UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
NOMINATIONS FOR THE FEDERAL INSECTICIDE, FUNGICIDE, AND RODENTICIDE ACT (FIFRA)
SCIENTIFIC ADVISORY PANEL (SAP)
Docket Number: EPA-HQ-OPP-2017-0602

Biographical Sketches

Jonathan W. Boyd, Ph.D.

Affiliation: West Virginia University, Morgantown, WV

Expertise: Ecological toxicology; chemical environment fate and effects; genomics and green chemistry designs

Education: Ph.D., Environmental Toxicology, Texas Tech University; B.S., Biochemistry, University of Texas at Austin

Experience Summary: Dr. Jonathan Boyd is an Associate Professor in the C. Eugene Bennett Department of Chemistry at West Virginia University (WVU), with additional appointments in the Intercollegiate Undergraduate Program in Biochemistry and the Departments of Surgery and Orthopedics at the West Virginia University School of Medicine. His primary research interest is in understanding the mammalian response to chemical and physical stressors; specifically, the integration of cellular mechanisms into tissue and organ-level responses. He is also a Guest Professor at Fulda University where his research involves understanding early biological reactions to chemical exposures. Prior to his tenure at WVU, Dr. Boyd was a Senior Scientist/Toxicologist at the Milton S. Eisenhower Research Center at Johns Hopkins University's Applied Physics Laboratory where he led the development of a new predictive toxicology research group focused on coupling mathematical models with *in vitro* pharmacodynamic responses.

Panel Experience: Dr. Boyd previously served on numerous advisory panels and is currently serving on the European Research Council, Advanced Grants Committee (2015-2020); He was appointed to the U.S. Environmental Protection Agency's Science to Achieve Results, Graduate Fellowship Committee (2013, 2015); Department of Defense, Defense Advanced Research Projects Agency Committee (2004-2008) and the American Association for the Advancement of Science, Homeland Security and Defense Committee.

Robert E. Chapin, Ph.D.

Affiliation: Pfizer Global Research and Development, Groton, CT

Expertise: *In vitro* predictive toxicology; pre-conception reproductive toxicology

Education: Ph.D., Pharmacology, University of North Carolina, Chapel Hill; B.A., Biology, Earlham College

Experience Summary: Dr. Robert Chapin has recently retired from his position as a Senior Research Fellow and member of the Developmental and Reproductive Toxicology Center of Expertise at Pfizer Global Research and Development in Groton, CT. He received his Ph.D. degree in 1980 from UNC-Chapel Hill in Pharmacology and subsequently post-doctored for 2 years at the Chemical Industry Institute of Toxicology. This was followed by 18 years at the National Institute of Environmental Health Sciences (NIEHS), as a Senior Staff Fellow in the National Toxicology Program, then as a Principal Investigator, and then Lab Head. His area of expertise is pre-conception reproductive toxicology in male and female; however, he also worked hard in the area of *in vitro* predictive toxicology. He developed advanced *in vitro* culture methods for exploring mechanisms of reproductive toxicology and helped pioneer the integrated use of molecular, biochemical, histologic, and in vitro methods to address mechanistic questions in reproductive toxicology.

Panel Experience: Dr. Chapin has served as an *ad hoc* member on several Scientific Advisory Panels for the U.S. Environmental Protection Agency (U.S. EPA) specifically the National Research Council's Low Dose Non-Monotone Panel. (2013), and had previously worked on numerous International Life Sciences Institute committees and publications (2009-2011).

Weihsueh A. Chiu, Ph.D.

