Autism Spectrum Disorders Program

Through its Autism Spectrum Disorders Program, the Nisonger Center is one of the nation’s leading centers for interdisciplinary pre-service preparation and continuing education; training and technical assistance; direct services and demonstration projects; and research. Autism spectrum disorders (ASD) include autism, Asperger syndrome and pervasive developmental disorder – not otherwise specified (PDD-NOS). This portfolio highlights our recent achievements and describes current programs and services. While most of them span more than one mission area, we arranged them according to the primary mission area served.

Interdisciplinary Education and Training

Two graduate- and postgraduate-level programs and numerous pre-service, in-service and continuing education training programs offer students high-quality educational, research and training experiences. Students gain the knowledge and skills they need to become leaders in the ASD field.

Leadership Education in Neurodevelopmental and Related Disabilities (LEND) provides interdisciplinary leadership training to long-term graduate and postgraduate trainees. Primary objectives are to develop high levels of clinical expertise, skills, competence and leadership that will improve the health of
infants, children and adolescents with or at risk for ASD and other neurodevelopmental disabilities. LEND receives funding to focus on leadership training for students who want to specialize their learning in ASD.

LEND faculty members are involved in a collaborative research project with Easter Seals on autism screening in child development centers.

Last year, the LEND Program trained 15 long-term trainees across 10 disciplines. Nine LEND students received specialized training in the Autism Spectrum Disorders Clinic.

The Psychology of Intellectual and Developmental Disabilities (IDD) Doctoral Program prepares research-oriented scholars and clinicians to accept academic and other major leadership positions. The program specializes in training researchers and practitioners to work with people with IDD. Relevant experience can be gained through the Nisonger Center clinics and services. Clinical and research experience is also available through Nationwide Children’s Hospital, Franklin County Board of Developmental Disabilities and other partners.

The Health Promotion and Healthcare Parity project provides disability training for medical students at the University of South Florida and disability continuing education for healthcare providers, including physicians and nurses, on access to health care for people with developmental disabilities. This project will help children, adolescents and adults with ASD, who are especially likely to have problems accessing care that result in unmet healthcare needs.

Courses taught by Nisonger Center faculty on ASD

- **717.02**: Cross-listed course offered in Allied Med, Nursing, Social Work, and Speech and Hearing Science, provides interdisciplinary perspective on ASD.
- **PSYCH 571**: Senior undergraduate class on disabilities with practicum (30 percent of content on ASD).
- **PSYCH 652**: Graduate course on behavior modification with children, the use of Applied Behavior Analysis.
- **PSYCH 69309**: Research Forum required over the entire student experience in IDD Doctoral Program.
- **PSYCH 859.01**: Graduate seminar on assessment of exceptional children (emphasis on IDD and ASD).
- **PSYCH 859.02, 859.03**: Psychopharmacology of developmental disabilities, a graduate seminar on psychotropic medicines and methods to study effects.
- **SPEECH AND HEARING SCIENCE**: Annual lectures on ASD to undergraduate and graduate students in speech and hearing science.

Ohio’s STEM Ability Alliance (OSAA): STEM Degrees and Careers for Ohioans with Disabilities has three goals: 1) to increase recruitment of high school students with disabilities to major in science, technology, engineering and mathematics (STEM) at one of the OSAA community college and university partner institutions; 2) to increase retention and graduation rates of existing STEM students with disabilities; 3) to increase successful entry rates of OSAA STEM graduates into STEM graduate programs or STEM employment. Among our STEM students, 25 percent have Asperger syndrome. College students with ASD are eligible for the Choose Ohio First Scholarships funded by Ohio Board of Regents.

The Nisonger Center provides Early Childhood Education for children ages 1-6. Early intervention and preschool programs serve up to 64 children with developmental delays including ASD, supported by Franklin County Board of DD; 20 children ages 2-4 with typical development attend as peer models. Itinerant early intervention services are delivered at the OSU Child Care Center during regular child care hours for children 6 weeks to 3 years.
LEND trainees from special education, occupational therapy and speech-language pathology collaborate with ECE staff to collect information, develop goals and work directly with selected children on activities to help them reach their goals.

