List of Candidates for the External Peer Review of EPA's Draft Toxicological Reviews of Perfluorodecanoic Acid (PFDA), Perfluorononanoic Acid (PFNA), Perfluorohexanoic Acid (PFHxA), Perfluorohexanesulfonic Acid (PFHxS), and Perfluorobutanoic Acid (PFBA)
October 2021

The U.S. Environmental Protection Agency's (EPA's) Center for Public Health and Environmental Assessment (CPHEA) announced in an August 23, 2021 recent *Federal Register* Notice that it is initiating a peer review of EPA's Draft Integrated Risk Information System (IRIS) Toxicological Reviews of Perfluorodecanoic Acid (PFDA), Perfluorononanoic Acid (PFNA), Perfluorohexanoic Acid (PFHxA), Perfluorohexanesulfonic Acid (PFHxS), and Perfluorobutanoic Acid (PFBA). These documents will undergo an external scientific peer review, which is being organized and managed by Eastern Research Group, Inc. (ERG), an EPA contractor. ERG has identified nationally and internationally recognized experts with experience and expertise in one or more of the following areas: environmental epidemiology, experimental toxicology (e.g., animal, in vitro), and quantitative methods (e.g., dose-response modeling, PBPK model development) important for hazard identification and the derivation of toxicity values in human health assessments of environmental chemicals.

Attached for public comment is a proposed List of Candidates to serve as external peer reviewers along with their affiliation and technical expertise. In total, ERG has identified 22 candidates based on their relevant expertise and willingness to serve. This List of Candidates will be available for a 30-day public comment period. Following the public comment on the pool, and after considering public comment on the candidates, ERG will identify a subset of experts to serve as primary peer reviewers. Should a reviewer need to be replaced, ERG will review the availability of other candidates in the pool.

ERG will make the final decision about who will serve as external peer reviewers based on all relevant information, including the public comments. In addition, they will include a conflict-of-interest (COI) screening of the candidates to ensure that the experts have no COI and to identify factors that may create an appearance of a lack of impartiality. The screening will be conducted in accordance with Section 4.6 of EPA's *Peer Review Handbook* (4th Edition, EPA/100/B-15/001, 2015). Criteria used in evaluating candidates include: a) scientific and/or technical expertise, knowledge, and experience; b) availability and willingness to serve; c) absence of financial conflicts of interest; d) skills working in advisory committees and panels; and e) for the panel as a whole, diversity of scientific expertise and viewpoints. A balanced peer review is characterized by inclusion of candidates who possess the necessary domains of knowledge, the relevant scientific perspectives (which, among other factors, can be influenced by work history and affiliation), and the collective breadth of experience to adequately address the general charge.

Public comments on the candidate peer reviewers are due on November 19, 2021 and should be submitted to ERG via email: peerreview@erg.com (subject line: EPA PFAS assessments peer review). For more information, visit the *EPA's Peer Review Handbook.*

Attachment 1
Peer Review Candidate Biographies

John L. Adgate, Ph.D., MSPH, University of Colorado

Relevant Expertise: Environmental epidemiology

Education: Rutgers University and University of Medicine and Dentistry of New Jersey (joint degree), Ph.D. in Environmental Health (1996), and University of North Carolina at Chapel Hill School of Public Health, MSPH in Environmental Sciences and Engineering (1987)

Professional Experience: Dr. Adgate is a professor in the Colorado School of Public Health Department of Environmental and Occupational Health and an affiliate faculty member of the Center for Health, Work and Environment at the school. Dr. Adgate is also an affiliate faculty member of the Department of Environmental and Radiological Health Science at Colorado State University and the University of Colorado Cancer Center. He served as the chair of the Department of Environmental and Occupational Health from August 2009 until July 2021. Dr. Adgate has also served on multiple science advisory panels for the U.S. EPA and the National Academies of Science committees exploring technical and policy issues related to PFAS exposure and remediation, residential exposure to pesticides and air pollutants, impacts of energy development on human health, lead-exposure interventions, and the impacts of climate change on indoor air quality. Dr. Adgate's research on exposure science, risk analysis, and children's environmental health has focused on improving exposure estimation in epidemiologic studies by documenting the magnitude and variability of human exposures to chemical and biological stressors. His current research focuses on the risks, health, and community impacts of oil and gas development; the impact of heat and air pollution on the development of chronic kidney disease in Guatemalan sugarcane workers; and exposure and health effects stemming from perfluoroalkyl chemical (PFAS) exposure. He is one of the principal investigators in the national multi-site PFAS exposure and health effects study funded by ATSDR/CDC.

