DIVISION OF
CHILD NEUROLOGY

Mission

The mission of the Division of Child Neurology is:

- To provide outstanding clinical care to children with disorders of the central and peripheral nervous system
- To perform clinical and basic research that improves the ability to diagnose and treat children with neurological disease
- To train the next generation of child neurologists and to educate physicians and other medical personnel about childhood neurological disease
- To serve the community with expertise in neurology and pediatric medicine

FACULTY

Ira Bergman, MD, PhD
Chief, Division of Child Neurology
Professor of Pediatrics, Neurology, and Immunology
Program Director, Child Neurology Residency Program
Ronald L. and Patricia M. Violi Endowed Chair in Child Development

Hoda Abel-Hamid, MD
Associate Professor of Pediatrics
Director, Neuromuscular Program and Electromyography

Gulay Alper, MD
Associate Professor of Pediatrics
Director, Clinical Neuro-Immunology Program

Miya Asato, MD
Associate Professor of Pediatrics, Psychiatry, and Clinical and Translational Science
Program Director, Neurodevelopmental Disabilities Program
Associate Program Director, Child Neurology Residency Program
Director, Leadership Education in Neurodevelopmental and Related Disabilities (LEND) Program

Catalina Cleves-Bayon, MD
Assistant Professor of Pediatrics
Director, Idiopathic Intracranial Hypertension Program

Patricia K. Crumrine, MD
Professor of Pediatrics and Neurology
Associate Director, Epilepsy Program

Dana D. Cummings, MD, PhD
Assistant Professor of Pediatrics
Director, Pediatric Stroke Program

Luis De Jesus Fernandez, MD
Assistant Professor of Pediatrics
Associate Director, Epilepsy Program

Robyn Filipink, MD
Clinical Associate Professor of Pediatrics
Medical Director, Fragile X Clinic
Medical Director, Tourette Syndrome Clinic
Medical Director, Movement Disorder Clinic

Jenna M. Gaesser, MD
Assistant Professor of Pediatrics
Associate Director, Neonatal Neurology Program
Codirector, Neurofibromatosis Clinic
Codirector, Advanced Practice Provider Development and Utilization in the Child Development Unit

Yanhua Gao, MD, PhD
Research Assistant Professor

Amy C. Goldstein, MD
Assistant Professor of Pediatrics
Director, Neurogenetics Program
Codirector, Neurofibromatosis Clinic

Anuja Vora Jindal, MD, MPH
Assistant Professor of Pediatrics

Todd Lamitina, PhD
Associate Professor of Pediatrics and Cell Biology

Monica Naik, MD
Clinical Assistant Professor of Pediatrics
Director, Neonatal Neurology Program

Udai Pandey, PhD
Associate Professor of Pediatrics and Human Genetics

Christina Patterson, MD
Assistant Professor of Pediatrics
Director of Epilepsy
Director, Epilepsy Monitoring Unit
Medical Director, Pediatric Epilepsy Surgery Program
Director, Advanced Practice Provider Development and Utilization

Deepa Rajan, MD
Assistant Professor of Pediatrics
Codirector, Neurogenetics Program

Robert Safier, MD
Associate Professor of Pediatrics
Director, Medical Student and Resident Child Neurology Education
Codirector, Child Neurology Inpatient Floor Team

Levi Shelton, MD
Assistant Professor of Pediatrics
Codirector, Advanced Practice Provider Development and Utilization
Director, Visiting Resident Education, Child Neurology Division

Bilal Sitwat, MD
Assistant Professor of Pediatrics
Associate Director, Epilepsy Program

Yoshimi Sogawa, MD
Associate Professor of Pediatrics
Associate Director, Epilepsy Program

Kavita Thakkar, MD
Assistant Professor of Pediatrics
Associate Director, Clinical Neuro-Immunology Program

Inna Vaisleib, MD
Associate Professor of Pediatrics
Associate Director, Epilepsy Program

Rajiv R. Varma, MD
Clinical Professor of Pediatrics and Neurology
Clinical Director, Division of Child Neurology

Shelley Williams, MD
Associate Professor of Pediatrics and Neurology
Director, Pediatric Electrophysiology Fellowship Program
Director, Pediatric Ketogenic Diet Clinic
Director, Pediatric Tuberous Sclerosis Clinic
Associate Director, Epilepsy Program

OVERVIEW OF DIVISION

The division consists of the inpatient consultation and primary admitting services, the Pediatric Epilepsy Monitoring Unit, the Pediatric Electroencephalography (EEG) Laboratory, the Electromyography (EMG) Laboratory, the outpatient neurology clinics, a clinical research component, and a basic research component. The faculty provides training in the diagnosis and management of neurological disorders to medical students, pediatric residents, child and adult neurology residents, child psychiatry residents, physiatry residents, epilepsy fellows, nurses, nurse practitioners, and physician assistants. Clinical investigations are directly related to the clinical and educational components of the division's mission.

Clinical activity has continued to increase, and specialized services have been established in epilepsy, epilepsy surgery, headache, neuro-ophthalmology, idiopathic intercranial hypertension, stroke, movement disorders, Tourette syndrome, neurofibromatosis, tuberous sclerosis, neuromuscular disease, muscular dystrophy, inflammatory brain and spinal cord disease, neonatal neurology, ketogenic diet, infantile spasms/epileptic encephalopathy, metabolic disease, and neurogenetics.

Extensive clinical research studies have been initiated and expanded, including epilepsy drug trials and examination of cannabidiol for refractory seizures, mapping of cognitive skills in epilepsy with structural and functional magnetic resonance imaging (MRI), assessment of neural plasticity in patients following epilepsy surgery, computerized cognitive assessment of medication effects in newly diagnosed patients with epilepsy, study of drugs for status epilepticus in the emergency room, prospective study of children with epileptic encephalopathy, effect of vagus nerve stimulation on children with a history of status epilepticus, sildenafil therapy for cardiac failure in Duchenne muscular dystrophy (DMD), morpholino exon skipping in DMD, anti-inflammatory therapy of DMD, 31P NMR evaluation of adenosine triphosphate production in individuals with mitochondrial disease, North American Mitochondrial Disease Consortium activities, triheptanoin treatment of long-chain fatty acid oxidation disorders, a neurogenetics registry, functional characterization of the genetic disorder GEMIN5, a Fragile X registry, studies of sleep in children with autism, examinations in acute demyelinating disorders of childhood, radiological investigations of various neurological disorders, and use of a new compound to improve language learning in children with Fragile X syndrome. Laboratory studies include cellular and molecular mechanisms of fused in sarcoma (FUS)-related neurodegeneration, molecular basis of FUS/translocated in liposarcoma (TLS)-related amyotrophic lateral sclerosis, molecular library screen for suppressors of FUS proteinopathy, a *Drosophila* model to investigate the role of FUS in amyotrophic lateral sclerosis (ALS), development of a targeted oncolytic virus to treat cancer, prevention of cancer metastases of the brain, bipartite regulation of osmosensitive gene expression in *C. elegans* and biomechanical profiling of *C. elegans* motility, and mechanisms and characterization of modifiers of C9orf72-associated dipeptide toxicity.

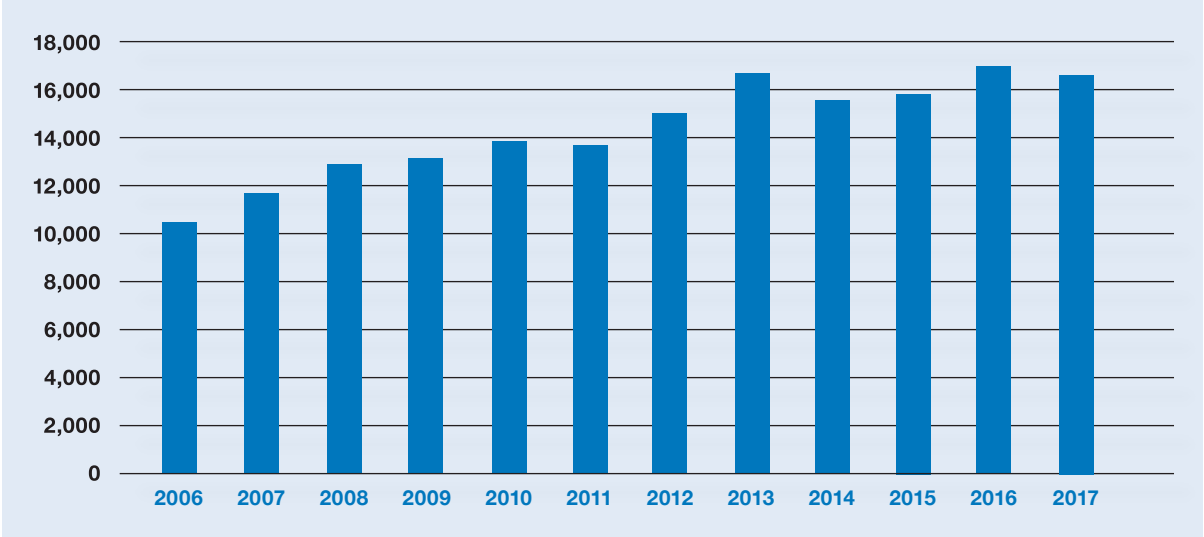
The child neurology training program consists of nine child neurology residents and two neurodevelopmental disabilities residents. Four current PL-2s and four current PL-1s will be entering the child neurology residency. There is one neurophysiology fellow. Educational programs have been established for the medical students, pediatric residents, and visiting neurology and psychiatry residents. The division has partnered with the Epilepsy Foundation of Western/Central Pennsylvania to improve care for children and families with epilepsy and to provide telemedicine visits and educational outreach to rural pediatric practices.