Last year, the ECE program served as a practicum site for 12 education and 10 psychology trainees. A total of 129 university students received training and an opportunity for employment, volunteer work or field work.

Each year, the Autism Program provides assessment, diagnostic and intervention services for about 75 children and their families and more than 260 hours of technical assistance.

Autism Diagnosis Education Pilot Project (ADEPP) is a state-funded clinical service to evaluate children ages 1-6 with suspected ASD and improve their care. LEND trainees participate in the clinics.

The Child Behavior Support Services Program serves children ages 4-18, while the Adult Behavior Support Services Program serves adults age 18 and older with challenging behaviors who are referred from the Franklin County Board of DD. Psychologists and behavior specialists meet with families and service providers to perform a functional assessment of the person’s challenging behaviors. The BSS staff trains caregivers to implement behavioral interventions. Together, they develop and monitor a behavior support plan according to guidelines provided by the Ohio Department of DD and Franklin County Board of DD.

Each year, the Behavior Supports Program serves about 485 individuals and families. Of these, 67 percent are in the adult program and 33 percent are in the child program. About 33 percent have ASD.

IDD Dental Program is Central Ohio’s largest provider of dental services for people of all ages with developmental disabilities, including ASD. The program also provides screening, oral hygiene education and community staff training. Preference is given to Franklin County residents.

One clinic is located in Nisonger Center on the Ohio State campus and is recognized nationally as a model for best practices. Another is located within the Franklin County Early Childhood Education Center. More than 70 percent of the children served by the second location are Latino, an underserved population.

At the annual Ohio Summer Games, the Dental Program screens about 400 Special Olympics athletes and collects data to assess disparities in care and access to care.

The EnvisionIT and Electronic Mentoring programs are being piloted in more than 20 high school and community programs across Ohio. These programs teach students Information Technology skills while they develop self-directed transition portfolios to plan for college or employment. Access Tomorrow provides students in the E-Mentoring program access to free and portable assistive technology applications delivered via flash drives. Both programs include a research component.

The Autism Spectrum Disorders Clinic is an interdisciplinary team clinic that provides clinical diagnosis, functional analysis of challenging behavior, communication and language assessments, medical and pharmacological evaluations, and behavior and education plans for people age 2 through adolescence.

Clinics and Services

Early Childhood Education
Aspirations is a social and vocational support group and job training program for young adults ages 17-30 with Asperger syndrome and high-functioning autism.

Group sessions focus on issues of friendship, responsibility, work and independence. Graduates of the eight-week program meet monthly for reunions. Subgroups have formed for teens, women, men and book clubs. Family support groups meet simultaneously to provide resources, friendship and guidance.

Since 2002, Aspirations has served more than 150 young adults with ASD and their families.

Kidnetic Energy is a community-based gymnastics program for children and adolescents with ASD and other developmental disabilities.

Next Chapter Book Club (NCBC) is a community-based literacy activity for adolescents and adults with intellectual disabilities. Some members read well and some need support to read. Many have ASD. NCBC encourages friendship and lifelong learning within inclusive community settings such as bookstores and cafés.

Originated by the Nisonger Center, there now are more than 160 book clubs located in 17 U.S. states, Canada and Germany.

Toy and Technology Library, with satellites in Dublin and in Nationwide Children’s Hospital, houses more than 1,500 developmental toys, switches, developmental software programs and low-technology augmentative communication devices available for families to borrow free of charge for up to 30 days. The library is managed by an occupational therapist to help families choose developmentally appropriate toys.
Each year, the toy library serves about 160 individuals and families and is a teaching site for more than 40 students.

Support of Siblings project offers support groups, information and advocacy for brothers and sisters of people with disabilities, including ASD.

The Transition program includes Go-to-Work, which places students with IDD, including autism, into paid internships that increase their employability.

