Invitation for Public Comment on the List of Candidates
For the Environmental Protection Agency's
Clean Air Scientific Advisory Committee

May 10, 2021

The U.S. Environmental Protection Agency (EPA) Science Advisory Board (SAB) Staff Office announced in a Federal Register Notice (86 FR 17146-17147) on April 1, 2021, that it was inviting nominations of experts to be considered for the Administrator's appointment to the Clean Air Scientific Advisory Committee (CASAC). The CASAC provides independent advice, information, and recommendations to the EPA Administrator on the scientific and technical aspects of air quality criteria and National Ambient Air Quality Standards (NAAQS). The SAB Staff Office sought nominations of experts to serve on the CASAC with expertise in: air quality, biostatistics, ecology, environmental engineering, epidemiology, exposure assessment, medicine, risk assessment, and toxicology.

The SAB Staff Office received nominations for the attached 100 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. Comments should be submitted to Mr. Aaron Yeow, Designated Federal Officer, at yeow.aaron@epa.gov no later than **June 1, 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.

Chartered CASAC Membership (May 2021)

Adar,Sara

University of Michigan

Dr. Sara Adar is an Associate Professor of Epidemiology at the University of Michigan School of Public Health. Her research expertise is broadly focused on the health impacts of community exposures to air pollution and noise. Dr. Adar currently has funding from the National Institute of Environmental Health Sciences (NIEHS) and the National Institute on Aging (NIA) to study the impacts of fine particulate matter (PM2.5), coarse particulate matter (PM10-2.5), ozone (O3), and nitrogen oxides (NOx) on outcomes of aging including dementia, disability, and lost independence as well as relationships with health care costs. This work is largely being conducted in the United States, but she is also funded to conduct research on particulate air pollution and aging using harmonized, nationally-representative surveys in the U.S., Europe, Asia, and Central America with funding from the NIA. Dr. Adar is also researching the impacts of funding for clean school buses on educational attainment, absenteeism, and health in children across the United States using an award from the Health Effects Institute. Dr. Adar is currently a member of the Health Effects Institute's Review Panel for Low Levels of Air Pollution Studies, an associate editor at Environmental Health Perspectives, on the editorial board at Environment International, and a section editor at Current Environmental Health Reports. She previously served as the elected Secretary/Treasurer of the International Society of Environmental Epidemiology, a member of the Technical Oversight Committee for Non-Communicable Disease Studies for the United Nation Foundation's Global Alliance for Clean Cookstoves, a member of the external scientific advisory committee for the EPA-funded Great Lakes Air Center for Integrative Environmental Research (GLACIER) project, and an expert reviewer of the Integrated Science Assessment for the National Ambient Air Quality Standards (NAAQS) for PM (2008, 2015) and Sulfur Oxides (2014). Dr. Adar has training in environmental engineering from the Massachusetts Institute of Technology (B.S., 1996) as well as epidemiology, exposure assessment, and biostatistics from the Johns Hopkins School of Public Health (M.P.H., 1998) and the Harvard Chan School of Public Health (Sc.D., 2005). She also completed post-doctoral fellowship at the University of Washington working on the Multi-Ethnic Study of Atherosclerosis and Air Pollution (MESA Air).

Anenberg,Susan

George Washington University

Dr. Susan Anenberg is an Associate Professor of Environmental and Occupational Health and of Global Health at the George Washington University Milken Institute School of Public Health. Dr. Anenberg received a B.A. in Biological Sciences and Environmental Sciences from Northwestern University and an M.S. and Ph.D. in Environmental Science and Engineering, with a minor in Environmental Policy, from the University of North Carolina at Chapel Hill. Dr. Anenberg's research examines interrelationships between air quality, climate change, public health, and environmental policy. She uses multi-disciplinary methods, drawing from epidemiology, exposure science, remote sensing, atmospheric chemistry and meteorology, numerical modeling, and economics. Her research has been supported by National Aeronautics and Space Administration (NASA), National Science Foundation (NSF), Health Effects Institute, Wellcome Trust, C40 Cities, and Environmental Defense Fund and has been published in top academic journals such as Science, Nature, and Lancet Planetary Health. Dr. Anenberg was previously a Co-Founder and Partner at Environmental Health Analytics, LLC, Deputy Managing Director for Recommendations at the U.S. Chemical Safety Board, an environmental scientist at the U.S. Environmental Protection Agency (EPA), and a senior advisor for clean cookstove initiatives at the U.S. State Department. At the U.S. EPA, she led health risk and benefits assessments for Ozone National Ambient Air Quality Standards and Mercury and Air Toxics Standards. She has led or contributed to many science-policy reports on air quality and climate change published by U.S. EPA, World Bank, World Health Organization, United Nations Environment Programme, Arctic Monitoring and Assessment Programme, and others. She currently serves on the U.S. EPA Clean Air Act Advisory Committee's Mobile Sources Technical Review Subcommittee and the Arctic Monitoring and Assessment Programme's Expert Group on Short-Lived Climate Forcers, and as Secretary of the GeoHealth section of the American Geophysical Union, Editor of the GeoHealth journal, and Founding Associate Editor of the Frontiers in Sustainable Cities: Health and Cities journal.

Balmes,John R.

University of California, San Francisco

Dr. John Balmes is Professor of Medicine Emeritus at the University of California, San Francisco (UCSF) and Professor of Environmental Health Sciences in the School of Public Health at the University of California, Berkeley (UC Berkeley). Dr. Balmes is a physician-scientist who graduated with a B.A. in Psychology from the University of Illinois, Champaign-Urbana in 1972; received his M.D. from the Mount Sinai School of Medicine in 1976; completed a Residency in Internal Medicine at the Mount Sinai Hospital in New York City in 1979; and completed a Post-doctoral Fellowship in Pulmonary Medicine at Yale University School of Medicine in 1982. He is board-certified in both Internal and Pulmonary Medicine and is a practicing physician at the Zuckerberg San Francisco General Hospital. Dr. Balmes has been studying the adverse health effects of exposures to occupational and environmental toxicants for the past 40 years with over 300 peer-reviewed papers published in the scientific literature. Many of these papers report results of his research on the health effects of ambient air pollution. He is currently funded by the National Institute of Environmental Health Sciences (NIEHS) to study the metabolic effects of exposure to air pollution among children in Fresno, CA. He is also currently funded by the NIEHS to conduct two randomized controlled trials: 1) of a stove range hood intervention to reduce cooking-related indoor air pollution and improve asthma outcomes among children in Richmond, CA; and 2) of a combined clean cooking and clean lighting intervention to improve lung function and blood pressure among children and adults in Rwanda. Dr. Balmes has served as the Physician Member of the California Air Resources Board since 2008. He has also served on multiple National Ambient Air Quality Standard Review Panels of the Clean Air Scientific Advisory Committee, including for ozone, nitrogen oxides, sulfur oxides, and most recently, particulate matter. He is a member of the American Thoracic Society, the American College of Chest Physicians, the European Respiratory Society, the Pan African Thoracic Society, and the American College of Occupational and Environmental Medicine. He is an Associate Editor of the American Journal of Respiratory and Critical Care Medicine. Dr. Balmes is the Director of the Northern California Center for Occupational and Environmental Health (COEH), a consortium of programs at UC Berkeley, UC Davis and UCSF. In that role, he also is the Principal Investigator of the Northern California Educational Resource Center funded by the Centers for Disease Control and Prevention (CDC) and the National Institute for Occupational Safety and Health (NIOSH).

Bell,Michael

National Park Service

Dr. Michael Bell is a biologist for the National Park Service (NPS) Air Resources Division. His role is to collect, synthesize, and communicate data about how human-released air pollutants are damaging natural ecosystems within national parks. Dr. Bell came to the NPS six years ago after spending three years as a scientist in various national parks and then completing his Ph.D. in Botany at the University of California, Riverside. His thesis research used stable isotopes of atmospheric pollutants to trace sources that were impacting nearby park resources. This mix of biology, chemistry, and management background gives Dr. Bell a diverse perspective of the hows and whys of air pollution impacts on the environment. All funding for his current projects comes from federal appropriations to the NPS. Dr. Bell has previously served on the National Atmospheric Deposition Program – Critical Loads of Atmospheric Deposition (NADP-CLAD) executive team and maintains active participation in the community by leading working group efforts. Dr. Bell has helped to organize and guide federal, academic, and other research efforts around ecosystem effects of deposition and how best to communicate them to land managers to encourage active response. He has helped lead a data synthesis effort for compiling critical loads that overlap within a management boundary which will distill the complexity of interactions into clear action-response goals. Additionally, he has been working alongside the NADP-Total Deposition subcommittee to integrate NADP-CLAD efforts into the deposition modeling arena, so that uncertainty of model outputs can be taken into consideration when evaluating the exceedance of a critical load. Currently he is leading a multi-agency team to establish criteria for using critical load information in Prevention of Significant Deterioration (PSD) and National Environmental Policy Act (NEPA) analyses.

Bell,Michelle

Yale University

Dr. Michelle Bell is the Mary E. Pinchot Professor of Environmental Health at the Yale University School of the Environment, with secondary appointments at the Yale School of Public Health, Environmental Health Sciences Division and the Yale School of Engineering and Applied Science, Department of Chemical and Environmental Engineering. Her research investigates how human health is affected by environmental conditions, including air pollution and weather. Other research interests include the health impacts of climate change and environmental justice. Much of this work is based in epidemiology, biostatistics, and environmental engineering. The research is designed to be policy-relevant and contribute to well-informed decision-making to better protect human health and benefit society. She is the Director of the Solutions to Energy, AiR, Climate, and Health (SEARCH) Center funded by the Environmental Protection Agency (EPA). She is Principal Investigator (PI) for a National Institutes of Health (NIH) Research Project (R01) grant focusing on environmental justice and a project funded by the Wellcome Trust on air pollution and health under climate change in Brazil. Other funding within the last two years include projects on green playgrounds in New York City funded by the Robert Wood Johnson Foundation, ethane cracker plants funded by the Hightide Foundation, and unconventional oil and gas funded by EPA. Her work is global in scope and she has over 250 peer-reviewed publications. Dr. Bell holds a Ph.D. in Environmental Engineering and M.S.E. in Environmental Management and Economics from Johns Hopkins University, an M.S. in Environmental Engineering and Science from Stanford University, an M.Sc. in Philosophy from University of Edinburgh, and a B.S. in Environmental Engineering Science from the Massachusetts Institute of Technology. She was a member of the EPA Clean Air Scientific Advisory Committee (CASAC) Ozone Review Panel and is a current and former member of several National Academy committees. She received the NIH Outstanding New Environmental Scientist (ONES) Award, Health Effects Institute Rosenblith New Investigator Award, and the Prince Albert II de Monaco/Institut Pasteur Award. She was elected to the National Academy of Medicine and was recognized as a highly cited researcher (top 1% for field) for the last three years.

Belzer,Richard

Independent Consultant

Dr. Richard Belzer has been an independent consultant in regulation, risk, economics and information quality since 2001. Previously he was a visiting professor of public policy at Washington University in St. Louis and staff economist in the Office of Information and Regulatory Affairs in the Office of Management and Budget. He received his Ph.D. in public policy from Harvard University (1989), Master's in Public Policy (M.P.P.) from the John F. Kennedy School of Government (now Harvard Kennedy School) (1982), and M.S. and B.S. degrees in agricultural economics from the University of California at Davis (1979, 1980). Current original research areas include the analysis of variability in quantities conventionally assumed to be constant; the development of objective economic indicators to identify adverse human health effects; and the improved integration of human health risk assessments into benefit-cost analysis. Recent projects have included benefit-cost analyses of California's proposed drinking water standards for hexavalent chromium and 1,2,3-trichloropropane; the estimation of variability in pulmonary function testing and blood pressure measurement; and the characterization of the definition and implementation of economic feasibility into Safe Drinking Water Act regulations. In 2021, he is working on methods to implement within regulatory impact analysis recent presidential directives concerning distributional effects and environmental justice. Dr. Belzer is a regular contributor to scholarly professions through journal peer review and service to professional societies. He was elected Treasurer of the Society for Risk Analysis (1998, 2000) and elected Secretary-Treasurer of the Society for Benefit-Cost Analysis (2008, 2010). He earned multiple awards for exemplary performance at the Office of Management and Budget (OMB), given the Society of Risk Analysis Distinguished Service Award (2003), and was named a Fellow of the Cecil and Ida Green Center for the Study of Science and Society (1995). In 2015, Dr. Belzer was appointed to the Environmental Protection Agency (EPA) Science Advisory Board (SAB) ad hoc panel on Economy-Wide Modeling and served through 2017. In 2019, he was appointed to and serves on the SAB Chemical Assessment Advisory Committee (term expiring September 30, 2021). Dr. Belzer's breadth of experience and multidisciplinary contributions to scientific advancement would add diversity to the Chartered SAB, its Chemical Assessment Advisory Committee, and Clean Air Scientific Advisory Committee (CASAC).

Boylan,James

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, lead, SO2, NO2). In addition, he is responsible for updating Georgia's Rules for Air Quality Control and developing and submitting all attainment demonstration State Implementation Plans (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/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 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 National Ambient Air Quality Standards (NAAQS). He was assigned as lead reviewer on multiple chapters and appendixes related to measurements, emissions, and modeling. 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 EPA Science Advisory Board (SAB) Reduced Forms Tools (RFT) review panel in 2020.

Castner,Jessica

Castner Incorporated

Dr. Jessica Castner, Registered Nurse-Board Certified (RN-BC), Fellow of the Academy of Emergency Nursing (FAEN), Fellow of the American Academy of Nursing (FAAN), is the President and Principal of Castner Incorporated, Editor-in-Chief of the Journal of Emergency Nursing, and a board-certified emergency nurse. Dr. Castner earned her Ph.D. in Nursing from the University of Wisconsin-Milwaukee, Master's in Public Health Nursing from the University of Missouri-Columbia, and Bachelor's in Nursing from Marquette University. Dr. Castner has successfully completed intramural training through the National Institutes of Health (NIH) and National Institute of Nursing Research (NINR) Summer Genetics Institute training and Big Data Bootcamp. Joining a Health Canada environmental epidemiology research team as the content expert in emergency department utilization, her early career research included collaborative training in mathematical modeling and environmental epidemiology methods leading to a subsequent trajectory of published work relevant to Canadian-USA cross-border and border region air pollution. These completed works have been included in the Environmental Protection Agency's most recent Integrated Science Assessments on particulate matter and ozone and related photochemical oxidants. Dr. Castner remains instrumental to the civic engaged research with the second-ever criminal conviction of a polluting company under the U.S. Clean Air/Resource Recovery and Conservation Acts (United States vs. Tonawanda Coke 10-CR-219-S) and was committed research support for the subsequent research studies. Overall, Dr. Castner's scientific expertise focuses on reducing the acute and life-threatening human health risks from environmental and occupational exposures. Dr. Castner's research activities revolve around four synergistic themes: 1) inhaled toxicants and health outcomes, 2) innovating the next generation of telehealth nursing, including mhealth tools for respiratory health and environmental exposure measurement, 3) unscheduled, or emergency, healthcare and utilization, and 4) understanding and improving occupational environments. With over 60 peer reviewed publications, her research has been supported by agencies that include NIH, National Science Foundation (NSF), and Rockefeller University Hielbrunn Family Center for Research Nursing with most recent (last 2 years) sources of support from NIH/National Institute on Aging (NIA) and the Small Business Administration's Paycheck Protection Program with loan forgiveness. Dr. Castner is uniquely positioned to contribute to the diversity of perspectives on the Clean Air Scientific Advisory Committee as a nationally and internationally recognized environmental health nurse scientist. Dr. Castner's experience in working on the national level includes scientific advisory activities that inform policy, including service with the American Thoracic Society's Environmental Health Policy Committee. Dr. Castner authored the Projected Health Effects of Climate Change resolution, adopted by the governing assembly of the Emergency Nurses Association in 2018, representing over 52,000 members in the specialty. Dr. Castner's active membership in the American Academy of Nursing's Expert Panels on Environmental and Public Health and Informatics and Technology includes policy brief development. Dr. Castner's influence in integrating national and global health policy with a balanced nursing science perspective includes her editing contributions to the Journal of Emergency Nursing. Dr. Castner is a Fellow in both the American Academy of Nursing and Academy of Emergency Nursing, national and international recognitions she received for the substantive, sustained, and outstanding impact of research with significant innovations that integrate environment determinants of health, data science, and emergency health outcomes. Dr. Castner is active in the following professional organizations: Emergency Nurses Association, Society for Academic Emergency Medicine, American Thoracic Society, Council for the Advancement of Nursing Science, American Academy of Nursing, National Black Nurses Association, Inc, Alliance of Nurses for Healthy Environments, and the American Nurses Association.

Chow,Judith C.

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 the U.S. 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."

Christy,John R.

University of Alabama in Huntsville

Dr. John R. Christy is the Director of the Earth System Science Center (ESSC), Distinguished Professor of Atmospheric and Earth Science and Alabama's State Climatologist at the University of Alabama in Huntsville. He manages ESSC with over 100 employees working on research projects ranging from developing and launching space-based instruments to studying impacts of significant weather events in developing countries to high-resolution studies of air pollution (air-chemistry and meteorology) in the Southeast. His own area of research concerns developing, constructing and refining global and regional climate data records which may be used to test claims of climate variability and change and to understand the climate's sensitivity to various forcing factors, resulting in 100 peer-reviewed publications. As State Climatologist he interacts with government, industry, and the public regarding climate resources in Alabama that may be utilized in environmentally and economically sustainable ways. Inducted as a Fellow of the American Meteorological Society (AMS) in 2002, Dr. Christy was also selected for (a) the AMS Special Award as co-author of the first satellite-based global bulk-atmosphere temperature record and (b) the National Aeronautics and Space Administration (NASA) Medal for Exceptional Scientific Achievement. He has served on panels of the National Research Council, National Academy of Sciences, the Earth Science Subcommittee of the NASA Advisory Council and Lead Author/Contributor/Reviewer of the Intergovernmental Panel on Climate Change. He has been called to testify before 20 Congressional Hearings and approved as an expert witness in U.S. Federal Court on climate issues. He earned both the M.S. and Ph.D. degrees in Atmospheric Sciences from the University of Illinois. Present research is funded by the State of Alabama, NASA, National Oceanic and Atmospheric Administration (NOAA), United States Department of Agriculture (USDA) and the Department of Energy.

Clougherty,Jane

Drexel University

Dr. Jane E. Clougherty is an Associate Professor at the Drexel University Dornsife School of Public Health, Department of Environmental and Occupational Health. Dr. Clougherty completed her doctorate and post-doctoral training at the Harvard School of Public Health, worked at New York City Department of Health and Mental Hygiene from 2008-2010, and was faculty at the University of Pittsburgh Graduate School of Public Health from 2010-2016. An air pollution exposure scientist and epidemiologist, Dr. Clougherty's research focuses on the combined health effects of chronic social stressors and air pollution exposures. To that end, she has designed and implemented a number of studies on intra-urban variation in air pollution and source apportionment. She is Principal Investigator on several studies funded by the Environmental Protection Agency (EPA) and National Institutes of Health (NIH), including a Research Project grant (R01) using geographic information systems (GIS)-based methods to examine how social and environmental exposures may alter the efficacy of pharmaceutical interventions for asthma in clinical trials, a Health Effects Institute (HEI)-funded grant on the combined effects of community stressors and multiple pollutant exposures on cardiovascular events, and an R01 on extreme temperature and children's health. She has received a Fulbright award, and the International Society for Exposure Science (ISES) Sally Liu Award for an Outstanding New Investigator. She has served on the Board of ISES, and on Scientific Advisory Committees of the National Academy of Sciences, Engineering, and Medicine.

