

## Brief Biographies of BEST Members (as of December, 2017)

### *Chair*

**FARLAND, William H.**, is the Senior Advisor to the Executive Vice President at Colorado State University and professor in its Department of Environmental and Radiological Health Sciences in the School of Veterinary Medicine and Biomedical Sciences. From 2006 to 2013, he was the vice president for research at CSU. In 2006, Dr. Farland was appointed deputy assistant administrator for science in the Environmental Protection Agency (EPA) Office of Research and Development (ORD). He had served as the acting deputy assistant administrator since 2001. In 2003, Dr. Farland served as chief scientist in the Office of the Agency Science Adviser. He also served as EPA's acting science adviser throughout 2005. Formerly, he was the director of ORD National Center for Environmental Assessment. Dr. Farland served on a number of executive-level committees and advisory boards in the federal government. In 2005-2006, he chaired the Executive Committee of the National Toxicology Program. He was also a member of the Scientific Advisory Council of the Risk Sciences and Public Policy Institute of the Johns Hopkins University School of Hygiene and Public Health, a public member of the American Chemistry Council's Strategic Science Team for its Long-Range Research Initiative, and a member of the Programme Advisory Committee for the World Health Organization's International Programme on Chemical Safety. Dr. Farland recently served as chair of an external advisory group for the National Institute of Environmental Health Sciences regarding the future of the Superfund Basic Research Program. He is the chair of a standing Committee on Emerging Science for Environmental Health Decisions of the National Research Council. In 2002, Dr. Farland was recognized by the Society for Risk Analysis with the Outstanding Risk Practitioner Award, and in 2005, he was named a fellow of the society. In 2006, he received a Presidential Rank Award for his service as a federal senior executive. In 2007, he was elected a fellow of the Academy of Toxicological Sciences. He currently serves as a member of the NRC Committee to Develop a Research Strategy for Environmental, Health, and Safety Aspects of Engineered Nanomaterials. Dr. Farland received his PhD from the University of California, Los Angeles in cell biology and biochemistry.

### *Members*

**AYLWARD, Lesa** is a Principal at Summit Toxicology, LLP, located in Falls Church, Virginia, USA, and is an Honorary Associate Professor at the University of Queensland, Australia, National Research Centre for Environmental Toxicology and Queensland Children's Medical Research Institute. She has more than 25 years of experience in chemical risk assessment and hazard communication. She specializes in applying pharmacokinetic modeling and data in the assessment of toxicology, exposure, and risk, including the interpretation of biomonitoring data for assessing human health risks from a variety of chemicals. Dr. Aylward and her colleagues at Summit Toxicology have published on the development of tools for screening-level evaluation of population biomonitoring data for a wide range of chemical compounds in a risk assessment context. Dr. Aylward is a member of the board of the International Society for Exposure Science (Councilor) and an active member of the Society of Toxicology (Biological Modeling and Risk Assessment Specialty Sections) and the Society for Risk Analysis. Prior to her position at Summit Toxicology, Dr. Aylward provided consulting services at Exponent, Inc.; BBL, Inc.; and Karch & Associates. She received her B.S. and M.S. in engineering from the Massachusetts Institute of Technology and her Ph.D. in toxicology from Utrecht University.

**BECKER, Richard A.**, is a Senior Toxicologist in the American Chemistry Council, focusing on emerging health risk science issues, including advanced molecular screening methods in toxicity evaluation and risk assessment, human biomonitoring, sensitive subpopulations, endocrine screening and testing and alternative test methods. He was a toxicology study director for NTP and NCI sponsored toxicity studies at SRI International (1985-1987), and then served as a senior scientist with the State of California from 1987 to 1999. His experience in California government included appointments to increasingly important technical and scientific management positions, beginning in the Department of Toxic Substances Control, rising first to Deputy Director of Scientific Affairs in the California Environmental Protection Agency's Office of Environmental Health Hazard Assessment (OEHHA), and subsequently to Director of OEHHA by appointment of Governor Wilson. In these positions, Dr. Becker initially conducted and then managed hazard evaluations, exposure assessments and risk characterizations to determine health and environmental threats posed by the exposures to hazardous substances in the environment. He is a Diplomate of the American Board of Toxicology. Dr. Becker received his B.A. in Chemistry from Swarthmore College and a Ph.D. in Pharmacology and Toxicology from the University of California. He also received post-doctoral training at the University of Toronto and the International Agency for Research on Cancer.

