Invitation for Public Comment on the List of Candidates
For the Environmental Protection Agency's
Clean Air Scientific Advisory Committee (CASAC)
Lead Review Panel

October 28, 2021

The U.S. Environmental Protection Agency (EPA) Science Advisory Board (SAB) Staff Office announced in a Federal Register Notice (86 FR 50345-50346) on September 8, 2021, that it was inviting nominations of experts to be considered for appointment to the Clean Air Scientific Advisory Committee (CASAC) Lead Review Panel. The CASAC Lead Review Panel will provide advice through the chartered CASAC on the scientific and technical aspects of air quality criteria and the primary and secondary National Ambient Air Quality Standards (NAAQS) for lead. The SAB Staff Office sought nominations of nationally and internationally recognized scientists with demonstrated expertise and research in the field of air pollution related to criteria pollutants, in the following fields, especially with respect to lead: Air quality; environmental fate and transport; exposure and biomarker assessment; biokinetic modeling; toxicology; epidemiology; risk assessment; biostatistics; and ecology.

The SAB Staff Office received nominations for the attached 31 candidates based on their expertise and willingness to serve. We hereby invite public comments on the attached List of Candidates under consideration for appointment to the CASAC Lead Review Panel. Comments should be submitted to Mr. Aaron Yeow, Designated Federal Officer, at yeow.aaron@epa.gov no later than **November 18, 2021**. E-mail is the preferred mode of receipt. Please be advised that public comments are subject to release under the Freedom of Information Act.

Candidates for the 2021 CASAC Lead Panel

George A. Allen

Northeast States for Coordinated Air Use Management (NESCAUM)

Mr. George Allen is the Chief Scientist at the Northeast States for Coordinated Air Use Management (NESCAUM), an interagency association of the eight Northeastern States. He holds a B.S. in Electrical Engineering from Tufts University. At NESCAUM, Mr. Allen is responsible for monitoring and exposure assessment activities across a range of wide range of air topics, including regional haze, air toxics, on and off-road diesel, wood smoke, and continuous aerosol measurement technologies. He served on the Chartered Clean Air Scientific Advisory Committee (CASAC) from 2010 to 2016, has been a member of several CASAC review panels since 2004 including the disbanded 2016 particulate matter (PM) panel, and is the author or co-author of more than 45 peer-reviewed journal papers on development and evaluation of measurement methods, exposure assessment, and air pollution health effects. In October 2019, Mr. Allen participated in the Independent PM review Panel, a group of scientists dismissed by the Environmental Protection Agency (EPA) in the fall of 2018 that performed a parallel review of the science behind the PM standards. Before joining NESCAUM in 2002, Mr. Allen was on the professional staff at the Harvard School of Public Health (HSPH) in Boston for more than 20 years, working on a wide range of air pollution studies, funded by EPA and the National Institutes of Health. While at HSPH, he developed several new techniques for real-time aerosol measurements. Currently, Mr. Allen is serving as the lead for the NESCAUM Monitoring and Assessment Committee. He also represents states interests to EPA in the National Association of Clean Air Agencies (NACAA) Monitoring Steering Committee, and is a member of the Environmental Protection Agency (EPA) AIRNow Steering Committee. Mr. Allen's current and pending research support pertains to scientific, technical, analytical, and policy support for NESCAUM states' air quality and climate programs, with a focus on air pollution exposure assessment and measurement methods development. These funders include New York State Energy Research and Development Authority (NYSERDA) (characterization of biomass air pollution), Massachusetts Department of Environmental Protection (spatial and temporal trends of black carbon), NESCAUM member states and Federal Land Managers (CAMNET visibility network), NESCAUM member states and EPA (support of member states' air quality programs).

James Boylan

Georgia Department of Natural Resources

Dr. James Boylan is currently the Manager of the Planning & Support Program in the Air Protection Branch of the Georgia Environmental Protection Division. The Planning & Support Program includes the Data & Modeling Unit (DMU), Emissions & Control Strategies Unit (ECSU), and Planning & Regulatory Development Unit (PRDU). Dr. Boylan's team is responsible for air dispersion modeling with American Meteorological Society/Environmental Protection Agency Regulatory Model (AERMOD) and California Puff Model (CALPUFF) required for Prevention of Significant Deterioration (PSD) permit applications covering sulfur dioxide (SO2), nitrogen dioxide (NO2), carbon monoxide (CO), particulate matter with a diameter of less than 2.5 microns (PM2.5), and lead (Pb); photochemical grid modeling with Community Multiscale Air Quality Model (CMAQ) and Comprehensive Air Quality Model with extensions (CAMx) required for Georgia's ozone, PM2.5, and regional haze State Implementation Plans (SIPs); meteorological modeling with the fifth-generation Pennsylvania State University & National Center for Atmospheric Research Mesoscale Model (PSU/NCAR MM5) and Weather Research and Forecasting model (WRF); emissions modeling with Sparse Matrix Operator Kernel Emissions model (SMOKE) and MOtor Vehicle Emission Simulator (MOVES); the development of annual state-wide emission inventories for criteria pollutants; and the technical analyses for nonattainment area designation recommendations (ozone, PM2.5, Pb, SO2, NO2). In addition, he is responsible for updating Georgia's Rules for Air Quality Control and developing and submitting all attainment demonstration SIPs, infrastructure SIPs, and rule revision SIPs to Environmental Protection Agency (EPA). He has a B.S. in Chemical Engineering from the University of Notre Dame, a M.S. in Chemical Engineering from Auburn University, and a M.S. and Ph.D. in Environmental Engineering from the Georgia Institute of Technology. Dr. Boylan's Ph.D. research included the development of the Urban-to-Regional Multiscale 1 Atmosphere Model (URM-1ATM) which was the first comprehensive three-dimensional Eulerian photochemical grid model that included full ozone chemistry, heterogeneous sulfate chemistry, aerosol thermodynamics, wet deposition and scavenging, and the decoupled direct method (DDM) for ozone and particulate matter. This model was applied as part of the Southern Appalachian Mountain Initiative (SAMI) to simulate 1-hour maximum ozone, W126 ozone, speciated PM2.5, acid deposition (ANC), and regional haze. In 2002, he was awarded the "Outstanding Ph.D. Thesis Award" the for the best Ph.D. dissertation in the Georgia Tech School of Civil and Environmental Engineering. Later, he developed and published the first model performance goals and criteria for PM2.5 which has become the benchmark for most PM2.5 modeling projects both nationally and internationally. Dr. Boylan was one of the first modelers to merge traditional air permit dispersion modeling with photochemical grid models (PGMs) when he applied a PGM to evaluate the single source impacts on ozone and secondary PM2.5 from a coal-fired power plant as part of a PSD permitting review in 2009. In addition, he developed the "Inter-Pollutant Trading Ratio Approach" for accounting for secondary PM2.5 formation from SO2 and NOx in EPA's AERMOD steady-state dispersion model. Over the past several years he has held leadership positions within many regional and national workgroups. Dr. Boylan has authored or co-authored over 30 peer-reviewed journal articles and conference papers on ozone and PM2.5, has presented research findings at over 150 national, regional, and local conferences and meetings, and was awarded "Outstanding Reviewer Status" by Atmospheric Environment in 2015. In 2001, Dr. Boylan was inducted into the Sigma Xi Scientific Research Honor Society. In 2014, Dr. Boylan was selected to participate in the Clean Air Scientific Advisory Committee (CASAC) review panel for the primary SO2 National Ambient Air Quality Standards (NAAQS). In 2017, he was appointed by the EPA Administrator to serve on the chartered CASAC where he reviewed EPA documents for the most recent ozone and PM NAAQS. In December 2020, Dr. Boylan published a paper titled "CASAC Review of the PM and Ozone NAAQS" in EM - The Magazine for Environmental Managers where he compared the traditional CASAC review approach to the newly implemented streamlined approach. Finally, Dr. Boylan was one of eight people selected to serve on the SAB Reduced Forms Tools (RFT) review panel in 2020.

