	Continental Breakfast	Grand Ballroom Foyer
7:00 AM	8:15 AM	Breakfast Seminar 4: Telemedicine in Pediatric Epilepsy	Grand Ballroom AB
7:00 AM	8:15 AM	Breakfast Seminar 5: Updates in Pediatric Traumatic Brain Injury	Grand Ballroom CD
7:00 AM	8:15 AM	Breakfast Seminar 6: Children's Sleep in the ICU	Columbus GH
8:15 AM	8:45 AM	Break	Grand Ballroom Foyer
8:45 AM	9:45 AM	Hower Award Lecture	Grand Ballroom
10:00 AM	12:00 PM	Symposium V: Critical Care Neurology for the bedside to the clinic: Outcomes and follow-up of acute neurologic injuries	Grand Ballroom
1:00 PM	4:30 PM	CNF Symposium VI: Transition of Care	Columbus GHIJKL
1:00 PM	5:00 PM	Biomedical Writing Workshop	Roosevelt 3A

WANT CME OR CEU CREDITS?

Go on line for link to complete post-meeting survey by November 10

Exhibits and Posters



Advocate Children's Hospital (#503)

Part of Advocate Health Care, Advocate Children's Hospital is the largest network provider of pediatric services in Illinois and among top 10 in US with 2 campuses in Chicagoland with 730+ pediatricians & pediatric subspecialists. Through a holistic approach, ACH combines the country's most respected medical talent with exceptional care.

SPONSOR

Agilis Biotherapeutics (#223)

Agilis Biotherapeutics is advancing innovative DNA therapeutics designed to provide long-term efficacy for patients with debilitating, often fatal, rare genetic diseases that affect the central nervous system. Our therapies are engineered to impart sustainable clinical benefit, and potentially a functional cure, by inducing persistent expression of a therapeutic gene.



Ambry Genetics, a Konica Minolta Company (#330)

Since 1999, our mission has remained focused on understanding disease better so cures can come faster. Through our ongoing research, our extensive neurology testing menu, and our industry-leading clinical exome test, we give health care providers clearer information so they can accurately guide patient care.

American Academy of Pediatrics Section on Neurology and National Coordinating Center for Epilepsy (#602)

The AAP Section on Neurology is committed to improving the neurological care of infants, children and adolescents. The AAP National Coordinating Center for Epilepsy fosters strategies to improve access to quality care for Children and Youth with Epilepsy, particularly among those experiencing health disparities and/or residing in medically underserved communities.

American Board of Psychiatry & Neurology (#604)

The American Board of Psychiatry and Neurology serves the public interest and the professions of psychiatry and neurology by promoting excellence in practice through its certification and maintenance of certification processes.

Aquestive Therapeutics (#127, 325)

Aquestive Therapeutics is a specialty pharmaceutical company built upon the PharmFilm technology as an innovative drug delivery system. PharmFilm was developed to provide meaningful clinical and therapeutic differentiation to better meet the needs of patients, caregivers, and physicians. For more information about the technology, visit our website at <https://aquestive.com/technology>.

Assertio Therapeutics (#131)

Assertio Therapeutics is committed to providing responsible solutions to advance patient care in the Company's core areas of neurology, orphan and specialty medicines. Assertio currently markets three FDA-approved products and continues to identify, license and develop new products that offer enhanced options for patients that may be underserved by existing therapies. To learn more about Assertio, visit www.assertiotx.com.

Association of Child Neurology Nurses (ACNN) (#600)

The Association of Child Neurology Nurses is an international non-profit organization of nurses and other health care professionals who promote excellence in child neurology nursing practice. 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.acnn.org.

Atrium Health – Levine Children's Hospital (#317)

Atrium Health – Levine Children's Hospital is the most comprehensive children's hospital between Atlanta and DC. We are currently looking for excellent child neurologists to join our team. Atrium Health provides healthcare throughout North Carolina, South Carolina and Georgia with 3,000 employed physicians, operating 45 hospitals and 900-plus care locations.

SPONSOR

AveXis, Inc. (#109, 110)

We are breaking barriers. AveXis is a clinical-stage gene therapy company relentlessly focused on bringing gene therapy out of the lab and into the clinical setting for patients and families devastated by rare and orphan neurological genetic diseases. For more information, please visit AveXis.com.



Banner Health & Banner Children's Specialist (#228)

As part of the Banner Health network, Banner Children's Specialists (BCS) cares for more children in Arizona than any other healthcare organization. BCS is seeking a BC/BE Pediatric Neurologist to join our Pediatric Neurology teams at Cardon Children's and Banner Thunderbird Medical Centers in Phoenix metro area.

Batten Disease Support and Research Association (#203)

BDSRA is dedicated to funding research for treatments and cures, providing family support services, advancing education, raising awareness, and advocating for legislative action. Founded by parents seeking to build a network around Batten disease, BDSRA is now the largest support and research organization dedicated to Batten disease in North America.

Biogen (#315)

At Biogen, our mission is clear: we are pioneers in neuroscience. Since our founding in 1978 as one of the world's first global biotechnology companies, Biogen has led innovative scientific research with the goal over the last decade to defeat devastating neurological diseases.

BioMarin Pharmaceutical Inc. (#420, 421)

BioMarin develops and commercializes innovative biopharmaceuticals for serious diseases and medical conditions. Approved products include the first and only therapies for PKU, LEMS, MPS I, MPS VI, MPS IVA, and CLN2 disease. Clinical development programs include investigational therapies for Hemophilia A, Achondroplasia, MPS IIIB, Friedreich's Ataxia and other rare diseases.

Blueprint Genetics (#311)

Blueprint Genetics delivers quality genetics testing to the global clinical community. We provide clinicians, and their patients, with comprehensive and high-quality tools and resources for diagnostics of genetic conditions. Through our innovative laboratory process, latest sequencing technology with AI empowered data-crunching tools, and world-class professionals, we are advancing mainstream healthcare.

The Brain Recovery Project Childhood Epilepsy Surgery Foundation (#129)

The Brain Recovery Project is committed to providing families with the critical research-based information, programs, and resources they need to help maximize their child's full potential after pediatric epilepsy brain surgery to stop seizures.

B. Braun CeGaT, LLC (#209)

B. Braun CeGaT is a genetic diagnostic laboratory that has performed thousands of tests for pediatric patients with various neurological-related diseases. Our test menu consists of multi-gene diagnostic panels, whole exome sequencing, and single-gene tests in clinical areas such as neurodegenerative disease, neuromuscular disease, epilepsy, and brain development disorders.

Catabasis Pharmaceuticals (#309)

Catabasis is actively enrolling a global Phase 3 POLARIS DMD trial with edasalonexent in Duchenne muscular dystrophy. The trial is enrolling boys ages 4 to 7 (up to 8th birthday) all mutation types who have not been on steroids for at least 6 months. More information is available on clinicaltrials.gov.

Catalyst Pharmaceuticals (#207)

Catalyst Pharmaceuticals is a biopharmaceutical company focused on developing and commercializing innovative therapies for people with rare debilitating, chronic neuromuscular and neurological diseases, including Lambert-Eaton myasthenic syndrome (LEMS), congenital myasthenic syndromes (CMS), MuSK antibody positive myasthenia gravis, and spinal muscular atrophy (SMA) type 3. For more information on our work, please visit www.catalystpharma.com.

Children's Health (#313)

Children's Health is the eighth-largest pediatric health care provider in the nation and the leading pediatric health care system in North Texas, providing a full spectrum of health care services. Children's Health has been consistently named one of the nation's top pediatric providers by *U.S. News & World Report*.

Children's Healthcare of Atlanta (#509)

The Neurosciences Division at Children's Healthcare of Atlanta, through a collaborative arrangement with Emory University School of Medicine, serves as the primary provider of pediatric neurology services at each of our three hospital campuses, the Marcus Autism Center, and at various neighborhood locations throughout metro Atlanta. We are actively seeking physicians in several areas including general neurology, epileptology, and neuromuscular disorders.

Children's Hospital Los Angeles (#305)

The mission of Children's Hospital Los Angeles is to create hope and build healthier futures. It is the top-ranked children's hospital in California and among the top 10 in the nation, according to the *U.S. News & World Report* Honor Roll. It's one of the few freestanding pediatric hospitals, and it's affiliated with the Keck School of Medicine of USC.

Children's Hospital & Medical Center – Omaha, NE (#306)

Children's Hospital & Medical Center is the only full-service, pediatric health care center in Nebraska, providing expertise in 50+ pediatric specialty services to children across a five-state region and beyond. Nationally ranked in five specialties by *U.S. News & World Report*, Children's is home to Nebraska's only PICU and Level IV NICU.

Children's National Health System (#222)

Children's National Health System, based in Washington, D.C., has served the nation's children since 1870. Children's National is one of the nation's Top 5 pediatric hospitals and is ranked No. 1 in newborn care, as well as ranked in all specialties evaluated by *U.S. News & World Report*.

CoxHealth (#221)

Cox South Hospital is a highly developed regional referral center and level III NICU in Springfield, Missouri. In addition to pediatric hospitalists and intensivists, pediatric sub-specialty care includes: cardiology, endocrinology, gastroenterology, general surgery, neonatology, sleep medicine and urology. We are seeking a pediatric neurologist to join an established practice.

Dayton Children's Hospital (#229)

Dayton Children's is a free-standing children's hospital in Dayton, Ohio. For nearly 50 years, our focus remains steadfast – we exist because every child deserves a great children's hospital close to home. The hospital is affiliated with Wright State University School of Medicine. Please visit www.childrensdayton.org for additional information.

Dystonia Medical Research Foundation (#218)

The mission of the DMRF is to advance research for more treatments and ultimately a cure, to promote awareness and education, and to support the needs and well-being of affected individuals and families.

SPONSOR

Eisai Inc. (#103, 123)

As the U.S. pharmaceutical subsidiary of Tokyo-based Eisai Co., Ltd., we are a fully integrated pharmaceutical business with discovery, clinical, and marketing capabilities. Our key areas of focus include oncology and neurology (dementia-related diseases and neurodegenerative diseases). To learn more about Eisai Inc., please visit us at www.eisai.com/US and follow us on Twitter and LinkedIn.



Elsevier, Inc. (#116)

Elsevier is a world-leading provider of information solutions that enhance the performance of science, health, and technology professionals, empowering them to make better decisions, and deliver better care.

Fulgent Genetics (#227)

Fulgent Genetics provides full-service genetic testing services to physicians with clinically actionable diagnostic information. Its technology platform integrates data comparison and suppression algorithms, learning software, genetic diagnostics tools and integrated laboratory processes. Fulgent prides itself on affordable costs, flexibility, diverse product offerings, and services that are second to none.

GeneDx, Inc. (#220)

GeneDx, an OPKO Health Company and a leader in genomics with expertise in rare genetic disorders, offers diagnostic testing for hereditary cancers, cardiac, mitochondrial, and neurological disorders. Whole exome sequencing, microarray-based testing, targeted variant testing, and prenatal diagnostic services are also available. Visit www.genedx.com for more information.

SPONSOR

Genentech (#117, 216)

For more than 40 years, we've been following the science, seeking solutions to unmet medical needs. As a proud member of the Roche Group, we make medicines to treat patients with serious medical conditions. We are headquartered in South San Francisco, California.



SPONSOR

Greenwich Biosciences, Inc. (#119, 428, 523)

Greenwich Biosciences is focused on discovering, developing, and commercializing novel therapeutics from its propriety cannabinoid product platform. It is our passion and purpose to continually seek solutions that transform the lives of those living with rare and severe neurological diseases. For additional information, please visit www.GreenwichBiosciences.com.



Henry Ford Health System (#319)

The Henry Ford Health System is comprised of hospitals, medical centers and one of the nation's largest group practices, the Henry Ford Medical Group, which includes more than 1,200 physicians practicing in over 40 specialties. The System's flagship, Henry Ford Hospital in Detroit, is a Level 1 Trauma Center recognized for clinical excellence in cardiology, cardiovascular surgery, neurology and neurosurgery, orthopedics, sports medicine, multi-organ transplants and cancer treatment.

Invitae (#121)

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 most of the world's genetic tests into a single service with higher quality, faster turnaround time and lower prices. Visit www.invitae.com.

Ipsen Biopharmaceuticals, Inc. (#238)

Ipsen is a global biopharmaceutical group focused on innovation and specialty care. Ipsen employs approximately 600 people in North America and is dedicated to providing hope for the patients challenged by difficult-to-treat diseases in oncology, neuroscience and rare diseases. For more information on Ipsen in North America, please visit www.ipseus.com

Jett Foundation (#521)

Jett Foundation meets the needs of patients affected by Duchenne muscular dystrophy through educational programs that empower affected families with the knowledge, support, and resources needed to seek out the highest standard of care, the most cutting-edge and innovative treatments available, and promising clinical trials and scientific advancements.

Joe DiMaggio Children's Hospital at Memorial (#231)

Joe DiMaggio Children's Hospital (JDCH) in south Florida is seeking experienced pediatric neurologists. Stop by booth #332 to learn more. JDCH has grown since 1992 to be the leading children's hospital in Broward/Palm Beach Counties, with 226 beds, an 84-bed Level II and III NICU, 30-bed PICU and 12-bed ICU.

LeBonheur Children's Hospital, Neuroscience (#104)

The Neuroscience Institute at LeBonheur Children's Hospital in Memphis, Tenn. provides high quality care to children with a wide range of neurologic diagnoses utilizing advanced technology, clinical expertise and state-of-the-art facilities. LeBonheur is recognized by *U.S. News & World Report* as one of the nation's best pediatric neuroscience programs.

Lennox Gastaut Syndrome (LGS) Foundation (#507)

The LGS Foundation is a non-profit organization dedicated to improving the lives of individuals with Lennox-Gastaut Syndrome through research, family support programs, and education.

Lineagen, Inc. (#431)

Lineagen provides advanced genetic diagnostics for children with neurodevelopmental disorders (NDD). Healthcare providers can easily submit a cheek swab to order a suite of genetic tests and complementary patient services, including FirstStepDx PLUS® optimized chromosomal microarray, fragile X, and NextStep Dx PLUS®, the clinical-grade exome designed for NDD and epilepsy.

Lundbeck (#427)

Lundbeck, a global pharmaceutical company based in Denmark and founded in 1915, strives for global leadership in psychiatry and neurology by improving the lives of patients. One of the world's leading companies specializing in brain disorders, Lundbeck is focused on innovating treatments for depression, schizophrenia, Parkinson's disease and Alzheimer's disease.

SPONSOR

Ann & Robert H. Lurie Children's Hospital of Chicago (#234)

Ranked by *U.S. News & World Report* as the top children's hospital in Illinois and #10 in the country, Lurie Children's is the only children's hospital in the state to rank in all 10 specialties, including Neurology and Neurosurgery, ranked 12 in the country. The Epilepsy Center and Neuromuscular Disorder Program are one of the largest and most comprehensive programs in the region along with the nationally-recognized Neurocritical Care Program, the only program of its kind in the region and only one of a few in the country.