**COLGLAZIER, E. William**, is Visiting Scientist in the Center for Science Diplomacy at the American Association for Advancement of Science (AAAS) and works primarily to support science diplomacy and international collaboration and cooperation in science and technology. He served as the fourth Science and Technology Adviser to the Secretary of State from 2011 to 2014. His role was to provide scientific and technical expertise and advice in support of the development and implementation of U.S. foreign policy. From 1994 to 2011, he served as Executive Officer of the National Academy of Sciences (NAS) and the National Research Council (NRC) where he helped to oversee the studies that provide independent, objective scientific advice on public policy issues. He received his Ph.D. in theoretical physics from the California Institute of Technology in 1971, and prior to 1994 worked at the Stanford Linear Accelerator Center, the Institute for Advanced Study in Princeton, the Center for Science and International Affairs at Harvard's Kennedy School of Government, and the University of Tennessee. While at Harvard, he also served as Associate Director of the Program in Science, Technology, and Humanism of the Aspen Institute. While at Tennessee, he directed several research centers dealing with environmental, energy, and waste management issues and worked with scientists at Oak Ridge National Laboratory and Oak Ridge Associated Universities. In 1976-77, he was an AAAS Congressional Science Fellow working for Congressman George Brown. He is past chair of the Forum on Physics and Society of the American Physical Society and a Fellow of the AAAS and APS. He is the recipient of the 2015 Joseph A. Burton Forum Award of the American Physical Society that recognizes "outstanding contributions to the public understanding or resolution of issues involving the interface of physics and society."

**Di TORO, Dominic M.**, (NAE) is the Edward C. Davis Professor of Civil and Environmental Engineering in the Department of Civil and Environmental Engineering at the University of Delaware. He has specialized in the development and application of mathematical and statistical models to stream, lake, estuarine, and coastal water and sediment quality problems. Recently his work has focused on the development of water and sediment quality criteria for the U.S. Environmental Agency (EPA), sediment flux models for nutrients and metals, and integrated hydrodynamic, sediment transport, and water quality models. He is a member of the National Academy of Engineering and served on the NRC Committee on Sediment Dredging at Superfund Megasites, and Committee on the Evaluation of Chesapeake Bay Program Implementation for Nutrient Reduction to Improve Water Quality. He received a B.E.E. in electrical engineering from Manhattan College, an M.A. in electrical engineering from Princeton University, and a

Ph.D. in civil and geological engineering from Princeton University.

**DORMAN, David C.** is a Professor of Toxicology in the Department of Molecular Biosciences of North Carolina State University. The primary objective of his research is to provide a refined understanding of chemically induced neurotoxicity in laboratory animals that will lead to improved assessment of potential neurotoxicity in humans. Dr. Dorman's research interests include neurotoxicology, nasal toxicology, pharmacokinetics, and cognition and olfaction in animals. He has served on nine National Research Council committees, chairing four of them. He is currently chairing the Committee on Predictive-Toxicology Approaches for Military Assessments of Acute Exposures. He has served on other advisory boards for US Navy, NASA, USDA, and is currently a member of the NTP's Board of Scientific Counselors. He received his DVM from Colorado State University. He completed a combined PhD and residency program in toxicology at the University of Illinois at Urbana-Champaign and is a diplomate of the American Board of Veterinary Toxicology and the American Board of Toxicology. He is an elected fellow of the Academy of Toxicological Sciences and he is a fellow of the American Association for the Advancement of Sciences.

