

Biosketches for Members of the Chartered SAB and Board Liaisons

Swackhamer, Deborah L. (Chair)

Dr. Deborah L. Swackhamer is Professor and Charles M. Denny Jr., Chair in Science, Technology, and Public Policy in the Hubert H. Humphrey School of Public Affairs, and Co-Director of the University's Water Resources Center. She also is Professor in Environmental Health Sciences in the School of Public Health. She received a BA in Chemistry from Grinnell College (Grinnell, IA) and a 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 has studied the processes affecting the behavior of, and exposures to, toxic chemicals in the environment, including bioaccumulative chemicals in the Great Lakes and environmental estrogens in wastewater. Dr. Swackhamer currently serves as Chair of the chartered Science Advisory Board of the US Environmental Protection Agency, and on the Science Advisory Board of the International Joint Commission of the US and Canada. She currently serves on the National Research Council, National Academy of Sciences committee reviewing the USGS National Assessment of Water Quality Program. She is appointed by Governor Pawlenty to serve on the Minnesota Clean Water Council. Dr. Swackhamer is a member of the Editorial Advisory Board for the journal Environmental Science & Technology, and she chairs the Editorial Advisory Board of the Journal of Environmental Monitoring. 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. She received the prestigious Founders Award from the Society of Environmental Toxicology and Chemistry for lifetime achievement in environmental sciences in 2009. She is the 2010 recipient of the University of Minnesota's Ada Comstock Award.

Alexeeff, George

Dr. George Alexeeff, Ph.D. is Director of the Office of Environmental Health Hazard Assessment (OEHHA) in the California Environmental Protection Agency. He provides scientific and policy input on the medical, scientific, and public health risks posed by hazardous substances and act as a scientific expert on health effects of various contaminants. He oversees a staff of 125 including over 80 scientists in multidisciplinary evaluations of the health impacts of pollutants and toxicants in air, water, soil and other media. He is also an adjunct Professor in the Department of Environmental Toxicology at the University of California at Davis. He earned his Ph.D. in Pharmacology and Toxicology from the University of California at Davis and has been certified as a Diplomat of the American Board of Toxicology, Inc. (DABT) since 1986. He has reviewed over 140 documents evaluating human epidemiological or animal toxicological evidence for OEHHA or other agencies such as U.S. EPA. Dr. Alexeeff has recently served on three National Academy of Sciences' Committees, and is a current member of the U.S. EPA Science Advisory Board's Drinking Water Committee, and EPA's Science Advisory Board. Dr. Alexeeff's professional activities include: past President of the Northern California Chapter of the Society of Toxicology, the past President Genetic and Environmental Toxicology Association of Northern California, member of the Society of Toxicology, and charter member of the Society for Risk Analysis. Currently Dr. Alexeeff is not receiving any grant funding.

Allen, David T.

Dr. David Allen is the Gertz Regents Professor of Chemical Engineering, and the Director of the Center for Energy and Environmental Resources, at the University of Texas at Austin. He is the author of eight books and over 200 papers. For the past two decades, his work has focused primarily on urban air quality and the development of materials for environmental and engineering education. Dr. Allen was a lead investigator for the first and second Texas Air Quality Studies, which involved hundreds of researchers drawn from around the world, and which have had a substantial impact on the direction of air quality policies in Texas. He has developed environmental educational materials for engineering curricula and for the University's core curriculum, as well as engineering education materials for high school students. His research is supported by the Environmental Protection Agency (for examining the air quality impacts of drought and electrical grids), the National Science Foundation (for smart, green, electrical grids and for the development of high school engineering programs), a consortium including Environmental Defense Fund and natural gas producers (for the measuring the methane emissions of natural gas production), and the federal court system (for measuring air pollutant concentrations in neighborhoods near petroleum refineries). He also directs the Air Quality Research Program funded by the State of Texas. The quality of his work has been recognized by the National Science Foundation (through the Presidential Young Investigator Award), the AT&T Foundation (through an Industrial Ecology Fellowship), the American Institute of Chemical Engineers (through the Cecil Award for contributions to environmental engineering and through the Research Excellence Award of the Sustainable Engineering Forum), the Association of Environmental Engineering and Science Professors (through their Distinguished Lecturer Award), and the State of Texas (through the Governor's Environmental Excellence Award). He has won teaching awards at the University of Texas and UCLA. Dr. Allen received his B.S. degree in Chemical Engineering, with distinction, from Cornell University in 1979. His M.S. and Ph.D. degrees in Chemical Engineering were awarded by the California Institute of Technology in 1981 and 1983. He has held tenured faculty appointments at UCLA and the University of Texas and visiting faculty appointments at the California Institute of Technology, the University of California, Santa Barbara, and the Department of Energy. Dr. Allen's research is supported by EPA (for examining the air quality impacts of drought and electrical grids), the National Science Foundation (for smart, green, electrical grids and for the development of high school engineering programs), a consortium including Environmental Defense Fund and natural gas producers (for the measuring the methane emissions of natural gas production), and the federal court system (for measuring air pollutant concentrations in neighborhoods near petroleum refineries).

Alvarez, Pedro

Dr. Pedro J. Alvarez is the George R. Brown Professor and Chair of Civil and Environmental Engineering Department at Rice University. He received a degree in Civil Engineering from McGill University and MS and Ph.D. degrees in Environmental Engineering from the University of Michigan. His research focuses on environmental sustainability through bioremediation of contaminated aquifers, fate and transport of toxic chemicals, the water footprint of biofuels, microbial-plant interactions, medical bioremediation, and environmental implications and applications of nanotechnology. Dr. Alvarez is a Diplomate of the American Academy of Environmental Engineers and a Fellow of ASCE. Past honors include President of AEESP, Honorary Consul of Nicaragua, the Malcom Pirnie-AEESP Frontiers in Research Award, the WEF McKee Medal for Groundwater Protection, the SERDP cleanup project of the year award, the Button of the City of Valencia, the Collegiate Excellence in Teaching Award from the University of Iowa; the Alejo Zuloaga Medal from the Universidad de Carabobo, Venezuela; a Career Award from the National Science Foundation; a Rackham Fellowship, and best paper awards from the EPA/HSRC for Regions 7 & 8; WEF, and the Battelle Bioremediation Symposium. Dr. Alvarez currently serves on the editorial board of Environmental Science and Technology, and as honorary professor at Nankai and Kunming Universities in China and as adjunct professor at the Universidade Federal de Santa Catarina in Florianopolis, Brazil. Dr. Alvarez has also served as environmental advisor to the President of Nicaragua and as scientific advisor to the Mexican Petroleum Institute Biotechnology Program, the Cities of Ann Arbor, Managua and Valencia, the State of Iowa, and the governments of Dominica and Nicaragua on hazardous waste remediation and policy development. He has also given over 100 international invited lectures and has organized/chaired 15 international conference sessions.

Arvai, Joseph

Dr. Joseph Arvai is the Svare Chair in Applied Decision Research in the Haskayne School of Business, and the Institute for Sustainable Energy, Environment, and Economy. Prior to arriving at the University of Calgary in 2011, he was on the faculties of Michigan State University (2006-2010) and The Ohio State University (2001-2005). He received his Ph.D. in the decision sciences from the University of British Columbia and he also holds degrees in Ecology and Oceanography (BSc and MSc, respectively). Dr. Arvai's research focuses on advancing our understanding of how people process information and make decisions, both as individuals and in groups. A second objective of his research is to develop and test decision support tools that can be used by people to improve decision quality across a variety of environmental, social, and economic contexts. Dr. Arvai's current research is supported by grants from: the Canada

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School for Energy and Environment (National Energy Strategy); the National Science Foundation (Decision-makers Use of Climate Science); Natural Resources Canada and Carbon Management Canada (Carbon Management); Canadian Tri-council Foundation for Innovation (Enhancing Research Infrastructure in Canada); and Michigan State University Board of Trustees (Decision Support for Energy Planning). In addition to his research program, Dr. Arvai teaches courses on behavioral decision research and sustainability for undergraduates, graduate students, and MBAs. His research has been published in some of the premier interdisciplinary journals, which reflects the wide range of contexts in which he works: these include Risk Analysis, Environmental Science & Technology, the Journal of Risk Research, Ecological Applications, Ecological Economics, and Climatic Change. Dr. Arvai's research has also received international recognition and media attention; media outlets that have covered his research include the British Broadcasting Corporation, the Australian Broadcasting Corporation, CBS News, and the New York Times. Dr. Arvai has also received several awards for his research. In 2006, he was the recipient of the Chauncey Starr Award, which each year honors the individual aged 40 or under who has made exceptional contributions to the field of risk and decision analysis. And in 2011, he was named a Leopold Leadership Fellow by the Woods Institute for the Environment at Stanford University.

Benitez-Nelson, Claudia

Dr. Claudia Benitez-Nelson received her Ph.D. in Oceanography from the Woods Hole Oceanographic Institution/Massachusetts Institute of Technology Joint Program. She is currently Professor in the Marine Science Program & Department of Earth & Ocean Sciences at the University of South Carolina and Director of the Marine Science Program, University of South Carolina. Her research focuses on understanding the ocean's role in climate change, as well as human impacts on nutrient biogeochemistry and coastal ecology. She is a diverse scientist, with expertise in radiochemistry, nutrient biogeochemistry, and harmful algal bloom toxins. Over the past decade, Dr. Benitez-Nelson has authored or co-authored more than 50 papers, including several in the journals of Nature and Science, and two Oceanography Lab Manuals. She has garnered over 3.4 million dollars in research support from a number of federal and state agencies. Her many research honours include the Early Career Award in Oceanography from the American Geophysical Union in 1996, one of the highest honours in the field. She is also highly regarded as a teacher and mentor, having received the National Faculty of the Year Award from the National Society of Collegiate Scholars in 2005 and the University of South Carolina's Mungo Teaching Award in 2006. Dr. Benitez-Nelson currently serves as an Associate Editor of Limnology and Oceanography-Methods and Marine Chemistry, as an elected Councillor of the Oceanography Society, and a member of the Advisory Committee to the Geoscience Directorate of the National Science Foundation.

