

**Invitation for Public Comment on the List of Candidates for the
EPA Science Advisory Board Ad Hoc Committee for Review of the *Screening Methodologies
to Support Risk and Technology Reviews (RTR): A Case Study Analysis***

November 3, 2016

The U.S. Environmental Protection Agency (EPA) Science Advisory Board (SAB) Staff Office announced in a *Federal Register* Notice (Volume 81, Number 153, Pages 52682) published on August 9, 2016 that it was forming a Panel to review the draft EPA report entitled “Screening Methodologies to Support Risk and Technology Reviews (RTR).” This draft report describes newly developed screening methods designed to assess the risk to public health and the environment that would remain after stationary sources of hazardous air pollutants come into compliance with the EPA’s Maximum Available Control Technologies (MACT) standards. To form the panel, the SAB Staff Office sought public nominations of nationally and internationally recognized scientists with demonstrated expertise in the following disciplines: Human health risk assessment, ecological risk assessment, exposure assessment, toxicology, ecology, aquatic toxicology, air toxics, and dispersion modeling.

Attached is a List of Candidates that includes the biosketches of nominees. In total, the SAB Staff Office has identified 27 candidates based on their relevant expertise and willingness to serve.

The SAB Staff Office Director will make the final decision about who will serve on the Panel based on all relevant information. This includes a review of the confidential financial disclosure form (EPA Form 3110-48), relevant information gathered by staff, and public comments. For the EPA SAB Staff Office, a balanced panel is characterized by inclusion of candidates who possess the necessary domains of knowledge, the relevant scientific perspectives (which, among other factors, can be influenced by work history and affiliation), and the collective breadth of experience to adequately address the general charge. Specific criteria to be used in evaluating a candidate include: a) scientific or technical expertise, knowledge, and experience; b) availability and willingness to serve; c) absence of financial conflicts of interest; d) absence of appearance of a lack of impartiality; e) skills working in advisory committees and panels, and, for the panel as a whole, f) diversity of scientific expertise and viewpoints.

We hereby invite comments on the attached List of Candidates for consideration by the SAB Staff Office in the formation of this Panel. Comments should be submitted to Dr. Bryan J. Bloomer, Designated Federal Officer, no later than November 28, 2016. E-mailing comments (bloomer.bryan@epa.gov) is the preferred method for receipt. Please be advised that comments received are subject to release under the Freedom of Information Act (FOIA).

Risk and Technology Reviews (RTR) Methodologies Review Panel

Bond, Tami

University of Illinois at Urbana-Champaign

Dr. Tami Bond is the Nathan M. Newmark Distinguished Professor at the University of Illinois at Urbana-Champaign in Civil and Environmental Engineering, and an Affiliate Professor in Atmospheric Sciences. Dr. Bond's research addresses the aerosol chemistry, physics, and optics that govern the environmental impacts of particles from combustion. Her work includes laboratory studies of aerosol behavior, field measurements of emissions from small combustion sources, development of global emission inventories, and future emission projections. Dr. Bond is a Fellow of American Geophysical Union and a member of the American Association for Aerosol Research and has authored or co-authored more than 70 scientific papers. She earned her Ph.D. in Atmospheric Sciences, Civil Engineering and Mechanical Engineering at the University of Washington. Dr. Bond is a 2014 John D. and Catherine T. MacArthur Fellow..

Bredfeldt, Tiffany

Texas Commission on Environmental Quality

Dr. Tiffany Bredfeldt is a Senior Toxicologist with the Toxicology Division of Texas Commission on Environmental Quality (TCEQ). She received her bachelor's degree in Microbiology and a minor in Spanish from the University of Arkansas (Magna Cum Laude) and earned a Ph.D. in Pharmacology and Toxicology from the University of Arizona. She next worked as a postdoctoral fellow at the University of Texas, M.D. Anderson Cancer Center investigating the impact of early life exposure to endocrine disrupting chemicals. After her postdoctoral fellowship, she joined the TCEQ as a toxicologist in 2010. In this role, Tiffany has conducted health effects reviews for impacts associated with proposed air permits and evaluations of ambient air monitoring data. She also derives chemical-specific toxicity factor for environmental chemicals of health concern. Additional areas of some expertise include expert witness testimony, communicating human health risk information at various public meetings, and serving on the editorial board for Toxicology In Vitro. Since 2010, she has served as a member of the Dose-Response Advisory Committee of the Alliance for Risk Assessment. As part of this committee, Tiffany focuses on the emergence of new approaches in risk assessment, particularly those associated with the application of molecular data in human health risk assessment. In addition, she serves as a member of the USEPA Science Advisory Board's Chemical Assessment Advisory Committee, which provides scientific guidance regarding toxicological review of environmental chemicals produced by the Integrated Risk Information System (IRIS). As time permits, Tiffany enjoys working with students and postdoctoral fellows at the University of Texas or with the Society of Toxicology in areas of career planning, project strategy, interpersonal communication and professional networking..

Carmichael, Gregory

University of Iowa

Dr. Gregory R. Carmichael has a BS, MS and PhD in chemical engineering and has done extensive research related to air quality and its environmental impacts. He is currently the Karl Kammermeyer professor of chemical and biochemical engineering at the University of Iowa and director of the University of Iowa Informatics Initiative, a cross campus activity focused on Big Data, where 25 new faculty positions have been created and more than 200 affiliate faculty and staff are engaged. He is also co-director of the Center for Global and Regional Environmental Research (a large interdisciplinary center with 100+ faculty). He served as Associate Dean for Graduate Studies and Research for the college of engineering from 2002-2015. His research is focused on air pollution and climate change, where he uses comprehensive computer models and big data to simulate the interactions of air pollutants with weather and climate and to estimate resulting environmental impacts. His models are also used to evaluate effectiveness of various air pollution and climate change mitigation strategies. He has authored or co-authored over 330 scientific publications, as well as six books and monographs. These research activities include the development of comprehensive air quality models and their application to regional and international air pollution problems. His studies have led to a greater appreciation and understanding of the importance of long range transport of pollutants within Asia and across the Pacific. His work has also explored the importance of dust on atmospheric chemistry, and this work has helped to stimulate laboratory as well as large-scale field experiments. His research has involved the development of innovative modeling tools, including techniques to optimally integrate measurements and models via formal chemical data assimilation. Most recently his work has focused on the role of black carbon (BC) in the atmosphere and its dual role as an air pollutant and climate warming agent. He is an active instructor and advisor, having supervised 35 MS and 38 Ph.D. students. He has received numerous awards, including the American Institute of Chemical Engineer's Lawrence K. Cecil Award for outstanding chemical engineering contribution and achievement in the preservation or improvement of the environment. He is a Fellow of the American Institute of Chemical Engineers. He serves on numerous international advisory boards related to climate forecasting and atmospheric science; including NASA's Earth System Subcommittee and chair of the scientific steering committee for the environmental programs at the UN World Meteorological Organization.