**FAIRBROTHER, Anne**, is a Principal Scientist (Retired) in Exponent's EcoSciences practice, with more than 30 years of experience in ecotoxicology, wildlife toxicology, contaminated site assessment, and regulatory science. She has conducted large-area (> 100 sq mile) risk assessments in tropical, desert, and mountain ecosystems, determining risk thresholds for plants and wildlife. She provided consultation on future development of mine pit lakes, assessed the risks to livestock during mine closure operations, and conducted assessments of risk to terrestrial and aquatic organisms from selenium, mercury, and other metals. She has assessed risks to wildlife from organic chemicals, including DDT, PCBs, dioxins, and petroleum hydrocarbons. Dr. Fairbrother has consulted with industry groups and businesses in product review and registration, particularly agrichemicals. She has worked in support of U.S., Canadian, and European regulatory processes for both the public and private sectors. Dr. Fairbrother has testified in front of governmental Boards of Review and Science Advisory Boards, and has briefed Congressional committees. She has prepared expert testimony, been deposed, and served as an expert witness at trials on environmental risks of pollutants for legal cases within the U.S. Dr. Fairbrother has drafted guidance documents for ecological risk assessments including the EPA's Framework for Metals Risk Assessment, the BC Ministry of Environment guidance for implementing Tier 1 ecological risk assessments and incorporating weight of evidence practices into ecological risk assessments of contaminated sites, and has participated in setting ecological soil screening and clean-up values. While a scientist at the EPA, Dr. Fairbrother led research into the ecological risks of genetically modified crops, methods for assessing risks of nanomaterials, and some of the early guidance for field assessments of Superfund sites and effects of pesticides on birds. She researched and developed methods for assessment of chemical effects on bird immune and endocrine systems. Dr. Fairbrother has published more than 100 peer-reviewed articles, books, and book chapters that reflect her expertise in wildlife toxicology, immunotoxicology, endocrine-disrupting chemicals, and ecological risk assessment. She has served on several National Academies of Sciences committees; European Research Council review panels; and numerous other scientific boards, expert panels, and editorial boards. A veterinarian and Certified Wildlife Biologist, Dr. Fairbrother served as President of the Society of Environmental Toxicology and Chemistry, American Association of Wildlife Veterinarians, and Wildlife Disease Association. Dr. Fairbrother holds an adjunct professorship at Oregon State University, Department of Environmental and Molecular Toxicology and is a SETAC Science Fellow.

**GRAY, George** is a professor in Environmental and Occupational Health at the George Washington

University. In both academic and policymaking settings, Professor Gray has long been committed to the effective use of science to inform public health choices, and emphasizes the importance of communicating those choices effectively to citizens, journalists, and lawmakers. Risk analysis, including the tradeoffs that must be made when risks exist on both sides of a decision, has been a core component of that work. Prior to joining the Milken Institute School of Public Health in 2010, Professor Gray served as assistant administrator for the EPA's Office of Research and Development and as the agency science advisor, promoting scientific excellence in EPA research, advocating for the continuing evolution of the agency's approach to analysis, and encouraging programs that provide academic research to support EPA's mission. His areas of focus included nanotechnology, ecosystem research, the influence of toxicology advances on testing and risk assessment, and sustainability. From 2001 to 2005, Professor Gray was executive director of the Harvard Center for Risk Analysis, and a member of the faculty at the Harvard School of Public Health. In addition to teaching, he applied the tools of risk analysis to public health problems ranging from mad cow disease to pesticides in food to the risks and benefits of fish consumption.