Affiliation: Texas A&M University, College Station, TX

Expertise: Environmental chemicals and human health; physiologically-based pharmacokinetic modeling

Education: Ph.D., Physics, Princeton University; A.B., Physics, Harvard University

Experience Summary: Dr. Weihsueh Chiu is a Professor in the Department of Veterinary Integrative Biosciences at the Texas A&M University College of Veterinary Medicine and Biomedical Sciences. He also has a Research Fellow appointment at the Institute for Science, Technology, and Public Policy at the Bush School of Government and Public Service. He received a bachelor's degree in Physics from Harvard University and earned a Ph.D. in Physics from Princeton University, as well as a Certificate in Science, Technology, and Environmental Policy from the Woodrow Wilson School of Public and International Affairs. Dr. Chiu spent the first 16 years of his career in government service, first at the U.S. Government Accountability Office, and then at the U.S. Environmental Protection Agency. Throughout his career, he has been involved in a diverse span of risk-related topics such as defense against chemical-biological warfare agents, radioactive contamination in biosolids, human health risks from environmental chemical exposures, and the interface between science and policy. His recent research has focused on human health risk assessment, particularly with respect to toxicokinetics, mechanisms of toxicity, physiologically-based pharmacokinetic modeling, dose-response assessment, and characterizing uncertainty and variability.

Panel Experience: Dr. Chiu has participated in expert review panels for numerous government agencies, including as chair to both the National Toxicology Program's, Report on Carcinogens (RoC) Monograph on Haloacetic Acids Found as Water Disinfection By-products (July 2017), and the Monograph on Immunotoxicity Associated with Exposure to Perfluorooctanoic Acid (PFOA) or Perfluorooctane Sulfonate (PFOS) (July 2016) and as a member on the National Institute for Environmental Health Sciences (NIEHS), PRIME R01 Special Emphasis Panel (July, 2017). He has also served on a number of national and international workgroups for the World Health Organization's International Agency for Research on Cancer (2012, 2014, 2015, 2016, 2017), International Program on Chemical Safety (2009, 2010, 2011, 2013, 2014), the Organization for Economic Cooperation and Development (2017). Dr. Chiu has served on several U.S. National Academy of Sciences (NAS)/National Research Council Committees (NRCC) as a member to Review the Dietary Reference Intakes of Sodium and Potassium (December 2017-present); NAS/NRCC (Standing Committee) on the Use of Emerging Science for Environmental Health Decisions (September 2016-present); NAS/NRCC on the Unraveling Low Dose Toxicity: Case Studies of Systematic Review of Evidence (June 2015-July 2017); NAS/NRCC on the Predictive-Toxicology Approaches for Military Assessments of Acute Exposures (September 2014-July 2015); and as a consultant for the NAS/NRCC on the Development of Guiding Principles for the Inclusion of Chronic Disease Endpoints in Future Dietary Reference Intakes (October 2016-August 2017).

George B. Corcoran, Ph.D.

Affiliation: Wayne State University, Detroit, MI

Expertise: Cellular injury; cell death and factors that govern drug and chemical injuries, including drug metabolism and nutrition

Education: Ph.D., Pharmacology/Toxicology, George Washington University; M.S., Chemistry Bucknell University; B.A., Chemistry, Ithaca College

Experience Summary: Dr. Corcoran is Professor and Chairman of the Department of Pharmaceutical Sciences, College of Pharmacy & Health Sciences, Wayne State University, and Adjunct Professor of Pediatrics, Wayne State University School of Medicine. Prior to Wayne State, Dr. Corcoran served as Assistant Professor of Pharmaceutics at the State University of New York at Buffalo and Associate Professor, and later Professor and Director of the Toxicology Graduate Program at the University of New Mexico. His research interests are multidisciplinary and translational. They focus on cellular injury and cell death, and factors that govern drug and chemical injuries, including drug metabolism and nutrition.

Panel Experience: Dr. Corcoran has served on and/or chaired review panels for the National Institutes of Health (1996-2002), the National Academies (2000-2005), and the Howard Hughes Medical Institute (2000-2003). He is a past Member of the Scientific Advisory Board of the U.S. EPA (2003-2009), Past Chair (2012-2013) of the Executive Board of the Council of Scientific Society Presidents (2007-2013), and past member of the Inter-governmental Scientific Advisory Committee on Alternative Toxicological Methods (2008-2011).

Nikolay M. Filipov, Ph.D.