Judith C. Chow

Desert Research Institute

Dr. Judith Chow holds the Nazir and Mary Ansari Chair in Science and Entrepreneurialism and is a Research Professor in the Division of Atmospheric Sciences at the Desert Research Institute (DRI), Nevada System of Higher Education in Reno, Nevada. She has led DRI's Environmental Analysis Facility since its inception in 1985. Dr. Chow earned a B.S. degree in Biology from Fu-Jen Catholic University in Taiwan (1974), a M.S. degree in Environmental Health Science (1983) from Harvard University, and a Sc.D. degree in Environmental Science and Physiology (1985) from Harvard University. For nearly 45 years, she has conducted air quality and source characterization studies and performed data analysis and receptor modeling to improve understanding of how air quality affects human health, visibility, historical treasures, ecosystems, and climate. Dr. Chow is currently the principal investigator for: 1) measuring organic and black carbon concentrations for the National Park Service's Interagency Monitoring of Protected Visual Environments (IMPROVE) network; 2) tracking changes in air quality with control measures at the ports of Los Angeles and Long Beach; and 3) investigating the chemical nature and composition of atmospheric brown carbon aerosol. She has been principal investigator or a major collaborator in more than 50 large air quality studies (and many smaller ones) across the United States and in other countries. Dr. Chow prepared and revised sections of EPA's Particulate Matter (PM) Criteria Document (in the late 1990s/early 2000s) pertaining to chemical analysis and source emissions and contributed to EPA guidance documents on network design, continuous particulate monitoring, and particulate matter chemical speciation. Her research has been sponsored by grants and contracts from the federal government (e.g., EPA, Department of Energy and Department of Interior), local, state, and international air quality management authorities, industry, and the National Science Foundation. As past chair and a member of the Air & Waste Management Association's (A&WMA) Critical Review Committee, Dr. Chow has coordinated and evaluated Critical Reviews and Discussions on environmental science and technology topics. She was chair of the Publications Committee for the Journal of the Air & Waste Management Association and serves on Editorial Boards and/or as Associate Editor for several international journals including: the Journal of Air Quality, Atmosphere, & Health, Aerosol and Air Quality Research, Atmospheric Pollution Research, and Particuology. Dr. Chow was a member of the National Research Council's (NRC) committees on Research Priorities for Airborne Particulate Matter (1998&2003) and Energy and Air Pollution Futures in the U.S. and China (2004-2008); she also served on the NRC Board on Environmental Studies and Toxicology (2002&2005). She has been a member of the technical advisory group for the South Coast (California) Air Quality Management District's Multiple Air Toxics Exposure Study (MATES) since 1998. Dr. Chow was a chartered member of EPA's Clean Air Scientific Advisory Committee (CASAC) (2015-2018) and CASAC's Air Monitoring and Methods Subcommittee (AMMS, formerly the Ambient Air Monitoring and Methods Subcommittee) (2004-2019). She is the principal author or co-author of >590 peer-reviewed articles and book chapters and >260 reports. She has been recognized by ISIHighlyCited.com in ecology and environment with more than 27,725 citations and an h-index of 82, and is one of Stanford University's "Top 2% of the Worlds' Most Cited Scientists."

William Clements

Colorado State University

Dr. William Clements is a Professor in the Department of Fish, Wildlife and Conservation Biology and a faculty advisor in the Graduate Degree Program in Ecology at Colorado State University. Dr. Clements holds a B.S. and M.S. in Biology from Florida State University, and a Ph.D. in Zoology from Virginia Tech. Dr. Clements' research interests focus primarily on community and ecosystem responses to contaminants. He is especially interested in questions that address responses to multiple perturbations and interactions between contaminants and global climate change. He is the author/co-author of two textbooks in ecotoxicology (Community Ecotoxicology and Ecotoxicology: a Comprehensive Treatment) and has published over 100 peer-reviewed papers. At Colorado State University he teaches graduate and undergraduate courses in ecology, experimental design, and ecotoxicology. Dr. Clements is active in several professional societies including the Society of Environmental Toxicology and Chemistry (SETAC) and the Society of Freshwater Science (SFS). He chaired the Executive Committee for SFS and was elected to the Board of Directors of SETAC in 2003 and in 2012. Clements served as president of the Rocky Mountain Chapter of SETAC in 1995 and 2016. He currently serves as an Associate Editor for the journal Freshwater Science and has previously served on the Editorial Board of SETAC (1995-1997), as a Guest Editor for the Journal of Ecosystem Stress and Recovery (2000) and Ecological Applications (2007). At the national level, Dr. Clements has served on a Department of Interior Federal Advisory Committee and on two separate National Academy of Sciences National Research Council committees investigating effects of dredging operations at U.S. Environmental Protection Agency (EPA) Superfund sites and effects of coalbed methane development in the West. He served on the U.S. EPA Science Advisory Board (SAB) Ecological Processes and Effects Committee and on a SAB panel that provided advice on effects of mountaintop mining. Dr. Clements' funding over the last 2 years has been obtained from the National Institute for Environmental Health Sciences and Colorado Parks and Wildlife.

Deborah Cory-Slechta

University of Rochester

Dr. Deborah Cory-Slechta is a Professor of Environmental Medicine, Pediatrics and Public Health Sciences at the University of Rochester Medical School, and former Chair of its Department of Environmental Medicine and Principal Investigator (PI) of its National Institute of Environmental Health Sciences (NIEHS) Core Center Grant. She also previously served as Dean for Research at the University of Rochester Medical School, and as Director of the Environmental and Occupational Health Sciences Institute of Rutgers University. Her research, which has resulted in over 200 peer-reviewed publications to date, includes both animal models and human studies focused largely on the consequences of developmental exposures to environmental chemicals on brain development and behavior. Her earlier work examined the effects of developmental exposures to metals and pesticides in animal models and human cohorts. Over the past 10 years she has undertaken studies of the impact of air pollution on brain development and behavior, with exposures to concentrated ambient ultrafine particles that have led to 20 peer-review publications. Dr. Cory-Slechta has served on advisory panels of the National Institutes of Health (NIH), the Food and Drug Administration (FDA), the Environmental Protection Agency, the National Academy of Sciences, the Institute of Medicine, and the Agency for Toxic Substances and Disease Registry (ATSDR), and on the editorial boards of the journals Environmental Health Perspectives, Neurotoxicology, Toxicology, Toxicological Sciences, Toxicology and Applied Pharmacology and Neurotoxicology and Teratology. She also served on the Board of Scientific Counselors, ATSDR/Centers for Disease Control and Prevention (CDC). In 2017, she was the recipient of the Distinguished Neurotoxicologist Award from the Neurotoxicology Specialty Section of the Society of Toxicology. In 2021, she was the recipient of the Distinguished Toxicology Scholar Award from the Society of Toxicology.

Christina H. Fuller

Georgia State University School of Public Health

Dr. Christina H. Fuller is an Associate Professor of Environmental Health at the Georgia State University School of Public Health. Dr. Fuller received her M.S. degree and Sc.D. degree in Environmental Health from the Harvard School of Public Health and her B.S. degree in Environmental Engineering from Northwestern University. Dr. Fuller has been active in the air pollution field for over 15 years and specializes in human exposure assessment, epidemiology, health disparities and community-based research. Her expertise includes the characterization of criteria air pollutants, as well as extensive knowledge of ultrafine particles; estimating cardiovascular health effects; documenting disparities and social vulnerabilities; and testing exposure reduction technologies. Dr. Fuller has served on review panels for the National Institute of Environmental Health Sciences (NIEHS), the Health Effects Institute and the Natural Environment Research Council (United Kingdom). She is an Editorial Board Member of the International Journal of Environmental Research and Public Health (IJERPH) and is currently editing a special issue on air pollution within Africa and the African Diaspora. Dr. Fuller recently released a co-edited book titled Ambient Combustion Related Ultrafine Particles and Health, which compiles the state of the science of the very smallest particles. Within the past two years, Dr. Fuller has served as Principal Investigator (PI) of an NIEHS-funded research grant testing the effectiveness of air pollution mitigation through green infrastructure. In addition, she served as PI on a community-engaged research project measuring air pollution near marine ports funded by New York Community Trust/Friends of the Earth. She teaches courses on air pollution, environmental justice, and environmental health to both undergraduate and graduate students. Dr. Fuller is a member of the International Society of Environmental Epidemiologists (ISEE) and its Capacity Building and Education Subcommittee; the International Society of Exposure Science (ISES) and its 2021 Technical Organizing Committee; and the American Public Health Association.