Janet K. Anderson, Ph.D., DABT, GSI Environmental

Relevant Expertise: Toxicology (hepatic; developmental)

Education: University of Cincinnati, College of Medicine, Ph.D. in Molecular and Cancer Biology (2007), and Diplomate, American Board of Toxicology (2012 to present)

Professional Experience: Dr. Janet Anderson, with GSI Environmental Inc., is a principal human health toxicologist and environmental risk assessor with over 15 years of experience providing toxicology expertise and consultation to federal agencies and industry. She specializes in the translation of human health toxicology data into state and federal regulatory policy decisions and performs critical reviews of federal and state risk assessment guidance and regulations. Previously, as a civilian government employee, Dr. Anderson led the U.S. Air Force (USAF) Emerging Issues and Contaminants Program, where she developed programmatic recommendations on environmental regulations and cleanup standards and assisted with site-specific remediation. Dr. Anderson is a nationally recognized leader in unregulated and emerging chemicals, such as per- and polyfluoroalkyl substances (PFAS), 1,4-dioxane, and 1,2,3-trichloropropane. She has extensive experience developing human health risk management strategies for multi-stakeholder groups. She also served as a member of the federal interagency review

team providing consultation and expert review on toxicology assessments and/or guidance documents produced by EPA, the National Toxicology Program (NTP), and the Agency for Toxic Substances Disease Registry (ATSDR). As a postdoctoral fellow for the EPA Office of Research and Development National Center for Environmental Assessment, she managed numerous Provisional Peer-reviewed Technical Review Value assessments for the Agency's Superfund Technical Support office and served as a team member for Integrated Risk Information System (IRIS) assessments. Dr. Anderson is a diplomate of the American Board of Toxicology and an active member of the Society of Toxicology.

Courtney C. Carignan, Ph.D., Michigan State University

Relevant Expertise: Environmental epidemiology

Education: Boston University School of Public Health, Ph.D. in Environmental Health (2013)

Professional Experience: Dr. Carignan is an Assistant Professor in Food Science and Human Nutrition and Pharmacology and Toxicology at Michigan State University. Her expertise is in environmental epidemiology and environmental exposure science. Her research helps protect reproductive and child health by investigating exposure to mixtures of ingredients and contaminants in consumer products, drinking water and food. She conducts biomonitoring and health studies for a wide range of populations including infertile couples, pregnant women, infants, new mothers, office workers, gymnasts, and communities exposed to contaminated drinking water. Her research has contributed to public health interventions aimed at reducing exposures to flame retardants, perfluoroalkyl substances (PFAS), and arsenic. Dr. Carignan's current work includes serving as a co-investigator of the child health study for PFAS-REACH and support for development of the PFAS Exchange. She has received numerous awards including the Katherine Skinner Memorial Prize for Commitment to the Study of Women's Health Issues, Champion of Toxics Use Reduction, and Pioneers Under 40 in Environmental Public Health.

Deborah A. Cory-Slechta, Ph.D., University of Rochester School of Medicine

Relevant Expertise: Toxicology (developmental)

Education: University of Minnesota, Ph.D. in Experimental Psychology (1977), and Western Michigan University, M.A. in Experimental Psychology (1972)

Professional Experience: Dr. Deborah Cory-Slechta's research has focused largely on the relationships between brain neurotransmitter systems and children's neurodevelopment and how such relationships are altered by exposures to environmental toxicants, including the role played by environmental neurotoxicant exposures in developmental disabilities and neurodegenerative diseases. She began as faculty at the University of Rochester Medical School (URMC) in 1983, was Chair of its Department of Environmental Medicine and Director of the NIEHS Environmental Health Sciences Center from 1998 to 2000, was Dean for Research at the URMC from 2000-2002, and is currently serving as professor in Environmental Medicine and Pediatrics. From 2003-2007, she was Director of the Environmental and Occupational Health Sciences Institute (EOHSI) and Chair of the Department of Environmental and Community Medicine at the UMDNJ-Robert Wood Johnson Medical School. Dr. Cory-Slechta is also co-director of the Behavioral Sciences Facility Core and director of the Animal Behavior Core, which provides consultation and assistance to investigators conducting translational neurobehavioral research

to enhance our understanding of human disease. Dr. Cory-Slechta has served on numerous national review and advisory panels of the National Institutes of Health, the National Institute of Environmental Health Sciences, the Food and Drug Administration, the National Center for Toxicological Research, the Environmental Protection Agency, the National Academy of Sciences, the Institute of Medicine, and the Agency for Toxic Substances and Disease Registry, Centers for Disease Control. In addition, she has served on the editorial boards of numerous toxicologic journals; examples include Neurotoxicology, Toxicology, Toxicological Sciences, Fundamental and Applied Toxicology, and Neurotoxicology and Teratology. She has held the positions of President of the Neurotoxicology Specialty Section of the Society of Toxicology, President of the Behavioral Toxicology Society, and been named a Fellow of the American Psychological Association.

