Neurology

Division Data Summary

Research and Training Details

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Clinical Activities and Training

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Significant Publications

Andrew D Hershey, Current approaches to the diagnosis and management of paediatric migraine, Lancet Neurol 2010; 9: 190-204

This is an invited review of pediatric migraine, based upon excellent migraine research at Cincinnati Children's.

This study shows the ongoing interest in transcriptomics/genomics in the search for biomarkers of disease and the effects of treatments.


This is a landmark study to compare 3 AED's that have been used in absence epilepsy for some time. It is a model for future clinical pharmacology studies.


This paper is part of an ongoing study towards high frequency brain oscillations during brain development. This will be the basis for studies in pediatric brain disorders.


This study shows that mice lacking the Pet1 gene do not develop 80% of their serotonergic neurons; we showed that these mice that are abnormally inactive and hyper-reactive to sound but surprisingly have no learning and memory impairments.

Faculty Members

Antonius DeGrauw, MD, PhD, Professor; Director Neurology Division
Research Interests: Neurodevelopment, mitochondrial disorders

Todd Arthur, MD, Assistant Professor Clinical
Research Interests: Brain concussion

Anna W Byars, PhD, Associate Professor Clinical
Research Interests: Cognitive effects of epilepsy

James Collins, MD, PhD, Assistant Professor Clinical
Research Interests: Congenital Muscular Dystrophy; Neuromuscular Disease

David Franz, MD, Professor Clinical; Director Tuberous Sclerosis program
Research Interests: Tuberous sclerosis

Donald Gilbert, MD, Associate Professor Clinical; Director Movement Disorders program
Research Interests: Tourette syndrome, Transcranial Magnetic Stimulation (TMS)

Tracy A Glauser, MD, Professor Clinical; Director Comprehensive Epilepsy program
Research Interests: Epilepsy, pharmacology

Barbara Hallinan, MD, Assistant Professor Clinical
Research Interests: CSF steroid profiles

Andrew Hershey, MD, Professor Clinical; Director Headache Center
Research Interests: Migraine, blood genomics

Katherine Holland-Bouley, MD, PhD, Assistant Professor Clinical
Research Interests: Ion channels and epilepsy

Sarah Hopkins, MD, Assistant Professor Clinical
Research Interests: White Matter Disease; Multiple Sclerosis

Sejal Jain, MD, Assistant Professor Clinical
Research Interests: Epilepsy, sleep

Marielle A Kabbouche, MD, Assistant Professor Clinical
Research Interests: Migraine

Darcy Krueger, MD, Assistant Professor Clinical
Research Interests: Tuberous Sclerosis

Ki Lee, MD, Associate Professor Clinical; Director EEG lab, EMU
Research Interests: Epilepsy surgery

Cindy Molloy, MD, Assistant Professor Clinical
Research Interests: Autism
Diego Morita, MD, Assistant Professor Clinical
 Research Interests: Epilepsy, pharmacology

Hope O'Brien, MD, Assistant Professor Clinical
 Research Interests: Headaches

Douglas Rose, MD, Professor Clinical; Director MEG lab
 Research Interests: Magneto-Encephalography (MEG)

Mark Schapiro, MD, Professor Clinical; Director Neurology Residency program
 Research Interests: Neurodevelopmental disorders

Mary Sutton, MD, Assistant Professor Clinical
 Research Interests: Neuro-oncology

Shannon Standridge, DO, Assistant Professor Clinical
 Research Interests: Outcomes study, epilepsy

Jennifer Vannest, PhD, Research Assistant Professor
 Research Interests: Speech and language development

Charles Vorhees, PhD, Professor; Director Animal Neurobehavior Core
 Research Interests: Drugs/toxicants and brain development

Kristen Wesselkamper, MD, Assistant Professor Clinical
 Research Interests: Improvement science

Michael Williams, PhD, Research Associate Professor
 Research Interests: Drugs/toxicants and brain development

Brenda Wong, MD, Associate Professor Clinical; Director Neuromuscular program
 Research Interests: Duchenne's Muscular Dystrophy, Spinal Muscular Atrophy

Steve Wu, MD, Assistant Professor Clinical
 Research Interests: Movement Disorder; Transcranial Magnetic Stimulation (TMS)

Jing Xiang, MD, PhD, Research Associate Professor; Director MEG Research program
 Research Interests: MEG