CLINICAL ACTIVITIES

The primary goal of the division is to provide high-quality clinical services to children with neurological disorders. A total of 16,426 outpatients were treated this year in Lawrenceville and at the three satellite facility offices of Children's Hospital of Pittsburgh of UPMC (Wexford, South Hills, and Monroeville), as well as at five outreach facilities (Johnstown, Pa.; Wheeling, W.Va.; Erie, Pa.; Hermitage, Pa.; and Chippewa, Pa.). In addition, the division provided specialty neurology services at the Pediatric Specialty Care Center in Aliquippa, Polk State Center, Mercer County Amish Clinic, and Verland Community Homes. The overall trend over the past 13 years has been a continuing increase in clinical outpatient activity in the division, which varies to some degree because of fluctuations of faculty numbers (see figure below). Children's Hospital neurology physicians had 1,627 inpatient admissions, 1,644 bedded outpatients, and 1,203 inpatient consults in fiscal year 2017.

The comprehensive Epilepsy Program at Children's Hospital is a nationally recognized epilepsy center with a level 4 (highest) designation by the National Association of Epilepsy Centers. The Epilepsy Monitoring Unit has eight beds and is equipped with EEG and audio-telemetric monitoring, which operates 24 hours per day, seven days per week. Video EEG monitoring is also performed in all intensive care units in the hospital, in all rooms on the hospital floors, and in the neonatal intensive care unit at Magee-Womens Hospital of UPMC. All recordings are monitored remotely and continuously by EEG technologists. The monitoring unit is staffed by registered EEG technologists and professional nurses and functions as both an inpatient and outpatient unit. The comprehensive Epilepsy Program is staffed by Board-certified epileptologists; pediatric neurologists; pediatric neurosurgeons; physician assistants; psychologists; a social worker; and associated experts in neuroimaging, dietary, communication, and psychiatric services. Clinical trials for new anti-epileptic drugs are available. There is an active ketogenic diet program with a dedicated team that includes a dietitian, social worker, and nurse. Therapeutic options for patients with refractory seizures not responding to standard anti-epileptic drugs include the use of vagus nerve stimulation, new anti-epileptic drugs in clinical trials, or epilepsy surgery. In fiscal year 2017, the unit performed 2,341 video EEGs, 321 ambulatory EEGs, 37 phase I evaluations, five phase II evaluations, and 18 epilepsy surgeries. Eighteen new vagus nerve stimulators were placed and 16 replaced.

PEDIATRIC NEUROLOGY OUTPATIENT VISITS



The EEG Laboratory staff performs inpatient and outpatient EEG procedures. Procedures are performed in the EEG Laboratory, the intensive care units, the inpatient areas, and the emergency room. EEGs are available around the clock. This fiscal year, the EEG Laboratory performed 2,110 inpatient procedures and 2,150 outpatient procedures. In addition, 124 studies were performed at Magee-Womens Hospital and UPMC Hamot Hospital.

EMG is a study that aids in the diagnosis of neuromuscular disorders. A physician electromyographer performs EMG examination as a diagnostic consultation. The Muscular Dystrophy Program at Children's Hospital provides a multidisciplinary setting for the diagnostic evaluation and follow-up care of infants and children with known or suspected neuromuscular diseases. Hoda Abdel-Hamid is director of the EMG Laboratory and the Neuromuscular Program. This fiscal year, 134 EMG procedures were performed. In addition, Abdel-Hamid administers Botox injections on an outpatient basis; 147 procedures were performed.

RESEARCH AND OTHER SCHOLARLY ACTIVITIES

Ira Bergman, MD, PhD

Ira Bergman is a professor of pediatrics, neurology, and immunology at the University of Pittsburgh; chief of the Division of Child Neurology; interim chief of the Division of Child Development; program director of the Child Neurology Residency Program; and the Ronald L. and Patricia M. Violi Endowed Chair in Child Development.

RESEARCH

- Replicating Recombinant Vesicular Stomatitis Virus, specifically targeting cancer cells and treating cancer by direct killing and by stimulating the immune system to recognize and kill cancer cells
- Viral Immunotherapy to Eradicate Subclinical Brain Metastases, U.S. Department of Defense (DOD), 2015
- Memory Anti-Tumor T Cells Resist Inhibition by Immune Suppressor Cells, anticancer research, 2015

STUDY SECTIONS

- Chair, Peer-Reviewed Cancer Research Program, Pediatric Brain Tumor Review Panel, DOD
- Chair, Tuberous Sclerosis Complex Research Program, Clinical and Population Studies Review Panel, DOD
- Chair, Visionary Postdoctoral Fellowship, DOD

ADVISORY COMMITTEE MEMBERSHIPS

- Research Advisory Committee, Children's Hospital of Pittsburgh of UPMC
- Magnetoencephalography Oversight Board, UPMC

PROFESSIONAL AFFILIATIONS/ SOCIETY MEMBERSHIPS

- Child Neurology Society
- American Academy of Neurology
- American Academy of Pediatrics
- American Association of Immunology
- American Association of Cancer Research
- American Pediatric Society/Society for Pediatric Research

Ira Bergman, MD, PhD
Division Chief, Child Neurology

HONORS

- *Best Doctors*, Pittsburgh Magazine, 2009–2017
- Five-Star Excellence Award, Professional Research Consultants, 2015, 2016
- *Best Doctors in America*, Woodward/White, Inc.
- U.S. patent application 11/227,778, titled "Targeting Viruses Using a Modified Sindbis Glycoprotein"

Hoda Abdel-Hamid, MD

Hoda Abdel-Hamid is an associate professor of pediatrics and neurology and director of the Neuromuscular Program, the Neurology Botox program, the MDA clinic (muscular dystrophy), and the EMG Laboratory at Children's Hospital of Pittsburgh of UPMC.

RESEARCH

- Phase II, Randomized, Double-Blind, Placebo-Controlled, Multiple Ascending Dose Study to Evaluate the Safety, Efficacy, Pharmacokinetics, and Pharmacodynamics of Pf-06252616 in Ambulatory Boys With DMD
- Ataluren in Patients With Nonsense Mutation DMD: A Multicenter, Randomized, Double-Blind, Placebo-Controlled, Phase III Trial
- Phase 3 Efficacy and Safety Study of Ataluren (ptc124) in Patients With Nonsense Mutation Dystrophinopathy: A New Randomized, Double-Blind, Placebo-Controlled, Phase III Trial of Tadalafil for DMD

- Open-Label, Multiple-Dose, Efficacy, Safety, and Tolerability Study of Eteplirsen in Subjects With DMD Who Participated in Study 4658-US-201
- A Multicenter Collaborative Study on the Clinical Features, Expression Profiling, and Quality of Life of Infantile-Onset Facioscapulohumeral Muscular Dystrophy
- Twenty-Year Follow-Up Assessment of the Impact of Newborn Screening on Men With Muscular Dystrophy and Their Families
- Becker Muscular Dystrophy: A Natural History Study to Predict Efficacy of Exon Skipping
- Cardiac Outcome Measures in Children With Muscular Dystrophy
- DMD Tissue Bank for Exon Skipping
- Longitudinal Study of the Relationship Between Impairment, Activity Limitation, Participation, and Quality of Life in Persons with Confirmed DMD
- Clinical Trial of Coenzyme Q10 and Lisinopril in Muscular Dystrophies: Recruitment, Clinical Evaluation of Participants, and Physical Examinations
- Association Study of Exon Variants in the NF-κB and TGFβ Pathways Identifies CD40 as a Modifier of DMD

ADVISORY COMMITTEE MEMBERSHIPS

- Educational Committee for Neurophysiology Fellowship, Children's Hospital of Pittsburgh
- Accreditation Council for Graduate Medical Education, Children's Hospital of Pittsburgh
- Advisory committee, Sarepta Therapeutics
- Advisory committee, Biogen
- Advisory board, Sanofi

PROFESSIONAL AFFILIATIONS/SOCIETY MEMBERSHIPS

- American Academy of Pediatrics
- American Academy of Neurology
- Child Neurology Society
- American Academy of Electrodiagnostic and Neuromuscular Medicine
- World Muscle Society
- Egyptian Medical Syndicate

Gulay Alper, MD

Gulay Alper is an associate professor of pediatrics and neurology and director of the Clinical Neuroimmunology Program.