Philip Goodrum

GSI Environmental Inc.

Dr. Philip Goodrum is a Principal Toxicologist with 30 years of experience in the health and environmental science fields, working on behalf of both government and private sector clients. He has extensive experience in quantitative risk assessment and environmental modeling, specializing in exposure assessment, toxicology, and statistical analysis. He is recognized nationally as an expert in lead risk assessment and statistical sampling methods for site characterization, having been invited to serve on numerous national advisory committees, including National Academy of Sciences (NAS) Committee to Review the Department of Defense's Proposed Occupational Exposure Limits for Lead (2019-2020), Environmental Protection Agency (EPA) Peer Review Panel for Lead in Drinking Water (2017) and Revision to Exposure Factors Handbook (2017), National Institutes of Health (NIH)/National Institute of Environmental Health Sciences (NIEHS) Time Sensitive Grant Review Committee (2016), Science Advisory Board (SAB) for Lead (2010, 2015, 2019-2020), Clean Air Scientific Advisory Committee (2006-2012), and EPA National Center for Environmental Assessment Peer Review Panel for the All Ages Model (2000). Dr. Goodrum is a board-certified toxicologist and ecologist. He is a visiting instructor at State University of New York (SUNY) College of Environmental Science and Forestry where he teaches a course in environmental risk assessment. He received a Ph.D. in Environmental Engineering with a research focus that included developing the Integrated Stochastic Exposure model for lead in collaboration with EPA to support risk-based action levels for soil lead at several mining sites. He received an M.S. in Water Resources and served as chair of the Syracuse Regional Lead Task Force for two years to support initiatives to educate the public about lead exposure, toxicology, and risk reduction methods.

Perry Gottesfeld

Occupational Knowledge International

Mr. Perry Gottesfeld is the Executive Director of Occupational Knowledge International (OK International), a nongovernmental organization (NGO). He founded OK International in 1999 to build capacity to address environmental and occupational health in low and middle-income countries. Mr. Gottesfeld obtained his Masters of Public Health in Biomedical and Environmental Health Sciences from University of California at Berkeley and has a Bachelor's degree in Environmental Studies from Binghamton University. He served on the steering committee for the Global Alliance to Eliminate Lead Paint under the World Health Organization and United Nations Environment Programme. Gottesfeld also served on the U.S. Center for Disease Control and Prevention's Advisory Committee on Childhood Lead Poisoning Prevention where he co-chaired the workgroup that developed the current U.S. national guidelines for childhood lead poisoning prevention. He currently serves on the California Environmental Protection Agency's Lithium-ion Car Battery Recycling Advisory Group established to advise the California legislature. In 2014 he received the Social Responsibility Award from the American Industrial Hygiene Association. He has published more than 20 articles in the peer-reviewed literature on a wide range of environmental and occupational health topics including lead exposures and biomonitoring, industrial emissions, and public health policy. Research funding for the past two years came from Doctors Without Borders, the Conservation, Food and Health Foundation, and from donations to Occupational Knowledge International. Mr. Gottesfeld has extensive experience working on lead poisoning prevention for more than 30 years and has worked cooperatively with lead battery companies and paint manufacturers to reduce environmental and occupational lead exposures. Through this work he has visited dozens of lead battery manufacturing and recycling plants in the U.S. and abroad.

Daven Henze

University of Colorado Boulder

Dr. Daven Henze is a Professor and the S. P. Chip and Lori Johnson Faculty Fellow in the Department of Mechanical Engineering at the University of Colorado Boulder (CU Boulder), and an Adjunct Senior Research Scientist at the Lamont-Doherty Earth Observatory of Columbia University. He holds a Ph.D. in chemical engineering from Caltech. Prior to joining the faculty at CU Boulder he was an Earth Institute Postdoctoral Fellow at Columbia University, where he worked at the National Aeronautics and Space Administration (NASA) Goddard Institute for Space Studies. Dr. Henze's research focuses on atmospheric chemistry, air quality, air pollution health impacts, long-range pollution transport, and climate change. A large part of his research stems from chemical data assimilation and inverse modeling project, which encompass more specific interests in satellite remote sensing, adjoint sensitivity analysis, and source apportionment. Dr. Henze has received an Environmental Protection Agency (EPA) Early Career award, a NASA New Investigator award, and several university awards for teaching and research. He is a member of the NASA Earth Science Advisory Committee, which is responsible for providing guidance to the NASA Earth Science Division and he was a member of the EPA Clean Air Scientific Advisory Committee (CASAC) NOx/SOx Secondary National Ambient Air Quality Standards (NAAQS) Panel. He is/has been a member of multiple NASA satellite science teams (TES, Glory, CrIS, AQAST, HAQAST), and he is the lead scientist for the GEOS-Chem adjoint model and a member of the GEOS-Chem Steering Committee. His research funding for the past two years has come from NASA, EPA, National Oceanic and Atmospheric Administration (NOAA), National Institutes of Health (NIH), the Welcome Trust, the Stockholm Environment Institute, the International Council on Clean Transportation, and Industrial Economics Inc.

Philip Hopke

Clarkson University

Dr. Philip K. Hopke is the Bayard D. Clarkson Distinguished Professor Emeritus at Clarkson University and an adjunct professor in the Department of Public Health Sciences at the University of Rochester Medical Center. He holds a B.S. in Chemistry from Trinity College, Hartford, CT, and an M.A. and Ph.D. in Chemistry from Princeton University. His research interests include: Chemical characterization of ambient aerosol samples; Characterization of source/receptor relationships for ambient air pollutants; Multivariate statistical methods for data analysis; Indoor air quality; Exposure and risk assessment; Emissions and properties of solid biomass combustion systems; and Experimental studies of homogeneous, heterogeneous, and ion-induced nucleation. Dr. Hopke is the past Chair of the Environmental Protection Agency (EPA) Clean Air Scientific Advisory Committee (CASAC), and has previously served on the EPA Science Advisory Board. Professor Hopke is a Past President of the American Association for Aerosol Research (AAAR), was a member of the more than a dozen National Research Council committees, and on their Board of Environmental Studies and Toxicology. He is a fellow of the International Aerosol Research Assembly (IARA), the American Association for the Advancement of Science, the American Association for Aerosol Research, and the Air and Waste Management Association. He is an elected member of the International Statistics Institute and the recipient of the two major international awards in chemometrics. Dr. Hopke is also a recipient of the AAAR David Sinclair Award and the IARA Fissan-Pui-TSI Award for International Research Collaboration. He served as a Jefferson Science Fellow at the U.S. Department of State during the 2008-09 academic year. He has been appointed to World Health Organization (WHO) Global Air Pollution and Health & Technical Advisory Group (GAPH-TAG) Expert Working Group on Interventions / Policies and the Expert Working Group on Methodologies for Source-Specific Burden of Disease. His current EPA funding is the Great Lakes Fish Monitoring and Surveillance Program that examines the presence of legacy and emerging contaminants in Great Lakes fish. He also has funding from the New York State Energy Research and Development Authority (NYSERDA) to analyze air pollution data from New York State. He is part of two Health Effects Institute (HEI) projects looking at particulate pollution and health outcomes in China and the U.S. and project looking at particulate pollution and fetal development, funded by the National Institute of Environmental Health Sciences.

Howard Hu

University of Southern California

Dr. Howard Hu, a physician-scientist-epidemiologist, has been a tenured Professor, Director, Department Chair, and Dean in positions at Harvard (1990-2006), the University of Michigan (2006-2012), and the University of Toronto (2012-2018). He is currently Professor and the Flora L. Thornton Chair of the Department of Preventive Medicine in the Keck School of Medicine of the University of Southern California (USC). He has a B.S. in Biology from Brown University, an M.D. from the Albert Einstein College of Medicine, and M.P.H. (Occupational Health), M.S. (Epidemiology) and Sc.D. (Epidemiology) degrees from the Harvard School of Public Health. He also completed residency training in Internal Medicine at Boston City Hospital and in occupational medicine at the Harvard School of Public Health, and is board-certified in both specialties. In terms of research, Dr. Hu has led international teams investigating the environmental, nutritional, social, genetic and epigenetic determinants of chronic disease and impaired child development in population-based studies based in the U.S., Mexico, India, China, and elsewhere around the world. His team's work has been continuously funded by the U.S. National Institutes of Health (NIH) and has generated over 300 publications (over 80 of which pertain to lead exposure and effects) and won many awards. In terms of the last two years, his research has been funded by NIH, and he has also led a number of new research projects related to the COVID-19 pandemic that have been funded by the Los Angeles County Department of Public Health, the USC/Keck COVID19 Research Fund, and the USC Office of Research. In terms of service, he currently serves as a member of the Research Committee of the Health Effects Institute, the Chair of the Scientific Advisory Board of the Marilyn Brachman Hoffman Foundation, the Chair of the Board of Directors for the Canadian Urban Environmental Research Consortium, a member of the External Advisory Committee of the New York University NIEHS P30 Environmental Health Core Sciences Center, a member of the Research Advisory Committee of the Public Health Foundation of India's Centre for Environmental Health, and a member of the Advisory Council for Physicians for Human Rights.