Chiu, Weihsueh

Texas A&M University

Dr. Weihsueh A. Chiu, Ph.D. is a professor in the Department of Veterinary Integrative Biosciences in the College of Veterinary Medicine and Biomedical Sciences at Texas A&M University. He received an AB degree in Physics from Harvard University, a MA and PhD in Physics from Princeton University, and a Certificate in Science, Technology and Environmental Policy from the Woodrow Wilson School of Public and International Affairs at Princeton University. Dr. Chiu was an analyst at the U.S. Government Accountability Office from 1998-2000. He joined the Radiation Protection Division of the U.S. Environmental Protection Agency (EPA) as an environmental scientist in 2000, and then transferred to the Office of Research and Development in 2002. From 2002-2015, Dr. Chiu led and supervised the development of human health hazard and dose response assessments for a variety of environmental chemicals, serving as Chief of the Toxicity Pathways Branch from 2012-2015. Thereafter, he joined the faculty of Texas A&M University where he is actively involved in research, teaching, and service in the areas of toxicology, chemical risk assessment, and regulatory science. Dr. Chiu's research has focused on various aspects of human health risk assessment, including toxicokinetics, mechanisms of toxicity, physiologically-based pharmacokinetic modeling, dose-response

BioSketch

assessment, and characterizing uncertainty and variability. His work is particularly relevant to the interface between science and policy. His research is sponsored by a number of agencies, including the National Institutes of Health, the Food and Drug Administration, the U.S. EPA. Dr. Chiu has served on a variety of expert review panels related to human health risk assessment, including panels for the National Toxicology Program, the Agency for Toxic Substances and Disease Registry, the California Environmental Protection Agency. He has also served on multiple committees and workgroups for the World Health Organization (WHO) International Agency for Research on Cancer, the WHO International Program on Chemical Safety, the Organisation for Economic Cooperation and Development, as well as the U.S. National Academy of Sciences.

Di Giulio, Richard

Duke University

Dr. Di Giulio received his Ph.D. from Virginia Polytechnic Institute and State University in 1982. He is currently the Director of the Duke University Superfund Basic Research Center; the Director of the Integrated Toxicology Program at Duke University; and the Director of the Center for Comparative Biology of Vulnerable Populations. His research is focused upon biochemical and cellular responses of aquatic animals to environmental stressors, particularly contaminants. The laboratory is concerned with both basic studies of mechanisms of contaminant metabolism, adaptation and toxicity, and with the development of sensitive, mechanistically-based indices of exposure and toxicity that can be used in biomonitoring of free-living organisms. The long-term goal of his research is to bridge the gap between fundamental toxicological research and the development of mechanism-based approaches for monitoring environmental health. Relatedly, he seeks to utilize the comparative biology paradigm to elucidate linkages between human and ecosystem health.

Driscoll, Jr., Charles T.

Syracuse University

Dr. Charles T. Driscoll, Jr. is a Distinguished and University Professor at Syracuse University. Driscoll received his B.S. degree in Civil Engineering from the University of Maine in 1974, and his M.S. in 1976 and Ph.D. in 1980 in Environmental Engineering from Cornell University. Driscoll's teaching and research interests are in environmental engineering, environmental chemistry, biogeochemistry, soil chemistry and environmental quality modeling. Driscoll's research focused on the impacts of disturbance on ecosystems, including climate change, air pollution, land management, and the response to mitigation efforts. He uses long-term measurements, whole ecosystem experiments, and models to address research questions. Driscoll characterizes the inputs of and trends of acid, nitrogen and mercury deposition, the transport and fate of these materials, and their effects on ecosystem structure and function. Recently his acidification and mercury research has focused on the recovery of ecosystems, including the development of critical loads and total maximum daily loads to use as tools to guide emission control strategies. He is currently examining climate change and land disturbance impacts on the northern forest, and human and ecosystem health co-benefits associated with policies to decrease carbon dioxide emissions from electric utilities. He has provided expert testimony on air pollution effects on ecosystems to U.S. Congressional and State committees. Driscoll is currently serving on the National Research Council Board of Environmental Studies and Toxicology (2011-present) and has participated in the National Research Council committees on Air Quality Management (2004) and the Independent Scientific Review of Everglades Restoration Progress (2008, 2010, 2012, 2014, 2016) among others. He served as a member of the U.S. Environmental Protection Agency Clean Air Scientific Advisory Committee panel reviewing the secondary National Ambient Air Quality Standard for Oxides of Nitrogen and Oxides of Sulfur (2007-2011, 2014-present), and the U.S. EPA Science Advisory Board committee reviewing the Mercury Risk Assessment for Coal-Fired and Oil-Fired Electric Generating Units (2011). Driscoll has authored or co-authored approximately 430 peer-reviewed articles, and has been acknowledged by the Institute for Scientific Information (ISI) as one of the most highly cited researchers in both engineering and environmental science. He was elected to the National Academy of Engineering in 2007. Recent research funding sources include the National Science Foundation, New York State Energy Research and Development Authority, the U.S. Environmental Protection Agency, the Grantham Foundation and the William and Flora Hewlett Foundation.

Eastmond, David

University of California - Riverside

Dr. David A. Eastmond is a professor and chair of the Department of Cell Biology & Neuroscience at the University of California, Riverside. He received a B.S. in zoology and an M.S. in entomology from Brigham Young University in Provo, Utah, and a Ph.D. in environmental health sciences from the University of California, Berkeley. After serving as a Hollaender Distinguished Postdoctoral Fellow at Lawrence Livermore National Laboratory, he joined the faculty at UC Riverside where he is actively involved in research and teaching. His research focuses on the mechanisms involved in the toxicity and carcinogenesis of environmental chemicals and their associated risks. He has published more than 125 scientific articles in these and related areas. At UC Riverside, Dr. Eastmond teaches classes in toxicology and risk assessment. In recent years, he has received funding from the NIH, the University of California, and the Vandium Producers and Reclaimers Association. Dr. Eastmond previously served as the president of the Environmental Mutagen Society and as a Jefferson Science Fellow in the US State Department. He has also participated on a variety of expert panels related to chemical mutagenesis, carcinogenesis and risk assessment including panels for the US Environmental Protection Agency (EPA), the US Food and Drug Administration, the National Toxicology Program, the International Programme for Chemical Safety, the International Agency for Research on Cancer, the WHO's Joint Meeting on Pesticide Residues, the Organisation for Economic Cooperation and Development, and Health Canada. He currently serves as a member of the Carcinogen Identification Committee for the California EPA and the Chemical Assessment Advisory Committee for the US EPA.