Affiliation: University of Georgia, Athens, GA

Expertise: Neurotoxicology; neuroimmunology; immunotoxicology and Toxicokinetics

Education: Ph.D., Toxicology, University of Georgia; M.S., Physiology, University of Georgia

Experience Summary: Dr. Nikolay Filipov is a Professor in the Department of Physiology and Pharmacology at the University of Georgia's College of Veterinary Medicine in Athens, GA. He is also a member of the University of Georgia's interdisciplinary Toxicology and Neuroscience programs. In addition to teaching toxicology, neurophysiology, and cell physiology (among others) to veterinary and graduate students, his professional responsibilities include service on the Toxicology Program Executive Committee and coordination of the departmental scientific seminar series. Dr. Filipov's primary research activities are in the areas of neurotoxicology, immunotoxicology, neuroimmunology, and toxicokinetics. Consequences of pesticide and metal exposures, which are studied with both *in vivo* and *in vitro* models are a major research focus.

Panel Experience: Since 2004, Dr. Filipov has served on advisory panels for the National Institutes of Health (NIH) [Neurotoxicology and Alcohol Study Section (NAL), Developmental Brain Disorders Study Section (DBD), NIH Superfund Research Programs, NIH K/R01/R13/R21 Special Emphasis Panels]. He has also served on Panels at the National Institute for Occupational Safety and Health (NIOSH; 2015-current), Department of Defense (DOD; 2010-current), and Veteran Affairs (VA; 2015-2016) grant review panels. Dr. Filipov currently is a full member of the Mechanism of Cellular Death in NeuroDegeneration (MCDN) (Neuroscience R15; since 2013) review panel and of the VA NURE review panel (2016-2019).

Paul M. Foster, Ph.D.

Affiliation: National Institute of Environmental Health Sciences, Durham, NC

Expertise: Human health effects of environmental endocrine disruptors (antiandrogens); mechanisms of testicular toxicity; toxicokinetic and dynamic parameters affecting the induction of reproductive and developmental toxicity

Education: Ph.D., Biochemistry/Toxicology, Brunel University

Experience Summary: Dr. Paul Foster received his Ph.D. from Brunel University, Uxbridge, England in 1977 and is currently the Chief of the Toxicology Branch of the Division of the National Toxicology Program (NTP) at the National Institute of Environmental Health Sciences (NIEHS) in Research Triangle Park, NC. The Toxicology Branch is responsible for the scientific leadership of the NTP's cancer and non-cancer testing program. Prior to joining NIEHS in 2002, he was the Director of the research program in endocrine, reproductive and developmental toxicology at the CIIT Centers for Health Research. He joined CIIT in December 1995 after a 13-year career at Zeneca's (formerly Imperial Chemical Industries) Central Toxicology Laboratory in Cheshire, England, where he was Head of Reproductive and Developmental Toxicology. Dr. Foster's research interests span from understanding the potential human health effects of environmental endocrine disruptors (particularly antiandrogens); mechanisms of testicular toxicity; the study of early testicular Leydig cell dysfunction induced by chemicals as a prelude to hyperplasia and tumors; and the toxicokinetic and dynamic parameters affecting the induction of reproductive and developmental toxicity. He also has a broad interest in risk assessment issues in these areas and currently serves as the NTP's senior discipline leader in reproductive, developmental and endocrine toxicology.

Panel Experience: Dr. Foster served on numerous national and international advisory committees [U.S. Environmental Protection Agency (U.S. EPA), World Health Organization (WHO), International Programme on Chemical Safety (IPCS), European Centre for Ecotoxicology and Toxicology of Chemicals (ECETOC), Organisation for Economic Co-operation and Development (OECD), National Institute for Health and Medical Research (INSERM), Medical Research Center (MRC), Nuclear Regulatory Commission, (National Research Council (NRC)/National Academy of Sciences (NAS), and Society of Environmental Toxicology and Chemistry (SETAC)] dealing with reproductive and developmental toxicology or endocrine disruption. Dr. Foster is a former Chair and member of the Continuing Education Committee (1996-1999), Science Program Committee (2009-2013) of the Society of Toxicology (SOT), and was a Past President of the Reproductive and Developmental Toxicology specialty section (1997-2001) of the SOT.

