Dear Friends and Colleagues,

The Wendy Klag Center for Autism & Developmental Disabilities celebrated its first full year of existence in 2014. Launched in April 2013, the Wendy Klag Center had its roots in the Center for Autism and Developmental Disabilities Epidemiology at the Johns Hopkins Bloomberg School of Public Health. It expanded its scope in 2013, so 2014 marks the first year of its new mission. And what a busy year it was. We hope you enjoy reading about the activities, research, and partnerships we have fostered this year, as well as the creation of an award-winning video. We are on our way to an equally productive 2015.

Best wishes,

Director M. Daniele Fallin
Associate directors Janet DiPietro and Elizabeth Stuart

Our Mission

The Wendy Klag Center will promote research and education regarding the origins, detection, measurement and prevention of conditions that affect behavioral, socioemotional and/or cognitive development, as well as evaluation of services and policies that support optimal development of affected children and their families. The Center will also promote expansion of partnerships with the School of Medicine and the Kennedy Krieger Institute.
**Expansion**

In 2014, the Wendy Klag Center and the Kennedy Krieger Institute began a search for two new tenure track faculty in autism research. One position would focus on public health approaches to autism and developmental disabilities, while the second sought an individual with experience in the care and evaluation of autism, and a strong background in research. We successfully recruited Heather Volk, PhD, formerly Assistant Professor at USC, to fill the public health position. Now based in the Department of Mental Health, Volk brings expertise in environmental epidemiology and genetic epidemiology. Her work on traffic exposure and air pollution risk in autism was listed in the 2014 Annual Review of Research Advancements from the Autism Science Foundation and the 2012 Autism Speaks List of Top Ten Research Advancements. She began August 1, 2015, and has hit the ground running with new grant proposals, pending awards, new publications, and student mentoring. The clinical research position search is ongoing, with a strong research candidate scheduled for her second visit in September 2015.

**Research**

Wendy Klag Center faculty continue to work on multiple externally funded projects including the CDC-funded Study to Explore Early Development (SEED), the NIH and Autism Speaks-funded Early Autism Risk Longitudinal Investigation (EARLI), and the CDC-funded Autism and Developmental Disabilities Monitoring Network (ADDM). We have now also partnered with the Center on the Early Life Origins of Disease at Hopkins to generate autism data among the participants of the Boston Birth Cohort (BBC) through HRSA funding. These are building deep data infrastructure that enables Center-affiliated faculty and trainees access to epidemiological studies of autism and developmental disabilities across a range of study designs.

Researchers affiliated with the Wendy Klag Center published widely in the last two years, on a range of subjects. These included applied findings in autism research as well as statistical methods to be applied in ASD settings and topics related to the field, such as epigenetics and teacher training. (Please see appendix for citations.)

**Pilot and Student Research Awards**

In June 2014, the Wendy Klag Center announced its first recipients for research awards to faculty and students affiliated with the Johns Hopkins Bloomberg School of Public Health. The second round of recipients received funding starting in July 2015.

**2014 Funded Faculty Projects**

- Elise Pas, PhD, Assistant Scientist in the Department of Mental Health, in collaboration with the Kennedy Krieger Institute
  Project: “Reducing Behavior Problems Among Students with ASD through Coaching Teachers in a Mixed-Reality Setting”
• Alden Gross, PhD, Assistant Professor in the Department of Epidemiology, in collaboration with the Kennedy Krieger Institute
  Project: “Development and Validation of a Continuous Scale of Autism Severity across ADOS Modules”

2015 Funded Faculty Project
• Li-Ching Lee, PhD, Associate Scientist in the Department of Epidemiology, in collaboration with Parul Christian, DrPH, in International Health
  Project: “Parent-mediated In-home Intervention for Children with Autism Spectrum Disorder in Bangladesh”

2014 Funded Student Projects
• Luke Kalb, doctoral student in the Department of Mental Health
  Project: “Effects of Federal Mental Health Parity on Psychiatric Emergency Department Use among Privately Insured Youth with an Autism Spectrum Disorder”

Read more about Luke Kalb’s project on the school’s website.

