

Standing Committee on the Use of Emerging Science for Environmental Health Decisions

Committee

Andrea Baccarelli

Co-Chair

Andrea Baccarelli is the Leon Hess Professor and Chair of the Department of Environmental Health Sciences and serves as the Director of the NIH/NIEHS P30 Center for Environmental Health and Justice in Northern Manhattan, one of such 21 centers across the country. Dr. Baccarelli's work has supported international best practices for air pollution control developed by multiple agencies worldwide, and his findings have served as the basis for the Environmental Protection Agency's decision to enforce stricter guidelines for human exposure.

Dr. Baccarelli's research investigates molecular mechanisms as pathways linking environmental exposures to human disease. Current projects investigate a range of mechanisms, including epigenomics, epitranscriptomics, extracellular vesicles and small non-coding RNAs, mitochondrial DNA, and the microbiome.

Kristen Malecki

Co-Chair

Kristen Malecki, PhD, MPH is a Professor and Division Director for Environmental and Occupational Health Sciences at the University of Illinois at Chicago (UIC) School of Public Health. She has a PhD in Environmental Epidemiology and Health Policy and Masters of Public Health from Johns Hopkins University Bloomberg School of Public Health. She was a member of the Risk Sciences and Public Policy institute and her research involved developing new scientific methods for indicator development to advance environmental health. Her current translational environmental health research uses a molecular biology approach to examine combined chemical (air pollution, water pollution), physical and social stressors, and their influence on adult chronic disease, aging and health disparities. She applies emerging multi-omic tools including epigenetics, transcriptomics, and the microbiome to identify interim biomarkers of exposure and response to improve understanding of the biological mechanisms linking environmental stressors across the life-course to persistent health disparities. Dr. Malecki's work is grounded in communities and uses community engaged approaches to population and environmental health sciences research.

Her ongoing work is funded by several NIH institutions and she is a principal investigator for the NCI funded coordinating center for the new Cohorts for Environmental Exposures and Cancer consortium. Before becoming an academic, she served as a Council for State and Territorial Epidemiology fellow and the lead epidemiologist for the state Environmental Public Health Tracking Program along with Climate Change and Health Programs within the Bureau of Environmental and Occupational Health at the Wisconsin Department of Health Services. In 2021, she was appointed to the National Academies of Sciences standing committee on the "Use of Emerging Science for Environmental Health Decisions." Dr. Malecki brings extensive experience in leading and managing multi-disciplinary teams of researchers, practitioners, and policy makers in development of new systems thinking approaches and developing practical solutions to address today's complex environmental and occupational health challenges

Karen Bailey

Member

Karen Bailey is an Assistant Professor of Environmental Studies at the University of Colorado at Boulder. She is a systems researcher interested in understanding how human-environment interactions impact human health and well-being and natural resource management. 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. Her current projects focus on climate adaptation in southern Africa, human health and well-being in east Africa, barriers to entry in natural resource fields, just and equitable climate change research, and urban communities and environmental engagement. 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. Dr. Bailey completed her Ph.D. in 2018 in the School of Natural Resources and the Environment at the University of Florida.

Paloma Beamer

Member

Paloma I. Beamer, Ph.D., is a professor in the College of Public Health at the University of Arizona. She holds joint appointments as a professor of Chemical & Environmental Engineering and as a research scientist in the Asthma and Airway Disease Research Center. She is the Community Engagement Core Director for the Southwest Environmental Health Sciences Center (NIEHS P30). She is an environmental engineer by training and earned her BS from the University of California Berkeley and her MS and PhD from Stanford University. Her research focuses on understanding how individuals are exposed to environmental contaminants and the health risks of these exposures with a special focus on vulnerable populations, including children, low-wage immigrant workers, Native Americans and those in the US-Mexico Border Region. The ultimate goal of her work is to develop more effective interventions and policies for prevention of avoidable cases of certain diseases such as asthma.