Jamie C. DeWitt, Ph.D., East Carolina University

Relevant Expertise: Toxicology (immunotoxicology, developmental)

Education: Indiana University School of Public and Environmental Affairs and Program in Neural Science, Ph.D. in Environmental Science and Neural Science (2004)

Professional Experience: Dr. DeWitt is Professor of Pharmacology and Toxicology at the Brody School of Medicine, East Carolina University. She has also served as faculty in the Department of Public Health at the Brody School of Medicine and in the Toxicology program at North Carolina State University. Dr. DeWitt is an affiliate member of the Harriet and John Wooten Laboratory for Alzheimer's and Neurodegenerative Disease Research, East Carolina University. She is a diplomate of the American Board of Toxicology. Dr. DeWitt's laboratory research program explores relationships between biological organisms and their responses after exposure to environmental contaminants with a specific focus on the immune system. A particular focus of the research program is on emerging aquatic contaminants, especially per- and polyfluoroalkyl substances (PFAS). Dr. DeWitt PFAS work has focused on their ability to disrupt immune function in experimental models. She has served as an external reviewer for the U.S. Environmental Protection Agency health effects assessment of perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS), the U.S. National Toxicology Program's immune effects assessment of PFOA and PFOS, the U.S. Agency for Toxic Substances and Disease Registry toxicological profile for PFASs, and was a member of the International Agency for Research on Cancer working group for the assessment of the carcinogenicity of PFOA. Her laboratory is currently assessing the immunotoxicity of emerging PFAS that have been designed to replace those that have been phased out of production and that are of concern in North Carolina. Dr. DeWitt is currently principal investigator (PI) on three projects focusing on PFAS toxicity and co-PI on a study of PFAS-induced immunotoxicity.

Alan M. Ducatman, MD, West Virginia University

Relevant Expertise: Environmental epidemiology, toxicology (hepatic, thyroid)

Education: Wayne State University, M.D. in Medicine (1978), and City University of New York—Hunter College, and Mt. Sinai School of Medicine, M.Sc. in Environmental Health (1974)

Professional Experience: Dr. Alan Ducatman's research interests include occupational and environmental toxicity and prevention of diseases potentially related to environmental exposures. His

current environmental research focuses on the human population aspects of perfluorocarbon exposure. Similarly, Dr. Ducatman's clinic provides diagnostic and intervention advice to patients concerned with exposure to toxins. Dr. Ducatman also collaborates with clinical laboratory scientists and clinicians to create comparative effectiveness research for laboratory utilization practices. Dr. Ducatman served as Interim Founding Dean, School of Public Health, at the West Virginia University (WVU) Health Sciences Center. He was also the chair of the WVU Department of Community Medicine for 15 years, and director of WVU's Occupational Medicine residency program. His national leadership history includes service as Chair, Residency Review Committee in Preventive Medicine, Accreditation Council for Graduate Medical Education. He has also served as Chair, Board of Scientific Counselors, National Environmental Health Center and Agency for Toxic Substances and Disease Registry, U.S. Centers for Disease Control and Prevention. Dr. Ducatman is a frequent consultant to industry, government, nonprofit organizations, and patient or community groups regarding occupational and environmental health, and public health interventions.

Elaine M. Faustman, Ph.D., DABT, University of Washington

Relevant Expertise: Toxicology (developmental)

Education: Michigan State University, Department of Pharmacology and Toxicology, Ph.D. (1980)

Professional Experience: Dr. Elaine M. Faustman, Ph.D. DABT, ATS, is Professor and Director of the Institute of Risk Analysis and Risk Communication, School of Public Health at the University of Washington, Seattle. She is an elected fellow of the American Association for the Advancement of Science and the Society for Risk Analysis. She has served on the USEPA Science Advisory Board, NIEHS National Advisory Environmental Health Sciences Council, NTP Board of Scientific Counselors, and has served as the Secretary General for the International Union of Toxicology (IUTOX). She is currently a co-chair of the steering committee of the International Science Council World Data Systems. Her research expertise is the identification of molecular mechanisms of developmental, reproductive, and neuro toxicants, characterizing in vitro techniques for toxicology assessment, and developing biologically based dose-response models. She has directed a Center for Oceans and Human Health that has been funded by the NIEHS to examine models for evaluating engineered nanomaterials. Recent research efforts include her leadership as PI for the EPA Predictive Toxicology Center and her work with the NICHD Health Measurement Network Environmental Domain Working Group and Lifecourse Health Sciences Working Group.