Muhammad Ibrahim

Government College University Faisalabad, Pakistan

Dr. Muhammad Ibrahim is Associate Professor of Environmental Science in the Department of Environmental Sciences and Engineering at Government College University Faisalabad, Pakistan. He has Bachelor's and Master's degrees in Soil Science and a Ph.D. in Soil and Environmental Sciences from the University of Agriculture, Faisalabad, Pakistan. He was awarded a prestigious South Korean postdoctoral fellowship to work with Dr. Sang Keun Ha. Dr. Ibrahim has expertise in environmental management, toxicology, atmospheric pollution, modeling, public health, risk assessment and statistics. His research includes measurement and modeling of problems related to soil-plant-atmosphere and human health impacts, heat stress, particulate pollution in urban and suburban environments. He has been principal or co-principal investigator for over 10 sponsored/funded research projects, and has published over 110 journal papers, 60 conference abstracts, 10 technical reports and 9 book chapters. Dr. Ibrahim's funding sources in the last few years include the International Environmental Research Institute (IERI)-Gwangju Institute of Science and Technology (GIST) South Korea, Higher Education Commission, Pakistan, International Center for Integrated Mountain Development (Nepal), the Wageningen University (WUR), etc. Dr. Ibrahim was a member of the editorial boards of reputed journals and served more than 5 years as editor. He chaired the International Centre for Integrated Mountain Development (ICIMOD) Committee in 2012 on hazardous materials. He has been a technical reviewer of various funding agencies including National Center of Science & Technology Evaluation, Ministry of Education & Science, Astana, Republic of Kazakhstan (since 2011). He is a reviewer of many Science Citation Index (SCI) journals and contributes in his capacity. He has been ranked at 3rd Most Productive Scientist (under 40) by Pakistan Council of Science & Technology in 2017 and included in Productive Scientists of Pakistan. He has been instrumental in organizing many seminars and conferences and symposia at the national and international levels. Dr. Ibrahim has been among the few Pakistani scientists working on atmospheric pollution and field observation. He has a good record of collaboration with fellow scientists in the developed world. He does have membership of many professional societies related to his work.

Chris Johnson

Syracuse University

Dr. Chris Johnson holds bachelors (Civil Engineering), masters (Statistics), and Ph.D. (Geology) degrees, all from the University of Pennsylvania. He is a member of Phi Beta Kappa and Tau Beta Pi and was a Fulbright Scholar in the Czech Republic in 1994. He has served as a visiting faculty member at Charles University in Prague and Griffith University in Brisbane, Australia. A member of the Department of Civil and Environmental Engineering at Syracuse University, Dr. Johnson has taught courses in environmental chemistry, soil chemistry, environmental data analysis, and surveying. He has served as Department Chair, Interim Director of the university's honors program, and is currently Associate Provost for Academic Affairs. He has been an associate editor for the Soil Science Society of America Journal and the Journal of Soils and Sediments. Professor Johnson has a variety of interests in the broad area of environmental chemistry, especially soil chemistry. He is actively involved in research on the chemistry of natural organic matter, which plays an important role in soil fertility, trace metal transport, and the acid-base status of soils and natural waters. Professor Johnson is also involved in the interdisciplinary study of biogeochemical cycles at the Hubbard Brook Experimental Forest in the U.S. He has ongoing research interests in the fate of trace metals (Pb, Zn, Cu, Ni) in forest soils and landscapes; the effects of clear-cut logging on soils and drainage waters; and the changing acid-base chemistry of soils historically affected by acid rain. His work has been funded by the National Science Foundation, the New York State Energy Research and Development Authority, the Australian Research Council, and various regional agencies.

Marty Kanarek

University of Wisconsin-Madison

Dr. Marty Kanarek is Professor of Epidemiology in the Department of Population Health Sciences in the School of Medicine and Public Health and in the Nelson Institute for Environmental Studies at the University of Wisconsin-Madison. He has served as Director of the Graduate Program in Population Health and the Graduate Program in Epidemiology and Vice Chair of the Department of Population Health Sciences in the School of Medicine and Public Health, and Chair of the Gaylord Nelson Institute for Environmental Studies Major and Certificate for undergraduates. He has taught introduction to epidemiology, advanced epidemiology, non-infectious disease epidemiology, environmental health, and air pollution and human health and other courses to thousands of junior and senior undergraduate students, graduate students, medical students and physicians, and has mentored many Master's degree and Doctoral students. Dr. Kanarek's research has included many aspects of environmental epidemiology, including childhood lead poisoning prevention and subtle neurological and learning effects of lead at low and moderate lead exposure levels, indoor and outdoor air pollution (including nitrogen dioxide, formaldehyde and radon), PCB, dioxin and mercury contaminants from consumption of contaminated fish, drinking water and cancer, environmental tracking and other studies of the human health effects of pollution. He has been a consultant in epidemiology on the environmental and occupational disease effects of asbestos, lead and other contaminants for the United States Environmental Protection Agency (EPA), the International Agency for Research on Cancer (IARC), the Agency for Toxic Substances and Disease Registry (ATSDR), and the National Institute for Environmental Health Sciences (NIEHS). He has been on several National Institutes of Health (NIH) Study Sections. His research in the last two years has been funded by the Wisconsin Division of Public Health. Dr. Kanarek is a Fellow in the American College of Epidemiology.

Susan Korrick

Harvard Medical School

Susan Korrick, M.D., M.P.H., is an Environmental Epidemiologist with particular expertise in studies of the relation of exposure to environmental chemicals with cognitive function, behavior and mental health as well as reproductive health. She is an Assistant Professor of Medicine at the Channing Division of Network Medicine and Harvard Medical School, Boston, MA and an Assistant Professor in the Department of Environmental Health at the Harvard T.H. Chan School of Public Health, Boston, MA. In addition, she is a physician with specialty training in Environmental and Occupational Medicine and an Associate Physician in the Department of Medicine at Brigham and Women's Hospital, Boston, MA. Dr. Korrick holds a B.A. from Harvard University, an M.D. from Yale University School of Medicine, and an M.P.H. from Harvard T.H. Chan School of Public Health. She is responsible for the training and supervision of doctoral students and post-doctoral trainees in environmental and occupational epidemiology and taught for many years as an invited lecturer in public health graduate courses in toxicology and environmental and occupational epidemiology. She currently directs the Research Experience and Training Coordination Core for a National Institute of Environmental Health Sciences (NIEHS)-funded Superfund Research Center at Harvard T.H. Chan School of Public Health. Although she has extensive experience studying lead exposure and its health impacts across the life span, her research encompasses a wide range of environmental contaminants and exposure media – metals (e.g., lead, mercury, manganese, and arsenic), organochlorines [pesticides, polychlorinated biphenyls (PCBs), dioxins, furans], phthalates, phenols, as well as air and water pollution among populations ranging in age from newborns to elderly adults. Dr. Korrick's expertise in epidemiology and her extensive experience with assessment of chemical risk factors for adverse neurocognitive function and reproductive health are important to understanding critical human health risks of contaminants from a range of sources, including air pollution. Dr. Korrick has been an invited speaker or expert panelist in Centers for Disease Control / Agency for Toxic Substances and Disease Registry, National Institutes of Environmental Health Sciences and U.S. Environmental Protection Agency sponsored forums addressing the human health impacts of environmental contaminants. She served on an Institute of Medicine, National Academy of Sciences panel assessing an ATSDR report on contaminants in the Great Lakes (2008), and has served on other EPA Science Advisory Boards including previous work on the EPA Clean Air Scientific Advisory Committee Lead Review Panel (2010-2013), the EPA Drinking Water Committee Scientific Advisory Board (2009-2015), and as an ad hoc member of the EPA Scientific Advisory Board Environmental Engineering Committee Panel that provided advice to EPA on its draft Hydraulic Fracturing Research Scoping Study Plan (2010). She was appointed to the EPA and National Research Council (NRC) committee to review the non-cancer effects of PCBs as part of the Integrated Risk Information System (IRIS) program (2015). Lastly, she was appointed (2015) to the Panel of Pediatric and Reproductive Specialists in Health and the Environment (PPRSHE) supporting the Region 1 New England Pediatric Environmental Health Specialty Unit (PEHSU), Boston, MA. Dr. Korrick's most recent research is largely focused on the relation of both chemical and non-chemical (e.g., psychosocial stressors) environmental exposures with child neurobehavioral development. For the past 2 years, this work has been funded by the National Institutes of Health (NIH), primarily the National Institute of Environmental Health Sciences (NIEHS). Only one of her current research projects (a study of fluoride and child neurodevelopment) is not supported by NIH but, instead, by the Canadian Institutes of Health Research (CIHR), a Canadian federal research agency analogous to the U.S. NIH based in Ottawa, Ontario. Lastly, Dr. Korrick is a member of the International Society for Environmental Epidemiology (ISEE) and a founding member of the International Society for Children's Health and the Environment (ISCHE).

