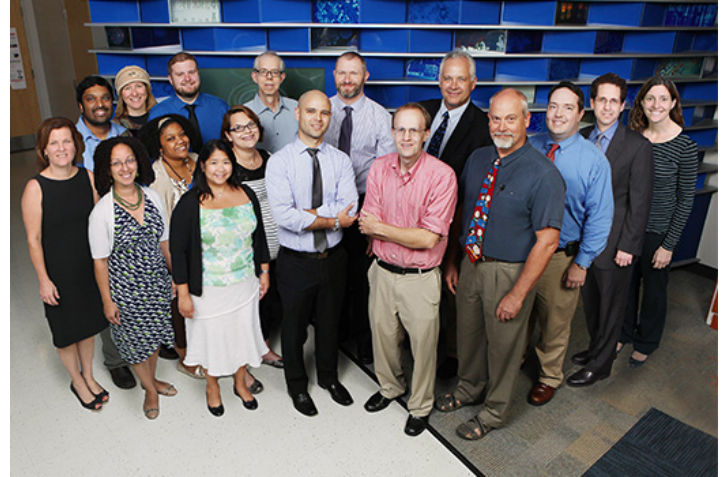


2015 Research Annual Report

Psychiatry

RESEARCH AND TRAINING DETAILS



[Click to view members](#)

Faculty	20
Joint Appointment Faculty	2
Support Personnel	19
Direct Annual Grant Support	\$870,361
Direct Annual Industry Support	\$262,242
Peer Reviewed Publications	40

CLINICAL ACTIVITIES AND TRAINING

Clinical Fellows	21
Inpatient Encounters	27,010
Outpatient Encounters	39,832

[Download Report in PDF Format](#)
[Visit Psychiatry](#)

Research Highlights

Ernest V. Pedapati, MD

Children with autism, especially in combination with intellectual disability and severe communication impairments, can suffer from psychiatric disorders such as ADHD, irritability and depression. **Pedapati** is an assistant professor with a joint

appointment in the Division of Psychiatry and **Neurology** with a clinical focus on the treatment of severe behavioral symptoms in children with developmental disabilities. Pedapati's research focuses on identifying physiological markers including transcranial magnetic stimulation (TMS) measurements and electroencephalography (EEG) to predict treatment response to commonly used medications and decrease trial and error in these sensitive populations. Pedapati's research is supported by the **Procter Scholar Award**, a multiyear institutional funded scholarship, which supports his research activities and mentorship. In addition, in 2015, he was selected as the recipient of the **American Academy of Child and Adolescent Psychiatry Junior Investigator award** for investigating eye-tracking markers of stimulant response in autism.

Richard Gilman, PhD

Rich Gilman, PhD, recently received an R21 funding from NICHD to investigate the effects of an empirically based, family-focused therapy for veterans diagnosed with post traumatic stress disorder (PTSD). Children and families are often silent victims to the ravages of combat-related PTSD, and yet are rarely involved in treatment planning. The research is in collaboration with **UC College of Medicine** and the **Cincinnati Veterans Administration**. Data thus far indicate that in comparison to individual therapy, veterans and their partners who received cognitive-behavioral therapy, plus parent management training, report significantly lower levels of veteran PTSD symptoms, significantly higher levels of relationship and parenting satisfaction and significantly lower instances of child misbehaviors. Read more about this study [here](#).

New Residential Building at College Hill Campus

In FY15, the Division of Psychiatry opened a new 35,000-square-foot residential building at our **College Hill Campus**, with a playground and outdoor space. The opening of this new facility continues Cincinnati Children's commitment to pediatric mental health. The **Convalescent Hospital for Children's** unprecedented generosity and donation allows the College Hill Campus to serve its patient population of over 2,100 annually with state-of-the-art technology and facilities. The expansion offers a balance between private patient rooms that provide heightened safety and open patient unit spaces flooded with natural light and vibrant colors that stimulate comfort. The flexibility of the space meets the needs of both residential patients and inpatients in a homelike environment. This building will allow the Division of Child and Adolescent Psychiatry to expand to its full 92-bed capacity. The single rooms also allow families to stay longer with children, as some families stay with patients 24 hours a day, seven days a week.