Cory-Slechta,Deborah

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.

Cote,Ila

University of Colorado

Dr. Ila Cote is currently an associate for Risk Sciences International, Ottawa, Canada (an international consulting company), and an adjunct professor in the University of Colorado Medical School, Department of Environmental and Occupational Health. She is an inhalation toxicologist and risk assessor. Her B.A. is from the University of New Mexico, and her Ph.D. is from the University of New Mexico, School of Medicine (Albuquerque, NM). She was a post-doctoral fellow at Duke University School of Medicine, Department of Cell Biology (neuroendocrinology), and then at the New York University School of Medicine, Department of Environmental Medicine (inhalation toxicology). For more than 25 years, she was a board-certified toxicologist. Current research interests are in improving dose-response assessment methodologies, and utilizing advanced biologic data (e.g., omics) to inform risk assessments. Previously, at the Environmental Protection Agency (EPA) National Center for Environmental Assessment, she has served as the Senior Science Advisor to the Director, and the Research Triangle Park Division Director. In these positions, she was responsible for leadership, planning, and oversight of EPA's Integrated Science Assessments for the criteria air pollutants and Integrated Risk Information System (IRIS) assessments for high priority hazardous air pollutants, as well as the development of new risk assessment methodologies and policies. Before this, she was the Associate Director for EPA's National Health and Environmental Effects Research Laboratory and its matrix manager for the air pollution research program. In these positions, she has had extensive experience presenting to independent science advisory boards, including the Clean Air Scientific Advisory Committee (CASAC), the Science Advisory Board (SAB), and the National Academy of Sciences, as well as responding to comments. Additionally, she has served on a number of advisory panels, e.g., the National Academy of Sciences, World Health Organization, National Institutes of Health, Food and Drug Administration, and the National Association of Clean Air Agencies. Dr. Cote also has led several scientific delegations and taught extensively in South America, Asia, and the Middle East.

Cox, Jr.,Louis Anthony (Tony)

Cox Associates

Dr. Tony Cox is President of Cox Associates, a Denver-based applied research company specializing in health risk analysis, epidemiology, computational toxicology and disease modeling, causal analytics, decision science, and operations research. He holds the world's first Ph.D. in Risk Analysis, from the Massachusetts Institute of Technology (MIT), as well as an S.M. in Operations Research from MIT and an A.B. from Harvard; he is also a graduate of the Stanford Executive Program. Dr. Cox has won many scientific awards for research in risk analysis, computational toxicology, biostatistics, respiratory disease modeling, and causal analysis and has served as an expert on risk analysis on many National Academies and National Research Council committees, and as a member of the National Academies' Board on Mathematical Sciences and their Applications (BMSA). He is author of Quantitative Risk Analysis of Air Pollution Health Effects and numerous other books and over 250 peer-reviewed scientific publications on air pollution epidemiology, toxicology, statistics, and health risk analysis. He is an expert in quantitative modeling of chemical health effects and disease causation, pharmacokinetics and pharmacodynamics, and systems biology modeling, and stochastic models of carcinogenesis and inflammation-mediated health effects. In the past two years, he has received research funding from Cox Associates, primarily for research for the US Department of Agriculture (USDA) on causal analysis of microbial risks. Dr. Cox serves as Editor-in-Chief of Risk Analysis: An International Journal. He is a member of the National Academies (NASEM), a Fellow of the Society for Risk Analysis (SRA), and a Fellow of the Institute for Operations Research and Management Science (INFORMS). Dr. Cox has advised many national and international regulatory and health risk assessment bodies in multiple administrations, including the World Health Organization, the U.S. Food and Drug Administration (FDA), Department of Agriculture (USDA), Environmental Protection Agency (EPA), and National Institutes for Occupational Safety and Health (NIOSH). He is currently a member of the NIOSH Board of Scientific Counselors (BSC) and is past Chair of the Clean Air Scientific Advisory Committee (CASAC) for the U.S. EPA.

Crawford,James

National Aeronautics and Space Administration

Dr. James H. Crawford is a Senior Scientist for Atmospheric Chemistry at the National Aeronautics and Space Administration (NASA). In this position, he serves as the agency lead on tropospheric chemistry and air quality. His duties include providing leadership for national and international airborne field studies that collect detailed measurements of atmospheric composition to identify human and natural impacts related to gaseous and particulate pollution. These observations are crucial to understanding the emissions, chemistry, and dynamics that underlie air pollution events. The central aim of Dr. Crawford's work has been to improve the interpretation and application of satellite observations for air quality through integration with surface monitoring, aircraft observations, and air quality models. In conducting these studies, Dr. Crawford has collaborated with federal and state air quality agencies in California, Colorado, Maryland, and Texas, always drawing on local advice and experience to ensure that study goals and measurements are focused on advancing current understanding of the unique issues faced by each locality. He currently serves on the Advisory Panel of the Texas Air Quality Research Program. He has authored over 150 peer-reviewed publications on the chemistry of the lower atmosphere including photochemical production of ozone and particulate matter, carbon monoxide and atmospheric transport, and near-surface vertical gradients in reactive nitrogen oxides, formaldehyde, and ozone production. Dr. Crawford has also coordinated special issue publications of air quality findings in EM magazine, targeted to air quality decision makers, and he served as the atmospheric chemistry editor for the Journal of Geophysical Research-Atmospheres from 2013-2019. He is a member of the International Global Atmospheric Chemistry (IGAC) project Steering Committee and is currently serving as co-chair of that group. Dr. Crawford was selected for a Presidential Early Career Award for Scientists and Engineers in 2001. He has also received NASA's highest honors, the Outstanding Leadership Medal, and NASA's Exceptional Achievement Medal for sustained scientific contributions to NASA's Tropospheric Chemistry Program. His current research interests include the photochemistry of tropospheric ozone and free radicals, the global budget of reactive nitrogen, the influence of clouds on trace gas transport and chemistry, the development of satellite proxies linking precursor distributions to secondary ozone and particulate pollution, and the integration of satellite observations with in situ surface and airborne observations with models to address long-range pollution transport and air quality. Since 2010, Dr. Crawford has led a series of air quality focused field studies across the United States (DISCOVER-AQ and FIREX-AQ) and in South Korea (KORUS-AQ) to understand local and transboundary influences on air quality and to prepare for geostationary satellite observations of air quality planned by Korea and the U.S. in the early 2020s. Dr. Crawford received his Ph.D. in Atmospheric Chemistry from the Georgia Institute of Technology, and his B.S. in Mathematics from the United States Military Academy.

Crawford,Kelly

District of Columbia Department of Energy and Environment

Ms. Kelly Crawford is the Associate Director of the District of Columbia (DC) Department of Energy & Environment (DOEE), Air Quality Division and Chair of DOEE's Equity Committee. Ms. Crawford is a DC native with over 10 years of experience as environmental engineer and emergency management professional, including air quality compliance, enforcement, asbestos permitting, management of environmental systems, integrated contingency planning, and remediation of environmental health hazards. She previously served as Chief for DOEE Air Quality Division's Compliance and Enforcement Branch and continues to serve as the Acting Branch Chief. She leads a team of scientists and engineers developing and ensuring compliance with air quality regulations through the lens of equity in the District of Columbia. Prior to her tenure at DOEE, Kelly served as contract environmental engineer and program manager at the National Aeronautics and Space Administration (NASA) Goddard Space Flight Center supporting the Environmental Management System, Oil Control Program and Air Quality Programs. Ms. Crawford is a Certified Public Manager (CPM) and holds a M.S. in Management with a focus in Emergency Management from University of Maryland University College (UMUC), and a B.S. in Environmental Science from Rochester Institute of Technology. She is also a Leadership in Energy and Environmental Design (LEED) Accredited Professional by the U.S. Green Building Council.

Croes,Bart E.

California Air Resources Board (Retired)

Mr. Bart E. Croes is the retired Chief of the Research Division for the California Air Resources Board, with former responsibilities for California's criteria pollutants, health effects, environmental justice, exposure, atmospheric processes, and emissions research; indoor air quality program; short-lived climate pollutant science; and mitigation of high global warming potential gases. He is currently a Visiting Fellow at the Cooperative Institute for Research in Environmental Sciences (CIRES) at the University of Colorado-Boulder, a Member of the National Academies of Sciences, Engineering, and Medicine (NASEM) Board on Atmospheric Sciences and Climate (BASC), and a Member of the U.S. Environmental Protection Agency (EPA) Board of Scientific Counselors (BOSC) Subcommittee on Air and Energy. He was a member of the NASEM Committees on Review of EPA's "Science to Achieve Results" Research Grants Program, Research Priorities for Airborne Particulate Matter, Review of the Bureau of Ocean Energy Management (BOEM) "Air Quality Modeling in the Gulf of Mexico Study," and the Committee on Energy Futures and Air Pollution in Urban China and the United States, a joint collaboration between the National Academy of Engineering (NAE), National Academy of Sciences (NAS), Chinese Academy of Engineering, and Chinese Academy of Sciences. Mr. Croes was the Public Sector Co-Chair for the North American Research Strategy for Tropospheric Ozone (NARSTO) Executive Assembly, and has published peer-reviewed articles on air pollution and public health, air quality simulation modeling, emission inventory evaluation, reactivity-based volatile organic compound (VOC) controls, the weekend effect for ozone and particulate matter (PM), air quality data analysis and trends, toxic air contaminants, soil nitrogen oxide (NOx) emissions, acid deposition, climate change impacts on California, and greenhouse gas emissions and control. Mr. Croes holds a Master of Science in Chemical Engineering from the University of California, Santa Barbara and a Bachelor of Science in Chemical Engineering from the California Institute of Technology and is a registered Professional Chemical Engineer in the State of California.

Cromar,Kevin

New York University

Dr. Kevin Cromar is the Director of the Air Quality Program at the Marron Institute of Urban Management at New York University (NYU). He is a member of the Utah Air Quality Board which functions as the primary air quality policy maker for the state. He currently serves as the air quality expert on the Transportation Coordinating Committee for the metropolitan planning organization serving northern Utah. An environmental epidemiologist by training, he has appointments as an associate professor in the departments of Population Health and Environmental Medicine at NYU School of Medicine. He received a B.S. in Neuroscience from Brigham Young University and an M.S. and Ph.D. in Environmental Health Science from New York University. Dr. Cromar is recognized as an expert in environmental health policy having previously served as a research fellow at NYU School of Law Institute for Policy Integrity and currently serves as the vice-chair on the Environmental Health Policy Committee for the American Thoracic Society. His translational health and policy work has led to improvements in transportation, energy, and health policy at the local level both in the U.S. and internationally. Dr. Cromar has published research on the health effects of ambient air pollution using a variety of study designs including ecologic studies, cohort studies, and animal toxicology studies. These studies have investigated a wide range of relevant health endpoints including cardiovascular, respiratory, neurological, metabolic and cancer endpoints. His research on air quality indices and risk communication has led to the development of health-based air quality indices used in Mexico City and as part of a global index created in conjunction with colleagues at the National Aeronautics and Space Administration (NASA) and United Nations Children's Fund (UNICEF). He has participated in, and served as organizing chair, of several international expert consultations on various air quality topics that have been supported by the World Health Organization (WHO), NASA, U.S. Environmental Protection Agency (EPA), National Institute of Environmental Health Sciences (NIEHS), and Centers for Disease Control and Prevention (CDC). He is a member of the NASA Health and Air Quality Applied Science Team (HAQAST) and in the last two years has been funded by multiple NASA awards to improve how satellite data can be used to improve exposure assessment and air quality management in the U.S. and internationally.

Diette,Gregory

Johns Hopkins University School of Medicine

Dr. Gregory B. Diette is Professor of Medicine in the School of Medicine and Professor of Environmental Health and Engineering and Epidemiology in the Bloomberg School of Public Health at Johns Hopkins University. He has an active clinical practice, including the Hopkins Obstructive Lung Disease Program where he treats adults with asthma, chronic obstructive pulmonary disease (COPD) and a multitude of other chronic respiratory conditions. Dr. Diette received Bachelor of Arts and Bachelor of Sciences degrees from the University of Pennsylvania, a medical degree from Temple University, and a Masters of Epidemiology degree from Johns Hopkins. He trained in Internal Medicine at the Hospital of the University of Pennsylvania and Pulmonary and Critical Care Medicine at Johns Hopkins. Dr. Diette has an extensive funding and publication record in the area of chronic respiratory diseases, environmental exposures, and health care disparities. He has been a researcher for more than 20 years in the Johns Hopkins Center for Childhood Asthma, including serving as Program Director. This Children's Environmental Health Center, funded by National Institute of Environmental Health Sciences (NIEHS) and Environmental Protection Agency (EPA), has focused on the role of air pollutants and allergens as susceptibility factors in childhood asthma and sought to examine explanations for race and ethnicity disparities, including the roles of diet and obesity. He was previously co-Director of the NIEHS-funded Disease Investigation Through Specialized Clinically-Oriented Ventures in Environmental Research (DISCOVER) program award, in which his team studied mechanisms by which pollutants (particulate matter, nitrogen dioxide) and allergens provoke inflammation and oxidative stress in children with asthma. He has also served as the Co-director of a program entitled: Comparing Urban and Rural Effects of Poverty on COPD (CURE COPD), funded by the National Institutes of Health (NIH) and EPA. This program investigated the role of air pollutants that differ by region in the U.S. and their role in development of COPD. Dr. Diette is the author of more than 200 peer-reviewed publications, including multiple papers on environmental exposures and lung diseases. Dr. Diette is an active member of the American Thoracic Society, where he has served in numerous leadership positions, including on the Board of Directors. Dr. Diette was appointed by two successive governors of the State of Maryland to serve as an Advisor on the State Children's Environmental Health & Protection Advisory Council.

Driscoll, Jr.,Charles T.

Syracuse University

Dr. Charles T. Driscoll is a Distinguished and University Professor at Syracuse University. Dr. Driscoll's scholarly work addresses the effects of disturbance on forest, urban, freshwater and marine ecosystems, including air pollution (acid and mercury deposition), land-use, and climate change. His current research focuses on: recovery of eastern forest watersheds from acidic deposition; co-benefits of carbon dioxide emissions controls from power plants; ecosystem restoration; ecosystem response to changing climate; harmful algal blooms; and atmospheric deposition, watershed and surface water transport and transformations, and biotic exposure of mercury. Dr. Driscoll has been designated as a highly-cited researcher. He has testified at U.S. Congressional and state legislative committee hearings, and has served on local, national, and international committees pertaining to environmental management and policy. Dr. Driscoll is a member of the National Academy of Engineering and a fellow of the American Association for the Advancement of Science.

Frampton,Mark W.

University of Rochester Medical Center

Dr. Mark W. Frampton is Professor Emeritus in Medicine in the Pulmonary and Critical Care division, at the University of Rochester Medical Center. Dr. Frampton holds an M.D. from New York University. His research career has been devoted to understanding the human health effects of exposure to air pollution, using human clinical studies. His work extends beyond pulmonary function effects to include airway inflammation, host defense, and cardiovascular effects. Dr. Frampton's laboratory was the first to conduct human clinical studies of ultrafine particles (smaller than 100 nm) and is one of three centers completing a joint study of the cardiovascular effects of ozone exposure in healthy older subjects, funded by the Health Effects Institute (HEI). Overall, these studies have helped to understand the physiological changes and pathways to adverse effects from air pollutant exposure and have informed the Environmental Protection Agency (EPA) promulgation of rational ambient air quality standards. Funding for these studies has come from the National Institutes of Health (NIH), the EPA, HEI, and others. Dr. Frampton has served on numerous scientific review panels for the NIH, EPA, and other scientific funding organizations. He has served as Chair of the Environmental and Occupational Health Assembly of the American Thoracic Society, chaired a Task Force on Bioterrorism, and served as the first Chair of the Section on Bioterrorism. Dr. Frampton is a former member of the Science Review Committee for HEI. He participated in an HEI review panel on the health effects of traffic-related air pollution, and chaired an HEI Review Panel on ultrafine particles, which produced a recent HEI Perspectives, "Understanding the Health Effects of Ambient Ultrafine Particles." Dr. Frampton has served as a consultant to the EPA in developing and reviewing Integrated Scientific Assessments for criteria pollutants. He served as a member of the Chartered Clean Air Scientific Advisory Committee (CASAC) from 2018 – 2021, participating in reviews of the National Ambient Air Quality Standards (NAAQS) for particulate matter (PM) and ozone.

Fuller,Christina H.

Georgia State University

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.

Goldman,Gretchen T.

Union of Concerned Scientists

Dr. Gretchen T. Goldman has expertise in air pollution exposure science, environmental engineering systems, atmospheric science, and environmental policy. She received a Ph.D. and M.S. in environmental engineering from the Georgia Institute of Technology and a B.S. in atmospheric science from Cornell University. Her research focused on geostatistical modeling of Environmental Protection Agency (EPA) criteria pollutants and particulate matter speciation for use in epidemiologic studies of acute human health effects. Dr. Goldman is the Research Director of the Center for Science and Democracy at the Union of Concerned Scientists. She conducts technical analyses and policy assessments at the intersection of science and federal environmental policy decisions. Her areas of study have included air pollution exposure assessments, environmental justice and community risk analysis, climate change risk assessment, and local impacts of oil and gas operations, among other topics. Dr. Goldman serves as an expert on the Public Health Rulemaking of the California Geologic Energy Management Division (CalGEM) of the Department of Conservation; the United Nations Educational, Scientific and Cultural Organization (UNESCO) and American Association for the Advancement of Science's (AAAS) Consultation Group on how the U.S. science ecosystem compares to the UNESCO Recommendation on Science and Scientific Researchers, and has served as Chair of the Air and Climate Public Advisory Committee for the Metropolitan Washington Council of Governments.

Goodrum,Philip E.

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.

Gordon,Terry

New York University School of Medicine

Dr. Terry Gordon holds the rank of Professor of Environmental Medicine at the New York University (NYU) School of Medicine. He holds a B.S. in Physiology, an M.S. in Toxicology from the University of Michigan, and a Ph.D. in Toxicology from Massachusetts Institute of Technology (MIT), and was appointed to the faculty of the Department of Environmental Medicine in 1989. He has served as an ad hoc member of grant review panels and/or site visit teams for National Institute of Environmental Health Sciences (NIEHS), National Institute of Allergy and Infectious Diseases (NIAID), National Coalition for Cancer Research, Department of Defense (DOD), Bureau of Mines, National Aeronautics and Space Administration (NASA), Health Canada, National Institute for Occupational Safety and Health (NIOSH), Centers for Disease Control and Prevention (CDC), and the Environmental Protection Agency (EPA). Dr. Gordon is past Chair of the American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value (TLV) committee, a volunteer organization that publishes occupational exposure levels that are used as workplace safety guidelines throughout the world. Dr. Gordon's broad research interest is in inhalation toxicology. The major focus of his research lab is the identification and understanding of the role of susceptibility factors in the pathogenesis of the adverse pulmonary effects produced by inhaled environmental and occupational agents. Because inter-individual responses to inhaled particles and gases vary so greatly in both human subjects and test animals, Dr. Gordon has hypothesized that genetic, age, and sex susceptibility factors play a major role in environmental and occupational lung disease. Dr. Gordon also plays a major role in the particulate matter (PM) research program at NYU, and was among the first researchers to use concentrator technology to study the adverse cardiopulmonary effects of ambient PM. Dr. Gordon is an active member of the Society of Toxicology (SOT), and has served on the Program, Placement, Membership, and Awards Committees and as President of its Inhalation Specialty Section. He has served as a consultant/author to the EPA on issues of pulmonary toxicology related to the development of various documents, and served on EPA's Clean Air Scientific Advisory Committee (CASAC) Oxides of Nitrogen (NOx), PM, and Sulfur Oxides (SOx) Primary National Ambient Air Quality Standards (NAAQS) Review Panels. Dr. Gordon's current research, supported by National Heart, Lung, and Blood Institute (NHLBI), NIEHS, and National Cancer Institute (NCI), examines the adverse health effects of alternative tobacco products and underground subway air pollution. He is also the Director of NYU's NIEHS-supported Training Grant in Environmental Toxicology.

