Invitation for Public Comment on the List of Candidates for the Environmental Protection Agency Science Advisory Board Chemical Assessment Advisory Committee

September 18, 2017

The U.S. Environmental Protection Agency (EPA) Science Advisory Board (SAB) Staff Office announced in a Federal Register Notice on June 27, 2017 (82 FR 29077 - 29078) that it was inviting nominations of experts to be considered for the Administrator's appointment to the Science Advisory Board (SAB) Chemical Assessment Advisory Committee (CAAC). The SAB provides independent advice and peer review to EPA's Administrator on the scientific and technical aspects of environmental issues. The SAB Staff Office sought nominations of experts to serve on the SAB CAAC with demonstrated expertise in one or more of the following disciplines: toxicology, including, developmental/reproductive toxicology, and inhalation toxicology; carcinogenesis; biostatistics; uncertainty analysis; and risk assessment. The SAB Staff Office identified 26 candidates based on their expertise and willingness and ability to serve. We hereby invite public comments on the attached List of Candidates for appointment to the SAB CAAC for consideration by the SAB Staff Office. Comments should be submitted to Dr. Suhair Shallal, Designated Federal Officer, no later than October 9, 2017 at shallal.suhair@epa.gov. E-mail is the preferred mode of receipt. Please be advised that public comments are subject to release under the Freedom of Information Act.

2017 Candidates for the EPA Science Advisory Board Chemical Assessment Advisory Committee

Aga, Diana

SUNY Buffalo

Dr. Diana Aga, Henry M. Woodburn Professor of Chemistry at the University at Buffalo, received her BS degree in Agricultural Chemistry from the University of the Philippines at Los Baños in 1988, and her Ph.D. degree in Analytical and Environmental Chemistry from Kansas University (KU) in 1995. Her graduate research, which investigated the Fate, Transport, and Transformation of Triazines and Acetanilide Herbicides in the Environment was jointly supervised by Prof. George S. Wilson (KU) and Dr. E. Michael Thurman (U.S. Geological Survey, Water Resources Division). In 1996, Diana moved to Zurich, Switzerland to become a postdoctoral fellow at the Swiss Federal Institute of Aquatic Science and Technology (EAWAG), , and is recipient of various prestigious fellowship awards, including the Alexander von Humboldt Research Fellowship in Germany, and the Fulbright Fellowship in the Philippines. Her current research interests include investigating the fate and transport of contaminants in the environment, such as antimicrobials, persistent organic pollutants, pesticides, pharmaceuticals, endocrine disrupting chemicals, and engineered nanomaterials. She is an expert in developing trace analytical methods for organic and heavy metal contaminants in complex environmental matrices using chromatography and mass spectrometry. She has been evaluating the efficiencies of various treatment processes in removing emerging contaminants and antibiotic resistance genes in animal wastes and in municipal wastewater treatment plants. Dr. Aga is author of more than 130 peer-reviewed scientific articles and book chapters. The State University of New York, and also serves as editor of Journal of Hazardous Materials.

Badding, Melissa

Exponent, Inc.

Dr. Melissa Badding is a Senior Scientist at Exponent, Inc. within the Health Sciences consulting practice. She is a board-certified toxicologist and specializes in the toxicological evaluation of molecular and tissue responses to chemical and particulate exposures. Her research background includes laboratory experience with an emphasis on molecular and tissue responses to chemical and particulate exposures. She also has experience in human health risk assessment related to chemical exposures and the evaluation of biocompatibility for medical devices and consumer products. Prior to joining Exponent, Dr. Badding held the position of Associate Service Fellow at the National Institute for Occupational Safety and Health (CDC/NIOSH) where she conducted laboratory research to evaluate the toxicity of various particles encountered in the workplace. She received her B.S. in Biotechnology from Rochester Institute of Technology in 2007 and her M.S. and Ph.D. degrees in Toxicology from the University of Rochester in 2009 and 2012, respectively. She has authored or co-authored 12 peer-reviewed publications and has received several awards for her work during her years of laboratory research. Dr. Badding has been an active member of the Society of Toxicology (SOT, since 2010) and the Women's Council on Energy and the Environment (WCEE, since 2015). Within SOT, she has participated in several specialty sections and was previously a member of the Allegheny-Erie Regional Chapter; this included service as the Postdoctoral Representative and volunteer on the Proposal Review Group of the Occupational and Public Health Specialty Section of SOT (2014-2016) and she has assisted with the SOT Women in Toxicology Section Awards Committee. While at CDC/NIOSH, Dr. Badding volunteered within local community STEM activities as a science fair judge, volunteer at the West Virginia Regional Science Bowl, and as a Mentor for CDC's Undergraduate Public Health Scholar's Program. Dr. Badding receives no outside research funding.

Bandichhor, Rakeshwar

Dr. Reddy's Laboratories

Dr. Rakeshwar Bandichhor is Director and Senior Principal Scientist for Active Pharmaceutical Ingredient (API) Research and Development at Dr. Reddy's Laboratories (DRL) in Hyderabad, India. He holds a B.S. in Chemistry and Zoology, an M.S. in Chemistry with a specialization in Organic and Pharmaceutical Chemistry, and a Ph.D. in Chemistry from the University of Lucknow, India. Dr. Bandichhor's research work is directly related to benefits to the society, and his research funding over the past two years has been supported by DRL. In the area of health sector, his efforts resulted in alternate synthesis of phase III and complex molecules. For example, the molecule patented as Eribulin is being used in treating/managing various diseases ranging from metabolic disorders to HIV. Dr. Bandichhor devised several synthetic strategies such as diastereoselective, enantioselective, DKR based, metal catalysed synthesis of medicines which are of great intellectual property and business value in the pharmaceutical industry. A number of his ideas have already been materialized in concluding the trial, validation and commercial campaigns towards catering the business needs of different geographies. In coming next 4 to 5 years, most of Dr. Bandichhor's noteworthy ideas/synthesis will get realized in commercial sense. This monumental service to society turned basic knowledge into an applied endeavour for commercial application. Despite of his industrial commitments on job, he produced >10 PhDs and trained several bachelor and master students. He is a Fellow of the Royal Society of Canada, a Chartered Chemist of the Royal Society of Chemistry (RSC), featured as one of 175 scientific leaders in the area of chemical sciences adjudged by the RSC. His chemistry knowledge has prolifically used in formulation sciences for successful ANDA filings too. He is able to attract collaborators from MIT and University of Pennsylvania for training the DRL scientists to help enable them to handle complex molecules. Dr. Bandichhor's group, particularly he himself, championed industry–academia collaboration by delivering scientific talks across the world and co-authoring research and review articles in the journals of repute. He has co-edited a book along with a faculty at University of Delhi, which is going to be published by RSC. He has represented DRL in ACS-GCI roundtable for 8 years and institutionalized Green practices at DRL. He has also co-contributed a concept article to TATA in the area of sustainability. These are the perfect examples of model in industry-academia collaboration. His inputs towards selecting right synthetic route in industry are also published in Nature Medicine 2013, 19, 1200-1203. Due to excellent contribution, he received several awards within the organization and outside e.g. Chairman Excellence Award in the Category of individual functional excellence, IGCW-2013 award in the category of Green Chemistry etc.. He recently worked with ACS to organize first ACS-Industry Symposium at DRL and considering his commitment towards chemical sciences, ACS has appointed him as Vice-Chair of ACS-India Chapter (South). He just received CRSI-Bronze Medal for year 2018. He is also certified Six Sigma Black and Master Black Belt.