**HAMBURG, Steven P.**, is Chief Scientist of the Environmental Defense Fund and is an Ecosystem Ecologist. Trained at Vassar College (AB, Biology), Yale (MFS ecology and forestry; PhD, biogeochemistry and ecosystem ecology), Stanford Universities (Post-doc ecology) and Harvard (Bullard Fellowship) he has been involved in biogeochemistry/forest ecology research for more than 25 years. He has published 100 scientific papers on biogeochemistry, climate change impacts on forests and carbon accounting approaches and methodologies and has served as a lead author for the IPCC. His involvement with the IPCC resulted in his being acknowledged as one of the contributing recipients of the 2007 Nobel Peace Prize. He was twice awarded the US EPA Environmental Merit Award from Region 1 for his climate change related work. He was a senior member of Brown University faculty for 15 years where he was the founding director of the Global Environment Program at the Watson Institute for International Studies. Prior to being at Brown he was on the faculty of the University of Kansas where he directed the Environmental Studies Program and served as the Environmental Ombudsman. He has supervised the research of more than 20 graduate students and 60 undergraduates. He helped found the East Asia Long-term Ecological Research network and served as the Vice Chair of the International Long Term Ecological Research Network. He currently co-chairs the Solar Radiation Management Governance Initiative (joint project of Royal Society, TWAS, and EDF), chairs the Hubbard Brook Research Foundation and serves on USDA's National Agricultural Research, Economics, Education and Extension Advisory Board, US EPA Science Advisory Board, NRC's Board on Environmental Science and Toxicology as well as many university advisory bodies.

**HIATT, Robert A.**, is Professor and Chair of Epidemiology and Biostatistics at the University of California, San Francisco (UCSF). He also is the Director of Population Sciences and Associate Director of the UCSF Helen Diller Family Comprehensive Cancer Center. In addition, Dr. Hiatt holds adjunct appointments as Professor in the Division of Epidemiology at the University of California Berkeley School Of Public Health and as an Adjunct Investigator at the Division of Research at Kaiser Permanente Northern California in Oakland. From 1998 to early 2003 he was the first Deputy Director of the Division of Cancer Control and Population Sciences at the National Cancer Institute (NCI), where he oversaw cancer research in epidemiology and genetics, surveillance, and health services research. Dr. Hiatt is the Principal Investigator of the Coordinating Center for the NIEHS/NCI-supported Breast Cancer and the Environment Research Program that is studying the influence of environmental factors on pubertal maturation as a window to understanding the causes of breast cancer. He is a past president of the American College of

Epidemiology and the American Society for Preventive Oncology. He has served on several NRC and IOM Committees including the Committee on Breast Cancer and the Environment: The Scientific Evidence, Research Methodology, and Future Directions. Dr. Hiatt received an M.D. from the University of Michigan, and a Ph.D. in epidemiology from the University of California, Berkeley.

**LEWIS, R. Jeffrey** is currently a Distinguished Scientific Associate in the Epidemiology, Health Surveillance and Quality Assurance Section of ExxonMobil Biomedical Sciences, Inc (EMBSI). He is responsible for supporting ExxonMobil scientific programs related to naphthalene, 1,3-butadiene, human health risk assessment, regulatory affairs and regulatory impact analysis, and he is Chair of EMBSI's Senior Technical Council. He has served on a number of industry trade association scientific committees (e.g., American Chemistry Council), external science advisory boards (e.g., the Alliance for Risk Assessment Expert Science Panel, U.S. Environmental Protection Agency Science Advisory Board for 1,3-butadiene) and is a member of the American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value (TLV) Committee. Dr. Lewis also has an adjunct faculty appointment at the University of Texas School of Public Health, is Past Treasurer for the Society for Risk Analysis and is currently the Assistant Treasurer for the Society for Benefit-Cost Analysis. Dr. Lewis received his Bachelor of Science degree in biology from the University of Kansas and M.S. and Ph.D. degrees in Epidemiology from the University of Texas School of Public Health. In addition, he earned a Master of Business Administration degree from Rutgers University.