Harkema,Jack R.

Michigan State University

Dr. Jack Harkema is a University Distinguished Professor at Michigan State University and the Albert C. and Louis E. Dehn Endowed Chair in Veterinary Medicine. As a board-certified veterinary pathologist, he has extensive experience in respiratory and toxicologic pathology of laboratory animals. He has been an academic and research mentor to numerous graduate and medical students, pathology residents, and postdoctoral fellows for over 30 years in the areas of inhalation toxicology and respiratory pathology. His personal research has focused on elucidating the biological mechanisms underlying airway injury, repair, and adaptation caused by inhalation exposures to air pollutants, allergens, and microbial toxins. His laboratory has developed animal models of human respiratory, cardiovascular, metabolic and autoimmune diseases that are used to 1) determine how pre-existing health conditions may affect an individual's susceptibility to airborne pollutants and 2) preclinically test interventions to prevent or treat environmentally triggered illness. His research career has been fostered by a network of extensive and highly productive collaborations reflected in over 280 publications with coauthors from 20 units in his home academic institution and 115 extramural national/international laboratories. Dr. Harkema has been awarded career achievement awards from the Society of Toxicology, American Thoracic Society, International Society for Aerosol Medicine, and the American Association of Aerosol Research. He received the Alumni Achievement Award in 2015 from the Faculty of the School of Veterinary Medicine at the University of California, Davis, and the Outstanding Mentorship Award from the Society of Toxicologic Pathology in 2018.

Haynie,Fred

North Carolina State University (Retired)

Mr. Fred Haynie's most recent biography is listed in the 2020 Marquis Who's Who in America (73 Edition). It mentions publications without specifics. He has authored many chapters in Ozone, Nitrogen Oxides, Sulfur Dioxide, and Particulate Criteria Documents. He has authored or co-authored over 60 papers in scientific journal and books and has received awards on some papers. He has chaired committees of technical societies and have peer reviewed many papers. In retirement he has continued his study of the atmospheric environment.

Henze,Daven

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 the California Institute of Technology (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 air quality, long-range pollution transport, and climate change. A large part of his research stems from chemical data assimilation, the process by which both models and observations are combined to produce estimates of the atmospheric state that are often more complete than those provided by either approach alone. This encompasses more specific interests in remote sensing, adjoint sensitivity analysis, inverse problems, 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 the lead scientist for the GEOS-Chem adjoint model, a member of the GEOS-Chem Steering Committee, a member of the NASA Earth Science Advisory Committee as well as multiple NASA satellite science teams, and was a member of the EPA Clean Air Scientific Advisory Committee (CASAC) on the Secondary National Ambient Air Quality Standards (NAAQS) for Sulfur Oxides and Nitrogen Oxides.

Herring,Amy

Duke University

Dr. Amy Herring is the Sara and Charles Ayres Distinguished Professor of Statistical Science at Duke University, with secondary appointments in Global Health and Biostatistics & Bioinformatics. Her research focuses on both methodological work in statistics and collaborations in public health and medicine, and she has published over 275 peer-reviewed manuscripts in these areas. Her methodological research program is supported by the National Institutes of Health (NIH), and her research interests lie in methods for longitudinal and multivariate data, missing data, and Bayesian inference. She conducts research in public health, notably environmental and reproductive epidemiology, and she has been developing dimension reduction and other approaches for assessing the potential health effects of exposures to environmental mixtures. Dr. Herring has held major leadership positions in numerous professional organizations, including as President of the International Biometrics Society (IBS) Eastern North American Region (ENAR), the largest professional organization of biostatisticians in North America; Chair of the Biometrics Section and Chair-Elect of the Section on Bayesian Statistical Science of the American Statistical Association (the largest professional organization of statisticians in North America); and as Executive Secretary of the International Society for Bayesian Analysis. She is currently on the Board of Directors for the International Biometrics Society and on the Research Committee for the Health Effects Institute (HEI). Dr. Herring has served on several National Academies committees including currently as a member of the Committee on Applied and Theoretical Statistics, has been a standing member of NIH grant review groups, and has served on numerous prize selection committees, including chairing the committee for the Committee of Presidents of Statistical Societies (COPSS) Presidents' Award (widely perceived as the highest honor in statistics). She has received numerous awards for her work, including the Janet L. Norwood Award for Outstanding Achievement by a Woman in Statistical Sciences (2019), the Lagakos Distinguished Alumni Award from the Harvard University Department of Biostatistics (2018), the Mortimer Spiegelman Award for outstanding public health statistician under age 40 (2012) from the American Public Health Association, and the Gertrude M. Cox Award for outstanding contributions to applied statistics (2012) from the Washington Statistical Society and RTI. She is an Elected Fellow of the American Statistical Association and the International Statistics Institute.

Hill,Jason

University of Minnesota

Dr. Jason Hill is Professor in the Department of Bioproducts and Biosystems Engineering at the University of Minnesota. He received his A.B. from Harvard University and his Ph.D. from the University of Minnesota. His research focuses on improving the sustainability of our world's food, energy, and natural resource systems by examining them from a life cycle perspective. His research is funded by the U.S. Department of Agriculture and the U.S. Environmental Protection Agency (EPA) as a project co-lead for the Center for Air, Climate, and Energy Solutions. Dr. Hill served on the EPA Science Advisory Board (SAB) Biogenic Carbon Advisory Panel and was a member of the National Research Council's Committee on the Economic and Environmental Impacts of Increasing Biofuels Production and its Committee on Expanding Biofuel Production: Sustainability and the Transition to Advanced Biofuels. Dr. Hill is on the editorial board of Environmental Research Communications.

Hollis,Adrienne

Union of Concerned Scientists

Dr. Adrienne L. Hollis is the Senior Climate Justice and Health Scientist in the Climate and Energy Program at the Union of Concerned Scientists' Washington, D.C. office. She has a bachelor's degree in biology from Jackson State University, a Ph.D. from Meharry Medical College, and a J.D. from the Rutgers School of Law – Newark, New Jersey. Dr. Hollis has expertise in environmental justice, toxicology, public health, environmental law, and risk assessment. Her work focuses on the intersection of public health, environmental justice and climate science, community science and environmental health. She has presented at more than 20 meetings, authored more than 20 blogposts, written a number of articles and been featured in numerous articles for her work. Dr. Hollis has not engaged in independent research in the last two years, focusing instead on community education. Therefore, Dr. Hollis has not received any federal funding for her work and has no conflicts of interest. Dr. Hollis is an Associate Editor and reviewer for Environmental Justice journal, a member of the Environmental Protection Agency (EPA) Clean Air Act Advisory Council (CAAAC), a past member of the Negotiated Rulemaking Committee: Chemical Data Reporting Requirements for Inorganic Byproducts, a member of the Lancet Countdown U.S. Brief Working group, an Expert Reviewer for the Government and Expert Review of the First Order Draft (FOD) of the Working Group II (WGII) contribution to the Sixth Assessment Report (AR6) of the Intergovernmental Panel on Climate Change (IPCC). She is on the Steering Committee of the National Black Environmental Justice Network (NBEJN), a member of the American Public Health Association (APHA), its Environment Section and its Environmental Justice Subcommittee, Special Advisor to the Centers for Disease Control and Prevention (CDC) National Environmental Health Partnership Council (NEHPC), NEHPC Steering committee member, co-chair of the NEHPC Environmental Justice/Health Equity Workgroup and its Communication Workgroup.

Holloway,Tracey

University of Wisconsin-Madison

Dr. Tracey Holloway is the 2017-2021 Gaylord Nelson Distinguished Professor at the University of Wisconsin-Madison, appointed in the Nelson Institute for Environmental Studies and the Department of Atmospheric and Ocean Sciences. She holds a Bachelor's degree with Honors in Applied Mathematics from Brown University, and a Ph.D. in Atmospheric and Oceanic Sciences from Princeton University. Dr. Holloway is an air quality scientist, working at the intersection of air quality, energy, climate, and public health. As Team Lead of the National Aeronautics and Space Administration (NASA) Health and Air Quality Applied Sciences Team, Dr. Holloway connects NASA data with air quality management and public health. Dr. Holloway was a co-founder and first President of the Earth Science Women's Network (ESWN), supporting the scientists of today and welcoming a diverse community of scientists for tomorrow. Dr. Holloway has received multiple awards for teaching and mentoring at University of Wisconsin-Madison, and she was the first-ever recipient of the Massachusetts Institute of Technology (MIT) Clean Energy Education & Empowerment (C3E) Award in Education and Mentoring, a Stanford University Leopold Leadership Fellow, an American Association for the Advancement of Science (AAAS) Leshner Leadership Fellow, a TEDx speaker, and profiled in Nature for her work with ESWN. Over the past two years, Dr. Holloway has received research funding from NASA, Environmental Protection Agency (EPA), the Joyce Foundation, Madison Gas and Electric, and the Texas Air Quality Research Program. Dr. Holloway's current service includes chairing Science-a-Thon, an activity of ESWN, leading engagement and outreach for the University of Wisconsin-Madison Energy Analysis and Policy graduate certificate program, serving as an Executive Board Member for the journal Environmental Research Letters, membership on the Wisconsin Department of Natural Resources Air Management Study Group and the Wisconsin Initiative on Climate Change Impacts Science Advisory Board, and serving on the advisory committees for Atmospheric Chemistry Observations and Modeling at the National Center for Atmospheric Research, University of Wisconsin-Madison Space Science and Engineering Center, University of Wisconsin-Madison Global Health Institute, and the Yale/Johns Hopkins Air Climate and Energy Research Center.

Hughes,Brian

Michigan Department of Environment, Great Lakes and Energy

Dr. Brian J. Hughes has a Bachelor of Science (B.S.) in Biochemistry and a master's degree (M.S.) in Dairy Science from Michigan State University (East Lansing, MI). Afterward, he received a Doctor of Philosophy (Ph.D.) degree in toxicology at Utah State University (Logan, UT). His Ph.D. dissertation was in immunotoxicology looking at the structural activity relationships of trichothecene mycotoxins. He conducted postdoctoral work at the United States Department of Agriculture (USDA) Agricultural Research Station in El Reno, OK studying the effects of anti-glucocorticoids as novel therapeutic agents in cattle to alleviate immunosuppression associated with bovine respiratory disease complex and to study their steroid hormone receptor interactions. He also earned an M.P.H. in epidemiology from the University of Alabama at Birmingham, Alabama. Dr. Hughes is certified through the American Board of Toxicology. In 1991, he served as Director, Risk Assessment and Toxicology Section in the Alabama Department of Public Health (Montgomery, AL) where he conducted human and environmental health assessments for hazardous waste sites under a cooperative agreement with the Agency for Toxic Substances and Disease Registry. He also has significant experience in pesticide and worker protection issues from his time at the Michigan Department of Agriculture. He also provided environmental health and safety consulting to business units involved in the production of industrial chemicals used as food additives, pharmaceutical excipients, electronic materials, amines, oxygenated solvents and intermediates for the Dow Chemical Company in Midland, Michigan. He was formerly a Senior Principal Toxicologist at NSF International, a not-for-profit and global public health organization where he conducted product safety assessments for drinking water contaminants, medical devices, and a range of other consumer products to assist clients in achieving compliance with either regulatory requirements or NSF/ American National Standards Institute (ANSI) standards. He is currently the Toxicology Manager at the Air Quality Division of the Michigan Department of Environment working to set air toxics standards for air permitting activities. Dr. Hughes currently serves as an adjunct faculty in the Department of Animal Science at Michigan State University. He has published peer-reviewed research in the areas of pesticide worker exposure, public health risk assessment, and modes of action. Dr. Hughes has served on several industry panels covering a wide range of chemical classes. He formerly served on a US Environmental Protection Agency (EPA) Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) Scientific Advisory Panel on "Worker Exposure Assessment Methods". Dr. Hughes is an active member of the Society of Toxicology (SOT) and has served as the Planning Committee chair for the Toxicology Forum. There has been no research funding during the past 2 years. Dr. Hughes will bring a diversity of background and experience in epidemiology, toxicology, and risk assessment serving the regulatory sector and regulated industries to the Clean Air Scientific Advisory Committee (CASAC) committee. He has more than 25 years of experience that spans the public, private, academic, and state and federal government sectors. He has assisted businesses in fulfilling national and international regulatory requirements for agencies such as, U.S. EPA, U.S. Food and Drug Administration (FDA), European Union (EU) Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), via coordination of toxicity studies and other resources.

Ibrahim, Muhammad

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.

Jaspers,Ilona

University of North Carolina at Chapel Hill

Dr. Ilona Jaspers is a Professor at the University of North Carolina at Chapel Hill (UNC-CH) in the Department of Pediatrics, Division of Allergy, Immunology, and Rheumatology, with joint appointments in the Departments of Microbiology and Immunology as well as Environmental Sciences and Engineering. She received her undergraduate degree from Seton Hall University and her Ph.D. in Environmental Health Sciences from New York University. Dr. Jaspers came to UNC-CH to conduct her postdoctoral studies in the Center for Environmental Medicine, Asthma and Lung Biology and has continued her academic career at UNC-CH since then. Dr. Jaspers has a long-standing interest in the adverse health effects induced by inhaled pollutant exposures, especially how it affects respiratory immune responses. As the Director of the Center for Environmental Medicine, Asthma and Lung Biology, Dr. Jaspers collaborates extensively with investigators from UNC-CH and the U.S. Environmental Protection Agency (EPA) to conduct translational studies related to air pollution health effects. Research in Dr. Jaspers' laboratory has been funded by National Institutes of Health (NIH), EPA, Food and Drug Administration (FDA), and Department of Defense (DOD) and focuses on the mechanisms by which exposure to air pollutants such as ozone, woodsmoke, cigarette smoke, and e-cigarettes modifies host defense responses, using translational human in vitro and in vivo models. In addition to research, Dr. Jaspers has served on several internal and external advisory committees and is an active member of the Society of Toxicology (currently serves as the chair of the awards committee) and the American Thoracic Society (she is current Chair-Elect for the Environmental, Occupational, and Public Health Assembly). She currently serves on the Scientific Advisory Board for the National Institute of Environmental Health Sciences (NIEHS) Gulf Long-term Follow-up Study (GuLF STUDY), the External Advisory Board for the University of Rochester Environmental Health Sciences Center, the External Advisory Board for the Molecular and Biochemical Toxicology Training Program, North Carolina State University, the External Advisory Board for the Center for Research on Flavored Tobacco (CrOFT), Roswell Park and University of Rochester Medical Center, and the External Advisory Board, Molecular and Biochemical Toxicology Training Program at Vanderbilt University. In the past, she has served on the External Advisory Committee for the Swiss National Science Foundation Project, the External Science Advisory Board for the U19 Gulf Coast Research Consortium on Women's Health (GROWH) at Tulane University, and has been a reviewer for Health Effects Institute, the National Institutes of Health, and the Flight Attendant Medical Research Institute.

Jayjock,Michael

Jayjock Associates LLC

Dr. Michael Jayjock is an independent consultant who retired as a Senior Research Fellow from the Rohm and Haas Company where he worked for 35 years. During his employment his responsibilities included development and management of all aspects of exposure assessment and mathematical modeling projects in the service of product safety. He developed interests and expertise in modeling the nature of indoor pollution by experimentally and theoretically characterizing sources and loss mechanisms. Dr. Jayjock has been an active participant on the committees of the American Industrial Hygiene Association; the U.S. Environmental Protection Agency (EPA) Science Advisory Committee On Chemicals (SACC) Peer Review Risk Evaluation for Asbestos and 1,4 Dioxane (2019-2020); the U.S. EPA Science Advisory Board (SAB), COVID-19 Review Panel (2020); the U.S. EPA SAB Scientific and Technological Achievement Awards (STAA) Committee (2019- 2021); the 2018 U.S. EPA peer review panel for the Draft Exposure and Use Assessment for Five Persistent Bioaccumulative Toxic (PBT) Chemicals; the 2016 U.S. EPA peer review panel for Draft Guidelines for Human Exposure Assessment; the 2014 U.S. Department of Energy (DOE) Hanford Tank Vapor Assessment Team; the 2013 U.S. EPA peer review panel for the Draft Risk Assessment for Trichloroethylene (TCE)/Degreaser Arts/Crafts Uses; the 2011 U.S. EPA Science Advisory Panel on Lead Exposure; the 2008 U.S. EPA Peer Consultation Panel for Perfluorooctanoic Acid (PFOA) Site-Related Environmental Assessment Program; the 2005 U.S. EPA Board of Scientific Counselors Peer Review Panel for the Office of Research and Development Science Program; the 2002 U.S. EPA Human Health Research Strategy Panel; a member of or consultant to the 1998-2003 U.S. EPA SAB – Integrated Human Exposure Committee (IHEC). He has also been a member of three subcommittees of the U.S. National Academy of Sciences. He is not currently a recipient of research grants from the Environmental Protection Agency, other federal agencies, or the private sector.

Kanarek,Marty

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 funding the last two years has been several projects from the Wisconsin Division of Public Health. Dr. Kanarek is a Fellow in the American College of Epidemiology.

Kaufman,Joel

University of Washington

Dr. Joel Kaufman is a physician-epidemiologist, board-certified in internal medicine and occupational medicine. He has been a full-time faculty member at the University of Washington (UW) since 1997, currently holding appointments as a Professor in the Departments of Environmental & Occupational Health Sciences, and Medicine (General Internal Medicine), and Epidemiology. He also serves as the Director of the UW Center for Exposures, Diseases, Genomics and Environment (EDGE Center) which is supported by the National Institute of Environmental Health Sciences (NIEHS). Dr. Kaufman's work integrates epidemiology, exposure sciences, toxicology, and clinical medicine. His current research activities are primarily focused on environmental factors in chronic disease, including cardiovascular disease, diabetes, and brain aging. He is the principal investigator of a major epidemiological prospective cohort study of air pollution and cardiovascular disease (The Multi-Ethnic Study of Atherosclerosis and Air Pollution, or "MESA Air"). He directs a facility customized for experimental inhalation toxicology studies on health effects of air pollutants. Since early 2020, Dr. Kaufman has served as editor-in-chief of Environmental Health Perspectives, a leading environmental health journal published by the National Institute of Environmental Health Sciences. A Fellow of the American College of Physicians, the American Heart Association, and the American College of Occupational and Environmental Medicine, Dr. Kaufman is an author of more than 250 peer-reviewed papers and is an elected member of the National Academy of Medicine. He has previously served on Clean Air Scientific Advisory Committee (CASAC) panels convened for Carbon Monoxide, Oxides of Nitrogen, and Particulate Matter.