Jagdish Khubchandani

New Mexico State University

Dr. Jagdish Khubchandani is a Professor of Public Health at New Mexico State University. He received his Doctorate in Clinical Medicine from DAVV University in India, Master's in Public Health from Western Kentucky University, and Ph.D. in Health Education and Epidemiology from University of Toledo. Within the past decade, he has mentored and taught over 500 students pursuing undergraduate and graduate degrees in the field of public health, nursing, or medicine. During this time, he has also coauthored more than 150 research articles in prestigious journals such as the Lancet, Journal of American Medical Association, and the New England Journal of Medicine with emphasis on global health, social epidemiology, and injury and violence prevention. More recently, his research has received widespread attention from prominent media outlets such as Fox News, MSN, Bloomberg News, Chicago Tribune, Wall Street Journal, and Huffington Post. Dr. Khubchandani has also served as an elected Director of the World Association of Medical Editors.

Bruce Lanphear

Simon Fraser University

Bruce Lanphear, M.D., M.P.H., a Professor at Simon Fraser University and Investigator at BC Children's Research Institute in Vancouver, British Columbia, is a board-certified physician in public health and preventive medicine. He has expertise in pediatric research, population health, exposure assessment, dose-response relationships, and epidemiology. Dr. Lanphear is the founding principal investigator for an ongoing 400-person cohort study in Cincinnati and a co-principal investigator for an ongoing 600-person cohort study in Canada to examine the impacts of gestational and childhood exposures to a wide array of chemicals and various health outcomes in children. He has conducted over 200 studies to quantify exposures to toxic chemicals, including lead, per- and polyfluoroalkyl substances (PFAS) and air pollution, and their health impacts. He has also conducted numerous randomized controlled trials to reduce children's exposures to toxic chemicals, including lead, phthalates and air pollution. Over the past 25 years, Dr. Lanphear led key studies used by federal agencies to set lead standards for water, air and dust, and to conclude that there is no safe level of lead in blood. His ongoing research is focused on how toxic chemicals, including lead, fluoride and air pollution, elevate the risk for cognitive deficits or autism. Dr. Lanphear was a member of the North American Commission for Environmental Cooperation Expert Panel on Children's Health and the Environment (2001-2003), the U.S. Environmental Protection Agency (EPA) Clean Air Scientific Advisory Committee (CASAC) Lead National Ambient Air Quality Standards (NAAQS) Review Panel (2006-2008), the American Academy of Pediatrics Committee on Environmental Health (2011- 2016), the National Toxicology Program's Panel on Lead Toxicity (2012), and the Lancet Commission on Pollution and Health (2016-present). He served as a member or reviewer for several National Academies of Science reports. Over the past two years, Dr. Lanphear's research was funded by the National Institutes of Health, the Department of Housing and Urban Development, and the Canadian Institutes of Health Research.

Willie Morgan

Southeast Rural Community Assistance Project, Inc.

Mr. Willie J. Morgan, P.E., is the South Carolina State Program Manager for the Southeast Rural Community Assistance Project, Inc. (SERCAP). He also serves as the Executive Director for the Partners for Minorities in Engineering and Computer Science (PMECS) at the University of South Carolina. Mr. Morgan is a native of McCormick, South Carolina, and a graduate of the University of South Carolina where he earned a Bachelor of Science Degree in Engineering. He also holds a Master of Arts Degree in Management from Webster University, and is a licensed professional engineer in the State of South Carolina. Mr. Morgan is the former Deputy Director for Utility Rates with the South Carolina Office of Regulatory Staff (ORS). Before joining the ORS, he was employed with the South Carolina Department of Health and Environmental Control (DHEC) whereby he held the position of Permitting Liaison in which he had responsibility for the coordination of air, water, land, and waste permitting activities within the Environmental Quality Control area. Collectively, he has over thirty-four (34) years of technical compliance experience providing assistance and oversight for various types of regulated utilities, including water, wastewater, electric, and gas. His publications include a technical paper in the American Water Works Association's Opflow magazine titled "Increase Utility Revenue without Increasing Rates" (May 2013) and an environmental permitting booklet called "A General Guide to Environmental Permitting in South Carolina" (1994, 1995, 1996, 1999, and 2001). He is the author of multiple guidance documents for regulatory compliance in South Carolina including a cement batch plant fact sheet, drycleaner manual and calendar, automotive painting industry manual, and a chrome plating manual. He was appointed and served on several agency and national committees including the customer service, cultural competency, permitting workgroup, program area employee recruitment and career development committee, and Region IV’s representative on the Small Business Assistance Program (SBAP) National Steering Committee.

Richard Peltier

University of Massachusetts

Dr. Richard Peltier is an Associate Professor of Environmental Health Sciences at the University of Massachusetts Amherst. He has more than 15 years of research and teaching experience in exposure science, atmospheric chemistry, measurement outreach, data analyses, and stakeholder outreach. Dr. Peltier received a B.S. in Biology from the University of Massachusetts Amherst, a Master of Public Health in Environmental Health from Columbia University, and a Ph.D. in Atmospheric Chemistry from the Georgia Institute of Technology. He completed a postdoctoral fellowship in environmental medicine and inhalation toxicology at the New York University (NYU) Langone School of Medicine before taking an appointment at the University of Massachusetts. His lab focuses on questions at the intersection of human exposure to air pollution and health impacts, with measurement domains including traditional indoor and outdoor locations, but also in understudied regions of the world. His recent work includes research in West Africa, the Indian subcontinent (with a particular focus on India and Nepal), Central Asia, remote indigenous regions of Canada, and, most recently, in the South Pacific. Dr. Peltier is also active in novel instrument development, including the development of low-cost sensing applications in health research that are meant to better characterize human exposure to air quality. Finally, Dr. Peltier is highly active in diverse public engagement beyond the academy, including leading work for the World Meteorological Organization aimed at member states who are interested in low cost sensing applications, leading workshops at the World Health Organization on the use of these sensors, and writing explainers for United Nations Children's Fund (UNICEF) to engage the range of global field office information needs. He has receiving funding from the U.S. Environmental Protection Agency (EPA), the National Institutes of Health (NIH), the Commonwealth of Massachusetts, and the National Science Foundation (NSF). He has published 58 peer-reviewed papers, has provided ad-hoc grant reviewing for the U.S. EPA, National Science Foundation (NSF), National Institutes of Health (NIH), National Aeronautics and Space Administration (NASA), and Centers for Disease Control and Prevention (CDC), is a recent Fulbright awardee, and is the Deputy Editor in Chief for the Journal of Exposure Science and Environmental Epidemiology.

