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September Newsletter

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ISES & ISEE Joint Annual Meeting 2025 NEXUS Reflections



The 2025 ISES & ISEE Joint Annual Meeting convened global leaders in the field of exposure science and environmental health from August 17-20, 2025 in Atlanta, Georgia. Over the course of three days, the conference featured seminars, workshops, poster sessions, and plenary lectures, which promoted the exchange of ideas and collaborative thinking. Although exposomics was not the central theme of the conference, both NEXUS and the exposome were well represented. Key presentations highlighted the critical role of the exposome in understanding the relationships between environmental exposures and health outcomes.

On the first day of the conference, NEXUS Collaborator Douglas Walker, PhD, Emory University, hosted a pre-meeting workshop titled "High-resolution mass spectrometry workflows to study the exposome" which was taught by Anna Young, PhD, Emory Rollins School of Public Health, Donghai Liang, PhD, Emory University, and Xin Hu, PhD, Emory University. Dr. Douglas Walker also co-lead the symposium "Micro- and nanoplastic and human health; where do we stand?" with Roel Vermeulen, PhD and co-lead of the International Human Exposome Network (IHEN).

Additionally, NEXUS ChemBio Analytical Hub co-lead Krystal Pollitt, PhD, and Elizabeth Lin, PhD, Yale School of Public Health, led the pre-meeting workshop, "Wristbands 101: Harnessing Wearable Tech for Personalized Environmental Exposure Assessment." Approximately 40 participants attended the workshop that addressed the basics of passive sampling and practical applications of the technology. Dr. Krystal Pollitt also presented key insights during the conference poster session along with Jeremy Koelmel, PhD, Yale University to highlight community-wide perspectives, methodologies, and applications in exposomics. Their poster highlighted the findings from Exposome Research Coordination Survey completed by the NEXUS ChemBio Analytical Sciences Hub.

Another key symposium was led by NEXUS Collaborator Carmen Marsit, PhD, Emory University and Yewei Wang, PhD, Emory University, titled "Advancing Exposome Research Across the Lifespan: Biomarkers, Big Data, and Exposure Assessment." This symposium highlighted the cutting-edge research on environmental exposures through the lens of the exposome.

One significant event that took place at this year's ISES & ISEE Joint Annual Meeting was an Open Exposome Research Community Meetup hosted by the International Human Exposome Network (IHEN) and led by Drs. Roel Vermeulen and Martine Vrijheid. The meeting featured discussions about building a network and fostering collaborations, the development of an Exposome Toolbox, along with the development of the Roadmap for Global Exposome Research. NEXUS Collaborator Dean Jones, PhD, Emory University, urged the exposomics research community to emphasize the unique aspects of the exposome, mostly distilled into two concepts, cumulative lifelong exposures (and impacts) and integrated effects of multiple exposures and exposure types. He noted that focusing on these aspects would increase the impact of exposome research.

Overall, the 2025 ISES & ISEE Joint Annual Meeting was a success, bringing together a diverse and engaged community of stakeholders in exposure science and environmental health. For NEXUS members, the meeting offered a valuable platform to share their work, exchange ideas, and foster new collaborations with the broader scientific community. The field of exposomics has not developed in a vacuum. The expertise from ISES and ISEE members has been essential for exposomics to flourish as a field. Indeed, these two

societies have likely contributed the most to its foundation. As such, the NEXUS team foresees ongoing partnerships with both ISES and ISEE in the future.

[Read the Full Article](#)

NEXUS Reflections

Exposome Moonshot Forum 2025

NEXUS had the opportunity to reflect on the inaugural [Exposome Moonshot Forum](#) which took place in Washington, D.C., from May 12-15, 2025. This meeting aimed to bring together diverse stakeholders from industry, academia, and government to chart the future of the Human Exposome. The Exposome Moonshot Forum was hosted at the Johns Hopkins University Bloomberg Center by Fenna Sillé, Ph.D., and Thomas Hartung, M.D., Ph.D., and organized with input from an international [Organizing Committee](#). Drs. Fenna Sillé and Thomas Hartung lead a collaborative hub of NEXUS, and all of the hubs of NEXUS were involved in providing assistance to the team at Hopkins.

Please click on the video below



[NEXUS Youtube](#)

Spotlight

Fenna Sillé, Ph.D.

Johns Hopkins University



[Learn more](#)

[Dr. Fenna C. M. Sillé](#) is an [Assistant Professor in the Department of Environmental Health and Engineering](#) at the Johns Hopkins Bloomberg School of Public Health, where she also serves as Deputy Director of the [Center for Alternatives to Animal Testing \(CAAT\)](#) and directs the [JHU Exposome Collaborative](#).

Guided by the motto “[a healthy environment = healthy people](#),” Dr. Sillé investigates how the exposome shapes immunity and disease across the life course.

Focusing on early-life and chronic exposures—especially arsenic and heavy metal mixtures—her work examines impacts on vaccine responses, infection and cancer risk, and neuroinflammatory pathways tied to neurodevelopmental and neurodegenerative outcomes. She also leads a study characterizing the [exposome in relation to childhood asthma in Baltimore City](#).