Significant Publications

Erickson CA, Ray B, Maloney B, **Wink LK**, Bowers K, Schaefer TL, McDougale CJ, Sokol D, Lahiri DK. **Impact of acamprosate on plasma amyloid- β precursor protein in youth: A pilot analysis in fragile X syndrome-associated and idiopathic autism spectrum disorder suggests a pharmacodynamic protein marker.** *J Psychiatr Res.* 2014 Dec;59:220-8.

This is the first manuscript to demonstrate the pharmacodynamics impact of acamprosate on amyloid precursor protein derivatives in human blood. This is of importance because excessive amyloid precursor protein alpha is implicated in the pathophysiology of fragile X syndrome and potential autism spectrum disorder. Some correlation was also noted for the first time with improvement in social relatedness and reduction in blood amyloid precursor protein alpha in the clinical trials included in the analysis. We continue to investigate the impact of acamprosate on amyloid precursor protein levels in placebo controlled trials in autism and fragile X syndrome.

Division Publications

1. Adler BA, Wink LK, Early M, Shaffer R, Minshawi N, McDougale CJ, Erickson CA. **Drug-refractory aggression, self-injurious behavior, and severe tantrums in autism spectrum disorders: a chart review study.** *Autism.* 2015;

19:102-6.

2. Barzman D, Eliassen J, McNamara R, Abonia P, Mossman D, Durling M, Adler C, DelBello M, Lin PI. **Correlations of inflammatory gene pathways, corticolimbic functional activities, and aggression in pediatric bipolar disorder: a preliminary study.** *Psychiatry Res.* 2014; 224:107-11.
3. Barzman D, Geise C, Lin PI. **Review of the genetic basis of emotion dysregulation in children and adolescents.** *World J Psychiatry.* 2015; 5:112-7.
4. Bitter SM, Adler CM, Eliassen JC, Weber WA, Welge JA, Burciaga J, Shear PK, Strakowski SM, DelBello MP. **Neurofunctional changes in adolescent cannabis users with and without bipolar disorder.** *Addiction.* 2014; 109:1901-9.
5. Bowers K, Lin PI, Erickson C. **Pharmacogenomic medicine in autism: challenges and opportunities.** *Paediatr Drugs.* 2015; 17:115-24.
6. Bowker JC, Adams RE, Fredstrom BK, Gilman R. **Experiences of Being Ignored by Peers During Late Adolescence: Linkages to Psychological Maladjustment.** *Merrill Palmer Q-J Dev Psychol.* 2014; 60:328-354.
7. Cerullo MA, Eliassen JC, Smith CT, Fleck DE, Nelson EB, Strawn JR, Lamy M, DelBello MP, Adler CM, Strakowski SM. **Bipolar I disorder and major depressive disorder show similar brain activation during depression.** *Bipolar Disord.* 2014; 16:703-12.
8. Davis AK, DelBello MP, Eliassen J, Welge J, Blom TJ, Fleck DE, Weber WA, Jarvis KB, Rummelhoff E, Strakowski SM, Adler CM. **Neurofunctional effects of quetiapine in patients with bipolar mania.** *Bipolar Disord.* 2015; 17:444-9.
9. Dawson EL, Shear PK, Howe SR, Adler CM, DelBello MP, Fleck DE, Strakowski SM. **Impulsivity predicts time to reach euthymia in adults with bipolar disorder.** *Bipolar Disord.* 2014; 16:846-56.
10. DelBello MP, Hochadel TJ, Portland KB, Azzaro AJ, Katic A, Khan A, Emslie G. **A double-blind, placebo-controlled study of selegiline transdermal system in depressed adolescents.** *J Child Adolesc Psychopharmacol.* 2014; 24:311-7.
11. Detke HC, DelBello MP, Landry J, Usher RW. **Olanzapine/Fluoxetine combination in children and adolescents with bipolar I depression: a randomized, double-blind, placebo-controlled trial.** *J Am Acad Child Adolesc Psychiatry.* 2015; 54:217-24.
12. Dominick K, Wink LK, McDougale CJ, Erickson CA. **A Retrospective Naturalistic Study of Ziprasidone for Irritability in Youth with Autism Spectrum Disorder.** *J Child Adolesc Psychopharmacol.* 2015; 25:397-401.
13. Donfrancesco R, Di Trani M, Andriola E, Leone D, Torrioli MG, Passarelli F, DelBello MP. **Bipolar Disorder in Children With ADHD: A Clinical Sample Study.** *J Atten Disord.* 2014; .
14. Erickson CA, Ray B, Maloney B, Wink LK, Bowers K, Schaefer TL, McDougale CJ, Sokol DK, Lahiri DK. **Impact of acamprosate on plasma amyloid-beta precursor protein in youth: a pilot analysis in fragile X syndrome-associated and idiopathic autism spectrum disorder suggests a pharmacodynamic protein marker.** *J Psychiatr Res.* 2014; 59:220-8.
15. Findling RL, Pathak S, Earley WR, Liu S, DelBello MP. **Efficacy and safety of extended-release quetiapine fumarate in youth with bipolar depression: an 8 week, double-blind, placebo-controlled trial.** *J Child Adolesc Psychopharmacol.* 2014; 24:325-35.