The Ohio State School for the Blind Pathways Two program coordinates a summer work program for six persons with visual impairments, IDD or ASD.

In a typical year, we disseminate our Transitions career program on the Internet to more than 1,000 parents, teachers and students.

Community Outreach

Many of the programs and services described above include a community outreach component. Here are other highlights relating to ASD:

Athens Outreach Clinic through Athens Health Department; LEND faculty evaluate children ages 0-6 suspected of ASD or other neurodevelopmental disabilities. The clinic started in 2005.

An AUCD Act Early mini grant provides outreach training on implementing the “Medical Home Model” for students with ASD ages 2-21.

Nisonger Center faculty, staff and former trainees provide call-in support and technical assistance in quarterly NBC 4 WCMH-TV autism awareness events that began in 2009. Nisonger and Nationwide Children’s Hospital co-sponsor related “The Autism Puzzle” TV specials and free tabloid publications.

Autism Intervention Network on Physical Health uses clinical practice algorithms on gastrointestinal issues and sleep problems that were developed by the Autism Speaks’ “Autism Treatment Network.” The Faculty Parent Advocate is the representative.

The Faculty Parent Advocate collaborates with the OSU Medical Center Burn Unit and Patient Education Department on the Safe Signals Project, funded by Autism Speaks Family Services, to offer burn and scald prevention kits for young adults with ASD transitioning to community independence.

The Ohio Developmental Disabilities Council (ODDC) has funded a Legislative Advocacy Day grant to promote efforts to change public policy and improve service delivery to people with disabilities across the state. LEND Family Faculty and the Faculty Parent Advocate work with a person with disabilities on the grant.

The Director of Clinical Services and LEND Co-Director partners with a LEND Family Faculty member, also the parent of a child with autism, to conduct presentations on the use of the Medical Home Model for children with autism. This duo has presented to Nationwide Children’s Hospital staff, The Central Ohio Autism Society chapter and NBC 4’s “The Autism Puzzle” programs.

Nutrition Interventions and Therapies for Autism is an educational program by LEND faculty for parents and professionals interested in learning more about evidence-based nutritional interventions for children with autism.

For the Ohio Autism Systems Project, LEND faculty assist the Ohio Department of DD to evaluate existing services and develop needed service systems for persons with ASD.

Nisonger faculty collaborate with the Ohio Center for Autism and Low Incidence to develop resources for parents and share transition experiences at annual conferences. The Faculty Parent Advocate was on the Parent Manual team that created Ohio’s Guide to Autism Spectrum Disorders.

The Faculty Parent Advocate presents to several parent groups and a class at Otterbein University on making accommodations for students with ASD in inclusive classrooms.

Nisonger staff provides technical assistance to the faculty and staff at St. Timothy School to integrate children with ASD ages 5-12 into the school program. We also offer parent advocacy to parents of children with ASD through The Central Ohio Autism Society.
Research

Nisonger Center faculty conduct original scientific research aimed at expanding knowledge about or improving the quality of life of persons with autism spectrum disorders. Our current research efforts are focused on three themes: problem behavior; improving achievement and transition outcomes for students with disabilities; and medication, behavior therapy and alternative treatments for children with autism and other disabilities. At any given time, there are four to 10 ongoing treatment studies and several related studies.

“Social Cognition and Pragmatic Language.” Paula Rabidoux; Laura Wagner (Developmental Psychology). This is a series of studies investigating social cognition and pragmatic language in typically developing children and children with ASD, ages 3-12, over four years.

“Factors Predictive of Problem Eating Behaviors and Suboptimal Nutrition in Children with Autism.” Maureen Geraghty; Alison Lane. This is a LEND pilot study that aims to describe patterns of problem eating behaviors and to obtain biologic measures to further elucidate contributors or co-existing physiologic abnormalities affecting these behaviors.

