Guidance on PFAS Testing and Health Outcomes

Committee

Bruce N. Calonge

Chair

Ned Calonge (NAM) is an Associate Professor of Family Medicine at the Colorado School of Medicine, University of Colorado, Denver, and an Associate Professor of Epidemiology at the Colorado School of Public Health. He most recently served as the President and CEO of The Colorado Trust, a private grant-making foundation dedicated to achieving health equity for all Coloradans. Nationally, chairs the CDC's Task Force on Community Preventive Services, chairs the National Academies of Science, Engineering and Medicine's Board on Population Health and Public Health Practice and is a member of the Roundtable on the Advancement of Health Equity. He is past Chair of the United States Preventive Services Task Force, past chair of the CDC's Evaluating Genomic Applications for Practice and Prevention (EGAPP) Working Group, and a past member of the Secretary's Advisory Committee on Heritable Disorders in Newborns and Children. Prior to coming to The Trust, Dr. Calonge was the Chief Medical Officer of the Colorado Department of Public Health and Environment. Dr. Calonge received his BA in Chemistry from The Colorado College, his MD from the University of Colorado and his MPH from the University of Washington, where he also completed his preventive medicine residency. He completed his family medicine residency at the Oregon Health Sciences University.

Laura Anderko

Member

Laura Anderko is a professor at Villanova University. She is Co-Director of the Region 3 Pediatric Environmental Health Specialty Unit, the Mid-Atlantic Center for Children's Health and the Environment at Villanova University College of Nursing. She is an educator and scholar in public health, nursing, and environmental health. Over the past 7 years, Dr. Anderko has educated communities and health providers about potential health impacts and risk reduction strategies for perfluoroalkyl substances (PFAS). She has published extensively on PFAS, focusing on clinicians' role in addressing health impacts and strategies for reducing risks. In 2020, she participated in the NASEM Planning Meeting on Children's Health and Climate Change. Dr. Anderko received her M.S. in Nursing from Northern Illinois University and her Ph.D. in Public Health from the University of Illinois at Chicago.

Erin M. Bell

Member

Erin Bell is a Professor in the Department of Epidemiology and Biostatistics and the Department of Environmental Health in the School of Public Health of the University at Albany. She joined the faculty at the University at Albany after completing her postdoctoral training at the National Cancer Institute, Bureau of Occupational and Environmental Epidemiology. She has taught Epidemiology and Environmental Health to undergraduate and graduate students for almost twenty years and most recently served as the Faculty Director of the Undergraduate Program in Public Health at the University at Albany. She is also an affiliate with the Center for Social and Demographic Analysis. Her research studies focus on environmental exposures as they relate to reproductive, immune, and cancer outcomes. Dr. Bell is currently the co-principal investigator of two cohort studies: the Upstate KIDS study, which follows over 6,000 children to identify potential risk factors for developmental health effects and the Health Study of New York State Communities Exposed to PFAS Contaminated Drinking Water, funded by ATSDR as one of seven sites participating in the Multi-Site PFAS Health Study. She has served on several National Academies committees, including the Committee to Review the Health Effects in Vietnam Veterans of Exposure to Herbicides: Seventh, Eighth, and Tenth Biennial Updates. Dr. Bell received her M.S. in Epidemiology and Biostatistics from the University of Massachusetts, Amherst and her Ph.D. in Epidemiology from the University of North Carolina at Chapel Hill.