Buffler, Patricia

Dr. Patricia A. Buffler is Dean Emerita of the School of Public Health at the University of California, Berkeley, having served as Dean from 1991 to 1998, and has been a Professor since 1991. She was appointed to the Kenneth and Marjorie Kaiser Endowed Chair and her current research interests in cancer epidemiology include studies of leukemia and brain tumors in children, health effects of environmental second-hand tobacco smoke, gene-environment interaction in cancer epidemiology, and health effects of non-ionizing radiation. She received her BSN in Nursing and Biology from Catholic University of America in 1960, and a MPH in Public Health Administration and Epidemiology in 1965, and a Ph.D. in Epidemiology in 1973 from the University of California, Berkeley. Dr. Buffler has also served as the principal or co-principal investigator for over three dozen research activities including research activities supported by the National Institutes of Health (NIH) Toxic Substances in the Environment Research Program and the NIH Studies of Molecular Epidemiology of Childhood Leukemia and Environmental Exposures and Leukemia. Dr. Buffler was elected a fellow of the American Association for the Advancement of Science (AAAS) in 1992 and served as an officer for the Medical Sciences Section from 1994-2000. She is a Fellow of the American College of Epidemiology, and has served as President for the Society for Epidemiological Research (1986), the American College of Epidemiology (1992), and the International Society for Environmental Epidemiology (1992-1993). In 1994 she was elected to the Institute of Medicine, National Academy of Sciences (IM/NAS). Dr. Buffler served on the U.S. Environmental Protection Agency (EPA) Science Advisory Board (SAB) Radiation Advisory Committee's (RAC) Nonionizing Electric and Magnetic Fields (EMF) Subcommittee in 1991-1992. Dr. Buffler has served on several editorial boards. In addition to memberships in scientific societies and professional organizations, she has served on numerous national and international advisory groups as director or member of several boards, including the U.S.-Japan Radiation Effects Research Foundation (RERF), the National Urban Air Toxics Research Center, the Lovelace Respiratory Research Institute, the FMC Corporation and the National Council on Radiation Protection and Measurements (NCRP). She has also served as an advisor to the World Health Organization (WHO), the NIH, the U.S. Public Health Service Centers for Disease Control and Prevention (U.S. PHS/CDC) the U.S. Environmental Protection Agency (U.S. EPA), the U.S. Department of Energy (U.S. DOE), the U.S. Department of Defense (U.S. DoD), and the National Academy of Sciences/National Research Council (NAS/NRC), including recent service as a member of the NAS BEIR VII Committee.

Burke, Ingrid

Dr. Ingrid "Indy" Burke is Director of the School of Environment, Natural Resources, and Biodiversity, and Wyoming Excellence Chair at the University of Wyoming. Prior to her current role, Burke was a Professor, University Distinguished Teaching Scholar, and Co-Director of the Graduate Degree Program in Ecology at Colorado State University. Burke has served as a member of several National Research Council (NRC) committees to review national environmental research programs and policies, as a member of the NRC Board on Environmental Studies and Toxicology, as a member on numerous National Science Foundation and other advisory panels, and currently serves on the Science Advisory Board for the Environmental Protection Agency. She has served on editorial boards for Ecological Applications, Ecosystems, and Forest Ecology and Management. Burke has been designated as a National Science Foundation Presidential Faculty Fellow, a National Academy of Sciences Education Fellow in the Life Sciences, and was recently elected a Fellow of the American Association for the Advancement of Science. Burke received her PhD in Botany (1987) at the University of Wyoming, and her BS (1980) at Middlebury College. Dr. Burke receives no federal research funding. Funding for her research comes from her endowed Chair at the University of Wyoming.

Burke, Thomas

Dr. Thomas A. Burke is Associate Dean and Professor at The Johns Hopkins Bloomberg School of Public Health, Department of Health Policy and Management, with joint appointments in the Department of Environmental Health Sciences and the School of Medicine Department of Oncology. He is also Director of the Johns Hopkins Risk Sciences and Public Policy Institute. Dr. Burke was Chair of the National Academy of Sciences Committee on Improving Risk Analysis and a Fellow of the Society for Risk Analysis. His research interests include environmental epidemiology and surveillance, evaluation of population exposures to environmental pollutants, assessment and communication of environmental risks, and application of epidemiology and health risk assessment to public policy. He was Principal Investigator for the Pew Environmental Health Commission which established the framework for a national approach to environmental public health tracking. He has been awarded the Johns Hopkins Golden Apple Award for excellence in teaching four times. Before joining the University faculty, Dr. Burke was Deputy Commissioner of Health for the State of New Jersey and Director of Science and Research for the New Jersey Department of Environmental Protection. In New Jersey, he directed initiatives that influenced the development of national programs, such as Superfund, the Safe Drinking Water Act, and the Toxics Release Inventory. Dr. Burke has served as a member of the National Academy of Sciences Board on Environmental Studies and Toxicology and chaired the NAS Committee on Human Biomonitoring for Environmental Toxicants and Committee on Toxicants and Pathogens in Biosolids Applied to Land. He also served on the NAS Committee on the Toxicological Effects of Methylmercury. In 2003 he was named a lifetime National Associate of the National Academies. He was Inaugural Chair of the Advisory Committee to the Director of the CDC National Center for Environmental Health and a member of the Executive Committee of the EPA Board of Scientific Counselors. Dr. Burke received his B.S. from St. Peter's College, his M.P.H. from the University of Texas and his Ph.D. in epidemiology from the University of Pennsylvania.

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Daniel, Terry

Dr. Terry C. Daniel is Professor Emeritus of Psychology and Natural Resources at the University of Arizona. He received his Ph.D. in Psychology at the University of New Mexico, where he was a Ford Foundation Career Scholar and a University Fellow. Professor Daniel is a Fellow in the American Psychological Association (Population and Environmental Psychology), has served as a member of the Advisory and Founding Committees for the Udall Institute for Public Policy Studies, and as an International Adjunct Professor in Behavioral Sciences at the University of Melbourne, Australia. He is a member of the editorial boards for *Society and Natural Resources*, *Journal of Environmental Psychology*, and *Landscape and Urban Planning*. Professor Daniel received the National Environmental Education Foundation Gifford Pinchot Award in 1993 for outstanding contributions to natural resources management education. Research has focused on the development and application of methods for quantifying relationships between bio-physical features of natural environments and human perception and judgment of environmental quality. Specific areas of research include: aesthetic and recreational impacts of forest management; effects of air pollution on perceived visual air quality in National Parks and Wilderness Areas; effects of environmental/ecological information on public perception and acceptance of environmental change; and roles for environmental data visualization and computer simulation in evaluating public response to environmental management policies.

Daston, George

Dr. George Daston is Victor Mills Society Research Fellow at the Procter & Gamble Company, and an adjunct Professor of Pediatrics at University of Cincinnati. He holds a B.S. in Biology from University of Miami (1978) and a Ph.D. in Developmental Biology and Teratology (1981) from the University of Miami, Coral Gables, Florida. Dr. Daston has published over 100 articles and book chapters and edited five books in toxicology and risk assessment. His current research efforts are in the areas of toxicogenomics and mechanistic toxicology, particularly in addressing how findings in these fields can improve risk assessment for chemicals and the development of non-animal alternatives. Dr. Daston's research has been funded by Procter & Gamble and by a grant from the Cefic (European chemical industry association) Long-range Research Initiative. He has served as President of the Teratology Society, Councilor of the Society of Toxicology, on the EPA Board of Scientific Counselors, National Toxicology Program Board of Scientific Counselors, National Research Council's Board of Environmental Studies and Toxicology, and National Children's Study Advisory Committee. Dr. Daston is Editor-in-Chief of *Birth Defects Research: Developmental and Reproductive Toxicology*. He manages the AltTox website, which is devoted to the exchange of scientific information leading to the development of in vitro replacements for toxicity assessments. Dr. Daston has been awarded the Josef Warkany Lectureship by the Teratology Society, the George H. Scott Award by the Toxicology Forum, and was elected a Fellow of AAAS. Dr. Daston receives no federal research funding.

Denson, Costel

Dr. Costel D. Denson is the managing member of Costech Technologies, L.L.C., a company that fabricates instrumentation for characterizing the application and performance properties of synthetic materials, and the impact that the use of these materials can have on the environment. Dr. Denson's research has focused on the rheological characterization and processing of polymeric materials, with an emphasis on mixing, mass transfer and chemical reactions in viscous media, and on the shaping operations for these materials. Dr. Denson has published numerous papers, holds patents related to the synthesis and characterization of synthetic materials and is the recipient of many honors and awards. He has served on a wide range of scientific and engineering advisory committees, including the Department of Defense Scientific Advisory Board for the Strategic Environmental Research and Development Program (2009-present), the Science Advisory Board of the Environmental Protection Agency (2009-present) the National Research Council's Committee on Air Quality Management in the United States, the National Research Council's Committee to Review EPA's Research Grants Program, the American Chemistry Council's Board Research Committee, the National Science Foundation's advisory committee for the Engineering Directorate, the National Science Foundation's advisory committee on Environmental Education and Research, and a wide array of engineering advisory committees at various universities. He also served as the first chair of the Board of Scientific Counselors of EPA's Office of Research and Development. Dr. Denson was employed from 1977 to 2005 at the University of Delaware where he was a professor of chemical engineering. From 1991 to 1992 he served as Engineering Dean and from 1992 to 2000, he served as Vice Provost for Research at that institution. Dr. Denson received his Bachelor of Science Degree from Lehigh University, his Master Degree from Rensselaer, and his Doctorate from the University of Utah, all in chemical engineering. Dr. Denson receives no federal research funding.

Doering III, Otto C.

Dr. Otto C. Doering III is a professor of Agricultural Economics at Purdue University where he has teaching, research and engagement responsibilities. He is a public policy specialist in agricultural, resource, and environmental policy issues. He served the U.S. Department of Agriculture working on the 1977 and 1990 Farm Bills. He was a Principal Adviser to USDA's Natural Resource Conservation Service for implementing the 1996 Farm Bill and worked again in 2005 with NRCS on the design and implementation of conservation programs. In 1999, he was team leader for the economic analysis of the White House's National Hypoxia Assessment focused on the Gulf of Mexico. Dr. Doering has been President of the Agricultural and Applied Economics Association and Chair of the National Public Policy Education Committee. He was founding director of Indiana's State Utility Forecasting Group and director of Purdue's Energy Policy Research and Information Program. He serves on the U.S. Environmental Protection Agency's Science Advisory Board and chaired EPA's Integrated Nitrogen Committee. He was a member of the National Academies' Water Science and Technology Board and served on National Academy committees focused on protecting and restoring water quality in the Mississippi River. He served with the Intergovernmental Panel on Climate Change and currently directs Purdue's Climate Change Research Center. His climate work has focused on agricultural adaptation to climate change. His current research funding is from the U.S. Department of Agriculture. He has served in Southeast Asia with the Ford Foundation and the Governments of Malaysia and Indonesia. Dr. Doering received a B.A. in Government from Cornell, a M.Sc. (Econ) from the London School of Economics, and a Ph.D. in Agricultural economics from Cornell. In earlier incarnations he has been a legal investigator in the New York City Municipal Courts and a horse wrangler in the Canadian Rockies. His recent publications focus on agricultural and conservation policy, agricultural adaptation to climate change, improving water quality in the Mississippi River, and alternative approaches to controlling reactive nitrogen.