Robert Phalen

University of California at Irvine

Dr. Robert F. Phalen is a Professor of Medicine at the Center for Occupational and Environmental Health at the University of California, Irvine (UCI). He has a joint appointment in the Department of Environmental and Occupational Health in the School of Public Health. He is the founding director, and current co-director of the Air Pollution Health Effects Laboratory, a faculty member in the graduate program in Environmental Health Science, and a faculty member in the Occupational Medicine Residency Program, all at UCI. His salary is totally provided by the university. His research is in aerosol science, inhalation toxicology, air pollution health effects, modeling the deposition and clearance of inhaled substances, and radiation biology. His research is supported by the Charles S. Stocking (Endowment) Fund, and UCI Advancement. At San Diego State University his undergraduate major was physics with a minor in mathematics, and his master's degree was in nuclear physics with an emphasis on inhaled nuclear reactor accident particles. At the University of Rochester (NY) School of Medicine and Dentistry, he obtained a Ph.D. in Radiation Biology and Biophysics, with an emphasis in Toxicology. His thesis was a study of inhaled nanosilver particles. His post-doctoral training was at the Lovelace Inhalation Toxicology Research Institute in Albuquerque, NM. There he was in the Aerosol Physics group and worked on a National Institute of Environmental Health Sciences (NIEHS) computer-modeling grant on inhaled particles in mammalian species, including humans. The University of California, Irvine, recruited Dr. Phalen in 1974 to direct the Air Pollution Health Effects Laboratory, and to establish a research program. The research focused on the effects of air pollution mixtures on lung defenses. He has published about 300 journal papers, book chapters, and reports related to his research. Another research interest is in the ethics of laboratory animal, and human research. He chaired the UCI Institutional Review Board (IRB), was a member and vice-chair of the Institutional Animal Care and Use Committee (IACUC), and authored an ethics textbook, "Core Ethics for Health Professionals" (Springer International Publisher, 2017). He is an elected fellow of three organizations: the Academy of Toxicological Sciences; the Southern California Academy of Sciences; and the American Association for the Advancement of Science. He is a full member of eight scientific societies and is the chair of the Board of Directors of the California Society for Biomedical Research (CSBR). He has served on review and advisory committees for Environmental Protection Agency (EPA), NIEHS, Centers for Disease Control and Prevention (CDC)/National Institute for Occupational Safety and Health (NIOSH), and the National Academy of Sciences (NAS), including the NAS Committee on Controlled Human Inhalation & Exposure Studies at EPA, and on EPA's Clean Air Scientific Advisory Committee & Particulate Material Subcommittee. He is a former member of the EPA's Science Advisory Board. He has authored and co-authored several books, including "Methods in Inhalation Toxicology" (1997); "Introduction to Air Pollution Science" (2011); and "Core Ethics for Health Professionals" (2017). His awards include "Career Achievement" (Society of Toxicology & Inhalation Section); and "Public Education" (CSBR). He has chaired and co-chaired several international conferences on the effects of air pollutants on human health, and on modeling inhaled aerosol inhalation exposures.

Joel G. Pounds

Retired

Dr. Joel G. Pounds retired as a Laboratory Fellow from the Biological Sciences Division at the Pacific Northwest National Laboratory in Richland, WA. He received his B.A. in Zoology and Chemistry from Olivet Nazarene College (1971), his M.S. in Environmental Toxicology from the University of Wisconsin, Madison (1973), and a Ph.D. in Toxicology (1977) from the University of Wisconsin, Madison. Dr. Pounds has directed research programs in Government (National Center for Toxicological Research, 1977-1985); National Laboratories (Brookhaven National Laboratory, 1985-1990), Pacific Northwest National Laboratory (1999-2015) and Academia (Wayne State University, 1990-1999). He has focused his research on the cellular and molecular toxicity of lead and other metals, metal-metal interaction, metal nanomaterials, and mathematical modeling of the response to metal mixtures. Dr. Pounds lead research center programs focused on the use of mass-spectrometry based proteomic and NMR-based metabonomic instrumentation for biomarker discovery and for characterization of biological responses to nanomaterials and other airborne toxicants. Dr. Pounds has served on numerous National Institutes of Health, Agency for Toxic Substances and Disease Registry, and Environmental Protection Agency advisory committees related to the biokinetics and toxicology of lead, metals, nanomaterials, mixtures, and risk assessment. In addition, he has many peer-reviewed publications, abstracts, and proceedings; edited volumes and book chapters; and invited lectures, seminars and symposia in which he participated.

Dennis Randolph

City of Kalamazoo

Mr. Dennis Randolph is a Professional Engineer with 50 years of practice in public works, higher education, and public administration. His experience spans research, planning, design, construction, and maintenance. His specializations include NEPA preparation and evaluation, environmental justice, and traffic systems including public safety. Besides his time as a local government engineer, he has 20 years of classroom experience instructing at the University of Missouri, Western Michigan University, and Wayne State University. He has over 100 publications, and has been quoted in the Washington Post, Detroit News, Kansas City Star, and the Wall Street Journal. He has been recognized as a Top Ten Public Works Official by the American Public Works Association. Mr. Randolph has 45 years involvement developing policies and addressing infrastructure issues with particular emphasis on resilience, sustainability, and environmental Justice. He has experience on national committees addressing infrastructure and environmental issues, including: American Public Works Association, Center for Sustainability (C4S), which delivers resources, to implement environmentally, economically and socially responsible projects and services; American Society of Civil Engineers' (ASCE) Society Advancing an Inclusive Culture (MOSAIC) which provides leadership in diversity, equity, and inclusion; Committee on Sustainability, ASCE, charged with developing sustainability and resilience policy for the Society; Energy, Environment and Natural Resources federal advocacy committee, National League of Cities; Committee on America's Infrastructure, ASCE, committee charged with oversight of the Infrastructure Scorecard; National Environmental Justice Advisory Council (NEJAC), United States Environmental Protection Agency, 2015 to 2021. As a consultant, Mr. Randolph served as Principal Investigator on federally funded safety research. Currently he is a member of a project oversight panel for an National Cooperative Highway Research Program (NCHRP) study on air quality monitoring. He also teaches fleet management and operations classes involving diesel maintenance and operations and how they impact air quality. He has served on several Transportation Research Board panels, covering a wide range of subject matter including: NCHRP 08-141: Guidance for Local Truck Parking Regulations; NCHRP 08-113 Effective Transportation Asset Management Practices at State DOTs, Regional Organizations, and Local Agencies; NCHRP 25-55: Quantifying the Contribution of Vehicle Emissions to Local Air Quality; NCHRP HR20-59(030): ICS Training for Field Level Transportation Supervisors and Staff; NCHRP 20-59(43), Integration of Security Training into Routine Operations Training; NCHRP 08-60, development of a manual entitled Risk Management Manual for Methods and Tools to Control Project Cost Escalation. Mr. Randolph is an active writer with over 100 publications including peer reviewed documents. Recent projects include Engineering for Sustainable Communities: Principals and Practice, Chapters 6, 10, and 19. He speaks at national conferences, and webinars, recent presentations include: Addressing Social, Economic, and Environmental Impacts Brought About by Infrastructure Development in an Environmental Justice Community; Convincing Public Officials to Support Green Projects; Unconscious Bias Concepts, EPA Staff Training Series, Region 7, Continuing education for staff attorneys. Race, Class, and Power Dynamics within Communities - Understanding and Addressing the Potential Biases within the Agency's Work with Communities, EPA/NEJAC; The Economic and Fiscal Benefits of Walkable and Bikeable City and Town Centers: presentation – Grandview Missouri Case Study; and Weather for Public Works Officials presentation 1 – Blacktop Farmers. While serving on NEJAC Randolph was a task committee leader for developing several papers including: Recommendations and Guidance for EPA to Develop Monitoring Programs in Communities, 2017 and National Environmental Policy Act and Environmental Justice, 2019.

