

Psychiatry

Division Details

RESEARCH AND TRAINING DETAILS

Faculty	23
Joint Appointment Faculty	2
Total Annual Grant Award Dollars	\$3,238,607
Total Annual Industry Award Dollars	\$275,238
CLINICAL ACTIVITIES AND TRAINING Staff Physicians	1
Clinical Fellows	21
Inpatient Encounters	29,803



Row 1: S Delgado, C Erickson, E Harris, S Sampang, D Barzman, E Pedapati

Row 2: R Gilman, D Vogel, J Strawn, M Sorter

Division Highlights

Daniel Medeiros Almeida, MD

Dr. Daniel Medeiros Almeida, MD, working with colleagues at University of Cincinnati and Lindner Center of HOPE, reviewed crossnational, and cross-sectional, studies that appraised the compelling association between polyunsaturated fatty acids (PUFAs) and recurrent mood disorders. Recent evidence suggests that low n-3 PUFA biostatus coincide with, and may precede, the initial onset of mood disorders. Reviewed translational evidence also provided a convincing rationale for this association. In addition to incorporation into cellular phospholipid membranes, the n-6 PUFAs including rachidonic acid and the n-3 PUFAs including eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA) serve as precursors of immune-inflammatory signaling modulators. Furthermore, there is a growing body of evidence implicating n-3 PUFAs in neuronal differentiation, synaptogenic and synaptic function. While the notion of nutritional medicine has been slow to impact conventional psychiatric training and practice, the extant evidence of n-3 PUFA insufficiency among patients with mood disorders may represent a "modifiable risk factor" and therefore represent a suitable therapeutic candidate incorporated into clinical practice. Published work, from 2017, is in *Progress in Lipid Research*.

Discovery of a Novel Drug Treatment Approach to Enhance Gains from Therapy in Children with Autism

Drs. Logan K. Wink, MD, and Craig A. Erickson, MD, discovered that low dose use of the glutamate modulator d-cycloserine (DCS) given weekly prior to social skills group therapy promotes continued social skill gains three months after the cessation of treatment. As published in *Molecular Autism* those children with autism who received the weekly DCS treatment continued to make social skill gains for a three month period following 10 weeks of social skills training compared to regression, or loss of gains, initially made during therapy noted in those who received placebo treatment. This is the first work showing drug-associated augmentation of gains from therapy in children with autism. Additionally, they showed that use of quantitative computer-based eye gaze tracking can work to predict which individuals with autism best respond to treatment and track positive treatment-associated change over time.

Meeting the Acute Care Needs of the Community by Growing Services and Improving Safety

The Division of Child and Adolescent Psychiatry has had the busiest year in its history. The number of emergency room assessments, inpatient admissions, inpatient days, and outpatient encounters are each at an all time high, with most increasing over 10% over the previous year. In addition, new services improve disposition and treatment options for patient's in acute need. A bridge clinic that offers urgent psychiatric services is now in place to offer intensive outpatient care for serious mental health difficulties, but not requiring inpatient care. Specialized services developed along similar methods with the use of care managers for patients with developmental disorders. Perhaps most importantly even with these increasing numbers, several safety measures have improved significantly in the past year. Over FY 16, there is a reduction of OSHA recordable staff injuries by 42%. There is a 88% reduction in patient mechanical restraints. This combination of higher levels of service, improved care options, and enhanced safety is a significant accomplishment for both the division and Cincinnati Children's.

Division Publications

- 1. Messamore E; Almeida DM; Jandacek RJ; McNamara RK. **Polyunsaturated fatty acids and recurrent mood disorders: Phenomenology, mechanisms, and clinical application.** *Progress in Lipid Research.* 2017; 66:1-13.
- Welge JA; Saliba LJ; Strawn JR; Eliassen JC; Patino LR; Adler CM; Weber W; Schneider MR; Barzman DH; Strakowski SM.
 Neurofunctional Differences Among Youth With and at Varying Risk for Developing Mania. Journal of the American Academy of Child and Adolescent Psychiatry. 2016; 55:980-989.
- 3. Wink LK; Minshawi NF; Shaffer RC; Plawecki MH; Posey DJ; Horn PS; Adams R; Pedapati EV; Schaefer TL; McDougle CJ. D-Cycloserine enhances durability of social skills training in autism spectrum disorder. *Molecular Autism*. 2017; 8:2.
- 4. Minshawi NF; Wink LK; Shaffer R; Plawecki MH; Posey DJ; Liu H; Hurwitz S; McDougle CJ; Swiezy NB; Erickson CA. A randomized, placebo-controlled trial of D-cycloserine for the enhancement of social skills training in autism spectrum disorders.