• Kelly Bakulski, postdoctoral fellow in the Department of Epidemiology
  Project: “Heavy Metals Exposure and Autism Spectrum Disorders in the Early Autism Risk Longitudinal Investigation (EARLI)”

• Allan Andersen, post-doctoral fellow in the Department of Mental Health, in collaboration with the Kennedy Krieger Institute
2015 Funded Student Project

- Kripa Raghavan, doctoral student in Department of Population, Family, and Reproductive Health
  

Examples of External Awards to WKC Members

January 2014: Autism Speaks awarded an $180,000 grant to Wendy Klag Center affiliate Christina Bethell, PhD, and her team to enable the creation of the Autism Pathways to Diagnosis and Services data portal on the Data Resource Center’s website. The DRC houses cleaned and user-friendly data from national surveys such as the 2010 National Survey of Children with Health Care Needs.

October 2014: Xiaobin Wang, MD, PhD, ScD, and Dani Fallin, PhD, were awarded a $1.5 million grant from the U.S. Department of Health and Human Services’ Health Resources and Services Administration / Maternal and Child Health Bureau. Wang and Fallin will lead a multidisciplinary team to carry out the study. The three-year project will draw from a long-standing NIH-funded cohort, the Boston Birth Cohort (BBC), which consists of approximately 8,500 mother-baby pairs of predominantly low-income, urban-minority families.

January 2015: The CDC again has funded Li-Ching Lee, PhD, ScM, of the Johns Hopkins Bloomberg School of Public Health, to lead the Maryland site of the Autism and Developmental Disabilities Monitoring (ADDM) Network. The amount of the award is $1.8 million. This will be Lee’s fourth time as principal investigator of the Maryland ADDM site. She has been with the ADDM project since 2003, the CDC’s first round of the surveillance project.

April 2015: Wendy Klag Center affiliate Gül Dölen, M.D., Ph.D., is among the 15 new Searle Scholars for exceptional young scientists. Dölen, who is an assistant professor of neuroscience in the School of Medicine, was noted for her research into “Synaptic and Circuit Mechanisms Underlying Social Reward Deficits in Autism.” Over the next three years, she will receive a total of $300,000 to support her work.

July 2015: Wendy Klag Center student Luke Kalb, MHS, was awarded an F31 pre-doctoral individual training fellowship for his dissertation work on “Evaluation of the START Crisis Prevention and Intervention Program” by the NICHD.

August 2015: Wendy Klag Center member Dani Fallin, Ph.D., and post-doctoral fellow Kelly Bakulski, Ph.D., lead a JHU-based team recently funded as part of the “Folic Acid Prevention Pathways for ASD in High-Risk Families” study awarded by NIEHS. This award provides $400,000 for five years, with approximately 30% coming to JHSPH.
**Scholarship and Internships**

The Wendy Klag Center internship program was prolific in 2014, employing four Johns Hopkins Bloomberg School of Public Health students. Two interns, doctoral student Julia Baller and masters student Eric Rubenstein, worked at the Maryland Center for Developmental Disabilities in fiscal 2014 (July 1 to June 30). The fiscal 2015 interns were Lydia Stewart, a Mental Health doctoral student, and Amanda Wylie, a Health Policy and Management masters student.

Additionally, the Wendy Klag Center hosted Rona Yu, an uncommonly bright and motivated intern from Montgomery Blair High School in summer 2014. Ms. Yu, who volunteers for autism-related causes, learned statistical techniques in R under the mentorship of doctoral student Shan Andrews. She additionally helped with administrative tasks and data entry for two ongoing autism studies.

**Collaborations and Community-Building**

In April 2014, the Wendy Klag Center invited faculty from various departments in the Johns Hopkins Bloomberg School of Public Health, School of Medicine and School of Education to affiliate with the Wendy Klag Center. Additionally, we invited faculty at the Kennedy Krieger Institute, with its world-renowned clinical expertise, to become KKI-Affiliated Faculty Members. The idea was to build a more multidisciplinary base of expertise for the center, and to leverage the talent across Johns Hopkins and Kennedy Krieger Institute for public health research. Thus far, more than 40 people have chosen to affiliate with the Wendy Klag Center. Each signed a letter of affiliation that outlined the privileges and expectations of affiliation.

Additionally, the Wendy Klag Center continued its collaboration with Autism Speaks. In October 2014, Autism Speaks hosted a two-day workshop of nearly 40 global autism researchers. The event was held at the Johns Hopkins Bloomberg School of Public Health, with assistance from the Wendy Klag Center. The meeting, “Autism Screening and Diagnosis in Low Resource Settings: Challenges and Opportunities to Enhance Research and Services Worldwide,” was held in collaboration with the International
Society for Autism Research and the World Health Organization. Students affiliated with the Wendy Klag Center had the opportunity to observe these global experts as they discussed the barriers and needs related to accurately assessing autism in their nations.