SPONSOR

Mallinckrodt Pharmaceuticals (#100)

Mallinckrodt Pharmaceuticals is a global specialty pharmaceutical company. The company's Autoimmune and Rare Diseases business includes H.P. Acthar® Gel (repository corticotropin injection), indicated for use in multiple specialties. To learn more, visit www.Acthar.com.



Mercyhealth (#300)

At Mercyhealth, we serve with a passion for making lives better. Every day we strive to provide an exceptional experience to every patient we come in contact with....every life we touch. Our patients, their families and our communities deserve this quality caring commitment. We are always here, giving compassionate care, every minute of every day. We are here because touching lives invigorates and inspires the best in us. This is our passion for making lives better.

Mississippi Center for Advanced Medicine (#322)

The Mississippi Center for Advanced Medicine in Madison is seeking a Child Neurologist to join our growing group of pediatric subspecialists and help establish the only freestanding pediatric entity in the state. Madison has been named the best place to live, raise a family and the safest city in Mississippi.

MNG Laboratories (#511)

MNG Laboratories is a leading provider of neurogenetic testing through clinical services, complex biochemical testing and sequencing. We specialize in movement disorders, muscular dystrophies, epilepsy, intellectual disabilities, metabolic and other inherited disorders. With over 15 years of diagnostic experience, MNG strives to deliver added value to our client's needs.

Monroe Carell Jr. Children's Hospital at Vanderbilt (#326)

Monroe Carell Jr. Children's Hospital at Vanderbilt provides comprehensive care for children with neurological disorders from Tennessee, the Southeast USA, and beyond. The Divisions of Pediatric Neurology and Neurosurgery offer many multidisciplinary clinics as well as active research and training programs to ensure the best outcomes for our patients.

National Institute of Neurological Disorders and Stroke (NINDS) (#606)

The National Institute of Neurological Disorders and Stroke (NINDS) (www.ninds.nih.gov), part of the National Institutes of Health (NIH), provides information about research support and funding mechanisms and free publications for patients and their families on neurological disorders. NINDS staff members will be available at the meeting.

National Organization for Disorders of the Corpus Callosum (#328)

The National Organization for Disorders of the Corpus Callosum is the leading resource for raising the profile, understanding and acceptance of disorders of the corpus callosum (DCC) through education, networking, advocacy, and research facilitation. Our mission is to enhance the quality of life and promote opportunities for individuals living with a DCC.

Nationwide Children's Hospital (#517)

Nationwide Children's is ranked among the seven 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.

Neurology Reviews (#201)

NEUROLOGY REVIEWS is a clinical news publication with articles and timely department features that keep neurologists, primary care physicians, and other healthcare professionals informed of the latest news affecting their practice.

NEUROLOGY REVIEWS covers major medical conferences and monitors the peer-reviewed literature to report the latest research findings.

Neurotech, LLC (#429)

Neurotech, LLC specializes in EEG services including in-home, long-term, and continuous hospital EEG monitoring. Accredited by the Joint Commission and partnered with many academic facilities, our in-home, long-term EEG monitoring services improves our patients' comfort and provides a cost-effective alternative to a hospital stay. Neurotech cEEG Partners, LLC provides hospitals with continuous EEG monitoring in the ICU and EMU to improve patient safety and outcomes.

Nutramax Laboratories Consumer Care, Inc. (#310)

Avmacol® by Nutramax Laboratories Consumer Care, Inc. is formulated with glucoraphanin and active myrosinase enzyme to support sulforaphane production in the body thus helping to increase phase 2 enzyme activities, essential for the elimination of certain toxins and harmful metabolites. Avmacol® has been chosen for clinical trials around the world.

Ovid Therapeutics (#323)

Ovid Therapeutics' research is pioneering a scientific approach to develop therapies based on new understanding of key biological pathways and their central role in rare neurological disorders. We seek to develop medicines using novel and clinically relevant endpoints to capture tangible patient benefits that emanate from addressing underlying disorder pathology.

Parent Project Muscular Dystrophy/Decode Duchenne (#608)

Parent Project Muscular Dystrophy's mission is to end Duchenne. We accelerate research, raise our voices in Washington, demand optimal care for all young men, and educate the global community. Decode Duchenne provides free genetic testing and counseling to people with Duchenne or Becker muscular dystrophy who have been unable to access genetic testing.

Philips Neuro (#307)

Whole head, high density EEG systems provide high-resolution brain monitoring and source imaging using the comfortable, child-friendly Geodesic Sensor Net for application of up to 256 sensors. Several published studies have investigated the use of HD EEG and ESI for epilepsy presurgical planning.

Practical Neurology (#321)

Practical Neurology® is a publication uniquely dedicated to presenting current approaches to patient management, synthesis of emerging research and data, and analysis of industry news with a goal to facilitate practical application and improved clinical practice for neurologists. We print 9 times/year and have a circulation of over 18,000 physicians.

PreventionGenetics (#304)

Founded in 2004 and located in Marshfield, Wisconsin, PreventionGenetics is a CLIA and ISO 15189:2012 accredited clinical DNA testing laboratory. PreventionGenetics provides patients with sequencing and deletion/duplication tests for nearly all clinically relevant genes. These tests include our powerful and comprehensive whole exome sequencing test, PGxome

Provider Solutions + Development aka Providence St. Joseph Health (#316)

Founded within Providence St. Joseph Health, Provider Solutions + Development is a clinical career navigation organization. We've helped thousands of physicians and providers achieve their practice potential.

SPONSOR

PTC Therapeutics (#242)

PTC is a science-led, global biopharmaceutical company focused on the discovery, development and commercialization of clinically-differentiated medicines that provide benefits to patients with rare disorders. EMFLAZA® (deflazacort) is the first and only FDA-approved corticosteroid indicated for the treatment of Duchenne muscular dystrophy in patients 5 years of age and older.



Recordati Rare Diseases (#226)

Recordati Rare Diseases is a biopharmaceutical company committed to providing often overlooked orphan therapies to the underserved rare disease communities of the United States. Our experienced team works side-by-side with rare disease communities to increase awareness, improve diagnosis, and expand availability of treatments. For more information, please visit www.recordatirarediseases.com.

Retrophin (#308, 327)

Retrophin is a biopharmaceutical company dedicated to delivering life-changing therapies to people living with rare diseases who have few, if any, treatment options.

RosmanSearch, Inc. (#118)

RosmanSearch is a Neurosurgery, Neurology and APP recruitment firm. We place quality providers with quality practices nationwide. We are the only search firm with dedicated teams specializing in neuroscience. Our mission is to be the best, the most expert, and the one that is known for quality – every time!

RSC Diagnostic Services (#302)

RSC Diagnostic Services delivers customized in-home ambulatory video EEG solutions for physician practices and acute care facilities. This unique approach empowers physicians by increasing the diagnostic yield to evaluate, diagnose and treat a variety of neurological symptoms that may be undetectable in a hospital setting. RSC specializes in Pediatric in-home testing.

Sanford Health (#126)

Sanford Health is one of the largest health care systems in the nation, with 44 hospitals and nearly 300 clinics. Headquartered in Sioux Falls, SD, and serving the Upper Midwest, with nearly 1,400 physicians & 28,000 employees making it the largest employer in the Dakotas. For information, visit sanfordhealth.org.

Sanofi Genzyme (#303, 318)

Sanofi Genzyme focuses on developing specialty treatments for debilitating diseases that are often difficult to diagnose and treat, providing hope to patients and their families.

SPONSOR

Sarepta Therapeutics (#211, 217)

Sarepta Therapeutics is a commercial-stage biopharmaceutical company focused on the discovery and development of precision genetic medicines to treat rare neuromuscular diseases. The Company is primarily focused on rapidly advancing the development of its potentially disease-modifying Duchenne muscular dystrophy (DMD) drug candidates and is proud to support the 47th CNS Annual Meeting. For more information about Sarepta, please visit www.sarepta.com.



St. Louis Children's Hospital (#205)

The neurological specialists at St. Louis Children's Hospital, in affiliation with Washington University School of Medicine (WUSM), provide compassionate, leading-edge care to infants, children and adolescents with all neurological diseases. WUSM ranks among the best medical schools and one of the country's top recipients in research grants.

The Sturge-Weber Foundation (#419)

The Sturge-Weber Foundation will feature the latest patient support materials, research initiatives and Clinical Care Network listing. Data from the SWS International Registry will also be submitted for review.

SPONSOR

Sunovion Pharmaceuticals, Inc. (#106)

Sunovion is a global biopharmaceutical company focused on the innovative application of science and medicine to help people with serious neurological, psychiatric and respiratory conditions. The company's spirit of innovation is driven by the conviction that scientific excellence paired with meaningful advocacy and relevant education can improve lives.



Texas Children's Hospital (#417)

Texas Children's Hospital is committed to creating a healthier future for children throughout the global community by leading in patient care, education and research. Consistently ranked among the top children's hospitals in the nation, Texas Children's has garnered widespread recognition for its expertise and breakthroughs in pediatric health.

Tourette Association of America (#312)

Founded in 1972, the Tourette Association of America is dedicated to making life better for all individuals affected by Tourette and Tic Disorders. The only nationwide organization serving this community, the Association raises awareness, fund research and provide on-going support. The Tourette Association directs a network of 32 Chapters and over 80 support groups across the country. For more information on Tourette and Tic Disorders, call 1-888-4-TOURET, visit www.tourette.org, and on Facebook, Twitter, Instagram and YouTube.

UCB, Inc. (#120)

At UCB, everything we do starts with a simple question: "How will this create value for people living with severe diseases?" We are a global biopharmaceutical company committed to innovation to improve the lives of people with neurological, immunological, and bone disorders, finding solutions to meet their unique needs.

Upsher-Smith Laboratories, Inc. (#416)

Upsher-Smith Laboratories, LLC is a trusted U.S. pharmaceutical company that has strived to deliver quality, affordable generic medications for nearly a century. In June 2017, Upsher-Smith was acquired by Sawai Pharmaceutical Co., Ltd., a large publicly traded generics company in Japan that shares a similar philosophy of always putting patients first. For more information, visit www.upsher-smith.com.

Variantx Inc. (#230)

Variantx provides Variantx Unity™ – a whole genome sequencing (WGS) based test for diagnosis of rare inherited disorders. We also enable hospitals and labs to profitably expand their test menu with validated genomic diagnostic solutions using our Genomic Intelligence® platform for simplified NGS data analysis, interpretation and clinical reporting.

VNS Therapy by LivaNova (#128)

As pioneers of the VNS (Vagus Nerve Stimulation) Therapy® system, we continue to advance medical device solutions for people affected by treatment-resistant epilepsy. We strive to help where it really counts, where it truly matters the most. Sharp, responsive and effective – at LivaNova we serve health and improve lives. Day by day. Life by life.

CONNECTING WITH COLLEAGUES



Stress and Adversity Sculpt the Developing Brain: An interview with Tallie Z. Baram, MD, PhD

By Daniel J. Bonthius, MD, PhD | CNS Connections Editor



Tallie Z. Baram, MD

Dr. Tallie Z. Baram is well known to all members of the Child Neurology Society. As one of the foremost researchers in the world working on the developing brain, Dr. Baram regularly draws large crowds to her frequent presentations at CNS Annual Meetings, including the 2013 Bernard Sachs Lecture.

Dr. Baram was honored this past spring by the American Academy of Neurology, delivering the prestigious George C. Cotzias Lecture at the AAN Meeting in Los Angeles ("How Early-Life Experiences Sculpt Your Brain: From Molecules to Circuits"). Dr. Baram is the Danette Shepard Professor Neurological Sciences at the University of California Irvine where she also serves as Director of the Conte Center and as Executive Council Chair of the Epilepsy Research Center.

QUESTION | *How did you become interested in the effects of stress on the developing brain?*

I have always been drawn to the brain, and specifically to the evolving, ever-changing developing brain. As child neurologists, we think of the brain in four rather than three dimensions, adding Time to the concept. I have often wondered how environmental and experiential forces sculpted brain development. Stress is clearly a powerful force from an evolutionary perspective. The ability of an individual to learn from adversity and adapt to it will strongly increase survival.

I was also intrigued by the complexity of the mechanisms the brain deploys to process and handle stress. The idea that the only players in this complexity are steroids simply didn't make sense. I was interested in uncovering the non-steroid hormone mechanisms that might be specific to the brain as it faces stress, and especially neuropeptides.

QUESTION | *Your research has revealed that neonatal stress can impair future memory abilities, cognitive functions, and behavioral responses. Yet, it seems that stress is universal and that evolution would strongly favor individuals who can cope with stress without it causing such negative consequences. Are you surprised that early life stress can have such lasting negative consequences?*

Of course! Rapid and long-lasting responses to stress are critical. This is why our brain is designed to respond to stress. Learning to associate the roar of the sabre-tooth tiger to the need to hop up the nearest tree is highly beneficial, and promotes stress-induced augmentation of memory decision making and other brain functions. However, the infant and child often do not face the quick, short roar of a sabre-tooth tiger. Rather, there are emotional challenges that derive from the most dominant experiential forces – the parents. And they are not instantaneous. Rather, they are long, ongoing and unpredictable. In these circumstances, the original mechanisms designed to enable stress-induced survival get co-opted in a disruptive way, leading to the adverse effects of early-life stress.

By the way, stress is such a vague and poorly defined entity. The more we understand this concept, the more tempted I am to discuss “adversity” rather than “stress” as a negative force that shapes the brain.

QUESTION | *One important model system that you use in your animal research of chronic early life stress is limited bedding and nesting material for rodents. This situation would stress the mothers as much as the newborns. How does your research sort out indirect effects of maternal stress from direct effects of stress on the infants?*

Yes. The limited bedding and nesting paradigm stresses the mother directly. The mother’s behavior is changed. Specifically, it becomes fragmented and unpredictable compared to the typical predictable patterns of maternal care in normally-bedded cages. It is this altered maternal care that is the source of stress to the pups, and probably also the source of the altered brain development. There is little physical adversity that the pups perceive (temperature and total amount of care and nutrition are not altered). In summary, the profound effects of the paradigm on the development of many brain circuits seem to result from the stress of the mother, which leads to her disrupted behavior towards the pups. Notably, we have recently found that unpredictable patterns of maternal care influence cognitive development in (human) children.