Our Clinical Trials Program includes the Research Unit on Pediatric Psychopharmacology (RUPP). Below is a summary of recently completed and ongoing studies related to ASD. See also “Selected Publications” on page 8.

“Atomoxetine, Placebo, and Parent Training in Autism,” funded by NIMH. Michael Aman, PI; L. Eugene Arnold, Co-I; Luc Lecavalier, Co-I; Yaser Ramadan, Co-I. This is a study of children on the autism spectrum, ages 6-13 years (inclusive), who have clinically significant symptoms of ADHD. Participating families are randomized to parent management training (PMT) or not and to atomoxetine (Strattera) or placebo. The goal is to assess atomoxetine’s effects on ADHD symptoms, cognitive performance and “noncompliant” behavior. The study is also designed to determine whether PMT reduces either noncompliance or ADHD symptoms, and the data analysis will help to determine whether the two treatments have an additive effect on the participants’ problem behavior.

“Double-Masked, Placebo-Controlled Trial of Cholesterol in Hypocholesterolemic Autism Spectrum Disorder,” funded by Autism Speaks through Kennedy Krieger Institute. L. Eugene Arnold, PI; Yaser Ramadan, Co-I; Michael Aman, Co-I. This is a three-site study (at The Ohio State University, Kennedy Krieger Institute at Johns Hopkins, and National Institute of Child Health and Human Development) to investigate cholesterol levels in children ages 4-12 with autism spectrum disorders. Cholesterol is necessary for normal brain development. Smith-Lemli-Opitz syndrome involves a missing enzyme for cholesterol production; 75 percent of those with that genetic disorder have autistic symptoms, which can be prevented by cholesterol supplementation. Eight hundred to 900 children with ASD will have cholesterol screening, and 150 (60 with low cholesterol, 60 with normal cholesterol, and 30 with high cholesterol) will have comprehensive clinical characterization to describe the hypocholesterolemic phenotype. The 60 children with low cholesterol will be offered a 12-week placebo-controlled trial of cholesterol supplementation for core autistic symptoms, followed by 12 weeks of open cholesterol.

“An Open-Label (Part One) and a Randomized, Double-Blind, Placebo-Controlled (Part Two) Study of the Pharmacokinetics, Safety, Efficacy, and Tolerability of Memantine in Pediatric Patients with Autism,” funded by Forest Research Institute. Michael Aman, PI; L. Eugene Arnold, Co-I; Yaser Ramadan, Co-I; Jill Holloway, Co-I. This is an industry-sponsored clinical trial of memantine (Namenda) in young people with
autistic disorder, ages 6-17 years. The intent of the trial is to determine if memantine affects core features of autism, including social impairment, communication impairment, and repetitive or compulsive behaviors.

“Neuronal Nicotinic Receptor Modulation in the Treatment of Autism: A Pilot Trial of Mecamylamine,” funded by Autism Speaks. L. Eugene Arnold, PI; Michael Aman, Co-PI; Yaser Ramadan, Co-I; Susan Thompson, Co-I. This is an investigator-initiated pilot trial of mecamylamine (Inversine) in children with autistic disorder or PDD-NOS, ages 4-12 years. The intent of the trial is to determine whether mecamylamine affects core features of autism, including social impairment, communication impairment and repetitive behaviors. The results are now being analyzed.

“Risperidone and Behavior Therapy in Children with Pervasive Developmental Disorder: Long-Term Follow-Up,” funded by Autism Speaks. L. Eugene Arnold, PI; Michael Aman, Co-PI; Eric Butter, Co-PII. This study is a follow-up on the sample of the recently completed three-site Research Units on Pediatric Psychopharmacology (RUPP) Autism Network clinical trial. The previous study assigned 124 children (49 at the OSU site) with ASD and severe irritability/aggression in a 3:2 ratio to either medication plus parent training in behavior management or medication alone. The primary study showed a significant added benefit of parent training in addition to the large effect of the FDA-approved drug. This follow-up is to see if parent training in child behavior management has enduring or delayed effects on current behavior.