Khubchandani,Jagdish

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 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.

Kipen,Howard

Rutgers University

Dr. Howard Kipen received a B.A. from University of California, Berkeley, an M.D. from University of California, San Francisco, and an M.P.H. from Columbia University. He completed an internal medicine residency at Columbia Presbyterian Medical Center in New York and an Occupational and Environmental Medicine fellowship at Mount Sinai in New York. Dr. Kipen is currently Professor of Environmental and Occupational Health at the Rutgers School of Public Health and has been at Rutgers for over 30 years. He is also Director of the Division of Clinical Research and Occupational Medicine, of the Rutgers Environmental and Occupational Health Sciences Institute (EOHSI). He also directs the Integrated Health Sciences Facility Core of EOHSI providing support for clinical He has authored over 190 scientific articles, book chapters and reviews on topics in environmental and occupational health, many on the health effects of air pollutants, both indoor and outdoor. Since, 2004, he has directed human mechanistic biomarker and air pollution studies in Beijing, Chongqing/Reading (UK), and the U.S. to understand how air pollutants affect cardiovascular and respiratory health. He was Principal Investigator (PI) on an Environmental Protection Agency (EPA) indoor air study that examined climate change impacts on air pollution and the use of indoor air cleaners to reduce health risks. He also directs a National Institutes of Health (NIH) field study on the use of portable air cleaners to reduce viral aerosol levels in homes of newly infected patients. He has served on or chaired a number of committees at the National Academy of Medicine/National Academy of Sciences, NIH, Department of Veterans Affairs, American Thoracic Society, and Department of Defense. From 2009 to 2016, he chaired the National Aeronautics and Space Administration (NASA) Standing Review Panel on Advanced Environmental Health and Food Technology. He is a member of the National Academies Standing Committee on Medical and Epidemiological Aspects of Air Pollution on U.S. Government Employees and their Families and serves on the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) committee to revise its carbon dioxide position document. He chaired the American Thoracic Society (ATS) Scientific Assembly on Environmental, Occupational and Population Health from 2017-2019. His current research focuses on how carbon dioxide (CO_2) might actually function as a neurotoxin, how portable air cleaners may reduce COVID transmission, and how "burn pits" may have injured U.S. troops.

Kleinman,Michael T.

University of California, Irvine

Dr. Michael T. Kleinman is an Adjunct Professor of Toxicology in the Department of Environmental and Occupational Health in the University of California, Irvine (UCI) College of Health Sciences, with joint appointments in the Department of Medicine and the Program in Public Health. He was previously employed by the U.S. Atomic Energy Commission (AEC) as an environmental scientist and he directed the Aerosol Exposure and Analytical Laboratory at Rancho Los Amigos Hospital in Downey, CA. He has more than 40 years of experience researching the health effects of environmental contaminants. He holds a M.S. in Chemistry (Biochemistry) from the Polytechnic Institute of Brooklyn and a Ph.D. in Environmental Health Sciences from New York University. He is the Co-Director of the Air Pollution Health Effects Laboratory at UCI. He has published more than 145 peer-reviewed journal articles on effects of environmental contaminants on cardiopulmonary and immunological systems and on global and regional distribution of toxic environmental materials including heavy metals and radioactive contaminants from nuclear weapons testing. He has directed more than 50 controlled exposure studies of human volunteers and laboratory animals to particulate matter from combustion sources, ozone and other photochemical oxidants, carbon monoxide, ambient particulate matter (PM) and laboratory-generated aerosols containing chemically or biologically reactive metals such as lead, cadmium, iron and manganese. He has served on two National Academy committees to examine issues in protecting deployed U.S. Forces from the effects of chemical and biological weapons. Dr. Kleinman's current research focuses on neurological and cardiopulmonary effects of inhaled particles, including nanomaterials and ultrafine, fine and coarse ambient particles in humans and laboratory animals. His recent health effects studies have focused on the role of inhaled pollutants on the promotion of airway allergies, tumor growth, tumor progression and the development or exacerbation of cardiovascular disease. The mechanistic focus of this work is understanding how these effects are mediated by toxic metals, organic constituents and elemental carbon components of PM and why there are differences in cardiovascular responses between males and females. Dr. Kleinman's recent research is supported by grants to examine the effects of inhaled particles on biochemical and behavioral changes in the brain related to Alzheimer's Disease from the California Health Effects of Air Pollution Foundation, grants from National Institutes of Health (NIH) to examine effects of e-cigarette smoke exposure on healthy and unhealthy hearts and a recently completed grant from the U.S. Forest Service to examine health effects of smoke exposure in wildland fire fighters. Dr. Kleinman has previously served on the U.S. EPA Clean Air Scientific Advisory Committee (CASAC) Ozone, PM, and Oxides of Nitrogen panels, is a member of the EPA Board of Scientific Counselors Air and Energy Subcommittee and is a member of the California Scientific Review Panel for Toxic Substances.

Koutrakis,Petros

Harvard T.H. Chan School of Public Health

Dr. Petros Koutrakis is a Professor of Environmental Sciences in the Environmental Health Department at the Harvard T.H. Chan School of Public Health (HSPH). He holds a B.S. degree in chemistry from the University of Patras, Greece. He holds an M.S. degree in atmospheric chemistry and a Ph.D. degree in environmental chemistry from the University of Paris, France. Dr. Koutrakis was a doctoral researcher from 1980-1984 in the Atmospheric Physical Chemistry Laboratory at the University of Paris. From 1984-1985 he was a post-doctoral researcher at the Energy and Environmental Policy Center, Kennedy School of Government, Harvard University. He was a Lecturer/Research Associate from 1986-1988 in the Department of Environmental Science and Physiology at HSPH. From 1988-1991 he was an Assistant Professor of environmental sciences in the Department of Environmental Sciences. Dr. Koutrakis was an Associate Professor and Director of the Environmental Chemistry Laboratory, Department of Environmental Health from 1991-1995. In 1995 he was promoted to Professor of Environmental Sciences. From 2003-2012 he served as the Director of the Exposure, Epidemiology & Risk Assessment Program at HSPH. Dr. Koutrakis was Director of the HSPH-Cyprus Program for the Environment and Public Health from 2004-2014. Since 1999 he has served as Director of the Environmental Protection Agency (EPA)-Harvard Particulate Matter Research Centers. He was the Technical Editor-in-Chief, Journal of Air & Waste Management Association from 1994-2003. Dr. Koutrakis was the winner of the 2018 Excellence in Exposure Science Award from the International Society of Exposure Science. He was the winner of the 2020 Lyman A. Ripperton Award from the Air Waste & Management Association, for distinguished achievement as an educator in the field of air pollution control. Recent funding sources include the EPA, National Institutes of Health, the Department of Veterans Affairs, and the National Aeronautics and Space Administration.

Kuminoff,Nicolai

Arizona State University

Dr. Nicolai Kuminoff is an Associate Professor in the Economics Department at Arizona State University and a Research Associate at the National Bureau of Economic Research. His research aims to infer consumer preferences for non-market amenities from their purchases in markets for housing, labor, health care and other goods and services. His recent research projects include developing satellite accounts for non-market expenditures on local environmental amenities, predicting the distributional welfare effects of choice architecture policies, examining how long term air pollution exposures affects morbidity and mortality among older adults, and estimating the private values that older adults place on reducing their morbidity and mortality risks. Dr. Kuminoff's research has been funded by the U.S. Environmental Protection Agency, the National Institute of Aging, and the National Science Foundation, and published in journals such as the American Economic Review, International Economic Review, Journal of Economic Literature, Journal of Environmental Economics and Management, Review of Environmental Economics and Policy, Land Economics, Environmental and Resource Economics, Proceedings of the Royal Society-B, Ecohealth, PLOS ONE, and Water Resources Research. He currently serves as Secretary for the Association of Environmental and Resource Economists, Co-Editor at the Journal of the Association of Environmental and Resource Economists, and as an editorial board member at the Journal of Environmental Economics and Management and at the Review of Environmental Economics and Policy. Dr. Kuminoff obtained a Ph.D. in Economics from North Carolina State University (2006) and M.S. (2000) and B.S. (1999) degrees in Agricultural and Natural Resource Economics from the University of California, Davis.

LaFranchi,Brian

Aclima, Inc.

Dr. Brian LaFranchi leads the Science Operations group at Aclima, Inc., which is responsible for sensor calibrations, deployed device performance, and overall quality control. After receiving his doctorate in Analytical Chemistry from the University of Vermont, where he was a U.S. Environmental Protection Agency (EPA) Science to Achieve Results (STAR) Fellow, Dr. LaFranchi embarked on a career in atmospheric chemistry research. As a post-doctorate, first at University of California Berkeley and then at Lawrence Livermore National Laboratory, his research touched on the impact of long-term declines in vehicle emissions on air quality over the Sierra Nevada Mountains of California and the use of radiocarbon isotope measurements as a tracer in carbon cycle studies on a regional scale. Prior to joining Aclima, Dr. LaFranchi worked in the GHG Attribution Laboratory at Sandia National Labs, leading efforts to characterize uncertainties in high precision GHG measurements as part of field studies in Barrow, AK and Livermore, CA.

Lange,Sabine

Texas Commission on Environmental Quality

Dr. Sabine Lange is the section manager for the Toxicology, Risk Assessment, and Research Division at the Texas Commission on Environmental Quality (TCEQ). Dr. Lange's responsibilities include overseeing health effects risk assessments of air permit applications, ambient air monitoring projects, and hazardous waste sites; overseeing the development of chemical toxicity factors; and conducting and overseeing systematic reviews and independent analyses of risk assessments. Dr. Lange serves as a technical resource for the State and citizens of Texas for human health and environmental risk assessment, especially related to air and water quality. Dr. Lange's research interests include the toxicology and risk assessment of criteria air pollutants, and risk assessment methods used for derivation of toxicity factors. In these areas she has published articles, given invited talks, presented posters, and served as a workshop panel member. On behalf of the TCEQ, Dr. Lange has intensively reviewed the documents released by the U.S. Environmental Protection Agency (EPA) on the National Ambient Air Quality Standards (NAAQS) for ozone, particulate matter, sulfur dioxide, nitrogen dioxide, and lead. She is also a former member of the U.S. EPA's chartered Clean Air Scientific Advisory Committee (CASAC), and she has served as a peer reviewer for EPA on a Science Advisory Board panel reviewing an EPA report on reduced form tools for estimating air quality benefits, as well as on a panel reviewing chemical hazard assessments for regulations under the Toxic Substances Control Act. Dr. Lange's work since joining TCEQ has been entirely funded by the State of Texas. Dr. Lange received a Bachelor's degree in biochemistry from the University of Western Ontario in Canada, and completed a Ph.D. and post-doctoral training in biochemistry and molecular carcinogenesis at the University of Texas at Houston and MD Anderson Cancer Center. Dr. Lange is a Diplomate of the American Board of Toxicology.

Lanphear,Bruce

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, 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.

Lee,Alison

Icahn School of Medicine at Mount Sinai

Dr. Alison Lee is a physician-scientist and an Associate Professor of Medicine in the Division of Pulmonary, Critical Care and Sleep Medicine at the Icahn School of Medicine at Mount Sinai. Dr. Lee graduated with Honors from Brown University and received her medical degree from the University of Massachusetts Medical School and a Master of Science in Epidemiology from Columbia University Mailman School of Public Health. Dr. Lee completed internal medicine residency training at New York University and pulmonary, critical care and sleep medicine fellowship at Columbia University. Currently and in the past two years, Dr. Lee has been the Principal Investigator of three National Institutes of Health (NIH) grants, including a K23 Early Career Award and R21 and R01 grants, and is a co-investigator on additional NIH-funded research. Dr. Lee has served on the Scientific Advisory Committees of the American Thoracic Society and Chest Foundation to recommend research funding priorities and currently serves on the American Thoracic Society Environmental Health Policy Committee to advise on environmental health policy and priorities. Dr. Lee's research focuses on the role of ambient and indoor sources of air pollution, alone or in conjunction with social risk factors, in explaining health risk and health disparities. Dr. Lee is particularly interested in understanding how environmental influences in early life increase risk for future, chronic disease. Specifically, Dr. Lee's research has identified the in utero and early childhood periods as key windows of susceptibility to air pollution exposures and demonstrates the importance of more comprehensively considering joint exposures. Building on these prior observations, Dr. Lee leads efforts to explore mechanisms mediating these associations to support a causal association between early life air pollution exposures and child health.

Lefohn,Allen S.

A.S.L. & Associates, LLC

Dr. Allen S. Lefohn is currently President and Founder of A.S.L. & Associates, LLC in Helena, Montana. From 1981 until 2017, he served as President and Founder of A.S.L. & Associates, a Montana corporation. He received his Bachelor of Science degree from the University of California, Los Angeles in 1966 and a Ph.D. in physical chemistry from the University of California, Berkeley in 1969. His advisor was Professor George C. Pimentel. For the period 1989 – 1999, he served as an Executive Editor of the internationally recognized journal Atmospheric Environment and is an Emeritus Editor of the Journal. Dr. Lefohn has published approximately 125 peer-reviewed publications, edited four books, presented numerous oral papers, and participated in panel presentations. He is the editor and author of the popular book Surface-level Ozone Exposures and Their Effects on Vegetation. During a career spanning over 50 years, his research has focused on (1) developing exposure-response relationships and indices that describe the effects of ozone on vegetation and human health, (2) investigating biological mechanisms that influence the nonlinearity response (i.e., weighting of the higher concentrations more than the mid- and low-level values) to ozone for both human health and vegetation, (3) understanding the relative importance of background ozone in relation to ambient concentrations and how background influences margin of safety considerations under the Clean Air Act, and (4) integrating results from the Environmental Protection Agency (EPA) air quality database for (a) characterizing co-occurrence patterns of criteria air pollutants under ambient conditions (e.g., ozone, sulfur dioxide, and nitrogen dioxide), (b) characterizing ozone trend patterns, and (c) designing research experiments that utilize realistic ambient exposures for assessing human health and vegetation effects. He served as Chairman of the Science Advisory Committee of the Center for Ecological Health Research, University of California, Davis and served as a member of the Committee until January 2002. His research results have also been applied by the EPA. Between 2007 and 2015, EPA staff, Clean Air Scientific Advisory Committee (CASAC), and the EPA Administrator discussed the application of an exposure metric, the W126 exposure index, as the federal ozone standard to protect vegetation. Dr. Lefohn created the exposure metric in 1985 with the help of the first-generation Apple Macintosh computer and introduced the metric into the peer-review literature in 1987 and 1988. In October 2015, as well as in December 2020, the EPA Administrator announced that the 8-h ozone standard would be used to control those cumulative W126 exposures that elicit an adverse effect on vegetation; the EPA continues to use the W126 metric as an indicator of the potential risk of ambient ozone exposures to vegetation. With several research investigators, he led a team to estimate the historical global emissions of sulfur for the period 1850-1990. The sulfur emission estimates are used in global climate change models. An important contribution of his work in the human health research area has been the designing of hour-by-hour ozone concentrations used in several of the key experiments that identified realistic ambient exposure regimes that elicited adverse forced expiratory volume in one second (FEV1) responses. Over the years, several of these clinical laboratory studies of healthy volunteers have formed the scientific basis for the human health ozone National Ambient Air Quality Standards (NAAQS), including the current 70 ppb standard. Dr. Lefohn has been involved in all the American Lung Association's annual State of the Air reports (1999-2021). As a consultant, he is responsible for characterizing the EPA's ozone and 24-hour average fine particulate matter (PM2.5) data in a form that the American Lung Association uses to assign air quality grades for each county in the United States that monitors either ozone or PM2.5.Dr. Lefohn is familiar with the EPA's rulemaking process. He was the lead consultant scientist for the EPA in authoring the air quality characterization chapter and the vegetation exposure-response section for the Ozone Criteria Document in 1996 and contributed to the Ozone Criteria Documents in 1985 and 2006. Dr. Lefohn presented testimony in March 2015 to the House Committee on Science, Space, and Technology about background ozone. In 2015, Dr. Lefohn was a co-guest editor for the Atmospheric Environment special issue: Observations and source attribution of ozone in rural regions of the Western United States. Dr. Lefohn from 2014 to 2019 served on the Steering Committee of the international research effort, Tropospheric Ozone Assessment Report (TOAR). The project provides the international research community with an up-to-date scientific assessment of tropospheric ozone's global distribution and trends from the surface to the tropopause. Dr. Lefohn was the lead author (with 23 additional co-authors) of the TOAR paper, Global Ozone Metrics for Climate Change, Human Health and Crop/Ecosystem Research, which was published in April 2018. Dr. Lefohn is a member of the American Association for the Advancement of Science (AAAS). For many years, he served as an Adjunct Professor of Environmental Engineering at Montana Tech in Butte, Montana. For the past two years, Dr. Lefohn's funding sources for his research activities have originated from the American Lung Association and his own company, A.S.L. & Associates, LLC.

Lovinsky-Desir,Stephanie

Columbia University

Dr. Stephanie Lovinsky-Desir is Assistant Professor of Pediatrics and Environmental Health Sciences and the Director of the Pediatric Pulmonary Division at Columbia University Irving Medical Center. She completed her general pediatrics training at the Children's Hospital of Montefiore in the Social Pediatrics program and her pediatric pulmonary fellowship at New York Presbyterian – Columbia University. Her research is focused on understanding how environmental factors impact children with asthma, particularly in urban and minority communities. Dr. Lovinsky-Desir's multidisciplinary approach to studying urban environmental asthma has led to fruitful collaborations throughout several schools at Columbia including the School of Medicine, the School of Public Health, the School of Nursing, and the Lamont Doherty Earth Observatory. Her current work is funded by the National Institutes of Health - National Heart, Lung, and Blood Institute (NHLBI) and National Institute of Environmental Health Sciences (NIEHS), the Robert Wood Johnson Foundation through the Amos Medical Faculty Development Award, and the Driscoll Children's Scholar Fund. She is an elected member of the Society for Pediatric Research and in 2019 was recognized by the journal Pediatric Research for the Early Career Investigator Spotlight. She is also the recipient of the 2019 American Society for Clinical Investigation Young Physician-Scientist Award and the 2021 Robert B. Mellins, MD Outstanding Achievement Award from the Pediatric Assembly of the American Thoracic Society (ATS). Dr. Lovinsky-Desir is also very active in the American Thoracic Society as a member of several committees within the Pediatric Assembly including the Programming Committee, Advocacy Committee, Diversity and Inclusion Working Group and Nominating Committee as well as the ATS Health Equity and Diversity Committee.