In July 2014, the Wendy Klag Center held a brief autism research overview for a contingent of Alpha Xi Delta sorority women from across United States. Alpha Xi Delta has chosen Autism Speaks as its philanthropy. In return, Autism Speaks invited the women to Washington, D.C., to learn about autism research. Through the Wendy Klag Center, the visitors learned about the genetics of autism, services and treatment research, and global autism research.

Education and Training

In June 2014 and 2015, Wendy Klag Center Director M. Daniele Fallin and core faculty member Li-Ching Lee jointly taught a Bloomberg School summer institute course devoted to autism. In addition to teaching the etiology, epidemiology and prevalence of autism, the course included a class on autism and education taught by Linda Brandenburg, Ed.D., senior director of School Autism Services at Kennedy Krieger Institute, and a class on Medicaid and autism taught by doctoral student and Wendy Klag Center intern Julia Baller.

Throughout fall 2014, the Wendy Klag Center co-hosted autism-related speakers with several Bloomberg School departments. In October, it brought in Douglas L. Leslie, Ph.D., from the Penn State College of Medicine, who spoke about Medicaid and autism. Leslie’s talk was one of four autism-related presentations in collaboration with the Department of Mental Health. Additional talks were co-hosted with the departments of

In late 2014, the Wendy Klag Center journal club debuted a new format designed to pair students and junior faculty with a more senior faculty co-presenter.

**Accolades**

**June 2014:** Wendy Klag Center associate director Elizabeth Stuart was named a American Statistical Association Fellow, honoring her for outstanding contributions to research in estimation of causal effects, and extensive efforts in dissemination of statistical methods in education and mental health.

**December 2014:** Wendy Klag Center affiliate Aravinda Chakravarti has been named a fellow of the American Association for the Advancement of Science. Chakravarti is a professor in the departments of Medicine, Pediatrics, and Molecular Biology and Genetics in the Johns Hopkins University School of Medicine, and the Department of Biostatistics in the Johns Hopkins Bloomberg School of Public Health. Chakravarti was elected for his distinguished contributions to human population and statistical genetics leading to improved understanding of common disease, particularly Hirschsprung's disease. Chakravarti has been a key participant and architect of the Human Genome, HapMap and 1000 Genomes projects.

**February 2015:** Tamara Marder, PhD, BCBA-D, an assistant professor at the Johns Hopkins School of Education and Wendy Klag Center affiliated faculty member, and Laurie deBettencourt, Ph.D., published the lead article in the journal of *Teacher Education and Special Education* for the February 2015 Special Issue on preparing educators to use evidence-based practices to support students with autism. Their article is titled “Teaching Students With ASD Using Evidence-Based Practices: Why Is Training Critical Now?” Marder and deBettencourt, who is a professor in the Johns Hopkins School of Education, served as editors of the Special Issue.

**May 2015:** Elizabeth Stuart received the Advising, Mentoring and Teaching Recognition Award from the Student Assembly of the Johns Hopkins Bloomberg School of Public Health.
Outreach and Development

Every April 2nd, affiliates of the Wendy Klag Center and its predecessor center mark World Autism Awareness Day. Johns Hopkins Bloomberg School of Public Health is one of many buildings across the globe that are bathed in blue light to raise awareness as part of an Autism Speaks initiative. Additionally, the Wendy Klag Center was a 2014 co-sponsor of the Honestly Autism Day conference, held yearly through a partnership of the Baltimore County Public School System, the Autism Society of Baltimore-Chesapeake, and Towson University. The Wendy Klag Center frequently is represented at community events, such as a talk at the Park Heights Family Resource Center and Baltimore’s Enoch Pratt Free Library.

Spring 2015 marked the premiere of a new project for the Wendy Klag Center. Backfin Media of Annapolis created a nine-minute, high-definition video with funding and input from the Health Advisory Board of the Bloomberg School of Public Health, and extensive input from the staffs of the Wendy Klag Center, the school’s development and communications teams. The purpose of the video is to raise awareness of the Wendy Klag Center and to bring in high-level donors. In addition to featuring Michael Klag, MD, MPH, speaking in his capacity as the school’s dean and as the parent of an adult daughter on the autism spectrum, the video also highlights a family who was in the Early Autism Risk Longitudinal Investigation, a national study with a site at the Wendy Klag Center. The video is now available on our website and is being used in media relations and development efforts. Find it at www.jhsph.edu/wkc. We are proud of the video, which inspiringly combines science and the personal impact of autism.
Appendix: Selected 2014-2015 Publications (WKC members and affiliates in bold)