16. Geise C, Barzman D, Strakowski S. **Pediatric emotion dysregulation: biological and developmental evidence for a dimensional approach.** *Psychiatr Q.* 2014; 85:383-9.
17. Hong YH, Wu SW, Pedapati EV, Horn PS, Huddleston DA, Laue CS, Gilbert DL. **Safety and tolerability of theta burst stimulation vs. single and paired pulse transcranial magnetic stimulation: a comparative study of 165 pediatric subjects.** *Front Hum Neurosci.* 2015; 9:29.
18. Hulvershorn LA, Schroeder KM, Wink LK, Erickson CA, McDougale CJ. **Psychopharmacologic treatment of children prenatally exposed to drugs of abuse.** *Hum Psychopharmacol.* 2015; 30:164-72.
19. Keeshin BR, Strawn JR, Out D, Granger DA, Putnam FW. **Elevated salivary alpha amylase in adolescent sexual abuse survivors with posttraumatic stress disorder symptoms.** *J Child Adolesc Psychopharmacol.* 2015; 25:344-50.
20. Korostenskaja M, Wilson AJ, Rose DF, Brunner P, Schalk G, Leach J, Mangano FT, Fujiwara H, Rozhkov L, Harris E, Chen PC, Seo JH, Lee KH. **Real-time functional mapping with electrocorticography in pediatric epilepsy: comparison with fMRI and ESM findings.** *Clin EEG Neurosci.* 2014; 45:205-11.
21. Kowatch RA, Scheffer RE, Monroe E, Delgado S, Altaye M, Lagory D. **Placebo-controlled trial of valproic Acid versus risperidone in children 3-7 years of age with bipolar I disorder.** *J Child Adolesc Psychopharmacol.* 2015; 25:306-13.
22. Moseley BD, Cole D, Iwuora O, Strawn JR, Privitera M. **The effects of lacosamide on depression and anxiety in patients with epilepsy.** *Epilepsy Res.* 2015; 110:115-8.
23. Pedapati EV, Gilbert DL, Horn PS, Huddleston DA, Laue CS, Shahana N, Wu SW. **Effect of 30 Hz theta burst transcranial magnetic stimulation on the primary motor cortex in children and adolescents.** *Front Hum Neurosci.* 2015; 9:91.
24. Saldana SN, Keeshin BR, Wehry AM, Blom TJ, Sorter MT, DelBello MP, Strawn JR. **Antipsychotic polypharmacy in children and adolescents at discharge from psychiatric hospitalization.** *Pharmacotherapy.* 2014; 34:836-44.
25. Schaefer TL, Davenport MH, Erickson CA. **Emerging pharmacologic treatment options for fragile X syndrome.** *Appl Clin Genet.* 2015; 8:75-93.
26. Schneider MR, Klein CC, Weber W, Bitter SM, Elliott KB, Strakowski SM, Adler CM, DelBello MP. **The effects of carbamazepine on prefrontal activation in manic youth with bipolar disorder.** *Psychiatry Res.* 2014; 223:268-70.
27. Stephens JR, Heffner JL, Adler CM, Blom TJ, Anthenelli RM, Fleck DE, Welge JA, Strakowski SM, DelBello MP. **Risk and protective factors associated with substance use disorders in adolescents with first-episode mania.** *J Am Acad Child Adolesc Psychiatry.* 2014; 53:771-9.
28. Strawn JR, Adler CM, McNamara RK, Welge JA, Bitter SM, Mills NP, Barzman DH, Cerullo MA, Chang KD, Strakowski SM, DelBello MP. **Antidepressant tolerability in anxious and depressed youth at high risk for bipolar disorder: a prospective naturalistic treatment study.** *Bipolar Disord.* 2014; 16:523-30.
29. Strawn JR, Dominick KC, Patino LR, Doyle CD, Picard LS, Phan KL. **Neurobiology of Pediatric Anxiety Disorders.** *Curr Behav Neurosci Rep.* 2014; 1:154-160.
30. Strawn JR, Hamm L, Fitzgerald DA, Fitzgerald KD, Monk CS, Phan KL. **Neurostructural abnormalities in pediatric anxiety disorders.** *J Anxiety Disord.* 2015; 32:81-8.
31. Strawn JR, John Wegman C, Dominick KC, Swartz MS, Wehry AM, Patino LR, Strakowski SM, Adler CM, Eliassen JC,