Maddaloni,Mark

Cardno/ChemRisk

Dr. Mark Maddaloni has 35 years of professional work experience in the areas of environmental health, toxicology, and human health risk assessment. Prior to joining Cardno/ChemRisk, he served as a senior toxicologist and the Regional Risk Assessment Coordinator in the Office of the Regional Administrator for Environmental Protection Agency (EPA) – Region 2. He has served on numerous EPA National Workgroups including: metals, asbestos, chemical mixtures, PCBs, perfluoroalkyl substances, and bioavailability. EPA recognized Mark as a national expert in lead (Pb) risk assessment. Dr. Maddaloni has played a key role in developing contaminant exposure guidelines for indoor air in complex, high-profile settings He chaired a multi-agency committee tasked with developing health-based exposure guidelines for indoor air and settled dust for the World Trade Center Response and Recovery Operation. Working with the New York City Department of Health, Dr. Maddaloni developed health-based exposure guidelines for polychlorinated biphenyls (PCBs) in NYC public schools. He has served on a Centers for Disease Control and Prevention (CDC) Pb Poison Prevention Advisory Committee and the New Jersey Department of Environmental Protection's Science Advisory Board. He is presently the longest serving member (appointed in 2000) of the New York City Department of Health and Mental Hygiene's Institutional Review Board (IRB). Dr. Maddaloni received his Dr.PH. in environmental health sciences from the Columbia University Mailman School of Public Health. His thesis title was: Measurement of Soil-borne Lead bioavailabilty in Adult Human Subjects and its Application in Biokinetic Modeling. He received an M.S. in Toxicology from St. John's University and a B.S. in Pharmacy from Long Island University. Dr. Maddaloni is a Diplomat of the American Board of Toxicology and a member of the Society of Toxicology.

Magi,Brian

University of North Carolina at Charlotte

Dr. Brian Magi is an Associate Professor of Atmospheric Sciences at the University of North Carolina at Charlotte (UNC Charlotte) in the Department of Geography and Earth Sciences. His research explores air quality using low-cost air monitors, and data-oriented questions about the relationship among fires, climate, lightning, and humans. Dr. Magi works with students on these questions, but also simply enjoys tackling enormous datasets related to climate to better understand the Earth system. He teaches two courses per semester at UNC Charlotte and serves on multiple administrative committees at his university. He is on the Board of Directors of a Charlotte-based non-profit called Clean Air Carolina, serves on the Clean Air Carolina Scientific Advisory Board for their Citizen Science program, and serves on the volunteer-based Mecklenburg County (NC) Air Quality Commission. Dr. Magi has also been a part of organizing committees for public displays showing air quality data in and around the Charlotte area. Prior to his position at UNC Charlotte, he was a postdoc at the National Oceanic and Atmospheric Administration (NOAA) Geophysical Fluid Dynamics Laboratory (GFDL) from 2007-2011. He worked on his graduate research from 1999-2006 in the Department of Atmospheric Sciences at the University of Washington, and successfully defended his Ph.D. in 2006. He earned his Bachelor of Science degree in Physics and Applied Math from the University of Arizona (UofA) in 1998.

Malm,William

Colorado State University

Dr. William C. Malm is a research scientist/scholar at Colorado State University's Cooperative Institute for Research in the Atmosphere (CIRA) and a recently retired research physicist in the National Park Service Air Resources Division where he was program coordinator for the visibility/particulate research and monitoring program. He received his B.S. degree in physics and a minor in mathematics from Mankato State University in 1965 and his M.S. and Ph.D. degrees in physics from the University of North Dakota (1968) and the University of Missouri (1972), respectively. He has previously worked as an Environmental Protection Agency (EPA) research scientist and as a professor of environmental science at Northern Arizona University in Flagstaff. He is a member of a number of professional organizations. He has served as an organizing chair for special sessions in each of these associations and as a guest editor for the Journal of Geophysical Research (JGR) and the Journal of the Air & Waste Management Association (JAWMA). He has received a number of awards for outstanding lectures and various research activities. In 2009 he received the George Wright Society 2008 Director's Award for Natural Resources, the EPA Thomas W. Zosel 2008 Outstanding Individual Achievement Award, and the Air & Waste Management Association's Frank A. Chambers Excellence in Air Pollution Control Award for his research contributions in the areas of visibility and air quality. He has served on a number of advisory committees most recently on a subcommittee of the EPA Clean Air Scientific Advisory Committee. Dr. Malm's expertise is in the general area of visibility and related topics. He made some of the first visibility and air quality measurements in the National Park Service system at the Grand Canyon in 1972. Since then he has designed and built instrumentation to measure the effects of atmospheric aerosols on the scenic qualities of landscape features, as well as their optical and chemical properties. He has formulated radiation transfer algorithms that allow pictorial visualization of aerosol scattering and absorption effects on scenic landscape features. He pioneered studies of visibility perception that elicit human responses, in terms of both psychophysical and value assessment, to changes in scenic quality as a function of aerosol optical properties. He has initiated and carried out large field campaigns to better characterize aerosol physical and optical properties, especially as they relate to aerosol hygroscopic properties, and to assess the relative contributions of various source types to visibility impacts in a number of national parks and wilderness areas. He has also pioneered back-trajectory receptor modeling methodologies that allow estimates of the relative contributions of source areas to aerosol concentrations or visibility effects at selected receptor sites. Many of the results from this work have been incorporated into the Interagency Monitoring of Protected Visual Environments (IMPROVE) program and the EPA Regional Haze Rule (RHR) and summarized in a book Visibility: The Seeing of Near and Distant Landscape Features, 2016, and a recent journal article focused on visibility metrics that best characterize a person's preference for acceptable levels of visibility in an urban setting.

Martien,Philip

Bay Area Air Quality Management District

Dr. Philip Martien is the Director of the Assessment, Inventory, and Modeling (AIM) Division at the Bay Area Air Quality Management District (BAAQMD). He is a national leader in addressing environmental injustice in air pollution exposure. He has been working with communities and stakeholders on this issue for 15 years. He is respected and trusted by community advocates and his team has developed the most precise and sophisticated methods for apportioning exposure to air pollution at the community scale. Key strengths he brings are the abilities to bridge theoretical science and applied solutions and to adopt agency policies to better address lived community concerns. Dr. Martien has over three decades of experience applying and evaluating regional meteorological and photochemical models to inform State Implementation Plans. He implemented the first adjoint sensitivity analysis method in a three-dimensional photochemical model and used this and other advanced methods to evaluate the efficacy of emissions control alternatives. He served as a member of the California Environmental Protection Agency's (CalEPA) Cumulative Impacts and Precautionary Approaches Work Group, which reviewed development of the first version of CalEnviroScreen, a mapping tool to identify the most overburdened communities in the California. He partnered with the City and County of San Francisco's Department of Public Health and Planning Department to develop mapping tools to identify Air Pollution Exposure Zones now used to inform housing and development requirements, including requirements for indoor filtration in new multi-family housing. Dr. Martien was an invited speaker and Work Group participant at the Environmental Justice and Climate Policy Solutions Dialogue convened by University of California (UC) President Janet Napolitano to identify strategies to achieve California's greenhouse gas reduction goals, while addressing environmental justice concerns. This dialogue informed the State Legislature's development of California Assembly Bill (AB) 617 that requires air districts to identify disadvantaged communities and adopt community emissions reduction programs. A recent focus of his work at BAAQMD has been evaluating health impacts from air pollution in support of AB 617 and conducting equity-based assessments to examine how air pollution exposures are distributed by race and ethnicity in Bay Area communities.

Mazurek,Monica

Rutgers University

Dr. Monica Mazurek works on air quality engineering, analytical methods for organic compounds in environmental and chemical engineering processes, and organic geochemistry of earth materials. Dr. Mazurek focuses on controlling energy-related emissions, renewable energy, and zero carbon reduction scenarios. As a contributor to the 1994 Intergovernmental Panel on Climate Change (IPCC) Assessment Report, she and IPCC colleagues share with Albert Arnold (Al) Gore Jr., the Nobel Peace Prize for 2007 "for their efforts to build up and disseminate greater knowledge about man-made climate change, and to lay the foundations for the measures that are needed to counteract such change." Dr. Mazurek received the 2001 Haagen-Smit Award and the 2007 Haagen-Smit Award for papers she co-authored on molecular composition, modeling, and source attribution of atmospheric fine particles. The award recognizes benchmark contributions to atmospheric chemistry and air quality research. She is an Associate Professor in the Civil and Environmental Engineering Department in the School of Engineering at Rutgers University.

McNeill,V. Faye

Columbia University

Dr. V. Faye McNeill is a Professor in the Department of Chemical Engineering and the Department of Earth and Environmental Sciences at Columbia University. She is also an associate member of the Earth Institute Faculty and Principal Investigator of the Columbia University Clean Air Toolbox for Cities Initiative. She joined Columbia in 2007 and received tenure in 2014. She received her B.S. in Chemical Engineering from the California Institute of Technology (Caltech) in 1999 and her Ph.D. in Chemical Engineering from the Massachusetts Institute of Technology (MIT) in 2005, where she was a National Aeronautics and Space Administration (NASA) Earth System Science Fellow. From 2005-2007 she was a postdoctoral scholar at the University of Washington Department of Atmospheric Sciences. She received the National Science Foundation (NSF) Faculty Early Career Development Program (CAREER) and the American Chemical Society (ACS) Petroleum Research Fund Doctoral New Investigator awards in 2009. She was the recipient of the Kenneth T. Whitby Award of the American Association for Aerosol Research (AAAR) in 2015 and the Mellichamp Emerging Leaders lecturer at the University of California, Santa Barbara in 2018. She is the Associate Editor in charge of Atmospheric Chemistry for ACS Earth and Space Chemistry. She was a co-editor of Atmospheric Chemistry and Physics from 2007-2017. She has served in multiple elected officer positions in American Institute of Chemical Engineers (AIChE), AAAR, and American Geophysical Union (AGU). She is an appointed member of the International Union of Pure and Applied Chemistry (IUPAC) panel on kinetic data evaluation and the ACS Committee on Environmental Improvement.

Mendoza,Jean

Friends of Toppenish Creek

Ms. Jean Mendoza is the Executive Director for the Friends of Toppenish Creek (FOTC), a 501(c)(3) non-profit group located on the Yakama Reservation in South Central Washington State (WA). She is a masters prepared registered nurse (retired) with graduate studies in public health and policy. Her area of expertise is air and water pollution from concentrated animal feeding operations (CAFOs). She served for seven years on the Lower Yakima Valley Groundwater Management Area Advisory Committee addressing groundwater problems. FOTC conducts air and water research with funding from the Columbia Riverkeepers and the Yakama Nation. Ms. Mendoza participates in community engagement regarding air pollution in Yakima County, WA where levels of fine particulate matter are high due to ammonia emissions from industrial dairies. Through FOTC she encourages and assists the WA State Department of Ecology and the Yakima Regional Clean Air Agency (YRCAA) to better protect the health of the multi-cultural communities that share the Yakima Valley. She has served on the YRCAA Agricultural Task Force and the YRCAA Dairy Work Group. She has testified before the legislature on environmental justice (EJ). She informs the public and policy makers about EJ at ground level and helps the victims of pollution to access assistance.

Morgan,Willie

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.

Ng,Nga (Sally)

Georgia Institute of Technology

Dr. Nga Lee (Sally) Ng is an associate professor and Tanner Faculty Fellow in the School of Chemical & Biomolecular Engineering and the School of Earth & Atmospheric Sciences at the Georgia Institute of Technology. She earned her doctorate in Chemical Engineering from the California Institute of Technology and was a postdoctoral scientist at Aerodyne Research Inc. Dr. Ng's research focuses on the understanding of the chemical mechanisms of aerosol formation and composition, as well as their health effects. Her group combines laboratory chamber studies and ambient field measurements to study aerosols using advanced mass spectrometry techniques. Dr. Ng has published over 130 journal papers and has been named among the world's most Highly Cited Researchers by Clarivate Analytics. Dr. Ng's funding sources in the last two years include the National Science Foundation, the National Oceanic and Atmospheric Administration, and the Centers for Disease Control and Prevention. Dr. Ng serves as a co-editor of Atmospheric Chemistry and Physics and a member of the Editorial Board of Nature Scientific Reports, and American Chemical Society (ACS) Earth and Space Chemistry. Dr. Ng served as Chair of Environmental Division for the American Institute of Chemical Engineers (AIChE) in 2020 and served as the Conference Chair for the 37th American Association for Aerosol Research (AAAR) conference in 2019. Dr. Ng's research contribution has also been recognized by the Sheldon K. Friedlander Award and the Kenneth T. Whitby Award from the American Association for Aerosol Research, the Environmental Protection Agency (EPA) Early Career Award, the Health Effects Institute Walter A. Rosenblith New Investigator Award, and the National Science Foundation (NSF) Faculty Early Career Development (CAREER) Award.

O'Hara,John

Maryland Group Against Smokers' Pollution

Dr. O'Hara has a Ph.D. in Electrical Engineering and Physics. He has measured respirable suspended air particulates and ionization radiation in tobacco smoke. He serves as the President of the Maryland Group Against Smokers' Pollution and has advocated for clean indoor air for the last 45 years. He has testified before legislative bodies at the local, state and federal level on the harmful impact of tobacco smoke.

Pace,Matthew

Arizona Department of Environmental Quality

Dr. Matthew Pace has a Ph.D. in Meteorology/Climatology from Arizona State University. He is currently employed at the Arizona Department of Environmental Quality (ADEQ) as an air quality meteorologist. In this role, he forecasts air quality across Arizona including ozone and particulate matter (PM-10 and PM-2.5), produces wildfire smoke forecasts, is the lead meteorologist for the ADEQ smoke management program, and provides support for other critical tasks within air quality. These tasks include providing a detailed weather/air quality analysis for screening exceptional event demonstrations, examining patterns that can result in lead and sulfur dioxide (SO2) exceedances in the Miami-Globe/Hayden area, and reviewing/recommending revisions to pertinent air quality rules. Dr. Pace was also the project lead for developing the air quality forecasts that are produced by ADEQ which shows forecasted ozone, PM-10, and PM-2.5 concentrations at the hourly time-scale, allowing residents to make the most informed decisions about their day. He also led the development and launch of the first state wildfire smoke forecast in the nation, which provides communities with early information about wildfire smoke impacts while giving federal and state land managers a tool they can use during wildfires. His research interests, in part, are in localized smoke impacts from prescribed fire/wildfire and ozone formation/movement/climatology across Arizona and the southwestern portion of the United States. His ongoing work includes: (1) how teleconnections, El Nino Southern Oscillation (ENSO), Pacific Decadal Oscillation (PDO), North Atlantic Oscillation (NAO), etc. influence ozone concentrations in Arizona, (2) developing a classification system for dust storms that impact Phoenix in order to be able to examine intensity over time, (3) investigate the potential for weather watch-outs that may lead to significant reduction in visibility on roadways due to wildland fire smoke, and (4) continuing to explore the impact the pandemic had on ozone and ozone precursors. Prior to these studies, Dr. Pace was also on the research team that examined international and interstate transport of ozone into Yuma, Arizona. He has published seven other papers related to meteorology/climatology. Dr. Pace is an effective problem solver, communicator, and not afraid to ask questions and works to get results. He serves on several committees, including the Western States Air Resources Council (WESTAR) smoke group, which has worked with the Western States and Federal/State Land Managers concerning prescribed fire. Dr. Pace is also the co-president of the Central Arizona Chapter of the American Meteorological Society (AMS). He is also an active member in the Drought Interagency Coordinating Group lead by the Arizona Department of Water Resources. As can be seen, with a wide range of skills and interests Dr. Pace is a dynamic and driven participant in any project or group.

Pacheco,Susan E

University of Texas McGovern Medical School

Susan E. Pacheco M.D. M.S., Fellow of the American Academy of Pediatrics (FAAP), Fellow of the American Academy of Allergy, Asthma and Immunology (FAAAAI), is Professor of Pediatrics, specialized in Allergy and Immunology at The University of Texas McGovern Medical School in the Texas Medical Center in Houston. She earned her medical degree at the University of Puerto Rico Medical School and completed her pediatric residency at Baylor College of Medicine in Houston, Texas. This was followed by a fellowship in Allergy and Immunology and a second fellowship in Clinical Laboratory Immunology, both at Baylor College of Medicine in Houston, Texas. Dr. Pacheco's area of expertise is in allergy and immunology, in particular on the effects of air pollution in pediatric health. She served in the American Academy of Pediatrics (AAP), Executive Committee for the Council on Environmental Health for 6 years and is currently member of the Environmental Exposures and Respiratory Health Committee with the American Academy of Allergy, Asthma and Immunology. Dr. Pacheco co-authored the AAP's 2015 policy statement about climate change and children's health and collaborates with the AAP in issues pertaining to indoor and outdoor air quality and climate change.

Paustenbach,Dennis J.

Paustenbach and Associates

Dr. Dennis J. Paustenbach is a scientist, businessman, researcher, and author. He has a B.S. in chemical engineering, an M.S. in Industrial Hygiene and Toxicology, and a Ph.D. in Toxicology. He did postdoctoral research at the Wright Patterson Air Force Base and at the Harvard School of Public Health. He is currently President of a small consulting firm, Paustenbach and Associates. He was previously President and Founder of ChemRisk which, for many years, was the largest health risk assessment consulting firm in the United States. He was a Group Vice President of Exponent for nearly four years. Prior to that, he was President/Chief Executive Officer of McLaren-Hart Environmental Engineering (a firm of about 800 professionals). He is a well-known expert in industrial hygiene, occupational disease, toxicology, environmental pollution, several aspects of chemical engineering and health risk assessment. He has received national awards from virtually all of the professional organizations in which he has been member (e.g., Society of Toxicology, Society for Risk Analysis, American Industrial Hygiene Association, American Conference of Governmental Industrial Hygienists, and others). Over the past 35 years, he has published nearly 300 peer reviewed papers in scientific journals, about 50 book chapters, and has authored nearly 500 papers which have been presented at various scientific conferences. Dr. Paustenbach has served as an expert witness in more than 300 depositions and has testified in court about 30 times. He has been accepted as an expert to give testimony in numerous cases involving dioxins, asbestos, benzene, chromium, beryllium, cobalt, chlorinated solvents, and other chemicals. His work on asbestos, benzene, chromium, dioxin (TCDD), beryllium, cobalt, formaldehyde, and the fluorinated chemicals is frequently cited within the scientific community. He has served as an adjunct professor at five different universities. He has served on science advisory boards over the years for National Institute for Occupational Safety and Health (NIOSH), Environmental Protection Agency (EPA), Occupational Safety and Health Administration (OSHA), Centers for Disease Control and Prevention (CDC) and Agency for Toxic Substances and Disease Registry (ATSDR). He has been awarded two honorary Ph.D. degrees.