RESEARCH

- Inflammatory Demyelinating Disorders of the Central Nervous System in Children
- Epidemiologic Study Aimed at Distinguishing Acute Disseminated Encephalomyelitis (ADEM) From Multiple Sclerosis (MS) at Its Earliest Diagnosis in Childhood
- Acute Demyelinating Disorders of Childhood—Pittsburgh Pediatric Demyelinating Cohort Study
- Multicenter Pediatric MS Adherence Study
- Discrimination of ADEM and MS at First Presentation by Clinical Features
- Imaging Characteristics of ADEM Versus MS in Children
- Brainstem Presentation of Pediatric MS
- Non-MS Relapsing Demyelination in Children With Positive Myelin Oligodendrocyte Glycoprotein (MOG) Antibodies

ADVISORY COMMITTEE MEMBERSHIPS

- International Pediatric MS Study Group (IPMSSG)
- Clinical Care Committee (an operational subcommittee of IPMSSG), facilitating studies aimed at optimization of care for children with MS and related disorders
- Expert Panel in Pediatric-Acquired Demyelinating Syndromes, United States
- International Affairs Committee, Child Neurology Society

EDITORSHIPS

- Guest editor, special issue, "Autoimmune Inflammatory Disorders of the Central Nervous System in Children," *Journal of Child Neurology*
- Editorial Board, *Journal of Child Neurology*

PROFESSIONAL AFFILIATIONS/SOCIETY MEMBERSHIPS

- Child Neurology Society
- American Academy of Neurology
- International Pediatric MS Study Group

Miya Asato, MD

Miya Asato is the program director of the Neurodevelopmental Disabilities Fellowship. The fellowship is one of eight accredited programs in the United States that provides clinical and research training to physicians who wish to specialize in neurodevelopmental disabilities. This multidisciplinary specialty includes pediatrics, neurology, and developmental and behavioral medicine. There are four fellowship trainees in different stages of training. Asato also serves on the national level as a leader for neurodevelopmental disabilities training and is the Neurodevelopmental Disabilities Special Interest Group leader for the Child Neurology Society.

Asato is director of the LEND Program. This competitive training grant is funded through the Health Resources and Services Administration (HSRA) and currently funds 17 graduate-level trainees in allied health disciplines so they can gain leadership training related to neurodevelopmental

disabilities. The LEND Program in Pittsburgh has been continuously funded for more than 20 years and is one of 52 programs across the United States. Primary training activities of LEND include a yearlong leadership course and a multidisciplinary clinic.

RESEARCH

- Neurobehavioral Status in Pediatric Epilepsy: This five-year National Institutes of Health (NIH) faculty-development grant examines cognitive and psychiatric comorbidities in children with medically treated epilepsy utilizing MRI methods, including functional MRI and diffusion tensor imaging, diagnostic psychiatric interviewing, and cognitive testing.
- Reward Processing in Adolescence: This NIH-funded longitudinal study assesses the developmental changes related to the effects of incentives on the ability to suppress task-inappropriate responses, using eye movements as a model system, as well as functional and structural MRI.
- Innovating Strategies and Replicating Promising Practices Program: This project, funded by the HSRA, is assessing the cognitive changes associated with epilepsy medical treatments using computerized cognitive testing.
- Non-research funding: The LEND Program at the University of Pittsburgh is a multidisciplinary, graduate-level training program for leadership and clinical training in neurodevelopmental disabilities, funded by the HSRA.
- Infection Unmasking Symptoms of Underlying POLG-Related Disease
- Supporting Transition Education for Families of Youth With Autism Spectrum Disorder

ADVISORY COMMITTEE MEMBERSHIPS

- Professional Advisory Board, Epilepsy Foundation of America
- Scientific Selection and Program Committee, Child Neurology Society
- University of Pittsburgh Graduate Medical Education
- Medical Advisory Board, Epilepsy Foundation of Western/Central Pennsylvania
- Epilepsy Section, American Academy of Neurology
- Medical advisor, Emma Bursick Memorial Fund
- Psychosocial Task Force, American Epilepsy Society
- Non-Epileptic Seizures Task Force, American Epilepsy Society
- Epilepsy Research Benchmarks Committee, American Epilepsy Society and NIH
- Local Advisory Board, Office of Child Development, University of Pittsburgh
- Neurology Education Committee, Children's Hospital of Pittsburgh
- Child Development Unit Education Committee, Children's Hospital of Pittsburgh
- Graduate Medical Education Subcommittee on Program Director Development, University of Pittsburgh

EDITORSHIPS

- Editorial Board, *Journal of Pediatric Epilepsy*
- Editorial Board, *Epilepsy and Behavior*

MAJOR LECTURESHIPS AND SEMINARS

- UPMC Graduate Medical Education 2016 Leadership Conference
- "Cognition and the Developing Brain in Pediatric Epilepsy," New York University neurology grand rounds, New York, N.Y., April 2016
- "Epileptic Syndromes, Autism, and the Developing Brain," American Society of Electroencephalographic Technicians annual meeting, Pittsburgh, Pa., August 2016
- "Epilepsy in Children: Growing Up Healthy," Clinic for Special Children Epilepsy Family Day, Strasburg, Pa., August 2017
- "Unknown Until Genome," 46th Annual Child Neurology Society Meeting, Kansas City, Mo., October 2017
- "Future of Neurodevelopmental Disabilities Training," Johns Hopkins Kennedy Krieger Retreat, Williamsburg, Va., November 2017
- "Co-Management of Pediatric Epilepsy: Primary Care and Specialty Care Partnership Model," American Public Health Association annual meeting, Atlanta, Ga., November 2017
- "Epilepsy and Medical Transition," transition conference sponsored by the Department of Neurology, UPMC, Pittsburgh Pa., December 2017

PROFESSIONAL AFFILIATIONS/SOCIETY MEMBERSHIPS

- American Academy of Neurology
- American Epilepsy Society
- Child Neurology Society
- Association of Pediatric Program Directors
- Autism Treatment Network

HONORS

- Philip Troen, MD, Excellence in Medical Student Research Mentoring Award, 2015
- Best Doctors, *Pittsburgh Magazine*, 2016
- American Academy of Neurology Transforming Leaders Program Awardee, 2017

Catalina Cleves-Bayon, MD

Catalina Cleves-Bayon is an assistant professor of pediatrics at the University of Pittsburgh and director of the Idiopathic Intercranial Hypertension Program at Children's Hospital of Pittsburgh of UPMC. Cleves-Bayon has also developed an interdisciplinary monthly neuro-ophthalmology conference that offers continuing medical education credit.

RESEARCH

- Clinical Outcomes of Patients With Pseudotumor Cerebri Treated in a Multidisciplinary Clinic
- Pseudotumor Cerebri as a Late Presentation of Craniosynostosis in Children
- Radiological Findings in Neuroborreliosis

MAJOR LECTURESHIPS AND SEMINARS

- "Neurodevelopmental Assessment," UPMC Hamot adult neurology lecture series, 2016
- "Idiopathic Intracranial Hypertension," ophthalmology lecture series, 2016
- "Pseudotumor Cerebri and Optic Nerve Edema," PGY-4 Boot Camp, Child Neurology Residency Program
- "Benign Epilepsies of Childhood," UPMC Hamot adult neurology lecture series, September 2017
- "Idiopathic Intracranial Hypertension: Advances in Diagnosis and Management," X Curso Internacional de Pediatría 2017, Hospital Ángeles, Puebla, Mexico, 2017
- "Childhood Migraine: Advances in Diagnosis and Management," X Curso Internacional de Pediatría 2017, Hospital Ángeles, Puebla, Mexico, 2017

PROFESSIONAL AFFILIATIONS/SOCIETY MEMBERSHIPS

- American Academy of Neurology
- American Headache Society
- North American Neuro-Ophthalmology Society
- Child Neurology Society
- North Central Headache Society

EDITORSHIPS

- Reviewer, *Headache Journal*

Patricia K. Crumrine, MD

Patricia K. Crumrine is a professor of pediatrics and neurology at the University of Pittsburgh and recently was chair of the Board of Directors of the American Board of Psychiatry and Neurology.

RESEARCH

Crumrine performs clinical research aimed at the study of the safety and efficacy of anti-epileptic drugs for children with seizure disorders.

