Psychiatry

Division Details

RESEARCH AND TRAINING DETAILS	
Faculty	**20**
Joint Appointment Faculty	**2**
Research Fellows and Post Docs	**1**
Total Annual Grant Award Dollars	**$1,545,431**
Total Annual Industry Award Dollars	**$880,600**
Total Publications	**24**

CLINICAL ACTIVITIES AND TRAINING	
Clinical Fellows	**21**
Inpatient Encounters	**29,447**
Outpatient Encounters	**46,815**

Row 1: M Singeltary, C Fosdick, J Bowden, L Wink, C Cinko, K Lee, K Dominick, C Engel, S Sampang

Row 2: S Delgado, D Vogel, E Pedapati, R Gilman, B Kurtz, M Sorter, D Nelson, C Erickson, E Harris

Research Highlights

Logan K. Wink, MD

Intranasal Ketamine Use in Autism Spectrum Disorder: A Placebo-Controlled Crossover Pilot Study.

In an investigator-initiated clinical trial sponsored by Roivant Sciences Ltd. and Cures Within Reach, Dr. Logan Wink and colleagues Drs. Craig Erickson and Ernest Pedapati are investigating the safety, tolerability, and efficacy of intra-nasal ketamine targeting core social impairment in adolescents and young adults with autism spectrum disorder. This study is a pilot double-blind, placebo-controlled crossover study which incorporaties an eye-tracking paradigm as a quantitative measure of social impairment, two novel blood biomarkers as potential predictors of treatment response, and exploratory electrophysiologic measures. This study is actively enrolling 24 individuals over the course of two years.

Craig A. Erickson, MD

Dr. Erickson conducts translational research in developmental disabilities including work in autism spectrum disorder, fragile X syndrome, and Angelman syndrome. In the 2015-2016 year, his group discovered a molecular abnormality in the plasma of humans with Angelman Syndrome. Researchers found persons with Angelman to have excessive levels of amyloid precursor protein (APP) in their plasma. Excess APP has been implicated in abnormal brain development, and this finding may provide a target for new treatment development in this field. With this finding, APP is the molecular biomarker most developed in the Angelman field for future use in treatment trials. Dr. Erickson's group also discovered a key molecular mark in peripheral lymphocytes in persons with autism spectrum disorder (ASD). His group found that persons with autism exhibited excessive activity of extracellular signal related kinase (ERK) a key intracellular signaling molecule. This sign of enhanced cellular activity in autism will open new dimensiosn for understanding causal factors in autism and developing biological treatments focused on this dysregulation.

Division Using MEDTAPP Healthcare Access Initiative Funding for Educational Curriculum

Through a grant from the Ohio MEDTAPP Healthcare Access Initiative, researchers developed an online educational curriculum for non-psychiatry medical practitioners to address gaps in knowledge to treat child psychiatric disorders. This project, "Child Psychiatry for the Primary Care Provider", had a total of 30 pediatrician learners in FY16. Led by Drs. Sampang, Bowden and Sorter, these learners watched the online didactic modules and had bi-weekly in person meetings to help learners with any questions that may have arisen out of the modules and to discuss any difficult cases from their practice. Learners are then paired with a child psychiatrist for future case review and discussions. Many of the division faculty are involved in both module creation and facilitating the in person case discussions.

Significant Publications

Erickson CA, **Wink LK**, Baindu B, Ray B, **Schaefer TL**, **Pedapati EV**, Lahiri DK. **Analysis of peripheral amyloid precursor protein in Angelman Syndrome**. *Am J Med Genet A*. 2016 Sep;170(9):2334-7.

This is the first report of abnormalities in amyloid precursor protein (APP) levels in humans with Angelman Syndrome. The paper implicates as a target of UBE3A. This finding provides the most advanced potential peripheral biomarker in Angelman Syndrome for potential use in treatment studies to predict targeted treatment response and assess for potential normalization of APP metabolism with treatment in Angelman Syndrome.

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**. *Mol Autism*. 2016 Apr 21; 7:26.

This is the first published study of N acetyl cysteine (NAC) in youth with autism targeting the core social impairment of the disorder. The study found that despite clear molecular engagement of NAC with oxidative species deficits associated with autism, that in short term study the NAC treatment was not associated with significant improvement in social skills.

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**. *J Child Adolesc Psychopharmacol*. 2016 Sep;26(7):625-31.

This is the first published report describing brain plasticity deficits in persons with autism using a novel transcranial magnetic stimulation (TMS) approach to assessing brain activity. This work hold promise for TMS as an effective measure of brain functional abnormalities in autism. As such, TMS is a potential stronger quantitative marker of brain dysregulation in autism. It may be possible to use it in the future to potentially characterize who with autism may best respond to a potential treatment, as well as to track potential response to treatment.

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**. *J Child Adolesc Psychopharmacol*. 2016 Mar 17.