Peden,David

University of North Carolina at Chapel Hill

David B. Peden, M.D., M.S., Fellow of the American Academy of Allergy Asthma and Immunology (FAAAAI), is the Andrews Distinguished Professor of Pediatrics, Medicine & Microbiology/Immunology, Senior Associate Dean for Translational Research and Deputy Director of the Center for Environmental Medicine, Asthma and Lung Biology (CEMALB) of the University of North Carolina (UNC) School of Medicine. The CEMALB is co-located within the Environmental Protection Agency (EPA) Human Studies Facility on the Chapel Hill campus, and CEMALB investigators collaborate with scientists from the Center for Public Health and Environmental Assessment of the EPA focused on Phase I/II translational studies of the health effects of air pollutants in humans. Dr. Peden is an internationally recognized pediatrician and allergist/clinical immunologist and an expert regarding the effect of pollutants in asthma, other lung disorders and systemic diseases. He is the Principal Investigator (PI), a Multiple PI, or Project Leader of EPA, National Institutes of Health (NIH) and Department of Defense (DOD) grants totaling $5 million focused using controlled exposure and epidemiologic methods to assess the impact of environmental pollutants on human health, biologic factors which modify these responses, and early-stage testing of interventions to mitigate the effect of pollutants in exposed persons. He has authored or co-authored 199 peer reviewed publications and 18 book chapters and has made over 132 national and international presentations. He has also served as a Commissioner for the North Carolina Environmental Management Commission, and on the EPA Clean Air Science Advisory Committee Sulfur Oxides Panel (2014-2018) and Particulate Matter Review Panel (2015-2018). Dr. Peden also serves as Associate Editor for the Journal of Allergy and Clinical Immunology for environmental health and is past chair of the American Board of Allergy and Immunology. He is also past President of the American Academy, Asthma and Immunology (2017-18) and is presently a member of the Board of Directors of the World Allergy Organization. Dr. Peden was the founding Chief of the Division of Allergy and Immunology of the UNC Department of Pediatrics, and currently serves as a faculty member of the UNC Curriculum for Toxicology, and as Associate Director for Cross Disciplinary Science the North Carolina Translational and Clinical Sciences Institute (the UNC CTSA). Dr. Peden received a B.A. in Biology (Honors Program), an M.S. in Pharmacology and Toxicology and his M.D. degree from West Virginia University. He was a resident and chief resident of Pediatrics at West Virginia University, and was a Medical Staff Fellow and Chief Medical Staff Fellow at the National Institute of Allergy and Infectious Diseases of the NIH in Bethesda, Maryland.

Peltier,Richard

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.

Phalen,Robert

University of California, 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.

Polidori,Andrea

South Coast Air Quality Management District

Dr. Andrea Polidori is the Advanced Monitoring Technologies Manager at the South Coast Air Quality Management District (South Coast AQMD; Diamond Bar, California) in the Science and Technology Advancement Division. He is a recognized expert in the air quality field with over 20 years of experience in scientific research, air pollution measurements, technology and methods development, community education, science communication, and environmental justice. He has developed and implemented a wide variety of high profile and innovative community air monitoring programs, all designed to better identify and characterize the major sources of air pollutions and improve air quality and public health. Dr. Polidori has been leading the design, development and implementation of the Air Quality Sensor Performance Evaluation Center (AQ-SPEC), a program created to conduct comprehensive performance tests of commercially available low-cost air quality sensors. He is responsible for the implementation of South Coast AQMD's Rule 1180, which mandates the execution of real-time air quality measurements at or near the fenceline of all major refineries in the South Coast Air Basin, and in nearby communities. His is also responsible for implementing air monitoring strategies to satisfy the requirements of Assembly Bill (AB) 617, a State Law which was created to address the disproportionate impacts of air pollution in environmental justice communities. Dr. Polidori has been member of the California Air Pollution Control Officers Association (CAPCOA) Air Monitoring working group (Co-chair and Chair), of the National Association of Clean Air Agencies (NACAA) Air Toxics Committee, and served in other advisory committees at the State and National level.

Ponette-González,Alexandra

University of North Texas

Dr. Alexandra Ponette-González is Associate Professor of Geography and the Environment at the University of North Texas (UNT). Prior to her appointment at UNT, she was a National Science Foundation Minority Postdoctoral Research Fellow. She received her Ph.D. from Yale School of Forestry and Environmental Studies (2009) and an M.A. in Geography from the University of Texas at Austin (2002). Dr. Ponette-González's research focuses on the atmospheric deposition of nutrients and pollutants to terrestrial ecosystems and the influence of human activities and global change drivers on atmosphere-to-ecosystem fluxes. Her research spans tropical as well as north temperate ecosystems. Some of her research has been at the interface of policy, management and basic science (e.g., Ponette-González et al. 2014, 2015). Currently, and with support from a National Science Foundation Faculty Early Career Development Program (CAREER) award, she is investigating the role of black carbon in the urban carbon cycle. She is also conducting research on dust and wildfire effects on particulate matter emissions and nutrient deposition. Dr. Ponette-González is an interdisciplinary scholar who integrates ground-based network data with remote geospatial data to better understand spatial variability in atmosphere-land interactions over small to large scales (e.g., Weathers et al. 2011, Carlson et al. 2014, Griffith et al. 2015, Ponette-González et al. 2016, Ponette-González et al. 2018). She and colleagues are evaluating the performance of a global 3-D chemical transport model in predicting N deposition to Latin American cities. She is a recently elected member of the Honors Committee B of the American Association of Geographers (AAG), served on the AAG Committee on the Status of Women in Geography (2015-2018), and is currently an editorial board member for Progress in Physical Geography (2020-present), Land (2019-present), and Frontiers in Water (2021-present). She has served as a panelist and reviewer for multiple National Science Foundation programs and as an ad hoc reviewer for ~20 journals in meteorology & atmospheric sciences, water resources, plant and soil sciences.

Randolph,Dennis A.

City of Kalazamoo

Mr. Dennis Randolph is a professional civil engineer with over 50 years of broad practice experience. An applied scientist, he has a unique mix of experience spanning research, education, planning, project design and construction, and maintenance. His background in environmental matters spans the period from the first Earth Day and his training in water quality, to present times with his participation in committee work on sustainability and resilience, climate change, and environmental justice. In addition to 45-years of local government engineering positions, he has 25-years of classroom experience at the university level, instructing a wide range of technical subjects. He currently serves on several National Cooperative Research Program study committees as well as technical committees of the American Society of Civil Engineers, American Public Works Association, and the Institute of Transportation Engineers. He is also a member of two Federal Advisory Boards: the Environmental Protection Agency (EPA) National Environmental Justice Advisory Council, and the EPA Financial Advisory Board. Most of his work experience has been for local government agencies where he has been responsible for dealing with environmental matter including surface and groundwater contamination, brownfield cleanup, and noise and air quality matters. He has worked as chief engineer and public works director in environmental justice, and minority majority, and Native-American communities addressing the problems of impacts on community health, and economic well-being. His work has been application based, solving community problems and working to meet regulatory requirements involving many environmental areas.

Rees,Sarah

South Coast Air Quality Management District

Dr. Sarah Rees is the Deputy Executive Officer in the Planning, Rule Development, and Area Sources Division at the South Coast Air Quality Management District (AQMD). In her role, Dr. Rees oversees all activities of the Division, including leading development of integrated plans to meet federal, state and local air quality goals. She is also responsible for strategies and rules for air pollution control, meteorology and forecasting, air quality evaluation, air toxics risk assessment, emissions inventories, transportation programs, and community-based programs. Dr. Rees has over twenty years of experience in air quality management and policy development at the state and federal level. Prior to joining the South Coast AQMD, she directed the Environmental Protection Agency (EPA) Office of Regulatory Policy and Management where she managed the Agency's national regulatory agenda and ensured that regulations were informed by robust scientific and economic analysis. Previously, Dr. Rees served several roles within Washington State's Department of Ecology, including directing programs to address climate change, and leading the development of statewide rules for stationary sources, diesel retrofit programs, and plans to meet federal air quality standards. She also brings substantial experience from the private sector, both as a chemical engineer responsible for air pollution control at a major manufacturing facility and as an environmental attorney focusing on air quality law. Dr. Rees has a bachelor's degree in Chemical Engineering from the New Jersey Institute of Technology, a law degree from Rutgers University, and a Ph.D. in Engineering and Public Policy from Carnegie Mellon University.

Rice,Mary B.

Harvard Medical School

Dr. Mary B. Rice is a pulmonary and critical care physician at Beth Israel Deaconess Medical Center (BIDMC) and an Assistant Professor of Medicine at Harvard Medical School. She is the Director of the Institute for Lung Health at BIDMC, where her research is focused on the influence of air pollution on risk and progression of chronic lung disease. She received an undergraduate degree in environmental science and public policy from Harvard College in 1999 and a medical degree from Harvard Medical School in 2007. She completed fellowship training in Pulmonary and Critical Care Medicine at the Harvard Combined Program at Massachusetts General Hospital, Brigham and al Women's Hospital and BIDMC. Her research career began with the investigation of acute and chronic respiratory effects of air pollution exposure in cohort studies of children (Project Viva) and adults (the Framingham Heart Study). In order to acquire and apply advanced skills in epidemiologic research and biostatistics, both of which are critical to her field of study, she completed an M.P.H. degree at the Harvard School of Public Health in 2015. For the past two years, her research has been funded entirely by the National Institute of Environmental Health Sciences (NIEHS) and the National Heart, Lung, and Blood Institute (NHLBI). She is the principal investigator of a grant from NIEHS to study personal pollution exposure (by portable monitor) and daily respiratory health among patients with chronic obstructive pulmonary disease (COPD). She is the principal investigator of a clinical trial (NIEHS R01) for which she is examining the impact of air purification in the homes of patients with chronic lung disease. Dr. Rice is also a co-investigator of the American Lung Association Lung Health Cohort (NHLBI U01), the nation's first prospective cohort study focused on lung health, for which she leads the environmental health research program. She co-chairs the research committee of the Harvard pulmonary fellowship program. Since April 2017, Dr. Rice has served as co-editor of the section on environmental science and health of the Annals of the American Thoracic Society. In this role, she reviews multiple scientific manuscripts each year related to air pollution exposure and health. From 2015-2018, she was vice chair of the American Thoracic Society (ATS) Environmental Health Policy Committee and has chaired this committee since 2018. This committee work has resulted in multiple publications, speaking engagements, scientific workshops on air quality monitoring (2017), asthma/COPD risk (2018) and wildfires (2019), and scientific symposia at the ATS conference. Dr. Rice is presently serving on the National Academies of Sciences, Engineering, and Medicine (NASEM) Committee on Respiratory Protection for the Public and Workers without Respiratory Protection Programs at their Workplaces.

Rich,David

University of Rochester Medical Center

Dr. David Q. Rich is a tenured Associate Professor of Epidemiology in the Departments of Public Health Sciences, Medicine, and Environmental Medicine at the University of Rochester Medical Center in Rochester, New York. Dr. Rich is also the Research Director of the Division of Epidemiology and the Director of the Ph.D. and M.S. Programs in Epidemiology. He received his Doctor of Science (Sc.D.) degree in Environmental Health and Epidemiology from the Harvard School of Public Health in 2004 and has held academic appointments at Harvard, Rutgers University, and now the University of Rochester. His primary research interests are the cardiorespiratory and reproductive health effects of ambient air pollution and accountability studies assessing the effects of air quality and environmental policies on air pollutant emissions, ambient pollutant concentrations, and morbidity and mortality in human populations. Over the past 2 years, Dr. Rich's research has been funded by the National Institute of Environmental Health Sciences, the Health Effects Institute, and the New York State Energy Research and Development Authority.

Rom,William

New York University

Dr. William N. Rom is the Sol and Judith Bergstein Professor of Medicine and Environmental Medicine, Emeritus, at the New York University (NYU) Grossman School of Medicine and Research Scientist at NYU School of Global Public Health (current position). He graduated cum laude in Political Science from the University of Colorado, received an M.D. from the University of Minnesota, an M.P.H. from Harvard School of Public Health, completed his internal medicine residency at University of California, Davis, and had a fellowship in pulmonary and occupational medicine at Mt. Sinai (New York). He was an Assistant and Associate Professor at the University of Utah where he founded the Rocky Mountain Center for Occupational and Environmental Health. He was a Senior Investigator at the Pulmonary Branch, National Heart, Lung, and Blood Institute (NHLBI), National Institutes of Health (NIH), and Director of the Division of Pulmonary and Critical Care Medicine at New York University and Chief of the Chest Service at Bellevue Hospital Center. He teaches Climate Change and Global Public Health at NYU School of Global Public Health to M.P.H. students for 5 years (and at Wagner Graduate School of Public Service for 5 years prior to that) and Environmental Health in a Global World to NYU public health undergraduates. He has published 356 peer reviewed publications. His research expertise is on the epidemiology of occupational lung diseases and environmental exposures. He performed over 150 bronchoalveolar lavages to study alveolar macrophages and deciphered the mechanisms of fibrosis due to asbestos, silica, and coal. He purified the Alveolar Macrophage-derived Growth Factor and demonstrated that it was a macrophage insulin-like growth factor I. He traveled to India and performed 47 bronchoalveolar lavages to study tropical pulmonary eosinophilia. He studied tuberculosis (TB)/human immunodeficiency virus (HIV) and focused on the molecular biology of inflammatory cytokines in the lung and their promoter activation. He performed clinical research on aerosolized interferon-gamma on TB in South Africa. He directed the NYU Lung Cancer Biomarker Center studying the biomarkers and molecular diagnostics of the early diagnosis of lung cancer. His team was awarded $294 million in NIH and Centers for Disease Control and Prevention (CDC) grants at NYU during his first 12 years; over the past two years his only funding has been from the Will Rogers Fund. He served 10 years on the Health Effects Institute's Review Committee on air pollution research. He served for 10 years on the World Trade Center Health Effects Technical Scientific Advisory Committee. He staffed the Environment and Public Works Committee and Health Committees for Senator Hillary Clinton while on sabbatical 2003-4. He was on sabbatical 2014-5 at the Environmental Protection Agency (EPA) in their Climate Change program and served on the health committee of the Global Change Program. He received the American Thoracic Society (ATS) Distinguished Achievement Award and was elected into the Association of American Physicians and as a Fellow of the American Association for the Advancement of Science.

Rose,Cecile

National Jewish Health

Dr. Cecile Rose is a Professor of Medicine in the Division of Environmental and Occupational Health Sciences, Department of Medicine, at National Jewish Health in Denver, Colorado. She has academic appointments in the Division of Pulmonary Sciences and Critical Care Medicine at the University of Colorado and in the Department of Environmental and Occupational Health at the Colorado School of Public Health. She is board-certified in internal medicine, pulmonary medicine, and occupational/environmental medicine, and has a master's degree in public health. Dr. Rose's area of expertise and clinical/research activities are in occupational and environmental lung diseases. She has a busy academic clinical practice focused on exposure assessment, diagnosis, treatment, and prevention of these lung diseases, particularly in vulnerable populations. She has had sustained federal and foundation funding throughout her career. For the past two years, she has been funded by the Department of Defense for a study on mechanisms of lung injury from post-9/11 military deployment. Additionally during this time, she has had funding from the Health Resource and Services Administration (DHHS) and from the Alpha Foundation for the Improvement of Mine Safety and Health to investigate dust diseases of the lung in U.S. miners, stone fabrication workers, and historic uranium industry workers. She has served as a member of the National Academy of Sciences, Engineering and Medicine (NAS) Committee on the Respiratory Health Effects of Airborne Hazards Exposures in the Southwest Asia Theater of Military Operations; the NAS Committee on the Study of the Control of Respirable Coal Mine Dust Exposure in Underground Mines; the NAS Committee on the Assessment of Department of Veterans Affairs Airborne Hazards and Open Burn Pit Registry; and on the NAS Committee on Personal Protective Equipment for Workplace Safety and Health. Dr. Rose is a member of the National Occupational Research Agenda (NORA) Respiratory Health Cross-sector Council, National Institute for Occupational Safety and Health (NIOSH). She belongs to a number of professional societies including the American College of Occupational and Environmental Medicine; the American Public Health Association (Environmental and Occupational Health and Safety Sections); and the American Thoracic Society, Assembly on Occupational, Environmental and Population Health.

Rudik,Ivan

Cornell University

Dr. Ivan Rudik is the Ruth and William Morgan Assistant Professor at the Dyson School of Applied Economics and Management at Cornell University. He is an environmental economist and received his Ph.D. at the University of Arizona in 2015. Dr. Rudik's areas of expertise cover the regulation and impacts of lead, ozone, and particulates. He has published papers in leading economics and general science journals on the effects of lead and ozone emissions on humans and wildlife, and the effects of energy regulations on particulates and flared gases. His sources of research funding over the last two years include Cornell University and the National Oceanic and Atmospheric Administration.

Sarnat,Jeremy

Emory University

Dr. Jeremy A. Sarnat is currently an Associate Professor of Environmental Health at the Rollins School of Public Health of Emory University and Co-Director of the Southeastern Center for Air Pollution and Epidemiology (SCAPE), based jointly at Emory University and the Georgia Institute of Technology. He holds an Sc.D. in Environmental Health from the Harvard School of Public Health. Dr. Sarnat's research focuses primarily on characterizing exposures to urban air pollution in various populations, in particular panels of sensitive cohorts such as children, older adults and individuals with cardiorespiratory disease. Much of his work examines how exposure science informs environmental epidemiology; the impact of exposure misclassification and confounding on air pollution epidemiologic findings; and, most recently, the development and application of molecular levels measures of air pollution exposure and response using novel high resolution metabolomics platforms. He has served on numerous academic and research advisory boards and was an ad hoc member of Environmental Protection Agency (EPA) Clean Air Scientific Advisory Committee (CASAC) panels for both Nitrogen Oxides and Particulate Matter. Currently, Dr. Sarnat is the Principal Investigator of several exposure and epidemiologic studies investigating exposures to primary traffic pollution. In 2011, he was awarded the Joan M. Daisey Outstanding Young Scientist Award by the International Society of Exposure Science. Prior to entering academia, Dr. Sarnat worked as staff scientist for 4 years at the Israel Union for Environmental Defense in Tel Aviv, a non-profit organization of scientists and lawyers promoting sustainable development and pollution prevention.

Schichtel,Bret

National Park Service

Dr. Bret A. Schichtel is a physical scientist for the National Park Service (NPS) Air Resources Division where he is the program coordinator for the visibility/particulate/nitrogen research and monitoring program involving federal and university scientists. He earned his B.S. in Mechanical Engineering (1989) from Virginia Polytechnic Institute and State University and his M.S. (1991) and D.Sc. (1996) from Washington University in Saint Louis. His research interests have focused on understanding the levels and origins of particulate matter, haze, and excess nitrogen deposition in national parks and other remote areas. This is conducted at scales from individual national parks to the entire United States with the goal of developing the underlying information needed to inform the NPS and others on air quality issues and their causes. As part of this research, he initiates and helps carry out large field campaigns to measure and characterize particulate and gaseous pollutants; is involved in managing the Interagency Monitoring of Protected Visual Environments (IMPROVE) program, a speciated aerosol monitoring network; and regularly publishes modeling and monitoring data assessments in international journals. Dr. Schichtel has also received various awards, including the 2018 Air & Waste Management Association's (A&WMA) Frank A. Chambers Excellence in Air Pollution Control Award for his research contributions in the areas of visibility and air quality. He has served on a number of committees and currently serves on the IMPROVE steering committee; the Aerosol and Air Quality Research editorial review board; and the JA&WMA Publications and Critical Review Committees and is the vice chair of the JA&WMA Editorial Review Board and Visibility Committee. He has also served on proposal review panels for the Environmental Protection Agency (EPA), United States Department of Agriculture (USDA), NPS, and other organizations.