QUESTION | *In your research regarding early stress, what has been your most surprising finding to date?*

Two surprises: first, that physical stress is not as important in governing infants’ mental outcomes. It is the presumed ‘emotional’ aspects of disrupted maternal care that powerfully change how brain circuits develop. Second, that there is a novel dimension of parental signals to the infant that add significantly to optimal or poor brain development – the patterns of these signals and especially their predictability. In addition to known ‘quality’ of care, predictable patterns are key. We believe that there is an important principle here: light and light patterns are required to activate neurons in the visual circuit. This

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first, that physical stress is not as important in governing infants’ mental outcomes. It is the presumed ‘emotional’ aspects of disrupted maternal care that powerfully change how brain circuits develop.
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leads to strengthening of some synapses and pruning of others, building a functional visual circuit. Sound and sound patterns are required to build a tonotopic auditory system in an analogous manner. Predictable, consistent, tactile (in rodents) and multimodal (in humans) sensory signals from the mother/caretaker are required for the normal maturation of stress-sensitive as well as cognitive circuits.

QUESTION | *Does your research suggest any ways in which we should be taking care of babies differently?*

Our findings highlight the importance of predictable and non-fragmented sequences of signals from the parent (and environment). The good news: quantity of care, within limits, doesn’t seem to have a major impact (To all my women colleagues: guilt about long hours of work and relatively little quality time with baby is not necessary). The more ominous news: we don’t have a clue about the consequences on children’s neurodevelopment of the most common and potent disruptor of predictable routine of care – the smartphone.

QUESTION | *What are the most important and interesting questions to address next?*

1. There are lots.
2. First and foremost, to what degree are studies in experimental animals relevant to children?
3. Can we use neuroimaging to identify aberrant circuit maturation and predict risk?
4. Can we generate methylome signatures in an individual infant to predict risk?
5. What are the mechanisms, at molecular, cellular and circuit levels, that mediate the effects of early-life adversity on brain development?
6. And, finally – how do we intervene?

Here, we are excited that we were able to reverse anhedonia by gene manipulations in rodents. Now we need to get practical and identify methods that will work in children.

CONNECTING WITH PARTNERS

Professors of Child Neurology



Gary Clark, MD
President, PCN

Letter from the PCN President

Echoing the president of the child neurology society, Jonathan Mink, these are exciting times for child neurology and neurodevelopmental pediatrics. It is a time of much change in applicants to residency training programs, in training programs (since we are now a core residency), in genetic diagnoses of neurological disorders, and in treatment of these disorders in children. It is time to prepare for what appears to be a very bright future for our field.

In keeping with this bright future, it is time to elect new leadership of the PCN. Our PCN presidential candidates, Dr. Karen Keough and Dr. Tim Lotze, represent a next generation of leaders of our profession, and their willingness to serve as president of the PCN should be applauded. I hope that every program that is eligible to cast a vote will do so for these candidates. Typically the election is concluded with a minority of programs voting (1 vote per program); let us resolve that this is the year with 100% of the programs voting for the future of child neurology and neurodevelopmental pediatrics.

Also, in looking to the future, it is time to rewrite the by-laws of the PCN. The PCN leadership has drafted an extensive by-law revision that recognizes the present electronic communication, voting and meeting capabilities that could not have been

foreseen by our predecessors who authored the original by-laws. This by-law revision will be posted for comments, reviewed by the Child Neurology Society lawyers, and voted upon at the PCN meeting Monday, October 15 at the Child Neurology Meeting in Chicago (location TBA, 2:00-5:00 pm).

These are exciting times for child neurology and neurodevelopmental pediatrics. It is a time of much change in applicants to residency training programs, in training programs (since we are now a core residency), in genetic diagnoses of neurological disorders, and in treatment of these disorders in children. It is time to prepare for what appears to be a very bright future for our field.

Finally, I believe that you will enjoy the content of this year's PCN meeting. Dr. Rejean Gueriero from Washington University will discuss changing priorities of applicants to child neurology and neurodevelopmental training programs. Dr. Don Gilbert of Cincinnati Children's Hospital will discuss a phone call coverage system that frees residents in their child neurology program from the burden of outside phone calls at night in their busy child neurology practices.

We are fortunate to have Ms. Louise Castile, Executive Director for the ACGME to talk about the implications of the designation of child neurology as a core residency. One of those implications is that our programs can now sponsor subspecialty training in Epilepsy, Neurophysiology, and other areas. Dr. David Urion from Boston Children's will discuss repatriating subspecialty training programs into child neurology and neurodevelopmental training programs.



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Exhibit Hall Hours

Monday, October 15

6:00 PM – 7:30 PM

Tuesday, October 16

11:30 AM – 6:00 PM

Wednesday, October 17

7:00 AM – 10:30 AM

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Date & Time

October 17, 2018

12:30 PM – 1:30 PM

Faculty Presenter



Steven M. Wolf, MD

Mount Sinai Health System
New York, NY

Location

**Hyatt Regency Chicago
Meeting Room: Roosevelt 3AB**

*Located on the Concourse Level of
the East Tower*

SPACE IS LIMITED AND SEATS WILL BE AVAILABLE ON A FIRST-COME, FIRST-SERVED BASIS.

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CONNECTING WITH PARTNERS

Child Neurology Foundation



Ann Tilton, MD
President, Child
Neurology Foundation

Dear Colleagues and Partners:

I hope you all had a wonderful summer! As we look forward to the second half of 2018, we focus on the collective impact of Child Neurology Foundation (CNF) initiatives on our diverse child neurology community – a population served both by the CNF and the Child Neurology Society.

Here's a snapshot of CNF's current initiatives, with those in bold indicating CNF/CNS collaboration:

Operationalizing Transitions of Care	Approaching Care Coordination & Education	Collaborative Advocacy Models	Improving Communication: Providers & Caregivers	Grants & Scholarships
National qualitative research on family experience Focus on individuals living with intellectual disability CNF Annual Symposium – October 18, 2018	Family Support & Empowerment Program Partnership with AAN & CNS PCORI: Collaborative Peer Support Workgroup Peer Support Bootcamp – October 2, 2018	Infantile Spasms Action Network Translate model into other disease states and cross-cutting topics (eg, rare disorders)	Piloting decision-support technology (CHICA ®) to facilitate SUDEP risk disclosure	\$235,000 to be awarded in 2018 Awards given to physicians, students, advocacy partners, and families

Transition of Care Program

CNF's Transition of Care Program helps to support youth, families, and child neurology teams in the transition from pediatric to adult health care systems. Led by TPAC – Transitions Project Advisory Committee – iders and youth/families. The CNS is a member of TPAC.

2018: CNF's 4th Year Hosting a Symposium at the CNS Annual Meeting

Join us on October 18th at 1pm for *Not Your Typical Transitions Symposium: How to Integrate Transition into Your Practice and Successfully Transfer Your Patients to Adult Providers*. In addition to receiving tools and resources, you'll also learn coding and payment strategies for transition-related services.

Featuring: Larry Brown, Bruce Cohen, Claudio deGusmao, John Millichap, myself, and others.

To learn more and to register (lunch included):
www.childneurologyfoundation.org/transitions.

Family Support and Empowerment Program (FSEP)

FSEP offers a free, direct connection with experienced Peer Support Specialists who help families living with a neurologic condition. FSEP has responded to inquiries from nearly all US states and 53 countries across the globe. The CNS has been instrumental in helping us navigate international FSEP requests.

www.childneurologyfoundation.org/FSEP



Infantile Spasms (IS) Awareness/Infantile Spasms Action Network (ISAN)

ISAN is a collaborative advocacy model convened by CNF. Currently 25 national and international organizations strong, ISAN hosts Infantile Spasms Awareness Week every December and created the STOP IS mnemonic – seen by 195 million! The CNS is a member of ISAN.

www.childneurologyfoundation.org/infantilespasms

Onward!

We – the CNF Board of Directors – remain confident that our ongoing programs and initiatives are impactful to the child neurology community. We greatly appreciate the partnership of CNS, which we feel is testament to the value of our initiatives to you – the CNS membership.

Thank you and please reach out to me or CNF staff if you'd like to learn more about CNF.

info@childneurologyfoundation.org
www.childneurologyfoundation.org

*My personal thanks goes out to the **2017-2018 CNF Board of Directors***

Bill Trescher, MD, Past President;
Scott Pomeroy, MD, PhD,
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PhD; Jonathan Mink, MD, PhD;
W. Donald Shields, MD, Honorary
Director; Amy Waldman, MD;
Sue Yudovin, MSN, Mary Zupanc,
MD; Roger Larson, CAE; and Amy
Brin Miller, MSN, MA. I also thank
our CNF Staff: Amy Brin Miller;
Stephanie Mucha; and
Allyson Eyermann.



Our Mission:

To serve as a collaborative center of education and support for children and caregivers living with neurologic conditions.

Our Vision:

We envision a world in which all children affected by neurologic conditions reach their full potential.

CONNECTING WITH PARTNERS

Child Neurology Foundation Grants



Hsiao-Tuan Chao, MD, PhD

2018 Pediatric Epilepsy Research Foundation (PERF) Elterman Research Grant

Profile

Dr. Hsiao-Tuan (Tuan) Chao is a Clinical Instructor in Child Neurology at Baylor College of Medicine, where she also serves as Associate Program Director for the Child Neurology Basic Neuroscience Research Track residency. Born and raised in Austin, Texas, Dr. Chao earned a Bachelor of Science in Biochemistry and Bachelor of Arts in Plan II Liberal Arts Honors from the University of Texas in Austin in 1999. She received her Ph.D. in Neuroscience and her M.D. from Baylor College of Medicine in 2010 and 2012, respectively. She completed a research-intensive residency in Child Neurology in 2017 and joined the faculty in the Department of Pediatrics at Baylor College of Medicine and Texas Children's Hospital in 2017.

As a physician-scientist, Dr. Chao has a long-standing research interest in elucidating the role of transcriptional dysregulation and perturbed inhibitory GABAergic signaling in the pathogenesis of childhood neurodevelopmental disorders such as intellectual disability, epilepsy, and autism spectrum disorder. Her research with the common fruit fly (*Drosophila melanogaster*) and the house mouse (*Mus musculus*) has produced important discoveries about the molecular mechanisms of disrupted inhibitory and excitatory signaling in the pathogenesis of neurodevelopmental disorders distinguished by intellectual disability, epilepsy, and autistic features.

During her doctoral training with Dr. Huda Y. Zoghbi and Dr. Christian Rosenmund, Dr. Chao's work uncovered a link between disrupted neuronal signaling and disease mechanisms for the MECP2-related disorders, Rett syndrome and MECP2-duplication syndrome. Subsequently, in her medical residency and post-residency research, Dr. Chao identified a novel disease association for a member of the Collier/Olf/EBF (COE) transcription factor family, Early B Cell Factor 3 (EBF3), with the newly recognized Hyponia Ataxia and Delayed Development (HADD) syndrome.

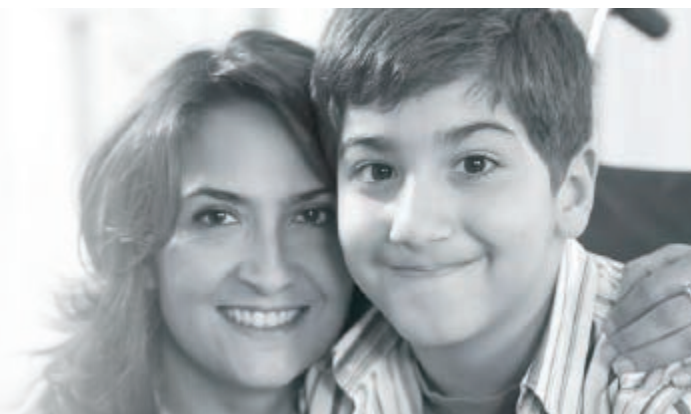
Dr. Chao was honored with the Wunderkind award from STAT News, Outstanding Junior Member award from the Child Neurology Society, Child Neurology scholar from the American Academy of Neurology, BRASS scholar from the Baylor Research Advocates for Student Scientists, and the McNair Medical Institute M.D./Ph.D. student scholar from the McNair Foundation. She has received funding support for her research from the CNCDP-K12 fellowship from the Kennedy Krieger Institute and the National Institute of Neurologic Disorders and Stroke, American Academy of Neurology, and the American Brain Foundation. Her work has been published in journals such as *Nature*, *Neuron*, *American Journal of Human Genetics*, *Nature Neuroscience*, and *Seminars in Cell and Developmental Biology*.

Research Abstract

Neurodevelopmental disorders encompass many diverse conditions such as intellectual disability, autism spectrum disorder, and epilepsy. These conditions often co-occur, suggesting that despite different underlying etiologies, there may be shared disease mechanisms. One approach to identifying and elucidating these disease mechanisms is through detailed studies of single gene disorders in model organisms. Such studies have led to the recognition that disruptions to the balance of excitatory and inhibitory neuronal activity is found in association with many of these conditions. The Pediatric Epilepsy Research Foundation Elterman Scientific Grant will facilitate my transition from post-doctoral research trainee to independent investigator and support studies to explore the regulatory landscape of neuronal development and signaling in health and disease. These studies will combine molecular, electrophysiological, and behavioral techniques in fruit flies and mice to elucidate how genetic alterations that perturb brain circuitry lead to life-long alterations in cognition, behavior, emotion, and bodily function.

TRANSITIONING TO ADULT HEALTH CARE

An Interactive Resource for
Your Neurology Practice



1

Expectation of
Transition

2

Yearly Self-Management
Assessment

3

Annual Discussion of
Medical Condition and
Age-Appropriate Concerns

4

Evaluation of Legal
Competency

5

Annual Review of
Transition Plan of Care

6

Child Neurology Team
Responsibilities

7

Identification of
Adult Provider

8

Transfer Complete

8

Common Principles

to Assist with the Transition of Care

Transitioning from the pediatric to adult health care system should be expected for all patients living with a neurologic condition. However, for some, transitioning from their child neurologist to an adult neurologist can prove challenging.

To that end, Transition of Care is one of the Child Neurology Foundation's (CNF) most important and comprehensive Program Priorities — described as: helping to support youth, families, and child neurology teams in the medical transition from pediatric to adult health care systems.

Led by CNF, the 2016 consensus statement, "The Neurologist's Role in Supporting Transition to Adult Health Care" was endorsed by the American Academy of Neurology, the Child Neurology Society, the American Epilepsy Society, and the American Academy of Pediatrics.

The consensus statement identifies 8 Common Principles for the neurology team to employ that will support the medical transition of youth with neurological conditions.

To aid in successful transitions, the CNF Transition Project Advisory Committee (TPAC) developed tools to help practices implement these 8 Common Principles.

CNF's interactive resource outlines each of the 8 Common Principles and matches each Principle with free downloadable tools for use in practice.

Get started at: www.childneurologyfoundation.org/transitions



**Child
Neurology**
FOUNDATION
Creating a Community of Support

The CNF gratefully acknowledges the work of the TPAC to develop these tools. The 2018 Transition of Care Program is supported by Eisai, Inc., Greenwich Biosciences, Horizon Pharma, Novartis Pharmaceuticals, Retrophin, Inc., Sunovion Pharmaceuticals, and Ultragenyx Pharmaceuticals.