Barton, Charles

Valspar Corporation

Dr. Charles (Chuck) Barton works for Valspar Corporation as Global Manager of Toxicology. He has experience with a variety of industries, including academia, government, pharmaceutical industry and consumer product industry. He was the State Toxicologist of Iowa for seven years. Dr. Barton has been appointed to six National Academy of Sciences committees, six U.S. Pharmacopeia committees, and one ISO committee. He served on the Board of Directors for the American Board of Toxicology. Dr. Barton is the Editor-in-Chief for MOJ Toxicology (MOJT) and an Editor for Open Access Journal of Toxicology (OAJT). In addition, he has served on the adjunct faculty for several universities. He is a member of over a dozen professional societies, having served as an officer in several. Furthermore, Dr. Barton has over 90 various publications. His professional practice has focused on evaluating potential public and occupational health risks associated with exposure to chemicals in the environment, workplace, pharmaceuticals, and consumer and personal care products. Dr. Barton received his Ph.D. in Toxicology at the University of Louisiana in Monroe, LA. He completed postdoctoral training in toxicology at Michigan State University. He is a Diplomate of the American Board of Toxicology. Dr. Barton has no outside research funding sources.

Barton, Hugh A.

Pfizer, Inc.

Dr. Hugh A. Barton is Associate Research Fellow with Biomedicine Design, Worldwide Research and Development, Pfizer, Inc. where he is a modeler for preclinical Translational Modeling Sciences. His focus in drug discovery has been on the application of systems pharmacology and toxicology modeling, physiologically based pharmacokinetic (PBPK) modeling, and pharmacokinetic pharmacodynamic (PKPD) modeling to oncology, cardiovascular disease, and neurodegenerative diseases to assess PK, PD, and safety. He has more than 25 years' experience in biological modeling, including with Pfizer, US EPA and consulting/contract companies, developing computational models for use in biologically based dose-response analyses for drug discovery and chemical risk assessment. For four years, Dr. Barton worked in environmental consulting doing site specific risk assessments for hazardous waste sites, air permitting, and other environmental regulatory requirements. He has been adjunct professor at Boston University School of Public Health and in Toxicology at The University of North Carolina at Chapel Hill. He received a B.S. in Life Sciences from the Massachusetts Institute of Technology, Cambridge, MA in 1982 and a Ph.D. in Toxicology from the Department of Applied Biological Sciences at MIT in 1988 working with Dr. Michael A. Marletta. Dr. Barton has been President of the Risk Assessment and Biological Modeling Specialty Sections of the Society of Toxicology. He has served as an invited peer-reviewer for organizations including Health Canada, NIEHS, US EPA, and TERA. He is a member of the US EPA Science Advisory Board's Chemical Assessment Advisory Committee and previously he served on the NRC Committee on Inorganic Arsenic and WHO IPCS PBPK Modeling working group. He is a reviewer for numerous scientific journals and serves on two editorial boards. Dr. Barton has published more than 50 articles in the scientific literature on physiologically based pharmacokinetic and pharmacodynamic modeling and has received awards from Pfizer, EPA and others for that work and its applications in pharmaceutical safety and risk assessment. Dr. Barton's research is funded by Pfizer, Inc.

Belzer, Richard

Independent consultant

Since 2001, Dr. Richard Belzer has been an independent consultant in regulation, risk, economics and information quality. 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 (MPP) from the John F. Kennedy School of Government (now Harvard Kennedy School) (1982), and MS and BS degrees in agricultural economics from the University of California at Davis (1979, 1980). Current original research areas include the analysis of variability in pulmonary function testing; the development of objective economic indicators to identify adverse human health effects; the improved use of human health risk assessments into benefit-cost analysis; the analysis of environmental justice ranking schemes; the analysis of patent law and examination practices; estimation of potential cost reductions state Medicaid programs from the substitution of electronic for tobacco cigarettes; and the economic value of subjective quality information in U.S. wine markets. Recent consulting projects have included benefit-cost analyses of California's proposed drinking water standards for hexavalent chromium and 1,2,3-trichloropropane; and

the critique of predicted human health impacts and monetized risks attributable to air emissions from new facilities designed to achieve federal regulatory standards. 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 OMB, given the SRA's Distinguished Service Award (2003), and named a Fellow of the Cecil and Ida Green Center for the Study of Science and Society (1995). He has not received any grants from EPA, any other government agency, or any private entity. He has conducted independent research on behalf of clients or through self-funding. Some projects are jointly funded. His clients include: Council of Producers & Distributors of Biotechnology, R Street Institute, Exxon Mobil Biomedical Sciences, Inc., American Chemistry Council and the California Manufacturing Technology Association.