**MATTHEWS, H. Scott**, is a professor in the Department of Civil and Environmental Engineering and the Department of Engineering and Public Policy at Carnegie Mellon University. He is also a member of the Green Design Institute, an interdisciplinary research consortium at Carnegie Mellon focused on modeling energy and environmental problems as systems, building decision support tools, and supporting robust policy decisions under uncertainty. His research and teaching focuses on valuing the socioeconomic implications of environmental systems, sustainable engineering, and industrial ecology. At Carnegie Mellon, he has taught graduate and undergraduate courses in the Departments of Economics, Civil and Environmental Engineering, Engineering and Public Policy, and Computer Science. His work intends to facilitate environmental decision making under uncertainty via large datasets, computation, and visualization methods. He has contributed to development of tools for environmental and energy life-cycle assessment of products and processes (such as the EIO-LCA model), estimating and tracking environmental effects across global supply chains (such as carbon footprinting), and the sustainability of infrastructure systems. Dr. Matthews has served as chair of the Committee on Sustainable Systems and Technology with the Institute of Electrical and Electronic Engineers and on the Executive Committee for the American Center for Life Cycle Assessment. He participated in the National Research Council study on the Hidden Costs of Energy and is a member of the NRC Board on Environmental Studies and Toxicology.

**PERCIASEPE, Robert**, is President of the Center for Climate and Energy Solutions, which is widely recognized in the United States and internationally as a leading, independent voice for practical policy and action to address the twin challenges of energy and climate change. Mr. Perciasepe has been an environmental policy leader in and outside government for more than 30 years, most recently as Deputy Administrator of the U.S. Environmental Protection Agency (EPA). He is a respected expert on environmental stewardship, natural resource management, and public policy, and has built a reputation for bringing stakeholders together to solve issues. While Mr. Perciasepe served as Deputy Administrator from 2009 to 2014, EPA set stricter auto emissions and mileage standards, increased protections for the nation's streams and rivers, and developed carbon emissions standards for power plants. Mr. Perciasepe

was previously assistant administrator for both the agency's water and clean air programs; leading efforts improve the safety of America's drinking water and lower sulfur levels in gasoline to reduce smog. In 2002, Mr. Perciasepe joined the National Audubon Society, one of the nation's oldest conservation organizations, as its senior vice president for public policy. He served as the group's chief operating officer from 2004 to 2009, and worked to protect wetlands and expand environmental education. He has also held top positions in state and municipal government – as Secretary of the Environment for the state of Maryland from 1990 to 1993 and as a senior planning official for the city of Baltimore, where he managed the city's capital budget. Mr. Perciasepe holds a master's degree in planning and public administration from the Maxwell School of Syracuse University and a Bachelor of Science degree in natural resources from Cornell University.

**POSTLEWAITE, R. Craig** served as the Chief of Force Readiness and Health Assurance and then as the Chief of the Public Health Division, Defense Health Agency, in the Office of the Assistant Secretary of Defense for Health Affairs from December 2008 to February 2015. There he provided policy, direction, and oversight for all aspects of military public health with an emphasis on medical readiness and deployment health, with an emphasis on occupational and environmental health. Dr. Postlewaite developed numerous policies and programs to prevent and assess environmental and communicable disease agent exposures in order to prevent disease, disability, and death among Service members and their families. As the DoD's senior public health policy maker for the protection of Service members' health during and after deployments, he prepared and delivered testimony to Congress on a variety of topics; contributed toward numerous national and international military public health initiatives, including special support to the Quadrapartite Chemical, Biological, and Radiological Working Group made up of the US, Canada, the United Kingdom and Australia; served as the Department's expert on potential health risks associated with burn pit smoke and other particulate matter exposures in Iraq and Afghanistan. Following the 2011 Japanese tsunami, he directed the establishment of a radiation exposure registry and web-site for the 75,000 DoD members and their families who were exposed to low-levels of ionizing radiation.

Dr. Postlewaite was commissioned in the U.S. Air Force Reserves in 1973 upon the award of an Armed Force Health Professional Scholarship. In 1976, he graduated with a Doctor of Veterinary Medicine degree from Colorado State University and entered upon active duty. In 1987, he earned a Master's Degree in Public Health from Johns Hopkins School of Hygiene and Public Health. He retired from the Air Force as a Colonel in 2002 after having served for 26 years as an Air Force Veterinarian and Public Health Officer. During those years, he also served as an Assistant Professor of Biology at the U.S. Air Force Academy; the Command Public Health Officer and Health Promotions Coordinator, United States Air Forces in Europe; Director of Health Risk Management in the Office the Deputy Assistant Secretary of the Air Force for Environment, Safety, and Occupational Health; and as the Director of Deployment Health and Chief of Staff of the White House-directed Military and Veterans Health Coordinating Board.