Fabisiak, James

University of Pittsburgh

Dr. James Fabisiak attended Syracuse University (BS) and Cornell University (MS) prior to receiving his Ph.D. in Pharmacology at the Pennsylvania State University School of Medicine at the Milton S. Hershey Medical Center under the mentorship of Dr. Elliot Vesell and D. Eugene Rannels. He went on to post-doctoral training at the University of Vermont in the laboratories of Dr. John Evans and Dr. Jason

BioSketch

Kelley and was the recipient of a prestigious Parker B. Francis Fellowship in Pulmonary Biology and Respiratory Medicine. His early career has been dedicated to understanding the responses of the lung to exogenous chemical agents and air pollutants, primarily at the cell and molecular level. He is currently an Associate Professor of Environmental & Occupational Health at the University of Pittsburgh, Graduate School of Public Health. His work has centered interactions between microbial and chemical stressors, effects of metals and atmospheric particulate matter, role of metallothionein in handling redox-active metals, and lipid-peroxidation in execution of apoptosis. He has over 50 peer-reviewed publications within this realm and has been able to support his work through independent funding provided by NIH, US EPA and other sources. In addition, Lastly, Dr. Fabisiak is a respected and accomplished teacher within the department as primary instructor for Principles of Toxicology, and Introduction to Risk Sciences/Environmental Risk Assessment which allows him to effectively broaden his expertise outside of his specific research interests. Dr. Fabisiak's insight is often sought after as a frequent invited reviewer by multiple peer-reviewed journals and has served on national grant review study sections such as NIH Special Study Section: CounterACT: Countermeasures to Chemical Threats and Gulf of Mexico Research Initiative (GoMRI): Human/mammalian toxicology and environmental health of Oil Spills. He serves as a counselor on the Executive Committee for the Allegheny-Erie Regional Chapter for the Society of Toxicology. More recently he has "expanded" his portfolio to include more public health community-based activities. He has been repeatedly invited to participate in multiple panels and advisory boards formed by such organizations as Coastal Response Research Center, NOAA, and Gulf of Mexico Research Initiative to address human health and other effects of oil dispersants. These activities include writing and evaluating various guidance documents, as well as, grant proposal review. Especially germane to the charge of the EPA advisory board being formed, Dr. Fabisiak has been the senior author for a team that has prepared a series of documents entitled PRETA (Pittsburgh Regional Environmental Threats Analysis Report) Air: Particulate Matter and PRETA Air: Hazardous Air Pollutants. These documents are in-depth scholarly presentations of air pollution issues specific to the Southwest PA region. As such they deal significantly with specific regional point sources and their contribution to human health risk and regulatory challenges within an area that is "at risk" by virtue of failing to meet current NAAQS standards for several criteria pollutants and long-standing legacy of industrial activity and pollution. Dr. Fabisiak continues his efforts in these directions by following closely the community/governmental/industry dynamic currently unfolding with the recent plans for a large petrochemical facility in the area and expanding unconventional natural gas extraction activities in the area where evaluation of health risk to point source pollution is becoming more critical over time.

Fenske, Richard

University of Washington

Dr. Richard A. Fenske is Professor of Environmental and Occupational Health Sciences at the University of Washington. He has served as director of the NIOSH-supported Pacific Northwest Agricultural Safety and Health Center since 1996, is a lead investigator in the UW Children's Environmental Health Center, and served as a core faculty member of the UW Center for Ecogenetics and Environmental Health. Dr. Fenske has focused his research on the assessment and mitigation of chemical hazards through workplace and community studies. He has introduced novel procedures for the assessment of skin exposure among agricultural workers through the use of fluorescent tracers. He has also contributed to the elucidation of pesticide exposure pathways for children living in agricultural communities and in residential settings. Current research is focused on pesticide drift reduction. Dr. Fenske currently serves as a member of the National Academy of Medicine's (IOM) Roundtable on Environmental Health Sciences, Research, and Medicine. He served as President of the International Society of Exposure Science in 2013-14. Dr. Fenske has received both the NIOSH Director's Award for Excellence in Research, and the Wesolowski Award from the International Society of Exposure Science for outstanding and sustained contributions to the field of exposure assessment.

Gentile, Thomas

New York State Department of Environmental Conservation

Mr. Thomas Gentile, M.S. is a Research Scientist and serves as Chief of the Air Toxics Section in the Division of Air Resources with the New York State Department of Environmental Conservation (NYSDEC) in Albany, New York. Mr. Gentile received his Bachelor's degree in Biology at North Adams State College, followed by a Master's of Science in Public Health from the School of Public Health at the University of Massachusetts at Amherst. His public health concentration was Environmental Health. Mr. Gentile supervises the Air Toxics Section which was established to protect the public and the environment from the adverse effects of exposure to toxic air contaminants. The section is responsible for the risk assessment of air toxics in support of the air quality permitting program, as well as, other special studies involving the assessment of air toxics in communities across New York. Mr. Gentile was the project manager and co-principal investigator for the Tonawanda Community Air Quality Study which was partially funded by a grant from the US EPA under the Local-Scale Air Toxics Ambient Monitoring Grant Program. He has worked on numerous air toxics issues at the State and Federal level. He was a member of the Clean Air Act Advisory Committee (CAAC) Workgroup working on the development of a National Integrated Urban Air Toxics Strategy for reducing air pollution, the Chemical Information Management Project with the Forum on State and Tribal Toxics Actions (FOSTTA), serves as co-chair of the Northeast States for Coordinated Air Use Management (NESCAUM) Air Toxics and Public Health Committee, served as a core workgroup reviewer on the USEPA Mercury Study Report to Congress, is a current member of the NYSDEC Mercury Task Force, and served as a consultant to the USEPA Science Advisory Board Executive Committee on risk assessment and air pollution issues. In 2003, Mr. Gentile was awarded the Alexander Rihm Jr. Outstanding Service Award by his peers for his work in the New York State Air Resources Program.