Jeffrey W. Fisher, Ph.D., ScitoVation

Relevant Expertise: Quantitative methods, toxicology (thyroid)

Education: Miami University of Ohio, Ph.D. in Zoology /Toxicology (1987), and Wright State University, M.S. in Biology/Ecology (1979)

Professional Experience: Dr. Jeffrey Fisher came to ScitoVation from the U.S. Food and Drug Administration (FDA), National Center for Toxicological Research, where he served as a leading research toxicologist. Dr. Fisher previously taught at and led research at the University of Georgia, where he also served as head of the Department of Environmental Health Sciences and director of the school's

Interdisciplinary Toxicology Program. A leading expert on physiologically based pharmacokinetic modeling (PBPK), Dr. Fisher's research interests have focused on the development and application of pharmacokinetic and biologically based mathematical models to ascertain health risks from environmental, food-borne and occupational chemical exposures. Dr. Fisher has researched the use of PBPK models for drug dose selection in pediatric populations at the FDA. His chemical toxicology modeling experience includes working with chlorinated and non-chlorinated solvents, fuels, pesticides, perchlorate, PFOA, and bisphenol A. He has developed PBPK models for use in cancer risk assessment, estimating lactational transfer of solvents, understanding in utero and neonatal dosimetry, quantifying metabolism of solvent mixtures and developing biologically motivated models for the hypothalamic-pituitary-thyroid axis in rodents and humans. Dr. Fisher has served as a member of EPA's Science Advisory Board, on numerous other science advisory panels, as a peer reviewer of EPA documents, and on the editorial boards of scientific journals. He had received numerous awards for his service and achievements.

Panagiotis G. Georgopoulos, Ph.D., Rutgers University

Relevant Expertise: Quantitative methods, environmental epidemiology (immunotoxicity)

Education: California Institute of Technology, Ph.D. in Chemical Engineering (1986), and California Institute of Technology, M.S. in Chemical Engineering (1982)

Professional Experience: Dr. Georgopoulos is Professor of Environmental and Occupational Health and Justice at Rutgers School of Public Health, with a joint appointment in the Department of Pharmacology, Robert Wood Johnson Medical School. He directs the Ozone Research Center and the Informatics and Computational Toxicology Core for the NIEHS Center for Environmental Exposures and Disease (CEED). He also directs the Center for Exposure and Risk Modeling (CERM) at EOHSI and is Co-Director of the Environmental Bioinformatics and Computational Toxicology Center (ebCTC) (funded by USEPA 2005-2010). He served as Director of the USDOE-funded Center of Expertise in Exposure Assessment of the Consortium for Risk Evaluation with Stakeholder Participation (CRESP). He has developed innovative course materials in modeling and informatics related to environmental health applications. His research interests involve the development and application of novel mathematical and computational methods for diagnostic and mechanistic studies of multipathway physicochemical processes taking place in interacting environmental and biological systems. The aim of this research is to improve the understanding and quantification of human exposure and biological mechanism-based dosimetry and risk for environmental toxics; this is being accomplished through the ongoing development of a consistent mechanistic multiscale modular computational framework for source-to-dose-to-effect modeling of toxicant dynamics. Outcomes of this research include integrative computational models of toxicokinetic and toxicodynamic processes at the cellular, tissue and whole body levels. Dr. Georgopoulos has published more than 125 peer-reviewed articles and chapters in scientific journals, books and proceedings. He has received awards and honors, including the DuPont Education and Research Award, for his work on environmental pollution and health. He has served on editorial boards of scientific journals and currently serves as member of various national and international scientific and technical committees on environmental issues, including US EPA's Chemical Safety Advisory Committee (CSAC).

Herman J. Gibb, Ph.D., Gibb Epidemiology Consulting

Relevant Expertise: Environmental epidemiology, quantitative methods

Education: Johns Hopkins University, Ph.D. in Epidemiology, (1989), and University of Pittsburgh, M.P.H. in Environmental Health (1974)