Dr. Postlewaite's military decorations include the Defense Superior Service Medal, the Meritorious Service Medal with 4 oak leaf clusters, and the Navy Commendation Medal. His civilian awards include the Medal for Distinguished Civilian Service and the Civilian Career Service Award. He is also the recipient of the Johns Hopkins University's Woodrow Wilson Distinguished Government Service Award, and the Distinguished Alumni Award from Colorado State University. On January 31, 2015, he retired from civilian federal service. He is married to Betty Postlewaite, has two grown children, and resides in Burke, VA.

**RASOULPOUR, Reza J.,** PhD, is the Global Predictive Safety Center Leader within Regulatory Sciences (RS), Research and Development (R&D) at Dow AgroSciences (DAS). His current responsibilities include leadership of a cross-disciplinary team of regulatory scientists with expertise in mammalian and ecological toxicology, environmental fate and metabolism, field fate modeling, kinetics, and analytical chemistry who partner with R&D Discovery to design products with more favorable environmental and human health safety profiles. Rasoulpour also spearheads several science strategy projects such as incorporation of predictive toxicogenomics platforms, membership on the Crop Protection Technology Steering Committee, and is also facilitator to the DAS R&D Leadership Team (RDLT). Dr. Rasoulpour joined Dow in 2007 with a background in reproductive toxicology and molecular biology.

Dr. Rasoulpour's primary research focus has been in leading the epigenetics and toxicogenomics research programs to accelerate pipeline product development as well as investigative mode-of-action research to characterize molecular mechanisms and their impact to product safety assessment. Dr. Rasoulpour currently serves as an appointed member on the National Academy of Sciences Emerging Science for Environmental Health Decisions standing committee (2016 to present), he is on the editorial board of the Environmental and Molecular Mutagenesis journal (2017 to present), and was nominated to the Society of Toxicology Membership Committee (2016 to present). He has organized numerous symposia and workshops at the Society of Toxicology meetings, has served as an invited speaker and panelist for scientific sessions at the National Academy of Sciences, ICCA-LRI workshops, ILSI-HESI, ECETOC, Crop Life America, Society for Toxicologic Pathology, and the Teratology Society. To date, he has authored/coauthored 38 peer-reviewed publications to the scientific literature, as well as authored a book chapter on the topic of male reproductive biology.

Dr. Rasoulpour earned a B.S. from the University of Connecticut, where he received the title of University Scholar, the university's highest academic honor. He then embarked on researching reproductive toxicology in the laboratory of Kim Boekelheide and was awarded his Ph.D. from Brown University.

**RATNER, Mark A.,** (NAS) is the Lawrence B. Dumas Distinguished University Professor and Co-Director of Northwestern University's Initiative for Sustainability and Energy at Northwestern (ISEN). ISEN is an umbrella organization whose unique mission is to catalyze the development of transformational science, technology, education and policy for sustainability and energy. Dr. Ratner has been a primary scientific contributor to molecular materials theory and modeling. His research has focused on mechanistic phenomena central to chemical structure and processes, and the application of appropriate theoretical models and methods to derive structure and function relationships between molecular structures and the susceptibilities and properties of molecular matter. Dr. Ratner has been active in several international collaborations, particularly in Denmark, Israel, and the Netherlands. He has been awarded the Feynman Prize and the Langmuir Award of the American Chemical Society; He also has served as a member of the American Academy of Arts and Sciences, the International Academy of Quantum Molecular Sciences, and the Royal Danish Academy of Sciences. Dr. Ratner is a member of the National Academy of Sciences and he has served as member or chair of ten committee and boards of the National Academies, including the Board on Chemical Sciences and Technology. He received his Ph.D. from Northwestern University in 1969.