At CAAT, she directs the metabolomics lab and chairs the [International Developmental Immunotoxicity \(DIT\) Working Group](#) to accelerate new approach methodologies (NAMs) for immune safety—part of her broader leadership in the CAAT [Implementation Moonshot Project for Alternative Chemical Testing \(IMPACT\)](#) aimed at modernizing chemical testing with human-relevant science. She also leads the IMPACT Exposome Program, aimed at realizing the Human Exposome Project, by developing practical tools and infrastructures for the field, including the [tidyexposomics](#) R toolkit, and advancing “[exposome intelligence](#)”—integrating AI with exposomics to accelerate discovery and translation for precision public health and medicine.

Within [NEXUS](#), Dr. Sillé co-leads the JHU Collaborative Hub of the [NIEHS U24](#) Coordinating Center for Exposome Research, helping build the infrastructure and community needed to bring [AI-driven exposomics](#) into biomedical research and practice. In collaboration with NEXUS, she recently led the organization of the [Exposome Moonshot Forum](#), gathering diverse stakeholders (including governments, organizations, scientists, funders, the technology sector and the public) and fostering global dialogue and collaborations around exposome-informed health policy and practices. This led to the [Washington, D.C. Declaration on the Human Exposome](#) and the formation of the [Global Exposome Forum](#), a growing international consortium dedicated to realization of the Human Exposome Project.

Fun Fact! When time allows—rarely, with three little kids and a busy career—Fenna, a native of dushi [Curacao](#), loves to sew her own clothes.

[Read the Full Article](#)

NEXUS Conversations

At the [Exposome Boot Camp 2025](#), NEXUS had the opportunity to engage with students from multidisciplinary backgrounds. Our conversations provided insight into students' interests in exposomics, individual experiences, along with their key takeaways and highlights from the two-day event.



[NEXUS Conversations Playlist](#)



Upcoming Events

Genomics meets exposomics: advancing gene by environment science

October 20-21, 2025
Mendel Museum, Brno, Czech Republic



The goal of this meeting is to develop a strategic plan for the advancement of gene by environment studies to better understand human disease. Advances in sequencing technologies have revealed countless discoveries of the genetic drivers of human disease, but for most chronic disease genetics can only account for a portion of the variability. A broad range of environmental factors are known to contribute to human disease. Recent advances in exposomics which is designed to systematically analyze the physical, chemical, biological, and social factors that influence disease, now position the research community to systematically perform gene by environment experiments.

Organized by: Jana Klánová (Masaryk University, EIRENE), Gary W. Miller (Columbia University, NEXUS), Robert Barouki (INSERM, EIRENE) and Chirag Patel (Harvard University, NEXUS)

Participation by invitation only.

Save-the-date

Global Exposome Summit

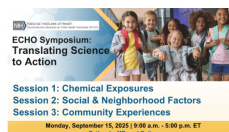
The **Global Exposome Summit**, organized by [IHEN](#) in collaboration with NEXUS and the Global Exposome Forum, will take place from **27-29 April 2026 in Sitges (Barcelona), Spain**

Additional information forthcoming.

NEXUS Community Events

ECHO Symposium: Translating Science to Action

September 15, 2025
Bethesda, MD/ Online



The Environmental influences on Child Health Outcomes (ECHO) Program is a research program supported by the National Institutes of Health (NIH), to enhance the health of children for generations to come. The ECHO Translating Science to Action Symposium brings together researchers, policymakers, health professionals, and advocates to translate child health research into impactful solutions.

[Learn more](#)

Santiago Exposome Symposium



Symposium

September 25-27, 2025
Santiago, Chile



2025 Santiago Exposome Symposium Integrating Environmental Exposures into Research on Alzheimer's Disease and Related Dementias

25-27 September 2025

Location: Club Manquehue, Avda. Vitacura 5841, Vitacura, Santiago

This symposium will bring together leading scientists and trainees interested in integrating environmental exposures into research on Alzheimer's Disease and Related Dementias (AD/ADRD). It aims to foster new collaborations between environmental health, exposomics, and AD/ADRD research communities across Latin America, the United States, and beyond. Keynote talks, poster sessions, and hands-on workshops will cover innovative topics, including geospatial modeling, digital biomarkers for detecting cognitive decline, and prodromal markers of AD/ADRD. Special emphasis will be placed on regional studies from across Latin America.

Keynote Speakers



Rick Woychik, PhD, National Institute of Environmental Health Sciences, USA



Martha M. Téllez Rojo, MSc, DSc, National Institute of Public Health, Mexico



Christian González-Billaut, PhD
GERO/University of Chile

Early Career Investigator Poster Competition

Posters are invited on topics broadly related to exposomics, environmental health, and/or ADRD. First Place – \$400, Second Place – \$250, and Third Place – \$175.

Presentations will be in English only

To learn more, visit: mountsinaiexposomics.org/2025santiago

[Learn more](#)

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We want to feature your
exposome-related events on
the NEXUS website and
social media!

[Event form](#)

Feature Podcasts

Please enjoy this interview of NEXUS MPI Gary Miler recent episode of Health Report by ABC Radio National which features NEXUS Collaborator Fenna Sillé, PhD, Johns Hopkins School of Public Health and organizer of the Exposome Moonshot Forum.



What is the exposome?

[Listen to the episode](#)

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