Schwartz,Joel

Harvard T.H. Chan School of Public Health

Dr. Joel Schwartz is a Professor in the departments of Environmental Health and Epidemiology at the Harvard School of Public Health and Director of the Harvard Center for Risk Analysis. His major research interests include health effects of air pollution, heavy metals, climate change, and drinking water, epidemiological methods, air pollution modeling, risk assessment and cost benefit analyses. He has examined the epidemiologic questions using a variety of methods including time series and case-crossover analyses (whose use in environmental epidemiology he introduced), and case-only analyses of administrative data, survival and repeated measures analyses of cohorts, repeated measures analyses of panel studies, etc. He is particularly interested in quasi-experimental designs and other causal models. His studies have included a range of outcomes including cognitive function, lung function, asthma, heart attacks, strokes, deaths, blood pressure, lipid levels, biomarkers of inflammation and oxidative stress, markers of biological aging, and epigenetic changes. He is also interested in social and other factors conveying increased susceptibility. Dr. Schwartz's benefit-cost analysis on lead in gasoline was responsible for its elimination in the United States, and his methodology for valuing the benefits of reducing toxins that have cognitive effects is widely used. He introduced ensembles of machine learners for modeling air pollution concentrations on a fine spatio-temporal scale, and his models for fine particulate matter (PM2.5), nitrogen dioxide (NO2), and ozone (O3) are widely used. He is the recipient of a John D. and Catherine T. MacArthur Fellowship, and the John Goldsmith Award from the International Society for Environmental Epidemiology.

Scofield,Robert

GSI Environmental, Inc.

Dr. Robert Scofield is a Principal Toxicologist and Vice President with GSI Environmental, Inc. and has more than 40 years of experience directing and conducting environmental health risk assessments; remediation and due diligence projects for contaminated land and groundwater sites; and air toxics emissions in the United States and internationally. He also has extensive experience performing product safety evaluations, teaching risk assessment, providing risk communication services, and serving as a third-party, neutral reviewer of risk assessments for various government and private parties. Dr. Scofield has been performing human health risk assessments for chemicals present the ambient and indoor air for his entire career. The source of emissions for these risk assessments have included uncontrolled sources (e.g., oil well fires, Superfund sites, fugitive dust) and controlled sources (e.g., incinerators and fuel combustion with mitigation measures, laboratory emissions, ethylene oxide sterilization facilities). The evaluations addressed both criteria air pollutants and other chemical-specific emission. Depending on the availability of data and regulatory requirements, exposure estimates for these evaluations have been based on modeled emissions and dispersion, measured emissions and ambient air concentrations, or a combination of these approaches. Also depending on the site-specific conditions and regulatory requirements, some risk assessments addressed inhalation only and others included the evaluation of multiple pathways of exposure. Dr Scofield has also helped develop and review chemical-specific exposure limits based on data from toxicology and epidemiology studies. Dr. Scofield earned a D.Env. in Environmental Science and Engineering and M.P.H. in Environmental Health Management from the University of California, Los Angeles (UCLA). He was a post-doctoral researcher in the Department of Toxicology at UC Davis. He has taught and lectured extensively on risk assessment at universities, for private industries, and for the California Bar Association and the U.S. Navy. He was member of the National Research Council committee on Natural Attenuation (addressed the issue of vapor migration), the American Society for Testing and Materials (ASTM) Standard, Risk Based Corrective Action (RBCA) for Petroleum Release Sites committee, and the Interstate Technology and Regulatory Council (ITRC) committee on Total Petroleum Hydrocarbons. He was invited by the California Environmental Protection Agency (CalEPA) to serve as a peer reviewer of their risk assessment procedures and served as a third-party reviewer for several Department of Defense risk assessments.

Selin,Noelle

Massachusetts Institute of Technology

Dr. Noelle Eckley Selin is a professor in the Institute for Data, Systems and Society and the Department of Earth, Atmospheric and Planetary Sciences at the Massachusetts Institute of Technology (MIT). She is also the Director of MIT's Technology and Policy Program. Her research uses atmospheric chemistry modeling to inform decision-making on sustainability challenges, including air pollution, climate change and hazardous substances such as mercury and persistent organic pollutants. Her work also examines interactions between science and policy in international environmental negotiations and develops systems approaches to address sustainability challenges. Her specific areas of expertise include: integrated modeling of the pathway from policies to impacts for health-damaging air pollutants such as fine particulate matter and ozone; climate change and air quality; atmospheric chemistry and integrated modeling of mercury and persistent organic pollutants; sustainability science and engineering; and science-policy interactions. Dr. Selin received her Ph.D. and M.A. in Earth and Planetary Sciences, and her B.A. in Environmental Science and Public Policy, all from Harvard University. She is the recipient of a U.S. National Science Foundation Faculty Early Career Development (CAREER) award (2011), a Leopold Leadership fellow (2013-2014), a Kavli fellow (2015), a member of the Global Young Academy (2014-2018), and an American Association for the Advancement of Science Leshner Leadership Institute Fellow (2016-2017). She currently serves as a Principal Investigator (PI) for the Air, Climate & Energy Center (Harvard-MIT) funded by the Environmental Protection Agency, and as co-director of the MIT Superfund Research Program. Dr. Selin has served on numerous advisory committees, including the Scientific Advisory Committee for the EPA-supported Center for Air, Climate, and Energy Solutions, the International Advisory Board of the United Nations Environment Programme (UNEP) International Environmental Technology Centre (IETC), the ad hoc technical expert group for effectiveness evaluation for the Minamata Convention, and the Scientific Steering Committee for the International Conference on Mercury as a Global Pollutant. She is currently on the editorial advisory board for the journals Environmental Science and Technology and Environmental Science: Processes and Impacts, and is an Associate Editor for the journal Science Advances. She has participated in numerous international assessment processes, most recently as a chapter lead author for the Arctic Monitoring and Assessment Programme's 2021 Mercury Assessment.

Shaw,Robert

U.S. Army Research Office (Retired)

Dr. Robert Shaw was the Chief of Chemical Sciences in the Physical Sciences Directorate of the U.S. Army Research Office in Research Triangle Park, NC. He was responsible for the conduct of extramural research in the fields of physical, analytical, polymer, inorganic, organic, and electrochemistry. Dr. Shaw joined the Army Research Office in 1983. He initiated and developed major research programs in ignition and combustion of energetic materials, high temperature water for destroying toxic military materials, and surface chemistry for chemical agent decontamination. He initiated and chaired three North Atlantic Treaty Organization (NATO) Advanced Research Workshops focused on chemical weapon demilitarization. Before joining the Army, Dr. Shaw spent seven years at the Environmental Protection Agency as a Research Chemist/Physicist where he worked on new methods for analysis of atmospheric gases and particles and on source/receptor relations. During this time, he received four EPA Science and Technological Achievement Awards and the Silver Medal of the EPA. Before joining the EPA, Dr. Shaw held postdoctoral positions in the Department of Medicine at Duke University where he developed analyses of tissue samples using nuclear accelerators, and at Princeton University where he carried out photoelectron and Auger electron spectroscopy. He also taught chemistry at the graduate and undergraduate levels at the University of Oregon. He received his graduate education in the Department of Chemistry of the University of Washington (Ph.D. in Physical Chemistry, 1970) where he did research on nuclear scattering and reactions, especially at high angular momentum. He did his undergraduate work at Williams College (B.A. in Chemistry, cum laude, 1964). He is a member of Phi Beta Kappa (1964), Sigma Xi, the American Chemical Society, the American Association of Physics Teachers, and the Federation of American Scientists. He is a Fellow of the American Association for the Advancement of Science. He published research in peer reviewed journals on thermodynamics, nuclear reactions and scattering, photoelectron and auger electron spectroscopy, environmental science, and analytical chemistry. He co-authored a review of the physical chemistry of energetic materials in Annual Reviews of Physical Chemistry and written numerous articles and reports on Army research. He is a co-author of a feature article on supercritical water in Chemical and Engineering News and the author of an article on atmospheric particles in Scientific American. He co-edited Overviews of Recent Research on Energetic Materials published by World Scientific.

Sheppard,Elizabeth A. (Lianne)

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 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.

Smith,Richard

University of North Carolina

Dr. Richard L. Smith is Mark L. Reed III Distinguished Professor of Statistics and Professor of Biostatistics in the University of North Carolina, Chapel Hill. From 2010-2017 he was Director of the Statistical and Applied Mathematical Sciences Institute (SAMSI), a Mathematical Sciences Institute supported by the National Science Foundation. From January-June 2018, he was Associate Director of SAMSI. He obtained his Ph.D. from Cornell University and previously held academic positions at Imperial College (London), the University of Surrey (Guildford, England) and Cambridge University. His main research interest is environmental statistics and associated areas of methodological research such as spatial statistics, time series analysis and extreme value theory. He is particularly interested in statistical aspects of climate change research, and in air pollution including its health effects. He is a Fellow of the American Statistical Association and the Institute of Mathematical Statistics, an Elected Member of the International Statistical Institute, and has won the Guy Medal in Silver of the Royal Statistical Society, and the Distinguished Achievement Medal of the Section on Statistics and the Environment, American Statistical Association. In 2004 he was the J. Stuart Hunter Lecturer of The International Environmetrics Society (TIES). He is also a Chartered Statistician of the Royal Statistical Society. In 2020, he was elected a Fellow of the American Association for the Advancement of Science (AAAS). Richard Smith was a member of EPA's Science Advisory Board (SAB) from December 2017 until the Board was dissolved in March 2021. He was also a member of the Board's Radiation Advisory Committee. His recent research funding has come through the National Science Federation (as Director or Associate Director, through June 2018, of the research institute SAMSI, and also as holder of a collaborative grant on climate extremes, through 2019) and the National Institutes of Health (as an investigator in a grant based at George Washington University, on the effect of air pollution on Alzheimer's disease and related dementia conditions). He also participated in an industry-funded research collaboration "A counterfactual approach to quantifying the causal effect of fine particulate matter on mortality" (the main activity took place in 2016-2018 but there is still a paper in process from that activity). He learned of this opportunity as a previous member of the SAB.

Solomon,Paul

Aclima, Inc.

Dr. Paul A. Solomon's areas of expertise and research interests have historically focused on the development, evaluation, and application of analytical laboratory and methods to measure particulate matter (PM) and the chemical components of PM in air with a focus on coarse and fine PM. Applications have included a range of domestic and international research studies designed to characterize and quantify major, minor, and trace elements and species as well as precursor gases and oxidants to elucidate source-receptor-exposure relationships and chemical and physical processes occurring in clean and polluted atmospheric environments. More recently, his interests include the development, evaluation, and deployment of micro air pollution monitors (air pollution sensors) with an emphasis on PM mass, methane, black carbon, and other PM and gaseous components in air. Dr. Solomon also has a strong desire to ensure that research results are communicated to the scientific, public, and policy arenas through coordination and publication of scientific papers in conferences and books. Dr. Solomon has over 90 peer-reviewed journal publications, about 140 presentations, holds 6 patents in air sampling methods with 5 patent applications pending, has organized 34 special peer-reviewed journal issues, including over 600 papers, and has organized and chaired four major international air quality specialty conferences.

Sonwane,Chandrashekhar

Masten Space Systems

Dr. Chandrashekhar Sonwane currently works full time as Principal Investigator and Director for various National Aeronautics and Space Administration (NASA) lunar robotics contracts at Masten Space Systems and works as part time President of an environmental consultancy firm. He is a current Environmental Protection Agency (EPA) Science Advisory Board (SAB) Chemical Assessment Advisory Committee (CAAC) member and has worked as a Lead Consultant leading various teams for engineering and environmental projects helping various industries such as Pratt and Whitney Rocketdyne, General Electric, BP, Shell, ExxonMobil, Boeing, Rockwell and Aerojet Rocketdyne. These projects include carbon dioxide (CO2) emissions as well as other toxic/criteria pollutants. He has also helped in the hospitals related to COVID-19 pandemic health effect study and ways to combat it. Dr. Sonwane holds a Bachelor's degree from University of Mumbai, Master of Technology from Indian Institute of Technology Mumbai, and a Ph.D. from University of Queensland, Brisbane, Australia all in Chemical Engineering. He is an Elected Fellow of European Academy of Sciences and Arts, Fellow of Royal Aeronautical Society, Associate Fellow of American Institute of Aeronautics & Astronautics, Fellow of Royal Astronomical Society, Fellow of the Institute of Engineering and Technology, Institute of Chemical Engineers, Fellow of Royal Australian Chemical Institute, Fellow of Engineers Australia. Dr. Sonwane was 2019-2021 elected Chair/President of American Institute of Aeronautics and Astronautics Los Angeles - Las Vegas section with a community of 15,000 Professionals and their family/friends as well as 2019-2021 Board member of American Chemical Society, Southern California and a lead for annual Earth day and annual Chemistry week. He has received numerous national and international awards, fellowships and scholarships as well as a topmost award "Engineer of the Year" from Pratt & Whitney and was recently nominated for 2020 Rotary National Award for Space Achievement (RNASA) Stellar Award. Recently he was nominated as International Union of Pure and Applied Chemistry (IUPAC)/United Nations (UN) Board member for the Chemical Advisory board. He is inventor of about 50 device and process patents/ patent applications worldwide (U.S., China, Japan and Europe) assigned to various companies (General Electric, Pratt & Whitney, United Technology Corporation, Aerojet Rocketdyne, Solar Reserve). Dr. Sonwane holds the following certifications: BCEE (Board Certified Environmental Engineer), QEP (Quality Environmental Professional), Master Black Belt Six Sigma for Quality Improvement, PMP (Project Management Professional), Chartered Engineer, and Chartered Chemist. Dr. Sonwane is author of 30 papers in peer reviewed international journals, 40 international conference papers and about 20 significant company reports. Dr. Sonwane's sources of research funding include: Internal corporate/company funding, U.S. Department of Energy, Defense Advanced Research Projects Agency (DARPA), Advanced Research Projects Agency-Energy, NASA, Shell, ExxonMobil & BP. He has received no direct or indirect funding from EPA.

Stoneburg,Christopher

Owens Corning

Mr. Chris Stoneburg, M.S., is a Research and Development (R&D) Leader at Owens Corning, a company that develops and produces insulation, roofing, and fiberglass composites and related materials and products. It is the world's largest manufacturer of fiberglass composites. At Owens Corning, he leads the Process Chemistry and Environmental Technology Team within the Advanced Manufacturing Organization at Owens Corning. His Team focuses on a deeper understanding of the manufacturing process and chemistry interactions. The Team specializes in innovative approaches to maximizing raw material utilization in manufacturing and using chemistry as a competitive weapon for the Company and reducing impact of environmental compliance on our Manufacturing Operations. Mr. Stoneburg leads the efforts around addressing ongoing and future environmental compliance challenges for Owens Corning. This includes managing projects that exceed $25 million USD to enable manufacturing operations. His research team focuses on unique air, water, waste and chemistry challenges for the organization. Recent work includes developing innovative approaches to waste processing of materials generated at manufacturing facilities and a deep understanding of film formation phenomenon within manufacturing processes. Before joining Owens Corning, Mr. Stoneburg was Environmental Engineer at The Sherwin Williams Company, one of the largest paint and coating manufacturers in the world. He was lead in developing their sustainability strategy for the Company, developing the key metrics and tracking tools that enabled successful environmental, social and governance (ESG) reporting to the Public. Mr. Stoneburg received a master's degree in Environmental Engineering from The Ohio State University located in Columbus, Ohio.

Stubblefield,William

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.

Suh,Helen

Tufts University

Dr. Helen Suh is a Professor in Civil and Environmental Engineering at Tufts University. She is an internationally recognized expert in environmental epidemiology, having led multidisciplinary teams in environmental exposure science and epidemiology for over 25 years, Dr. Suh's research uses traditional and innovative methods to examine the impacts of air pollution and neighborhoods on human health. Her current research studies focus on (1) the impacts of air pollution exposures on life expectancy, aging and the potential for confounding of these impacts, (2) the association of airborne metals on adverse birth outcomes and child development in minority populations, (3) the joint influence of air pollution, neighborhoods and lifestyle on cognitive and cardiac health in US older adults, and (4) identification of biological and social pathways through which air pollution may contribute to dementia. In this effort, Dr. Suh develops novel GIS-based spatio-temporal modeling and hybrid large data-epidemiological methods to further her work. Dr. Suh performs advisory work in environmental health for numerous local, national, and international organizations. She has previously served as a member of the charter U.S. Environmental Protection Agency Clean Air Scientific Advisory Committee and numerous National Academy of Science and Institute of Medicine committees. She received her S.B. in Biology from the Massachusetts Institute of Technology and her M.S. and Sc.D. in Environmental Health from the Harvard School of Public Health.

Thakur,Neeta

University of California at San Francisco

Dr. Neeta Thakur is an Assistant Professor at the University of California, San Francisco (UCSF) and a physician-scientist specializing in pulmonary and critical care medicine with advance training in clinical research methods, social and molecular epidemiology, and implementation sciences. She completed her undergraduate and medical school training at the University of Arizona, where she also obtained her M.P.H. via a dual degree program. She joined UCSF in 2007 to complete her residency training and fellowship in Internal Medicine and Pulmonary and Critical Care Medicine and joined the faculty in 2015. Dr. Thakur's research program focuses on the short and long-term health effects of multilevel stressors, including air pollution, with special focus on economically-disadvantaged communities and communities of color. She has linked multiple data types (biologic, individual, and environmental) to demonstrate that environmental and social risk factors are geo-spatially distributed, disproportionately burden communities of color, and are associated with clinically relevant health outcomes. Dr. Thakur has also developed and supported programs targeted at increasing access to science, technology, engineering, and math (STEM) fields for individuals from traditionally underrepresented groups in medicine and science (UIM) at the local and national level. This includes bringing community youth voices to science through youth participatory action research. Dr. Thakur is also the current Chair of Health Equality and Diversity Committee for the American Thoracic Society (ATS). The ATS is the leading professional association for pulmonary and critical care medicine and research with over 16,000 members worldwide. In this role, she provides guidance on issues as they relate to health equity, including proving input on ATS's stance related to Air Pollution and Climate Change. Dr. Thakur is currently funded by the National Institutes of Health (NIH), California Office of Planning and Research, Robert Wood Johnson Foundation, and Genentech Corporate Giving.

Thurston,George

New York University Grossman School of Medicine

Dr. George Thurston is a tenured faculty member in the Departments of Environmental Medicine and Population Health at the New York University (NYU) Grossman School of Medicine, and Director of the academic Program in Exposure Assessment and Human Health Effects. His research has focused on the human health effects of air pollution. In 1987, he published the first research that showed the association between fine particulate matter (PM2.5) and mortality, as well as the first paper using source apportionment methods to relate specific PM2.5 sources with mortality, especially coal burning. In New York City, this has included his Backpack Study of the effect of diesel air pollution on children with asthma in the South Bronx. His research and collaborations in cities around the globe has included a study of the effects of industrial air pollution among children in Cubatao, Brazil. He was also an author of the most recent World Health Organization (WHO) Global Burden of Disease (GBD) report, published in the Lancet, which provided global estimates of the life years lost due to outdoor fine particulate matter air pollution (PM2.5), which were based in large measure on Dr. Thurston's American Cancer Society (ACS) cohort studies of PM2.5 air pollution and mortality, and upon collaborative research in which global PM2.5 concentrations were estimated based on global satellite data. Dr. Thurston has also participated in the intersection of science and public policy decision-making. He has been called upon to testify before the U.S. Senate and the House of Representatives on dozens of occasions to explain the public policy implications of air pollution research. In 1999, he spoke at the Community of Parties (COP5) Kyoto Protocol meeting held in Bonn, Germany regarding his research on the immediate human health co-benefits of climate change mitigation steps from associated cleaner air quality. In 2002, he was called upon to testify before the Senate on the human health effects associated with the Word Trade Center disaster, in which he was involved in collecting air pollution samples independent of the government, and in directly sharing that information with the community through public forums led by him at NYU and in Lower Manhattan. He has also served as a member of the U.S. Environmental Protection Agency (EPA) Clean Air Scientific Advisory Committee (CASAC) that advises the EPA Administrator on the setting of the U.S. air quality standards, and has served on a National Academy of Science advisory committee on the environmental aspects of Waste Incineration. As a result of these activities, he has been frequently interviewed by the networks and the press. He has provided consistent leadership in his scientific organizations, and his research has been honored for its excellence by the scientific community. In May 2003, he organized and hosted the U.S. EPA supported international meeting: Workshop on the Source Apportionment of PM Health Effects. In 2004, he co-hosted the International Society of Environmental Epidemiology annual meeting, held at the NYU Kimmel Center in Washington Square. In 2012, Dr. Thurston was awarded the Haagen Smit Prize by the scientific journal Atmospheric Environment, and in 2018 he was awarded the American Thoracic Society's Public Service Award.