Cobb, George

Baylor University

For the past two decades Professor George Cobb's research group has developed and implemented forensic analytical techniques to evaluate risks that environmental chemicals may present. His work has successfully assessed contaminant presence, transport, and transformation in organisms and environmental systems. Major research thrusts have involved coupling ultra-trace analytical methods with minimally invasive non-lethal monitoring techniques. This approach allows repeated measures during long term monitoring of organism exposure, which is a critical component of comprehensive risk assessments. Prof Cobb has successfully assessed adverse effects that contaminants cause in organisms, both in environment and controlled laboratory studies. Successful field assessments have included normal-use pesticide applications, National Priorities Site assessments, State and Municipal air and water quality evaluations. He has also worked to develop approaches that can reduce or mitigate adverse effects. Most recently, Prof. Cobb's group has emphasized: nanomaterial alteration of amphibian development and of rice accumulation of metal toxicants; interactions of toxicants and light to induce stress; airborne movement of steroids from concentrated animal feeding operations; explosives transformation in mammals; ultra-trace measurement of acutely toxic volatile compounds; and non-targeted analyses to broadly screen toxicant exposures. Professor Cobb has used these novel research approaches to solve problems for federal, state, and local agencies, as well as industrial sponsors. As a result, he has published over 125 peer reviewed papers and maintains strong national and international collaborations through leadership positions in The Society or Environmental Toxicology and Chemistry as well as the American Chemical Society. Prof. Cobb has also participated in 14 USEPA Advisory Panels. Prof. George Cobb is the Chairman of the Environmental Science Department at Baylor University. In his capacity as an educator, Professor Cobb has produced alumni who are national leaders in industrial, government, and higher education. His role in professional society leadership includes service at the President of the Society of Environmental Toxicology and Chemistry (North America), Chairman of the Environmental Chemistry Division of the American Chemical Society (ACS), and a member of the ACS Committee for Environmental Improvement. Dr. Cobb's research is currently funded by the City of Denton and USDA.

Conti, Lisa

Florida Department of Agriculture and Consumer Services

Dr. Lisa Conti, the Florida Department of Agriculture and Consumer Services' first Chief Science Officer, is a Deputy Commissioner overseeing the divisions of Aquaculture, Plant Industry, Food Safety, Animal Industry and Agricultural Environmental Services. Prior appointments were with the Florida Department of Health, as Division Director of Environmental Health, Florida State Public Health Veterinarian and State HIV/AIDS Surveillance Coordinator. She has authored or co-authored numerous journal articles on One Health, public health, HIV/AIDS surveillance, vector-borne and zoonotic disease topics. She is Coeditor with Dr. Peter Rabinowitz, of the book Human-Animal Medicine: Clinical Approaches to Zoonoses, Toxicants and Other Shared Health Risks and Coeditor of Confronting Emerging Zoonoses: The One Health Paradigm. Dr. Conti is a member of the One Health Initiative pro bono team, served on the NIH National Advisory Environmental Health Sciences Council, and was a founding member and Chair of the State Environmental Health Directors with the Association of State and Territorial Health Officers. She was a founding member of the Florida Rabies Control and Prevention Advisory Committee, was National Association of State Public Health Veterinarians' Rabies Compendium Committee member, Executive Board member of the Florida Veterinary Medical Association (FVMA) and established and chaired the FVMA One Health Committee. She served on the American Veterinary Medical Association (AVMA) Council on Public Relations representing Public Health. Dr. Conti was an Affiliate with the Yale University School of Medicine on Human-Animal

Medicine projects; an Adjunct Professor at Florida State University having taught Food Safety and Epidemiology courses; Courtesy Associate Professor at the University of Florida, College of Veterinary Medicine's Department of Infectious Diseases and Pathology; and taught Anatomy and Physiology at Tallahassee Community College. Dr. Conti earned her Doctor of Veterinary Medical degree from the University of Florida, Master of Public Health (Public Health Administration) from the University of South Florida and Bachelor of Science (Chemistry/Math) from the University of Miami. She is a Certified Public Manager through Florida State University, and Board Certified in Preventive Medicine through the American College of Veterinary Preventive Medicine. She is a recipient of the Florida Public Health Woman of the Year Award and the AVMA Public Service Award. She receives research funding from EPA, USDA, FDA and CDC.

Damewood, James

DuPont

Dr. James Damewood received his Bachelor of Arts (B.A.) in Chemistry from the University of Maryland at Baltimore County and an M.S. and Ph.D. in Chemistry from Princeton University where he was both a Hugh Stott Taylor and Halcon International Fellow. Following a post·doctoral appointment at the University of Wisconsin·Madison he began an independent academic career at the University of Delaware. From there he moved to AstraZeneca Pharmaceuticals where he served as senior scientist in Discovery Research and Associate Director of Computational Chemistry, Informatics, and Structural Biology, where he was the recipient of both a Breakthrough and a Global R&D Challenge Award. At AstraZeneca he also served as a leader of several multidisciplinary and multi·company project teams and as a Global Chemical Toxicology Specialist with liaison responsibilities between Discovery Research and Preclinical Safety Assessment/Toxicology. In the Chemical Toxicology Specialist role, he worked on critical issues relating to drug safety, including the development of novel approaches for seizure assessment, the potential impact of phospholipidosis on drug safety profiles, and addressing design issues relating to cardiac safety and aromatic hydrocarbon receptor (AhR) activation. He moved to DuPont in early 2011, and has worked to bring safety/toxicology and product stewardship considerations into to early CR&D research while serving as a Business Liaison and Principal Research Toxicologist from the Haskell Global Centers for Health and Environmental Sciences. His responsibilities as a Business Liaison involve assisting a wide variety of DuPont business in developing products that are safe for both humans and the environment, including coordinating the activities of toxicology study directors, environmental scientists, and risk assessors. He works extensively to further DuPont approaches to Tox21 implementation. Since joining DuPont, he has been a leading member of the Acceptable Exposure Limit (AEL) committee that assess the toxicological profile of chemicals and determines occupational exposure limits for DuPont coworkers. Dr. Damewood is a diplomate of the American Board of Toxicology (D.A.B.T.) and previously served for 6 years as a member of the National Institutes of Health Medicinal Chemistry Study Section. He is the author of close to 50 scientific papers. He has not received any research funding over the past two years.