ADVISORY COMMITTEE MEMBERSHIPS

- Examiner and Board of Directors, American Board of Psychiatry/Neurology
- Board of Directors, Epilepsy Foundation of Western/Central Pennsylvania
- Professional Advisory Board, Epilepsy Foundation of Western/Central Pennsylvania
- Medical Records Committee, Children's Hospital of Pittsburgh of UPMC
- Chair, Epilepsy Exam Writing Committee, American Board of Psychiatry and Neurology, 2011 to the present
- Child Neurology Maintenance of Certification Exam Writing Committee, American Board of Psychiatry and Neurology
- Professionalism Exam Writing Committee, American Board of Psychiatry and Neurology, 2014 to the present
- Task Force on Burnout of Neurologists, American Academy of Neurology, 2015 to the present
- Research Subcommittee, American Academy of Neurology, 2015 to the present
- Engagement Committee, American Academy of Neurology, 2015 to the present

EDITORSHIPS

- Editorial Board, *Journal of Child Neurology*

MAJOR LECTURESHIPS AND SEMINARS

- "Lecture to the Child Neurologists: Update on the Use of the Ketogenic Diet," Children's Hospital of Jagellonian University, Krakow, Poland, May 2015
- "Update of Autism," American Academy of Neurology, Vancouver, British Columbia, Canada, April 2016
- "Drug Effects on the EEG," webinar, American Society of Electrographic Technologists, Pittsburgh, Pa., May 2016
- "Penry Pediatric Epilepsy" four talks and two workshops, Winston Salem, N.C., June 2017

PROFESSIONAL AFFILIATIONS/SOCIETY MEMBERSHIPS

- Child Neurology Society
- Professors of Child Neurology
- American Academy of Neurology
- American Neurological Association
- American Clinical Neurophysiology Society
- American Epilepsy Society

HONORS

- *Best Doctors in America*, Woodward/White, Inc., 2009–2015, 2017
- Best Doctors, *Pittsburgh Magazine*, 2013, 2014, 2015, 2017
- Lifetime Achievement Award, Child Neurology Society, October 2015

Dana D. Cummings, MD, PhD

Dana Cummings is an assistant professor of pediatrics at the University of Pittsburgh and director of the Pediatric Stroke Program at Children's Hospital. After working in international development in pediatric neurology, stroke, and neurorehabilitation in former Soviet Central Asia in collaboration with the U.S. Agency for International Development, Cummings is facilitating a long-term partnership between Children's Hospital/University of Pittsburgh School of Medicine and Nazarbayev University School of Medicine and Kazakhstan National Research Center for Maternal and Child Health (NRCRMC). Cummings was the first Children's Hospital faculty member to give a master training class in Astana, Kazakhstan, at NRCRMC. The long-term goal of the project is to produce measurable improvements in medical education and patient outcomes in Kazakhstan and Central Asia.

RESEARCH

- NIH Thrombolysis in Pediatric Stroke, a multisite clinical trial that demonstrated the first model of a network of pediatric brain attack centers
- Relationship between anemia and non-anemic iron-deficiency states and neurology disorders, including transient ischemic attack and stroke
- Neuroimaging of stroke in children
- Cerebral perfusion changes in atypical migraine with aura mimicking stroke
- Neurovascular coupling abnormalities in pediatric brain attack

ADVISORY COMMITTEE MEMBERSHIPS

- Research Advisory Committee, University of Pittsburgh School of Medicine
- Coordinating Center, National Institute of Neurological Disorders and Stroke (NINDS) Stroke Trials Network
- Child Neurology/Neurodevelopmental Disability Clinical Competency Committee

MAJOR LECTURESHIPS AND SEMINARS

- UPMC 20th Annual Stroke Update, Departments of Neurology and Neurosurgery, University of Pittsburgh Medical Center, September 2016

PROFESSIONAL AFFILIATIONS/SOCIETY MEMBERSHIPS

- American Academy of Neurology
- World Federation of Neurology
- International Child Neurology Association

Luis De Jesus Fernandez, MD

Luis De Jesus Fernandez is an assistant professor of pediatrics at the University of Pittsburgh and specializes in epilepsy and intensive care unit neurology.

RESEARCH

- EpiBioS4Rx, epilepsy bioinformatics study for antiepileptogenic therapy

PROFESSIONAL AFFILIATIONS/SOCIETY MEMBERSHIPS

- American Epilepsy Society
- American Academy of Neurology
- American Clinical Neurophysiology Society

HONORS

- General Academic Pediatrics Primary Care Award, selected by the faculty of Children's Hospital of Pittsburgh

Robyn Filipink, MD

Robyn Filipink is a clinical associate professor of pediatrics at the University of Pittsburgh and a neurodevelopmental disabilities specialist. She is medical director of the Fragile X Clinic, a comprehensive center that serves patients through their life spans. She is also the director of the Tourette Syndrome Clinic, which focuses on all aspects of Tourette syndrome, including comorbidities and various therapeutic approaches. She is director of the Movement Disorders Clinic. Once monthly, she runs the Movement Disorders Clinical Case Conference, during which a patient is presented with his or her family, an examination is performed, and a multidisciplinary plan is formulated with input from several medical specialties.

RESEARCH

- Effects of AFQ056 on Language in Young Children With Fragile X Syndrome, site principal investigator (PI)
- Fragile X Clinical and Research Consortium Registry, PI
- Fragile X Syndrome Registry, PI

ADVISORY COMMITTEE MEMBERSHIPS

- UPMC Autism Taskforce, 2016 to the present
- Pediatric Neurology Education Committee, Children's Hospital of Pittsburgh of UPMC, 2006 to the present
- Clinical Competencies for Child Neurology and Neurodevelopmental Disabilities, 2014 to the present
- LEND affiliated faculty member, 2013 to the present
- Fragile X Clinical and Research Consortium, 2010 to the present
- Co-investigator, NeuroNEXT, University of Pittsburgh

MAJOR LECTURESHIPS AND SEMINARS

- "Tourette Syndrome: Case Dissection," UPMC grand rounds, June 2016
- "Tourette Syndrome Update 2015," Three Rivers Pediatric Update, May 2015
- Movement Disorder Case Conference, first Friday of each month, 60-minute live case presentation of a patient with a movement disorder
- Microcephaly, Medlink, 2017

PROFESSIONAL AFFILIATIONS/SOCIETY MEMBERSHIPS

- American Academy of Neurology
- American Academy of Pediatrics
- Child Neurology Society

Jenna M. Gaesser, MD

Jenna Gaesser is an assistant professor at the University of Pittsburgh, associate director of the Neonatal Neurology Program, codirector of the Neurofibromatosis Clinic, and codirector of Advanced Practice Provider Development and Utilization in the Child Development Unit.

RESEARCH

- Cardiac neurodevelopmental outcomes
- HEAL Clinical Trial

PROFESSIONAL AFFILIATIONS/SOCIETY MEMBERSHIPS

- Child Neurology Society
- American Academy of Neurology

SERVICE

- Education Committee, Child Neurology Residency, Children's Hospital of Pittsburgh

MAJOR LECTURESHIPS AND SEMINARS

- Practicum in fundoscopic exam for pediatric residents

Yanhua Gao, MD, PhD

Yanhua Gao is a research assistant professor at the University of Pittsburgh.

RESEARCH

Yanhua Gao concentrates on T-cell cancer immunotherapy with the goal of developing therapeutic agents and simple and safe strategies to prevent and treat metastases. She studies methods to generate potent anti-tumor memory T cells and to characterize their functional capabilities. She is dissecting the anti-tumor properties of individual T-cell subsets by isolating them from donor mice that have been cured of tumors and transferring them to host mice with established tumors. She establishes animal brain metastasis models and develops methods to bring anti-tumor T cells into the nervous system to eradicate neoplastic metastatic deposits in the brain and leptomeninges. She studies anti-tumor primary and memory T-cell activation, migration, and interaction with other leukocytes, including stimulatory and inhibitory interactions in tumor microenvironments. The results will lay the basis for clinical trials applying targeted virus and anti-tumor specific memory T cells to control and treat brain metastasis.

Amy C. Goldstein, MD

Amy C. Goldstein is an assistant professor at the University of Pittsburgh, as well as director of the Neurogenetics Subdivision and director of the Neurofibromatosis Clinic of Children's Hospital of Pittsburgh of UPMC.