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Dourson, Michael

Dr. Dourson is the President of Toxicology Excellence for Risk Assessment (TERA). He has a PhD in toxicology from the University of Cincinnati in 1980 and is a Diplomate of the American Board of Toxicology (ABT). He has led TERA's development of partnerships among diverse groups to address chemicals of high visibility, such as formaldehyde, perchlorate, chloroform, and soluble nickel, and cooperative ventures such as the Voluntary Children's Chemical Exposure Program, the International Toxicity Estimates for Risk database (available at Toxnet), and the Alliance for Risk Assessment. He also worked 15 years for EPA, holding several leadership roles and winning awards for joint efforts, such as the creation of EPA's Integrated Risk Information System. In 2003, he won the Society of Toxicology (SOT) Lehman award for major contributions that improve the scientific basis of risk assessment. In 2007, he was elected a Fellow of the Academy of Toxicological Sciences. In 2009, he won the International Society of Regulatory Toxicology and Pharmacology's International Achievement Award in recognition of his outstanding contributions nationally and internationally to the advancement of regulatory science. In 2009, he was also selected a Fellow for the Society for Risk Analysis (SRA) for substantial achievement in science relating to risk analysis and service to SRA. Dr. Dourson has co-published more than 100 papers on risk assessment methods, including methods for assessing risk in sensitive subgroups, on use of animal and human data in the assessment of risk, or on assessments for specific chemicals. He has also co-authored well over 100 government risk assessment documents, made over 100 invited presentations, and chaired well over 100 sessions at scientific meetings and independent peer reviews. He has been elected to multiple officer positions in the American Board of Toxicology, the Society of Toxicology (SOT), and the Society for Risk Analysis. In addition to numerous appointments on government panels, such as EPA's Science Advisory Board, he is also a media resource specialist in risk assessment for the SOT, member on the editorial board of several journals, and vice chair of the NSF International Health Advisory Board.

Dzombak, David A.

Dr. David Dzombak is the Walter J. Blenko, Sr. University Professor of Environmental Engineering in the Department of Civil and Environmental Engineering at Carnegie Mellon University, Pittsburgh, PA. He is also Faculty Director of the Steinbrenner Institute for Environmental Education and Research at Carnegie Mellon. Dr. Dzombak holds a B.S. in Civil Engineering from Carnegie Mellon University, a B.A. in Mathematics from Saint Vincent College in Latrobe, PA, an M.S. in Civil-Environmental Engineering from Carnegie Mellon University, and a Ph.D. in Civil-Environmental Engineering from Massachusetts Institute of Technology. The emphasis of his research and teaching is on water quality protection and restoration. Dr. Dzombak's professional interests include: aquatic chemistry; fate and transport of chemicals in surface and subsurface waters; water and wastewater treatment; soil and sediment treatment; hazardous waste site remediation; river and watershed restoration; energy and environment; population and environment; and public communication of environmental science and engineering. He has published numerous articles in leading environmental engineering and science journals; book chapters; articles for the popular press; and three books (Surface Complexation Modeling: Hydrous Ferric Oxide, Wiley, 1990; Cyanide in Water and Soil, CRC/Taylor&Francis, 2006; Surface Complexation Modeling: Gibbsite, Wiley, 2010). Dr. Dzombak also has a wide range of consulting experience. He served on the EPA National Advisory Council for Environmental Policy and Technology, Environmental Technology Subcommittee (2004-2008); As chair of the National Research Council Committee on the Mississippi River and the Clean Water Act (2005-2007); as chair of the National Research Council Committee on U.S. Army Corps of Engineers Water Resources Science, Engineering, and Planning (2010-present); and as an Associate Editor of Environmental Science & Technology (2005-present). He is a registered Professional Engineer in Pennsylvania, a Board Certified Environmental Engineer by the American Academy of Environmental Engineers, a Fellow of the American Society of Civil Engineers and a member of the National Academy of Engineering.

Eighmy, T. Taylor

Dr. Taylor Eighmy is the Senior Vice President for Research and Professor of Civil Engineering at Texas Tech University (TTU) in Lubbock, TX. He received his B.S. in Biology from Tufts University in 1980, his M.S. in Civil Engineering from University of New Hampshire in 1983, and his Ph.D. in Civil Engineering from UNH in 1986. He joined TTU's Office of Research in June 2009. In his current capacity, Dr. Eighmy works closely with the faculty, department chairs, deans, the President's Cabinet, and the Chancellor's office to broaden and strengthen the research enterprise at TTU. Specific efforts are directed at enhancing scholarship opportunities for faculty and entering into strategic relationships with the Federal government, the private sector, and foundations to foster investment in faculty, graduate and undergraduate research, and interdisciplinary research programs. Prior to June 2009, Dr. Eighmy was Interim Vice President for Research at the University of New Hampshire (UNH) and Research Professor of Civil Engineering. At UNH, he was also the Assistant Vice President for Research and Director of Strategic Initiatives. He chaired the UNH Energy Task Force and helped manage the State's National Science Foundation (NSF) Experimental Program to Stimulate Competitive Research (EPSCoR) Research Infrastructure Improvement (RII) initiative. Dr. Eighmy was also the founding director of UNH's Environmental Research Group (ERG), an applied environmental engineering and environmental science research center from 1987 through 2004. He also was the director of UNH's Recycled Materials Resource Center from 1998 to 2004, which is a partnership with FHWA that promotes the wise use of recycled materials in highway construction. Dr. Eighmy presently serves on the Fully Chartered Committee and served on the Environmental Engineering Committee of the EPA Science Advisory Board. Dr. Eighmy is an inventor of a patented reactive barrier technology for contaminated sediments. His research interests are in beneficial use of waste materials; life cycle analysis of waste products; chemical speciation; environmental chemistry of leaching behavior; spectroscopic surface analysis; reactive barriers; and environmental microbiology. Dr. Eighmy's most recent research was supported by the Federal Highway Administration (FHWA), the National Oceanic and Atmospheric Administration (NOAA), the National Science Foundation (NSF), the U.S. Environmental Protection Agency (EPA), the European Union, and the private sector.

Faustman, Elaine

Dr. Elaine M. Faustman is Professor in the Department of Environmental and Occupational Health Sciences and Director of the Institute for Risk Analysis and Risk Communication in the School of Public Health and Community Medicine at the University of Washington, where she has received the Outstanding Teaching Award. Dr. Faustman received her A.B. in Chemistry and Zoology from Hope College (1976) and her doctorate in Pharmacology/Toxicology from Michigan State University (1980). Her research includes quantitative risk assessment for non-cancer endpoints, molecular mechanisms of developmental and reproductive toxicity, and in vitro and molecular biological methodologies. Dr. Faustman's research expertise also includes development of decision-analytic tools for communicating and translating new scientific findings into risk assessment and risk management decisions. She is the principal investigator of the Pacific Northwest National Children's Study Center. She also directs the Pacific Northwest Center for Human Health and Ocean Studies. She is an elected fellow of the American Association for the Advancement of Science and the Society of Risk Analysis. She has served as chair for the National Academy of Sciences Committee on Developmental Toxicology and as a member for the NIEHS-National Toxicology Program (NTP) Committee on Alternative Toxicology Methods, the NIEHS-NTP Board of Scientific Counselors, National Academy of Sciences Committee in Toxicology and the Institute of Medicine Upper Reference Levels Subcommittee of the Food and Nutrition Board. She also served on the executive boards of the Society of Toxicology, the Teratology Society, the Society for Risk Analysis, and NIEHS Council. She has served as Associate Editor of Fundamental and Applied Toxicology and on the editorial boards of Birth Defects Research Journal, Reproductive Toxicology and Toxicology Methods. Dr. Faustman's research is currently supported by the United States Environmental Protection Agency (US EPA), the National Institute of Environmental Health Sciences (NIEHS), the National Science Foundation (NSF), the National Institute for Child Health and Human Development (NICHD), the Department of Health and Human Services (DHHS), and the Food and Drug Administration (FDA). The goals of Dr. Faustman's research are to discover the mechanisms that define susceptibility in at-risk populations and to provide linkages across disciplines. Through her research, Dr. Faustman seeks to train the next generation of scientists.

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Giesy, John P.

Dr. John P. Giesy is currently Professor and Canada Research Chair in Environmental Toxicology in the Department of Veterinary Biomedical Sciences and Toxicology Centre at the University of Saskatchewan. He is also Distinguished Professor Emeritus of Zoology at Michigan State University in East Lansing, Michigan, where he was a Professor for 26 years. He is also Chair Professor at Large of Biology & Chemistry, at City University of Hong Kong and Concurrent Professor of Environmental Science at Nanjing University, China. Dr. Giesy holds a B.S., Summa cum laude with honors, in Biology from Alma College in Alma, Michigan (1970), and an M.S. (1971) and Ph.D. (1974) in Limnology from Michigan State University. Dr. Giesy is a world leading eco-toxicologist with interests in many aspects of eco-toxicology, including both the fates and effects of potentially toxic compounds and elements, particularly in the area of ecological risk assessment. He has conducted research into the movement, bioaccumulation, and effects of toxic substances at different levels of biological organization, ranging from biochemical to ecosystem. Dr. Giesy has done extensive research in the areas of metal speciation, multi-species toxicity testing, biochemical indicators of stress in aquatic organisms, fate and effects of Polycyclic aromatic hydrocarbons (PAHs), halogenated hydrocarbons, including chlorinated dibenzo-dioxins and -furans, PCBs and pesticides. Dr. Giesy discovered the phenomenon of photo enhanced toxicity of organic compounds, such as PAHs and was the first to report the occurrence of perfluorinated chemicals in the environment. His studies include both laboratory and field as well as mesocosm studies and apply tools from molecular biology to ecosystem-level. Dr. Giesy was the first to report the occurrence of perfluorinated compounds in the environment. Dr. Giesy's research has been supported by grants from both government agencies and private companies, with core grant research support primarily being from international, federal, state and local government (including the State Key Laboratory for Marine Pollution, City University, Hong Kong; National Plan for Science and Technology of Saudi Arabia; National Science and Engineering Research Council of Canada; Canada Institute for Health Research; National Science and Engineering Research Council of Canada; Chinese Ministry of Education; U.S. Environmental Protection Agency), with additional grant support from state and local governments, industry, and foundations. He has published 663 peer-reviewed articles and presented 1,125 lectures, world-wide. Dr. Giesy's research is significantly used and cited by other researchers; he is in the top 0.1% of active authors (Institute of Scientific Information Current Contents), and was the 2nd most cited author in the field of Ecology/Environmental Science over the period 1997-2007 with 12,437 citations.

Griffiths, Jeffrey K.