Professional Experience: Dr. Gibb is President of Gibb Epidemiology Consulting. He has over 35 years of experience in health risk assessment and has provided expert consultation to a variety of international and national clients. He is also Professorial Lecturer in Environmental and Occupational Health at the Milken Institute School of Public Health of the George Washington University. Dr. Gibb chaired the World Health Organization's Foodborne Epidemiology Reference Group's (FERG) Chemical Task Force (2007-2015). He was a member of the Science Advisory Committee of the United States Transuranium and Uranium Registries at Washington State University (2007-2016) and a member of the Presidential Advisory Board on Science, Technology, Engineering, Mathematics and Health at the Ana G. Mendez University System in San Juan, Puerto Rico (2001-2016). Dr. Gibb has served on three committees of the National Academies of Science, including one on research needs for per- and polyfluoroalkyl substances (PFAS) (2020). Dr. Gibb has served as an expert witness before federal and state courts and before an international tribunal on a variety of health risk assessment topics and has testified before two U.S. Senate committees about hexavalent chromium. Before starting Gibb Epidemiology Consulting in 2014, Dr. Gibb was President of Tetra Tech Sciences, an operating unit of the Tetra Tech Corporation specializing in health risk assessment. At Tetra Tech Sciences, he managed contracts providing public health support to the Centers for Disease Control and Prevention, the U.S. Environmental Protection Agency (EPA), Health Canada, and the World Health Organization (WHO). He was an invited peer reviewer of health risk assessment documents prepared by EPA, the U.S. Food and Drug Administration, the National Institute of Occupational Safety and Health, Health Canada, and the WHO. Dr. Gibb received the 2011 Practitioner of the Year from the Society of Risk Analysis. Dr. Gibb also served as Associate Director for Health and Assistant Center Director at EPA's National Center for Environmental Assessment. In this capacity, he oversaw the Agency's Integrated Risk Information System (IRIS) and directed EPA's assessment of inhalation exposures and potential health risks resulting from the collapse of the World Trade Center Towers. He was the Project Officer for EPA's cooperative agreements with the WHO. He is an author of EPA's Guidelines for Carcinogen Risk Assessment and EPA's Risk Assessment Principles and Practices. He was the recipient of the EPA's Scientific and Technological Achievement Award for his study of lung cancer mortality and clinical irritation among chromate production workers and the recipient of the EPA's Gold Medal for Exceptional Service for his work on the drinking water standard for arsenic. His study of chromate production workers utilized one of the most extensive industrial hygiene data bases ever assembled. The study formed the basis of OSHA's 2006 Permissible Exposure Limit (PEL) on Hexavalent Chromium. He is an author of the WHO's Environmental Health Criteria Document on Principles for the Assessment of Risks to Human Health from Exposure to Chemicals and the WHO's Environmental Health Criteria Document on Arsenic and Arsenic Compounds. Dr. Gibb served as Secretary-Treasurer of the Ethical, Legal, Forensics, and Societal Issues Specialty Section of the Society of Toxicology (2018-2020). In 2019, he received the University of Pittsburgh Public Health Distinguished Alumni Award.

Philippe Grandjean, D.M.Sc., MD, Odense University, Denmark and Harvard University

Relevant Expertise: Toxicology (immunotoxicology, thyroid, developmental)

Education: University of Copenhagen, D.M.Sc. (dr.med.) (1979), and University of Copenhagen, M.D. (1974)

Professional Experience: Philippe Grandjean is Adjunct Professor of Environmental Health at Harvard University and Professor of Environmental Medicine at the University of Southern Denmark. In 2004, he received the Mercury Madness Award for excellence in science in the public interest, from eight US environmental organizations. He has also received the Science Communication Award from the University of Southern Denmark, and in 2015, he received the Bernardino Ramazzini Award for his long research career including groundbreaking work on toxins affecting children. In 2016, Grandjean received the John F. Goldsmith Award from the International Society for Environmental Epidemiology for his sustained and outstanding contributions to the knowledge and practice of environmental epidemiology. He lives in Copenhagen, Denmark and in Cambridge, MA. He co-directs a Superfund Research Program center grant to study perfluorinated alkylate substances (PFASs): Sources, Transport, Exposure and Effects of PFASs (STEEP). His most recent projects examine brain development and immune functions in the context of exposure to environmental pollutants, such as perfluorinated compounds and mercury. The results have inspired downward revisions of methylmercury exposure limits internationally. Other recent studies have targeted age-related functional deficits and degenerative diseases with regard to life-time exposure to contaminants including perfluorinated compounds.

Joseph T. Haney, Jr., M.S., Texas Commission on Environmental Quality (TCEQ)

Relevant Expertise: Quantitative methods

Education: University of Texas School of Public Health, M.S. in Environmental Science with Emphasis in Toxicology

Professional Experience: Mr. Haney, is a senior toxicologist with the Texas Commission on Environmental Quality's (TCEQ) Toxicology Division. His 23 years of experience include deep expertise in dose-response modeling and the derivation of toxicity factors (e.g., FrC, RfD, URF, SFo) for data-rich chemicals such as multiple PFAS, hexavalent chromium, benzene, formaldehyde, 1,4-dichlorobenzene, nickel, methylene chloride, cadmium, cobalt, manganese, trimethylbenzenes, etc. His work considers the modes of action/biological mechanisms, toxicokinetics (i.e., ADME), and the full spectrum of adverse health effects (e.g., hepatic, thyroid, developmental, immunological, cancer). His experience includes work on multiple media types (e.g., soil, water, air, sediment, fish tissues) and human health risk assessment (e.g., state and federal superfund) for a variety of receptor types (e.g., residents, commercial/industrial workers, fishers, surface water recreators). He has made technical contributions to remediation risk assessment rules and guidance and toxicity factor development guidance, including the Texas Risk Reduction Program (i.e., TRRP; state site remediation rule) rule update, the Surface Water and Sediment Health-Protective Cleanup Value Guidance (TRRP-24), Total Petroleum Hydrocarbon Health-Protective Cleanup Value Guidance (TRRP-27), Guidelines to Develop Effects Screening Levels, Reference Values, and Unit Risk Factors (2006) and the TCEQ updated Guidelines to Develop Toxicity Factors (2012, 2015). He has presented at numerous toxicology and other conferences, including for the Annual Medical Device Sterilization Conference, the Society for Risk Analysis, and the

Society of Toxicology. Mr. Haney is a member of the Society of Toxicology (SOT), its Lone Star Regional Chapter, and the Risk Assessment Specialty Section (RASS), and in the Society for Risk Analysis (SRA). He has served on the USEPA Mouse Lung Tumor Workshop Planning Panel.