Ginsberg, Gary

Connecticut Department of Public Health

Dr. Gary L. Ginsberg, is a toxicologist in the Connecticut Department of Public Health Division of Environmental and Occupational Health Assessment. He utilizes the principles of toxicology and risk-assessment to evaluate human exposure to chemicals in air, water, soil, food, and the workplace. He has published in toxicology, carcinogenesis, physiologically based pharmacokinetic modeling, interindividual variability, and children's risk assessment. He also holds an adjunct faculty position at the Yale School of Public Health and is an assistant clinical professor at the University of Connecticut School of Community Medicine. Dr. Ginsberg has served on the USEPA's Science Advisory Board, USEPA's Children's Health Protection Advisory Committee, and several National Research Council (NRC) committees (Inorganic Arsenic, Human Biomonitoring, USEPA Risk Methods – "Science and Decisions", Emerging Science for Environmental Health). Dr. Ginsberg

BioSketch

received a Ph.D. in toxicology from the University of Connecticut and received the Society of Toxicology's 2016 Public Communications Award.

Halden, Rolf

Arizona State University

Dr. Rolf U. Halden received his M.S. in Biology (1992) from the Technical University of Braunschweig, Germany, and his M.S. (1994) and Ph.D. (1997) degrees in Civil/Environmental Engineering from the University of Minnesota. He worked as a postdoc and project engineer at the Lawrence Livermore National Laboratory from 1998 to 2001, where he conducted soil and groundwater remediation projects. In 2001, he joined the faculty of the Johns Hopkins School of Public Health as an Assistant Professor, founding member of the Center for Water and Health, and served as Associate Professor until 2007. In 2008, Dr. Halden joined the faculty of Arizona State University and the Biodesign Institute, where he currently serves as a tenured Full Professor in the School of Sustainable Engineering and the Built Environment, Senior Sustainability Scientist of the Global Institute of Sustainability, and Founding Director of multiple initiatives, including the Biodesign Center for Environmental Security, The CES Mass Spectrometry Facility, The National Sewage Sludge Repository, and The Human Health Observatory. Dr. Halden's expertise is in the area of public health engineering, green chemistry and sustainability. His research explores the impact of anthropogenic chemicals on environmental quality and human health. Many of his 160 peer reviewed publications deal with the occurrence of persistent organic pollutants in the environment, routes of human exposure, and the determination of body burdens and adverse health outcomes, particularly in children. Dr. Halden has invented numerous technologies for monitoring toxins in groundwater, determining chemical bioavailability, and identifying the best way of removing persistent pollutants from contaminated environments using microorganisms. His patented inventions and licensed technologies have sparked the creation of two startup companies. Dr. Halden has served on various advisory committees and panels. He provided a Congressional Briefing on the safety of antimicrobial compounds in 2011, served as editor of an American Chemical Society book on emerging contaminants in 2010, and as co-author of the 2007 technical report for the Pew Charitable Trusts on environmental impacts from industrial food animal production. He was a contributor to a report on antimicrobial drug resistance by the American Academy of Microbiology, served as a member of a 2006/7 National Research Council of the National Academies to help examine environmental monitoring and cleanup activities at the Los Alamos National Laboratory, and provided expert advice in 2006 to the EPA Office of the Inspector General – Office of Program Evaluation, Evaluation of Drinking Water Laboratory Procedures. Dr. Halden has been registered as a special government employee with the Food and Drug Administration since 2005, and served as a voting member of the Center for Drug Evaluation and Research (CDER) Nonprescription Drugs Advisory Committee. He also served as a Governor-appointed public interest member on the Maryland State Water Quality Advisory Committee from 2003 to 2005. Dr. Halden further served as a conference organizer, steering committee member, panel member or session chair for various scientific symposia nationally and internationally. He is a member of various professional societies, including the American Chemical Society, the American Society for Microbiology, the American Society of Civil Engineers, and the Society of Environmental Toxicology and Chemistry. In recent years, his team has been working on the development of new diagnostic approach for public health management that use the urban water cycle as a source of real-time information on human behavior, consumption, activities and public health risks posed by chemical, biological and physical hazards.

Hammond, S. Katharine

University of California, Berkeley

Dr. Hammond is a Professor of Environmental Health Sciences at the University of California, Berkeley, where she has an active, well supported research program examining the effects of chemicals and air pollutants on human health; she is also Associate Dean for Academic Affairs at the School of Public Health. She holds a BA and a PhD in chemistry (Oberlin College and Brandeis University) and an MS in environmental health sciences (Harvard School of Public Health) and her particular focus is exposure assessment for epidemiologic studies. She runs an active laboratory in which she develops new methods for evaluating exposures; these range from chemical methods to collect and analyze air samples (e.g., polycyclic aromatic hydrocarbons, endotoxins, VOCs and nicotine) to models to estimate daily pollutant exposures of hundreds of children in epidemiologic studies over several years. The courses she teaches include "Characterization of Airborne Contaminants" and "Health Risk Assessment, Regulation, and Policy" and she directs the industrial hygiene program at the School of Public Health, UC Berkeley. She has published 200 peer-reviewed scientific papers and numerous reports including those from committees on which she has served (e.g., National Research Council, Institute of Medicine, World Health Organization, the US Surgeon General—see CV for more information). She has served on numerous other advisory committees, including on the Board of Scientific Councilors for the National Toxicology Program. She currently serves on the California EPA Science Advisory Panel and the World Health Organization Tobacco Product Regulation Study Group. Dr. Hammond leads the Berkeley-Stanford Children's Environmental Health Center, which is jointly supported by USEPA and NIEHS and is studying the effects of air pollution on children's health, e.g., the immune system, birth outcomes, respiratory effects, and glucose dysregulation. She also studies the effects of indoor air pollution, both from biomass fuel burning in Guatemala, Nepal and Nigeria, and second hand tobacco smoke worldwide, and occupational exposures to solvents and particulate matter. Her research is funded by the National Institute of Environmental Health Sciences, US Environmental Protection Agency, National Institute for Occupational Safety and Health, Michael J. Fox Foundation for Parkinson's Research, Alcoa Corporation, Chau Hois Shuen Foundation Women in Science Program, National Eye Institute, the Koret Foundation, the Health Effects Institute, the United Nations Foundation, the Flight Attendants Medical Research Institute, the Mickey Leland National Urban Air Toxics Research Center, the National Heart, Lung and Blood Institute, the New United Motors Manufacturing, Inc. and the United Auto Workers Local 2244, and the CA EPA Air Resources Board. Her areas of expertise include exposure assessment, chemistry, environmental health sciences, risk assessment, epidemiology, industrial hygiene, and public health. .