John T. Greenamyre, M.D., Ph.D.

Affiliation: University of Pittsburg, Pittsburg, PA

Expertise: Neurological disorders, including Parkinson's disease; interactions between environmental toxins (natural or man-made); and genes that increase or decrease susceptibility in developing Parkinson's disease

Education: M.D., University of Michigan Medical School; Ph.D., Neuroscience, University of Michigan; B.S., Microbiology, Michigan State University

Experience Summary: Dr. John Greenamyre is the Love Family Professor and Vice-Chair of Neurology, Chief of Movement Disorders, and Director of the Pittsburgh Institute for Neurodegenerative Diseases (PIND), and the American Parkinson Disease Association Advanced Center for Parkinson's disease Research at the University of Pittsburgh. He is a member of the Scientific Advisory Board of the Michael J. Fox Foundation and a member of the scientific advisory boards of the Parkinson's Foundation and the American Parkinson Disease Association. He has been listed as one of the 'Best Doctors in America' since the mid-1990s. He is Editor-in-Chief of the scientific journal Neurobiology of Disease and past Editor of MedLink Neurology (*www.medlink.com*). His laboratory studies mechanisms of neurodegeneration in Parkinson's disease, with a focus on gene-environment interactions. His translational studies use pharmacological and 'gene therapy' approaches.

Panel Experience: Dr. Greenamyre is a member of the Scientific Advisory Board of the Michael J. Fox Foundation (2000-present) and a member of the scientific advisory boards of the Parkinson's Foundation (2004-present) and the American Parkinson Disease Association (2015-present).

William C. Griffith, Ph.D.

Affiliation: University of Washington, Seattle, WA

Expertise: Biostatistics; physiologically-based pharmacokinetic models; biologically-based dose-response models; interspecies extrapolation

Education: Ph.D., Biostatistics, University of Washington; M.S., Biostatistics, University of Washington; B.S., Mathematics, University of New Mexico

Experience Summary: Dr. William Griffith is the Senior Scientist at the Institute for Risk Analysis and Risk Communication (IRARC), University of Washington. His primary research interest involves collaborations with teams of investigators to apply biostatistical methods for risk assessment of childhood exposures to man-made toxic chemicals and naturally-occurring toxins, and he serves as Director of the Risk Characterization Core of the Child Health Center of IRARC. He is involved in laboratory and field-based studies of neurotoxicity in the fetus and young children. This has involved his application of a wide variety of methods, including physiologically-based models, Markov chain Monte Carlo techniques, and analysis of categorical data. Previously, Dr. Griffith was at The Lovelace Respiratory Institute where he worked on the health effects and exposure to airborne radioactive particles, diesel exhausts, and other particles.

Panel Experience: Dr. Griffith currently serves as a peer reviewer at the National Academy of Science evaluating the U.S. Environmental Protection Agency's document on Inorganic Arsenic (2015-present). He also currently serves as a panel member on the U.S. EPA's Clean Air Scientific Advisory Committee, Integrated Science Assessment for Sulfur Oxides (2014-present) and the U.S. Department of Energy, Scientific Review Group, Joint U.S.-Russia Coordinating Group for Human Radiation Effects (2011-present). Dr. Griffith previously served as Chairman on the World Health Organization's Data Quality Committee, International Program on Chemical Safety (2004–2009) and as a panel member on the U.S. EPA's Radiation Advisory Committee, Science Advisory Board (2003–2009).

William K. Karasov, Ph.D.