Barnett Rattner

USGS

Dr. Barnett Rattner is a scientist at the Eastern Ecological Science Center of the U.S. Geological Survey and an Adjunct Professor of the Department of Environmental Science and Technology of the University of Maryland. He conducts research of regional, national, and international scope that entails hypothesis-driven laboratory and field investigations, risk assessments and scholarly evaluations of legacy (industrial compounds, pesticides, metals including lead) and contemporary pollutants to wildlife and the environment. He has over 40 years of professional experience, published more than 140 peer-reviewed articles and book chapters, co-edited three reference texts, and serves on several journal editorial boards and statutory interagency government panels. For the past three decades, Dr. Rattner has served as an advisor to the U.S. Fish and Wildlife Service on evaluation of potentially safe alternatives to lead used in ammunition and fishing tackle, and he has generated exposure and effects data on lead and other metals as part of natural resource damage assessments. He is a Charter Member, Fellow and Past-President of the Society of Environmental Toxicology and Chemistry.

Allen Robinson

Carnegie Mellon University

Dr. Allen L. Robinson is a University Professor, the Raymond J. Lane Distinguished Professor, and the David and Susan Coulter Head of the Department of Mechanical Engineering at Carnegie Mellon University. He is also a Professor in the Department of Engineering and Public Policy. Dr. Robinson joined Carnegie Mellon in 1998 after working for two years as a Postdoctoral Fellow at the Combustion Research Facility at Sandia National Laboratories. He holds a B.S. in Civil Engineering from Stanford University, and an M.S. and Ph.D. in Mechanical Engineering from the University of California at Berkeley. Dr. Robinson has published more than 200 peer-reviewed, archival manuscripts the air quality, climate, and public health. His current research is focused on characterizing hyperlocal air pollution concentrations to quantify the impacts of modifiable factors on human exposure, to support epidemiological research, and to characterize exposure disparities that drive environmental justice. Dr. Robinson has also published extensively on emissions from combustion systems (focusing on fine particle emissions from mobile sources, biomass burning, and coal combustion); organic aerosols; and methane emissions from the natural gas system. In collaboration with colleagues, he proposed a new conceptual model for organic aerosol emissions from combustion systems published in 2007 in Science that has been widely adopted in the atmospheric chemistry, including implemented in many chemical transport models used for policy analysis. Dr. Robinson received the American Geophysical Union ASCENT Award in 2015 and the American Association and Aerosol Research David Sinclair Award in 2020. He was named a University Professor at Carnegie Mellon University in 2020. Dr. Robinson is the director of the EPA-funded Center for Air, Climate, and Energy Solutions (CACES), which supports a multi-disciplinary team of researchers from eight universities investigating problems at the intersection of air pollution, climate and energy. Dr. Robinson currently serves on the Research Committee of the Health Effects Institute (term ends Oct 2021). He is a past President of the American Association for Aerosol Research. Previous service to the Environmental Protection Agency (EPA) includes serving as a member of the EPA Clean Air Scientific Advisory Committee (CASAC) Air Monitoring and Methods Subcommittee (AMMS) and Working Group on Measurement of Particulate Matter Emissions from Wood Heaters. Dr. Robinson's research has been supported by grants from both government agencies and private companies (current support is from EPA and the National Science Foundation). He is a member of the American Association of Aerosol Research, American Geophysical Union, American Society of Mechanical Engineers, American Society for Engineering Education, American Chemical Society, and American Association for the Advancement of Science.

Brisa Sánchez

Drexel University

Dr. Brisa Sánchez is interested in the development and innovative application of statistical methodology to the study of environmental determinants of health, and health disparities. Her methodological research is in the area of latent variable models, correlated data, and study design, all of which is motivated by environmental studies, broadly defined. Dr. Sánchez is internationally recognized for her work on latent variable models with environmental health applications. In addition to her work in environmental health, she has extensive expertise in research involving health disparities and cardiovascular disease, including stroke, as well as the effectiveness of policies geared toward elimination of childhood obesity. She currently leads methodological research to assess health impacts of neighborhood-level exposures (social and built environment) and their interactions with individual-level factors/exposures through her National of Institutes of Health (NIH)-funded project "Characterizing health impacts of built environment features using complex data" (R01 HL131610, PI: Sanchez). She co-leads the NIH-funded project "Population-level interventions and community environment effects on child obesity disparities" (R01-HL136718, MPIs: Sanchez-Vaznaugh/Sánchez), which evaluates how the food environment in schools, regulated through food nutrition policies for schools, impacts child obesity, and how food environment near schools modifies the impact of school nutrition policies on obesity disparities. She has held multiple leadership roles in research collaborations, research administration, professional organizations, and has served on panels for the National Academies of Science. She served as Director or co-Director of several NIH-funded research centers, and currently also directs the Biostatistics for Social Impact Collaboratory. She has served as Book Reviews Editor for Biometrics, Associate Editor for Statistics in Medicine and the Journal of the Royal Statistical Society-C. She is currently Secretary for the Eastern North American Region of the International Biometrics Society, and previously served in multiple positions for the Statistics Section of the American Public Health Association. She became Fellow of the American Statistical Association in 2020.

Brian Schwartz

Johns Hopkins University

Dr. Brian Schwartz is a Professor in the Department of Environmental Health and Engineering in the Johns Hopkins Bloomberg School of Public Health, where he is Associate Chair of the Department. He is jointly appointed in the Department of Epidemiology in the School of Public Health and in the Department of Medicine in the School of Medicine. He is also appointed as a Professor in the Department of Population Health Sciences in the Geisinger Center for Health Research in Danville, PA, where he is Director of the Geisinger Environmental Health Institute. He received a B.S. degree in chemistry from Tufts University; an M.D. degree from Northwestern University Medical School; and an M.S. degree in clinical epidemiology from the University of Pennsylvania School of Medicine. He completed a residency in internal medicine at the Hospital of the University of Pennsylvania, and then was a Mellon Foundation Scholar in Clinical Epidemiology and a fellow in General Medicine at the same institution. He completed a fellowship in occupational and environmental medicine at the Johns Hopkins School of Hygiene and Public Health, then joined the faculty there as an Assistant Professor. He has been on the faculty at Johns Hopkins his entire career. Dr. Schwartz's research interests include the role of neurotoxicants in cognitive dysfunction with aging, and more generally, occupational, environmental and molecular epidemiologic studies of the health effects of chemicals. Over the past 20 years, he has been engaged in three large, population-based longitudinal studies funded by the National Institutes of Health (NIH) of the central nervous system, peripheral nervous system, hematopoietic, cardiovascular, and renal effects of lead in adults. These health outcomes were evaluated in relation to blood, patella, tibia, and chelatable lead levels. This work identified a number of new health concerns of lead exposure in adults and genetic and neighborhood effect modifiers of these adverse health impacts. Dr. Schwartz's recent research has used electronic health records from Geisinger to study the health impacts of unconventional natural gas development, industrial farm animal production, community contributors to type 2 diabetes, and risk factors for upper and lower respiratory diseases. He has received recent research funding from NIH, Centers for Disease Control and Prevention (CDC), Department of Energy (DOE), National Institute for Occupational Safety and Health (NIOSH), and the Pennsylvania Department of Health.

Elizabeth A. (Lianne) Sheppard

University of Washington

Dr. Elizabeth A. (Lianne) Sheppard is Professor in the Departments of Environmental and Occupational Health Sciences, and Biostatistics at the University of Washington School of Public Health. She has also been named Rohm and Haas Professor in Public Health Sciences. She holds a B.A. in psychology and a Sc.M. in biostatistics from Johns Hopkins University, and a Ph.D. in biostatistics from University of Washington. Her research interests focus on exposure assessment study design, exposure modeling, and inference about the health effects of environmental and occupational exposures with particular emphasis on statistical methods. She is co-principal investigator of the Adult Changes in Thought Air Pollution Study (ACT-AP) study to determine whether air pollution exposure is associated with degradation of late-life brain health, funded by the National Institute of Environmental Health Sciences (NIEHS) and the National Institute on Aging. She is principal investigator of a study funded by the Health Effects Institute to optimize air pollution exposure assessment for inference about health effects in cohort studies. Dr. Sheppard directs two NIEHS-funded training programs, one for graduate students and postdoctoral scholars emphasizing quantitative training in the environmental health sciences, and the other for undergraduates to promote diversity in the environmental health sciences. She is a fellow of the American Statistical Association and recipient of the International Society for Environmental Epidemiology (ISEE) Research Integrity Award. She has served on the Health Effects Institute's Review Committee, the Environmental Protection Agency (EPA) chartered Clean Air Scientific Advisory Committee (CASAC), and has further advised the EPA through service on several CASAC special panels, Science Advisory Board ad hoc committees, a Federal Insecticide, Rodenticide, and Fungicide Act Scientific Advisory Panel, and a Toxic Substances Control Act Science Advisory Committee on Chemicals Panel.