- DelBello MP. **Cortical surface anatomy in pediatric patients with generalized anxiety disorder**. *J Anxiety Disord*. 2014; 28:717-23.
32. Strawn JR, Prakash A, Zhang Q, Pangallo BA, Stroud CE, Cai N, Findling RL. **A randomized, placebo-controlled study of duloxetine for the treatment of children and adolescents with generalized anxiety disorder**. *J Am Acad Child Adolesc Psychiatry*. 2015; 54:283-93.
33. Strawn JR, Welge JA, Wehry AM, Keeshin B, Rynn MA. **Efficacy and tolerability of antidepressants in pediatric anxiety disorders: a systematic review and meta-analysis**. *Depress Anxiety*. 2015; 32:149-57.
34. Strunk CM, King KA, Vidourek RA, Sorter MT. **Effectiveness of the surviving the Teens(R) suicide prevention and depression awareness program: an impact evaluation utilizing a comparison group**. *Health Educ Behav*. 2014; 41:605-13.
35. Strunk CM, Sorter MT, Ossege J, King KA. **Emotionally troubled teens' help-seeking behaviors: an evaluation of surviving the Teens(R) suicide prevention and depression awareness program**. *J Sch Nurs*. 2014; 30:366-75.
36. Vasa RA, Carroll LM, Nozzolillo AA, Mahajan R, Mazurek MO, Bennett AE, Wink LK, Bernal MP. **A systematic review of treatments for anxiety in youth with autism spectrum disorders**. *J Autism Dev Disord*. 2014; 44:3215-29.
37. Vollmer LL, Strawn JR, Sah R. **Acid-base dysregulation and chemosensory mechanisms in panic disorder: a translational update**. *Transl Psychiatry*. 2015; 5:e572.
38. Wehry AM, McNamara RK, Adler CM, Eliassen JC, Croarkin P, Cerullo MA, DelBello MP, Strawn JR. **Neurostructural impact of co-occurring anxiety in pediatric patients with major depressive disorder: a voxel-based morphometry study**. *J Affect Disord*. 2015; 171:54-9.
39. Wink LK, O'Melia AM, Shaffer RC, Pedapati E, Friedmann K, Schaefer T, Erickson CA. **Intranasal ketamine treatment in an adult with autism spectrum disorder**. *J Clin Psychiatry*. 2014; 75:835-6.
40. 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*. 2014; .
-