Affiliation: University of Wisconsin-Madison, Madison, WI

Expertise: Impacts of pollutants, particularly halogenated organic compounds, and heavy metals on fish-eating birds and mammals and aquatic amphibians and fish

Education: Ph.D., Biology, University of California, Los Angeles; B.S., Biology, University of Minnesota

Experience Summary: Dr. Karasov is a Professor within the Department of Forest and Wildlife Ecology at the University of Wisconsin-Madison (UW-Madison). Dr. Karasov is also a member of other graduate programs at UW-Madison: Molecular and Environmental Toxicology Center (METC), Department of Zoology, Gaylord Nelson Institute for Environmental Studies, and Interdepartmental Graduate Program in Nutritional Sciences (IGPNS). Dr. Karasov obtained his undergraduate degree in Biology at the University of Minnesota (1971-1975), his Ph.D. in Biology at the University of California, Los Angeles (U.C.L.A. 1975-1981), and from 1980-1984, he completed his postdoctoral training in the Department of Physiology, also at U.C.L.A. Dr. Karasov's research interests include physiological ecology - how physiological concepts and methods can advance ecological knowledge and the application of knowledge to ecological management issues. His particular interests are vertebrates and the ecological implications of how they process energy, nutrients, and toxins.

Panel Experience: Dr. Karasov served as a member of nearly a dozen research review panels at the U.S. National Science Foundation in six programmatic areas: Physiological Mechanisms and Biomechanics (2015, 2017), Postdoctoral Research Fellowships in Biology (2013, 2015), Processes Structure & Integrity (twice in 2012), Climate Change Advisory Panel (2010), Organism-Environment Interactions Panel (2007-2009), and Ecological and Evolutionary Physiology Advisory Panel (2005).

Francisco J. Leyva, M.D., Ph.D., Sc.M.

Affiliation: National Institute of Allergy and Infectious Diseases, Rockville, MD

Expertise: Diagnostic tools, new drug treatments, clinical trials, disease prevention through vaccines, and host-directed therapy

Education: M.D., Universidad Peruana Cayetano Heredia; Ph.D., Inhalation Toxicology, University of Montana; Sc.M. Clinical Investigation, Johns Hopkins Bloomberg School of Public Health

Experience Summary: Dr. Francisco Leyva, is a Medical Officer in the Tuberculosis, Leprosy and other Mycobacterial Diseases Section at the National Institute of Allergy and Infectious Diseases, Division of Microbiology and Infectious Diseases, Respiratory Disease Branch. His work focuses on clinical research related to the development of diagnostic tools, new drug treatments, disease prevention through vaccines, and host-directed therapy. Dr. Leyva graduated from Medical School from the Universidad Peruana Cayetano Heredia in 1995 in Lima Peru. Due to his computer programming and analytical skills, he was invited to join the Research Office and School of Public Health at his university. In 1998, Dr. Leyva moved to Houston, Texas to be trained in Pulmonary Clinical Research as a Fellow. Dr. Leyva then joined the Toxicology Ph.D. Program at The University of Montana, where he graduated with a major in Inhalation Toxicology, with a thesis in silicates and lung disease. Soon after graduation in 2007, Dr. Leyva was hired by the National Institutes of Health as a Translational Medicine Postdoctoral Fellow in Bethesda, MD. In 2009, Dr. Leyva joined the Division of Clinical Pharmacology at Johns Hopkins University School of Medicine, where he worked in drug development and multiple clinical trials. Throughout his career, Dr. Leyva has been directly involved in the clinical trial field, international public health, and in the multiple stages of the drug development pipeline.

Panel Experience: Dr. Leyva served on numerous advisory panels as a member of the MD Anderson Cancer Center Postdoctoral Association Executive Committee (2000) and the Catholic Charities Medical Clinical Executive Committee (2014-2015). He has also served as a participant of the Pharmacy & Therapeutics Committee at Johns Hopkins Hospital (2011-2012) and as an ex-officio member and Chair at the Universidad Peruana Cayetano Heredia IRB (1996-1997).

Michael A. Malfatti, Ph.D.