This is the first manuscript describing systematic use of clozapine in an inpatient setting using a novel standardized dosing paradigm. Use of clozapine in those with drug refractory irritability associated with developmental disability is novel and provides a new systematic way to reduce significant interfering behavior in this select severely impaired population.

Wink LK, Fitzpatrick S, Shaffer R, Melnyk S, Begtrup AH, Fox E, **Schaefer TL**, Mathieu-Frasier L, Ray B, Lahiri D, Horn PA, **Erickson CA.** **The neurobehavioral and molecular phenotype of Angelman Syndrome**. *Am J Med Genet A*. 2015 Nov; 167A(11):2623-8.

This is the report describing brain-derived neurotrophic factor (BDNF) levels in persons with Angelman Syndrome. Abnormal BDNF elevations in plasma may provide a molecular reason for some of the phenotypic features noted in Angelman Syndrome while also providing a potential molecular target of treatment in the disorder.

Division Publications

1. Adams R, Fredstrom B, Peets K, Hodges EV, Bowker JC, Holleb L, Gilman R. **Validating a Measure of Friends' Responses to Self-Disclosure in Adolescent Obese and Public School Samples.** *J Clin Child Adolesc Psychol*. 2016:1-12.
2. Almeida D, Jandacek R, Weber W, McNamara R. **Docosahexaenoic Acid Biostatus Is Associated with Event-Related Functional Connectivity in Cortical Attention Networks of Typically Developing Children.** *Nutr Neuroscience*. 2016:1-9.
3. Bowers K, Wink L, Pottenger A, McDougle C, Erickson C. **Phenotypic Differences in Individuals with Autism Spectrum Disorder Born Preterm and at Term Gestation.** *Autism*. 2015; 19:758-63.
4. Curran RL, Badran IA, Peppers V, Pedapati EV, Correll CU, DelBello MP. **Aripiprazole for the Treatment of Antipsychotic-Induced Hyperprolactinemia in an Adolescent Boy.** *J Child Adolesc Psychopharmacol*. 2016; 26:490-1.
5. Davenport MH, Schaefer TL, Friedmann KJ, Fitzpatrick SE, Erickson CA. **Pharmacotherapy for Fragile X Syndrome: Progress to Date.** *Drugs*. 2016; 76:431-45.
6. Delgado S, Strawn J, Pedapati E. *Contemporary Psychodynamic Psychotherapy for Children and Adolescents: Integrating Intersubjectivity and Neuroscience*. New York:Springer.
7. Delgado SV, Barzman DH. **Beyond Dsm-5 and Iq Scores: Integrating the Four Pillars to Forensic Evaluations.** *Psychiatr Q*. 2016.
8. Erickson C, Wink L, Baindu B, Ray B, Schaefer T, Pedapati E, Lahiri D. **Analysis of Peripheral Amyloid Precursor Protein in Angelman Syndrome.** *Am J Med Genet A*. 2016; 170:2334-7.
9. Fitzpatrick SE, Srivorakiat L, Wink LK, Pedapati EV, Erickson CA. **Aggression in Autism Spectrum Disorder: Presentation and Treatment Options.** *Neuropsychiatr Dis Treat*. 2016; 12:1525-38.
10. Lin PI, Hsieh CD, Juan CH, Hossain MM, Erickson CA, Lee YH, Su MC. **Predicting Aggressive Tendencies by Visual Attention Bias Associated with Hostile Emotions.** *PLoS One*. 2016; 11:e0149487.
11. McGuire K, Erickson C, Gabriels RL, Kaplan D, Mazefsky C, McGonigle J, Meservy J, Pedapati E, Pierri J, Wink L, Siegel M. **Psychiatric Hospitalization of Children with Autism or Intellectual Disability: Consensus Statements on Best Practices.** *J Am Acad Child Adolesc Psychiatry*. 2015; 54:969-71.
12. 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.** *Mol Autism*. 2016; 7:2.
13. Oberman LM, Enticott PG, Casanova MF, Rotenberg A, Pascual-Leone A, McCracken JT, T. M. S. in ASD Consensus Group. **Transcranial Magnetic Stimulation in Autism Spectrum Disorder: Challenges, Promise, and Roadmap for Future Research.** *Autism Res*. 2016; 9:184-203.
14. Oh S, Ji H, Barzman D, Lin PI, Hutton J. **Pediatric Asthma and Autism-Genomic Perspectives.** *Clin Transl Med*. 2015; 4:37.
15. Pedapati E, DiFrancesco M, Wu S, Giovanetti C, Nash T, Mantovani A, Ammerman R, Harris E. **Neural Correlates Associated with Symptom Provocation in Pediatric Obsessive Compulsive Disorder after a Single Session of Sham-Controlled Repetitive Transcranial Magnetic Stimulation.** *Psychiatry Res*. 2015; 233:466-73.
16. 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.** *J Child Adolesc Psychopharmacol*. 2016; 26:625-31.
17. Pestian J, Grupp-Phelan J, Cohen K, Meyers G, Richey L, Matykiewicz P, Sorter M. **A Controlled Trial Using Natural Language Processing to Examine the Language of Suicidal Adolescents in the Emergency Department.** *Suicide Life Threat Behav*. 2016; 46:154-59.