Dr. Beamer has received a Mentored Quantitative Research Award from NIH and a Scientific Technological Achievement Award (Level I) from the US EPA. She has served on the Board of Scientific Counselors for both US EPA and ATSDR. She is currently an Associate Editor for Environmental Health Perspectives.

Dr. Beamer is the Past President for the International Society of Exposure Science. She is a lifetime member of the Society for Hispanic Professional Engineers (SHPE) and the Society for the Advancement of Chicanos and Native Americans in Science (SACNAS).

Yao-Yi Chiang

Member

Yao-Yi Chiang, Ph.D., is an Associate Professor at the Computer Science & Engineering Department, University of Minnesota. He was an Associate Professor (Research) in Spatial Sciences at the University of Southern California until 2021. He is also an Action Editor of *GeoInformatica* (Springer) and an editorial board member for *Transactions in GIS* (Wiley). Dr. Chiang received his Ph.D. degree in Computer Science from the University of Southern California and his bachelor's degree in Information Management from the National Taiwan University. His current research area is spatial artificial intelligence. He develops spatial explicit machine learning and data mining methods to discover useful insights from heterogeneous spatial data, including satellite imagery, scanned historical maps, knowledge graphs, natural language data, time-series data, and transportation data. He has received funding from NSF, NIH, DARPA, NGA, NEH, and partners such as NTT Global Networks, BAE Systems, Conveyancing Liability Solutions, TerraGo, and Rumsey Map Collection. He was recently a visiting researcher at Google AI (NYC) and a machine learning consultant at the Spatial Computing Group at Meta. Before his Ph.D. study, Dr. Chiang worked as a research scientist for Geosemble Technologies and Fetch Technologies in California. Geosemble Technologies was founded on a patent on geospatial data fusion techniques, and he was a co-inventor. Dr. Chiang is the founder of Kartta Foundation, a non-profit organization providing software and services to distill and assemble geographic knowledge for the public good. Kartta Foundation currently manages Kartta Labs, a previous Google product, including re.city.

Alissa Cordner

Member

Alissa Cordner is an Associate Professor of Sociology and Paul Garrett Fellow at Whitman College, where she teaches Sociology and Environmental Studies courses. As an environmental sociologist, her interests include environmental sociology, environmental health and justice, risk and disasters, science and knowledge, social movements, and policy and participation. Her 2016 book, "Toxic Safety: Flame Retardants, Scientific Controversies, and Environmental Health," examines the sociological aspects of risk assessment in industry, regulation, research, and activism. It received the 2018 Schnaiberg Award from the Environmental Sociology section of the American Sociological Association, recognizing a book that makes an outstanding contribution to the discipline. Her work has been published in leading sociology, environmental studies, and science and technology studies journals, including the *American Journal of Sociology*, *Environmental Sociology*, *Science Technology & Human Values*, the *Journal of Environmental Studies and Sciences*, *Social Science & Medicine*, *Environmental Science & Technology*, *Social Studies of Science*, *Qualitative Sociology*, and *Sociological Forum*. Her 2019 paper on PFAS guideline levels in JESEE won the 2020 Best JESEE Paper from the International Society of Exposure Science. Dr. Cordner has conducted extensive research on the regulation, research, and activism related to industrial chemicals, and is currently studying the sociological aspects of wildfire risk management in the Northwest. She received her Ph.D. in Sociology from Brown University.