Dr. Jeffrey K. Griffiths is Professor of Public Health, and Medicine, at Tufts University School of Medicine. He has adjunct appointments in Nutrition, Veterinary Medicine, and Civil and Environmental Engineering. Clinically, he is an Infectious Diseases physician at New England Medical Center. Dr. Griffiths holds an A.B. (Chemistry) from Harvard College, an M.D. from Albert Einstein College of Medicine, and a MPH&TM in Public Health and Tropical Medicine from Tulane University. He completed residencies in both Internal Medicine and Pediatrics at Yale-New Haven Hospital. His major research interests include waterborne diseases (especially cryptosporidiosis) and their relationship to environmental factors; the roles of nutrition and environmental factors on health; and the development of heat stable vaccines for use where refrigeration is not present. Major funding sources are the US Agency for International Development (USAID), and the National Institutes of Health. He directs the USAID Global Nutrition Collaborative Research Support Program in Africa, which studies how agricultural, nutrition, and health (including water and sanitation) interventions can help the global poor. Prior national committees or advisory group service includes: the U.S. Environmental Protection Agency (EPA) Science Advisory Board (SAB) Drinking Water Committee, the EPA National Drinking Water Advisory Council; the National Academies' Committee on Drinking Water Contaminants, and the Public Interest Advisory Forum of the American Water Works Association, Public Health Subgroup. He was the Federal representative for the National Association of People with AIDS to the EPA Drinking Water Microbial Disinfection and Byproducts Committee. Dr. Griffiths recently chaired the EPA SAB Drinking Water Committee review of Partial Lead Service Line replacements, and was a member of the EPA SAB Environmental Engineering Committee (EEC) Panel that provided advice to EPA on its draft Hydraulic Fracturing Research Scoping Study Plan. He has testified thrice before the US Senate on drinking water issues. He currently receives research funding from the National Institutes of Health and the U.S. Agency for International Development.

Hammitt, James K.

Dr. James K. Hammitt is Professor of Economics and Decision Sciences, Director of the Harvard Center for Risk Analysis, and visiting professor at the Toulouse School of Economics. His teaching and research concern the development and application of decision and risk analysis to health and environmental policy. Professor Hammitt studies the management of long-term environmental issues with important scientific uncertainties (such as global climate change and stratospheric-ozone depletion) and methods for measuring the value of health risks (including monetary and health-adjusted-life-year metrics). He holds degrees in applied mathematics and public policy from Harvard and worked at the RAND Corporation.

Harper, Barbara L.

Dr. Barbara Harper has been a toxicologist and risk assessor in the Department of Science and Engineering at the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) for about 7 years and has been working on tribal issues for 15 years, such as risk assessment, ethics, environmental justice, and National Resource Damage Assessment. She is responsible for coordinating the CTUIR Hanford nuclear project work, such as risk assessment review and performance, nuclear waste analysis and disposal plans, regulatory review, and Natural Resource Damage Assessment. She also has a research faculty appointment at Oregon State University and is coordinating several projects on environmental health and tribal rights and resources. She received her PhD from the University of Texas at Austin and has worked in academia, and in a state environmental regulatory agency, a national lab, and as a consultant.

Jones, Kimberly L.

Dr. Kimberly L. Jones is a professor of Environmental Engineering and Chair of the Department of Civil and Environmental Engineering at Howard University in Washington, DC. She holds a B.S. in Civil Engineering from Howard University, a M.S. in Civil and Environmental Engineering from the University of Illinois in Champaign, IL and a Ph.D. in Environmental Engineering from The Johns Hopkins University. Dr. Jones currently serves on the Water Science and Technology Board of the National Academy of Science and is a member of the National Academy of Science BGCAPP Water Recovery Committee. She has also served on the NAS Blue Water Navy Vietnam Veterans and Agent Orange Exposure Committee, the NAS Committee to Review Environmental Models in Regulatory Decision Making, the NAS Committee to Advance Desalination Technology, and the NAS Committee to Review the Desalination Roadmap. Dr. Jones' research interests include developing membrane processes for environmental and biomedical applications, physical-chemical processes for water and wastewater treatment and environmental nanotechnology. She served as the Deputy Director of the Keck Center for Nanoscale Materials for Molecular Recognition, one of the first centers to bring nanotechnology research to Howard University. She also serves on the Center Steering Committee of the Center for the Environmental Implications of Nanotechnology (CEINT), a National Environmental Nanotechnology Center. Dr. Jones has received a Top Women in Science Award from the National Technical Association, the Outstanding Young Civil Engineer award from University of Illinois Department of Civil and Environmental Engineering, an Outstanding Leadership and Service award from the College of Engineering, Architecture and Computer Sciences at Howard, Outstanding Faculty Mentor award from the American Society of Civil Engineers HU Student Chapter and Top Women Achievers award from Essence Magazine. She served on the Board of Directors and as Secretary of the Board of the Association of Environmental Engineering and Science Professors and was an associate editor of the Journal of Environmental Engineering (ASCE).

Kahn, Bernd

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Dr. Kahn is Director of the Environmental Radiation Center since 1974 (formerly the Environmental Resources Center) and now Professor Emeritus of the Nuclear and Radiological Engineering Programs at Georgia Institute of Technology (GIT). Dr. Kahn received his B.S. in Chemical Engineering from Newark College of Engineering (Now New Jersey Institute of Technology), M.S. in Physics from Vanderbilt University and Ph.D. in Chemistry from the Massachusetts Institute of Technology. He was Adjunct Professor of Nuclear Engineering at the University of Cincinnati (1970-1974), Chief of the Radiological & Nuclear Engineering Facility at the U.S. EPA's National Environmental Research Center (1970-1974), undertaking research in environmental, medical, and biological radiological programs, including studies of radioactive fallout in food, radionuclide metabolism in laboratory animals, and SR-90 balances in human infants; an Engineer/Radiochemist with the U.S. Public Health Service (1954-1970), evaluating the treatment of low-and intermediate-level radioactive wastes; and a Health Physicist and Radiochemist with Union Carbide Corporation (1951-1954). Dr. Kahn has served on a number of committees, panels and commissions, including the National Research Council (NRC) committees on decontamination and decommissioning of uranium enrichment facilities, buried transuranium waste, single shell tank wastes, Panel on Sources and Control Technologies, Committee on Nuclear Science, and Subcommittee on the Use of Radioactivity Standards. He has served on the National Council on Radiation Protection and Measurements (NCRP) Scientific Committees as Chair of the Scientific Committee 64-22 for Effluent and Environmental Monitoring, Chair of the Task Group 5 on Public Exposure from Nuclear Power, member of the Scientific Committee 84 on Radionuclide Contamination, and member of various other Scientific Committees. Dr. Kahn is widely published with over 160 publications on the topics of radiation measurements, monitoring and protocols, fate of radionuclide discharges, critical pathways for radiation and population exposure, radiochemical analyses for environmental studies, airborne radiation in buildings, emergency response to accidents involving radioactive materials, airborne fallout, sources, fate and occurrences and health effects of radionuclides in the environment, surveillance of radionuclides in the food chain, integrated environmental measurement, germanium detectors and other devices, and decommissioning.

Kane, Agnes

Dr. Kane is Professor and Chair of the Department of Pathology and Laboratory Medicine at Brown University. She received her B.A. degree from Swarthmore College and her M.D. and Ph.D. degrees for Temple University School of Medicine. She is board-certified in anatomic pathology and has studied murine models of asbestos-induced disease. She has served as scientific advisor and invited participant in workshops on fiber toxicology and nanotechnology for NIOSH, US EPA, NAS, IOM, NTP, and ILO and has participated in three IARC Working Groups on the Evaluation of Carcinogenic Risks to Humans. She is the Director of the Training Program in Environmental Pathology at Brown University, now in its 19th year. Her research focuses on the potential health effects of environmental and occupational exposure to asbestos fibers, mixed dusts, and nanomaterials. Her laboratory has developed a murine model of asbestos-induced malignant mesothelioma that reproduces the morphologic and molecular characteristics of the human disease. This murine model was used to develop new strategies for prevention and treatment of asbestos-related cancer. Dr. Kane collaborates with Dr. Robert Hurt in the School of Engineering to identify the physical and chemical parameters of engineered nanomaterials relevant to toxicity. Adverse human health effects due to occupational and environmental exposure to nanomaterials are a major concern and a potential threat to their successful commercialization and biomedical applications. All nanoscale material have high surface areas that can provide a vehicle for adsorption and transport of chemicals and metals in the lungs, where they can catalyze surface redox reactions resulting in oxidant stress, inflammation, and possibly cancer. Carbon nanotubes are a major concern due to their physical similarities with asbestos fibers: geometry, high aspect ratio and surface reactivity, and biopersistence, Dr. Kane has developed in vitro screening assays as alternatives to chronic inhalation assays potential toxicity and carcinogenicity of nanomaterials.

Khanna, Madhu

Dr. Madhu Khanna is a professor in the Department of Agricultural and Consumer Economics at the University of Illinois at Urbana-Champaign. She received her Ph.D. from the University of California at Berkeley. Her research focuses on environmental policy analysis and incentives for adoption of environmentally friendly technologies. She has examined the effectiveness of alternative market based instruments for inducing the adoption of best management practices in agriculture such as precision farming and improved irrigation methods and the targeting of green payment policies for reducing nitrogen run off and sediment from cropland. She has also examined the motivations and effectiveness of voluntary approaches to environmental protection. Her current work is examining the economics and land use implications of biofuel production. Her research is currently funded by NSF, USDOE and the Energy Biosciences Institute, University of California, Berkeley. Professor Khanna's teaching responsibilities have included undergraduate and graduate courses in international trade and environmental economics. She has received several teaching and research awards and was supervisor of the recipient of an Outstanding Thesis Award in 2002 from the American Association of Agricultural Economics. She was selected as a University of Illinois Scholar for 2004-07 and a Leopold Leadership Fellow of the Woods Institute at Stanford University in 2010. She has served on review panels for the USEPA and the USDA and on the Board of Directors of the Association of Environmental and Resource Economists. She currently serves as the Chair of the Board of the South Asian Network of Development and Environmental Economics and is an Associate Member of the Standing Panel on Impact Assessment of CGIAR (Consortium of International Agricultural Research). She has served on the editorial boards of several agricultural and environmental economics journals and is currently the editor of the American Journal of Agricultural Economics.

Kim, Nancy K.