 Molecular Autism. 2016; 7:2.
- 5. Wink LK; Adams R; Wang Z; Klaunig JE; Plawecki MH; Posey DJ; McDougle CJ; Erickson CA. A randomized placebo-controlled pilot study of N-acetylcysteine in youth with autism spectrum disorder. *Molecular Autism*. 2016; 7:26.
- 6. Erickson CA; Ray B; Wink LK; Bayon BL; Pedapati EV; Shaffer R; Schaefer TL; Lahiri DK. Initial analysis of peripheral lymphocytic extracellular signal related kinase activation in autism. *Journal of Psychiatric Research*. 2017; 84:153-160.
- 7. Nery FG; Norris M; Eliassen JC; Weber WA; Blom TJ; Welge JA; Barzman DA; Strawn JR; Adler CM; Strakowski SM. White matter volumes in youth offspring of bipolar parents. *Journal of Affective Disorders*. 2017; 209:246-253.
- 8. Shaffer RC; Pedapati EV; Shic F; Gaietto K; Bowers K; Wink LK; Erickson CA. **Brief Report: Diminished Gaze Preference for Dynamic Social Interaction Scenes in Youth with Autism Spectrum Disorders.** *Journal of Autism and Developmental Disorders*. 2017; 47:506-513.
- 9. Li J; Qiu L; Xu L; Pedapati EV; Erickson CA; Sunar U. Characterization of autism spectrum disorder with spontaneous hemodynamic activity. *Biomedical Optics Express*. 2016; 7:3871-3881.
- 10. Wang J; Ethridge LE; Mosconi MW; White SP; Binder DK; Pedapati EV; Erickson CA; Byerly MJ; Sweeney JA. A resting EEG study of neocortical hyperexcitability and altered functional connectivity in fragile X syndrome. Journal of Neurodevelopmental Disorders. 2017; 9:11.
- 11. Gilman R. School Psychology Quarterly: Onward and Upward. School Psychology Quarterly. 2017; 32:1-4.

- 12. Borowski S; Zeman J; Carboni I; Gilman R; Thrash T. **Adolescent Controversial Status Brokers: A Double-Edged Sword.** *School Psychology Quarterly.* 2017; 32:50-61.
- 13. Pestian JP; Sorter M; Connolly B; Cohen KB; McCullumsmith C; Gee JT; Morency L-P; Scherer S; Rohlfs L; Grp STMR. A Machine Learning Approach to Identifying the Thought Markers of Suicidal Subjects: A Prospective Multicenter Trial. Suicide and Life-Threatening Behavior. 2017; 47:112-121.
- Almeida DM; Jandacek RJ; Weber WA; McNamara RK. Docosahexaenoic acid biostatus is associated with event-related functional connectivity in cortical attention networks of typically developing children. Nutritional Neuroscience (Informa). 2017; 20:246-9.
- 15. Wink LK; Pedapati EV; Horn PS; McDougle CJ; Erickson CA. Multiple Antipsychotic Medication Use in Autism Spectrum Disorder. Journal of Child and Adolescent Psychopharmacology. 2017; 27:91-94.
- 16. Wink LK; Badran I; Pedapati EV; Sorensen R; Benton SC; Johnson MC; Wissel G; Erickson CA. Clozapine for Drug-Refractory Irritability in Individuals with Developmental Disability. Journal of Child and Adolescent Psychopharmacology. 2016; 26:843-846.
- 17. Yoon Y; Wink LK; Pedapati EV; Horn PS; Erickson CA. Weight Gain Effects of Second-Generation Antipsychotic Treatment in Autism Spectrum Disorder. Journal of Child and Adolescent Psychopharmacology. 2016; 26:822-827.
- Pedapati EV; Gilbert DL; Erickson CA; Horn PS; Shaffer RC; Wink LK; Laue CS; Wu SW. Abnormal Cortical Plasticity in Youth with Autism Spectrum Disorder: A Transcranial Magnetic Stimulation Case-Control Pilot Study. Journal of Child and Adolescent Psychopharmacology. 2016; 26:625-631.
- 19. Erickson CA; Wink LK; Baindu B; Ray B; Schaefer TL; Pedapati EV; Lahiri DK. **Analysis of Peripheral Amyloid Precursor Protein** in **Angelman Syndrome**. *American Journal of Medical Genetics*, *Part A*. 2016; 170:2334-2337.
- 20. Tulisiak AK; Klein JA; Harris E; Luft MJ; Schroeder HK; Mossman SA; Varney ST; Keeshin BR; Cotton S; Strawn JR.
 Antidepresssant Prescribing by Pediatricians: A Mixed-Mathods. Current Problems in Pediatric and Adolescent Health Care.
 2017; 47:15-24.
- 21. Delgado SV; Barzman DH. Beyond DSM-5 and IQ Scores: Integrating the Four Pillars to Forensic Evaluations. *Psychiatric Quarterly*. 2017; 88:199-211.