RESEARCH

- North American Mitochondrial Disease Consortium Patient Registry and Biorepository
- Creating models of rare childhood liver diseases using the human liver on a chip
- Industry-sponsored clinical trial (Reata): RTA 408 Capsules in Patients With Mitochondrial Myopathy, PI: Vockley
- Industry-sponsored clinical trial (Stealth Biotherapeutics): SPIMM-202: A Phase II Randomized, Double-Blind, Placebo-Controlled Crossover Study to Evaluate the Safety, Tolerability, and Efficacy of Subcutaneous Injections of Elamipretide (MTP-131) in Subjects With Genetically Confirmed Mitochondrial Disease Previously Treated in the Stealth BioTherapeutics SPIMM-201 Study, PI: Vockley

STUDY SECTIONS

- Invited ad hoc reviewer, Mitochondrial Disease, Peer-Reviewed Medical Research Program (PRMRP), DOD, February 2016
- Invited ad hoc reviewer, Mitochondrial Disease Discovery Award Program, PRMRP, DOD, November 2016

ADVISORY COMMITTEE MEMBERSHIPS

- Education Committee, Division of Child Neurology, Department of Pediatrics, Children's Hospital of Pittsburgh of UPMC, August 2013 to the present
- Scientific and Medical Board, MitoAction, 2013 to the present
- Scientific and Medical Advisory Board, United Mitochondrial Disease Foundation (UMDF), 2015 to the present

- Board of Trustees, UMDF, 2007–2015
- National Symposium Strategic Planning Steering Committee, UMDF, 2012 to the present
- Clinical Research Committee, UMDF, 2012 to the present
- Symposium Steering Committee, UMDF, October 2011 to the present
- Palliative Care Task Force, Jewish Association on Aging, 2008 to the present
- Autism Treatment Network, 2007 to the present; Genetics-Metabolic Subcommittee, October 2009 to the present
- Abstract Review Committee, UMDF, 2016

EDITORSHIPS

- Editorial Board, *Pediatric Neurology*, August 2010 to the present
- Editorial Board, *Journal of Child Neurology*, October 2007 to the present

MAJOR LECTURESHIPS AND SEMINARS

- "Neurofibromatosis: Lessons From Clinical Experience," course organizer, Neurofibromatosis Symposium, Children's Hospital of Pittsburgh of UPMC, April 2016
- "Genetics of Autism Spectrum Disorder: What We Know and How to Use It," neurology grand rounds, UPMC, May 2016
- "Cryptic X Chromosome Alterations in Patients with Allan-Herndon-Dudley Syndrome," Clinical Genomics Case Conference, Magee-Womens Hospital, May 2016
- "Current Issues in the Management of Primary Mitochondrial Disease," invited speaker, Children's Hospital of Philadelphia, University of Pennsylvania Mitochondria Research Affinity Group, July 2016
- "Current Issues in the Management of Primary Mitochondrial Disease," invited speaker, Pennsylvania-Northeast UMFD Regional Symposium, Children's Hospital of Philadelphia, University of Pennsylvania, Philadelphia, Pa., October 2016
- "Genetics of Autism Spectrum Disorder: What We Know and How to Use It," American Academy of Neurology annual meeting, Vancouver, Canada, April 2016

PROFESSIONAL AFFILIATIONS/SOCIETY MEMBERSHIPS

- Allegheny County Medical Society (ACMS)
- Pittsburgh Pediatric Society
- American Academy of Pediatrics
- American Academy of Neurology
- Child Neurology Society
- Society for Inherited Metabolic Disorders
- President, Mitochondrial Medicine Society, 2014 to the present

HONORS

- Best Doctors: Pediatrics, *Pittsburgh Magazine*, 2012–2016

Anuja Vora Jindal, MD, MPH

Anuja Vora Jindal is an assistant professor of pediatrics at the University of Pittsburgh and specializes in neurodevelopmental disabilities. Her research interests include supporting transitional care for youth with autism spectrum disorder nonsyndromic craniosynostosis mimicking pseudotumor cerebri syndrome.

PROFESSIONAL AFFILIATIONS/SOCIETY MEMBERSHIPS

- Child Neurology Society
- American Academy of Neurology
- American Academy of Pediatrics

Todd Lamitina, PhD

Todd Lamitina is an associate professor of pediatric cell biology at the University of Pittsburgh.

RESEARCH

- Bipartite regulation of osmosensitive gene expression in *C. elegans*, 2014–2017
- Biomechanical profiling of *C. elegans* motility, 2012–2017
- Mechanisms of C9orf72-associated dipeptide toxicity, 2015–2018
- Characterization of modifiers of C9orf72-associated dipeptide toxicity in a new *C. elegans* model, 2016–2018

PROFESSIONAL AFFILIATIONS/SOCIETY MEMBERSHIPS

- Society for Neuroscience
- American Society of Nephrology
- Genetics Society of America
- American Physiological Society

MAJOR LECTURESHIPS AND SEMINARS

- "Using *C. elegans* to Identify Conserved Modifiers of C9orf72-Associated Dipeptide Toxicity," Motor Neuron Disease Meeting, Orlando, Fla., 2015
- "Using the Model Organism *C. elegans* to Strikeout Lou Gehrig's Disease," University of Pittsburgh Department of Developmental Biology, 2016
- "Modeling the Complexities of C9orf72 Toxicity in the Simple Organism *C. elegans*," University of Pittsburgh, Live Like Lou Center for ALS Research Conference, 2016
- "A *C. elegans* Model for C9orf72 Toxicity," University of Pittsburgh Division of Neuropathology, 2016
- "Using the Model Organism *C. elegans* to Strikeout Lou Gehrig's Disease," University of Pittsburgh Summer Undergraduate Research Program, 2016

- "Using the Model Organism *C. elegans* to Strikeout Lou Gehrig's Disease," University of Pittsburgh Honors College Health Sciences, 2016
- "Modeling Neurodegenerative Disease Mechanisms in the Model System *C. elegans*," Pittsburgh Institute for Neurodegenerative Diseases, University of Pittsburgh, 2016
- "Novel Translational Products Encoded by Disease-Associated GC-Rich Repeat Expansions Cause Toxicity in *C. elegans*," 15th Annual Pittsburgh Symposium on Intracellular Membrane Traffic, 2017

EDITORSHIPS

- Academic editor, *PLoS ONE*

Monica Naik, MD

Monica Naik is a clinical assistant professor at the University of Pittsburgh and director of the Neonatal Neurology Program. Her interest lies in neonatal neurology and fetal diagnostics. Consultation services are provided at Children's Hospital and Magee-Womens Hospital. Antenatal consultations are provided at Magee-Womens Hospital through the Fetal Diagnostics and Treatment Center. She follows newborns with complex neurological diagnoses in the newborn specialty clinic.

RESEARCH

- Phenobarbital Levels in Neonates: A Comparison Between Blood and Saliva Levels
- Encephalopathy Undergoing Hypothermia
- Placental Origin of Neonatal Brain Injury
- HEAL Study: High-Dose Erythropoietin for Asphyxia and Encephalopathy, proposed multicenter study
- Feasibility of contrast-enhanced transfontanelle ultrasound: comparison with magnetic resonance imaging (MRI) in the neonate
- Evaluation of efficacy and safety of oxcarbazepine for the management of neonatal seizures
- The correlation between a short-term conventional EEG in the first day of life and brain MRI in newborns undergoing hypothermia for hypoxic-ischemic encephalopathy

MAJOR LECTURESHIPS AND SEMINARS

- Talk on basics of neonatal EEG, invited speaker, ASET—the Neurodiagnostic Society Symposium, Pittsburgh, Pa., 2016

PROFESSIONAL AFFILIATIONS/SOCIETY MEMBERSHIPS

- Indian Academy of Pediatrics
- American Academy of Neurology
- Child Neurology Society

Udai Pandey, PhD

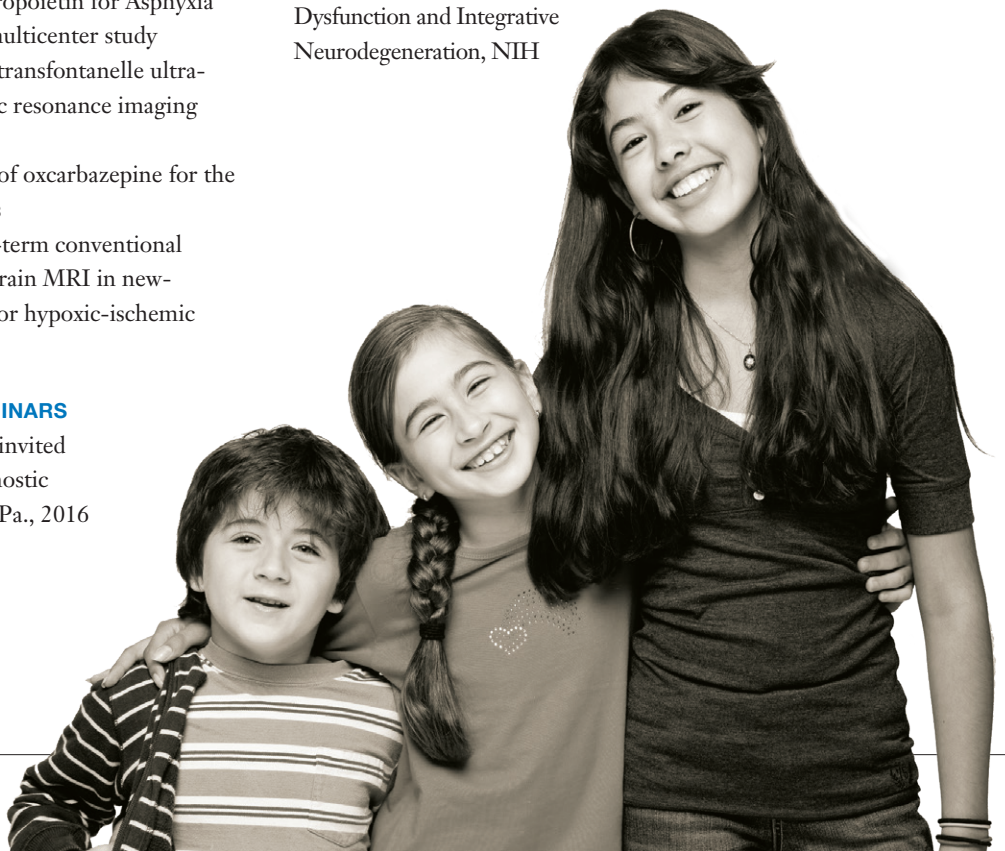
Udai Pandey is an associate professor of pediatrics and human genetics at the University of Pittsburgh.