Dana Boyd Barr

Member

Dana Boyd Barr is a Research Professor at Emory University Rollins School of Public Health where she co-directs RSPH's Laboratory for Exposure Assessment and Development in Environmental Research and leads research within the NIH-funded Human Exposome Research Center: Understanding Lifetime Exposures (HERCULES). Dr. Barr’s research focuses using analytical chemistry techniques to assess exposure, primarily as it related to maternal-child health. Prior to joining Emory, Dr. Barr was employed at the Centers for Disease Control and Prevention for 23 years where she devoted much of her time to the development of methods for assessing human exposure to a variety of environmental toxicants including current-use pesticides, phthalates, organochlorine chemicals, phytoestrogens, diethylene glycol, methyl eugenol, vinyl chloride and others. Dr. Barr is a past President of the International Society of Exposure Science, the former Editor-in-Chief of the Journal of Exposure Science and Environmental Epidemiology, and currently serves as a Deputy Editor for Environmental Health Perspectives. As a result of her research, Dr. Barr has received many awards including ISES’s Daisy Award for Outstanding Investigator, two HHS Secretary’s awards for exposure-health investigations involving diethylene glycol and methyl parathion poisoning, the 2004 Federal Scientific Employee of the Year, CDC’s Mackel Award for outstanding collaboration among epidemiology and laboratory, and EPA’s Silver Medal for outstanding service to environmental health. In 2014, 2015, and 2016, she was designated by Thomson-Reuters as a “Highly Cited Scientist” in environment/ecology representing the top 1% of scientists in her field. She recently became a member of the Academies’ Division on Earth and Life Studies Board on Environmental Studies and Toxicology. Dr. Barr received her Ph.D. in Analytical Chemistry from Georgia State University.

Kevin C. Elliott

Member

Kevin Elliott is a Professor at Michigan State University with joint appointments in Lyman Briggs College, the Department of Fisheries and Wildlife, and the Department of Philosophy. His research lies at the intersection of the philosophy of science, research ethics, and environmental ethics. Much of his scholarship has focused on the roles of ethical and social values in scientific research on environmental pollution. His work also addresses ethical issues related to science communication, science policy, and team science. He has authored a wide range of articles and book chapters and has published two books with Oxford University Press: “Is a Little Pollution Good for You? Incorporating Societal Values in Environmental Research” (2011) and “A Tapestry of Values: An Introduction to Values in Science” (2017). He has co-edited two other books: “Exploring Inductive Risk: Case Studies of Values in Science” (with Ted Richards, Oxford University Press, 2017) and “Current Controversies in Values and Science” (with Dan Steel, Routledge Press, 2017). He served as the Program Committee Chair for the 2018 meeting of the Philosophy of Science Association and is an Associate Editor for the journal Philosophy of Science. He served as a member of the Advisory Council for the National Institute of Environmental Health Sciences from 2014-2018 and is currently a member of the MSU Center for PFAS Research. He has also served on Academies organizing committees and workshops and on the Committee on Use of Emerging Science for Environmental Health Decisions. Dr. Elliott received his Ph.D. and M.A. in History and Philosophy of Science from the University of Notre Dame.

Melissa Gonzales

Member

Melissa Gonzales is a Professor in the Division of Epidemiology, Biostatistics, and Preventive Medicine at the University of New Mexico School of Medicine. She is also the Co-Director for UNM’s Center for Native American Environmental Health Equity Research and the Director of Evaluation for the Vice-Chancellors Office of Diversity. She is also the Associate Vice Chancellor for Research and Evaluation in the Office of Diversity, Equity and Inclusion at the UNM Health Sciences Center. As an environmental health scientist with expertise in exposure assessment and epidemiology, Dr. Gonzales' community-engaged, translational research focuses on 1) understanding the contribution of environmental exposure to health disparities; 2) rural and minority health; and 3) the translation of research for improved health equity through informed policy. Her research and leadership roles at UNM span the Center for Native Environmental Health Equity Research, the UNM Metal Exposure and Toxicity Assessment on Tribal Lands in the Southwest Superfund Center, and the Transdisciplinary Research, Equity, and Engagement Center for Advancing Behavioral Health Center. Her work includes the Albuquerque Hispanic Moms Study, the Zuni Exposure Study, the Colorectal Disease Prevention Study, and the UNM-UTEP ARCH study of asthma and air pollution among children living on the U.S. Mexico border. She has previously served on two Academies committees: the Committee to Review the Health Effects in Vietnam Veterans of Exposure to Herbicides - Tenth Biennial Update, and the Committee to Evaluate the Potential Exposure to Agent Orange/TCDE Residue and Level of Risk of Adverse Health Effects for Aircrew of Post-Vietnam C-123 Aircraft. Dr. Gonzales received her M.S. in Toxicology/Industrial Hygiene at the University of Arizona College of Pharmacy and her Ph.D. in Environmental Health at the University of California Berkeley School of Public Health.