Dorman, David

North Carolina State University

Dr. David Dorman is a professor of toxicology in the Department of Molecular Biosciences of North Carolina State University. Dr. Dorman completed a B.A. in Chemistry at the University of San Diego, a D.V.M. degree at Colorado State University, and a combined Ph.D. and residency program in toxicology at the University of Illinois at Urbana-Champaign. Dr. Dorman is a diplomate of the American Board of Veterinary Toxicology and the American Board of Toxicology. He has chaired or served on numerous National Research Council (NRC) committees and is a National Associate of the National Academies. He has served on advisory boards for the US Navy, the National Aeronautics and Space Administration, the US Department of Agriculture, and is a former member of the National Toxicology Program (NTP) Board of Scientific Counselors. Dr. Dorman is a recipient of the Society of Toxicology Achievement Award, the Zoetis Award for Veterinary Research Excellence, and is a fellow of both the Academy of Toxicological Sciences and the American Association for the Advancement of Sciences. Dr. Dorman's research interests include neurotoxicology, nasal toxicology, pharmacokinetics, and cognition and olfaction in animals. He has published over 160 peer-reviewed papers and 50 book chapters. In the past two years, he was the principal investigator on an Office of Naval Research grant evaluating environmental modifications to improve olfactory learning and memory for ammonium nitrate explosives detection. He has also been a co-investigator on grants from the US Department of Defense examining the efficacy of tranexamic acid (TXA) following severe trauma in the dog and the Morris Animal Foundation evaluating the use of thromboelastography in the treatment of canine immune-mediated hemolytic anemia.

English, Joanne

Independent Consultant

Dr. Joanne Caroline English is an independent consultant who recently retired as the Senior Principal Toxicologist with NSF International, a not-for-profit, nongovernmental organization whose mission is to protect and improve global human health. Her primary professional interest is in human health risk assessment, most recently for drinking water chemicals, food and dietary ingredients, and nanomaterials. She holds a B.S. in Biology from the University of Michigan and a Ph.D. in Toxicology from the University of Rochester (New York). Dr. English led NSF's risk assessment group, focused on developing and refining methods that employ mode of action and pharmacokinetic data, use of chemical specific adjustment factors, and predictive modeling. She served on the U.S. Technical Advisory Group to ISO/TC 229 Nanotechnologies, the executive committee of the NSF International Health Advisory Board, and the World Health Organization Chemical Risk Assessment Network Coordinating Committee. Prior to joining NSF, Dr. English held a variety of technical and leadership roles at the Eastman Kodak Company that included the design and oversight of research and testing programs in support of product development and stewardship. She was a participant in the U.S. EPA's Sustainable Futures initiative, and is experienced in the use of risk screening models for the assessment of new and existing chemicals. She held an adjunct faculty appointment in the Department of Environmental Medicine at the University of Rochester, and subsequently served as a member of the University's Environmental Health Sciences Center External Advisory Board. Dr. English is the primary or contributing author on numerous externally peer-reviewed health risk assessments for drinking water treatment chemicals, disinfection byproducts, and contaminants, available through the National Library of Medicine at the International Toxicity Estimates of Risk (ITER) website (http://toxnet.nlm.nih.gov/cgibin/sis/htmlgen?iter); additionally she has authored numerous articles in peer-reviewed journals, and wrote a book chapter on Metabolism and Toxicokinetics for "Toxicology Testing Handbook; Principles, Applications, and Data Interpretation" Eds. Jacobson-Kram and Keller, Eds. (Marcel Dekker, NY, 2001 and 2006). Dr. English is currently a member of the Chemical Assessment Advisory Standing Committee of the U.S. EPA's Science Advisory Board. Dr. English has been a member of the Society of Toxicology (SOT) since 1993, and has served in elected positions as Councilor of the Risk Assessment Specialty Section, as well as President of the Michigan Chapter of the SOT and Treasurer of the Northern California Chapter of SOT. She is a diplomate of the American Board of Toxicology, recerti·ed through 2019. For the past two years, Dr. English's research was funded by NSF International. She is not currently a recipient of research grants from state or federal agencies or the private sector.

Erraguntla, Neeraja

Texas Commission on Environmental Quality

Dr. Neeraja K. Erraguntla (Neera) is a Director, at the Chemical Products and Technology division at the American Chemistry Council (ACC). Dr. Erraguntla is responsible for managing the Center for Advancing Risk Assessment Science and Policy (ARASP), a coalition of independent groups and associations that promotes the development and application of up-to-date, scientifically sound methods for conducting chemical assessments. Dr. Erraguntla also manages other chemical-specific groups and is actively involved in projects involving mode-of-action and endocrine disruption. Prior to ACC, Dr. Erraguntla was a senior regulatory toxicologist at the Texas Commission on Environmental Quality (TCEQ) from 2005 to 2015. At TCEQ, she was a team lead to review available tools for conducting systematic reviews and evidence integration and to develop a position paper on how TCEQ conducts systematic reviews and evidence integration. Dr. Erraguntla also determined inhalation toxicity factors of arsenic compounds and hexavalent chromium compounds. Dr. Erraguntla played a major role in understanding and addressing community concerns about increased asthma rates in children and adults and prepared several science-based regulatory evaluations. Dr. Erraguntla is a diplomate of American Board of Toxicology (DABT) and has a Ph.D. from Louisiana State University. Recently in 2017, she was nominated as a Council Member for the International Society of Regulatory Toxicology & Pharmacology (ISRTP). In 2016, Dr. Erraguntla served as a reviewer for the Government's Accountability Office and was a peer reviewer of the National Academies report, Acute Exposure Guideline Levels for Selected Airborne Chemicals, Volume 20, from the Board on Environmental Studies and Toxicology. Previously, Dr. Erraguntla also served as a Science Advisory Board (SAB) for US EPA's Environmental Justice Technical Guidance Panel and has been on the National Academy of Sciences Acute Exposure Guidelines Committee. Dr. Erraguntla was an Adjunct Assistant Professor at Texas A&M School of Public Health. Dr. Erraguntla has no external sources of research funding.