CONNECTING WITH PARTNERS

Child Neurology Foundation Grants



April Levin, MD

2017 Pediatric Epilepsy Research Foundation (PERF) Shields Research Grant

Profile

The Shields award provides key support at a crucial time in my career. My background includes clinical training as a child neurologist, with pediatrics training in the Boston Combined Residency Program and child neurology training at Boston Children's Hospital. After residency, I did a fellowship focused on autism spectrum disorder, with clinical training mentored by Sarah Spence MD PhD, and research training mentored by Charles A. Nelson PhD. Since fellowship, the goal of my research has been to examine EEG-based measures of neural network function as potential biomarkers of ASD. However, I quickly learned that EEG signal processing (i.e., the mathematical algorithms necessary for this type of work) requires an ability to translate and collaborate across relatively disparate fields, including neurology, engineering, psychology, computer science, mathematics, and basic neuroscience. Over the past several years, my mentors have been tremendously supportive in helping me gain the skill set necessary for this translational work. With support from the Shields award, I will now be able to combine my training in child neurology, autism, and signal processing to begin to answer questions about how basic neural mechanisms beget neural circuit function and ultimately human behavior. My goal is that the project supported by the Shields award will act as a springboard towards improving our understanding of how the brain works in children with autism and related disorders, and thus towards more precise, biologically targeted evaluations and treatments for a variety of neurodevelopmental disorders.

Research Abstract

Autism spectrum disorder is a prevalent neurodevelopmental disorder that profoundly impacts affected individuals and their families. Early biological markers of brain activity in autism offer the opportunity to better understand how autism develops, and potentially to improve outcomes for individuals with autism by allowing treatment to begin even before behavioral manifestations occur.

In the search for early, predictive biomarkers of autism, infant siblings of children with autism provide crucial clues. The risk of autism in these infants is about 20 times higher than the risk of autism in infants with a typically developing older sibling. Additionally, even among those high risk siblings who do not develop autism, the risk for other neurodevelopmental concerns is increased as well. By following these infants closely over the first 3 years of life with serial EEGs and developmental testing, we can begin to identify neurological markers early in life that predict later developmental outcomes.

Typical brain function depends upon tightly regulated timing of neural activity, across numerous neurons within a network. Such timing can be measured using phase amplitude coupling (PAC) on electroencephalography (EEG), in which the phase of a lower-frequency oscillation (e.g., alpha) modulates the amplitude of high-frequency activity (e.g., gamma). PAC allows the brain to create perceptual windows that integrate and segregate temporally relevant and irrelevant information, respectively.⁸ Excessive PAC leads to windows that are too small; in theory, this could lead to difficulties integrating complex social and sensory information, as seen in autism. Indeed, excessive PAC has been previously found in older children with autism, as compared to children with typical development.

In the project supported by the Shields award, we will therefore measure PAC in high-risk infants who will later develop autism, in relation to unaffected high-risk infants and low-risk infants. We will also evaluate the extent to which PAC underlies a spectrum of neurodevelopmental abnormalities extending beyond autism. The long-term goal of this work is to unveil early biomarkers that can, during the first few months of life, predict future diagnoses of autism and biologically-related disorders, allowing appropriate treatment to begin early.



Brittany Charsar

Neurodevelopmental Disabilities Summer Research Scholarship

Brittany Charsar (MD, PhD Candidate; Thomas Jefferson University)

After studying Molecular Biology and Religious Studies at the University of Pittsburgh, I entered a dual degree program at Thomas Jefferson University to pursue both an MD and a PhD. With many others, I share the idea that a physician scientist bridges the divide between basic science and the clinic. At Pitt, I studied gene regulation, and after coming to Jefferson, I became inspired by children who face immensely challenging neurological conditions – many with a genetic cause – and also unsatisfied with our current understanding of these conditions and available treatment options. My goal is to push the limits on the current

boundaries of what we know as scientists and physicians of how to best care for and treat children with neurological diseases, and in particular, children with leukodystrophies. Now, with support from the Child Neurology Foundation through the NDD Scholarship, I am able to work toward bringing this vision of a physician scientist to fruition, becoming ambidextrous with expertise in both worlds to directly help children and families affected by leukodystrophies at the bedside while continuing to expand our understanding of these diseases, causes and treatment options at the bench. After completing my training, I would like to pursue a career in child neurology and to devote a life of research to leukodystrophies.

Got a project or colleague working on a project that you'd like to see featured?

Send email to Dan Bonthius (daniel-bonthius@uiowa.edu); cc Roger Larson (rblarson@childneurologysociety.org)

CONNECTING WITH PARTNERS

Association of Child Neurology Nurses



Tara Pezzuto, APRN
President, ACNN

Dear Colleagues,

We are so close! ACNN Chicago 2018 conference is just around the corner. We are all so excited about the “windy city” experience. Our key note speaker will inspire our future research. Our presentations are set with our members most requested interests in mind from newest treatments in muscular dystrophy and headache management to tuberous sclerosis, abusive head trauma and epilepsy spectrums. We look at the unique role nursing plays in the care of our pediatric patients, the quality of neurological assessments and our training for transition to care. We remember the past as Claire Chee herself presents the history of a neurology nurse.

Our ACNN booth will give you direct connection to our board members as well as our published resources; the Child Neurology Encounter Guide and the Caregiver Resource Guide will be available during the conference and are always available on the website.

Our ACNN booth will give you direct connection to our board members as well as our published resources; the *Child Neurology Encounter Guide* and the *Caregiver Resource Guide* will be available during the conference and are always available on the website. Technology will enhance your experience for 2018. Face book and twitter will keep members up to date on conference happenings and connected to the latest news from ACNN. Please be sure to sign up for a SIG's as they are posted on the *Connect* site of the CNS website (<http://connect.childneurologysociety.org/home>). These allow us to share experience as well as inquire about common practice. These conversations will facilitate a regional and

international multidisciplinary collaboration among members before, during and after the conference through connect. Such resources are invaluable to our everyday practice.

Our future goals include a plan for the next generation of child neurology APRN providers and RN's to have certification availability and resources for this certification as well as practice. Please join our SIG's to begin the development of a unified approach to training of excellence in the future neurology nurses of the world. Remember your sneakers for the annual 5K walk/run and gather your group to have fun in Chicago. We are all so excited to see you and help you succeed!

ACNN Awards

Association of Child Neurology Nurses Claire Chee Award for Excellence

Cheryl Cahill, MSN, CNRN;
Boston Children's Hospital, Boston, MA

Association of Child Neurology Nurses Nurse Practitioner Award

Scott Turner, DNP, FNP-C;
University of Alabama at Birmingham,
Birmingham, AL

Innovative Clinical Practice Award Presentation: Integrative Epilepsy Clinic: Managing a Spectrum Disorder

Angelina Koehler, MA, CPNP;
Children's Hospital Colorado, Aurora, CO

CONNECTING WITH PARTNERS

ACNN Award Profiles



Cheryl Cahill, MSN, CNRN;
Boston Children's Hospital

Association of Child Neurology Nurses Claire Chee Nursing Excellence Award

PROFILE WRITTEN BY JO ELLEN M. LEE MSN, APRN, ACNN AWARDS CHAIR

The Association of Child Neurology Nurses (ACNN) is pleased to award the 2018 Claire Chee Nursing Excellence Award to Cheryl Cahill, MSN, CNRN. Cheryl has been a nurse at Children's Hospital of Boston for the past 35 years. Since 1993 she has been part of the Pediatric Epilepsy Program. She served as the Clinical coordinator from 2008-2015 and then transitioned in 2015 to the Epilepsy Surgical Coordinator. She was nominated by Dr. Phillip Pearl.

Cheryl has excelled as a clinician and educator with a focus on epilepsy. She has co-directed The Calvin Family Conference with Dr. Pearl for many years. This is an educational event which provides information for families on topics related to epilepsy. This conference has been well received and at times has had standing room only crowds. She has partnered with the Epilepsy Foundation of New England to develop programs and workshops on epilepsy diagnosis, treatment, and co-morbidities.

Cheryl has presented locally and regionally on topics in epilepsy. She was able to present information on seizure medication at the SSADH (succinic semialdehyde dehydrogenase deficiency) conference in Boston. This is an international symposium for families, providers and investigators who are involved in the care and/or research of this rare metabolic disorder.

Her position as Coordinator for the Epilepsy Surgery Program was developed due to the

complexity of the multipronged evaluations these children and families undergo in the epilepsy surgery process. Cheryl is integral in the coordination of these visits and in guiding the families through the process. As a parent of a profoundly impaired son, who also went through epilepsy surgery at a younger age, she brings her firsthand experience to families that are also dealing with serious neurological impairments.

The development of a Vagal Nerve Stimulation program was started by Cheryl and has allowed for consistency in care with follow up visits for programming after implantations. She was also integral in the development of the ketogenic diet clinic and acute pain program at Children's Hospital of Boston.

Cheryl is an advocate for children in the school system. She has made countless visits to schools to speak with nurses and families about the aspects of having a child with epilepsy at school and she helps to educate teachers and school nurses about children with epilepsy in the classroom.

Cheryl is an advocate for children in the school system. She has made countless visits to schools to speak with nurses and families about the aspects of having a child with epilepsy at school and she helps to educate teachers and school nurses about children with epilepsy in the classroom.

Dr. Pearl describes Cheryl as a "selfless, devoted nurse, working extended hours, late into the night, helping families of children deal with neurological problems. Thus it is fitting to recognize this outstanding neurology nurse with this degree of personal and professional commitment. "

It is clear from the glowing tribute that Cheryl received from Dr. Pearl that she is an outstanding exemplar of nursing and highly deserving of the 2018 ACNN Claire Chee Nursing Excellence Award.

CONNECTING WITH PARTNERS

ACNN Award Profiles



Scott Turner, DNP, FNP-C;
University of Alabama at
Birmingham

Association of Child Neurology Nurses 2018 Nurse Practitioner Excellence Award

PROFILE WRITTEN BY JO ELLEN M. LEE MSN, APRN, ACNN AWARDS CHAIR

Scott B. Turner, DNP, FNP-C is the recipient of the 2018 Association of Child Neurology Nurses Nurse Practitioner Excellence Award. Scott has worked since 2008 as a Nurse Practitioner at the Children's Hospital Colorado where he is also an Assistant Professor of Pediatrics at the University of Colorado School of Medicine. He has been a member of ACNN since 2008 and currently serves as the Research Committee Chair, a position he has held since 2016.

Scott acts as the lead of the advanced practice team in the neurology department at Children's Hospital Colorado. He has been described as a leader who advocates for his fellow advanced practice

(APP) colleagues and is described as a role model and mentor for many providers in the department of neurology. Scott has been called an inspiration to the APP group and to the department as a whole. One of his colleagues defined Scott as "one of those rare people who lead by example instead of by position of authority. He encourages and welcomes input from the other advance practice providers." Scott's wealth of knowledge and his ability to lead and inspire his group compelled colleagues to nominate Scott for this award.

It is clear from the glowing descriptions provided by his colleagues that Scott's strength in mentoring new nurse practitioners is evident in the workplace. Scott is invested in ensuring that new nurse

practitioner to neurology are well prepared for their role. Scott lectures at the University of Colorado Nurse Practitioner program on neurologic issues.

Scott is described as a "dedicated professional who strives for excellence and doesn't settle for average." His interest in headache management led Scott to develop a quality improvement project which resulted in positive changes to treatment practices and outcomes for headache patients. He was also the lead author for the headache clinical care pathway at Children's Hospital Colorado.

A compassionate provider who advocates for his patients and families, Scott is known for having outstanding knowledge and a wonderful bedside manner. He takes the best possible care of his patients. "I have never received a whiff of a complaint, rather accolades from his patients, noted Dr. Benke, a collaborating physician. Scott received the Provider of the Month Award in March 2016 and the Outstanding Service Award in April 2017 at the Children's Hospital Colorado.

He is sought after as a local, regional and national speaker. Scott has published numerous articles and book chapters on headache management and movement disorders and has also presented posters at national conferences on the topic of headache management. He is a motivated self-learner and researcher. One colleague noted "he has strength in leadership, competency in caring for patients and commitment to the care of neurologic disorders."

Scott is described by a colleague as an "All around nice guy who is well liked by all who know him." It is clear that his colleagues think highly of Scott and that he is very deserving of this award. The Association of Child Neurology Nurses is honored to present the 2018 Nurse Practitioner Excellence Award to Scott Turner.

Scott is described as a "dedicated professional who strives for excellence and doesn't settle for average." His interest in headache management led Scott to develop a quality improvement project which resulted in positive changes to treatment practices and outcomes for headache patients. He was also the lead author for the headache clinical care pathway at Children's Hospital Colorado.

CONNECTING WITH PARTNERS

ACNN Award Profiles



Angelina Koehler, MA, CPNP; Children's Hospital of Colorado

Association of Child Neurology Nurses Innovative Practice Award

PROFILE WRITTEN BY JO ELLEN M. LEE MSN, APRN, ACNN AWARDS CHAIR

Integrative Epilepsy Clinic: Managing a Spectrum Disorder

The 2018 Association of Child Neurology Nurses Innovative Practice Award recipient is Angelina Koehler, MA, CPNP. Ms. Koehler created and implemented the Integrative Epilepsy Clinic at Children's Hospital Colorado.

The Integrative Epilepsy Clinic (IEC) is a multidisciplinary clinic where neurology providers can refer their epilepsy and Psychogenic Nonepileptic Spells (PNES) patients for further evaluation. This comprehensive clinic includes a neuropsychologist, clinical psychologist, epileptologist, neurology nurse practitioner and social worker who address the complexities of epilepsy in pediatric patients and provides a treatment home for patients with PNES.

The IEC is the first pediatric multidisciplinary clinic of its kind to holistically treat all aspects of a patient's disease as well as the comorbidities that are associated with it. It is based on the philosophy of integrative medicine with the goal of treating the mind, body and spirit, thereby improving the patient's overall quality of life.

The IEC is the first pediatric multidisciplinary clinic of its kind to holistically treat all aspects of a patient's disease as well as the comorbidities that are associated with it. It is based on the philosophy of integrative medicine with the goal of treating the mind, body and spirit, thereby improving the patient's overall quality of life. This is dependent on the partnership between the patient and provider. This clinic highlights the need for treatment to not only focus on the pharmacological treatment of seizures, but also to address the wider aspects of physical and mental well –including the comorbidities commonly seen in epilepsy. Having the availability of other disciplines can aid in the early intervention for behavioral and adjustment problems and thus may improve the quality of life.

This clinic's goal is to treat children with long standing intractable epilepsy that have co-morbidities of depression and anxiety as well as psychogenic non-epileptic spells (PNES). The interaction in clinic has led to improved evaluation and treatment of depression and anxiety despite the diagnosis of intractable epilepsy. The fact that so many providers are available in one clinic allows families to obtain support from the different disciplines in a single clinic. In addition the clinic has the ability to affect further change and support through the start of group therapy.