Jamie C. Dewitt

Member

Jamie C. DeWitt is an Associate Professor in the Department of Pharmacology & Toxicology of the Brody School of Medicine at East Carolina University and Adjunct Associate Professor in the Department of Biological Sciences at NC State University. Her laboratory's research program explores relationships between biological organisms and their responses after exposure to environmental contaminants with a specific focus on the immunotoxicity as well as how immune dysfunction may influence the nervous system during development and adulthood. A particular focus of her research program is on emerging aquatic contaminants, especially per- and polyfluoroalkyl substances (PFAS). She has B.S. degrees in Environmental Science and Biology from Michigan State University, Ph.D. degrees in Environmental Science and Neural Science from Indiana University-Bloomington, and certification as a Diplomate of the American Board of Toxicology. She completed postdoctoral training in ecotoxicology at Indiana University-Bloomington and in immunotoxicology at the U.S. Environmental Protection Agency in partnership with the University of North Carolina at Chapel Hill. She has co-authored nearly 70 scientific publications including two edited books, one of the toxicity of per- and polyfluoroalkyl substances and one on methods in immunotoxicology.

Anindita Dutta

Member

Dr. Anindita Dutta, Assistant Research Professor, University of Chicago, is an environmental health scientist, whose research addresses some of the most pressing global issues in understanding impacts of ambient and household air pollution on maternal-child health, including chronic non-communicable diseases (hypertension, cardiovascular disease, diabetes), reproductive health and adverse pregnancy outcomes, placental pathology, cord blood hematology, olfaction, pulmonary, cognition and neurobehavior. Anindita has been working in Asia (India, China), North America (USA), and Africa (Nigeria) for over 16 years, leading research on air pollution and intervention strategies, advocating policy measures, undertaking professional outreach related to public health, developing collaborative research partnerships with academic peers, community partners, and government agencies. She has PhD from Jadavpur University, India and two postdoctoral trainings from Peking University, China, and University of Chicago, USA. Her track record of scientific achievements is evidenced by numerous peer-reviewed publications (<https://scholar.google.com/citations?user=YsYhXXsAAAAJ&hl=en>), conference presentations, honors, and awards: "International Young Scientist Award", NNSF of China, 2012-2013; "Best Paper", Indoor Air/ISIAQ, 2014; Honoree, "Outstanding Paper by a New Researcher at Plenary Session of ISEE Annual Meeting", ISEE, 2014; "Young Scientist Travel Grant", IGAC, 2014; "Abstract scholarship", ATS, 2018; Fellowship, ISGlobal's Severo Ochoa Center of Excellence Accreditation, Barcelona Institute of Global Health, 2021, 2022.

Rima Habre

Member

Dr. Rima Habre is an Associate Professor of Environmental Health and Spatial Sciences at the University of Southern California (USC). She leads the Exposure Sciences Research Program in the USC Southern California Environmental Health Sciences Center. Her expertise lies in environmental health, air pollution, and exposure sciences. Her research aims to understand the effects of complex air pollution mixtures in the indoor and outdoor environment on the health of vulnerable populations across the life course. Dr. Habre's expertise spans measurement, spatiotemporal and GIS-based modeling, and mobile health approaches to assessing personal exposures and health risks. She co-chairs the Geospatial Working Group in the National Institute of Health's Environmental Influences on Child Health Outcomes program. She received the Young Investigator Award in recognition of scientific pursuits and accomplishments, as well as demonstrating potential for future leadership in environmental health science from NIEHS in 2017. She currently serves on the International Society of Exposure Science Board of Directors. Dr. Habre received her Doctor of Science (ScD) in Environmental Health from the Harvard T.H. Chan School of Public Health in 2012.

Darryl B. Hood

Member

Darryl B. Hood, PhD, is currently a tenured full professor and dean's fellow in the Division of Environmental Health Sciences in the College of Public Health at The Ohio State University. Prior to his current position, from 1993-2013, he was Assistant, Associate and Professor in the Meharry Medical College-Vanderbilt University alliance where he was the founding Principal Investigator of the NIEHS-sponsored Advanced Research Cooperation in Environmental Health (ARCH) program.