Fowle, John "Jack"

Science to Inform, LLC

Since 2012, Dr. Jack Fowle has been in solo practice as an independent consultant about 1) the use of science to inform decisions regarding environmental risk, and 2) in the development and use of more informative and efficient approaches to traditional toxicity testing. Previously he worked for 33 years for the US Environmental Protection Agency. His last position was to serve as the Deputy Director of EPA's Health Effects Division in the Office of Pesticide Programs (OPP) in Washington, DC where he directed the health risk assessment activities supporting the re-registration of existing pesticides. He also managed the integration of new Toxicity Testing in the 21st Century approaches into OPP's human health risk assessments. Before OPP he was Acting Director of EPA's Neurotoxicology Division, as well as Assistant Laboratory Director for Chemical Safety, at the National Health and Environmental Effects Research Lab (NHEERL) in Research Triangle Park, NC. There he managed a research division and helped develop alternatives to animal approaches and to establish the Agency's computational toxicology program. He also served as Deputy Director of EPA's Science Advisory Board, and as the Science Advisor to U.S. Senator Daniel Patrick Moynihan. He serves on the Board of Directors for the Institute of In Vitro Sciences in Gaithersburg, MD and the Center for Alternatives to Animal Tests (CAAT) at the Johns Hopkins University. He is President of the Board of Trustees for the Evidence Based Toxicology Consortium, also at the Johns Hopkins University, and is an AltTox Editor. He is Councilor for the American Society for Cellular and Computational Toxicology as well as Past President of the Society of Toxicology's In Vitro and Alternative Methods Specialty section and past Treasurer of the Society for Risk Analysis. He is a member, and former Vice Chair, of the American Chemical Society's Committee on Environmental Improvement (CEI) that helps develop ACS policy statements and advice about chemical safety and sustainability. He serves on a science advisory committee to a tobacco company. He received his baccalaureate and doctoral degrees in genetics from George Washington University in Washington, D.C., and he is a board certified toxicologist. Most of his work is in support of not-for-profit organizations and universities. He has also received compensation from Contract Research Labs, agrochemical companies and as a panel member of an independent science advisory panel to a tobacco company.

Gordon, Terry

New York University School of Medicine

Dr. Gordon is a Professor of Environmental Medicine at New York University's School of Medicine. He is the Director of a National Institute of Environmental Health Sciences (NIEHS) T32 Training Grant and is the Deputy Director of NYU's NIEHS-supported Core Center. Dr. Gordon received a B.S. in Physiology and an M.S. in Toxicology from the University of Michigan and his PhD from the Massachusetts Institute of Technology (MIT). He has been funded by the National Institutes of Health (NIH), Centers for Disease Control and Prevention (CDC), and Environmental Protection Agency (EPA) for nearly 3 decades. Dr. Gordon's broad research interest is in inhalation toxicology with a major focus on the identification and understanding of the role of individual susceptibility and genetic factors in the pathogenesis of the adverse pulmonary effects produced by inhaled environmental and occupational agents. Other major research foci include identifying PM components which contribute to the adverse effects of PM and the toxicity of alternative tobacco products such as secondhand hookah smoke. Dr. Gordon teaches graduate level courses and has authored over 130 papers and chapters. He has served as a consultant/author to the Army, NIEHS, National Aeronautics and Space Administration (NASA), and EPA on a number of issues of pulmonary toxicology and air pollution that are related to the development of various documents and on EPA's Clean Air Science Advisory Committee (CASAC) ad hoc advisory panels. Dr. Gordon has also served on a number of committees for the Society of Toxicology and is currently an Associate Editor for Environmental Health Perspectives and a member of the Threshold Limit Value (TLV) committee. Dr. Gordon's research is funded by grants from NIH and NYU/Abu Dhabi Institute.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 (1974) and an M.S. in Toxicology (1976) from the University of Michigan, and a Ph.D. in Toxicology from Massachusetts Institute of Technology (1981), 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 the National Institute of Environmental Health Services (NIEHS), National Institute of Allergy and Infectious Diseases (NIAID), National Coalition for Cancer Research (NCCR), U.S. Department of Defense (DOD), Bureau of Mines, Health Canada, and the U.S. Environmental Protection Agency (EPA). Dr. Gordon currently serves as Chair of the American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value 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 genetic host 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 susceptibility factors play a major role in environmental and occupational lung disease. In collaboration with a number of investigators in the department, his laboratory uses classic murine genetics models, computational genomics, and DNA microarrays to identify genes involved in the acute response as well as in the development of tolerance to repeated exposure to inhaled toxicants. 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. He also led a large collaborative effort amongst EPA's five original PM research centers to evaluate the in vitro and in vivo toxicity of size-segregated PM collected in the U.S. and Europe. Dr. Gordon's research has been supported by grants from both government agencies and private companies, with core grant research support primarily being from the federal government (U.S. Environmental Protection Agency, Centers for Disease Control, National Institute of Environmental Health Sciences), with additional grant support from state and local governments, and industry. Dr. Gordon is an active member of the Society of Toxicology (SOT), and has served on the Program Committee (2002-2005), the Placement Service (1998-2001), Membership Committee (2009-2012), and as President of its Inhalation Specialty Section during 2002-2003. He has served as a consultant/author to the EPA on issues of pulmonary toxicology related to the development of various documents, and he served on EPA's Clean Air Scientific Advisory Committee (CASAC) Oxides of Nitrogen (NOx) and Sulfur Oxides (SOx) Primary National Ambient Air Quality Standards (NAAQS) Review Panels.

Hughes, Brian

NSF International

Dr. Brian Hughes is a Senior Principal Toxicologist at NSF International working in the area of human health risk assessments with emphasis on drinking water contaminants. Formerly, he has conducted public health risk assessments for hazardous waste sites under a cooperative agreement with the Agency for Toxic Substances and Disease Registry and more recently provided environmental health and safety consulting to businesses involved in the production of industrial chemicals used as food additives, pharmaceutical excipients, electronic materials, amines, oxygenated solvents and intermediates. He has assisted businesses in fulfilling regulatory requirements for EPA, FDA, EU REACH, as well as geographies via coordination of studies and other resources. Publications are in the areas of pesticide worker exposure, public health risk assessment and modes of actions. Dr. Hughes has served on a number of American Chemistry Council panels for various chemicals such as ketones, amines, alkanolamines, oxygenated solvents, and the Ethyleneamines Product Stewardship Discussion Group managed by Bergeson and Campbell PC. Dr. Hughes has also worked on pesticide and worker protection issues in the Michigan Department of Agriculture. Formerly, he served as the Director, Risk Assessment and Toxicology Section in the Alabama Department of Public Health. Dr.Hughes earned a Ph.D. in toxicology at Utah State University and an MPH in Epidemiology at the University of Alabama at Birmingham. He also earned an M.S. in Animal Science from Michigan State University. Dr. Hughes is certified by the American Board of Toxicology, a member of the Society of Toxicology, formerly served on a FIFRA Scientific Advisory Panel on "Worker Exposure Assessment Methods" and is an adjunct professor at Michigan State University. For the past 2 years, his sole source of funding has been from the American Chemistry Council, Washington, DC.

