

Towards a Future of Environmental Health Sciences - A Workshop

Committee

Kristen Malecki

Chair

Dr. Kristen Malecki is an associate professor in the Department of Population Health Sciences. As an environmental epidemiologist, she has over twenty years leading translational and applied environmental health research to support policy development. She is director for the Center for Urban Population Health and of the Survey of the Health of Wisconsin (SHOW). The Center for Urban Population Health, works in collaboration with community partners and across academic and health care sectors to improve population health, well-being and equity. SHOW, an ongoing longitudinal study and infrastructure supports community based and engaged population health sciences research. She also maintains longstanding partnerships with colleagues at the Wisconsin Department of Health Services which has facilitated a breadth of applied environmental health research. Her current research uses a multi-omic approach to examine combined chemical (air pollution, water pollution), physical and social stressors, and their influence on adult chronic disease, aging and health disparities. Recent work has examined the role of metals and gut microbiome toxicity and impact of residential disadvantage on DNA methylation as an indicator of accelerated biological aging. She also co-leads the National Institutes of Health coordinating center for newly established cancer and the environment cohorts. She is also an ongoing member of the National Academies of Science and Medicine Committee for Emerging Science for Environmental Health Decisions since 2021. Kristen received her B.A. from New York University, and both her MPH and Ph.D. from the Johns Hopkins Bloomberg School of Public Health.

Karen Bailey

Member

Dr. Karen Bailey is an Assistant Professor in the Department of Environmental Studies at the University of Colorado at Boulder. She researches and teaches on human-environment interactions, climate change, and sustainable rural livelihoods, and justice and equity in STEM. She is an interdisciplinary environmental social scientist and combines social science research with environmental and ecological data to understand feedbacks between communities and their environments, how we can build resilience to climate change, and how to support landscapes that meet human needs and sustainability goals. She also has an emphasis on justice, equity, diversity, and inclusion in environmental fields and STEM more broadly and is committed to research that supports, amplifies and engages the most vulnerable among us. In addition to her role as an academic, she currently serves on the Colorado Parks and Wildlife Commission and with the NAS Standing Committee on the Use of Emerging Science for Environmental Health Decisions. Dr. Bailey received her Ph.D. from the University of Florida.

Chandra Jackson

Member

Dr. Chandra L. Jackson is an Earl Stadtman Investigator who leads the Social and Environmental Determinants of Health Equity Research group in the Epidemiology Branch of the National Institute of Environmental Health Sciences with a joint appointment in the National Institute on Minority Health and Health Disparities. Dr. Jackson investigates physical and social environmental factors that impact health disparities and subsequent risk of cardiometabolic dysfunction. Her research has been presented at national as well as international scientific conferences and published in both academic journals like Lancet, JAMA Internal Medicine, the American Journal of Epidemiology, and SLEEP as well as major media outlets such as the US News & World Report and The New York Times. She has earned merit-based awards, including the Presidential Early Career Award for Scientists and Engineers, Charlotte Silverman Award for outstanding commitment to public health, policy, and community outreach at Johns Hopkins, and an Outstanding Fellows Award at Harvard. She earned a Master's degree in Epidemiology from the Harvard T.H. Chan School of Public Health, a PhD in Epidemiology from The Johns Hopkins Bloomberg School of Public Health, and was an Alonzo Smythe Yerby Postdoctoral Fellow at the Harvard T.H. Chan School of Public Health.

Patrick McMullen

Member

Dr. Patrick McMullen, is the Director of Computational Toxicology at ScitoVation. Dr. McMullen works with diverse stakeholders spanning government, non-profit, and industry groups to bring new approaches to toxicology, with the goal of improving chemical safety decision-making processes. His research and consulting work combine high-content biological experiments with statistical and computational approaches to advance the understanding of biological fundamentals that underlie chemical safety challenges. Dr. McMullen's background in molecular biology, engineering, and computational science has been instrumental in interpreting and communicating complex data problems in diverse applications. Dr. McMullen manages a diverse computational biology team that uses modeling and cell-based experiments to deepen our understanding of how chemicals interact with biological systems. Dr. McMullen currently serves as a member of the NAS Emerging Science for Environmental Health Decisions standing committee. Patrick received his Ph.D. from Northwestern University.

Gary Miller

Member

Dr. Gary Miller serves as Vice Dean for Research Strategy and Innovation and Professor of Environmental Health Sciences at the Columbia University Mailman School of Public Health. Dr. Miller founded the first exposome center in the U.S. and wrote the first book on the topic. He has helped develop high-resolution mass spectrometry methods to provide an omic-scale analysis of the human exposome. He serves as Co-Director of Columbia's Irving Institute CTSA Precision Medicine Resource, which supports integration of exposomics and environmental measures into clinical and translational research projects. He is a member of the NIH All of Us Research Program Advisory Panel, serves on NIEHS Council, and is the founding editor of the new journal *Exposome*, published by Oxford University Press. Dr. Miller is a Fellow of the American Association for the Advancement of Science, he received his Ph.D. from the University of Georgia.

Christina Park

Member

Dr. Christina Park serves as Program Officer for the Environmental influence on Child Health Outcomes (ECHO) program at NIH, a large consortium of longitudinal cohort studies investigating the effects of a broad range of environmental factors on child health and development. In addition to managing cohort grants, she serves as a data lead within the ECHO program office and contributes to a number of program areas including protocol development, implementation and evaluation, and data collection, processing, and management. Prior to joining the ECHO program, she contributed to the development and implementation of the National Children's Study (NCS) Vanguard Study at NICHD. In this capacity, she has interacted with the NRC in preparing materials for the Council's review for its workshop on the Design of the NCS. Her previous professional experiences include conducting national health surveys at the National Center for Health Statistics, CDC, and performing epidemiologic research and program administration at the Maternal and Child Health Bureau, Health Resources and Services Administration. She has received numerous agency awards throughout her career in the Department of Health and Human Services. Christina has MHS and Ph.D. in Epidemiology from the Johns Hopkins School of Public Health.