Dr. Nancy Kim is employed by Health Research Incorporated, a not-for-profit corporation affiliated with the New York State Department of Health and Roswell Park Cancer Institute. She held several positions in the Center for Environmental Health in the New York State Health Department before retiring in April 2009, and continues to work there post retirement, part time, on several priority projects. She is an adjunct associate professor in the Department of Environmental Health Sciences in the School of Public Health at the State University of New York at Albany. Dr. Kim holds a B.A. in Chemistry from the University of Delaware, and an M.S. and Ph.D. in Chemistry from Northwestern University. Her primary professional interest is in chemical risk assessment and exposure assessment. Dr. Kim was Interim Director of the Center that provides environmental epidemiological, toxicological, and risk assessment expertise for environmental health programs; houses regulatory programs that include drinking water supplies, food safety, sanitation/fire safety, and radiation; and evaluates chemical and radiation exposures and recommends interventions. For most of her tenure at the Department of Health she was the Director of the Division of Environmental Health Assessment. Her recent panel memberships include: a) The National Academies, Committee on Assessment of the Health Implications of Exposure to Dioxins, b) The National Academies, Committee on Water System Security Research, c) The National Academies, Committee on the United States Geological Survey's National Water-Quality Assessment Program, and d) U.S. Environmental Protection Agency's Scientific Advisory Board, 2009-2012. Recent past funding came from the Centers for Disease Control (Environmental Public Health Tracking).

Lue-Hing, Cecil

Dr. Cecil Lue-Hing is the retired Director of Research and Development (R&D) for the Metropolitan Water Reclamation District of Greater Chicago, (District) and is currently Principal of the Environmental Engineering Consulting firm of Cecil Lue-Hing and Associates Inc., in Chicago, Illinois. During his 28 year tenure at the District, Dr. Lue-Hing provided R&D direction for the combined sewer overflow (CSO), Tunnel and Reservoir Plan (TARP), the Sidestream Elevated Pooled Aeration (SEPA) System in the Chicago River, established and directed a comprehensive water quality monitoring program for the Greater Chicago Waterway System, and the upper Illinois River, from Chicago to Peoria. Dr. Lue-Hing played a key role in the restoration of the Chicago River System. Dr. Lue-Hing is also nationally recognized as a Biosolids Management Expert. He has written extensively, and has authored, co-authored, or co-edited two reference texts on Biosolids Management, two on Industrial Wastewater control, two on Sewage Microbiology, and one on VOC emissions from wastewater treatment plants. He

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has also published extensively in the peer reviewed and open professional literature. He is a Past-President of The American Academy of Environmental Engineers; Past-President, Environmental and Water Resources Institute of The American Society of Civil Engineers; Past President, and Hall-of-Fame Inductee NACWA, formerly The Association of Metropolitan Sewerage Agencies; former Board Member American Academy of Environmental Engineers and The Water Environment Research Foundation. He is also a Past Chairman, Board of Editorial Review Water Environment Research. Dr. Lue-Hing has received many prestigious awards including the American Society of Civil Engineers' (ASCE) Distinguished Member, National Government Civil Engineer of the Year, and the Simon W. Freese Environmental Engineering Award and Lecture; the Water Environment Federation's Charles Alvin Emerson Medal; Honorable Member, American Academy of Water Resources Engineers; and the American Academy of Environmental Engineers Gordon Maskew Fair Award. His prior service on Advisory Boards include, the US.EPA SAB-Environmental Engineering Committee; the International Joint Commission-Expert Committee on Engineering and Technological Aspects of Great Lakes Water Quality; Chair, Science Advisory Board, the US EPA Industrial Waste Elimination Research Center at the Illinois Institute of Technology (IIT), Chicago; currently member of the Professional/External Advisory Boards for the Civil/Energy/Environmental Engineering Departments of Washington University in St. Louis MO., IIT in Chicago, and Marquette University, in Milwaukee, Wisconsin. Dr. Lue-Hing is a graduate of Marquette University, Case Western Reserve University, and Washington University in St. Louis, Missouri. He is a Registered Professional Engineer, a Diplomate of the American Academy of Environmental Engineers, and in 2000 was inducted a Member of the National Academy of Engineering. Dr. Lue-Hing currently has no federal research funding.

Meyer, Judith L.

Dr. Judith Meyer is Professor Emeritus at the Odum School of Ecology, University of Georgia (UGA), where she served on the faculty from 1977 – 2006. She received a B.S. in zoology from University of Michigan, a M.S. in marine biology from University of Hawaii, and a Ph.D. in ecology from Cornell University. Dr. Meyer's research interests center around stream ecosystems, in particular water quality and nutrient dynamics, stream food webs, headwater and urban streams, riparian zones, human impacts on stream ecosystems, and stream restoration practices. She has studied urban streams in Atlanta, blackwater rivers in Georgia, and mountain streams in the Southern Appalachians, where she led one of National Science Foundation's Long-term Ecological Research sites. Dr. Meyer's research has resulted in 175 peer-reviewed publications. She is a former President of the Ecological Society of America and helped found the River Basin Center at UGA, where she was a Co-Director. She currently serves on EPA's Science Advisory Board, is a member of the Scientific and Technical Advisory Committee of American Rivers, and serves on the Independent Science Board of California's Delta Stewardship Council. Dr. Meyer received the Award of Excellence in Benthic Science from the Society for Freshwater Science and the Naumann-Thienemann Medal for lifetime achievement from the International Society of Limnology. She currently receives no federal research grant funding.

Mihelcic, James R.

Dr. James R. Mihelcic is a Professor of Civil and Environmental Engineering and State of Florida 21st Century World Class Scholar at the University of South Florida. He holds a B.S. in Environmental Engineering from Pennsylvania State University (1981), and an M.S. (1985) and Ph.D. (1988) in Civil Engineering from Carnegie Mellon University. Dr. Mihelcic directs the Peace Corps Master's International Program in Civil & Environmental Engineering (<http://cee.eng.usf.edu/peacecorps>) and is an international expert in provision of water, sanitation, and hygiene in developing world community. His research interests are centered around sustainability, specifically understanding how global stressors such as climate, land use, and urbanization influence water resources, water quality, and provision of water supply and sanitation technologies. Dr. Mihelcic is a past president of the Association of Environmental Engineering and Science Professors (AEESP), a Board Certified Environmental Engineering Member, and Board Trustee with the American Academy of Environmental Engineers (AAEE). He is lead author for 3 textbooks: Fundamentals of Environmental Engineering (John Wiley & Sons, 1999); Field Guide in Environmental Engineering for Development Workers: Water, Sanitation, Indoor Air (ASCE Press, 2009); and, Environmental Engineering: Fundamentals, Sustainability, Design (John Wiley & Sons, 2010). Dr. Mihelcic's current research and education initiatives are supported by competitive grants from the National Science Foundation to provide graduate scholarships to achieve sustainable water and transportation infrastructure at the water-energy-global nexus, model and analyze the use, efficiency, value, and governance of water as a material in the Great Lakes region, and develop tools and strategies for integration of sustainability into engineering education. He also has research support from the Water Reuse Foundation to assess models to estimate and minimize greenhouse gas emissions and the carbon footprint of water reuse and desalination facilities. Finally, Dr. Mihelcic has several research grants to improve management of water resources and sanitation technologies in Madagascar and Bolivia. This includes support from CARE-Madagascar to provide applied research expertise to increase sustainable access to improved drinking water supply and sanitation facilities in regions of Madagascar with some of the lowest water and sanitation coverage rates and a new USAID Partnerships for Enhanced Engagement program grant that when integrated with NSF funding will study the fate of enteric pathogens during the safe reclamation of water and nutrients from reused wastewater.

Moe, Christine

Dr. Christine Moe is the Eugene J. Gangarosa Professor of Safe Water and Sanitation and the Director of the Center for Global Safe Water at Emory University. Her primary appointment is in the Hubert Department of Global Health at the Rollins School of Public Health of Emory University, and she holds joint appointments in the Department of Environmental Health and the Department of Epidemiology. Dr. Moe holds a B.S. in Biology from Swarthmore College and an M.S. and Ph.D. from the Department of Environmental Sciences and Engineering at the University of North Carolina School of Public Health. Her research focuses primarily on the environmental transmission of infectious agents, in particular; foodborne and waterborne disease. Dr. Moe works on international water, sanitation and health issues and has conducted research in the Philippines, El Salvador, Bolivia and Kenya. Her laboratory research program includes studies of viral persistence in the environment, methods to detect enteric viruses in water and wastewater, and studies of norovirus infectivity and inactivation. Dr. Moe's field research focuses on dry sanitation systems and drinking water distribution systems and associated health risks. In 2006, her research team received the Infrastructure Award and the Development Marketplace Award in The Development Marketplace Global Competition of The World Bank for their project on "Pro-poor Sanitation Demand Creation in Bolivia". Dr. Moe currently serves on the U.S. Environmental Protection Agency Science Advisory Board and has been a consultant on water and sanitation issues for the World Health Organization and The Bill and Melinda Gates Foundation.

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Moo-Young,Horace

Dr. H. Keith Moo-Young is Dean of the College of Engineering, Computer Science and Technology at California State University-Los Angeles. He holds an M.S. and Ph.D. in Civil-Environmental Engineering from the Rensselaer Polytechnic Institute, and a Masters of Technology Management from the University Pennsylvania, a B.S. degree in Civil Engineering from Morgan State University and is a licensed professional engineer (Environmental Engineering) in Pennsylvania. Dr. Moo-Young was formerly the Interim Dean and Associate Dean for Research and Graduate Studies at Villanova University, and has served as a Professor at Lehigh University and Villanova University. Dr. Moo-Young is a Board Certified Environmental Engineer by the American Association for Environmental Engineers and a Fellow of the American Society of Civil Engineers. The emphasis of his research is on hazardous and solid waste management and technologies, such as the remediation of inorganic contaminants in acid mine drainage and groundwater, manufactured gas plant and coal tar, recycling and reuse of industrial co-product materials, and corrective strategies for contaminated sediments. Dr. Moo-Young's current research is funded by the National Science Foundation to acquire an Ultra-Centrifuge for geoenvironmental research and education, renovate core facilities, fund the GK-12 Fellowship Program, and support the CREST Center for Sustainable Energy; Naval Surface Warfare Center (NSWC) to support its education partnership agreement with the College of Engineering, Computer Science and Technology at California State University, Los Angeles; the California Air and Resource Board to support the Hydrogen Refueling Station; the Department of Defense, to support the Great Minds in Science, Technology, Engineering and Math (STEM) careers program; Department of Education to increase engineering transfers students from East Las Angeles College and Los Angeles Trade Technical College; various corporations to support the 'Senior Design' project; and National Oceanic and Atmospheric Administration to support the University Research Center. Dr. Moo-Young has served as a member of the Water Environmental Research Foundation Exploratory Team on Solids Reduction, National Science Foundation Committee of Visitors for Civil and Mechanical Systems Division from 2001-2003, the Department of Energy's Workshop on Monitoring of Metals and Radionuclide Contaminated Sites in 2004 and Workshop on Containment Technologies in 2002. He also served as the session leader on Sediment Stability for the Department of Defense's SERDP-ESTCP Workshop on Contaminated Sediment in 2004. Dr. Moo-Young co-chaired the First International Conference on Environmental Research, Technology, and Policy on Africa in Accra, Ghana in 2007 and was the Honorary Chair for the ISEG 2012 The XII International Symposium on Environment, Energy and Global Sustainable Development. He has received numerous national awards including service as an American Association for the Advancement of Science Policy Fellow at the U.S. Environmental Protection Agency from 2001-2002 and Black Engineer of the Year in 2001. Dr. Moo-Young has published over 200 refereed papers and invited talks in peer-reviewed journals, books and conference proceedings, workshops and invited lectures. He is also the co-inventor of one patent.