**ROSE, Joan B.,** (NAE) serves as the Homer Nowlin Chair in Water Research at Michigan State University, the Co-Director of the Center for Advancing Microbial Risk Assessment, and the Director of the Center for

Water Sciences. She is an international expert in water microbiology, water quality, and public health safety with over 300 publications. Dr. Rose's work has examined new molecular methods for waterborne pathogens and zoonotic agents and source tracking techniques. She has been involved in the study of water supplies, water used for food production, and coastal environments, as well as drinking water treatment, wastewater treatment, reclaimed water, and water reuse. She has been instrumental in advancing quantitative microbial risk assessment. She was awarded the international Clarke Water Prize for contributions to water science and technology in 2001 and the International Water Association (IWA) Woman in Science award in 2008 and is currently a member of the Strategic Council for the IWA. She had served as chair of the U.S. Environmental Protection Agency Science Advisory Drinking Water Committee. She is a member of the National Academy of Engineering and has served on several National Research Council committees, most recently the Committee on Science for EPA's Future, the Planning Committee for Water Challenges for Public Health Needs Domestically and Internationally: A Workshop, the Committee on Sustainable Underground Storage of Recoverable Water, and the Panel on Human Health and Security. Dr. Rose earned a PhD in microbiology from the University of Arizona.

**SOLOMON, Gina M.**, is the Deputy Secretary for Science and Health at the California Environmental Protection Agency (CalEPA) and a Clinical Professor of Medicine at the University of California San Francisco (UCSF). Prior to coming to CalEPA in 2012, she was a senior scientist at the Natural Resources Defense Council, the director of the occupational and environmental medicine residency program at UCSF, and the co-director of the UCSF Pediatric Environmental Health Specialty Unit. Dr. Solomon's work has spanned a wide array of areas, including children's environmental health, reproductive toxicity, cumulative impacts and evaluating the use of novel data streams to screen chemicals for toxicity. She has also done work in exposure science for air pollutants, pesticides, mold, and metals in soil and on the health effects of climate change. She was involved in the aftermath of Hurricane Katrina, the Gulf oil spill, and the Chevron Richmond explosion and fire, and is currently working to improve refinery process safety in California. Dr. Solomon currently serves both on the U.S. EPA's Science Advisory Board and Board of Scientific Counselors. She previously served on the Committees on Toxicity Testing in the 21st Century and Exposure Science in the 21st Century, as well as on the National Toxicology Program's Board of Scientific Counselors. Dr. Solomon received her bachelor's degree from Brown University, her M.D. from Yale, and did her M.P.H. and her residency and fellowship training in internal medicine and occupational and environmental medicine at Harvard.

**SUSSMAN, Robert M.**, is the principal in Sussman and Associates, a consulting firm that offers advice and support on energy and environmental policy issues to clients in the non-profit and private sectors. He is also an Adjunct Professor at Georgetown University Law Center and was appointed by President Obama to the Interstate Commission for the Potomac River Basin. Bob is a member of the Board of Directors for the Chesapeake Legal Alliance and is serving on the NAS Committee studying the Effects of Diluted Bitumen on the Environment. Bob recently completed four and a half years of service in the Obama Administration, first as Co-Chair of the Transition Team for EPA and then as Senior Policy Counsel to the EPA Administrator. In this position, Bob functioned as the Administrator's principal policy advisor, providing oversight and guidance on the full suite of policy issues across the Agency. Bob worked closely with all of EPA's senior officials in Washington and the Regions. He also played a key role in EPA's interface with OMB, CEQ and other White House offices and worked closely with other agencies, particularly the Department of Energy and Department of Interior. Bob served in the Clinton Administration as the EPA Deputy Administrator during 1993-94. He was the Agency's Chief Operating Officer and Regulatory Policy Officer, testified frequently before Congress and represented EPA at several international meetings. At the end of 2007, Bob retired as a partner at the law firm of Latham & Watkins,