Khubchandani, Jagdish

Ball State University

Dr. Jagdish Khubchandani is a Professor of Community Health at Ball State University. He also serves as an ad-hoc Biostatistician for the College of Health and has previously served as a fellow of Center for International Development and Global Health Institute at Ball State University. He received his Doctorate in Clinical Medicine from India, Masters in Public Health from Western Kentucky University, and PhD in Health Education and Epidemiology from University of Toledo. Currently, he teaches in the areas of environmental health, global health, social epidemiology, and public health education in community and clinical settings. Within the past decade, he has mentored over 100 students pursuing undergraduate and graduate degrees in the field of public health, nursing, or medicine. In the past 5 years, he has coauthored more than 75 research articles in prestigious journals such as the Lancet, Journal of American Medical Association, and the New England Journal of Medicine on a broad range of issues including morbidity and mortality

associated with environmental health problems. Within the past 2 years, Dr. Khubchandani has received research funding from Merck Neuroscience Laboratories and Ball State University Foundation. Previously, he has also mentored racial/ethnic minority students on NSF and NIDDK funded projects. More recently, his research has received widespread attention from prominent media outlets such as Fox News, CNN, CNBC, MSN, Bloomberg News, Chicago Tribune, WSJ, and Huffington Post. Dr. Khubchandani also serves as an Associate Editor or Editorial Board Member for six journals in the field of public health and biomedical sciences. In 2017, he was also elected Director of the World Association of Medical Editors. Dr. Khubchandani has received many prestigious honors such as the Indiana Governor's Service Learning Award (2012), Hurley Goodall Distinguished Faculty Award (2012), Hero of Health Education (2012) and Open Society Award (2017) from Society for Public Health Education, Outstanding Junior Faculty Award (2014) and Outstanding Diversity Researcher (2017) from Ball State University.

Kleinman, Michael T.

University of California, Irvine

Dr. Michael T. Kleinman is an Adjunct Professor of Toxicology in the Department of Medicine's Occupational and Environmental Medicine Division at the University of California, Irvine (UCI), with a joint appointment in 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 115 peer-reviewed journal articles on effects of environmental contaminants on cardiopulmonary and immunological systems and on global and regional distribution of environmental contaminants 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 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 the role of inhaled combustion-generated particles on the promotion of airway allergies and acceleration of development of cardiovascular disease and how these effects are mediated by organic and elemental carbon components of PM. Dr. Kleinman's current research grants and contracts include a grant to examine the effects of inhaled particles on brain stem cells related to tumor development from the California Brain and Lung Tumor Foundation, a contract from the California Environmental Protection Agency to study the role of semi-volatile components of fine and ultrafine PM on cardiac function and atherosclerosis, and a contract to examine the effects of long term inhalation exposure to concentrated fine particles on brain inflammation. Dr. Kleinman has previously served on the U.S. EPA Clean Air Scientific Advisory Committee (CASAC) Ozone, PM and NO2 panels and was appointed to Chair the Scientific Review Panel for Toxic Substances for the state of California. 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 the role of inhaled combustion-generated particles on the promotion of airway allergies and acceleration of development of cardiovascular disease and how these effects are mediated by organic and elemental carbon components of PM. Dr. Kleinman is a co-Investigator on grants from NIH and NSF as well as contracts from the California Brain and Lung Tumor Foundation and from the California Environmental Protection Agency to study the role of semi-volatile components of fine and ultrafine PM on cardiac function, atherosclerosis, and effects of subchronic and chronic inhalation exposures to concentrated fine particles on brain inflammation.

Mahalingaiah, Shruthi

Boston University

Dr. Shruthi Mahalingaiah is an Assistant Professor in the departments of Obstetrics and Gynecology, Epidemiology, and Physiology/Biophysics at Boston University Medical Campus and School of Public Health. Dr. Mahalingaiah's research group focuses on the impact of environmental exposures and reproductive health in women across the life course, including pregnancy. Initially, she studied environmental exposures including endocrine disruptors and human reproduction. Her recent work established first-ever associations

of air pollution exposures and risk of infertility, and evaluated air pollution and risk of endometriosis, uterine fibroids, and menstrual irregularity. Her current research focuses on polycystic ovary syndrome (PCOS) incidence, severity, metabolic sequelae, and risk modification, including the role of environmental exposures in disease pathogenesis. Dr. Mahalingaiah is board certified in Obstetrics and Gynecology, and its sub-specialty Reproductive Endocrinology and Infertility (REI). In addition to research and mentorship, she provides clinical care in REI and advanced gynecology to women of all ethnic and demographic backgrounds at Boston Medical Center. Dr. Mahalingaiah received her medical degree from Harvard Medical School, and completed her clinical training at Brigham & Women's Hospital/Massachusetts General Hospital prior to joining the Department of Obstetrics and Gynecology at Boston University Medical Campus. She completed a masters in Epidemiology from Boston University School of Public Health. She was a postdoctoral fellow in the Boston University Superfund Research Program (BUSRP) during her K12 years. She is currently funded by the Ellison Foundation to study ethnic/demographic differences in polycystic ovary syndrome in an urban and international population. She was supported as a Building Interdisciplinary Research Careers in Women's Health (BIRCWH) K12 Scholar via the National Institutes of Health Office of Research in Women's Health to study the effect of air and water pollutants in benign gynecologic conditions. She continued as a Reproductive Scientist Development Program (RSDP) K12 Scholar supported by the *Eunice Kennedy Shriver* National Institute for Child Health and Human Development to study environmental determinants of polycystic ovary syndrome. She has been previously funded by the Burroughs-Wellcome Foundation and the American Congress of Obstetricians and Gynecologists.

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 B.S. in Environmental Management Systems, M.S. 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.