Erin N. Haynes

Member

Erin Haynes is the Kurt W. Deuschle Professor in Preventive Medicine and Environmental Health and Chair of the Department of Epidemiology and Department of Preventive Medicine and Environmental Health within the University of Kentucky (UK) College of Public Health. She is the Deputy Director of the National Institutes of Health, National Institute of Environmental Health Sciences (NIEHS) UK Center for Appalachian Research in Environmental Sciences (CARES), an associate director of the UK Center for Clinical and Translational Science, co-chair of the NIEHS Disaster Response Research Committee, and senior associate editor of the Journal of Appalachian Health. Her current research, funded by the NIEHS, focuses on investigating the effects of neurotoxiciant exposure, particularly metals, on neurodevelopment in rural adolescents, and development and validation of a real-time lab-on-a-chip sensor for blood metals detection. Dr. Haynes works with community members to address environmental health issues and develops citizen science tools to enable environmental health research. She also serves on the NIH/NIEHS Environmental Health Sciences study section, and as Academic Counselor for the International Society for Exposure Science, and as senior associate editor of the Journal of Appalachian Health. Dr. Haynes received her M.S. in Environmental Genetics and Molecular Toxicology from the University of Cincinnati, and her Dr.PH. in Environmental Health Sciences from the University of Michigan.

Jane Hoppin

Member

Jane Hoppin is a Professor of Biological Sciences and Deputy Director of the Center for Human Health and Environment at North Carolina State University. Dr. Hoppin’s research focuses on how epidemiologic evidence can inform mechanisms of disease from environmental exposures, and she is currently leading an NIH-funded study of PFAS exposures in the Cape Fear River basin. She is an environmental epidemiologist whose work focuses on the impacts of chemical exposures on human health. She currently has funded research projects evaluating the impact of pesticide exposure to residents in the banana growing region of Costa Rica and assessing exposure to novel and legacy PFAS among residents in the Cape Fear River basin in North Carolina. She has over 200 publications related to exposure assessment for chemicals in the environment and health outcomes. She previously spent almost 15 years at NIEHS working on the Agricultural Health Study. Dr. Hoppin received her S.M. and Sc.D. in Environmental Health and Epidemiology from the Harvard T.H. Chan School of Public Health.

Tamarra James-Todd

Member

Tamarra James-Todd is the Mark and Catherine Winkler Assistant Professor of Environmental Reproductive and Perinatal Epidemiology at Harvard T.H. Chan School of Public Health, Associate Epidemiologist at Brigham and Women's Hospital, and an Instructor in Medicine at Harvard Medical School. She has research expertise in reproductive and developmental outcomes following exposure to environmental risk factors. Specifically, Dr. James-Todd evaluates the impact of pregnancy as a sensitive period of environmental chemical exposure for women's cardiometabolic health across the reproductive life course. She is the PI of the Environmental Reproductive Glucose Outcomes (ERGO) Study, which evaluates the impact of environmental chemicals and glucose metabolism during the perinatal period. She is also a PI of a study evaluating PFAS exposure on maternal cardiometabolic health across the reproductive life course within the Project Viva pregnancy/birth cohort. She has a particular focus on racial/ethnic disparities in environmental exposures and women's reproductive health outcomes. She has served on the EPA's Scientific Advisory Board for the Chemical Assessment Advisory Committee, as well as the National Academies of Sciences, Engineering, and Medicine's Committee for Gulf War and Health: The Generational Health Effects of Serving in the Gulf War. Previously, she served on the Academies' Committee on Gulf War and Health: Volume 11: Generational Health Effects of Serving in the Gulf War. Dr. James-Todd received her M.P.H. in International Health from Boston University School of Public Health, and her Ph.D. in Epidemiology from Columbia University.