Not only a resource for families, the clinic has also been helpful for other providers and physicians who may not be familiar with PNES. The IEC clinic providers have interacted with local school systems to provide action plans as to what to do with a child who has PNES. They also act as a resource for the inpatient medical teams at Children's Hospital Colorado for patients with PNES. The ability to treat PNES patients earlier improves outcomes and decreases the risk for misdiagnosis, overuse of medications and decreases use of hospital resources.

Supporting letters were provided by Dr. Amy Brooks-Kayal and Dr. Susan Koh. Dr. Brooks-Kayal commented that Ms. Koehler is deserving of the Innovative Clinical Practice Award for her "ground breaking efforts to provide the most comprehensive care for children and teens with epilepsy."

Dr. Koh commented "All of the success is directly related to Ms. Koehler's dedication, hard work and enthusiasm for the treatment of children with intractable epilepsy. With her leadership ability in organizing and spearheading this multidisciplinary clinic and providing current care guidelines on PNES, she has touched many of the patients at Children's Hospital of Colorado with epilepsy and is deserving of this award."

CONNECTING WITH PARTNERS

Program Coordinators of Child Neurology

Dear Colleagues,

We are thrilled to welcome all of the Child Neurology Residency Program Coordinators from across the U.S. that are attending the 5th Annual Program Coordinators of Child Neurology (PCCN) conference.

When we created this group in 2014, we wanted to find a way to come together collectively to share knowledge, resources, and best practices. We know firsthand that stress and burnout in our positions are real, and the end result is a high turnover rate in the coordinator position. The annual conference is an important part of creating the networking relationships that help support one another throughout the year. Our hope for this conference is not only to provide program management tools, but also personal and professional wellness resources to further support all coordinators.

This year, we have expanded to a three-day conference and will include content that will help coordinators manage their programs on a daily and yearly basis. Sessions will be led by program coordinators with several years of experience in managing child neurology residency programs. Coordinators frequently manage multiple programs, and have many other responsibilities outside of GME, and we will provide helpful tips to successfully juggle all of this. We also have two high-level ACGME representatives presenting on the new common program requirements and the self-study. In addition, all coordinators are encouraged to attend the Professors of Child Neurology (PCN) meeting, as well as the Education Special Interest Group (SIG) which is for Program Directors and Program Coordinators.

With the continued support of the CNS and the PCN, we look forward to making strides towards a stronger and more capable coordinator workforce for child neurology programs. At last year's conference, Dr. Mink, President of the CNS as well as member of the ACGME Neurology Review Committee, thoughtfully listened to the concerns voiced by our group regarding the protected time disparity that existed for child neurology residency coordinators compared to that of adult neurology coordinators. He played a key role in affecting the change to make the FTE requirements for child and adult neurology residency coordinators equal. With sufficient protected time and continuing education through our conference, program coordinators are enhancing the management of, and compliance of, residency programs. We appreciate the ongoing support for this conference as it advances the important role that coordinators play within GME, as well as at the institution and national levels. We still have a lot of room to grow and work to do to further strengthen our group. Future goals include continuing to evolve and develop a collaborative structure within the CNS and the PCN.

We are thrilled to have so many coordinators join in this year and look forward to networking and another great conference!

Sincerely,
Terri Feist, BBA, C-TAGME
President, PCCN

2017 Program Coordinators of Child Neurology



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ASSISTANT/ASSOCIATE PROFESSOR OF CLINICAL NEUROLOGY AND PEDIATRICS

CLINICAL NEUROLOGY FACULTY POSITION

The Keck School of Medicine (KSOM) of the University of Southern California (USC) and Children's Hospital Los Angeles (CHLA) in the Division of Neurology, are actively seeking a full-time faculty member for the position of Assistant/Associate Professor of Clinical Neurology and Pediatrics to join its current team of 17 full-time and 2 part-time faculty members. General pediatric neurologists or those with subspecialty interest are encouraged to apply. In particular, there is a need for additional faculty with subspecialty and research interests in developmental disorders and autism, or movement disorders. Faculty with clinical research interest and experience are encouraged to apply. Faculty with bench research interests will also be considered. Faculty must be licensed in the State of California before hiring.

The Division of Neurology is part of the Neurosciences Service Line (the Neurological Institute) that has been identified as a key product line by the hospital and is currently undergoing rapid expansion with the development of comprehensive clinical specialties and sub-specialties, enhance its research portfolio, expand presence in the Southern California market and supported by the buildout of a brand-new integrated space. The goal of the institute is to offer comprehensive and integrated services in a patient centered environment.

Children's Hospital Los Angeles is a busy urban teaching hospital with diverse patient population. New hospital facilities opened in July 2011 with an increase of 311 beds. There is a very active outpatient Neurology Clinic with subspecialty programs in neuromuscular disorders (MDA), epilepsy (including epilepsy surgery, VNS and ketogenic diet), movement disorders (including deep brain stimulation

and baclofen pump), neuro-intensive care, pediatric stroke, neurocutaneous disorders, demyelinating disorders, and a multispecialty autism clinic. Our faculty currently provides services to CHLA and five satellite clinic locations within the greater Los Angeles area. Outreach clinics are currently being developed and will provide further clinical opportunities. The department has an ACGME-approved epilepsy fellowship program which accepts one fellow annually in addition to their ACGME-approved child neurology residency program in collaboration with the KSOM LAC + USC/University Hospital with three residents per year dividing their time between the two sites. Furthermore, there is ongoing clinical research within general child neurology and subspecialty programs.

If you are interested contact **Ashish Buttan, Administrative Director, Neurological Institute at abuttan@chla.usc.edu**

PEDIATRIC NEUROLOGIST

Cortica is pioneering a unique, multi-specialty approach to treating autism. Our clinical model, driven by insights and technologies from emerging neuroscience, brings together clinicians from a range of disciplines to design and deliver comprehensive care. Cortica's clinical team is led by Dr. Suzanne Goh, a behavioral pediatric neurologist, neuroscience researcher, and author, who has trained and held leadership roles at Harvard, Columbia, and UCSF. Our medical centers are high-energy, collaborative environments offering:

Pediatric Neurology (including metabolism and genetics)

- Functional Medicine
- Speech Therapy
- Occupational Therapy
- Physical Therapy

- Music Therapy
- Family Counseling
- Behavior Intervention
- EEG
- Neurofeedback
- Neuromodulation Therapies
- Nutrition

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. Central to this role is the ability to collaborate with colleagues across a range of specialties and to provide multidisciplinary leadership. The role includes opportunities to create novel approaches and platforms for integrative care. As our research program grows, we'll foster opportunities to participate in designing and carrying out research protocols and publishing study results. We welcome physicians of all levels, including residency graduates.

Required qualifications:

- MD from accredited medical school
- Board-certified or eligible in Child Neurology, Developmental Behavioral Pediatrics, or Neurodevelopmental Disabilities
- CA license (or ability to obtain one)
- Commitment to training clinical team
- Desired qualities and interests:
- Interest in integrative medicine
- Entrepreneurial spirit
- Interest in creation of new care models
- Curious about how technology can improve clinical outcomes

Contact:

David McMichael
dmc michael@corticacare.com

CNS PERSONNEL REGISTRY COLORADO

CHILDREN'S HOSPITAL COLORADO

SEE AD AT RIGHT

We're expanding our team.

Our Neuroscience Institute delivers world-class care for neurological conditions to kids from birth to young adulthood.

Our team of 35 neurologists, 8 neuropsychologists and 16 advanced practice providers sees and treats more than 19,500 kids annually. We're looking for qualified candidates interested in pushing the boundaries of neurological treatment to join the pediatric neurology faculty at Children's Hospital Colorado and the University of Colorado School of Medicine.



Innovative multidisciplinary programs and centers of excellence

- Epilepsy
- Pediatric stroke and neonatal brain injury
- Headache
- Neurogenetics (Rett, CDKL5, Tuberous Sclerosis, Neurofibromatosis)
- Rett Syndrome Clinical Research Center of Excellence
- PPMD-Certified Duchenne Care Center
- Neuro-immunology
- U.S. Network of Pediatric Multiple Sclerosis Centers
- Neuro-oncology
- Neuro-recovery

Contact Amy Brooks-Kayal, MD, Chief of Pediatric Neurology, for more information on available positions: amy.brooks-kayal@childrenscolorado.org



Children's Hospital Colorado
Here, it's different.™

* By reputation, as ranked by Diversity

Children's Hospital Colorado complies with applicable Federal civil rights laws and does not discriminate on the basis of race, color, national origin, age, disability, or sex. • ATENCIÓN: si habla español, tiene a su disposición servicios gratuitos de asistencia lingüística. Llame al 1-720-777-1234. • CHÚ Ý: Nếu bạn nói Tiếng Việt, có các dịch vụ hỗ trợ ngôn ngữ miễn phí dành cho bạn. Gọi số 1-720-777-1234. NEURO_180123_2019-07



Top ranked pediatric neurology and neurosurgery program in the region

TOP 10

Pediatric neurology residency program*

ONLY

Level 4 NAEC-accredited pediatric epilepsy center in the region

1st

International Foundation for CDKL5 Research "CDKL5 Center of Excellence"

130+

Epilepsy surgeries annually

LARGEST

Ketogenic diet program in the mountain west



1st Pediatric laser ablation and ROSA-assisted epilepsy surgery in Colorado



Dedicated clinical research team

20+ Research staff

80+ Active clinical studies

DISTRICT OF COLUMBIA

PEDIATRIC EPILEPTOLOGIST

The Division of Child Neurology, Children's National Health System, seeks a child neurologist at the assistant or associate professor level to join our expanding epilepsy and neuro-immunology programs.

The Divisions of Child Neurology, Epilepsy, and Neurophysiology have over 30 child neurologists in several subspecialty programs, including ten neurophysiologists/epileptologists and two neuro-immunologists, with a mission of excellence in clinical care, education, and neuroscience research. The candidate must be board certified in neurology with special qualifications in child neurology. In addition, the candidate must have completed fellowship training, hold boards/or be board eligible, in epilepsy and clinical neurophysiology. The candidate should demonstrate evidence of academic productivity and experience in neuro-immunology/infectious diseases of epilepsy.

Interested candidates should send a CV and brief cover letter to:

William D. Gaillard, MD

Division Chief, Child Neurology, Epilepsy, and Neurophysiology
wgaillard@childrensnational.org



LIVE. WORK. PLAY.

Joe DiMaggio Children's Hospital is seeking candidates for the following positions:

- Pediatric Neurology - Palm Beach location (Wellington)
- Pediatric Neurology and Pediatric Epilepsy with Surgical Training

Joe DiMaggio Children's Hospital opened in 1992 and has grown to be the leading children's hospital in Broward and Palm Beach counties. With 226 beds, a 84-bed Level II and III NICU, 30-bed PICU and 12-bed intermediate care unit, Joe DiMaggio Children's Hospital combines leading-edge clinical excellence with a child- and family-friendly environment that emphasizes the Power of Play.

Located in the heart of South Florida, a high quality of life - including year-round summer weather, exciting multiculturalism and no state income tax - attracts new residents from all over the country and around the world.

To see job descriptions and/or to submit your CV for consideration, please visit memorialphysician.com. Additional information about Joe DiMaggio Children's Hospital can be found at jdch.com.



visit memorialphysician.com

FLORIDA

BE/BC CHILD NEUROLOGIST
PRIVATE PRACTICE

Largest private practice pediatric neurology group in Palm Beach and The Treasure Coast seeking 5th Child Neurologist to join our busy growing practice. We also have 3 ARNP's. Established practice in the area for 20 years. Excellent referral base. We have 3 office locations and serve several surrounding counties.

Florida has fantastic year-round weather, beautiful beaches, cultural activities, NO - state taxes, excellent schools and affordable real estate.

Our practice offers cross coverage, generous vacation/sick time off, 401k, malpractice insurance, health/dental, annual CME allowance, competitive salary and incentives. Research and teaching opportunities available.

Our group values family time and a quality lifestyle. We dictate our schedules. Office is very efficient and maximizes your time spent working. Come see why this is the ideal Florida position for you.

Please send CV to Rleighliu@gmail.com Please do not apply through website.

CHILD NEUROLOGIST OPPORTUNITIES IN SOUTH FLORIDA

SEE AD BOTTOM LEFT

CHILD NEUROLOGIST -
KIDS NEURO CARE

Kids Neuro Care is seeking a full-time BC/BE Pediatric Neurologist to join an established Pediatric Neurology practice. We have two Pediatric Neurologists and one Physician Assistant. Our diagnostic capabilities include: EEG, Ambulatory EEG, Video EEG, and EMG.

We are based in Orlando, Florida, where residents enjoy a high standard of living combined with a low cost of living. 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 East Orlando, the city is ideally located for fast convenient getaways to Disney and Universal, Winter Park, and in close proximity to beautiful Cocoa Beach, Daytona Beach, and Wekiwa Springs.

Kids Neuro Care has academic affiliation with the University of Central Florida Medical School and has privileges with the local children's hospitals.

We offer a competitive salary and attractive benefits package. Salary will be negotiable commensurate with experience.

The applicant should hold an M.D. degree and have Board Certification in Neurology with Special Qualification in Child Neurology.

Applicants please include current CV

Contact:

Eric Marcus

Emarcus38@gmail.com

www.KidsNeuroCare.Com

CHILD NEUROLOGIST IN MIAMI

Neuro Network Partners (NNP) is seeking a child neurologist for their private/academic practice. NNP has 18 pediatric neurologists, and 18 pediatric nurse practitioners/physician assistants. NNP is a proud affiliate of Nicklaus Children's Hospital formerly known as Miami Children's Hospital. All members of NNP are an integral part of the Department of Neurology at Nicklaus Children's Hospital and Miami Children's Health System. In addition, NNP is affiliated with Baptist Hospital, South Miami Hospital and Broward Health System. The candidate must be board certified or board eligible in neurology with special qualification in child neurology. This is a full-time clinical position that includes outpatient clinics, attending on the inpatient child neurology services and teaching responsibilities. The practice has multiple opportunities for subspecialty child neurology care, as well as research opportunities.

If interested please email CV and brief description of relevant experience, current interests and career goals to Roberto Tuchman, M.D. email: rtuchman@me.com

CHILD NEUROLOGY IN ST. PETERSBURG, FL: JOHNS HOPKINS ALL CHILDREN'S HOSPITAL

Johns Hopkins All Children's Hospital in St. Petersburg, Florida seeks an additional child neurologist due to the continued growth of our program. Our 259-bed teaching hospital is the only US hospital outside the Baltimore/Washington, D.C. location to earn the honor of being part of the Johns Hopkins Medicine family. This is an employed position with All Children's Specialty Physicians, a growing group practice that includes more than 200 physicians. Our pediatric neurology program was recognized once again as a "Top 50 Children's Neurology & Neurosurgery Program" by *U.S. News & World Report* (2018-2019 edition).