Turpin,Barbara

University of North Carolina at Chapel Hill

Dr. Barbara Turpin is Department Chair and Professor of Environmental Sciences and Engineering in the Gillings School of Global Public Health at the University of North Carolina (UNC) at Chapel Hill. She is an aerosol scientist that combines laboratory experiments, chemical modeling and field research to improve our understanding of linkages between air pollution emissions and subsequent human exposure. She is best known for research on secondary organic aerosol formation through aqueous (multiphase) chemistry. She conducts research on many aspects of organic aerosol, indoor chemistry, Per- and polyfluoroalkyl substances (PFAS), aerosol transmission of COVID-19, and exposure science. Over the past two years, Professor Turpin's research has been supported by the US National Science Foundation, Alfred P. Sloan Foundation, the North Carolina (NC) General Assembly through the NC Collaboratory, and the National Oceanic and Atmospheric Association. Professor Turpin received a B.S. from the California Institute of Technology (1984) and Ph.D. from OGI at the Oregon Health Sciences University (1990). She conducted postdoctoral research at the University of Minnesota Particle Technology Laboratory (1990-1994) and was a Professor at Rutgers University (1990-2015) before joining the University of North Carolina 6 years ago. She is a Fellow of the American Association for the Advancement of Science, Fellow of the American Geophysical Union, and Fellow of the American Association for Aerosol Research (AAAR). Professor Turpin is currently serving on the National Academies Committee on the Chemistry of Urban Wildfires (2021-present). She served on the Environmental Protection Agency (EPA) Clean Air Scientific Advisory Committee (CASAC) Particulate Matter Review Panel (2016-2018), and subsequently served on the Independent Particulate Matter Review Panel that submitted public comments on PM2.5 standard in 2020. She also served as a Past President (2013), member of the Board of Directors (1997-2000) and Conference Chair (2003) of the American Association for Aerosol Research (AAAR). She served as Associate Editor of Environmental Science and Technology (ES&T) for 7 years (2013-2020), as a member of the International Commission for Atmospheric Chemistry and Global Pollution (2010-2014), and on an Advisory Group for the International Agency for Research on Cancer (IARC) Monographs on Air Pollution (2004). Dr. Turpin is a recipient of Atmospheric Environment's Haagen Smit Prize (2009), AAAR's Sinclair Award (2010) and the American Chemical Society's award for Creative Advances in Environmental Sciences and Technology (2018).

Underhill,Jeffrey

New Hampshire Department of Environmental Services

Dr. Jeffrey Underhill, having earned a Doctorate of Philosophy degree, two Master of Science degrees, and a Bachelor of Science degree, currently serves as the Chief Scientist for the Air Resources Division at the New Hampshire Department of Environmental Services. The Ph.D. was earned in 1995 from the University of Massachusetts in Atmospheric Chemistry. Masters of Science degrees were earned in 1994 from the University of Massachusetts in Analytical Chemistry, and in 1989 from the University of Arizona in the field of Atmospheric Physics. His recent work experience includes 24 years with the New Hampshire Department of Environmental Services and six years as an environmental consultant for Earth Tech/HMM Associates. Dr. Underhill's current position as Chief Scientist involves a wide variety of tasks, much of which leads to the analysis of air pollution exposure and potential risks to the population of the state. Beyond serving as an air pollution regulator, this position involves, but is not limited to, air quality monitoring data analysis, analysis of emission sources and trends, analysis of air pollution deposition, special studies to design and monitor air pollution issues of state concern, and studying and analyzing air pollution dispersion and transport via observation, monitoring and modeling studies. His expertise in the interpretation air pollution movement and chemistry, ambient air monitoring, and photochemical modeling data enables him to identify at potentially risk populations from various sources of air pollution. These skills along with the ability to team with others were factors in his nomination and selection to serve as the Ozone Transport Commission's Modeling Committee Chairman for over 14 years. Beyond serving for the Ozone Transport Commission, Dr. Underhill is not currently serving on other advisory committees although he has previously served in support of the Clean Air Act Advisory Committee / Air Quality Management Workgroup.

Upperman,Crystal

Aclima, Inc.

Dr. Crystal Romeo Upperman leads the integration of public health information and informed risk characterization into Aclima's products. Prior, she was a Senior Research Associate at the World Resources Institute on the Global Commission on Adaptation-that demonstrated that adaptation to climate change improves human well-being and results in better, more sustainable economic development and security for all. At AECOM, Crystal was the Climate Adaptation and Resilience Lead for the Southeast U.S., Latin America, and the Caribbean. She was also a consultant at the World Bank working on sustainable agricultural development in China, the Philippines, and Vietnam. Prior, Dr. Upperman spent 4 years with the Maryland Department of Health leading the U.S. Centers for Disease Control's Building Resilience Against Climate Effects grant that identified climate impacts and associated health effects in Maryland communities. Her other prior experiences include extensive laboratory research in environmental remediation and catalyst products with years of regulatory compliance in air and radiation protection at the state levels. She began her career at BASF researching catalyst coatings for reducing vehicle emissions. Crystal's research focus is in environmental health, exposure science and environmental epidemiology. Her research background includes a national assessment of the impact of climate change on chronic respiratory disease prevalence, that was funded by the U.S. Environmental Protection Agency. She has engaged in research projects that entail health risk assessment of climate and weather hazards, exposure assessment of pollen and extreme heat, environmental science translational research, and technical writing; particularly translating scientific findings to promote sustainability and positive environmental and public health outcomes. She served on the Biden-Harris Campaign's Climate, Energy, Environment policy committee and contributed to the Resilience and Environmental Justice subcommittees. Dr. Upperman is a Trustee for The Nature Conservancy's Maryland/District of Columbia chapter, a member of the advisory board for American Public Health Association's Center for Climate, Health, and Equity, a Steering Committee Member for the Environmental Law Institute's Emerging Leaders Initiative, and a member of the International Society of Exposure Science. She earned a Doctor of Philosophy in Marine, Estuarine, and Environmental Science from the University of Maryland at College Park as a U.S. Environmental Protection Agency Science To Achieve Results Fellow and a National Science Foundation Louis Stokes Alliance for Minority Participation Fellow. In addition, she holds a Master of Public Administration in Nonprofit Management from Kennesaw State University and a Bachelor of Science in Environmental Science from Spelman College.

van der Vaart,Donald

Independent Consultant

Dr. Donald van der Vaart is an Independent Consultant. He was previously a Senior Fellow at the John Locke Foundation concentrating on Energy and Environmental Policy. As a scientist, Dr. van der Vaart worked in the areas of combustion, refining and multi-phase reactor theory. His work included the stability analysis of catalytic converters for methanol fueled motor vehicles. Dr. van der Vaart has authored two patents. He has taught both environmental engineering and environmental law courses at North Carolina State University as adjunct professor. Dr. van der Vaart has 23 years of experience at all levels of Environmental Management with the North Carolina Department of Environmental Quality. He was the first Secretary of the Department who had risen through the ranks of the department. In these roles, Dr. van der Vaart advocated reconciling dated regulations with the latest scientific understanding including de-emphasizing the role of volatile organic compounds in the formation of ozone. He was a strong advocate for risk-based compliance options for all media and published in areas of air quality modeling in which risk-based air toxics approaches were compared with the technology-based approaches. He also developed a firmer understanding of Class I air quality modeling requirements under the Clean Air Act. He holds a Bachelor's degree in Chemistry from the University of North Carolina - Chapel Hill, a Master's degree in Chemical Engineering with a minor in Applied Mathematics from North Carolina State University, a Ph.D. in Chemical Engineering from Cambridge University, and a J.D. from North Carolina Central University. He is a registered engineer and a licensed attorney in North Carolina.

Van Winkle,Laura

University of California, Davis

Dr. Laura Van Winkle is a Professor of Respiratory Toxicology at University of California, Davis (UC Davis) in the School of Veterinary Medicine Department of Anatomy, Physiology and Cell Biology. She also chairs the Graduate Group in Pharmacology and Toxicology at UC Davis. She received her Ph.D. in Pharmacology and Toxicology in 1995. This was followed by additional training in comparative lung biology and medicine through a National Heart, Lung, and Blood Institute (NHLBI) Ruth L. Kirschstein Institutional National Research Service Award (T32) and an American Lung Associate Research Training Fellowship. Dr. Van Winkle has been a faculty member at UC Davis since 1997. Her training is in inhalation toxicology and cell biology of the lung. She has had Diplomate of the American Board of Toxicology (DABT) certification from 2002-present. For the last 20 years, her research has focused on injury and repair in the lung and how this relates to respiratory disease following environmental exposures. These grants have focused on the respiratory toxicology of small metabolized chemicals and pesticides, air pollution including ozone and particulate matter, secondhand tobacco smoke and inhaled engineered nanomaterials. Her laboratory uses biochemical and histologic in vivo and ex vivo approaches to tease apart lung cellular responses with an emphasis on lung cellular responses in the distal lung and site-specific approaches to lung toxicity in conjunction with aerosol exposures. Her research in the last two years has been funded by the Tobacco Related Diseases Research Program of the State of California, the National Institutes of Health (National Institute of Environmental Health Sciences, National Cancer Institute, and National Institute on Aging) and the Chloropicrin Manufacturers Association (in partnership and with reporting to California Department of Pesticide Regulation). Dr. Van Winkle is a member of 5 professional societies: American Thoracic Society (ATS), Society of Toxicology (SOT), American Society of Cell Biology, American Physiological Society and American Society for Pharmacology and Experimental Therapeutics. She has served on the Environmental Protection Agency (EPA) Integrated Risk Information System (IRIS) program's assessment of Naphthalene, NIH study sections, in the leadership of the SOT Inhalation and Respiratory Specialty Section (as a councilor and as secretary), and has been a member of the American Thoracic Society Environmental and Occupational Health Program Committee and Environmental Health Policy Committees. She was also involved in the integrated science assessment of particulate matter by EPA.

von Lindern,Ian

TerraGraphics International Foundation

Dr. Ian von Lindern is a Senior Scientist with TerraGraphics International Foundation (TIFO), a non-profit humanitarian environmental response organization. From 1984-2014 he was Chief Executive Officer of TerraGraphics Environmental Engineering in Moscow, Idaho. His education includes Bachelor's in Chemical Engineering from Carnegie-Mellon University and Master's and Doctoral degrees in Environmental Science and Engineering from Yale University. He has 46 years of environmental engineering/science experience, having directed more than 50 major health/environmental investigations involving mining/smelting sites. He was Project Manager for the State of Idaho at the Bunker Hill/Coeur d'Alene Basin Hill Superfund Site for 35 years, developing cleanup criteria, remedial design and oversight. From 2005-2012, he managed an International Environmental Health Initiative with the University of Idaho, adapting lead health response lessons learned in the U.S. to low-income countries. From 2007-11, he directed cleanup projects in China, Russia, the Dominican Republic, and Senegal. In 2010-11, he designed and directed the United Nations Children's Fund (UNICEF) remediation of several remote villages in Zamfara, Nigeria, where 400 to 500 children died of acute lead poisoning associated with artisanal gold mining. Since cofounding TIFO in 2014, he has collaborated with Médecins Sans Frontières (MSF) in joint medical, public health and environmental emergency response projects in Nigeria, Bangladesh, and Kyrgyzstan; funded by MSF and individual charitable donations. He has served on several Science Advisory Board (SAB) and Clean Air Scientific Advisory Committee (CASAC) subcommittees: National Ambient Air Quality Standard reviews in 1975-1977, 1982-1986, and 2006-2008; Assessing the Use of the Biokinetic Model for Lead Absorption in Children 1988; Assessing the Consistency of Lead Health Regulations in U.S. Environmental Protection Agency (EPA) Programs in 1992; Urban Soil Lead Abatement Demonstration Project in 1993; Ad Hoc All-Ages Lead Model (AALM) Reviews in 2005-2007 and 2019-2020; External Peer Review of Proposed Modeling Approaches for a Health-Based Benchmark for Lead in Drinking Water in 2017.

Warheit,David

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 successfully 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.

Wellenius,Gregory

Boston University

Dr. Gregory Wellenius is a Professor of Environmental Health at the Boston University (BU) School of Public Health. Prior to joining the faculty at BU in January 2020, he served as Associate Professor of Epidemiology at the Brown University School of Public Health and Director of Brown's Center for Environmental Health and Technology. Prior to that, he earned dual doctorate degrees from the Departments of Environmental Health and Epidemiology at the Harvard School of Public Health, completed a post-doctoral fellowship in the Cardiovascular Division of the Beth Israel Deaconess Medical Center (BIDMC, a Harvard Medical School teaching hospital), and served as Instructor in Medicine at BIDMC and Harvard Medical School. His training and research have been at the intersection of cardiovascular epidemiology, human physiology, and environmental toxicology. Dr. Wellenius has published extensively on the cardiovascular effects of ambient air pollution, contributed to the U.S. Environmental Protection Agency (EPA) 2009 Integrated Science Assessment for Particulate Matter, provided invited expert testimony on this topic before the U.S. House of Representatives and the U.S. Senate, served on a National Academies panel on the potential health effects of surface coal mining operations, and served on multiple scientific review panels for the Health Effects Institute. His group is currently focused on quantifying the adverse impacts of extreme weather events on human health, including days of moderate and extreme heat, hurricanes, and wildfires. They have published novel insights of the number of deaths and morbidity attributable to extreme heat in the U.S. in the present and under alternative future greenhouse gas emissions scenarios, and provided actionable evidence for informing heat warning policy across New England. With ongoing support from National Institute of Environmental Health Sciences (NIEHS) and Wellcome Trust, they seek to quantify and augment the effectiveness of heat early warning systems in the U.S. Dr. Wellenius previously served as an appointed member of the advisory board to the Rhode Island Executive Climate Change Coordinating Council (EC4) and as a co-author of the United States Global Change Research Program (USGCRP) 4th National Climate Assessment (NCA4). He recently served as a visiting scientist at Google Research and currently serves on the Science Advisory Panel of the Extreme Heat Resiliency Alliance of the Adrienne Arsht-Rockefeller Foundation Resilience Center.

West,Jason

University of North Carolina

Dr. J. Jason West is a Professor of Environmental Sciences & Engineering at the University of North Carolina at Chapel Hill. Dr. West is an engineer and a leader in interdisciplinary research that connects air pollution, climate change, energy, and human health, using models of atmospheric transport and chemistry at global through local scales. He led some of the first studies to use computer models of the global atmosphere to perform health impact assessments of ambient air pollution, including studies of the global health benefits of methane mitigation for managing global ozone air pollution, the global burden of air pollution on mortality, the co-benefits of global greenhouse gas mitigation for global air quality and health, the impacts of climate change on global air quality and health, and the effects of intercontinental air pollution transport on health. Dr. West has served on the Scientific Steering Committee of the International Commission on Atmospheric Chemistry and Global Pollution, has been a member of the National Aeronautics and Space Administration (NASA) Health and Air Quality Applied Sciences Team, and is a Leopold Leadership Fellow. He is on the editorial board of Atmospheric Chemistry & Physics and is an inaugural editorial board member of the Reviews section of Environmental Research Letters. He has published in prominent journals including Nature Climate Change, Nature Geoscience, Nature Communications, Proceedings of the National Academy of Sciences (PNAS), and Lancet, and his work has been featured in major news outlets including New York Times and CBS News. He has been a campus leader on climate change, as a co-organizer of Carolina Climate Change Scientists, and has written and spoken with the public extensively on this issue. He earned a B.S. from Duke University, M.Phil. from the University of Cambridge, and an M.S. and Ph.D. from Carnegie Mellon. He worked as a postdoctoral researcher and research scientist at the Massachusetts Institute of Technology (MIT) and Princeton, was an American Association for the Advancement of Science (AAAS) Fellow at the U.S. Environmental Protection Agency, and was a visiting scientist at the National Institute for Ecology in Mexico City.

West,Jeffrey

U.S. Environmental Protection Agency (Retired)

Dr. Jeffrey West retired from Federal service in December 2010. He had been with National Oceanic and Atmospheric Administration (NOAA) and Environmental Protection Agency (EPA) Office of Research and Development (ORD) National Exposure Research Laboratory (NERL) for 10 years. In addition to being the quality assurance manager for the division he spent considerable time working with others outside of the agency as Associate Management Coordinator of the North American Research Strategy for Tropospheric Ozone (NARSTO) organization. NARSTO was a public/private partnership whose membership spans government, the utilities, industry, and academia throughout Canada, the United States, and Mexico. It was established on February 13, 1995 when public and private representatives of Canada, the United States, and Mexico signed the NARSTO Charter in a ceremony at the White House. NARSTO's primary mission was to coordinate and enhance policy-relevant scientific research and assessment of tropospheric pollution behavior. Its activities provided input for science-based decision-making and determination of workable, efficient, and effective strategies for local, regional, and international air-pollution management. NARSTO has become a word mark signifying this tri-national, public-private partnership for dealing with multiple features of tropospheric air pollution. His 20 years working in private industry and 10 years of Federal experience doing air quality related work has provided him with knowledge and insights to how politics and science need to interact. He was instrumental in pursuing public and private cooperation to provide sound science for the development of reasonable environmental management policy throughout North America. His experience ranges from the practical permitting and licensing of major sources, managing large air pollution field monitoring programs, quality assuring environmental monitoring programs, to the research coordination and information dissemination with NARSTO. He has a B.S. in Environmental Science (Stockton University) and graduate studies in environmental engineering (Clemson University).

Young,S. Stanley

CGStat

Dr. S. Stanley Young is currently the Chief Executive Officer (CEO) of CGStat and previously worked at Eli Lilly, GlaxoSmithKline and the National Institute of Statistical Sciences. His current interest is studying methods used in the evaluation of observational studies. Dr. Young graduated from North Carolina State University, B.S., M.E.S. and a Ph.D. in Statistics and Genetics. He worked in the pharmaceutical industry on all phases of pre-clinical research. He has authored or co-authored over 70 papers including six "best paper" awards, and a highly cited book, Resampling-Based Multiple Testing. Dr. Young is a Fellow of the American Statistical Association and the American Association for the Advancement of Science. He is an adjunct professor of statistics at North Carolina State University, the University of Waterloo, and the University of British Columbia where he has co-directed thesis work. He is also an adjunct professor of biostatistics in the Jiann-Ping Hsu College of Public Health at Georgia Southern University. Dr. Young previously served on the Scientific Advisory Board of the U.S. Environmental Protection Agency. His funding sources include a grant from the National Association of Scholars.