Affiliation: Lawrence Livermore National Laboratory, Livermore, CA

Expertise: Physiologically-based pharmacokinetic modeling; carcinogenesis

Education: Ph.D., Pharmacology/Toxicology, University of California, Davis; M.A., Biological Science, San Jose State University; B.S., Biological Science, San Jose State University

Experience Summary: Dr. Michael Malfatti received his Ph.D. in Pharmacology/Toxicology from the University of California, Davis, and is currently a Senior Biomedical Scientist at Lawrence Livermore National Laboratory (LLNL) in the Physical and Life Sciences Division. His current research efforts include characterizing the low-dose pharmacokinetic, metabolism, and tissue distribution properties of toxicants and potential drug leads using accelerator mass spectrometry in an effort to understand their mechanisms of action. Other focus areas include using a pharmacogenomics approach to understand inter-individual susceptibility to adverse drug reactions and studying the toxic and/or carcinogenic effects of small molecules in subcellular, cellular and animal models to determine how these effects relate to human cancer susceptibility.

Panel Experience: Dr. Malfatti has served as a panel member on the LLNL Institutional Biosafety committee since 2008.

Daniel K. Nomura, Ph.D.

Affiliation: University of California-Berkeley, Berkeley, CA

Expertise: Chemoproteomic and metabolomic strategies for comprehensive assessment of chemical toxicology

Education: Ph.D., Molecular Toxicology, University of California, Berkeley; B.A., Molecular and Cell Biology, University of California, Berkeley

Experience Summary: Dr. Daniel Nomura is an Associate Professor in the Departments of Chemistry, Molecular and Cell Biology, and Nutritional Sciences and Toxicology at the University of California, Berkeley. He is also an Associate Adjunct Professor in the Department of Pharmaceutical Chemistry at University of California, San Francisco. He earned his Ph.D. in Molecular Toxicology at UC Berkeley with Professor John Casida and was a postdoctoral Fellow in Chemical Physiology at The Scripps Research Institute with Professor Ben Cravatt before returning to Berkeley as a faculty member in 2011. Among his honors are selection as a Searle Scholar, American Cancer Society Research Scholar Award, and the Department of Defense Breakthroughs Award. Dr. Nomura's Research Group is focused on developing and applying chemical proteomic and metabolomic platforms to identify and pharmacologically target metabolic drivers of human disease.

Panel Experience: N/A

David Peden, Ph.D.

Affiliation: University of North Carolina School of Medicine, Chapel Hill, NC

Expertise: Translational and clinical research in environmental lung disease

Education: M.D., West Virginia University; M.S., Pharmacology/Toxicology, West Virginia University; B.S., Biology, West Virginia University

Experience Summary: Dr. Peden holds a number of senior administrative positions in addition to faculty positions at the University of North Carolina School Of Medicine, at Chapel Hill, NC. Dr. Peden is Senior Associate Dean for Translational Research within the School of Medicine; Vice Chair for Translational Research within the Department of Pediatrics, School of Medicine; Service Director for Team Science, NC Translational and Clinical Science Institute (CTSA); Director, Center for Environmental Medicine, Asthma, & Lung Biology; and Chief, Division of Allergy, Immunology, & Rheumatology, Department of Pediatrics, School of Medicine. Dr. Peden's research interests are in translational and clinical research in environmental lung disease.

Panel Experience: Dr. Peden served on numerous advisory committees in various roles either as chair, co-chair or member. Dr. Peden previously served as Chair of the American Board of Allergy and Immunology (2006), Co-chair from (2004, 2005), and Director from 2003-2008. He was elected as Vice Chair and Committee Member to the Accreditation Council for Graduate Medical Education's Residency Review Committee for Allergy and Immunology (2008-2014) and as Chair of the Review and Recognition Committee Meetings (2011-2014). Dr. Peden has been appointed to a number of Federal Agency Panels such as the Food and Drug Administration's Regulatory Review Panel, Allergenic Products Advisory Committee in 2014; National Institutes of Health, Infectious Diseases, Reproductive Health, Asthma and Pulmonary, Conditions Study Section (2012-2016); and is currently serving as member to the United States Environmental Protection Agency's Clean Air Science Advisory Committee-Augmented for Sulfur Oxides Panel (2014-present) and to the Clean Air Science Advisory Committee, Particulate Matter Review Panel (2015-2018).