Faculty, Staff, and Trainees

Faculty Members

Michael Sorter, MD, Professor

Leadership Division Director, Division of Psychiatry

Drew Barzman, MD, Associate Professor

Leadership Director of Child and Adolescent Forensic Psychiatry Service

Sandra Batsel-Thomas, MD, Assistant Professor

Jennifer Bowden, MD, Assistant Professor

Anthony Cavalieri, MD, Assistant Professor

Sergio Delgado, MD, Professor

Leadership Director of Outpatient Services

Carol Engel, MD, Associate Professor

Leadership Residency Training Director, Triple Board Program

Craig Erickson, MD, Associate Professor

Richard Gilman, PhD, Professor

Reyna Gilmore, MD, Assistant Professor

Elana Harris, MD, Assistant Professor

Emily Harris, MD, Assistant Professor

Mark Johnson, MD, Assistant Professor

Brian Kurtz, MD, Assistant Professor

Leadership Director of Consultation Services

Mary Matias-Akhtar, MD, Assistant Professor

Daniel Nelson, MD, Professor

Leadership Director of Inpatient Services

Ernest Pedapati, MD, Assistant Professor

Suzanne Sampang, MD, Associate Professor

Leadership Residency Training Director, Child and Adolescent Psychiatry

Daniel Vogel, MD, Assistant Professor

Logan Wink, MD, Assistant Professor

Joint Appointment Faculty Members

Melissa DelBello, MD, Professor (Psychiatry)

Jeffrey Strawn, MD, Associate Professor (Psychiatry)

Trainees

- **Daniel Almeida, MD**, PGY 5, Universidade Federal Do, Ceara, Brazil
- **Amelia Campos, MD**, PGY 5, University of Louisville, Louisville, KY
- **Giuliana Centurion, DO**, PGY 5, Nova Southeastern College of Osteopathic Medicine, Ft. Lauderdale, FL
- **Leslie Deckter, MD**, PGY 5, University of Cincinnati, Cincinnati, OH
- **Rokeya Tasnin, MD**, PGY5, Dhaka Medical College, Bangladesh
- **Ismail Badran, MD**, PGY4, University School of Medicine, Grenada
- **Katherine Lee, MD**, PGY4, University of Cincinnati, Cincinnati, OH.
- **Eric Rueff, DO**, PGY4, Michigan State School of Osteopathic Medicine, East Lansing, MI
- **Courtney Cinko, MD**, PL5, Rush Medical College, Chicago, IL

- **Paul Houser, MD**, PL 5, St. Louis University School of Medicine, St. Louis, MO
- **Kelli Dominick, MD/PhD**, PL 4, Boston University School of Medicine
- **Yesie Yoon, MD**, PL 4, Yonsei University
- **Sophianne Subbiah, MD**, PL 3, University of Iowa School of Medicine, Iowa City, IA
- **Theresa Umhoefer, MD**, PL 3, University of Wisconsin School of Medicine and Public Health, Madison, WI
- **Melissa Schuman-Wagner, MD**, PL 3, Medical College of Wisconsin, Milwaukee, WI
- **Nina Butler, MD**, PL 2, Michigan State University College of Medicine, East Lansing, MI
- **Martine Lamy, MD/PhD**, PL 2, University of Cincinnati School of Medicine, Cincinnati, OH
- **Joseph Sin, MD**, PL 2, University of Utah, Salt Lake City, UT
- **Katherine Glass, MD**, PL 1, University of Washington School of Medicine, Seattle, WA
- **Nicole Jederlinic, DO**, PL 1, New York College of Osteopathic Medicine, Old Westbury, NY
- **Katie Richards, MD**, PL 1, University of Chicago School of Medicine, Chicago, IL.

