Dear Friends and Colleagues,

We enter 2017 with satisfaction about the work we accomplished in 2016, with excitement about our projects under way, and with mixed emotions about Michael J. Klag’s decision to step down as dean of the Johns Hopkins Bloomberg School of Public Health in June 2017. The Wendy Klag Center owes its existence to Mike, who created the underpinnings of the center in honor of his first wife, who passed away in 2006. Since then, the Wendy Klag Center has served as the home for epidemiologically based autism studies and the hub for researchers and students who view autism and developmental disabilities through a public health lens.

Since 2008, the center has directly supported the education and training of 13 promising students and funded 12 faculty and student research projects. It has hosted events large and small to unite bring together researchers and move science forward. After Mike steps down as dean, he will enjoy a well-earned sabbatical and then return to the school to teach and to focus on the Wendy Klag Center’s future sustainability.

Sincerely,

Director M. Daniele Fallin
Associate directors Janet DiPietro, Li-Ching Lee, Anne Riley, Elizabeth Stuart and Heather Volk
Wendy Klag Center researchers, staff and students mark Autism Awareness Month in April 2016, an annual tradition.

Branching Out in 2016

To reflect its mission in drawing from all corners of public health research, the Wendy Klag Center added three associate directors to its leadership team in 2016. The prior leaders remain: Director Dani Fallin, who is the Halpert Professor and Chair of the Department of Mental Health, Janet DiPietro who is Vice Dean for Research and Faculty and a professor in the Department of Population, Family and Reproductive Health, and Elizabeth Stuart, Associate Dean for Education who is also a professor of Mental Health, Biostatistics, and Health Policy and Management. The new associate directors are Li-Ching Lee, an Associate Scientist in the departments of Epidemiology and Mental Health, Anne Riley, a Professor of in the departments of Population, Family and Reproductive Health, Health Policy and Management, and Mental Health, and Heather Volk, an Assistant Professor in Mental Health who came to the Bloomberg School in August 2015 from the University of Southern California.

Research

Wendy Klag Center faculty continues to work on multiple externally funded projects. In 2016, WKC researchers were awarded a grant to work on the third round of the Centers for Disease Control-funded Study to Explore Early Development (SEED). This study has
enrolled hundreds of Maryland families to explore prenatal and early life risk factors for autism.

Heather Volk secured awards to explore environmental influences on children in the Infant Brain Imaging Study (IBIS) cohort, as well as the Early Autism Risk Longitudinal Investigation (EARLI) cohort. These awards will enable the collection and analysis of baby teeth and air pollution.

Li-Ching Lee continues to lead the Maryland site of the CDC-funded Autism and Developmental Disabilities Monitoring Network (ADDM), which put out its sixth report in March 2016 noting a rate of one in 68 children (1.46 percent). “Although we did not observe a significant increase in the overall prevalence rates in the monitoring sites, we continue to see the disparity among racial and ethnic groups,” Lee says. “For example, in Maryland, we found that Hispanic children were less likely to be evaluated for developmental concerns and therefore less likely to be identified.”

The WKC’s partnership with the Center on the Early Life Origins of Disease at Hopkins has flourished, generating autism data among the participants of the Boston Birth Cohort (BBC). This has been made possible through funding from the Health Resources & Services Administration. The collaboration enables WKC-affiliated faculty and trainees access to data for epidemiological studies of autism and developmental disabilities across a range of study designs.

IMFAR

In May 2016, Baltimore played host to International Meeting For Autism Research (IMFAR), the premier global conference for autism researchers. The Wendy Klag Center was well-represented. Oral presentations, panel sessions, special interest groups, and 14 posters were presented by faculty and students from the Hopkins School of Public Health, as well as Kennedy Krieger Institute-affiliated members of the WKC. To prepare for the conference, the Wendy Klag Center hosted an “IMFAR Sneak Peek” the week before, to provide practice and feedback to presenters.

WKC Director Dani Fallin, PhD, and KKI-affiliated WKC member Stewart Mostofsky, MD, were scientific program co-chairs of IMFAR. Oral presentations included talks by:

• Peng-Chou Tsai, MD. “Distributions of SRS-Measured Autistic Traits in a Taiwanese Population of Children Aged 6-8 Years”
• Heather Volk, PhD, “Air Pollution, Developmental Delays and Autism Spectrum Disorder in the Early Markers of Autism (EMA) Study”

Panel session presenters included:
• Alden Gross, PhD, presenting “Development and Validation of a Harmonized Scale of Autism Symptom Severity Across ADOS Modules 1 and 2: A BSRC Study,” as part of the session on “Recent Advances in Statistical Methods for Autism Research.” Elizabeth Stuart, PhD, a WKC Associate Director was the session chair and discussant.
• Li-Ching Lee, PhD, presenting "Cultural Adaptations in ASD Diagnostic Assessments and Case Determination in a Rural Region of Bangladesh,” as part of the session on “Understanding Cultural Differences in Diagnostic and Treatment Services for Children with ASD”

Volk also was a leader of the special interest group on Multiple Risk Factors for ASD: Genetic Predisposition and Environmental Influences.