William Stubblefield

Oregon State University

Dr. William Stubblefield is a senior research professor in the Department of Molecular and Environmental Toxicology at Oregon State University. Dr. Stubblefield has more than 25 years of experience in environmental toxicology, human and environmental risk assessment, derivation of water, sediment and soil criteria, and aquatic and wildlife toxicology studies. He has authored more than 50 peer-reviewed publications and technical presentations in the areas of aquatic and wildlife toxicology and risk assessment. He has conducted a variety of research programs aimed at the evaluation of the toxicity of metals and hydrocarbons in the environment. Dr. Stubblefield's research has examined acclimation induced changes in the responses of aquatic organisms to copper, zinc, and cadmium; evaluated the acute and chronic toxicity of manganese, cobalt, aluminum, methyl tert-butyl ether, petroleum hydrocarbon mixtures, and a variety of other compounds; quantified the effects of water quality characteristics, e.g., hardness, alkalinity, dissolved organic carbon, on the toxicity of several metals (e.g., nickel, lead, and silver). His current research examines methods/models that can be used to predict the toxicity of metals and hydrocarbons to aquatic organisms. Current sources of research funding include the Cobalt Development Institute, the European Aluminum Association, Iron Platform, and British Petroleum. Dr. Stubblefield is an active member of the Society of Environmental Toxicology and Chemistry (SETAC), where he served as President of the Society, member of the Society's Board of Directors, chairman of the SETAC's Metals Advisory Group, and member of the Editorial Board for Environmental Toxicology and Chemistry. He has been an invited participant at a number of national and international scientific and regulatory conferences, served on U.S. EPA and National Institute of Environmental Health Sciences (NIEHS) peer-review panels, and frequently acts as a technical reviewer for a number of scientific publications. Dr. Stubblefield has a Ph.D. in Zoology and Physiology (emphasis in Environmental Toxicology) from the University of Wyoming, a M.S. degree in Toxicology/Toxicodynamics from the University of Kentucky, and a B.S. in Biology from Eastern Kentucky University.

Kathleen Vork

California Environmental Protection Agency

Dr. Kathleen Vork is a Staff Toxicologist for the Office of Environmental Health Hazard Assessment (OEHHA) at the California Environmental Protection Agency. She received her Ph.D. in Environmental Health Sciences from the University of California at Berkeley and her MPH degree in Occupational and Environmental Health from the University of Minnesota School of Public Health. Prior to her position at OEHHA, Dr. Vork worked for the California Childhood Lead Poisoning Prevention Program. Dr. Vork has extensive experience and expertise relating to exposure pathways and the pharmacokinetics (PBPK) of lead in workers and the general population. Dr. Vork has implemented various statistical and mathematical modeling methods to estimate, adjust, and check the accuracy and consistency of predictions from models combining exposure pathways with physiologically based pharmacokinetic and bio-kinetic models. She is the primary author of the report entitled "Estimating Workplace Air and Worker Blood Lead Concentration using an Updated Physiologically-based Pharmacokinetic (PBPK) Model" (OEHHA 2013, Vork and Carlisle 2020). She has conducted work involving the derivation of human lactation transfer coefficients for various chemicals including lead for the "Risk Assessment Guidelines Technical Support Documents for Exposure Assessment and Stochastic Analysis" (2012), and contributed to "The Derivation of Non-cancer Reference Exposure Levels" (2007) for the California Air Toxics Hot Spots program. Dr. Vork has worked collaboratively with multiple agencies and the public. She has recently served on USEPA peer-review consult panels involving complex modeling of lead exposure and pharmacokinetics (2015, 2016, 2017, and 2020). She was appointed to the California Advisory Committee for Training Regulations for Lead Paint Abatement while working for the California Lead Poisoning Prevention Program, and she chaired the Lead Training Course Planning Committee while working for the Alameda County Lead Poisoning Prevention Program. She has been elected to multiple Councils and Boards for local professional and non-profit service organizations. OEHHA currently receives reimbursement funds through an inter-agency agreement with Cal OSHA's Research and Standards Unit.

David Warheit

Warheit Scientific LLC

Dr. David B. Warheit is a nano/pulmonary toxicology expert who has retired from the DuPont and Chemours Companies. Dr. Warheit holds a B.A. in Psychology from the University of Michigan and a Ph.D. in Physiology from Wayne State University School of Medicine. Dr. Warheit was awarded a National Institutes of Health (NIH) Postdoctoral Fellowship, and 2 years later, a Parker Francis Pulmonary Fellowship, both of which he took to the National Institute of Environmental Health Sciences (NIEHS) to study mechanisms of asbestos-related lung disease. In 1984, he moved to DuPont Haskell Laboratory to develop a pulmonary toxicology research laboratory. He is the author/coauthor of more than 140 publications and has been a recipient of the International Life Sciences Institute (ILSI) Kenneth Morgareidge Award (1993) and the Robert A. Scala Award in Toxicology (2000) and the Oklahoma State Sitlington Lecture (2007). In 2007, Dr. Warheit served on a joint DuPont and Environmental Defense Committee & to produce the "Nano Risk Framework" document. He has also attained Diplomat status of the Academy of Toxicological Sciences (2000) and the American Board of Toxicology (1988). He has served on National Institutes of Health (NIH) study section review committees, National Academy of Science Committees (1997) (2011-2013), The National Institute for Occupational Safety and Health (NIOSH) Board of Scientific Counselors (2003-2007), and the Scientific Advisory Board for National Center for Toxicology Research (NCTR-FDA) (2012-2016). He is a past president of the Society of Toxicology-related Inhalation Toxicology (1998) and Nanotoxicology Specialty Sections (2010) and past member of the Society of Toxicology Program Committee (2009-2012). More recently, he was the corresponding author of the Nanotoxicology Chapter in Casarett and Doull's Toxicology textbook (2019). Previously, he was a Technical Fellow at the DuPont Co. and the Chemours Company. Dr. Warheit retired from Chemours in December of 2018. In 2019, he formed his own toxicology consulting Company, Warheit Scientific LLC. He has not received any major U.S. governmental research funding. His two major clients are The Carbon Black and Titanium Dioxide Science Advisory Boards.

Marc Weisskopf

Harvard T.H. Chan School of Public Health

Marc G. Weisskopf, Ph.D., Sc.D., is the Cecil K. and Philip Drinker Professor of Environmental Epidemiology and Physiology at the Harvard T.H. Chan School of Public Health in the departments of Environmental Health and Epidemiology, Director of the Harvard T.H. Chan National Institute of Environmental Health Sciences (NIEHS) Center for Environmental Health, and Director of Epidemiological Studies for the Football Players Health Study at Harvard. Dr. Weisskopf received his Ph.D. in Neuroscience from the University of California, San Francisco, and his Sc.D. in Epidemiology from the Harvard T.H. Chan School of Public Health. He also spent two years as an Epidemic Intelligence Service Officer with the Centers for Disease Control and Prevention (CDC) working on environmental health issues in the Wisconsin State Health Department. His neuroscience work focused on molecular and cellular aspects of neural signaling and plasticity. His epidemiological work focuses on the influence of environmental exposures on brain health across the life course. In particular, his research focuses on environmental risk factors for outcomes such as autism spectrum disorders, amyotrophic lateral sclerosis, cognitive function and dementia, and psychiatric conditions. Dr. Weisskopf also explores the use of physiologically-based methods for assessing toxicant effects on the brain, and epidemiological methods issues to improve causal inference from observational environmental health studies. Dr. Weisskopf's research has been funded in the last two years by the National Institutes of Health (NIEHS, National Institute of Neurological Disorders and Stroke, and National Institute on Aging), CDC/Agency for Toxic Substances and Disease Registry, the Department of Defense, and a private donor. He serves on the advisory board for the GuLF Study at NIEHS and the Kaiser Permanente Research Bank. He is a member of the International Society for Autism Research and the International Society for Environmental Epidemiology, for which he is a past councilor and current chair of their annual conference committee.