Grants, Contracts, and Industry Agreements

Grant and Contract Awards

Annual Direct

Erickson, C

Pilot Double-Blind, Placebo-Controlled Study of Acampros

Autism Speaks Grant Administration

6/1/2013-5/31/2016

\$13,075

A Randomized, Placebo-Controlled Trial of D-Cycloserine

Department of Defense (Indiana University Health)

W81XWYH-09-1-0091

2/15/2015-8/15/2015

\$50,060

Acamprosate in Fragile X Syndrome

The John Merck Fund

1/1/2013-12/31/2016

\$250,000

Gilman, R

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	\$139,930
--------------	--------------------	-----------

Harris, E**Frontal Cortical Gamma Oscillations Mark Contamination Obsessions in Youth**

National Institutes of Health

K23 MH100640	2/15/2014-1/31/2018	\$164,553
--------------	---------------------	-----------

Sorter, M**Partnerships that Promote Integrated, Multidisciplinary Training Models and Increase Healthcare Access for the Ohio Medicaid Population**

Ohio Department of Medicaid (University of Cincinnati)

5/9/2014-6/30/2015	\$203,063
--------------------	-----------

Wink, L**Phenotyping of the Severely Affected Autism Population**

Simons Foundation (Central Maine Medical Center)

4/1/2014-9/30/2015	\$41,393
--------------------	----------

Phenotyping of the Severely Affected Autism Population_Reimbursement

Simons Foundation (Central Maine Medical Center)

4/1/2014-9/30/2015	\$8,287
--------------------	---------

Current Year Direct	\$870,361
----------------------------	------------------

Industry Contracts

Barzman, D

Teva Pharmaceuticals	\$11,165
----------------------	----------

Delgado, S

Pfizer, Inc	\$21,604
-------------	----------

Erickson, C

Alcobra Pharma	\$24,631
----------------	----------

Neuren Pharmaceuticals Limited	\$105,510
--------------------------------	-----------

Roche Laboratories, Inc	\$63,818
-------------------------	----------

Seaside Therapeutics, Inc.	\$2,698
----------------------------	---------

Wink, L

SynapDx

\$32,816

Current Year Direct Receipts

\$262,242

Total

\$1,132,603

Alcoholism Drug May Help Treat Fragile X Syndrome-Related Autism Spectrum Disorder



Craig Erickson, MD

PUBLISHED ONLINE AUG. 19, 2014

Journal of Psychiatric Research

A drug originally approved for treating alcoholism is showing promise in modulating the underlying neurochemistry of a type of autism linked to Fragile X Syndrome, an inherited genetic disorder.

Craig Erickson, MD, and his team have discovered that acamprosate, a drug that may modulate glutamate and gamma-aminobutyric acid (GABA) neurotransmission in the brain, normalizes the expression of proteins in the blood known to be dysregulated in people with Fragile X Syndrome-related autism spectrum disorder (ASD), and it produces improved behavior and social interaction skills in some of them.

Nearly half of children with Fragile X syndrome exhibit a type of autism marked by development disabilities, distinctive facial characteristics, social anxiety, communication deficiencies or repetitive movement behaviors. They also tend to have higher plasma levels of a derivative of amyloid- β precursor protein, called secreted APPa (sAPPa), as well as excessive levels of glutamate and insufficient levels of GABA, two abundant and critical neurotransmitters.

In collaboration with researchers at the Indiana University School of Medicine, Erickson reported on initial results of the positive impact of acamprosate on APP levels in blood. Now Erickson is collaborating with Rush Medical Center in Chicago on a 48-participant clinical trial of the drug, in which researchers will analyze blood levels for sAPPa, eye-tracking data, social interactions, and other ASD behavioral markers.

“Acamprosate is really a targeted treatment based on the physiology and neurochemistry of the disease,” Erickson says. “We’re trying to regulate and normalize some of the signaling pathways by use of this drug.” Tests on mice, he notes, produce similar molecular neurochemistry results.