Alex R. Kemper

Member

Alex R. Kemper is the Division Chief of Primary Care Pediatrics at Nationwide Children's Hospital and Professor of Pediatrics at the Ohio State University College of Medicine. The focus of his research is the evaluation of preventive services delivered in the primary care setting. He currently serves as the Chair of the Evidence Review Workgroup for the U.S. Secretary of Health and Human Services Advisory Committee on Heritable Disorders in Newborns and Children and is the Deputy Editor of PEDIATRICS. He is a former member of the US Preventive Services Task Force and has served on the National Academies of Science, Engineering, and Medicine planning committee on special nutritional requirements for disease states. Dr. Kemper received his M.D. from Duke University where he also completed his pediatric residency training, followed by combined fellowship training in health services research and medical informatics with residency training in preventive medicine at the University of North Carolina.

Brian Linde

Member

Brian Linde is the Associate Program Director of the Yale Occupational and Environmental Medicine Program (YOEMP) and Chief of Occupational Health Services at the VA Connecticut Healthcare System (VACHS). As Associate Program Director of YOEMP, he oversees the medical education and training for the physicians in training in Occupational and Environmental Medicine. He has also designed curricula to train Internal Medicine residents in core aspects of Occupational and Environmental Medicine. As Chief of Occupational Health Services at VACHS, he oversees the Medical Center Occupational Health Services for over 3,000 employees in the VA Connecticut Healthcare System. Services include medical surveillance, work injury evaluation and management, infection prevention, and employee health and well-being. As a Board Certified Occupational and Environmental physician, he also provides patient consultations to evaluate health effects of occupational and environmental exposures. Dr. Linde received his M.P.H. in Occupational and Environmental Medicine from Yale School of Public Health, and his M.D. from Albert Einstein College of Medicine, Yeshiva University.

Marc-Andre Verner

Member

Marc-André Verner is an Associate Professor in the Department of Occupational and Environmental Health, School of Public Health, Université de Montréal (Canada). He is also a member of the Center for Public Health Research. Dr. Verner’s current research projects mostly focus on developmental exposure to environmental chemicals in the womb and postnatally through breastfeeding in the context of epidemiologic studies and risk assessment. He has expertise in human health risk assessment, toxicology, biological modeling, and environmental epidemiology. He has worked on estimating gestational and lactational exposure to perfluoroalkyl substances in the context of risk assessment and epidemiologic studies. Namely, he participated in the Minnesota Department of Health re-evaluation of water guidance values for PFOA and PFOS. In 2016, he received the Joan M. Daisey Outstanding Young Scientist Award for his studies using pharmacokinetic modeling to assess exposures during hypothesized windows of susceptibility to contaminants. Dr. Verner received his M.S. and Ph.D. in Toxicology from the Université du Québec à Montréal.

Veronica M. Vieira

Member

Veronica Vieira is a Professor in the College of Health Sciences and the Interim Chair of Environmental and Occupational Health at University of California, Irvine. Her current work includes evaluating birth defects and infant morbidity in relation to air pollution using generalized additive models (GAM), and she has worked with the Boston University Superfund Research Program. She works extensively with reconstructing historic environmental exposures using GIS and has experience with groundwater modeling and perfluorooctanoic acid (PFOA). Dr. Vieira collaborated on the C8 Health Project, contributing to several health and exposure studies, and is currently an investigator on the UCI PFAS Health Study, part of a multi-site study sponsored by CDC/ATSDR. Dr. Vieira has served on the Committee to Review Possible Toxic Effects from Past Environmental Containment at Fort Detrick. She received her M.S. in Environmental Engineering from Stanford University and her D.Sc. in Environmental Health from Boston University School of Public Health.