RESEARCH

Pandey is interested in understanding the molecular basis of ALS and other related motor neuron degeneration diseases so that effective therapies can be developed. Recently, mutations in RNA-binding proteins have been identified in both sporadic and familial forms of ALS. Disease-causing mutations in these RNA-binding proteins indicate that defects in RNA metabolism might play an important role in causing motor neuron degeneration in ALS. Pandey's laboratory has developed *Drosophila* models of ALS that recapitulate several key pathological features of human disease, such as neurodegeneration and behavioral defects. Pandey's laboratory has been utilizing biochemical, cell biological, and genetic tools to dissect molecular mechanisms of ALS in *Drosophila* and mammalian neuronal models.

STUDY SECTIONS

- Ad hoc member, Friedreich Ataxia Research Association, 2010 to the present
- Ad hoc member, Israel Science Foundation, 2014
- Ad hoc member, Chronic Dysfunction and Integrative Neurodegeneration, NIH



- Ad hoc member, Medical Advisory Board, Muscular Dystrophy Association
- Ad hoc member, Special Emphasis Panel, ZRG1 BDCN-W (03), NIH
- Ad hoc member, Molecular Neurogenetics Study Section, NIH
- Ad hoc member, AFM-Telethon Study Section, France
- Ad hoc member, Neural Oxidative Metabolism, Mitochondria, and Cell Death Study Section, NIH

EDITORSHIPS

- Academic editor, *PLOS One*
- Editorial Board, *JSM Genetics and Genomics*
- Editorial Board, *American Journal of Neuroscience*
- Editorial Board, *Austin Neurology*
- Editorial Board, *Scientific Reports*

MAJOR LECTURESHIPS AND SEMINARS

- "ALS-Causing Mutations in FUS Perturb Cytoplasmic Stress Granule Dynamics and Cause Neurodegeneration," Neuropathology Division, Department of Neurology, UPMC, Pittsburgh, Pa.
- "Pur Alpha Ameliorates FUS-Mediated Neuro-degeneration and Regulates Cytoplasmic Stress Granule Dynamics," 16th Annual Robert Packard Center for ALS Research Symposium, Baltimore, Md., March 2016
- "Function and Dysfunction of RNA-Binding Proteins in ALS: Models and Mechanisms," Department of
- Pathology, Case Western Reserve University, Cleveland, Ohio, host: Xinglong Wang, April 2016
- "Molecular Genetic Approaches to Define the Mechanisms of FUS-Mediated ALS," Department of Neurology, University of Massachusetts, Worcester, Mass., host: Fen-Biao Gao, April 2016
- "Identifying Genetic Modifiers of FUS Toxicity in a *Drosophila* Model of ALS," annual Drosophila Research Conference, Orlando, Fla., July 2016
- "Identifying Genetic Modifiers of FUS-Mediated Neurodegeneration," Packard Center for ALS at Johns Hopkins, Baltimore, Md., January 2017
- "Molecular Determinants of RNA-Mediated Toxicity in ALS," Pittsburgh Institute for Neurodegenerative Diseases, Pittsburgh, Pa., January 2017
- "Muscleblind Protects Against FUS-Mediated Neuro-degeneration," Gordon Research Conference on ALS and Related Motor Neuron Diseases, Stowe, Vt., July 2017
- International Conference on Neurology and Stroke, Valencia, Spain, June 2017
- International Conference on Translational Neurosciences and its Application in Protection of Mental Health, Odisha, India, October 2017

PROFESSIONAL AFFILIATIONS/SOCIETY MEMBERSHIPS

- Society for Neuroscience, 2007 to the present
- Genetics Society of America, 2012 to the present

HONORS

- "Best Short Talk," International Conference on Molecular Neurodegeneration, Seoul, South Korea, 2016

Christina Patterson, MD

Christina Patterson is an assistant professor of pediatrics at the University of Pittsburgh. Patterson is the director of the Epilepsy Monitoring Unit, medical director of the Pediatric Epilepsy Surgery Program, codirector of the University of Pittsburgh Comprehensive Epilepsy Center, and director of epilepsy services at Children's Hospital of Pittsburgh of UPMC.

RESEARCH

- Funded R01 project: Recovery of High-Level Visual Function in Patients with Lobectomy or Hemispherectomy, clinical investigator
- Laboratory data for prediction of 30-day hospital readmission of pediatric seizure patients
- Maternal Outcomes and Neurodevelopmental Effects of Anti-Epileptic Drugs study, a multicenter national study investigating antiepileptic drug use in pregnancy and effects on children born to mothers with epilepsy, co-investigator
- Clinical trials for novel treatments for medically intractable epilepsy, co-investigator
- Assessing the accuracy of ictal and interictal single-photon emission computed tomography versus interictal 18F-fluorodeoxyglucose
- Childhood absence epilepsy pharmacokinetics, pharmacodynamics, and pharmacogenetics
- Investigation of CDKL5 and its role in brain ependymal cilia function
- Assessing the accuracy of ictal and interictal SPECT versus interictal fluorodeoxyglucose (FDG) positron emission tomography (PET), an observational data-collection study to assess the accuracy of localization of the epileptogenic zone in ictal and interictal SPECT testing versus interictal FDG PET testing in patients being evaluated for epilepsy surgery

MAJOR LECTURESHIPS AND SEMINARS

- "Diagnosing Pediatric Epilepsy," Three Rivers Pediatric Update, Children's Hospital of Pittsburgh of UPMC, Pittsburgh, Pa., May 2015

- "Diagnosing Epilepsy," University of Pittsburgh Nurse Practitioner Training Program, September 2012 and ongoing annually
- "Temporal Lobectomy Versus Hemispherectomy, Invasive Monitoring Case Presentation," International Society for Pediatric Neurosurgery, Denver, Colo., 2017

PROFESSIONAL AFFILIATIONS/SOCIETY MEMBERSHIPS

- American Academy of Neurology
- American Epilepsy Society
- Child Neurology Society
- National Association of Epilepsy Centers (NAEC)

EDITORSHIPS

- Invited journal referee, *Journal of Clinical Neurophysiology*
- Invited journal referee, *Neurodiagnostic Journal*

Deepa Rajan, MD

Deepa Rajan is an assistant professor of pediatrics at the University of Pittsburgh and codirector of the Neurogenetics Program.

RESEARCH

- Neurogenetics Program Patient Registry: clinical and genetic diagnosis, natural history study, translational research, and biorepository
- Next-Generation Sequencing and Metabolomics in Pediatric Neurogenetic Disorders
- Functional characterization of GEMIN5, establishing a gene-discovery pipeline from variants of unknown significance on next-generation sequencing

ADVISORY COMMITTEE MEMBERSHIPS

- Child Neurology Education Committee, Children's Hospital of Pittsburgh

MAJOR LECTURESHIPS AND SEMINARS

- Neuroanatomy lecture series to the child neurology residents
- "What Do These Orders Really Mean? Simplified Approach to Common Metabolic Tests Ordered in Child Neurology," annual lecture to pediatric residents and medical students, Pittsburgh, Pa., 2016

PROFESSIONAL AFFILIATIONS/SOCIETY MEMBERSHIPS

- American Academy of Neurology
- Child Neurology Society
- American Epilepsy Society
- Accreditation Council for Graduate Medical Education, setting up milestones for Child Neurology Residency

Robert Safier, MD

Robert Safier is an associate professor of pediatrics at the University of Pittsburgh, director of the Medical Student and Resident Child Neurology Education Program, and codirector of the Child Neurology Inpatient Floor Team.