Murphy,Eileen

Dr. Eileen Murphy is the Director of Research and Grants at the Rutgers University Ernest Mario School of Pharmacy. She holds a B.S. in English with a minor in Biology from the University of Notre Dame (1983), an M.S. in Environmental/Outdoor Education from Northern Illinois University (1984), and a Ph.D. in Environmental Science from Rutgers University (1989). Dr. Murphy coordinates multi-disciplinary research projects in pharmacology, toxicology, communication, environmental science, engineering and other disciplines at Rutgers. Her research interests include occurrence, fate and transport of pharmaceuticals and other anthropogenically-derived organic chemicals in the environment with a particular research emphasis on exposures to toxic substances, fate and transport of toxic substances and assessments of the potential risks to human health and the environment posed by these exposures. Prior to holding this position, Dr. Murphy served as the Director of the New Jersey Department of Environmental Protection (NJDEP) Division of Science, Research and Technology. She held the position of Assistant Director for the group for four years before that and served as a research scientist for 15 years within the group, developing an expertise in the drinking water field. Dr. Murphy has focused much of her career on drinking water science, including contaminant occurrence and fate & transport. She has been involved in the issue of unregulated contaminants in drinking water and the treatment to remove them from finished water. Dr. Murphy's She is co-author on numerous peer-reviewed scientific papers that have appeared in scholarly journals, including Environmental Science and Technology. Dr. Murphy's research has been conducted without the support of grants from either federal government agencies or private companies. Dr. Murphy currently has no federal research funding.

Opaluch,James

Dr. James Opaluch is Professor and Department Chair of Environmental Economics at the University of Rhode Island. He received a Ph.D. in Natural Resource Economics and Masters Degree in Statistics both from the University of California, Berkeley. Dr. Opaluch has been actively involved in issues related to natural resource and environmental policy for many years, and is an internationally recognized expert in natural resource valuation and damage assessment. Dr. Opaluch currently serves on the US EPA Science Advisory Board. He has served as an expert in over 25 major natural resource damage assessment cases. Other projects include development of the original Type A model for assessing natural resource damages under CERCLA (incorporated in Federal Regulations); evaluation of the potential social costs of the national five-year offshore oil and gas leasing program; a comprehensive assessment of alternative bidding systems for auctions for offshore oil; development of a methodology for landfill siting for the state of Rhode Island, and estimating uses and values of the Peconic Estuary System as part of the National Estuaries Program. Dr Opaluch was invited to serve on the United Nations Environmental Program's Working Group of Consultative Experts to provide advice and training to policy professionals throughout the world. Dr. Opaluch has served on a number of national committees, including panels for the National Academy of Science, National Science Foundation, the United Nations, the US EPA and the United States Minerals Management Service. He also served on as executive officer and in an editorial capacity for many National and International Professional Associations. Dr. Opaluch has authored or co-authored numerous papers in peer reviewed, professional journals. Dr. Opaluch has ongoing research grants on managing ecosystem services funded by the U.S. Department of Agriculture, and siting renewable energy facilities, funded by the State of Rhode Island.

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Patten,Duncan

Dr. Duncan Patten is Director of the Montana Water Center and Research Professor with the Department of Land Resources and Environmental Sciences at Montana State University, Bozeman. He is also Professor Emeritus in the School of Life Sciences and past director of the Center for Environmental Studies at Arizona State University. Dr. Patten holds an A.B. degree from Amherst College, an M.S. from the University of Massachusetts at Amherst, and a Ph.D. from Duke University. His research interests include arid and mountain ecosystems, especially the understanding of ecological processes of riparian, wetland, and riverine ecosystems. Dr. Patten's research has also involved developing conceptual models for and studies of ecosystem indicators of watershed and National Park ecosystem condition, and he served on a Washington State Academy of Sciences committee reviewing indicators of Puget Sound health and recovery. He was Senior Scientist of the Bureau of Reclamations Glen Canyon Environmental Studies, overseeing the research program evaluating effects of operations of Glen Canyon Dam on the Colorado River riverine ecosystem. Dr. Patten was founding president of the Arizona Riparian Council, president of the Society of Wetland Scientists, and Business Manager of the Ecological Society of America. He is a Fellow of the American Association for the Advancement of Science, has been a member of the National Academy of Sciences/National Research Council (NAS/NRC) Board on Environmental Studies and Toxicology; the NAS/NRC Commission on Geoscience, Environment and Resources, and eleven NAS/NRC committees, chairing two. He has also served on the National Science Foundation Environmental Biology/Ecological Sciences Panel. He participated in the development of the Heinz Center's "State of the Nation's Ecosystems" project.

Polasky,Stephen

Dr. Stephen Polasky holds the Fesler-Lampert Chair in Ecological/Environmental Economics at the University of Minnesota where he is a member of the Department of Applied Economics and the Department of Ecology, Evolution and Behavior. He is also a Faculty Fellow at the Institute on the Environment, and the Law School, and a graduate faculty member of the Conservation Biology, Water Resources, and Natural Resource Science and Management Graduate Programs. He received a Ph.D. in Economics from the University of Michigan. He served as senior staff economist for environment and resources for the President's Council of Economic Advisers. He has served on the SAB, the SAB Committee on Valuing Ecosystems and Services, and the Environmental Economics Advisory Committee for US EPA. He serves on the Governing Board of the Natural Capital Project, the Board of Directors for the Beijer Institute of Ecological Economics, the Sustainability External Advisory Committee for the Dow Chemical Company, and the Board of Directors and the Science Council of The Nature Conservancy. He is a University Fellow at Resources for the Future, a Research Fellow at the Beijer Institute of Ecological Economics, and a Research Associate in the Environmental & Energy Economics Program at the National Bureau of Economic Research. His research focuses on issues at the intersection of ecology and economics. His research interests focuses on land use, the value of ecosystem services and natural capital, biodiversity conservation, sustainability, environmental regulation, renewable energy, and common property resources. Over the past five years he has received research funding from the National Science Foundation, the National Aeronautics and Space Administration, the Minnesota Pollution Control Agency, Friends of the Boundary Waters, and the University of Minnesota. He was elected into the National Academy of Sciences in 2010. He was elected as a Fellow of the Association of Environmental and Resource Economists in 2011, the American Academy of Arts and Sciences in 2009, and the American Association for the Advancement of Science in 2007..

Pope, III,C. Arden

Dr. C. Arden Pope III is the Mary Lou Fulton Professor of Economics at Brigham Young University. He received his Ph.D. from Iowa State University (Economics/Statistics, 1981) and was a Fellow at the Harvard School of Public Health (Environmental Health and Public Policy, 1992/93). He has conducted research dealing with various natural resource and environmental issues and his cross-disciplinary research in environmental economics and air pollution epidemiology has resulted in seminal studies on the health effects of air pollution. Dr. Pope has conducted or collaborated on various key studies of human health effects of short- and long-term air pollution exposure, has played prominent roles in reviewing and interpreting this literature, and is one of the world's most widely cited and recognized experts on the health effects of air pollution. He has been the recipient of various honors and awards including the Thomas T. Mercer Joint Prize from the American Association for Aerosol Research and the International Society for Aerosols in Medicine (2001), the Utah Governor's Medal for Science & Technology (2004), and Honorary Fellow of the American College of Chest Physicians (FCCP Hon, 2008). His current research funding comes from National Institutes of Health (through University of Louisville Research Foundation), U.S. Environmental Protection Agency (through The Harvard School of Public Health and The Cleveland Clinic Foundation), and a Mary Lou Fulton Professorship (Brigham Young University).

Roberts,Stephen M.

Dr. Stephen M. Roberts is Professor at the University of Florida with joint appointments in the College of Veterinary Medicine, College of Medicine, and College of Public Health and Health Professions. He also serves as Director of the Center for Environmental & Human Toxicology at the University of Florida. Dr. Roberts received a B.S. in Pharmacy from Oregon State University and a Ph.D. from the University of Utah College of Medicine. After a postdoctoral fellowship at SUNY Buffalo (1977 – 1980), he served on the faculties of the University of Cincinnati College of Pharmacy (1980-1985) and the College of Medicine at the University of Arkansas for Medical Sciences (1986-1989). Dr. Roberts has been a faculty member at the University of Florida since 1989. His research addresses mechanisms of toxicity, particularly involving the liver and immune system. Dr. Roberts also has an active research program in toxicokinetics, especially involving bioavailability of environmental toxicants, as well as approaches to evaluation of potential toxicity of nanomaterials. Dr. Roberts' research has been supported by the National Institutes of Health, the Department of Defense, the U.S. EPA, Gulf Power Corporation, and HSF Pharmaceuticals. He serves as an advisor to regulatory agencies on topics related to risk assessment

Rodewald,Amanda

Dr. Amanda Rodewald is Professor of Wildlife Ecology in the School of Environment and Natural Resources at The Ohio State University. She holds a B.S. in Wildlife Biology from The University of Montana, an M.S. in Zoology from The University of Arkansas, and a Ph.D. in Ecology from The Pennsylvania State University. Dr. Rodewald's research program seeks a mechanistic understanding of the responses of animal communities to human activities and global change, which requires her to work at multiple spatial scales and across multiple levels of biological organization. As such, her research touches on a variety of sub-disciplines, including conservation biology, landscape ecology, population demography, community ecology, behavioral ecology, and ecological restoration. Her current work focuses on understanding (1) how community organization and species interactions are affected by land use change, invasive species, altered disturbance regimes, and anthropogenic resource subsidies, (2) socioecological drivers of avian population, community, and landscape dynamics, (3) modified selective environments in human-dominated systems, and (4) population and community responses of forest birds to land use change in the U.S. and South America. Dr. Rodewald consistently extends research findings to managers, decision-makers, and private individuals in the U.S. and Neotropics. She serves her professional societies and university by serving on governance councils, advisory boards, and committees, and was recently a CIC Academic Leadership Fellow. Dr. Rodewald also contributes to the national and state-level environmental decision-making process in her ad-hoc advisory and panel roles with National Science Foundation, U.S. Department of Agriculture Forest Service, U.S. Fish and Wildlife Service, Ohio Department of Natural Resources, and North American Bird Conservation Initiatives. Over the last decade, her research has been funded by National Science Foundation (NSF), U.S. Fish and Wildlife Service (USFWS), Ohio Department of Natural Resources, National Council for Air & Stream Improvement, National Fish and Wildlife Foundation, American Association for the Advancement of Science, The Nature Conservancy, Ohio Agricultural and Research Development Center, Cleveland Metropark Zoo, and Ohio Ornithological Society. Dr. Rodewald's research is currently supported by grants from: the NSF; the USFWS; and the Ohio Department of Natural Resources.