His body of work was recognized by the USEPA in the 2017 Integrated Risk Information System Assessment (IRIS) for the environmental contaminant benzo(a)pyrene and cited multiple articles from his laboratory and extended research group as a basis for recalibrating the reference concentrations (RfC) for inhaled B(a)P exposures in reproductive and neurotoxicity studies. This speaks to the impact of his research on policy change in the environmental public health arena. At the Ohio State University, he has continued his innovation in discovery as the co-architect of the novel Public Health Exposome framework with BD2K analytics. This paradigm-altering framework interrogates hypotheses and focuses on determining if there are associations between the built, natural, physical, and social environment and disparate health outcomes observed in vulnerable census tracts.

He was recently honored by The Ohio State University as the recipient of the 2022 Ruth C. Bailey Award <https://news.osu.edu/ruth-c-bailey-award-winner-inspired-by-community-engagement/> and as a 2021 Engaged Scholar in Community Outreach <https://cph.osu.edu/news/2021/11/engaged-scholars-darryl-hood> He is a member of the Society of Toxicology, American Association for the Advancement of Science, Society of Neuroscience, and American Public Health Association.

Most recently in 2022, he was appointed to a three-year term on the National Advisory Environmental Health Sciences Council at the National Institute of Environmental Health Sciences and also served on the NASEM organizing committee for the Children's Environmental Health Workshop.

Joel Kaufman

Member

Dr. Kaufman is a physician-epidemiologist, board-certified in internal medicine and occupational medicine. Earning his M.D. in 1986 from the University of Michigan, and M.P.H. in 1990 from the University of Washington (UW), he has been a full-time faculty member at the UW since 1997 and is currently a Professor in the Departments of Environmental & Occupational Health Sciences, and Medicine (General Internal Medicine), and Epidemiology.

Dr. Kaufman's work integrates epidemiology, exposure sciences, toxicology and clinical medicine. He was elected to the National Academy of Medicine in 2020 for his international leadership in understanding the health effects of ambient air pollution, and for his work to elucidate the link between air pollutants and cardiovascular disease through acceleration of atherosclerosis.

Since early 2020, Dr Kaufman has served as editor-in-chief of Environmental Health Perspectives, a leading environmental health journal published with support by the National Institute of Environmental Health Sciences.

Megan W. Latshaw

Member

Dr. Megan Latshaw serves as Director of the Master's Degree Programs in the Department of Environmental Health and Engineering at the Johns Hopkins Bloomberg School of Public Health. She also serves as Core Faculty for the Bloomberg American Health Initiative, and Co-Chair of the JHU Sustainability Plan Steering Committee.

Previously, Dr. Latshaw served as Chair of the American Public Health Association's Inter-Sectional Council (and sat on the Association's Executive Board), as well as Chair of their Environment Section.

Other positions included leading the Environmental Health programs at both the Association of State & Territorial Health Officials (where she created the State Environmental Health Directors group which still meets today) and at the Association of Public Health Laboratories (where she directed the launch of the National Biomonitoring Network).

Over 80,000 students from all over the world have enrolled in her massive open online course on Chemicals & Health. Her efforts to translate environmental health science to policy and practice focus on transit equity, environmental justice, climate change, disease clusters, and designing healthy communities.

Dr. Latshaw has three degrees from Johns Hopkins: PhD & MHS in Environmental Health, and a BA in Biology. Currently, she sits on a NASEM/TRB/ NCHRP Project Panel and has participated on more than a dozen committees, presented at dozens of meetings, co-authored several peer-reviewed articles (the first of which was published in JAMA), and received awards including the Collaborative on Health and the Environment's 20 Pioneers under 40 in Environmental Public Health.