Alan M. Hoberman, Ph.D., DABT, Argus International, Inc.

Relevant Expertise: Toxicology (developmental)

Education: Pacific Western University, Ph.D. in Toxicology (1982); University of Arkansas, M.S. in Interdisciplinary Toxicology (1979); and Diplomate, American Board of Toxicology (1988 to present)

Professional Experience: Dr. Hoberman has worked in the field of toxicology for over 40 years and has specialized in reproductive and developmental toxicology for over 34 years. He is currently president of Argus International and also serves as Executive Director of Global Development, Reproductive and Juvenile Toxicology for the Charles River Laboratories Preclinical Services (PCS). He was previously Executive Director of Site Operations and Toxicology for Charles River PCS. As a diplomate of the American Board of Toxicology (since 1988) and a Fellow of the Academy of Toxicological Society (since 2006), he has over 70 publications and 200 presentations of abstracts and lectures in the fields of reproductive and developmental toxicology, neuro-toxicology, inhalation toxicology, photobiology, and regulatory toxicology. His current research interests include the development of the immune response and the assessment of compounds in young animals. Dr. Hoberman is a former and current President of the Middle Atlantic Reproduction and Teratology Association and former President of the Reproductive and Developmental Toxicology Specialty Section (2011). He presented a course on interpretation of data from reproductive toxicity evaluations held at the International Federation of Teratology Societies meeting in Boca Ratan, Florida, in 1991. He was President of the Arkansas Biotechnology Association from 1999-2000. He is currently the treasurer of the American College of Toxicology and the Pennsylvania Society for Biomedical Research, where he is also a board member.

Lisa M. Kamendulis, Ph.D., Indiana University

Relevant Expertise: Toxicology (hepatic)

Education: University of New Mexico, Ph.D. in Toxicology (1994)

Professional Experience: Dr. Lisa M. Kamendulis is an Associate Professor in the Department of Environmental and Occupational Health at Indiana University, Bloomington. Her research focuses on elucidating the mechanisms involved in toxic responses elicited by environmental factors, and how these exposures affect the development of chronic human diseases such as cancer. Current research focuses on investigating whether exposure to perfluoroalkyl substances (PFAS) promotes the progression of pancreatic cancer. She uses animal models and molecular and analytical chemistry approaches to quantify oxidative stress and other biomarkers related to environmental exposures and chronic diseases. Information from these studies may lead to novel disease prevention/intervention strategies and will provide the framework to assess the relative human risk from exposure to toxicants. She has published more than 65 peer-reviewed manuscripts, and book chapters, has mentored many graduate and post-doctoral students, and taught courses in the areas of environmental health, toxicology, and environmental carcinogenesis. Dr. Kamendulis has served both locally and nationally as a peer reviewer for several EPA panels and chemical toxicity evaluations, has served as Councilor and

Secretary-Treasurer of the Ohio Valley Society of Toxicology and as Councilor in the Carcinogenesis Specialty Section of the Society of Toxicology.

Angela M. Leung, MD, University of California Los Angeles (UCLA)

Relevant Expertise: Toxicology (thyroid)

Education: Boston University School of Medicine, M.D. (2006), and Boston University School of Public Health, M.Sc. in Epidemiology (2010)

Professional Experience: Dr. Angela M. Leung is an Associate Professor of Medicine at the University of California Los Angeles (UCLA) David Geffen School of Medicine and an endocrinologist at UCLA Health and the Veteran Affairs (VA) Greater Los Angeles Healthcare System. Dr. Leung has clinical and research interests in thyroid disorders, specifically regarding environmental thyroid toxicants, iodine status, and maternal-child thyroid health. Her research has been funded by the National Institutes of Health (NIH) and the VA Clinical Science Research and Development Service; currently, she is principal investigator of a VA study examining the associations between iodinated contrast dye exposure, thyroid dysfunction, cardiac outcomes, and mortality among Veterans. Dr. Leung also serves on the board of directors of the American Thyroid Association (ATA) and is Editor-in-Chief of Clinical Thyroidology, one of the ATA's journals; president of the ATA's Women in Thyroidology task force; and past-chair of the ATA's Public Health Committee. She has served on multiple NIH study sections and draft toxicity assessment review committees for the U.S. Environmental Protection Agency (EPA) and the global Organization for Economic Cooperation and Development (OECD), in relation to the exposure risks of various environmental thyroid disruptors that include GenX, PFBS, and perchlorate.