Biosketches for Members of the Chartered SAB and Board Liaisons

Samet, Jonathan M.

Dr. Jonathan M. Samet is Professor and the Flora L. Thornton Chair of the Department of Preventive Medicine at the Keck School of Medicine of the University of Southern California (USC), and Director of the USC Institute for Global Health. Dr. Samet received a Bachelor's degree in Chemistry and Physics from Harvard College, an M.D. degree from the University of Rochester, School of Medicine and Dentistry, and a Master of Science degree in Epidemiology from the Harvard School of Public Health. He is trained in the specialty of internal medicine and in the subspecialty of pulmonary diseases. From 1978 through 1994, Dr. Samet was at the University of New Mexico School of Medicine, where he was Professor and Chief of the Pulmonary and Critical Care Division in the Department of Medicine. From 1984 through 2008 he was chair of the Department of Epidemiology at the Bloomberg School of Public Health. Dr. Samet's research has addressed active and passive smoking and the effects of inhaled pollutants in the general environment, both indoors and outdoors, and in the workplace. Dr. Samet has served as Editor for Reports of the Surgeon General on Smoking and Health receiving the Surgeon General's Medallion in 1990 and 2006 for these contributions. Dr. Samet was elected to the Institute of Medicine (IOM) of the National Academy of Sciences (NAS) in 1997. He currently chairs the Clean Air Scientific Advisory Committee of the U.S. Environmental Protection Agency and also the FDA's Tobacco Products Scientific Advisory Committee. He was appointed to the National Cancer Advisory Board in 2011. Dr. Samet is past President of the Society for Epidemiologic Research and the American College of Epidemiology. He is a past editor of the American Journal of Epidemiology; and of Epidemiology and current co-editor in chief of Air Quality, Atmosphere and Health. His current research funding comes from the National Institutes of Health, the Center for Disease Control Foundation, American Institutes for Research, the Tobacco-Related Disease Research Program of the State of California, and Green Cross, Switzerland.

Sanders, James

Dr. James Sanders is Director of the Skidaway Institute of Oceanography, a campus of the University System of Georgia. He received his B.S. from Duke University in Zoology and his Ph.D. from the University of North Carolina in Marine Sciences, then was a postdoctoral investigator at Woods Hole Oceanographic Institution. Prior to his arrival in Savannah in 2001, Dr. Sanders was on the faculty and served as Director of the Academy of Natural Sciences' Estuarine Research Center in Maryland from 1981 to 1999, then was Chairman of the Department of Ocean, Earth and Atmospheric Sciences at Old Dominion University in Virginia. Dr. Sanders is known for his interests within the area of nutrient and trace element biogeochemistry: how trace elements are transported through coastal zones, transformed by chemical and biological reactions during transport, and how they can impact aquatic ecosystems. He serves as a consultant to federal and state science agencies and industrial groups in the U.S. and Europe. He is a member of numerous scientific societies and is a Trustee of the Consortium for Ocean Leadership. He is the author of over 75 scientific publications. Dr. Sanders' current research is supported by grants from the National Science Foundation (ship operations, shipboard scientific support equipment, oceanographic instrumentation, and positioning field stations and marine laboratories for emerging initiatives in scientific research and training), and the National Oceanic and Atmospheric Administration (support for fisheries sampling activities on the Southeast U.S. Continental shelf).

Schnoor, Jerald

Dr. Jerald L. Schnoor, Ph.D., P.E., BCEE, Allen S. Henry Chair in Engineering; Professor, Civil & Environmental Engineering; Professor, Occupational and Environmental Health; and Co-Director, Center for Global and Regional Environmental Research; The University of Iowa, Iowa City, Iowa. Dr. Jerald Schnoor is a member of the National Academy of Engineering (elected in 1999) for his pioneering work using mathematical models in science policy decisions. He testified several times before Congress on the environmental effects of acid deposition and the importance of passing the 1990 Clean Air Act. While serving as Editor-in-Chief of Environmental Science and Technology, Jerry guides the leading journal in both environmental engineering and environmental science. His editorial writings on environmental policy and research have been widely accessed by the international community. Professor Schnoor has published (as author, co-author, or editor) six books and over 175 research articles in archival journals. Dr. Schnoor chaired the Board of Scientific Counselors for the Environmental Protection Agency, Office of Research and Development from 2000-2004. Currently, he is Chair of the NRC Committee on Science for Environmental Protection in the 21st Century. He was also the Chair of the 2008 National Research Council report on The Water Implications of Biofuels Processing in the U.S. Dr. Schnoor and his students have pioneered phytoremediation, the use of plants to help clean the environment. The research involves discovering novel pathways for the uptake, storage, and metabolism of toxic organic chemicals at waste sites. Dr. Schnoor has been instrumental in the full-scale clean-up and demonstration of phytoremediation systems to remediate petrochemical contaminations, explosives contaminant remediation from groundwater using created wetlands, and the interception and treatment of groundwater plumes containing industrial chemicals. Schnoor's publications cover a wide range of environmental problems including toxic chemical fate and transport, surface and groundwater contaminant modeling, phytoremediation, and carbon sequestration for mitigation of greenhouse gases. His research is currently supported by research grants from NSF, EPA, and NIEHS.

Solomon, Gina

Gina Solomon, M.D., M.P.H. is the Deputy Secretary for Science and Health at the California Environmental Protection Agency. Prior to joining Cal/EPA, she was a senior scientist at the Natural Resources Defense Council since 1996 and she has been on the faculty in the division of occupational and environmental medicine at the University of California, San Francisco (UCSF) since 1997, where she still holds the title of clinical professor of health sciences. Dr. Solomon served as the director of the occupational and environmental medicine residency program at UCSF from 2008-2012 and was the associate director of the UCSF Pediatric Environmental Health Specialty Unit from 2003-2009. She has served on numerous scientific committees for the State of California, the U.S. Environmental Protection Agency, the National Toxicology Program, and the National Academy of Sciences. She is on the editorial board of the journal Environmental Health Perspectives, and serves regularly as a peer-reviewer for numerous scientific journals. She has authored about 50 peer-reviewed articles, a book published by the Massachusetts Institute of Technology Press, numerous reports, and chapters in several medical textbooks. Dr. Solomon's work has included research on diesel exhaust and asthma, endocrine disrupting chemicals, pesticides, environmental contaminants in New Orleans after Hurricane Katrina, the health implications of the 2010 Gulf oil spill, and the health effects of climate change. Dr. Solomon received her bachelor's degree from Brown University, a doctorate of medicine from the Yale University School of Medicine, and a master's degree in public health from the Harvard School of Public Health. She is board-certified in both internal medicine and occupational and environmental medicine, and is licensed to practice medicine in California.

Stram, Daniel O.

Dr. Daniel O. Stram, Ph.D. is Professor of Preventive Medicine, Biostatistics Division, of the University of Southern California. His research is primarily focused upon statistical problems that arise out of the design, analysis, and interpretation of large scale epidemiological studies. His research interests include measurement error analysis, meta-analysis, longitudinal modeling, association-based studies of genetic susceptibility to cancer, and general exposure-response modeling in cancer epidemiology. Dr. Stram received his Ph.D. in Statistics from Temple University in 1983, and did postdoctoral training in Biostatistics at the Harvard School of Public Health from 1984-86. In 1986-1989 he was a member of the Statistics Department of the Radiation Effects Research Foundation (RERF) in Hiroshima, Japan, collaborating on studies of the health of survivors of the atomic bombings. Since coming to the University of Southern California in 1990 he has been involved as co- or principal investigator in studies of the Colorado Plateau Uranium Miners cohort, the Multi-ethnic Cohort Study, and the California Teachers Study. Dr. Stram was a member of the National Academy of Sciences' Board on Radiation Research from 1997-2003, and is a current member of the Nuclear and Radiation Studies Board. He has participated in the preparation of many National Academy of Sciences reports reviewing research into the impact of radiation releases on the health of nuclear weapons plant workers and populations living downwind of weapons facilities and nuclear test

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sites. Dr. Stram has authored or co-authored over 200 peer-reviewed articles in statistical, medical, and epidemiological journals. Dr. Stram currently is a member of the U.S. Environmental Protection Agency (EPA), Science Advisory Board (SAB), and is chair of the Radiation Advisory Committee (RAC). His research support is primarily from grants from the U.S. National Cancer Institute.

Thorne, Peter

Dr. Peter S. Thorne is Professor of Toxicology and Head of the Department of Occupational and Environmental Health at the University of Iowa, College of Public Health. He holds a secondary appointment as Professor of Civil and Environmental Engineering. Dr. Thorne is Associate Director and co-founder of the Interdisciplinary Graduate Program in Human Toxicology. He received a BS in chemical engineering, MS in biomedical engineering and PhD in toxicology from the University of Wisconsin-Madison and completed post-doctoral training in immunotoxicology at the University of Pittsburgh. Since 2001 he has served as Director of the NIH-funded Environmental Health Sciences Research Center. Dr. Thorne directs a major community-based research project and the Inhalation Toxicology Core for the Iowa Superfund Research Program. He has been continuously funded by NIH for over two decades and 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. Dr. Thorne has authored 200 peer-reviewed papers and book chapters. He teaches graduate level courses on environmental health and human toxicology and has mentored 75 MS, PhD and Postdoctoral trainees. Dr. Thorne has served on a wide variety of editorial and review boards for scientific journals, government agencies, and academia and regularly chairs grant reviews for NIH. From 2003 to 2006, he served on the NIH National Advisory Environmental Health Sciences Council. He is the recipient of the Thomas Bedford Memorial Prize from the British Occupational Hygiene Society, the John Doull Award from the Society of Toxicology (Central States Chapter) and was the 2003 Whitehead Memorial Lecturer at the Children's Hospital of Pittsburgh.