Haney, Joseph

Texas Commission on Environmental Quality

Mr. Joseph "Kip" Haney, M.S., has served as a senior toxicologist in the Toxicology Division of the Texas Commission on Environmental Quality (TCEQ) for 18 years and has extensive expertise in human health risk assessment, exposure assessment, toxicology, and air toxics. As a regulatory toxicologist and risk assessor, he regularly reviews environmental media sampling results (e.g., air, surface soil, drinking

BioSketch

and ground water) from a human health risk perspective (e.g., excess risk, hazard, margin of exposure). Using peer-reviewed, established scientific methods he has conducted dose-response analyses using the latest science for numerous air toxics (e.g., benzene, methylene chloride, formaldehyde, 1,4-dichlorobenzene, hexavalent chromium, cadmium, cobalt, nickel) and derived health-protective toxicity factors (e.g., unit risk factors, short- and long-term RfCs). He has published carcinogenic dose-response analyses for several air toxics (e.g., hexavalent chromium, cadmium, and nickel URFs). Joseph has also conducted multiple combustion strategy risk assessments that evaluate potential point and fugitive source impacts on human health, both directly via inhalation, incidental soil ingestion, and dermal contact with soil, and indirectly via modeled deposition and uptake through the food chain (e.g., beef, chicken eggs, cow and breast milk, fish tissue). Joseph recently published three risk assessment papers on oral exposure to hexavalent chromium, as well as a paper on historical drinking water contamination and health hazard at Camp Lejeune, NC. He was recognized at the 2016 Society of Toxicology (SOT) conference by the Risk Assessment Specialty Section (RASS) for two of his outstanding chromium papers that received top 10 risk assessment paper awards. Joseph received his B.S. in Biology (summa cum laude) from the University of Houston and his M.S. in Environmental Science with Emphasis in Toxicology from the University of Texas School of Public Health. He is a member of SOT, the Lone Star Regional Chapter of the SOT, and the RASS of SOT. Joseph served on the USEPA Mouse Lung Tumor Workshop Planning Panel (workshop held January 7-8, 2014). Joseph's work is fully supported by state funding.

Hattis,Dale

Clark University

Dr. Dale Hattis is a Research Professor with the George Perkins Marsh Institute at Clark University. He received his Ph.D. in Genetics from Stanford University in 1974 and an undergraduate degree in Biochemistry from the University of California at Berkeley in 1967. For the past 42 years he has been engaged in the development and application of methodology to assess the health, ecological and economic impacts of regulatory actions. His work has focused on the development of ways to incorporate human interindividual variability data and quantitative mechanistic information into risk assessments for both cancer and non-cancer endpoints. Specific studies have included quantitative risk assessments for reproductive effects, neurological effects, and chronic lung function impairment, four pharmacokinetic-based risk assessments for carcinogens, an analysis of uncertainties in physiologically based pharmacokinetic (PBPK) modeling and an analysis of differences among species in processes related to carcinogenesis. Recent research has also explored pharmacokinetics and dose response for neurodevelopmental effects of the insecticide chlorpyrifos. Dr. Hattis has published more than 200 articles and chapters in scientific journals, books and proceedings. He has been a member of the Environmental Health Committee of the EPA Science Advisory Board, and the Board of Scientific Counselors for the National Toxicology Program. He has also served as a member of the National Research Council Committee on Estimating the Health-Risk-Reduction Benefits of Proposed Air Pollution Regulations. Dr. Hattis has been a councilor and is a Fellow of the Society for Risk Analysis.

Hayes,Stanley

Ramboll Environ

Mr. Stan Hayes is currently chair of the Advisory Council of the Bay Area Air Quality Management District, which provides science-based counsel to the Board of Directors, the Executive Officer, and other senior staff of the District. He has an MS degree in Aeronautics & Astronautics and a BS degree in Mechanical Engineering, both from Stanford University. He has 40 years of experience in air-related environmental science and engineering, with particular emphasis on air impact analysis, including air quality modeling, exposure and health risk assessment, and strategic and regulatory policy analysis. He has conducted numerous air dispersion, exposure, and health risk assessments for a wide range of industrial facilities, including petroleum refineries, aerospace manufacturing plants, marine vessel loading, mining operations, petrochemical complexes, airports, power plants, manufacturing facilities, and agricultural processing plants. He is the primary author of more than 70 scientific papers and presentations, as well as a large number of technical reports on air-related subjects. He has provided expert testimony before federal, state and local regulatory agencies and in court. He is a Fellow of the Air & Waste Management Association, for whom he has chaired or co-chaired national and international specialty conferences on climate change, greenhouse gas reporting and homeland security. Mr. Hayes has worked for more than a decade to analyze, evaluate, and apply human health exposure and risk analysis methods and supporting databases used by EPA to calculate residual risk for a range of MACT-category Risk and Technology Reviews, including petroleum refineries, aerospace manufacturing plants, marine vessel loading facilities, and agricultural processing plants. For 25 years, until 2015, he was a Principal with Ramboll Environ (previously ENVIRON). Now emeritus, he is casual part-time with Ramboll Environ, with no regular salary, benefits, or firm ownership interest. Previously and most relevant to the RTR Methods Review Panel, in work he directed, ENVIRON (now Ramboll Environ) was retained by various petroleum industry clients to review and evaluate residual risk modeling conducted by EPA in support of its Refinery Sector Rule, including identification of risk-driver sources and HAPs, emission inventory accuracy, dispersion model and meteorological processing options, and a range of risk-modeling sensitivity analyses. Work was completed in 2014. .

Heiger-Bernays,Wendy J.

Boston University

Dr. Wendy Heiger-Bernays is an associate professor in the Department of Environmental Health at the Boston University School of Public Health where she applies her strong experience in molecular toxicology to practical questions about the impact of a subset of industrial chemicals, consumer products and pharmaceuticals on people's health. Her research and teaching includes a focus on effective ways to translate findings from the laboratory to multiple audiences. She works collaboratively with colleagues to assess toxicity of chemicals that are able to modify the metabolic pathways in juvenile and prenatal animal (fish and rodent) models, to characterize and screen chemicals with endocrine activity in water, characterize health risks posed by solvent vapors in homes that originate beneath the ground, and to development of practical interventions to commonly measured chemical hazards in garden soils. Dr. Heiger-Bernays' overall objective is to engage communities in their understanding and mitigation of environmental health risks. She teaches graduate courses in toxicology, risk assessment, water quality, and environmental health and is PI of the Research Translation Core (RTC) for the NIEHS-supported BU Superfund Program. Her work on the RTC is focused on technology and information transfer of the science to multiple audiences, including environmental regulatory and health agencies as well as with advocacy groups and community groups. Since leaving the laboratory, she

BioSketch

has trained dozens of MS and MPH students and mentored doctoral students in bench and regulatory toxicology. Dr. Heiger-Bernays has served as a reviewer on several NIH and USEPA study sections, FIFRA Science Advisory Panel Workgroups, and as a member of EPANDWCC workgroup and EPA Science Advisory Board. She currently serves as a member of the Massachusetts DEP Waste Site Advisory and is chair of her local board of health. In 2015-2016, she was a AAAS Science and Technology Fellowhosted in the Office of Science Coordination and Policy at the US EPA, working in the Endocrine Disrupting Screening Program.