As members of the Johns Hopkins All Children's Institute for Brain Protection Sciences, our pediatric neurologists also draw upon the expertise of specialists in neurosurgery, neuroimaging, neuro-

oncology and neuropathology as needed. This multidisciplinary institute unites clinicians, researchers and educators in a comprehensive program to promote optimal neurodevelopment early in life and provide state-of-the-art care for children with injuries or illness that can affect the brain.

As one of the world's leading health care systems, JHACH stands at the forefront of discovery, leading innovative research to cure and prevent childhood diseases while training the next generation of pediatric experts. In addition to providing clinical care, participation in research will be strongly supported and encouraged. Qualified candidates may be 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 benefits package including medical malpractice insurance with tail insurance, relocation assistance, paid vacation, paid time and expenses for CME, 403(B) retirement plan, pension plan, short and long-term disability coverage and life insurance and health benefits.

The Tampa-St. Petersburg area offers year-round sunshine, abundant cultural and recreational activities, national sports venues, excellent schools and an affordable cost of living. We are centrally located to many of Florida's amenities, only minutes from beautiful gulf beaches, 90 minutes from Orlando and four hours from Miami.

To learn details, please contact:

Joe Bogan

President

Providence Healthcare Group

817-424-1010 (direct)

jbogan@provdh.com

CNS PERSONNEL REGISTRY GEORGIA

CHIEF, NEUROSCIENCES – CHOA AND DIRECTOR, PEDIATRIC NEUROLOGY – EMORY UNIVERSITY SOM

Children's Healthcare of Atlanta (Children's) and Emory University School of Medicine; seek an accomplished, collaborative pediatric neurologist with a strong clinical foundation to serve as Chief, Neurosciences and Director, Pediatric Neurology.

Children's is a leading pediatric health system and one of the largest in the country – treating more than one million patients annually. In efforts to better serve the community and provide cutting-edge healthcare, Children's formed a vital partnership with Emory, a leading private institution committed to academic excellence and fostering scholars. Children's and Emory's pediatric neurosciences program is advancing clinical, education and scholarly activities with the goal of top tier achievement in all areas.

The new Chief will have an opportunity to lead this endeavor and shape the future of one of the most comprehensive pediatric neurosciences programs in the country. Children's is investing a billion dollars in new facilities to construct a larger medical campus in North Druid Hills. This includes a new hospital and the Center for Advanced Pediatrics which will integrate pediatric subspecialties in one location to improve access, provider collaboration and support research opportunities to better serve the patients of the southeast region.

The successful candidate will be an outstanding clinical leader with demonstrated ability to articulate a vision, effectively inspire, and lead others.

For confidential expressions of interest and or nominations of respected colleagues please contact Linda Komnick and Jim King through the office of Vinny Gossain via email at vgossain@wittkiewer.com.

Lurie Children's Division of Neurology

Please visit
our booth
#234

Comprised of 24 faculty members engaged in clinical care, research, education and advocacy, the Division of Neurology sees one in three children hospitalized at Lurie Children's. In fact, more families bring children with neurologic conditions to us for care or for second opinions than to any other single hospital in the state of Illinois. Lurie Children's is ranked 12th in the nation by *U.S. News & World Report* for pediatric neurology and neurosurgery.

Our multidisciplinary team — consisting of physicians, nurses, nurse practitioners, fellows, residents, genetic counselors, dietitians, physical and occupational therapists, neuropsychologists, social workers, research professionals and educational specialists — provides care for nearly 14,000 patients per year.

Clinical programs we offer:

- Pediatric Epilepsy Program
- Neuromuscular Program
- Neurocritical Care Program
- Movement Disorders Program
- Leukodystrophy Care Program
- Brain Tumor Program
- Autonomic Dysfunction Program
- Brachial Plexus Program

All the specialists.
All the expertise.
All, for your one.®



CNS PERSONNEL REGISTRY
ILLINOIS

CHILD NEUROLOGIST OPPORTUNITIES IN ILLINOIS

SEE AD AT LEFT

CNS PERSONNEL REGISTRY
INDIANA

PEDIATRIC NEUROLOGY OPPORTUNITIES – PEYTON MANNING CHILDREN'S HOSPITAL

Peyton Manning Children's Hospital at St. Vincent is currently seeking Pediatric Neurologists for our locations at Peyton Manning Children's Hospital in Indianapolis, IN and at St. Vincent Center for Children in Evansville, IN.

1) Peyton Manning Children's Hospital (Indianapolis, IN):

Peyton Manning Children's Hospital at St. Vincent is seeking a BE/BC Pediatric Neurologist for our hospital in Indianapolis. Our ideal candidate will be a personable, patient-focused and team-oriented child neurologist who enjoys both inpatient consults and outpatient care. While it is a general child neurology practice, there is the opportunity to pursue personal interests within the field.

- Join a team of three Pediatric Neurologists and a Nurse Practitioner
- Opportunity to expand program and nationwide system referral base
- Thriving ketogenic diet clinic and epilepsy monitoring unit
- Call Schedule: 1 in 4 weeks

Features include: a free-standing tertiary care, pediatric hospital with 40 private inpatient beds and 6 short stay beds, staffed in-house 24/7 by our Pediatric Hospitalist group; a 15-bed PICU staffed 24/7 by Pediatric Intensivists; a 17-bed Pediatric Emergency department staffed 24/7 by Pediatric Emergency physicians; and Indiana's largest Level IV NICU with 85 beds staffed 24/7 by Neonatologists.

2) St. Vincent Center for Children (Evansville, IN):

St. Vincent Center for Children is seeking a BE/BC Pediatric Neurologist to join a busy and growing practice located at the Center for Children, a multidisciplinary regional referral center for outpatient clinical care. The Center for Children is predominately an outpatient practice but does provide inpatient consultations for our collegial Pediatric Hospitalists, Intensivists and Neonatologists. Applicants will also have the ability to work with our nationally recognized feeding team program and collaborate with other pediatric subspecialists including but not limited to Pediatric Surgery, Psychology, and Pulmonology.

- Existing (PT) physician and nurse practitioner within this very busy, collaborative practice
- Shared call schedule for urgent EEGs; inpatient and ER call during office hours only
- 20 bed Pediatric Inpatient Unit with Pediatric Hospitalists; 6 bed Pediatric Intensive Care Unit with Pediatric Intensivists; Level III NICU with 5 Neonatologists
- Established Pediatric Subspecialty Clinic representing 10 specialties

St. Vincent offers a very competitive compensation package that includes: Competitive base salaries, Relocation allowance, CME, Comprehensive health benefits, Retirement savings plan (403b) with match, Malpractice with tail coverage and generous paid time off.

St. Vincent has been dedicated to improving the health of Indiana communities we have been privileged to serve for more than 140 years, with over 20 health ministries serving in central and southern Indiana. St. Vincent is part of Ascension the largest nonprofit health system in the U.S. and the world's largest Catholic health system whose shared mission is to care for the body, mind and spirit of those we serve.

For more information, please contact Mona Hansen, Physician Recruiter

Mhansen@ascension.org or 317-338-6140

CNS PERSONNEL REGISTRY
IOWA

PEDIATRIC EPILEPTOLOGIST

SEE AD BELOW



PEDIATRIC EPILEPTOLOGIST
Stead Family Department of Pediatrics

The Stead Family Department of Pediatrics at the University of Iowa seeks Pediatric Epileptologists at ranks including Associate (non-track), Assistant Professor, Associate Professor or Professor (tenure or non-tenure track).

Qualifications:

- 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
- Experience in advanced epilepsy management, including ketogenic diet, vagus nerve stimulation (VNS), epilepsy surgery evaluation
- Teaching competence in neurology for medical students, residents and fellows
- Strong oral and written communication and interpersonal skills
- Scholarly activity

University of Iowa Stead Family Children's Hospital is one of the nation's top-ranked pediatric care and research institutions. A new 189-bed children's hospital opened in February 2017.

For more information contact:
Alex Bassuk, M.D., Professor of Pediatrics
Director, Division of Neurology
alexander-bassuk@uiowa.edu

To apply for this position please visit The University of Iowa website at <http://jobs.uiowa.edu>, requisition number 68613.

CNS PERSONNEL REGISTRY KANSAS

PEDIATRIC NEUROLOGIST

Ranked as one of 2018's Happiest Cities in America!

Exciting opportunity for a Pediatric Neurologist to join our Women's & Children's Specialty Group.

- Practice offers comprehensive pediatric neurology care to include whole body cooling and advanced protocols
- Attractive schedule; enjoy a great quality of life!
- Opportunity to establish a robust outpatient practice and an outpatient pediatric sleep disorders clinic

Kansas City is one of the best kept secrets in the US!

- Recently named one of the 10 best downtown areas by *Forbes* magazine
- Consistently listed as one of the top 10 places to live in the US due to the affordability of housing, great job market, nationally-ranked public schools, cultural interests, sports activities and facilities and geographic location

Benefits

Our clinicians enjoy a competitive compensation package with many locations offering sign on bonuses, relocation and tuition reimbursement.

Our benefits include:

- Health (various options), life, vision, dental and disability insurance
- 401(k) with annual matching program
- Advanced and continuing medical education
- Leadership training and advancement opportunities
- Employee stock purchase plan at a 15% discount
- Professional liability insurance
- Support and payment for mandatory license/s and hospital credentialing
- These benefits are for full time employees, employees in other types of employment classifications may be eligible for some of these benefits.

About MEDNAX

With a 35+ year record of success, MEDNAX has grown from a single medical practice to a trusted health solutions partner. As part of

our national medical group, we give you the tools you need to build the career you want, and the flexibility to adapt as your personal needs and professional interests change.

We invite you to grow with us and help shape the future of health care.

MEDNAX Ranks on *Forbes* Most Innovative Growth Companies (<https://www.forbes.com/companies/mednax/>)

MEDNAX is an Equal Opportunity Employer

All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability or veteran status.

Apply Here: <http://www.Click2apply.net/ydggrrwh5htsdps5ks>

CNS PERSONNEL REGISTRY KENTUCKY

PEDIATRIC EPILEPTOLOGIST

The University of Louisville is seeking a Child Neurologist at the Assistant or Associate Professor level for employment in Louisville, Kentucky.

This position will coordinate the delivery of patient care to children and adolescents who are being evaluated for neurological conditions in Louisville, KY, and possibly at some remote clinic locations across the state of Kentucky.

Requirements

- Must have a Medical Degree (or foreign equivalent degree)
- Must be Board Certified or Board Eligible in Neurology with Special Qualification in Child Neurology
- Kentucky medical license required
- Pre-employment background check required.

Qualified applicants must forward their CV to Division Chief, Vinay Puri, MBBS, FAAN, at vinay.puri@louisville.edu

CNS PERSONNEL REGISTRY MARYLAND

PHYSICIAN REVIEWER

Summary:

MCMC provides independent medical reviews of the highest possible quality to health plans, health insurers, self-insured employers, and anyone else who wants an independent, objective opinion about the facts of a medical care case. We review cases in all domains of medicine, at all levels of technology, for all age groups. The Physician Reviewer is an essential member of the independent review team.

Responsibilities:

- Evaluate clinical requests for medical necessity and medical appropriateness, experimental or investigational treatment or both
- Utilizes clinical judgment in conjunction with relevant health plan criteria or guidelines to substantiate service requests
- Contacts the attending provider and remains professional and objective
- Supports every recommendation with a clear, precise rationale based on the clinical facts available for review
- Completes all reviews within the specified turn-around-time
- Completes all reviews according to MCMC operational directions and client specific instructions, in a clear and comprehensive fashion
- Consults collaboratively with clinical and non-clinical team members
- Adheres to URAC, NCQA, ERISA, and other applicable regulatory and legislative requirements and standards

Qualifications:

- Education
- Doctor of Medicine (MD) or Doctor of Osteopathic Medicine (DO)

Skills:

- Knowledge of current practice standards
- Strong oral communication and interpersonal skills
- Strong computer skills with the ability to learn new applications
- Strong analytical skills
- Ability to work independently and with a team

Experience:

5 or more years post graduate experience in direct patient care

Licenses & Certifications:

Must have an active, unrestricted U.S. medical license

Must be board certified

Contact:

Patricia Adegbenle
patricia.Adegbenle@careworksmcs.com

CNS PERSONNEL REGISTRY MASSACHUSETTS

CHILD NEUROLOGY – CHIEF & FACULTY POSITIONS

Baystate Health is western Massachusetts's premier healthcare provider and home to the prestigious University of Massachusetts Medical School – Baystate. The cornerstone of our organization is Baystate Medical Center, a 716-bed tertiary care hospital which boasts the states single busiest emergency department and the regions only Level-I trauma center. With 4 community hospitals, Baystate Children's Hospital and Baystate Primary Care Medical Practices, we offer an amazing, diverse culture that provides outstanding opportunities for physicians and advanced practice providers to start or advance their career.

Position Intro We are seeking a Division Chief & Faculty Child Neurologist to join Baystate Children's Hospital.

Position Highlights

- Practice in our beautiful new state-of-the-art outpatient facility which is home to 15 pediatric specialties. Excellent outpatient EEG lab and strong hospitalist, genetics, neuroradiology and developmental-behavioral pediatrics.
- Combination of clinical care and resident and medical student teaching with University of Massachusetts School of Medicine faculty appointment commensurate with experience.
- Focus on neurophysiology is ideal. We have a comprehensive inpatient and outpatient neurophysiology service including routine EEG, ambulatory EEG and long-term video monitoring.

- Potential relationship with Boston Children's Hospital, Department of Neurology that supports the clinical and academic missions of both departments; opportunity for research collaboration and mentorship at Boston Children's Hospital
- The new Chief will have full institutional support to develop innovative approaches to enhance our inpatient consulting and busy outpatient program.
- Highly competitive compensation & benefits, bonus and student loan forgiveness available.

Qualifications:

Sample Chief candidates will demonstrate excellent clinical and teaching skills, a track record of scholarly productivity in clinical pediatric neurology and/or education, and leadership potential. 3+ years experience is required. New graduates will be considered for the faculty position.

The Pioneer Valley is a thriving area located in western Massachusetts and provides extensive access to urban, suburban and rural amenities. Anchored by the city of Springfield, our region boasts a myriad of opportunities for recreation, music, education and art enthusiasts. When you live and work in the Pioneer Valley, you will enjoy picturesque four-season living, excellent schools and year-round social and cultural events. In fact, Massachusetts was once again ranked #1 in Education nationally by *U.S. News and World Report*.

For more information please visit us online at: ChooseBaystateHealth.org or interact with us socially at [facebook.com/BaystateCareers](https://www.facebook.com/BaystateCareers) or on Twitter @BaystateCareers.