**Pilot and Student Research Awards**
In June 2016, the Wendy Klag Center announced its third round of recipients for research awards to faculty and students affiliated with the center. Several projects from prior years matured into publications or earned federal funding based on the results of the WKC pilot funding.

**2016 Funded Faculty Projects**
• Robert Gilman, MD, Professor, Department of International Health. Project: “Smell as Diagnostic Aid for Autism.” This research will take place in Peru.
• Vanya C. Jones, PhD, Assistant Professor, Department of Health, Behavior and Society. Project: “Childhood Unintentional Injury Safety Practices: What are the experiences of parents of children with Autism Spectrum Disorder?”
• Heather Volk, PhD, Assistant Professor, Department of Mental Health. Project: “Measurement of Environmental Exposure Biomarkers in Shed Deciduous Teeth.” This research dovetails with a larger effort to collect children’s baby teeth as part of the NIH-funded Environmental Influences on Child Health Outcomes (ECHO) Program.

**2016 Funded Student Projects**
• Martha Brucato, MD/PhD student in the Department of Epidemiology. Project: “Developing Methods Utilizing Machine Learning and Latent Class Analysis to Identify Children with ASD in Administrative Health Data.” This project involves the Boston Birth Cohort, which has several WKC projects.
• Bo Y. Park, postdoctoral fellow in the Department of Mental Health. Project: “Maternal Metabolic Syndrome and Autism Spectrum Disorder (ASD) Risk.” Dr. Park’s project also involves the Boston Birth Cohort.

2015 Funded Faculty Project and Progress
• 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.” The results of this study have been accepted for publication.

2015 Funded Student Project and Progress

2014 Funded Faculty Projects and Progress
• 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.” This project led to a 2016 publication in the Journal of Autism and Developmental Disorders.
• 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.” This research was presented at IMFAR in 2016.

2014 Funded Student Projects and Progress
• Allan Andersen, post-doctoral fellow in the Department of Mental Health, in collaboration with the Kennedy Krieger Institute. Project: “A Survey of Cost and Effectiveness of Parental Responses to Elopement among Children with ASD in the Interactive Autism Network.”
• 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).” This project has now received NIH funding.
• 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.” This research was presented at IMFAR 2016.
**Scholarship and Internships**

The center’s internship program was productive in 2016, placing Hopkins School of Public Health students Taylor Holroyd, Lydia Stewart and Alicia Vooris in posts to improve their training and experience at the Maryland Center for Autism and Developmental Disabilities, run by the Kennedy Krieger Institute.

![Image of WKC leaders and interns](image)

WKC leaders Anne Riley (from left), Heather Volk, Dani Fallin and Li-Ching Lee (far right), with WKC-funded interns Taylor Holroyd and Lydia Stewart.

**Collaborations and Community-Building**

In January 2016, the Wendy Klag Center hosted its first retreat, bringing together faculty affiliates from across Johns Hopkins entities and the Kennedy Krieger Institute. Several members offered brief presentations about their research, showing the breadth of experience within the center. Then retreat attendees broke into topic groups with the mission of brainstorming ideas for fundable research projects.

![Image of retreat](image)

Nearly 50 people attended the first WKC faculty retreat in January 2016.
The Wendy Klag Center, in collaboration with the School of Public Health office of external affairs, again hosted its traditional April Autism Awareness Month schoolwide photo. The school’s large Wall Of Wonder has a multi-day display to highlight the school’s research in autism.

The center also attended community events such as the Honestly Autism Day community conference in April 2016, the Autism Society of Baltimore-Chesapeake’s 40th anniversary community event in June, and the Pathfinders for Autism resource fair in October 2016.

Wendy Klag Center continued its collaboration with Autism Speaks, playing host to a contingent of Alpha Xi Delta sorority women from across the 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.

Autism Speaks’ Alpha Xi Delta affiliates visit the School of Public Health.
In November 2016, Dean Michael J. Klag spoke about the Wendy Klag Center, named in honor of his late wife, at Blakehurst retirement community in Baltimore, offering insight into a condition piques the interest of many grandparents. He showed the center’s award-winning video that outlines the center’s mission.

View the Wendy Klag Center video at www.JHSPH.edu/WKC

**Education and Training**

Wendy Klag Center Director M. Daniele Fallin and core faculty member Li-Ching Lee jointly taught a Bloomberg School course devoted to autism. In addition to teaching the etiology, epidemiology and prevalence of autism, the course included expert guest speakers. The course was offered as a full academic 3rd term course in early 2016 and as a 2016 Summer Institute short course.

Throughout 2016, the Wendy Klag Center co-hosted autism-related speakers with several Bloomberg School departments. These included a talk on prenatal risk factors by doctoral candidates Mengying Li and Kripa Raghavan, and an intervention methods talk by University of Michigan biostatistician Daniel Almirall, PhD. For 2017, the Department of Mental Health will offer a series of noontime talks on autism, including speakers such as David Mandell, ScD, of the University of Pennsylvania. In April, Molly Condon, PhD, also of the University of Pennsylvania, will talk about state insurance mandates and pharmacological interventions for autism.

The center continues to hold its monthly journal club during the academic year, enriching students’ background and enabling faculty to learn different methods and disciplines from one another.
Appendix: Selected 2016 Publications (WKC members and affiliates in bold)