ADVISORY COMMITTEE MEMBERSHIPS

- Child Neurology Education Committee, Children's Hospital of Pittsburgh
- Codirector, Child Neurology Inpatient Floor Team

MAJOR LECTURESHIPS AND SEMINARS

- "The Impact of Genetic Testing in Infantile-Onset Epilepsy," poster presentation, Child Neurology Society, Vancouver, Canada, fall 2016
- "The Multimodal Approach to Atypical Migraine With Aura Mimicking Stroke: Time Course of Cerebral Perfusion Changes," poster presentation, Child Neurology Society, Vancouver, Canada, fall 2016

PROFESSIONAL AFFILIATIONS/SOCIETY MEMBERSHIPS

- American Academy of Neurology
- Child Neurology Society

Levi Shelton, MD

Levi Shelton is an assistant professor of pediatrics at the University of Pittsburgh, codirector of Advanced Practice Provider Development and Utilization, and director of Visiting Resident Education in the Child Neurology Division.

PROFESSIONAL AFFILIATIONS/SOCIETY MEMBERSHIPS

- Child Neurology Society
- American Academy of Neurology

SERVICE

- Education Committee, Child Neurology Residency, Children's Hospital of Pittsburgh
- Transition of Care Task Force, Children's Hospital of Pittsburgh

MAJOR LECTURESHIPS AND SEMINARS

- "Pediatric Board Review: Neurology," fellow facilitator, 40 pediatric residents, April 2016
- "Fast Facts in Neuro Infectious Diseases," fellow lecturer, 15 child neurology/neurodevelopmental disabilities residents, May 2016
- "Bacterial Infections of the Central Nervous System," invited fellow lecturer, 20 medical residents, Teine-Keijinkai Hospital, Sapporo, Japan, January 2017

- "Headache," invited fellow lecturer, 20 medical residents, Teine-Keijinkai Hospital, Sapporo, Japan, January 2017
- "The Neurologic Exam," invited fellow lecturer, 12 medical residents, Teine-Keijinkai Hospital, Sapporo, Japan, January 2017

Bilal Sitwat, MD

Bilal Sitwat is an assistant professor of pediatrics at the University of Pittsburgh and a member of the epilepsy subdivision. He is interested in using neuromodulation to treat refractory epilepsy.

RESEARCH

- Refractory Status Epilepticus in Children
- Levetiracetam Effectiveness in the Treatment of the Electrical Status Epilepticus During Slow-Wave Sleep
- Determining whether topiramate and zonisamide cause oligohydrosis as well as alter sweat electrolyte concentrations
- A 12-month, open-label study to evaluate the safety and tolerability of pregabalin as adjunctive therapy in pediatric subjects 1 month to 16 years of age with partial-onset seizures and pediatric and adult subjects 5–65 years of age with primary generalized tonic-clonic seizures

ADVISORY COMMITTEE MEMBERSHIPS

- Epilepsy consultant, Epilepsy Foundation of Western/Central Pennsylvania, March 2012 to the present
- Project Access, HSRA

MAJOR LECTURESHIPS AND SEMINARS

- "Sudden Unexplained Death in Epilepsy: Know the Facts! Supporting Parents, Supporting Kids," regional conference for the Epilepsy Foundation of Western/Central Pennsylvania, November 2016
- "Current Practice in Pediatric Epilepsy and Its Management," invited lecturer, Children's Institute of Pittsburgh, May 2017
- "Uncontrolled Seizures: What Every Patient and Parent Should Know!" invited speaker, Epilepsy Foundation of Western/Central Pennsylvania, November 2017
- "Current Practice of Head Imaging in Pediatric Trauma and Epilepsy," Wheeling Hospital, W.Va., November 2017

PROFESSIONAL AFFILIATIONS/SOCIETY MEMBERSHIPS

- American Academy of Neurology
- American Epilepsy Society
- Child Neurology Society
- American Academy of Pediatrics

Yoshimi Sogawa, MD, MS

Yoshimi Sogawa is an associate professor of pediatrics at the University of Pittsburgh, the divisional director of clinical research, and a member of the epilepsy subdivision of the Child Neurology Division. She has a master's degree in clinical research methods and has more than 20 publications in the field of child neurology and epilepsy. She has started a prospective observational study of infants and young children with epileptic encephalopathy to address their cognitive outcomes and risk factors and has enrolled 81 patients since 2013. She is collaborating on the new NIH-funded Established Status Epilepticus Treatment Trial and is the site PI for a Pennsylvania study of the use of cannabidiol for refractory epilepsy in children.

RESEARCH

- Prospective observational study about epileptic encephalopathy in young children (75 patients enrolled), PI
- The Effect of Vagus Nerve Stimulation in Children With a History of Status Epilepticus, PI
- Use of Vagus Nerve Stimulator on Primary Generalized Epilepsy, PI
- The Impact of Genetic Testing in Infantile-Onset Epilepsy, PI
- Established Status Epilepticus Treatment Trial, co-investigator
- A study on the effect of Epidiolex® in children with intractable epilepsy, site PI
- Subspecialty clinical/clinical research expert (co-investigator) at the University of Pittsburgh in NeuroNEXT network, an NIH-sponsored network to perform multicenter neuroscience clinical research studies (RFA-NS-17-024)

PROFESSIONAL AFFILIATIONS/SOCIETY MEMBERSHIPS

- American Epilepsy Society

ADVISORY COMMITTEE MEMBERSHIPS

- American Epilepsy Society
- Pediatric Epilepsy Research Consortium, representing the children's hospital of Pittsburgh, 2017 to the present

MAJOR LECTURESHIPS AND SEMINARS

- "Pediatric Epilepsy Syndromes," annual clinical pharmacology course, University of Pittsburgh School of Medicine, 2014–2017
- "Cognitive Outcome of Infantile Spasms: Are We Making a Difference?" pediatric grand rounds, Children's Hospital of Pittsburgh of UPMC, July 2017

Kavita Thakkar, MD

Kavita Thakkar is an assistant professor of pediatrics at the University of Pittsburgh. She is codirector of the Clinical Neuroimmunology Program. Her research interests include immune-mediated disorders of the nervous system, autoimmune and demyelinating disorders of the brain, and acute brain stem clinical and radiological syndromes in children.

MAJOR LECTURESHIPS AND SEMINARS

- "Immunizations in a Child with Neurological Disorders," Three Rivers Pediatric Conference, University of Pittsburgh, Pittsburgh, Pa., May 2015
- "Acute Ataxia in Childhood," boot camp lecture, Children's Hospital of Pittsburgh of UPMC, Pittsburgh, Pa., July 2016

PROFESSIONAL AFFILIATIONS/SOCIETY MEMBERSHIPS

- The Consortium of MS Centers
- Child Neurology Society
- American Academy of Neurology

Inna Vaisleib, MD

Inna Vaisleib is an associate professor of pediatrics at the University of Pittsburgh and a member of the epilepsy subdivision of the Child Neurology Division.

RESEARCH

- Open-Label, Pharmacokinetics, Safety, and Efficacy Study of Adjunctive Brivaracetam in Children With Epilepsy (N01263)
- Open-Label Long-Term Follow-Up Study of Adjunctive Brivaracetam in Pediatric Subjects With Epilepsy (NO1266)
- Long-Term Follow-Up Partial Epilepsy Study (Sepracor 093-50)
- Randomized, Double-Blind, Placebo-Controlled Study of the Safety and Efficacy of Intranasal Midazolam (USL261) in the Outpatient Treatment of Subjects With Seizure Clusters (Upsher-Smith P261-401A)

ADVISORY COMMITTEE MEMBERSHIPS

- Quality Review Committee in Neurophysiology, Children's Hospital of Pittsburgh
- Director, industry-supported studies and education, Division of Child Neurology
- Director, Intensive Pediatric Epilepsy and Neurophysiology Teaching Program, Children's Hospital
- Physician director of medical services, Epilepsy Camp Frog
- Consultant to pharmaceutical companies on new antiepileptic drugs

PROFESSIONAL AFFILIATIONS/SOCIETY MEMBERSHIPS

- American Academy of Neurology
- Child Neurology Society
- American Epilepsy Society

Rajiv R. Varma, MD

Rajiv R. Varma is a clinical professor of pediatrics at the University of Pittsburgh and clinical director of the division. He has overseen rapid clinical growth of the division, improvement in access to the physicians, and establishment of multiple satellite and outreach locations. He launched a quality-assessment program. He mentors young faculty. Varma is past president of the ACMS and the ACMS Foundation. The ACMS is a 3,000-physician-member professional organization representing the interests of and advocating for patients and physicians. The foundation raises money to provide grants for scholarships, health-related research projects, and service organizations.

ADVISORY COMMITTEE MEMBERSHIPS

- Professional Advisory Board, Epilepsy Foundation of Western/Central Pennsylvania
- House of Delegates, chair of the International Medical Graduate Section, Pennsylvania Medical Society
- Peer Review Committee, Board of Directors, chair of the Membership Committee, and treasurer, ACMS

PROFESSIONAL AFFILIATIONS/SOCIETY MEMBERSHIPS

- American Academy of Pediatrics
- American Academy of Neurology
- Child Neurology Society
- American Medical Association
- Mitochondrial Medicine Society

MAJOR LECTURESHIPS AND SEMINARS

- "The Global Burden of Epilepsy," Professor Shiv N. Singh Memorial Lecture, Annual Scientific Program of Patna Medical College, Patna, India, February 2017

Shelley Williams, MD

Shelley Williams is an associate professor of pediatrics at the University of Pittsburgh, a member of the epilepsy subdivision of the Child Neurology Division, director of the Pediatric Electrophysiology Fellowship Program, and director of the Pediatric Ketogenic Diet Clinic.