All correspondence can be directed to:
Dr. Charlotte Boney, Chair of the Department of Pediatrics
c/o Melissa Hale, Lead Senior Recruiter
Phone: 413-794-2624 Fax: 413-794-5059 Email: Melissa.Hale@baystatehealth.org

Reinventing healthcare takes courage. It takes collaboration. It takes you.

Baystate Health is an Equal Opportunity employer. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, marital status, national origin, ancestry, age, genetic information, disability, or protected veteran status.

CNS PERSONNEL REGISTRY MICHIGAN

CHILD NEUROLOGIST

The Division of Pediatric Neurosciences seeks a full-time BC/BE Child Neurologist to join a rapidly expanding children's hospital and neurosciences program and will have ample opportunity to develop his or her own specialized areas of expertise. The candidate will enjoy support from 3 pediatric neurosurgeons, 2 neuropsychologists, 2 neurodevelopmental pediatricians and 2 neuro-intensivists. The candidate will have access to a 6-bed epilepsy monitoring unit and a very active epilepsy surgery program. She/he will have support of a complete neurophysiology laboratory and will be able to refer children with complex movement disorders, spasticity, neuromuscular disorders, stroke and epilepsy to other physicians within the group. The new child neurologist will join 8 child neurologists and 2 neuro-intensivists, in addition there are 5 Advanced Practice Providers, social work, dietician, support staff including Child Life and genetics counselors. The ideal candidate will be a quality and safety driven and will be key in the expansion of our Pediatric Neurosciences program. As the prime Pediatric clinical academic partner of Michigan State University College of Human Medicine, HDVCH offers academic appointments for qualified candidates and teaching opportunities are available. Support for clinical research is also available. HDVCH is a 236-bed free standing Children's Hospital and is a tertiary and quaternary referral center. Also, within HDVCH there is a Neuro Pediatric Intensive Care Unit and a 6 bed Epilepsy Monitoring Unit. Benefits include malpractice insurance,

MICHIGAN continued

health, dental, disability and life insurance. Paid time off for vacation, illness, CME and relocation allowance.

Contact:

Karyn Hazel
karyn.hazel@spectrumhealth.org
www.helendevoschildrens.org

CNS PERSONNEL REGISTRY MISSOURI

CHILD NEUROLOGY OPPORTUNITY IN SPRINGFIELD, MISSOURI – LARGE REFERRAL CENTER

CoxHealth, a Top 100 Integrated Healthcare System, in Springfield, Missouri, is seeking a BE/BC Pediatric Neurologist with general neurology interests to join a practice with one established physician. The scope of practice includes outpatient clinic, EEG readings and consultative hospital services at one hospital, Cox South. The outpatient clinic is connected to the hospital.

Cox South Hospital (a 644-bed hospital, level 1 trauma center) is a highly developed regional referral center. In addition to pediatric hospitalists and intensivists covering the Pediatric Inpatient Floor and PICU, pediatric sub-specialty care includes: cardiology, endocrinology, gastroenterology, general surgery, neonatology, orthopedic surgery, sleep medicine and urology.

This physician would have a collegial relationship with CoxHealth's nationally recognized Neuroscience Program. The neuroscience team at CoxHealth offers state-of-the-art care for patients with brain and spine diseases, disorders and injuries; adult neurologists subspecialize in neuromuscular diseases, epilepsy, sleep, and vascular neurology.

The position offers:

- Excellent compensation
- Comprehensive benefits program
- Sign on bonus
- Professional liability insurance
- CME allowance

Springfield, Missouri is consistently rated as one of the Top Quality of Life Communities in the Nation by *Money* Magazine. Located in the southwest

portion of the state, Springfield is the third largest city (metro population 450,000) and offers diversity in the arts, a wide variety of outdoor activities and numerous sporting events.

Contact:

Lori Mathews
lori.mathews@coxhealth.com
www.coxhealth.com

CHILD NEUROLOGIST – JOPLIN, MO

Children's Mercy Joplin is seeing a board-eligible/certified child neurologist to join a growing group of 20 faculty in the Department of Pediatrics, Division of Neurology at Children's Mercy Kansas City.

The position is full time and would include coverage for the Joplin Children's Mercy clinic, with the possibility of later having outreach clinics in Springfield, MO.

- 80% Clinical care with average of 8 half day (4 hour) clinics per week
- 20% Administrative, research, teaching, and service
- Admitting privileges at Freeman Health System in Joplin, MO
- Call coverage for your own patients M-F 8am-5pm, assist with coverage on nights and weekends, remaining coverage provided by neurology call pool
- Base pay, CME, vacation, time off in accordance with Children's Mercy policy

Our division is committed to clinical excellence, education and research and is continuing to grow. Children's Mercy has very competitive salaries and benefits, in addition to excellent support among physicians and staff with high job satisfaction. Faculty members are affiliated and have academic rank at the University of Missouri-Kansas City.

Following are some of the highlights from our division:

- Level IV comprehensive pediatric epilepsy center for seven pediatric epileptologists, four pediatric neurosurgeons, and eight-bed EMU
- One of the largest ketogenic diet programs in the country
- Active VNS Program
- Comprehensive Headache program, including a headache clinic where treatment is tailored to each patient using novel approaches such as acupuncture, biofeedback and in-clinic DHE infusions

- The only exclusively pediatric Tourette Center of Excellence, designed by the Tourette Association of America
- Very successful pediatric DBS program within our growing movement disorder program
- Numerous subspecialty multidisciplinary clinics, including: neonatal neurology, pediatric stroke and spasticity to name a few
- Research collaborations with our Genomic Medicine Center and Division of Clinical Pharmacology, Toxicology and Therapeutic Innovation
- Robust pediatric residence and fellowship programs, including a child neurology residency, clinical neurophysiology fellowship and headache fellowship

Qualified candidates should submit their CV to physicianjobs@cmh.edu

Attention: Admed T. Abdelmoity, MD, FAAP, Division Director

**Phone/email Dr Abdelmoity with any questions: 913/433-3118
aabdelmoity@cmh.edu**

EOE/M/F/Disabled/VET

CNS PERSONNEL REGISTRY NEBRASKA

DIVISION CHIEF & ADDITIONAL FACULTY – CHILD NEUROLOGY

Division Chief – Child Neurology

Additional Faculty Positions: Child Neurology, Child Epilepsy

Children's Hospital & Medical Center, with the University of Nebraska College of Medicine, is currently recruiting Child Neurologists. Children's is a vibrant, free-standing pediatric teaching hospital and Nebraska's only full-service pediatric specialty health care center focused on extraordinary clinical care, education, clinical and outcomes research, and advocacy. The hospital is embarking on transformational programmatic and physical growth to address our local, regional, national and global patient care. The hospital has a Level IV Regional NICU, Level II Pediatric Trauma Center, Specialized Clinical Pediatric Services, and 24/7 Pediatric Intensivists. We have 50+ Specialty Clinics, 200+ Specialists, 14 Satellite Offices, multiple Pediatric Fellowship programs, and is Magnet

Certified. Our new campus expansion plans include an additional 100 beds to the existing 145, expansion to the Newborn Intensive Care Unit, Fetal Care Center and Fetal Surgery, Pediatric Intensive Care Unit, Cardiac Center including dedicated intensive care, Short-Stay Observation Unit, Emergency Department, and Surgical Services. The expansion will also provide new facilities to support education and clinical and outcomes research.

The Division Chief will develop and implement Children's clinical, educational, academic, research and advocacy goals for Pediatric Neurology, as well as represent Children's leadership for issues affecting Pediatric Neurology at all inpatient and outpatient campus sites. The successful candidate will be board-certified in Pediatric Neurology. This is an outstanding leadership opportunity as we build a neuroscience center.

Children's is seeking to significantly increase its number of faculty to develop an epilepsy program, as well as other subspecialty interests in Pediatric Neurology. All individuals will hold faculty appointments at the University of Nebraska College of Medicine. The Child Health Research Institute provides start-up funding and infrastructure for clinical, basic science, or translational research. Research interests are strongly desired and supported. This individual should possess excellent verbal, written and interpersonal communication skills; strong emotional and social intelligence, and the ability to connect with others in a meaningful way at all levels of the organization and university. The candidate will have administrative, academic and clinical practice management experience within a complex, pediatric tertiary care center.

Omaha enjoys four distinct seasons, along with an exciting metropolitan and a population over 925,000. The people of Omaha make it a safe city where it is special to live and enjoy all the amenities of a big city with the warmth of the Midwest. The area is rich in cultural activities including a professional symphony, ballet, theater, art, history, children's museums, and a world class zoo that will appeal to every taste. Additionally, Greater Omaha has an outstanding educational system of public and private schools. There are numerous

universities and colleges, most notably the University of Nebraska at Omaha, the University of Nebraska Medical Center, Creighton University, and the College of Saint Mary's. In addition to the many collegial sports, Omaha hosts the Olympic Swim Trials, the Olympic Curling Trials, and the College World Series. All of this, combined with a diverse economy with multiple Fortune 500 companies, makes for an extraordinary quality of life.

Nominations, expressions of interest and applications (including cover letter and CV/resume) should be submitted to Geralyn Azizkhan, Director, Physician and Faculty Affairs, gazizkhan@childrensomaha.org or 402/955-6585. Cell: 402/979-3103. All replies will be treated with confidentiality.

CNS PERSONNEL REGISTRY NEW YORK

SEEKING PEDIATRIC NEUROLOGISTS FOR MOUNT SINAI HEALTH SYSTEM

The Mount Sinai Health System has openings for full-time pediatric neurologists to join our nationally ranked Division of Pediatric Neurology.

Applicants are sought at any rank (Assistant, Associate, Professor), with an academic appointment at the Icahn School of Medicine at Mount Sinai that is commensurate with experience and resume. The chosen candidate must have excellent clinical skills and an interest in outpatient and inpatient pediatric neurology.

He or she will also work with an outstanding team of 10 pediatric neurologists with specialized interests in epilepsy, movement disorders, stroke, neurobehavioral disorders, multiple sclerosis and autoimmune encephalitis, as well as general pediatric neurology throughout the Mount Sinai Health System in Manhattan. Faculty teach adult neurology residents, pediatric residents, and medical students at the Icahn School of Medicine at Mount Sinai during those trainees clinical rotations in pediatric neurology. In addition, the Division is preparing an application to ACGME for a pediatric neurology fellowship training program.

Position Qualifications:

- Board Eligible or Board Certified in Pediatric Neurology
- Applicants with subspecialty fellowship training in epilepsy, headache, and neuromuscular are particularly encouraged to apply
- Committed to Mount Sinai and the communities we serve
- Excellent communication, bedside manner, and organizational skill
- A strong work ethic and desire to develop clinical programs with the full support of our division

The Mount Sinai Health System is New York City's largest integrated delivery system encompassing seven hospital campuses, a leading medical school, and a vast network of ambulatory practices throughout the greater New York region. Mount Sinai's vision is to produce the safest care, the highest quality, the highest satisfaction, the best access and the best value of any health system in the nation.

Mount Sinai's Kravis Children's Hospital is a comprehensive tertiary children's hospital. U.S. News and World Report consistently selects Kravis Children's Hospital at Mount Sinai as one of the best children's hospitals in the nation. In the 2018-2019 annual edition of Best Children's Hospital report, Kravis ranked in five pediatric specialties. It includes a pediatric epilepsy monitoring unit and an active pediatric epilepsy surgical program.

The Mount Sinai Health System is an equal opportunity employer. We promote recognition and respect for individual and cultural differences, and we work to make our employees feel valued and appreciated, whatever their race, gender, background, or sexual orientation.

We offer a competitive salary and benefits package.

**Please send CV with cover letter to:
Walter J. Molofsky, MD Director of
Pediatric Neurology Mount Sinai Health
System
10 Union Square East 5G
New York, NY 10003
Walter.Molofsky@MountSinai.org
T: 917/565-4372**

NEW YORK continued

PEDIATRIC NEUROLOGIST

The Division of Pediatric Neurology at the Steven and Alexandra Cohen Children's Medical Center of New York has an opening for two BC/BE Pediatric Neurologists with strong clinical skills in Pediatric Neurology to join our team. The Division is comprised of 10 Pediatric Neurologists, 3 NPs and has an ACGME-approved residency training program (two per year). It also has a pediatric epilepsy fellowship training program (one per year), combined with the adult epilepsy service. Faculty also participates 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. Candidates with additional expertise in neuro-immunology, neonatal neurology, surgical pediatric epileptology or headache are particularly encouraged to apply. 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.

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. CCMC is committed to a center of excellence in pediatric neurology including a newly renovated Epilepsy Monitoring Unit (NAEC level 4) opened in 2016. 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. An academic appointment at The Zucker School of Medicine at Hofstra/Northwell is commensurate with experience.

Long Island is home to the world's most beautiful beaches and state parks which offer an array of outdoor activities. You can easily access Manhattan within 30 minutes to catch a Broadway show, visit

a museum or attend a performance at the Met. Whatever your lifestyle, you can find a neighborhood to call home.

We offer a competitive salary and benefits package.

For further information and to apply, please email: OPR@northwell.edu, or contact Sanjeev V. Kothare, MD, Division Director for Child Neurology, skothare@northwell.edu

PEDIATRIC CLINICAL NEUROPHYSIOLOGY FELLOW 2019

There is an opening for a one year ACGME-accredited pediatric epilepsy/clinical neurophysiology fellowship at New York-Presbyterian Hospital/Weill Cornell Medicine starting July 2019. 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. Fellows are responsible for reading pediatric inpatient floor, ICU EEGs and EMU studies. There is a brand new rapidly expanding EMU, which opened in December 2017. 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 multidisciplinary refractory epilepsy clinic and a multidisciplinary joint neurosurgery epilepsy clinic, during which they have continuity of care. There is a weekly combined pediatric and adult epilepsy conference and a pediatric EMU/EEG teaching conference, which fellows are encouraged to lead.

There is an active pediatric and adult surgical program. Fellows are exposed to ECoG-guided resections, intracranial surgical monitoring with subdural grids/strips/depth electrodes, vagal nerve stimulation, 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.

For more information and to apply, please contact the program director for the pediatric epilepsy track, Srishti Nangia, MD at srn9001@med.cornell.edu

CNS PERSONNEL REGISTRY NORTH CAROLINA

PEDIATRIC NEUROLOGIST

East Carolina University, Brody School of Medicine, Division of Neurology

East Carolina University's Brody School of Medicine, Division of Neurology seeks a pediatric neurologist to join our academic group in a tenure-track or fixed-term appointment at the rank/title of Assistant Professor or higher.

We are located in Greenville, North Carolina and serve as a referral base of over 1.3 million people from a 29-county area in eastern North Carolina. Our physicians enjoy a thriving ambulatory clinic as an integral part of the faculty practice plan, ECU Physicians. They hold clinical appointments in the Brody School of Medicine. The neurology division, ECU Physicians-Neurology, offers neurodiagnostic modalities including polysomnography, EMG, ENG, EEG, ultrasound and CT. ECU Physicians also owns and operates an ACR accredited MRI diagnostic imaging center.