where he headed the firm's environmental practice in DC for ten years. He joined Latham in 1987 to start its environmental practice in DC after being a partner at Covington & Burling since 1974. Bob worked with a wide range of companies and trade associations on all aspects of energy and environmental policy, functioning as a policy advisor, advocate and litigator. For several years, Bob was named one of the leading environmental lawyers in Washington, DC by Chambers USA: America's Leading Business Lawyers and The International Who's Who of Environmental Lawyers. Bob was a Senior Fellow at the Center for American Progress in 2008, writing and speaking about climate change and energy. Bob is a magna cum laude 1969 graduate of Yale College and a 1973 graduate of Yale Law School, where he was an editor of the Yale Law Journal. Bob clerked for Judge Walter K. Stapleton of the Third Circuit Court of Appeals.

**SWACKHAMER, Deborah L.**, is Professor of Science, Technology, and Public Policy in the Humphrey School of Public Affairs, and Professor of Environmental Health Sciences in the School of Public Health. She also directed the Water Resources Center from 2002 until 2014. She received a BA in Chemistry from Grinnell College, IA and an MS and PhD from the University of Wisconsin-Madison in Water Chemistry and Limnology & Oceanography, respectively. After two years post-doctoral research in Chemistry and Public & Environmental Affairs at Indiana University, she joined the Minnesota faculty in 1987. She studies the processes affecting the behavior of and exposures to, toxic chemicals in the environment and works on policies to address these potential risks. In 2012 Dr. Swackhamer completed a 4 year term as Chair of the Science Advisory Board of the US Environmental Protection Agency, and served as a member of the Science Advisory Board of the International Joint Commission of the US and Canada from 2000-2013. She recently served on the National Research Council, National Academy of Sciences committee addressing Sustainability Linkages in the Federal Government and the NAS Committee evaluating the US Environmental Protection Agency Laboratory Enterprise. She currently serves as a Governor appointee on the Minnesota Clean Water Council. She was President of the National Institutes of Water Resources in 2011-2012. She is a Fellow in the Royal Society of Chemistry in the UK. Dr. Swackhamer received the 2007 Harvey G. Rogers Award from the Minnesota Public Health Association. In 2009 she received the prestigious Founders Award from the Society of Environmental Toxicology and Chemistry for lifetime achievement in environmental sciences. She was the 2010 recipient of the University of Minnesota's Ada Comstock Award. In November, 2014 she was named an Inaugural Fellow of the Society of International Toxicology and Chemistry.

**THORNE, Peter S.**, is Professor and Head of the Department of Occupational and Environmental Health at the University of Iowa, College of Public Health. Dr. Thorne is Associate Director and co-founder of the Interdisciplinary Graduate Program in Human Toxicology. He is the director of the NIH-funded Environmental Health Sciences Research Center at the University of Iowa and Principal Investigator of the AESOP Project (a community-based research study) and a project on Toxicity and Risk of Inhaled PCB Mixtures for the Iowa Superfund Research Program. He runs a productive research laboratory engaging his students in studies of environmental risk factors for asthma, health effects of inhaled air pollutants, inflammatory lung diseases, endotoxin-induced immunomodulation, nanotoxicology, and novel methodology for exposure assessment to airborne toxicants. He has published over 225 peer-reviewed journal articles. Dr. Thorne has served on a wide variety of editorial and review boards for scientific journals, government agencies, and academia. From 2003 to 2006, he served on the NIH National Advisory Environmental Health Sciences Council. Since 2011, he has served on the U.S. EPA Chartered Science Advisory Board (SAB) and has been Chair of the SAB since January 2015. He has been a member of the Board on Environmental Studies and Toxicology since 2013. Dr. Thorne received his B.S. in chemical engineering, M.S. in biomedical engineering and Ph.D. in toxicology from the University of

Wisconsin-Madison, and completed post-doctoral training in immunotoxicology at the University of Pittsburgh.