O'Brien, Jonathon

Harvard Medical School

Dr. Jonathon J. O'Brien is a Postdoctoral Fellow in the Department of Cell Biology at Harvard Medical School. He earned a BA in Mathematics and Philosophy and an MS in Applied Mathematics at the University of Colorado at Boulder. After completing his master's degree, Dr. O'Brien worked in the private sector as an analyst for a consumer goods company, before returning to school at the University of North Carolina at Chapel Hill, where he completed a PhD in Biostatistics. His thesis work was focused on the statistical modeling used in mass spectrometry based proteomics experiments. His work uncovered problems with missing data biases and poorly defined correlations in the models commonly used in the biological literature. Preliminary results from his research led to invitations to present his work at the Annual Meeting of the American Society for Mass Spectrometry, A Dagstuhl Seminar on Computational Mass Spectrometry and ultimately an offer to work as Postdoctoral Researcher in the Gygi Lab at Harvard Medical School. The Gygi Lab specializes in pushing the boundaries of Mass Spectrometry based Proteomics and Dr. O'Brien currently works with the lab to develop new methodologies for the field. As a statistician working in a proteomics lab, Dr. O'Brien has shown a strong ability to communicate the importance of statistical uncertainty to the scientific community. Within the last two years, he was still a PhD student and his funding came in the form of a training grant from the National Cancer Institute. His only other recent funding was the Schloss Dagstuhl National Science Foundation Support Grant for Junior Researchers which paid for attending the Dagstuhl Seminar.

Orlov, Alexander

State University of New York, Stony Brook

Dr. Alexander Orlov is an Associate Professor of Materials Science and Engineering at State University of New York, Stony Brook, USA. He is also a faculty member of the Consortium for Interdisciplinary Environmental Research, Chemistry Department and the Institute for Advanced Computational Science. In addition, Dr. Orlov is the European Research Council (EU) and National Science Foundation (US) funded Visiting Professor of Chemistry at the University of Cambridge. Furthermore, he is President and Founder of the Sustainable Nanotechnology Corporation. Dr. Orlov has already a substantial experience on providing advice to policy makers on environmental, consumer protection and agricultural matters. From 2007 till 2014 he was appointed by two UK Secretary of States for Environment, Food and Rural Affairs to advice the Government on such issues as hazardous substances, sustainability, environmental health/engineering and environmental impact of nanotechnology. More specifically he provided guidance on risk assessment of more than dozen chemicals and nanomaterials, where he evaluated submissions to the UK government and the European Chemicals Agency (ECHA). In particular, he was co-author of reports on DecaBDE toxicity, cumulative toxic effects of phthalates, behavior of pharmaceuticals in the environment and risk assessment of nanosilver/nanoseria to name a few. Several of his current NSF funded projects are focused on development of new technologies for air purification using waste materials, water and air remediation utilizing novel catalytic materials and risk analysis for nanomaterials release in the environment. Dr. Orlov has 5 degrees from various European and the US institutions, including: Doctoral and Master's degrees in Physical and Environmental Chemistry from the University of Cambridge (UK) and Master's degree in Environmental Engineering from the University of Michigan (US). He also holds Diploma in Economics from the London School of Economics. Among his current activities Dr. Orlov is contributing to work of the United Nations Environmental Program (Lead Author for the GEO report and reviewer of various UN reports) and the US-EU working group on Risk Assessment of Nanomaterials under auspices of the US White House and European Commission cooperative program on nanotechnology research. He serves as expert for over 20 Governmental agencies throughout the world, which includes grant reviewing for the NSF (13 Programs), DOE, DOD and the EU Commission. He also chairs the American Institute of Chemical Engineering Committee on Research and New Technologies, and participates in the Executive Committee of the American Chemical Society Environmental Division. Dr. Orlov was awarded the US National Science Foundation CAREER Award and the UK National Endowment for Science Technology and Arts CRUCIBLE award. He was also selected to the Fellowship of the UK Royal Society of Chemistry, the US National Academy of Engineering (NAE) Frontiers of Engineering (US), the EU-US (NAE) Frontiers of Engineering and was made Kavli Fellow in 2014 by the Kavli Foundation and the US National Academy of Sciences. In 2016 Dr. Orlov has been named Sigma Xi Distinguished Lecturer and was recognized by the State University of New York with Chancellor's Award of Excellence in Scholarship and Creative Activities. In addition to research awards, Dr. Orlov has received several teaching awards, including the 2015 NAE Frontiers of Engineering Education selection and the 2017 American Chemical Society Award for Incorporating Sustainability into Chemistry Education.

Paustenbach, Dennis

Cardno ChemRisk

Dr. Dennis Paustenbach is a board-certified toxicologist and industrial hygienist with nearly 35 years of experience in risk assessment, environmental engineering, ecotoxicology, and occupational health. Currently he is the President of Cardno ChemRisk, a division of Cardno. This division specializes in human and ecological risk assessment, as well as, risk analysis of chemical and radionuclides in consumer products, contaminated sites, pharmaceuticals and medical devices. Dr. Paustenbach specializes in the areas of industrial and environmental toxicology, occupational health, historical state-of-knowledge regarding environmental issues, and ecological and human risk assessment and has also directed the scientific aspects of toxic tort cases. In addition, he has also provided expert witness testimony in public meetings and as many as 400 depositions and two dozen trials concerning the health effects of chemicals in sediments, air, soil, consumer products, groundwater, and the workplace. He has been an adjunct professor at five universities. He has been an invited technical reviewer for prominent journals and of proposed regulations. Dennis has published approximately 300 peer-reviewed articles and written more than 50 book chapters in the fields of industrial hygiene, human and aquatic toxicology, engineering, and risk assessment. His two textbooks on risk assessment are among the most popular that have ever been published and they have been adopted by a number of universities in various countries. Having been in consulting for the past 30 years, he has also tried to maintain an active research program publishing

between 5-10 papers per year. His research has been primarily funded by the private sector (e.g., Ford, GM and Chrysler, Brush Wellman, DePuy (Johnson and Johnson), John Crane, CNH, Mercedes, and Others).