We are affiliated with Vidant Health and Vidant Medical Center which is a tertiary referral center including the newly built James and Connie Maynard Children's Hospital which is an essential component of the medical center. Additionally, the medical campus offers a 75-bed CARF accredited rehabilitation hospital and the East Carolina Heart Institute.

The successful candidate will join our division with our existing two pediatric neurologists who share on call and hospital responsibilities. Credentials should include board certification/board eligibility by the American Board of Psychiatry and Neurology with a certification in Pediatric Neurology. Board certification/board eligibility in Pediatrics would be a plus as would pertinent subspecialties.

In addition to submitting a candidate profile online, please submit online the required applicant documents: Curriculum Vitae, letter of interest and list of three references (noting contact information).

East Carolina University is an equal opportunity and affirmative action employer. All qualified applicants will receive consideration for employment without regard to their race/ethnicity, color, genetic information, national origin, religion, sex, sexual orientation, gender identity, age, disability, political affiliation, or veteran status.

Individuals requesting accommodation under the Americans with Disabilities Act Amendments Act (ADAAA) should contact the Department for Disability Support Services at 252/737-1016 (Voice/TTY).

Proper documentation of identity and employability is required at time of employment. A current North Carolina medical license is required. MD or DO from an appropriately accredited institution required.

Applications will be considered until position is filled. Please submit an online ECU application for vacancy # 002276 at ECU Human Resources at <http://ecu.peopleadmin.com/postings/13210>.

For more information, email your CV to Amanda Anderson at Amanda.anderson@vidanthealth.com or call 252/847-9029.

CNS PERSONNEL REGISTRY OHIO

DIVISION CHIEF, CHILD NEUROLOGY & EPILEPSY

On behalf of University Hospitals Rainbow Babies & Children's Hospital (UHRBC) and the University Hospitals (UH) system, MillicanSolutions, LLC, a leader in academic pediatric executive search, has initiated a national search to identify candidates to serve as Division Chief of Pediatric Neurology & Epilepsy. The organizations are seeking a physician leader capable of establishing and implementing a vision that encompasses the mission values of UHRBC: To Heal, To Teach, To Discover. Taking into consideration the strategic imperative UH has placed on pediatrics, the organizations commitment to meaningful resources, and the respected history of UHRBC, we believe this leadership role to be one of the top positions available nationally.

Transformational Leadership Position Highlights:

- The Division Chief will have the goal of advancing the field of Pediatric Neurology through patient care, practice innovation, research, and education.
- Improve faculty and staff engagement through attention to diversity recruitment, retention, career development, personal leadership development, and effective communication.
- Key opportunities, but not limited to, further development of a comprehensive Pediatric Neurology & Epilepsy program, organizational academic commitment to focus on Neuroscience as a Center of Excellence, development of neuro-critical care programs in the PICU and NICU, and collaboration with strong, adult Neurological Institute
- The successful MD/DO or MD/DO/PhD candidate with a sustained record of leadership accomplishment, operational expertise, and scholarly activity will be qualified to be appointed at the rank of Associate or Full Professor and will be eligible for an unrestricted medical license in the state of Ohio.
- UHRBC is a 244-bed renowned children's hospital and a principal referral center for Ohio and the region.
- The Department of Pediatrics is structured into 16-academic divisions, consisting of more than 160-faculty members, and a number of clinical multidisciplinary programs, representing the full disciplinary diversity of pediatric medicine today.

Additionally, we are pleased to announce that Marlene R. Miller, MD, MSc, has been appointed Pediatrician-in-Chief for University Hospitals and Chair of the Department of Pediatrics at University Hospitals Rainbow Babies & Children's Hospital. Dr. Miller comes from the Johns Hopkins Children's Center in Baltimore, where she served as Vice Chair of Quality and Safety since 2003, and as Chief Quality Officer, Pediatrics, for the health system since 2014. Dr. Miller is looking forward to working closely with and supporting the incoming Division Chief of Pediatric Neurology & Epilepsy.

For more details about this opportunity, please contact Marcel Barbey, Vice President of MillicanSolutions, LLC, at 682/223-5779 or via email: Marcel.Barbey@millicansolutions.com. All interactions will remain confidential and no inquiries will be made without the consent of the applicant.

University Hospitals Rainbow Babies & Children's Hospital values diversity and is committed to equal opportunity for all persons regardless of age, color, disability, ethnicity, marital status, national origin, race, religion, sex, sexual orientation, veteran status or any other status protected by law.

CNS PERSONNEL REGISTRY OREGON

ACADEMIC CHILD NEUROLOGY

General Academic Child Neurology Position

Oregon Health & Science University, Portland, OR

The Division of Pediatric Neurology at Oregon Health & Science University (OHSU) is seeking a BC/BE Pediatric Neurologist to expand its faculty. The appointment will primarily focus on strengthening our outpatient neurology clinics and inpatient neurology service. Special consideration will be given to candidates with interest and/or expertise in headache, movement, neurogenetics or neuro-immunology/neuro-inflammatory disorders. Ample opportunities also exist for program development and leadership roles within the Division and in the Department of Pediatrics, as well as mentoring of residents in both our child neurology and neurodevelopmental disabilities residency programs.

Position Condition/Requirements: Candidates should possess an M.D. or equivalent degree and have completed (or are in their final year of) neurology residency and/or fellowship training at a strong tertiary or quaternary care center. Additional subspecialty/fellowship training is welcomed but not required. A commitment to excellence in patient care is a must.

OREGON continued

Location: Doernbecher Children's Hospital is a 151-bed modern state-of-the-art facility on the OHSU campus and serves as the tertiary and quaternary referral center for all of Oregon and SW Washington. The Division of Pediatric Neurology currently consists of 11 M.D. and 3 N.P. faculty and the Department of Pediatrics boasts more than 90 clinicians and scientists representing all pediatric subspecialties integral to the mission of OHSU and the School of Medicine.

OHSU and Doernbecher Children's Hospital are located in the stunning city of Portland, Oregon, which pairs its vibrant and progressive urban scene with abundant access to year-round outdoor opportunities for individuals and their families. Portland is consistently ranked as one of the most desirable places to live in the United States.

Additional Details: OHSU is an equal opportunity, affirmative action institution. All qualified applicants will receive consideration for employment and will not be discriminated against on the basis of disability or protected veteran status. Applicants with disabilities can request reasonable accommodation by contacting the Affirmative Action and Equal Opportunity Department at 503/494-5148.

If interested in this opportunity, please contact:

Yoon-Jae Cho, MD

Chief, Division of Pediatric Neurology
Oregon Health & Science University
3181 SW Sam Jackson Park Rd,
MC: L321

Portland, OR 97239

Phone: 503/494-9113

E-mail: chyoo@ohsu.edu

CNS PERSONNEL REGISTRY PENNSYLVANIA

PEDIATRIC NEUROLOGIST

Seeking a BC/BE pediatric neurologist to join our growing Department of Pediatrics which now includes physicians in 28 specialties, a large general pediatric group and dedicated hospitalists and intensivists. We have a 30-bed inpatient unit, a 40-bed Level III NICU, 8-bed Level II PICU, Level II pediatric trauma center, a children's surgery center and 12-bed pediatric ER. LVPG Pediatric Neurology offers a cohesive work environment, a busy clinical practice, 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. Lehigh Valley Health Network (LVHN) is located 1 hour north of Philadelphia and 1.5 hours west of NYC. The area is one of the fastest growing in the state of Pennsylvania due to urban redevelopment, suburban affordability and outstanding public and private schools.

Contact:

Aisha Al- Hommoud

aisha.al-hommoud@lvhn.org

https://www.lvhn.org/careers/working_in_the_lehigh_valley

CNS PERSONNEL REGISTRY RHODE ISLAND

CLINICIAN EDUCATOR, PEDIATRIC NEUROLOGY

The Department of Pediatrics at Hasbro Children's hospital/ Rhode Island Hospital is seeking a Pediatric Neurologist to join

the Division of Pediatric Neurology. We are seeking a dedicated clinician and educator with expertise in the evaluation of the full range of pediatric neurologic diseases with special interest in Epilepsy to join our busy and expanding practice.

The successful candidate will participate in the outpatient clinics, attends in the inpatient services and will participate in teaching fellows, residents, and medical students. Hasbro Children's Hospital is the only tertiary care hospital for children in Rhode Island and offers comprehensive Pediatric services and consultation, including the full range of pediatric subspecialties, a pediatric intensive care unit, NICU and pediatric emergency department with trauma service.

The candidate must hold an MD degree, be board certified in Neurology with Special Qualification in Child Neurology, with additional EEG/Epilepsy fellowship training. This is an outstanding opportunity to participate in the patient care, teaching, and clinical research missions related to the expanding Pediatric Neurology practice at Rhode Island Hospital/Hasbro Children's Hospital.

We seek candidates who embrace diversity and reflect diversity in the broadest sense.

Rhode Island Hospital is an equal opportunity, affirmative action employer.

Interested individuals should submit CV and a cover letter to: Chanika_Phornphutkul@brown.edu

CNS PERSONNEL REGISTRY TENNESSEE

SEE AD AT RIGHT

AD PLACEMENT

Ads may be placed in the CNS Newsletter with rates for text-only ads beginning at \$150. Graphic ads begin at \$525 for 1/4 page (email/call for rates). Ads placed in newsletter may also be placed on CNS Website for \$75 (\$275 for non-members).

Deadline for placement in the next issue is **November 30, 2018.**

TO POST AN AD:

Go to www.childneurologysociety.org
Click "Post a Position"



Join A Top Team



When it comes pediatric neurology care, Le Bonheur Children's Hospital has the expertise and experience children need. The Le Bonheur Neuroscience Institute is recognized as one of the nation's top 25 neuroscience programs by *U.S. News & World Report*.

If you are looking for an outstanding opportunity to work in a state-of-the-art pediatric neurology program at a world-class children's hospital, look no further. The University of Tennessee Health Science Center and Le Bonheur Children's Hospital are currently recruiting several full-time, Board Certified Pediatric Neurologists. Now is your chance to join one of the top neuroscience teams in the country.

For a complete job description
or to apply, please email
Dr. James W. Wheless
at jwheless@uthsc.edu.

THE UNIVERSITY of TENNESSEE 
HEALTH SCIENCE CENTER

Le Bonheur
Children's Hospital

lebonheur.org



**Best care
in mind**

Texas Children's Neuroscience Center

As one of the largest pediatric neuroscience programs in the nation, we provide lifesaving treatments to thousands of critically ill children every year. Ranked #3 in Neurology and Neurosurgery by *U.S. News & World Report*, the Neuroscience Center at Texas Children's Hospital is leading research, treatment and surgical intervention for the full continuum of neurological conditions.

Program highlights:

- 45 board-certified neurologists
- 7 neurosurgeons
- 250 faculty members, scientists and researchers
- 39,000 annual clinic visits
- 13 specialty clinics and programs
- 12-bed epilepsy monitoring unit

texaschildrens.org/neuroscience



**Texas Children's
Hospital®**

CNS PERSONNEL REGISTRY

TEXAS

SEE AD AT LEFT

CNS PERSONNEL REGISTRY

UTAH

PEDIATRIC NEUROMUSCULAR PHYSICIAN

The Division of Pediatric Neurology, Department of Pediatrics, University of Utah, seeks a Pediatric Neurologist with Neuromuscular expertise. This collegial Division is active across all domains of pediatric neurology, including clinical care, translational studies, and research programs.

Qualified candidates must be Board Qualified/Board Certified in Child Neurology and have experience in Pediatric Neuromuscular Diseases. Expertise in EMG/NCV preferred.

Salt Lake City offers an incredible and affordable quality of life with a growing economy, rich cultural scene, and the Sundance Film Festival. The city is a ski and mountain biking destination and gateway to the West's landscapes including 14 ski resorts and five national parks.

The University of Utah is an Affirmative Action/Equal Opportunity employer. Individuals from historically

underrepresented groups are encouraged to apply.

Apply for the position at <http://utah.peopleadmin.com/postings/76185>. Cover letter and curriculum vitae required. For additional information, please contact: Josh Bonkowsky, M.D., Ph.D., Division Chief, at Joshua.bonkowsky@hsc.utah.edu.

CNS PERSONNEL REGISTRY

WASHINGTON

PHYSICIAN PEDIATRIC NEUROLOGIST

MultiCare Health System Tacoma, WA

Founded in 1955, Mary Bridge Children's provides our regions most advanced care for children. We are focused on what we can do in the future.

Our new Pediatric Neurologist will play a key role in that future. You will be a trusted provider and a part of our MultiCare values of Respect, Integrity, Stewardship, Excellence, Kindness and Collaboration.

MultiCare Mary Bridge Children's Hospital is searching for a Pediatric Neurologist to join an established team of 6 Providers with multiple pediatric Neurology subspecialties. Call is 1:6. We have a busy EEG lab with OP EEGs performed in multiple locations. We have the capacity to monitor 4 IP video EEG patients. We also have 4 pediatric

sleep center beds. Mary Bridge Children's Hospital is an advanced regional care and referral center for Southwest Washington serving more than 13 referring hospitals over 9 counties and backed by fully staffed services 24/7. Mary Bridge supports a Level IV NICU. The pediatric neurology service is primarily a consultation service with excellent support through fully staffed busy ED service, PICU, trauma service, IPS and a full complement of pediatric subspecialties.

Requirements:

- Board certified/eligible at time of employment
- Completion of a Pediatric Neurology Fellowship
- Licensed in the state of WA by the time of employment
- DEA, NPI & prescriptive authority
- Current BLS for Healthcare Providers certification by the American Heart Association

Please visit our website to apply for position #58400 online at: <https://jobs.multicare.org/pediatricneuro>

MultiCare is an equal opportunity employer. Hiring decisions are made without regard to race, color, religion, national origin, sexual orientation, gender identity, disability or veteran status. EOE/AA/M/F/D/V

PEDIATRIC NEUROLOGY SUB-INTERNSHIP AT THE UNIVERSITY OF UTAH/PRIMARY CHILDREN'S HOSPITAL

Funding is available to support qualified Under-Represented Minority (URM) medical students for a sub-internship at the University of Utah/Primary Children's Hospital. The funding up to \$2000 is available to cover a four-week rotation working with a group of 14 pediatric neurologists that will expose interns to a variety of general and specialized clinical experiences to include both in – and out-patient settings. Primary Children's is one of the top children's hospitals in the western U.S., and provides exposure to a geographically unique patient population. Qualified applicants should contact Ms. Kenya Arnett (Kenya.arnett@hsc.utah.edu) and include "URM Pediatric Neurology Sub-I" in the subject line.



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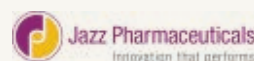
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