Carmen J. Marsit

Member

Carmen J. Marsit, PhD is Executive Associate Dean for Faculty Affairs and Research Strategy, Rollins Distinguished Professor of Research, and Professor in the Gangarosa Department of Environmental Health and Department of Epidemiology at the Rollins School of Public Health of Emory University. He leads a multi-disciplinary research program focused on understanding the impacts of the pre- and perinatal environments on maternal and child health, utilizing the tools of genomics, epigenomics, and bioinformatics to uncover mechanisms underlying the impact of the environment on health within epidemiologic studies. Dr. Marsit was the recipient of a NIMH Biobehavioral Research Award for Innovative New Scientists. His current projects are examining the impacts of maternal structural, psychosocial, and chemical exposures on the transcriptomes and epigenomes of the placenta in populations in the United States and in Thailand. He also has an extensive record of research in the utilization of epigenetic biomarkers to understand the etiology and outcomes of human exposure related cancers. Dr. Marsit serves as Director of the NIEHS-funded Emory HERCULES Exposome Research Center and Training Program in the Environmental Health Sciences and Toxicology, and was the founding Director of the Emory-Georgia Clean Air Research and Education Program in the Republic of Georgia. Dr. Marsit received his BS in Biochemistry from Lafayette College and his PhD in the Biological Sciences in Public Health from the Graduate School of Arts and Sciences at Harvard University.

Claudio Sorrentino

Member

Claudio Sorrentino is the Senior Toxicologist at the Department of Toxic Substances Control (DTSC), California Environmental Protection Agency in Sacramento. Since December 2007, he has been providing scientific and technical advice on risk assessment, exposure assessment, and toxicological issues. Claudio has been involved with the Interstate Technology and Regulatory Council for more about a decade as leader of three teams (Risk Assessment-3; Bioavailability of Contaminants in Soil; and Soil Background & Risk Assessment). He graduated from the School of Pharmacy of the University of Rome, Italy "La Sapienza" where he also specialized in Pharmacology from School of Medicine. He earned a Ph.D. in Environmental Health Sciences from the New York University and was a postdoctoral scholar M.S. Denison's Lab at UC Davis where he is still involved in teaching.

Laura O. Taylor

Member

Dr. Taylor is Chair of the School of Economics at the Georgia Institute of Technology. Prior to joining the Georgia Tech faculty in 2018, she was Director of the Center for Environmental and Resource Economic Policy at North Carolina State University. Her research focuses on the economics of environmental management and includes topics at the intersection of environmental and human health such as estimating the public health effects of air pollution and valuing human mortality-risk reductions associated with environmental improvements. She has extensive experience measuring the broader economic benefits associated with improved air, water, and ecosystem quality. She was elected as a Fellow of the Association of Environmental and Resource Economists in 2020, and has held numerous advisory board positions, including serving on the environmental economics subcommittee of the US EPA Science Advisory Board. She received a Ph.D. in economics from North Carolina State University, M.A. in economics from Duke University, and a B.A. in economics from the University of North Carolina at Asheville.

Amy Wagoner Johnson

Member

Amy Wagoner Johnson is a Professor and Head of the Biomedical and Translational Sciences Department in the Carle Illinois College of Medicine, the world's first engineering-based college of medicine, at the University of Illinois at Urbana-Champaign. She is an Andersen Faculty Scholar in the Grainger College of Engineering and holds a primary faculty appointment in the Department of Mechanical Science and Engineering. Her research focuses on biomaterials and biomechanics with applications in bone regeneration and repair, coral regeneration and restoration, and biomechanics of women's reproductive tissue, including tissue exposed to environmental toxins. She received her PhD in Engineering from Brown University (2002). She was a Chair of Excellence at the NanoSciences Foundation (Grenoble, France) and an Invited Professor at the University of Grenoble (2014-2017). She received the Distinguished Engineering Educator Award from the Society of Women Engineers (2020) and was elected to the American Institute for Medical and Biological Engineering (AIMBE, 2022). At Illinois, she received the Dean's Award for Excellence in Research (2018) and the Grainger College of Engineering Award for Sustained Excellence in Diversity Equity and Inclusion (2022). She has affiliate appointments in the Department of Bioengineering, the Beckman Institute for Advanced Science and Technology, and Carl R. Woese Institute for Genomic Biology, where she is a Core Member of Regenerative Biology and Tissue Engineering and Environmental Impacts on Reproductive Health.