Zhoumeng Lin, Ph.D., DABT, University of Florida

Relevant Expertise: Quantitative methods

Education: University of Georgia, Athens, Ph.D. in Toxicology (2013), and Diplomate, of the American Board of Toxicology (2017 to present)

Professional Experience: Dr. Zhoumeng Lin is an Associate Professor in the Department of Environmental and Global Health and a member of the Center for Environmental and Human Toxicology. He served on the faculty at Kansas State University prior to joining the University of Florida as an Associate Professor in May 2021. Dr. Lin's research is focused on the development and application of computational technologies, especially physiologically based pharmacokinetic (PBPK) modeling, to study food safety, nanoparticles, and chemical risk assessment. He is a co-author of more than sixty peer-reviewed publications. His publications have received several awards, including the Society of Toxicology Biological Modeling Specialty Section Best Paper Award in 2020. Dr. Lin teaches a graduate level course on PBPK modeling. He is a co-editor and co-author of five chapters of a textbook entitled "Physiologically Based Pharmacokinetic (PBPK) Modeling: Methods and Applications in Toxicology and Risk Assessment." Dr. Lin has served as an ad hoc grant reviewer for USDA and NIH. He is an ad hoc member of the Science Advisory Committee on Chemicals (SACC) of US EPA. He has served as an external reviewer on risk assessment documents for EPA, CDC, and FDA. He is the Vice-President-Elect of

the Biological Modeling Specialty Section (BMSS) and a Councilor of the Nanoscience and Advanced Materials Specialty Section (NAMSS) of Society of Toxicology.

Carla A. Ng, Ph.D., University of Pittsburgh

Relevant Expertise: Quantitative methods

Education: Northwestern University, Evanston, Ph.D. in Chemical Engineering (2008), and SUNY University at Buffalo, M.S. in Chemical Engineering (2003)

Professional Experience: Dr. Carla Ng is an Assistant Professor in the Department of Civil and Environmental Engineering at the University of Pittsburgh, with a secondary appointment in Environmental and Occupational Health in the Graduate School of Public Health. Dr. Ng's research involves the development of models for the fate of chemicals in organisms and ecosystems, at the intersection of chemistry, biology, and engineering. She focuses on the development of mechanistic toxicokinetic models of PFAS in organisms and using protein-PFAS interactions to understand and predict their impacts across different PFAS structures and species of interest. Other areas of research include tracking the evolution of complex chemical mixtures in the environment and exploring the role of the industrial food system on the fate of contaminants, with implications for human exposure. She is widely published in the area of PFAS toxicology. For example, she recently published "Addressing urgent questions for PFAS in the 21st Century," a feature article in the journal, Environmental Science and Technology.

Gloria Post, Ph.D., DABT, New Jersey Department of Environmental Protection

Relevant Expertise: Toxicology, quantitative methods

Education: Thomas Jefferson University, Ph.D. in Pharmacology (1982), and Diplomate of the American Board of Toxicology (1990 to present)

Professional Experience: Dr. Gloria Post is a Research Scientist in the New Jersey Department of Environmental Protection (NJDEP) Division of Science and Research. She is a toxicologist responsible for health effects evaluation and risk assessment of contaminants found in New Jersey's environment. Dr. Post has made substantial contributions to the risk assessments of many environmental contaminants including per- and polyfluoroalkyl substances (PFAS). She has focused on PFAS as environmental contaminants for more than 17 years, and she is the first author of five publications and the co-author of three additional publications on this topic. She is the lead for the Human Health section of the Interstate Technology & Regulatory Council (ITRC) PFAS Technical and Regulatory Document and a major contributor to the Environmental Council of the States white paper on states' PFAS standards. Dr. Post has served on the National Academy of Sciences Planning Committee for the Workshop on Federal Human Health PFAS Research and on several EPA Science Advisory Board and other peer review panels. Dr. Post is a member of the NJ Drinking Water Quality Institute (DWQI), an advisory body that recommends drinking water standards (Maximum Contaminant Levels; MCLs) to NJDEP. She made substantial contributions the DWQI's development of MCLs for three PFAS; the NJ MCL for perfluorononanoic acid (PFNA) was the first MCL to be established for any PFAS in the U.S. She also represents NJDEP on the NJ Governor's Council for Prevention of Developmental Disabilities. She has served the Mid-Atlantic Chapter of Society of Toxicology as an officer and committee chair. Dr. Post is a

recipient of the American Water Works Association-NJ Section Annual Drinking Water Research Award (2014), the NJ State Public Service Award for the Governor's Team of Excellence (2019, 2020), and the NJDEP Division of Science and Research Gail P. Carter Memorial Science Award (2010, 2014, 2020) for major contributions to environmental science or use of scientific expertise to significantly improve New Jersey's environment.