“Risperidone in the Treatment of Children and Adolescents with Autistic Disorder: A Double-Blind, Placebo-Controlled Study of Efficacy and Safety, Followed by an Open-Label Extension Study of Safety,” funded by Johnson & Johnson Pharmaceutical Research and Development. Michael Aman, PI; L. Eugene Arnold, Co-I; Yaser Ramadan, Co-I. This is an industry-sponsored study to compare the effects of placebo, a moderate dose of risperidone, and an ultra-low dose of risperidone in children and adolescents with autism and severe behavior problems (tantrums, aggression, and self-injury). Children are randomly assigned to one of the three experimental conditions for a six-week clinical trial, and this is followed by open-label treatment with known risperidone for a six-month follow-on trial. The primary outcome measure is the Aberrant Behavior Checklist (ABC), an instrument that was devised by the Nisonger investigative team.

“A Phase III Randomized, Double-Blind, Placebo-Controlled Trial of CM-AT in Children with Autism,” funded by CureMark. L. Eugene Arnold, PI; Michael Aman, Co-PI; Yaser Ramadan, Co-I. This is an industry-sponsored clinical trial to determine the effect of a digestive enzyme (CM-AT) on both autism symptoms and gastrointestinal difficulties. This study involves checking the stool of children ages 3-8 with autistic disorder for lack of chymotrypsin. Children who are found to be low in chymotrypsin will be offered a 12-week double-blind trial of enzyme supplementation, followed by an open trial.

“Genetic Influences on ADHD Expression and Treatment Response to Atomoxetine in ASDs,” funded by Ohio State’s Center for Clinical and Translational Science (CCTS). Julia Pinsonneault, Co-PI; Michael Aman, Co-PI; Elizabeth Hurt, Co-I; L. Eugene Arnold, Co-I. This project is designed to determine if children with ASD and with significant ADHD symptoms differ from children with ASD and no ADHD symptoms on candidate genes for dopamine, norepinephrine and serotonin. We shall also examine children who are clinical responders and nonresponders to a standardized trial of atomoxetine (Strattera) to determine if responders and nonresponders differ on candidate genes.

“Randomized Trial of Parent Training in Young Children with Autism,” funded by the National Institute of Mental Health. Michael Aman, Co-PI; Luc Lecavalier, Co-PI. This is a randomized clinical trial of parent training compared to psychoeducation in preschool-age children with ASD and irritability. Eligible participants will be randomly assigned to receive either parent training (PT) or psychoeducational intervention (PEP) over six months. The primary outcomes are changes in the child’s irritable and “noncompliant” behavior. The aim is to find out if parent training in behavior intervention principles can increase children’s adaptive behaviors, reduce challenging behaviors, and reduce reliance on behavioral medications. Enrollment of participants is ongoing from 2010 until at least 2014.

“Metabolic Effects of Antipsychotics” is an industry-sponsored study of the side effects of such antipsychotic drugs as risperidone and aripiprazole, which have FDA-approved indications for treatment of irritability in ASD. The aim is to delineate the effects on prolactin, weight gain, and other metabolic measures in children and adolescents who took those medications in the past two years. This is an important safety follow-up and should contribute useful information to the clinical decisions about treatment.
Autism Speaks selected the “Medication and parent training in children...” article cited in the lower left column as one of the 2009 “Top Ten” List of Achievements in Autism Research.


Each year, Nisonger faculty publish numerous articles about autism-related studies in peer-reviewed scientific journals.