Irudayaraj, Joseph

Purdue University

Dr. Joseph Irudayaraj has degrees in Agricultural Engineering, Computer Sciences, and Biological Engineering. He is a Professor of Biological Engineering in the Department of Agricultural and Biological Engineering. He is also the Interim Director of Bindley Bioscience Center, Executive Committee member of the Purdue Center for Cancer Research (Co-Leader of the Drug Discovery and Molecular Sensing Core of the Cancer Center) and co-PI of the P30 NIH-NCI Purdue Cancer Center grant and Center for Food Safety Engineering (2015-2020), 2011 Fellow of the Academic Leadership Program (Committee for Institutional Cooperation) and 2012 Fellow of Entrepreneurship Leadership Academy. He has served as the Chair of the graduate program (2009-2012) of Purdue Agricultural and Biological Engineering (Rated #1 by US News and World Report 2009-present) and am the PI for a Keck Foundation grant and the P42 superfund grant submitted by Purdue in 2016 (the grant was scored). Their group is interested in monitoring the dynamics of nuclear proteins, transcripts, epigenetic mechanisms and signaling pathways in live cells to provide a mechanistic perspective of disease etiology. His group in collaboration with the toxicology faculty at Purdue has developed live cell platforms to examine the signaling pathways (Akt, FAK, VEGF, Src, and MAPK) and epigenetic mechanisms in response to exposure of volatile organic compounds by Fluorescence Lifetime Imaging (FLIM) and Fluorescence Correlation Spectroscopy (FCS). Our mechanism-focused single cell tools are now applied to understanding exposure effects of nanoparticles and chlorinated volatile organic compounds on human health. Recently, their single cell technologies have been successfully used to monitor live cell acetylation in a range of cancer cell lines exposed to chlorinated volatile organic compounds (CVOCs). Microarray analysis of gene expression as well as physiological measurements of heart defects in zebrafish upon exposure to CVOCs at the 10-100 ppb level have shown that it is possible to identify molecular markers and determine the underlying mechanisms using the single cell techniques developed in our laboratory. Their goal is to bring single cell technologies to toxicology. He has published over 250 refereed publications (Citations > 11,000 and h index > 61) with over 20 years of experience in spectroscopy and biosensors, ~15 years of experience in single cell technology development for human health. He is a strong proponent of training the next generation of the student scientists/engineers in cross disciplinary areas. He is a member of American Chemical Society, Institute of Biological Engineering, Biophysical Society, and the American Society of Agricultural and Biological Engineers.

Li, Abby A.

Exponent Incorporated

Dr. Abby A. Li is a Senior Managing Scientist in the Health Science Practice of Exponent Inc., an international scientific consulting firm. She holds a B.A. in Chemistry and a Ph.D. in Pharmacology and Physiology from the University of Chicago. Dr. Li's research interests include evaluating the neurotoxic potential of industrial and agricultural chemicals and applying quantitative risk assessment approaches to neurotoxicity endpoints. Dr. Li has served on international and national panels for workshops on improving testing and evaluation of the neurotoxic potential of chemicals in adults and offspring. Dr. Li served on the National Academy of Science's National Research Council Committee on Toxicity Testing and Assessment of Environmental Agents in the 21st century, and the EPA's SAB Chemical Assessment Advisory Committee and Hydraulic Fracturing Research Advisory Panel. She has been a member of several International Life Science Institute Committees on adult and developmental neurotoxicity testing (DNT), and toxicity testing strategies for pesticides. Dr. Li served on the U.S. expert teams to the Organization for Economic Cooperation and Development (OECD) for the development of international test guidelines for adult and developmental neurotoxicity testing. Prior to joining Exponent Inc., Dr. Li was Senior Science Fellow at Monsanto, providing expertise in toxicology/risk assessment. She led the neurotoxicology group at Monsanto's Environmental Health Laboratory where she conducted pharmacokinetic, toxicology and neurotoxicology studies for industrial chemicals, agricultural products, and pharmaceuticals. These studies included guideline, specialized mechanistic studies, as well as human and in vitro studies. She continues to design, monitor and analyze data from adult and developmental neurotoxicity studies at contract laboratories for different industry clients. She is currently the President of the Neurotoxicity Specialty Section and Co-chair of the Specialty Section Collaboration and Communication Group of the Society of Toxicology.

Lomnicki, Slawo

Louisiana State University

Dr. Lomnicki has received his masters and doctoral degrees in physical chemistry from the A. Mickiewicz University in Poznan Poland. Afterwards, he has received post-doctoral training at the Department of Chemical Engineering, University of South Carolina and later at the Department of Chemistry, Louisiana State University. After finishing his postdoctoral training he remained at Louisiana State University as the Senior Researcher and later Research Professor. Currently he is an Assistant Professor at the Department of Environmental Sciences, Louisiana state University. Dr. Lomnicki research and science expertise is chemistry of pollutant formation, sampling and analysis in combustion processes and in the ambient air and reactions on the gas-solid and gas-liquid interfaces. 3 major aspects of combustion related pollutants are a special focus of his research: (i) formation mechanism and yield of Environmentally Persistent Free Radicals (EPFRs) in combustion born particulate matter and their health effects in the exposed population based on the spatial and temporal distribution of ambient air collected samples; (ii) assessment of formation, sampling and analysis of the polychlorinated and polybrominated persistent organic pollutants in the combustion waste/product streams. Dioxin/furan products as well as brominated flame retardants and their combustion products are of special interest; (iii) concentration and transformation of PAHs, oxy-PAHs and nitro-PAHs in the effluents of combustion streams. The fate and environmental transformations of those pollutants are also subject of his research. Dr. Lomnicki is Co-Chair of the Executive Committee of the International Congress on Toxic Combustion By-Products and their Health Effects. He is also a Chair of the Scientific Committee, Executive Board Member and Co-Organizer of "The Central and Eastern European Conference on Health and the Environment: The Environment – A Platform for Health", held in May 24-31, 2014 in Cluj-Nopoka, Romania and Main Organizer of

BioSketch

this meeting in 2018 in Krakow, Poland. He has served on the EPA dialogue committee and Louisiana Department of Military panel to select the technology for the safe disposal of M6 propellants at Camp Minden, Louisiana. Dr. Lomnicki has received multiple funding from federal, non-profit and industrial partners for his research.