Grants, Contracts, and Industry Agreements

Annual Grant Award Dollars

Investigator	Title	Sponsor	ID	Dates	Amount
Elana Harris, MD, PhD	Frontal Cortical Gamma Oscillations Mark Contamination Obsessions in Youth	National Institutes of Health	K23 MH100640	02/15/2014 - 01/31/2018	\$193,112
Logan Kristen Wink, MD	Phenotyping of the Severely Affected Autism Population	Simons Foundation (Central Maine Medical Center)	Phenotyping of the S	04/01/2014 - 09/30/2018	\$113,740
Michael T Sorter, MD	MOBILITY: Improving Patient- Centered Outcomes Among Overweight and Obese Youth with Bipolar Spectrum Disorders Treated with Second-Generation	Patient-Centered Outcome Research Inst. (University of Cincinnati)	Sorter_UC_PCORI	09/01/2015 - 08/31/2020	\$278,283

	Antipsychotics (Cost- Reimbursable portion)				
Craig Andrew Erickson, MD	Using Longitudinal Data to Characterize the Natural History of Fragile X Syndrome to Improve Services and Outcomes	Ctr for Disease Control and Prevention	U01 DD001185	09/01/2016 - 08/31/2020	\$99,998
Michael T Sorter, MD	Partnerships that Promote Integrated, Multidisciplinary Training Models and Increase Healthcare Access for the Ohio Medicaid Population	Ohio Department of Medicaid (ODM) (University of Cincinnati)	ODM201609	07/01/2015 - 06/30/2017	\$279,534
Ernest V Pedapati, MD	Eye Tracking as a Predictor of Methylphenidate Response in Autism with Co-morbid Attention Deficit Hyperactivity Disorder	Amer Acad of Child & Adoles Psychiatry	AACAP_Pedapati	07/01/2015 - 06/30/2017	\$30,000
Craig Andrew Erickson, MD	Cincinnati Children's- Simons SFARI Autism Cohort Submission	Simons Foundation	383634	03/01/2016 - 02/28/2019	\$149,405
Michael T Sorter, MD	MOBILITY: Improving Patient- Centered Outcomes Among Overweight and Obese Youth with Bipolar Spectrum Disorders Treated with Second-Generation Antipsychotics (Per Patient Component)	Patient-Centered Outcome Research Inst. (University of Cincinnati)	Sorter UC_PCORI	09/01/2015 - 08/31/2020	\$170,554
Craig Andrew Erickson, MD	Mehanisms of Neocortical and Sensory Hyperexcitability in Fragile X Syndrome	National Institutes of Health (University of Cincinnati)	U54 HD082008	02/01/2016 - 05/31/2019	\$917,956
Kelli R. Dominick, MD, PhD	Functional Connectivity in Infants with Fragile X Syndrome and High Risk Infant Siblings of Individuals with Autism Spectrum Disorder	Amer Acad of Child & Adoles Psychiatry	AACAP_Dominick	08/01/2016 - 12/03/2018	\$15,000
Ernest V Pedapati, MD	Anomalous Sensorimotor Physiology in Fragile X Syndrome	National Institutes of Health	K23 MH112936	04/01/2017 - 03/31/2022	\$182,933
Ernest V Pedapati, MD	Social Developmental Testing Device	Marcus Autism Center	MAC_Pedapati	01/24/2017 - 01/23/2018	\$499,375
Richard C Gilman, PhD	Identifyuing and Embedding	Department of Justice	2016-CK-BX-0009	01/01/2017	\$293,717

Brokers into a Multi-tiered -

System of Services to 12/31/2020

Reduce the Bystander Effect Leading to a Reduction in

School Violence

Drew Barzman, MD Developing a Standardized Park Foundation 17-147 04/01/2017 \$15,000

Risk Assessment Approach

to Improve School Safety. 03/31/2018

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Annual Industry Award Dollars

Investigator Industry Sponsor Amount

Logan Kristen Wink, MD Ovid Therapeutics, Inc. \$275,238

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