Raliya, Ramesh

Washington University in St. Louis

Dr. Ramesh Raliya is a Research Scientist in the Department of Energy, Environmental and Chemical Engineering at Washington University in St. Louis. He earned Ph.D. in 2012 from the Indian Council of Agricultural Research, India. His expertise is in functional nanomaterial synthesis using biological, chemical and aerosol routes. He has developed advanced nano-fertilizers for enhancing nutrient uptake and mobilization of native phosphorus. So far, he has published more than 35 peer-reviewed publications and holds five patents for the use of nanotechnology in agriculture. Dr. Raliya's research focuses on the use of nanoscale material for the applied and fundamental aspects of agricultural research. Being a member of a farmer family, Raliya understands the gravity of maximum production from minimum input on farmers, drive him into research nanotechnology for precision & sustainable agriculture. In fact, he started a start-up company (BIRANO LLC) in 2016 to translate his nanofertilizer research into real world application. And in January 2017, he won the Leadership in Entrepreneurial Acceleration Program (LEAP) Inventor Challenge Award for his translational research.

Rodricks, Joseph

Ramboll ENVIRON

Dr. Joseph Rodricks is a founding Principal of ENVIRON, and is now a Principal of Ramboll Environ. He has been certified as a Diplomate of the American Board of Toxicology since 1981, and is an internationally recognized expert in toxicology and risk analysis. He has consulted for hundreds of manufacturers, government agencies and for the World Health Organization in the evaluation of health risks associated with human exposure to chemical substances of all types. He came to consulting after a 15-year career as a scientist at the US Food and Drug Administration (USFDA). In his last four years at the USFDA, he served as Associate Commissioner for Health Affairs. His experience extends from pharmaceuticals, medical devices, consumer products and foods, to occupational chemicals and environmental contaminants. He has served on the National Research Council's Board on Environmental Studies and Toxicology, and on more than 30 boards and committees of the National Academy of Sciences and the Institute of Medicine, including the committees that produced the seminal works Risk Assessment in the Federal Government: Managing the Process (1983), and Science and Decisions–Advancing Risk Assessment (2009). He has more than 150 scientific publications and has received honorary awards from three professional societies for his contributions to toxicology and risk analysis. He is author of the widely-used text, Calculated Risks, now in its second edition, published by Cambridge University Press, and has presented more than 300 lectures in countries around the world. Dr. Rodricks has no external sources of research funding.

Roy, Robert

3M Company

Dr. Robert Roy is currently a Lead Toxicology Specialist in the Toxicology group of the 3M Medical Department. He has been a toxicologist at 3M for 20 years, but has almost 30 years of direct toxicology experience, including extensive experience in developing human health risk assessments in industry, government and academic settings. At 3M, he is currently responsible for many senior-level projects/activities including performing human health risk/safety assessments for base chemicals and finished products, developing detailed health hazard assessments for base chemicals and products, developing health-based guidance values (e.g. health-based OELs, REACH DNELs and DMELs, ADIs, carcinogenic slope factors, NSRLs and MADLs, drinking water guidelines, etc.), placing and critically evaluating both short-term and chronic mammalian toxicity tests, and working on activities relating to health hazard assessment of chemicals using in silico and read-across methodologies. He obtained both his MS and PhD degrees in Environmental Health Sciences (Program in Toxicology) from the University of Minnesota. Dr. Roy is extremely active in many of the above-mentioned areas outside of 3M via service on various advisory and technical committees. Some examples include: The American Chemistry Council (ACC) Health, Products & Science Policy Risk Assessment Work Group; the ACC Health, Products & Science Policy Exposure Assessment Work Group; the University of Minnesota (U of M) School of Public Health Toxicology Advisory Board; the U of M School of Public Health Industrial Hygiene Advisory Board; the U of M Occupational Medicine Residency (MD) Program Advisory Board; and the Editorial Boards of two peer-reviewed toxicology journals. He is a former member of the Board of Directors of the American Board of

Toxicology (grantor of the DABT status), a current and past technical member of various toxicology-related committees of the European Centre for Ecotoxicology and Toxicology of Chemicals (ECETOC), CMA/ACC, AIHA, both the national SOT and the Northland regional chapter of SOT (where he has also held/holds elected and appointed positions), and the University of Cincinnati's Risk Science Center's Workplace Environmental Exposure Level (WEEL) Committee (establishes consensus health-based OELs). Dr. Roy currently holds adjunct teaching and graduate faculty appointments at both at the University of Minnesota and Indiana University (both in Environmental Health Sciences/Toxicology); has extensive experience (over 25 years) in developing and presenting toxicology continuing education courses in specialized toxicological subjects such as immunotoxicology, reproductive and developmental toxicology, health risk assessment, inhalation toxicology, product stewardship, carcinogenesis and genotoxicity; and toxicology testing and data interpretation at various national professional societies, trade associations, 3M, and at academic institutions. Dr. Roy has no external sources of research funding.

Shea, Damian

Statera Environmental, Inc.

Dr. Damian Shea is a Professor of Environmental Chemistry and Toxicology at North Carolina State University and President and Founder of Statera Environmental, Inc., an environmental technology and consulting company. He received his Ph.D. in Environmental Chemistry from the University of Maryland in 1985 and was awarded a National Research Council Post-Doctoral Fellowship at the National Institute of Standards and Technology (1985-1987). In 1987, he was awarded an American Association for the Advancement of Science Environmental Science and Engineering Fellowship to work at the U.S. Environmental Protection Agency. From 2001 to 2011 he served as Head of the Department of Environmental and Molecular Toxicology and Department of Biology and also was the Founding University Director of the U.S. Department of the Interior Southeast Climate Science Center and the Program Director for the Howard Hughes Medical Institute Undergraduate Science Education Program. Dr. Shea has been studying the sources, fate, and effects of chemicals in the environment for over 30 years. His research and teaching is highly interdisciplinary and applied to solving real-world environmental problems. By combining his knowledge and experience in chemistry, toxicology, risk assessment, and the social sciences his ultimate goal is to improve our ability to assess, communicate, and mitigate the risks of chemicals to human and ecological health. He is a member of the American Chemical Society, Society for Environmental Toxicology and Chemistry, and International Society of Exposure Science and previously a member of the Society of Toxicology, American Geophysical Union, among others. He also provides scientific leadership to a startup company focusing on environmental technologies. Dr. Shea receives research funding from National Institute of Environmental Health Sciences, U.S. Department of Agriculture, U.S. Geological Survey, and U.S. Fish and Wildlife Service.