Nisonger Center Faculty

- Helen Alexander, PT, MHS, PCS, Physical Therapy; LEND Program
- Michael G. Aman, PhD, Director of Research; Program Director, Research Unit on Pediatric Psychopharmacology; Professor of Psychology and Psychiatry
- L. Eugene Arnold, MD, MEd, Child and Adolescent Psychiatrist; Professor Emeritus of Psychiatry
- Betsey A. Benson, PhD, Program Director, Adult Behavior Support Services; Associate Professor of Clinical Psychiatry and Clinical Psychology
- Jane Case-Smith, PhD, Occupational Therapy; LEND Program; Professor of Allied Medical Professions
- Patricia Cloppert, BSFS, Program Manager, Community Development; LEND Program Faculty Parent Advocate
- Sherry Feinstein, MS, Clinical Program Manager, Early Childhood Development; LEND Program Faculty
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- Maureen E. Geraghty, PhD, Medical Dietetics; LEND Program; Assistant Professor of Allied Medical Professions
- Mary Gottesman, PhD, Nursing; LEND Program; Clinical Professor of Nursing
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- Susan M. Havercamp, PhD, Director, Health Promotion and Healthcare Parity; Associate Professor of Psychiatry and Psychology
- Amy Hess, Project Coordinator; LEND Program Family Faculty
- Margo Vreeburg Izzo, PhD, Nisonger Center Associate Director; Program Director, Special Education and Transition Services; LEND Program
- Alison Lane, PhD, OTR/L, Occupational Therapy; LEND Program; Assistant Professor of Allied Medical Professions
- Luc Lecavalier, PhD, Program Director, Child Behavior Support Services; Associate Professor of Psychology and Psychiatry
- Marilee Martens, PhD, Program Director, Williams Syndrome Program; OSU-Newark Assistant Professor of Psychology
- Paula C. Rabidoux, PhD, CCC-SLP, Speech-Language Pathology; Nisonger Center Director of Training and Community Outreach; LEND Program Co-Director; Adjunct Assistant Professor of Speech and Hearing
- Yaser Ramadan, MD, Director, Dual Diagnosis Clinic
- Karen L. Ratliff-Schaub, MD, Developmental-Behavioral Pediatrics; Nisonger Center Director of Clinical Services; LEND Program Co-Director; Clinical Associate Professor of Pediatrics; Director, Child Development Center, Nationwide Children’s Hospital
- Edward S. Sterling, DDS, Pediatric Dentistry; Program Director, IDD Dental Program; LEND Program; Associate Professor of Pediatric Dentistry
- Sandra Tanenbaum, PhD, Political Science; LEND Program; Associate Professor of Health Services Management and Policy, College of Public Health
- Marc J. Tassé, PhD, Nisonger Center Director; Professor of Psychology and Psychiatry
- Sara Thiessen, MA, Interim Program Coordinator, Early Childhood Education
- Gail M. Whitelaw, PhD, Audiology; LEND Program; Director, Clinical Instruction and Research, Speech and Hearing

History

The Nisonger Center was founded in 1966 as an interdisciplinary program of The Ohio State University through funds from the United States Department of Health and Human Services, Maternal and Child Health (MCH) Bureau. MCH funds also built the building we occupy on the Ohio State campus. The U.S. Administration on Developmental Disabilities (ADD) has designated Nisonger Center a “University Center for Excellence in Developmental Disabilities (UCEDD),” one of 67 in the nation.
Nisonger Center Executive Leadership

Marc J. Tassé, PhD, Director
Margo Vreeburg Izzo, PhD, Associate Director
Paula C. Rabidoux, PhD, CCC-SLP, Director of Training and Community Outreach
Michael G. Aman, PhD, Director of Research
Karen L. Ratliff-Schaub, MD, Director of Clinical Services
Maureen Meck, BS, Administrator

Donations to Nisonger Center are tax-deductible. Please consider making a gift today.
Each day, the clinicians, researchers, staff and students of The Ohio State University Nisonger Center change the lives of children, adolescents and adults with autism spectrum disorders. Many of these accomplishments would not be possible without funding from various sources including the generous support of you — our friends and community leaders.

To make your gift online, please visit https://www.giveto.osu.edu/igive, type in “Nisonger” and choose from our Center funds. To learn more about giving opportunities to support Nisonger Center, please contact Leigh Briggs at Leigh.Briggs@osumc.edu or 614-293-5522.

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