Beate R. Ritz, M.D., Ph.D.

Affiliation: University of California- Los Angeles, Los Angeles, CA

Expertise: The effects of occupational and environmental exposures; pregnancy and adverse birth outcomes and childhood diseases (autism and asthma); neurodegeneration (Parkinson's and Alzheimer) and cancers

Education: M.D., University of Hamburg; Ph.D., Epidemiology, University of California, Los Angeles; M.P.H., University of California, Los Angeles.

Experience Summary: Dr. Beate Ritz is a Professor of Epidemiology at the University of California, Los Angeles (UCLA) Fielding School of Public Health with co-appointments in Environmental Health Sciences and Neurology at the UCLA School of Medicine, a member of the Center for Occupational and Environmental Health, and the California Population Research Center. Her primary research interests are the effects of occupational and environmental exposures focusing on air pollution and pesticides on pregnancy and adverse birth outcomes and childhood diseases (autism and asthma), as well as neurodegeneration (Parkinson's and Alzheimer) and cancers. She has developed geographic information system (GIS) based exposure assessment tools to study health effects of air pollution and of long-term pesticide exposures.

Panel Experience: Dr. Ritz has served on multiple advisory committees, specifically at the Institute of Medicine (IOM), National Academy of Sciences (NAS), evaluating Gulf War illness (2003-2004); and the U.S. EPA's Clean Air Scientific Advisory Committee evaluating Carbon Monoxide National Ambient Air Quality Standards (2008-2009). She has been a member of the Scientific Review Panel on Toxic Air Contaminants for the state of California for 5 years and recently served on the IOM-NAS Panel that published the report "Using 21st Century Science to Improve Risk-Related Evaluations" (2012-present).

Christopher P. Weis, Ph.D.

Affiliation: National Institute of Environmental Health Sciences, Bethesda, MD

Expertise: Environmental chemicals and human health; physiologically-based pharmacokinetic modeling

Education: Ph.D., Environmental Toxicology and Comparative Physiology, Michigan State University; B.S., General Biology, Grand Valley University

Experience Summary: Dr. Christopher Weis has a wealth of knowledge and experience in environmental and forensic toxicology, biophysics and comparative physiology in both field and laboratory environments. With more than 25 years of experience, Dr. Weis' expertise includes collecting, interpreting, and applying exposure, toxicological, human and zoonotic data for environmental health assessment and protection during dozens of federal emergencies and chronic exposure situations. He has advanced experience charactering and mitigating human health risks due to chemical, biological, radiological, and inorganic exposures. He currently serves as the Senior Advisor on Toxicology for the Director of the National Institute of Environmental Health Sciences. Dr. Weis has managed multidisciplinary science teams to collect data and toxicological evidence for regulatory enforcement under extreme and unusual circumstances. He is also trained and experienced in complex data collection, rapid risk evaluation, risk communication, and federal regulatory policies for laws under the purview of the U.S. Environmental Protection Agency, Food and Drug Administration, and other Federal regulatory agencies.

Panel Experience: Dr. Weis is currently serving as senior Co-Chair of the Office of Science and Technology Policy, Subcommittee on Toxics and Risks (2014-present).

Clifford P. Weisel, Ph.D.

Affiliation: Rutgers University, Piscataway, NJ

Expertise: Exposures to chemical agents; multi-route exposures to environmental contaminants; the association between exposure and adverse health effects; utilization of sensors for continuous exposure measurement; and development and application of biomarkers of exposure

Education: Ph.D., Chemical Oceanography, University of Rhode Island; M.S., Analytical Chemistry, University of Rhode Island; B.S., Chemistry, State University of New York at Stony Brook

Experience Summary: Dr. Clifford Weisel is a Professor at Rutgers University and a member of the Exposure Science and Epidemiology Division of the Environmental and Occupational Health Sciences Institute. He is Director of the Doctoral Degree Program in Exposure Science offered by Rutgers University. Dr. Weisel's research focuses on understanding exposure to chemical agents, with an emphasis on multi-route exposures to environmental contaminants, the association between exposure and adverse health effects, utilization of sensors for continuous exposure measurement, and development and application of biomarkers of exposure. He has examined the relationship among indoor, outdoor and personal exposures to air pollutants; documented the importance of inhalation and dermal exposure to contaminants; characterized exposures within the transportation sector; and examined exposure and health issues related to disinfection by-products in water.