Tolbert, Paige

Dr. Paige Tolbert is Professor and Chair of the Department of Environmental Health at the Rollins School of Public Health of Emory University. She holds a joint appointment in the Department of Epidemiology, and a cross-appointment at Emory's Graduate School of Arts and Sciences. Dr. Tolbert received a B.A. in biochemistry from Harvard College, and both an M.S.P.H. in environmental science and Ph.D. in epidemiology from the University of North Carolina Chapel Hill. Following a post-doctoral fellowship at the Harvard School of Public Health, she joined the faculty of Emory University in 1993. Dr. Tolbert has devoted the past twenty years to research, teaching and service in environmental epidemiology. She is interested in understanding the role of environmental exposures in the etiology of acute and chronic health outcomes. In studies ranging from intensive molecular lab-based studies to large cohort studies, Dr. Tolbert has studied carcinogens, endocrine disruptors, pesticides, water pollution, and most recently the pulmonary, cardiac and reproductive health effects of ambient air pollution. The air pollution work is encompassed by a collection of studies called the Studies of Particles and Health in Atlanta (SOPHIA), supported by multiple grants in the past ten years, and recently has culminated in the award of a new EPA Clean Air Research Center, an \$8M five-year collaboration with Georgia Tech. She also directs a NIOSH-funded graduate training program. Dr. Tolbert has served on numerous expert panels and grant reviews, including the USEPA's chartered Science Advisory Board, the agency's primary source of guidance on priorities and future directions.

Vena, John

Dr. John E. Vena is the Head of the Department of Epidemiology and Biostatistics and University of Georgia Foundation Professor in Public Health at the College of Public Health, University of Georgia. From 2003-2008 he served as Professor and Chair of the Department of Epidemiology and Biostatistics at the Arnold School of Public Health at the University of South Carolina (USC). Dr. Vena was Professor of Social and Preventive Medicine at the State University of New York at Buffalo, School of Medicine and Biomedical Sciences and a research fellow at Roswell Park Cancer Institute (1981-2003) and Director of the Environment & Society Institute (1999-2003). Dr. Vena received his B.S. in Biology from St. Bonaventure University and his M.S. and Ph.D. degrees in Epidemiology from the State University of New York at Buffalo. Dr. Vena is a Fellow of the American College of Epidemiology and the American Epidemiological Society, a member of the International Society for Environmental Epidemiology, Society for Epidemiologic Research and the American Public Health Association (APHA). He has published extensively in the field of environmental and occupational epidemiology and his studies have included descriptive and analytic studies of air and water pollution, bladder cancer and drinking water contaminants, occupational exposures, health of municipal workers including firefighters and police officers, diet, electromagnetic fields and persistent environmental toxicants. His current grant activities are funded by the Georgia Cancer Coalition and the national Institutes of Health on the topics of environmental determinants of cancer and systemic lupus erythematosus (SLE); physical activity, stroke and cognitive function; stress and cardio-metabolic disease in police; biomarkers of SHS smoke; long-term lung health after exposure to chlorine gas; and health effects of persistent organic pollutants. Since 1981, Dr. Vena has taught courses in epidemiologic methods and applications in occupational health and in environmental health and has mentored graduate students, post-doctoral fellows and junior faculty.

Watts, Robert

Dr. Robert G. Watts attended Tulane University, receiving a B.S. in Mechanical Engineering in 1959. He received a M.S. from M.I.T the following year and a Ph.D. from Purdue University in 1965. After teaching at Tulane for several years he studied Atmospheric and Ocean Sciences on an NSF Senior Postdoctoral Fellowship at Harvard University during academic year 1969-70. In 1975 he spent a year at the Institute for Energy Analysis in Oak Ridge, and in about 1990 he spent ten months at the International Institute for Applied Systems Analysis in Laxenburg, Austria. A few years later he spent a semester sabbatical leave at Battelle in Washington D.C. He is founder and past director of the South Central Region of the National Institute for Global Environmental Change, which is funded by the Department of Energy. After retiring from Tulane as the Cornelia and Arthur L. Jung Professor of Mechanical Engineering in 2007 he taught at the United States Naval Academy for one semester. Dr. Watts currently receives no federal research funding. His most recent book is "Responding to Climate Change: An Engineering Perspective," to be published soon by Lewis Publishers.

Biosketches for Members of the Chartered SAB and Board Liaisons

Zoeller, R. Thomas

Dr. R. Thomas Zoeller is Professor of Biology at the University of Massachusetts Amherst. He received his Bachelor's degree in Biology at Indiana University-Bloomington, followed by MS and Ph.D. degrees at Oregon State University. He pursued four years of postdoctoral studies in molecular endocrinology and neuroendocrinology at the National Institutes of Mental Health and Neurological Disorders and Stroke in Bethesda, MD. His first academic appointment in 1988 was as Assistant Professor in the Department of Anatomy and Neurobiology, University of Missouri-Columbia School of Medicine. He later joined the Biology Department at the University of Massachusetts Amherst, becoming appointed as Professor and later as Chair. Dr. Zoeller's research has focused on the role of thyroid hormone in brain development with a focus on the fetal cerebral cortex prior to the onset of fetal thyroid function. His work also includes a focus on environmental contaminants of all kinds that may interfere with thyroid hormone signaling and how best to visualize the effects and consequences of this disruption. Dr. Zoeller currently serves on the chartered Science Advisory Board to the U.S. Environmental Protection Agency and is chair of the Exposure and Human Health Committee. Dr. Zoeller has been a member of the Editorial Board of Endocrinology and Environmental Toxicology and Pharmacology. He was a member of the U.S. EPA's Endocrine Disruptors Screening and Testing Advisory Committee (EDSTAC) Screening and Testing Workgroup as well as on the peer review panels for EPA's risk assessment for Perchlorate and PFOA. He served on the NIH Center for Scientific Review Integrative and Clinical Endocrinology and Reproduction study section. He was named "Scientist of the Year - 2002" by the Learning Disabilities Association of America and won the Samuel F. Conti Award for Research Excellence at the University of Massachusetts Amherst.

Biosketches for Members of the Chartered SAB and Board Liaisons

Schlenk, Daniel

Liaison - Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) Scientific Advisory Panel

Dr. Daniel Schlenk is Professor of Aquatic Ecotoxicology and Environmental Toxicology at the University of California Riverside. Dr. Schlenk received his Ph.D. in Toxicology from Oregon State University in 1989. He was supported by a National Institute of Environmental Health Science postdoctoral fellowship at Duke University from 1989-1991. Since 2007, he has been a permanent member of the U.S. EPA FIFRA Science Advisory Panel. From 2003-2006, he was a member of the Board of Directors for the North American Society of Environmental Toxicology and Chemistry and has been a visiting Scholar in the Department of Biochemistry, Chinese University of Hong Kong; a recipient of the Ray Lankester Investigatorship of the Marine Biological Association of the United Kingdom; a visiting Scholar of the Instituto Del Mare, Venice Italy; and a Visiting Scientist at the CSIRO Lucas Heights Laboratory, in Sydney Australia. He has been a member of the U.S. EPA Science Advisory Board Aquatic Life Criteria Guidelines Consultative Panel and served on proposal review panels for the U.S. EPA, National Oceanic and Atmospheric Administration (NOAA), and the National Institutes of Health. He is the co-editor-in chief of Aquatic Toxicology and serves on the editorial boards of Toxicological Sciences, The Asian Journal of Ecotoxicology and Marine Environmental Research. He has co-edited a 2 volume series entitled "Target Organ Toxicity in Marine and Freshwater Teleosts" and has published more than 130 peer reviewed journal articles. His research interests revolve around the fate and effects of pesticides and emerging compounds in aquatic organisms.

Shubat, Pamela

Liaison - Children's Health Protection Advisory Committee

Dr. Pamela Shubat supervises the work of the Health Risk Assessment Unit of the Minnesota Department of Health Environmental Health Division. Pam has worked in the department for twenty years in many areas of risk assessment, toxicology, and exposure assessment. Her major responsibilities have included research on fish contaminants and developing state fish consumption advisories; childhood lead poisoning prevention; population-based exposure assessment; and rules for groundwater contaminants. She was the principal investigator for a state component of the EPA National Human Exposure Assessment Survey (the Minnesota Children's Pesticide Exposure Study) and for a study on using environmental economics for children's environmental health valuation. She currently supervises the work of developing risk assessment methods that take into account sensitive subpopulations and life stages in drinking water rules. In addition to this state work, she is an appointed member and the chair of the EPA Children's Health Protection Advisory Committee, and has served as a peer reviewer for EPA projects involving methylmercury, polychlorinated biphenyls, and risk assessment practice. Pam has been a member of the Society of Toxicology since 1989 and a member of the International Society for Exposure Analysis since 1996, serving as councilor from 2002-2005. She is also a member of the EPA Federal-State Toxicology Risk Analysis Committee. Pam received a received a Ph.D. in Pharmacology and Toxicology from the University of Arizona in 1988, an M.S. in Fisheries and Wildlife from Oregon State University, and a B.S. in biology from the University of Minnesota, Duluth.

von Stackelberg, Katherine

Liaison Board of Scientific Counselors

Dr. Katherine von Stackelberg specializes in developing risk-based tools and methods to support sustainable approaches to environmental decision-making. An emerging area of interest is in the exploration of approaches and tools for quantifying changes in ecosystem services, and identifying relationships between ecosystem services and expected benefits with the goal of integrating economics and risk assessment to better quantify the benefits of proposed risk reductions as a result of management or regulatory actions for use in cost-benefit, cost-effectiveness, and value of information analyses. Much of her work has focused on incorporating quantitative uncertainty analysis (e.g., analytical, probabilistic, and fuzzy methods) into the environmental management process, and she has been at the forefront of the effort to explore methods for effectively communicating and interpreting scientific uncertainty to support environmental decision-making. At the Harvard Center for Risk Analysis, Dr. von Stackelberg is leading a STAR grant on communicating uncertainty across complex integrated models to support decision making, and serves as the lead for the Research Translation Core of a Superfund Research Program grant. As a Principal at E Risk Sciences, LLP, Dr. von Stackelberg works on a number of projects related to environmental decision making, particularly with respect to contaminated sediments. She lead the development of several aquatic food web models used to support risk-based decision making for the Corps and US EPA, including FishRand, FishRand-Migration, and TrophicTrace (<http://el.erdc.usace.army.mil/trophictrace/>). She is currently working on a project to integrate environmental models within an integrated GIS-multi-criteria decision framework (DECERNS; www.decerns.com) to better support and inform environmental decision-making. Dr. von Stackelberg serves as peer reviewer for numerous journals, and is on the editorial board for Risk Analysis and Human and Ecological Risk Assessment. Dr. von Stackelberg serves on the US EPA Board of Scientific Counselors, and is a member of the Scientific Advisors on Risk Assessment for the European Commission in Brussels. She is a member of the Society for Risk Analysis, Society for Environmental Toxicology and Chemistry (Chair of the Technical Committee), Ecological Society of America, International Society for Ecological Economics, and the Association of Environmental and Resource Economists. Dr. von Stackelberg received an A.B. cum laude from Harvard College, and a Sc.M. and Sc.D. from the Harvard School of Public Health in Environmental Science and Risk Management.