David A. Savitz, Ph.D., Brown University

Relevant Expertise: Environmental epidemiology

Education: Ohio State University, Department of Preventive Medicine, M.S. (1978), and University of Pittsburgh, Department of Epidemiology, Ph.D. (1982)

Professional Experience: David Savitz is Professor of Epidemiology in the Brown University School of Public Health, with joint appointments in Obstetrics and Gynecology and Pediatrics in the Alpert Medical School. He previously served as the Charles W. Bluhdorn Professor of Community and Preventive Medicine and Director of Disease Prevention and Public Health Institute for four years at the Mount Sinai School of Medicine. His epidemiological research has addressed a wide range of public health issues focusing on health effects of environmental agents in the workplace and community and a wide range of reproductive health outcomes. He has done extensive work on health effects of nonionizing radiation, pesticides, drinking water treatment by-products, and perfluorinated compounds. His reproductive health research has focused on preterm birth, fetal growth restriction, pregnancy complications, and miscarriage. He has directed 30 doctoral dissertations and 15 master's theses. He is the author of nearly 400 papers in professional journals and editor or author of three books. He has served as editor at the American Journal of Epidemiology and Epidemiology and as a member of the Epidemiology and Disease Control study section of the National Institutes of Health. He was President of the Society for Epidemiologic Research and the Society for Pediatric and Perinatal Epidemiologic Research and North American Regional Councilor for the International Epidemiological Association. Dr. Savitz is a member of the National Academy of Sciences Institute of Medicine. From 2013-2017 he served as Vice President for Research at Brown University.

Anatoly A. Soshilov, Ph.D., California Environmental Protection Agency

Relevant Expertise: Toxicology (hepatic)

Education: University of California at Davis, Ph.D. in Biochemistry and Molecular Biology (2007), and Novosibirsk State University, Novosibirsk, Russian Federation, M.S. in Chemistry (2001)

Professional Experience: Anatoly Soshilov was involved in several research projects in environmental chemistry and molecular biology early in his academic career. His doctoral thesis was on analysis of protein interactions of the Aryl hydrocarbon receptor (AhR), which mediates toxicity of dioxin and dioxin-like compounds. His ongoing research in this area further elucidated ligand-specific mechanisms of activation of the AhR. This work resulted in multiple publications in peer-reviewed journals. In 2015, he joined the Office of Environmental Health Hazard Assessment at California EPA. Here he has worked on toxicity assessments of multiple compounds including disinfection byproducts and certain PFAS. Recent publications include topics such as PFAS as endocrine disruptors and perfluorobutane sulfonic acid in drinking water.

R. Thomas Zoeller, Ph.D., University of Massachusetts Amherst

Relevant Expertise: Toxicology (thyroid, developmental)

Education: Oregon State University, Corvallis, M.A. in Endocrinology (1979), and Oregon State University, Corvallis, Ph.D. in (Neuroendocrinology (1983)

Professional Experience:
Dr. R. Thomas Zoeller, Ph.D., is Emeritus Professor of Biology at the University of Massachusetts, Amherst and is a visiting Professor at the University of Örebro in Sweden. His early training was in molecular neuroendocrinology at the National Institutes of Health and he has published nearly 200 peer-reviewed papers, contributing to fields including the neurochemistry of behavior, circadian rhythms, reproductive neuroendocrinology, and the role of thyroid hormones in development. Dr. Zoeller's lab also studied the mechanisms by which environmental endocrine disruptors can interfere with thyroid hormone action in the brain. He was a member of the U.S. EPA's committee to develop a strategy to identify endocrine-disrupting chemicals in the 1990's, as well as other EPA and NIH review panels. Dr. Zoeller received the "Scientist of the Year – 2002" from the Learning Disabilities Association and was a Samuel F. Conte Research Fellow at the University of Massachusetts, where he was awarded the UMass Chancellor's Medal. He was also an Endocrine Society Laureate Awardee. He has served as a chartered member of the EPA's Science Advisory Board and was chair of their Exposure and Human Health Committee reviewing the Computational Toxicology Program. He has written extensively on issues of Endocrine Disruption and Public Policy and was one of the editors of the State of the Science of Endocrine Disruption published by a joint United Nations/World Health Organization project. In 2005, he was a member of EPA's Scientific Advisory Board for PFOA. He is co-author of a recent (2020) study, "Maternal serum perfluoroalkyl substance mixtures and thyroid hormone concentrations in maternal and cord sera," published in the journal, *Environmental Research*.