Clinical Staff Members

- Irina Rybalsky, MD

Trainees

- Alice Lawrence, MD, PGYV, Milton S. Hershey Medical Center
- Cameron Thomas, MD, PGYV, University of Colorado
- Shawn Aylward, MD, PGYV, Southern Illinois University
- Keith Ridel, MD, PGYV, University of Cincinnati
- Jan-Mendelt Tillema, MD, PGYIV, St. Radboud University Nijmegen, The Netherlands
- Laura Lehman, MD, PGYIV, University of Cincinnati
- Jeffrey Tenney, MD, PGYIV, University of Massachusetts Medical School
- Jamie Fountain, MD, PGYIV, Albany Medical College
- Holly Hoenes, MD, PGYIII, Mercer University
- Andrea Pardo, MD, PGYIII, Universidad del Rosario
- John Pugh, MD, PGYIII, Boston University
- Tanishia Williams, MD, PGYIII, University of Medicine & Dentistry of New Jersey

Significant Accomplishments

Research in Childhood Absence Epilepsy

Tracy Glauser, MD, earned a Cincinnati Children’s Faculty Award for a series of accomplishments in epilepsy research. The *New England Journal of Medicine* published the preliminary findings from the landmark Childhood Absence Epilepsy (CAE) study, for which he is the primary investigator. This 32-center, 453-patient double-blind, randomized comparative trial is the second of its kind for pediatric epilepsy studies in 65 years.
In March, Glauser and his team received an $11.7 million grant to study long-term outcomes for children in the CAE study. The new study began in July 2010.

Glauser also co-authored an article on the International League Against Epilepsy (ILAE) reclassification of seizures and epilepsy. The article details the first new reclassification for seizures and epilepsy in more than 20 years.

Transcranial Magnetic Stimulation (TMS) Laboratory

Led by Donald Gilbert, MD, MS, and Steve Wu, MD, the TMS lab is exploring research in neurological function. They study motor cortex physiology in Tourette syndrome and ADHD and are co-investigators in a two-site, five-year NIH study assessing motor cortex and motor function in ADHD. Wu also received a grant this spring from the Tourette Syndrome Association for a one-year study of neuroplasticity and long-term potentiation in Tourette syndrome.

Jerzy Szafalarsky, MD, PhD, and Jennifer Vannest, PhD, are using the latest neuronavigation equipment to study aphasia in stroke. Our team is involved in additional studies that use TMS to quantify long-term potentiation (LTP) and depression (LTD) in humans.

Tuberous Sclerosis Complex Center

The Tuberous Sclerosis Complex (TSC) Center at Cincinnati Children’s launched a 25-center clinical trial to determine if RAD001 is an effective treatment for sub-ependymal giant astrocytomas (SEGAs) in patients with TSC. Center director David Franz, MD, is primary investigator. Along with studying RAD001’s efficacy on SEGAs, the study will investigate the drug’s effects on renal function and the frequency of epileptic seizures.

Division Publications


29. Modi AC, Monahan S, Daniels D, Gläuser TA. Development and validation of the Pediatric Epilepsy Medication Self-Management Questionnaire. Epilepsy Behav. 2010; :.


Grants, Contracts, and Industry Agreements

Grant and Contract Awards

Collins, J

Transcriptomics & Proteomics in Merosin-Deficient CMD Patients
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<td>Anomalous Motor Physiology in ADHD</td>
<td>Kennedy Krieger Research Institute (National Institutes of Health)</td>
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<td>07/01/06 - 06/30/11</td>
<td>$55,374 / $311,728</td>
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<td>The Role of SLITRK1 in Tourette and Related Disorders</td>
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<td>Cortical Excitability: Phenotype and Biomarker in ADHD</td>
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**Current Year Direct** 1,537,005

**Industry Contracts**
Franz, D
Novartis Pharmaceuticals $ 346,548

Hershey, A
Endo Pharmaceuticals, Inc. $ 22,145
GlaxoSmithKline $ 15,541
Palm Beach Neurology $ 2,695

Holland-Bouley, K
Novartis Pharmaceuticals $ 14,864

Krueger, D
Novartis Pharmaceuticals $ 16,940

Vorhees, C
Eli Lilly and Company $ 5,015
Tau Ta Tis, Inc. $ 32,002

Wong, B
PTC Therapeutics, Inc. $ 501,830
Genethon $ 126,537

**Current Year Direct Receipts**

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**Content**

ID: 62026
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