18. Schonfeld DJ, Adams RE, Fredstrom BK, Weissberg RP, Gilman R, Voyce C, Tomlin R, Speese-Linehan D. **Cluster-Randomized Trial Demonstrating Impact on Academic Achievement of Elementary Social-Emotional Learning.** *Sch Psychol Q*. 2015; 30:406-20.

19. Siegel M, Smith KA, Mazefsky C, Gabriels RL, Erickson C, Kaplan D, Morrow EM, Wink L, Santangelo SL, Autism, Developmental Disorders Inpatient Research Collaborative. **The Autism Inpatient Collection: Methods and Preliminary Sample Description.** *Mol Autism*. 2015; 6:61.

20. Wink L, Pedapati E, Horn P, McDougle C, Erickson C. **Multiple Antipsychotic Medication Use in Autism Spectrum Disorder.** *J Child Adolesc Psychopharmacol*. 2015.

21. 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.** *Mol Autism*. 2016; 7:26.

22. 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.** *J Child Adolesc Psychopharmacol*. 2016.

23. Wink LK, Fitzpatrick S, Shaffer R, Melnyk S, Begtrup AH, Fox E, Schaefer TL, Mathieu-Frasier L, Ray B, Lahiri D, Horn PA, Erickson CA. **The Neurobehavioral and Molecular Phenotype of Angelman Syndrome.** *Am J Med Genet A*. 2015; 167A:2623-8.

24. Xiang J, Tenney JR, Korman AM, Leiken K, Rose DF, Harris E, Yuan W, Horn PS, Holland K, Loring DW, Glauser TA. **Quantification of Interictal Neuromagnetic Activity in Absence Epilepsy with Accumulated Source Imaging.** *Brain Topogr*. 2015; 28:904-14.

Grants, Contracts, and Industry Agreements

Annual Grant Award Dollars

Investigator	Title	Sponsor	ID	Dates	Amount
Craig Andrew Erickson, MD	Cincinnati Children's-Simons SFARI Autism Cohort Submission	Simons Foundation	383634	3/1/2016 - 2/28/2019	$149,995
Craig Andrew Erickson, MD	Acamprosate in Fragile X Syndrome	The John Merck Fund	Erickson TRP	1/1/2013 - 12/31/2016	$250,000
Richard C Gilman, PHD	Research on Children in Military Families: The Impact of Parental Family Deployment and Reintegration on Child and Family Functioning	National Institutes of Health	R21 HD079899	3/5/2015 - 2/28/2017	$219,957
Elana Harris, MD-PHD	Frontal Cortical Gamma Oscillations Mark Contamination Obsessions in Youth	National Institutes of Health	K23 MH100640	2/15/2014 - 1/31/2018	$179,141
Daniel Medeiros Almeida, MD	Long-Chain Omega-3 Fatty Acid Biostatus and Hippocampal Function in Adolescent Depressive Disorders	Amer Acad of Child & Adoles Psychiatry	AACAP_Almeida	8/1/2015 - 11/1/2016	$15,000
Ernest V Pedapati, MD	Eye Tracking as a Predictor	Amer Acad of Child &	AACAP_Pedapati	7/1/2015 -	$30,000

	of Methylphenidate Response in Autism with Co-morbid Attention Deficit Hyperactivity Disorder	Adoles Psychiatry		6/30/2017	
Michael T Sorter, MD	Continued Partnerships to Promote Integrated, Interprofessional Care	Ohio Department of Medicaid (ODM) (University of Cincinnati)	ODM201609	11/19/2015 - 6/30/2017	$22,441
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	7/1/2015 - 6/30/2017	$116,793
Michael T Sorter, MD	MOBILITY: Improving Patient-Centered Outcomes Among Overweight and Obese Youth with Bipolar Spectrum Disorders Treated with Second-Generation Antipsychotics	Patient-Centered Outcome Research Inst. (University of Cincinnati)	Sorter_UC_PCORI	9/1/2015 - 8/31/2020	$455,754
Logan Kristen Wink, MD	Phenotyping of the Severely Affected Autism Population	Simons Foundation (Central Maine Medical Center)	Phenotyping of the S	4/1/2014 - 9/30/2016	$106,350
Total Annual Grant Award Dollars					**$1,545,431**

Annual Industry Award Dollars

Investigator	Industry Sponsor	Amount
Logan Kristen Wink, MD	Cures Within Reach	$15,000
Logan Kristen Wink, MD	Simons Foundation	$106,350
Logan Kristen Wink, MD	Stemina Biomarkder Discovery, Inc.	$736,050
Logan Kristen Wink, MD	SynapDx Corporate Office	$23,200
Total Annual Industry Award Dollars		**$880,600**