Marlborough, Sidney

Noble Energy, Inc

Dr. Sidney Marlborough is currently a Senior Environmental Toxicologist with Noble Energy, Inc. in Houston, Texas. He is responsible for corporate chemical stewardship program and is responsible for the risk evaluation of new products for oil and gas exploration and production. He received a BS in Environmental Management Systems, MS in Environmental Toxicology and Ph.D. in Environmental Science minoring in molecular genetics from Louisiana State University. He has 18 years of experience in environmental risk management, toxicology, risk assessment, litigation, and research. He has worked for state government, academia, private consulting and industry. He has developed numerous human health and ecological risk assessments for expert reports and remedial cleanup requirements. He has studied the toxicity of metals, chlorinated solvents, poly-aromatic hydrocarbons and pesticides in both human and ecological receptors. Dr. Marlborough has developed an uptake kinetic model simulating the phytoremediation of arsenic with various plant species. He has developed formulas for the extrapolation of toxicity of arsenate and arsenite as part of ecological risk assessment. He has conducted published research in the areas of marine toxicity to benthic invertebrates, arsenic speciation toxicity in ecological receptors, TNT exposure to benthic fish, phytoremediation of metals, and microsatellite instability in squamous cell carcinoma. Dr. Marlborough is currently a member of the Society of Toxicology and the Society of Petroleum Engineers.

Ryan, P. Barry

Emory University

Dr. P. Barry Ryan is Professor of Exposure Science and Environmental Chemistry in the Department of Environmental Health, Rollins School of Public Health, Emory University. He is jointly appointed in the Department of Chemistry at Emory University. Prior to joining the faculty at Emory in 1995, he was on the faculty at Harvard School of Public Health. He received a BS in Chemistry from the University of Massachusetts, an MS in Physical Chemistry from the University of Chicago, and PhD in Computational Chemistry from Wesleyan University. He has been active in the exposure assessment field for over 25 years publishing in excess of 110 peer-reviewed manuscripts and book chapters and making over 200 presentations of his work to the scientific community. His work has included both cross-sectional and longitudinal studies of community-based exposure for multiple pollutants in multiple media. He has been involved with a study of exposure to pesticides experienced by individuals in a community in Northern Thailand for the last five years. In addition, he is Co-Principal Investigator and Co-Investigator on three separate Formative Research projects associated with the National Children's Study. Recently, he began work assessing exposure to airborne contaminants and noise in the community surrounding a commuter airport in metropolitan Atlanta. Recent work completed by Dr. Ryan's group includes a study of retrospective exposure to perfluorooctanoic acid in a large area surrounding a manufacturing facility using this compound, a U.S. EPA-funded STAR Grant designed to assess the effectiveness of biological markers of exposure to organophosphate and pyrethroid pesticides and a study of the impact on the surrounding community of airport emissions of various airborne compounds. Dr. Ryan is a member of the Executive Committee of the Emory/Battelle/ Morehouse consortium for the National Children's Study. He was Principal Investigator on the U.S. EPA funded longitudinal study of exposures to pollutants known as the National Human Exposure Assessment (NHEXAS) - Maryland study, and was Co-Principal Investigator of a study on health-compromised individuals assessing the impact of particulate matter exposure on heart rate variability, and Co-Principal Investigator on a study of the impact of air pollution exposure on hiker lung-health in the Great Smoky Mountain National Park. Dr. Ryan was a member of the Board of Scientific Counselors for U.S. EPA's Office of Research and Development and a member of the US EPA Science Advisory Board Sub-Committee on Exposure and Human Health. Dr. Ryan also completed a four-year term on the Federal Advisory Committee for the National Children's Study being undertaken by the National Institutes of Health. He has served on numerous other advisory panels for the U.S. EPA, most recently as the Chair of the external evaluation committee on the Draft Exposure Factors Handbook update and on the FIFRA SAP on Chlorpyrifos PBPK-Cares Modeling Review. Dr. Ryan has also served on several National Academy of Science panels.

Sadd, James

Occidental College

Dr. James L. Sadd is Professor of Environmental Science and Chair of the Geology Department at Occidental College, Los Angeles, California. Over the past 15 years he has been a national leader in research focused on the quantitative and statistical evaluation of questions related to environmental exposure, health risk, and environmental justice primarily through the use of spatial analysis using geographic information systems and remote sensing tools. He is part of a three-person research team who have published widely in the field, and are also recognized for their ongoing research collaborations with numerous environmental justice organizations. He recently served as a member of the Nationally Consistent Environmental Justice Screening Approaches Work Group to evaluate and provide guidance and feedback on EPA's Environmental Justice Strategic Enforcement Assessment Tool (EJSEAT) to the National Environmental Justice Advisory Council. His recent research is currently supported by contracts and grants from EPA Region 9, the California EPA, California Air Resources Board, California Energy Commission, Hewlett, Annenberg and Energy Foundations, the California Endowment. Dr. Sadd earned his master's degree in Geology at University of Texas, Austin, and doctorate in geology at the University of South Carolina, Columbia. Professor James Sadd of Occidental College is one of the leading researchers in the field of environmental justice through his development of a sophisticated computer-based screening methodology that uses GIS mapping and data analysis to highlight patterns of racial, economic and social disparity with regard to toxic air emissions. Developed over nearly ten years in collaboration with Dr. Manuel Pastor (USC) and Dr. Rachel Morello-Frosch (UC Berkeley), and supported with research funding from many private foundations and the State of California, the screening methodology has helped to raise awareness and impact policy discussions at the local, state and national levels. Dr. Sadd possesses a remarkable and sorely needed ability to effectively translate between scientists, policymakers, regulatory specialists and community residents on environmental health and justice issues. In addition to his university research and numerous academic publications on environmental exposure patterns, Dr. Sadd has also worked extensively with community-based organizations in the Los Angeles area to pioneer a community-based participatory research model called "ground truthing." Dr. Sadd served as the principal

BioSketch

researcher and coordinator of an unprecedented effort which involved training more than 50 community residents to map toxic hazards and sensitive land uses, as well as conduct air sampling, in order to compare their findings to official state inventories. The research results are contained in a December 2009 report, Hidden Hazards, produced by the Liberty Hill Foundation.