Panel Experience: Dr. Weisel is past President (2007-2008) and Treasurer (2000-2003) of the International Society of Exposure Science (ISES) and has served on numerous international and national advisory committees, workshops and advisory review panels. His panel experience has included the National Academy of Sciences Committee to Review the U.S. EPA's “Science to Achieve Results” Research Grants (August 2015). Dr. Weisel currently serves as Chair of the U.S. EPA’s “Guidelines for Human Exposure Assessment” review panel (September 2015-present and has recently completed a term with the National Institute of Environmental Health Sciences (NIEHS) Powering Research through Innovative Methods for Mixtures in Epidemiology (PRIME) R01 Study Section (July, October 2016).

Raymond S.H. Yang, Ph.D.

Affiliation: Colorado State University, Fort Collins, CO

Expertise: Physiologically-based pharmacokinetic modeling

Education: Ph.D., Toxicology/Entomology, North Carolina State University; B.S., Biology, National Taiwan University

Experience Summary: Dr. Raymond Yang is Professor Emeritus of Toxicology and Cancer Biology at the College of Veterinary Medicine and Biomedical Sciences, Colorado State University (CSU). Currently, Dr. Yang works part-time as an International Consultant. Part of his service includes the teaching of "PBPK Modeling Workshop for Beginners" at CSU and elsewhere in the US, Europe, and Asia. Dr. Yang's research interests focus on physiologically-based pharmacokinetic/pharmacodynamic (PBPK/PD) modeling, and other biologically-based computer modeling with a special emphasis on the toxicology and risk or safety assessment of chemical mixtures, poly-pharmacy, and multiple stressors. Dr. Yang has had extensive research and administrative experience in all three sectors of the profession (academia, chemical industry, and the federal government) and is a Fellow of the Academy of Toxicological Sciences.

Panel Experience: Dr. Yang has served on many prestigious national and international scientific committees and advisory panels as a member of the Safe Drinking Water Subcommittee on Mixtures, National Research Council/National Academy of Sciences (NAS) (1987-1988); Air Quality Science Advisory Board member, State of Colorado (1992-1998); Steering Committee Member, Decision Support Methodologies for Human Risk Assessment of Toxic Substances, Agency for Toxic Substance and Disease Registry (ATSDR), Department of Health and Human Services (DHHS) (1994-1999); member on the Committee on Interactions of Drugs, Biologics, and Chemicals in Deployed U. S. Military Forces, Institute of Medicine (IOM), NAS (1995-1996); Expert Panel Member, Risk Assessment for Mixtures of Drinking Water Disinfection-Byproducts, International Life Sciences Institute/U.S.EPA, Washington, DC (1996-1997); Commissioned author on Health Risks and Preventive Research Strategy for Deployed U.S. Forces from Toxicologic Interactions Among Potentially Harmful Agents, National Research Council, NAS (1998-1999); member of the Society of Toxicology Expert Panel on Chemical mixtures (2001-2002); Chemical Mixture Committee member to National Occupational Research Agenda, National Institute for Occupational Safety and Health (NIOSH) (2001-2010); member of the Environmental Health Sciences Review Committee (Study Section for Center Grants, and Training Grants), National Institute of Environmental Health Sciences (NIEHS), National Institutes of Health (NIH), DHHS (2001-2005); Dr. Yang was appointed to the FIFRA SAP for reviewing PBPK Modeling Application in Risk Assessment of Six Pesticides (2017-2020).