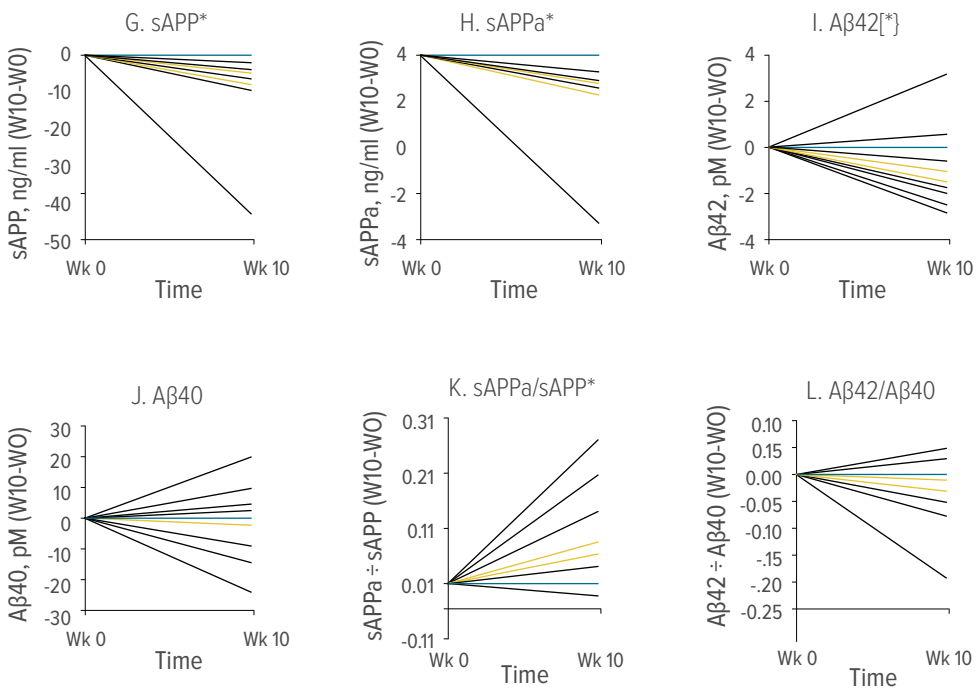
Plasma protein derivative analysis, Erickson says, holds promise as a biomarker for ASD-targeted treatment, and acamprosate may have “novel pharmacodynamics properties” to reduce amyloid- β precursor proteins in children with this type of ASD.

RESEARCH AND TRAINING DETAILS

Faculty	20
Joint Appointment Faculty	2
Support Personnel	19
Direct Annual Grant Support	\$870,361
Direct Annual Industry Support	\$262,242
Peer Reviewed Publications	40

Erickson CA, Ray B, Maloney B, Wink LK, Bowers K, Schaefer TL, McDougle CJ, Sokol DK, Lahiri DK. Impact of acamprosate on plasma amyloid-beta precursor protein in youth: a pilot analysis in fragile X syndrome-associated and idiopathic autism spectrum disorder suggests a pharmacodynamic protein marker. *J Psychiatr Res.* 2014;59:220-228.

PRE- AND POST-ACAMPROSATE IN FXS SUBJECTS



Results from two pilot studies show that treatment with the drug acamprosate produce improved behavior and social interaction skills in some children with Fragile X Syndrome-related autism spectrum disorder. These fan plots show blood test results from FXS patients assayed for selected processing products of the plasma amyloid-b precursor protein (APP), including sAPP, sAPPa, Ab42, Ab40, and Ab42/Ab40. Gray lines show individual subjects. Orange solid lines show mean sample change. Orange dashed lines show mean sample change excluding the most extreme result. Blue lines show "null" zero. Acamprosate use was associated with a significant reduction in plasma sAPP(total) and sAPPa levels, but no change occurred in Ab40 or Ab42 levels.

"We're trying to regulate and normalize some of the signaling pathways by use of this drug."