Turner, Jay

Washington University

Dr. Jay Turner is an Associate Professor of Energy, Environmental and Chemical Engineering, and Vice Dean for Education in the School of Engineering & Applied Science at Washington University in St. Louis. Dr. Turner holds B.S. and M.S. degrees from UCLA (1987) and a D.Sc. from Washington University (1993), all in Chemical Engineering. Following his M.S. studies, he spent two years at the University of Duisburg, Germany, where he was a DAAD Fellow. Following his D.Sc. studies, Dr. Turner spent eight months on assignment with the Federal Highway Administration, U.S. Department of Transportation, as an Air Quality Specialist. He subsequently joined the Washington University faculty in 1994 as an Assistant Professor of Engineering & Policy. Dr. Turner's research primarily focuses on air quality characterization and control with emphasis on field measurements and data analysis to support a variety of applications in the atmospheric science, regulation and policy, and health studies arenas. He was the Principal Investigator of the St. Louis – Midwest Fine Particulate Matter Supersite. He manages a field site in East St. Louis that has hosted several Federal Equivalent Method testing campaigns and was recently one of two U.S. Environmental Protection Agency (EPA) coarse particulate matter pilot speciation study sites. Current and recent research projects include estimating lead emissions from piston engine aircraft, source apportionment of ambient particulate matter in Hong Kong, assessing intra-urban variability of air toxics metals, long-term fence-line monitoring for gaseous air toxics and particulate matter species at an industrial facility, and air quality measurements to support health studies. Recent consulting activities include monitoring guidance and/or data analyses for agencies in four states in support of State Implementation Plan development. He is currently Washington University lead investigator on a contract from the Airport Cooperative Research Program (ACRP) to Sierra Research, Inc. to develop approaches to mitigate lead concentration hot spots at general aviation airports, and Co-PI on an NIH grant to examine relationships between air pollution and neurodegenerative disease. His consulting work is currently funded by The Organisation for Economic Co-operation and Development (OECD) to assess the state of air quality monitoring in 51 countries and develop a framework for estimating air quality indicators, and by the Hong Kong Environmental Protection Department through Hong Kong University of Science and Technology to develop a conceptual model for particulate matter air quality over the Pearl River Delta. Dr. Turner has served on several state and local air quality-related advisory committees and the Science and Technical Support Workgroup of the Federal Advisory Committee Act (FACA) Subcommittee for Ozone, Particulate Matter, and Regional Haze Implementation Programs. He currently serves on EPA's chartered Science Advisory Board (SAB), the Ambient Monitoring and Methods Subcommittee (AMMS) of EPA's Clean Air Scientific Advisory Committee (CASAC), and the Independent Technical Advisory Committee of the Texas Air Quality Research Program. He recently served on the Science and Technology Achievement Awards (STAA) Committee of the EPA Science Advisory Board and on the Health Effects Institute project panel for the National Particle Components Toxicity Initiative. Dr. Turner was general chair for the 2007 Annual Conference of the American Association for Aerosol Research (AAAR) and is the immediate past president of AAAR. He is a Visiting Scientist at the Harvard T.H. Chan School of Public Health for the period January-July 2016. He previously served on the Science and Technology Achievement Awards (STAA) Committee of the EPA Science Advisory Board (term 2012-2015).

Vieira, Veronica

Boston University

Dr. Veronica Vieira is an Associate Professor of Public Health at University of California, Irvine. She received her environmental engineering and public health training at MIT, Stanford, and Boston University. She works extensively with reconstructing historic environmental exposures using GIS and have an extensive knowledge of groundwater modeling, spatial statistics, and on persistent environmental contaminants including tetrachloroethylene (PCE, a dry-cleaning solvent), perfluorooctanoic acid (PFOA, a perfluorinated compound (PFC) involved in the manufacturing of Teflon), and polybrominated diphenyl ethers (PBDEs, a common class of flame retardants). Her research is focused on spatiotemporal modeling of exposures and disease risk in environmental epidemiology. Dr. Vieira has been an investigator with the Boston University Superfund Research Program for 15 years where she examines the relationship between mixtures of chemical and non-chemical stressors and neurobehavioral outcomes in children using generalized additive models (GAMs). Their application of GAMs for spatial analysis led to the creation of the MapGAM package in the R statistical programming language, of which she is a primary author. Dr. Vieira is also involved in a study examining spatiotemporal exposure uncertainty related to PFOA in an Ohio River community located near a large chemical plant that emitted PFOA into the local air and water for several decades. A major focus of Dr. Vieira's research is the spatiotemporal analysis of birth defects and infant bronchiolitis in relation to PM2.5 exposures. Dr. Vieira's environmental research is supported by the National Institute of Environmental Health Sciences. She has recently received funding from the National Institute of Minority Health and Health Disparities to study the contribution of geographic location to racial and socioeconomic disparities in ovarian cancer treatment and survival.

Wu, Zhijin

Brown University

Dr. Zhijin Wu is Associate Professor of Biostatistics at the Brown School of Public Health, Brown University. She holds a BS in Biochemistry and Molecular Biology (Peking University), an MS in Molecular Biology (University of Southern California), and a PhD in Biostatistics (Johns Hopkins University). Dr. Wu's primary areas of expertise are in high throughput bioassays, including microarrays, RNA-sequencing, high throughput screening assays. Her methodological research focuses on development and assessment of data preprocessing, modeling and analysis, as well as experimental design for the identification of biomarkers and biological networks/pathways related to diseases and other phenotypes. Her collaborative research includes cancer research, toxicological responses in gene expression, and gene-environment interactions. Dr. Wu's research has been primarily funded by the National Science Foundation and National Institute and Health. Her current research is exclusively supported by NIH. She served as the co-director of the Data and Analytical Core for the Superfund Research Program at Brown University, Toxicant Exposures in Rhode Island: Past, Present, and Future.

Yost, Michael

University of Washington

Dr. Michael Yost is Professor and Chair of the Department of Environmental and Occupational Health Sciences at the University of Washington. He holds MS and PhD degrees in Environmental Health Sciences from the University of California at Berkeley, with minor fields of electrical engineering and biostatistics. Formerly he served as director of the Exposure Sciences academic degree program at UW. Professor Yost was named the 2013 Outstanding Faculty Mentor, and previously received this award in 2010. Professor Yost is involved in a number of interdisciplinary research studies at UW funded by NIOSH, EPA, NIEHS and CDC focused on novel exposure assessment techniques, principally using real-time, remote sensing and direct reading measurement devices. Dr. Yost currently is deputy director of the Pacific Northwest Agricultural Safety and Health Center and was a coinvestigator in the UW Nanotoxicology Center investigating the potential toxicity and environmental effects of quantum dots and other nanomaterials. He is a project leader in the UW Center for Clean Air Research (UW-CCAR), conducting a nationwide study of human multi-pollutant exposures from traffic related air pollutants using a novel mobile monitoring platform. Dr. Yost's research group has published work on particle transport and deposition from pesticide spray applications, and served on a FIFRA panel on human exposures to pesticides.