Xiaobin Wang

Member

Xiaobin Wang (NAM) is an academic pediatrician, Zanvyl Krieger Professor in Children's Health, Director of the Center on the Early Life Origins of Disease at Johns Hopkins University Bloomberg School of Public Health and School of Medicine, Professor of pediatrics at Johns Hopkins School of Medicine, and an American Board of Pediatrics certified pediatrician at Johns Hopkins Hospital. Her work unites biomarkers, clinical medicine, epidemiology, and disease prevention. Dr. Wang served as the principal investigator in a number of molecular epidemiological studies funded by the National Institute of Health (NIH), and led multi-institution, multi-disciplinary teams to investigate environmental, nutritional, genetic and epigenetic factors during critical developmental windows (preconception, in-utero, infancy and childhood). Her team has conducted a series of studies in three unique study cohorts (the Boston Birth Cohort, Chicago Family Cohort and Chinese Twin Cohort). The Boston Birth Cohort is one of the largest and longest birth cohorts of a US urban, low income, minority population with multi-level and longitudinal data collection, and has already contributed more than 100 peer-reviewed publications. Those studies have advanced our understanding of early life precursors of pediatric and chronic diseases, including preterm birth, food allergies, asthma, autism, attention deficient and hyperactivity disorder, obesity, diabetes and hypertension. She has served on two Academies committees: the Committee on Food Allergies: Global Burden, Causes, Treatment, Prevention, and Public Policy, and the Committee on Understanding Premature Birth and Assuring Health Outcomes. She is also a member of the National Academy of Medicine. Dr. Wang received her M.D. from Beijing Medical University in Beijing, China, and her M.P.H. from the School of Public Health and Tropical Medicine at Tulane University in New Orleans. She also received a Sc.D. from the Department of Maternal and Child Health at the Johns Hopkins University School of Hygiene and Public Health in Baltimore. She completed a three-year research fellowship in Environmental Epidemiology at the Harvard School of Public Health and a residency in pediatrics at the Boston University Medical Center.

Chris J. Wiant

Member

Chris Wiant was the Founding President and CEO of the Caring for Colorado Foundation serving from 2000 until his retirement in 2020. Previously the Executive Director of Colorado's Tri-County Health Department, Dr. Wiant has extensive experience with health departments including collaborating with communities dealing with environmental contamination. He was the Chief of the Environmental Chemistry Section of the Illinois Department of Public Health. Dr. Wiant was appointed to 5 terms on the Colorado Water Quality Control Commission. He has served on the EPA National Drinking Water Advisory Council, the Federal Advisory Committee (FACA) for development of regulations for disinfection by-products in drinking water (Stage I and II), and he was the chairman of the NSF International Council of Public Health Consultants. Dr. Wiant is also a past president of the National Environmental Health Association (NEHA) and the Colorado Public Health Association. Dr. Wiant was also a key participant in the negotiation of the cleanup (Record of Decision) at the Rocky Mountain Arsenal Superfund site. He has been appointed to and recognized for his service on a variety of other local, state and national advisory committees and boards and as a facilitator of solutions to community public health challenges. He is experienced in risk assessment and communication, exposure science, and environmental policy. Dr. Wiant received his M.S. in Health Services Administration, M.P.H. from the University of Illinois and his Ph.D. in Public Policy with an emphasis in environmental policy from the University of Colorado.

Elizabeth Boyle

Staff Officer

Elizabeth Barksdale Boyle is a Senior Program Officer in the Health and Medicine Division's Board on Population Health and Public Health Practice after serving for several years as a Program Officer with the Board on Environmental Studies and Toxicology. Formerly, she was an Environmental Health scientist at Westat, where she supported the Environmental Protection Agency, the National Institute of Child Health and Development, and the National Cancer Institute. Before her tenure at Westat, Ms. Boyle was a Student Epidemiologist at the Minnesota Department of Health and an Industrial Hygienist at a consulting firm in Cincinnati. She is a Fellow of the Bloomberg American Health Initiative at the Johns Hopkins Bloomberg School of Public Health, where she is pursuing a doctorate of public health in environmental health. Ms. Boyle has an MPH in environmental health from the University of Minnesota, a certificate in risk sciences and public policy from Johns Hopkins University Bloomberg School of Public Health, and is a Certified Industrial Hygienist.