ADVISORY COMMITTEE MEMBERSHIPS

- Advisory Board, Tuberous Sclerosis Alliance Education Committee, Neurology Division

PROFESSIONAL AFFILIATIONS/SOCIETY MEMBERSHIPS

- Child Neurology Society
- American Epilepsy Society

TEACHING ACTIVITIES

CHILD NEUROLOGY RESIDENCY TRAINING PROGRAM

The Child Neurology Residency Training Program is an accredited three-year program. The first year of the residency is spent in the Adult Neurology Program at UPMC. The second and third years of the residency are spent in the Child Neurology Program at Children's Hospital of Pittsburgh of UPMC. Sitwat is a Bridges Program resident mentor.

NEURODEVELOPMENTAL DISABILITIES RESIDENCY TRAINING PROGRAM

One neurodevelopmental disabilities resident each year is accepted for a four-year training program that leads to board eligibility in neurodevelopmental disabilities and in neurology with special competence in child neurology by the American Board of Psychiatry and Neurology.

PEDIATRIC EPILEPSY FELLOWSHIP TRAINING PROGRAM

The Epilepsy Center at Children's Hospital of Pittsburgh of UPMC offers a one-year fellowship in neurophysiology. The program involves working in both inpatient and outpatient settings with the pediatric seizure population. In addition, there are rotations in EEG, prolonged video EEG monitoring, neuromuscular physiology, adult epilepsy, sleep disorders, and evoked responses.

MEDICAL SCHOOL TEACHING 2015–2017

- Clinical teaching in outpatient and inpatient settings (all faculty)
- Lecture series to medical students on clinical rotations (all faculty)
- Core Child Neurology Lecture Series (all faculty)
- Anatomy course/clinical basic skill MS1 (Abdel-Hamid)
- DMD, MS3 and MS4, University of Pittsburgh (Abdel-Hamid)
- Advanced Physical Exam course, MS1, University of Pittsburgh (Abdel-Hamid, Fernandez)
- Methods and Logic in Medicine MS2 (Alper)
- Scientific Management and Leadership course (Asato)
- Neurosciences problem-based learning small-group facilitator, MS1 (Asato)
- Neurosciences lecture, Cerebral Palsy: Neuroanatomic and Clinical Correlates, MS1 (Asato)
- Autism in the Dental Clinic (Asato)
- LEND director for 17 graduate student trainees and course codirector for 2174 HRS_2090 Leadership Seminars in Maternal Child Health and 2181_HRS_2079_Children with Disabilities (Asato)
- Class lecturer, PSYED 2530 course: Applied Developmental Psychology (master's level) lecture on "Neurodevelopmental Disabilities" (Asato)
- Transition to Internship: Focus on Disabilities, seminar organizer and facilitator (Asato)
- UPMC Graduate Medical Education 2017 Leadership Conference (Asato)
- Coordinator and director, Clinical Conference in Child Neurology, University of Pittsburgh (Bergman)
- Pediatric Brain Attack: Assessment and Management Pediatric Emergency Medicine Core Lecture (Cummings)
- Clinical Case in Traumatic Brain Injury (Cummings)
- Coordinator and mediator, Movement Disorder Case Conference (Filipink)
- Tourette Clinic introduction lecture (Filipink)
- Fragile X Clinic introduction and family pedigree lectures (Filipink)

- Grant Writing for Graduate Students (Lamitina)
- Imaging Cell Biology in Living Systems: From Single Molecules to Animal Models (Lamitina)
- Cell Biology of Normal and Disease States (Lamitina)
- Pathobiology of Neurodegeneration (Lamitina)
- Cellular and Molecular Neurobiology course lectures (Pandey)
- Neuroanatomy Workshop facilitator (Pandey)
- Faculty preceptor, Child Neurology Elective–Epilepsy Focus (Patterson)
- EEG record review (Patterson)
- Cranial Nerves, the Neurologic Exam, and Brain Death (Patterson)
- Advanced Physical Examination course, MSII (Rajan)
- Teaching facilitator, Neuroscience Problem-Based Learning (Rajan)
- Oversight of the MS-3 students during their third-year clinical clerkships, two students for each three-week neurology rotation (Safier)
- Director of medical student education, Children's Hospital of Pittsburgh (Safier)
- Pediatric Epilepsy Syndromes, annual course in Clinical Pharmacology (Sogawa)

RESIDENCY TEACHING 2015-2017

- Clinical teaching in outpatient and inpatient settings (all faculty)
- Core Child Neurology Lecture Series (all faculty)
- Bootcamp for new child neurology residents (all faculty)
- Mentor for scholarly projects (many faculty)
- Core neurophysiology teaching and precepting (all epilepsy faculty)
- Critical care fellows, EEG review and lectures, weekly (all epilepsy faculty)
- Preceptor for the first-year child neurology residents (four residents), continuity clinic (Abdel-Hamid)
- Neuromuscular Pathology Conference (Abdel-Hamid)
- Pediatric neuromuscular curriculum lectures (Abdel-Hamid)
- EMG skills and pediatric neuromuscular evaluation (Abdel-Hamid)
- Supervise NDD and child neurology didactic conferences and journal clubs (Asato)
- Western Psychiatric Institute and Clinic (WPIC) psychiatry residents and child psychiatry fellows, "Autism and Epilepsy for Psychiatrists" (Asato)
- Coordinator and director, Clinical Conference in Child Neurology, University of Pittsburgh (Bergman)
- Pseudotumor cerebri curriculum (Cleves-Bayon)
- Neuro-ophthalmology series (Cleves-Bayon)
- Neuro-ophthalmology conference (Cleves-Bayon)
- Cerebrovascular disorder curriculum, Pediatric Critical Care Medicine Fellowship (Cummings)
- Coordinator and mediator, Movement Disorder Case Conference (Filipink)
- Neurodevelopmental disabilities core lectures (Filipink)
- MERCK clinic lecture series, NDD topics (Filipink)
- Molecular Pathobiology course (Lamitina)
- Developing Successful Strategies for NIH K Awards (Lamitina)
- Neurology RITE Exam/Board Review (Patterson)
- Neuro-anatomy curriculum (Rajan)
- Neurophysiology/neuropharmacology curriculum (Rajan)
- Physician Assistant Child Neurology Orientation Program, mentoring (Shelton)
- Journal club faculty facilitator (Sogawa)
- Ketogenic Diet Overview/Troubleshooting, neurology residents, annual course (Williams)
- Tuberous Sclerosis Clinic, monthly, residents and fellows (Williams)

COLLEGE STUDENTS: OBSERVERS

MEDICAL STUDENTS: SECOND, THIRD, AND FOURTH YEARS

- UPMC
- Other national medical schools
- International medical schools

RESIDENCY TRAINING

- University of Pittsburgh Medical School Neurology Residency
- Allegheny General Hospital Neurology Residency
- Allegheny General Hospital Neurophysiology Fellowship
- Allegheny General Hospital Psychiatry Residency
- Hamot Medical Center Neurology Residency
- WPIC Psychiatric Residency
- WPIC Triple-Board Residency Program
- Children's Hospital of Pittsburgh Pediatric Residency Program
- UPMC Physical Medicine and Rehabilitation Residency
- University of Pittsburgh School of Dentistry Residency

THREE-YEAR BIBLIOGRAPHY

2015

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Ostrowski SM, Wright MC, Bolock A, Geng X, **Maricich SM**. Ectopic *Atoh1* expression drives Merkel cell production in embryonic, postnatal and adult epidermis. *Development*. 2015;142:2533-44.

Shuda M, Guastafierro A, Geng X, Shuda Y, Ostrowski SM, Lukianov S, Jenkins FJ, Honda K, **Maricich SM**, Moore PS, Chang Y. Merkel cell polyomavirus small T antigen induces cancer and embryonic Merkel cell proliferation in a transgenic mouse model. *PLOS One*. 2015;10(11):e0142329.

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Fernandez L, Gedela S, Tamber M, **Sogawa Y**. Vagus nerve stimulation in children less than 3 years with medically intractable epilepsy. *Epilepsy Research*. 2015;112:37-42.

Michel K, Zhao T, Karl M, Lewis K, **Fyffe-Maricich SL**. Translational control of myelin basic protein expression by ERK2 MAP kinase regulates timely remyelination in the adult brain. *J Neurosci.* 2015 May 20;35(20):7850-65.

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