UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
FEDERAL INSECTICIDE, FUNGICIDE, AND RODENTICIDE ACT (FIFRA)
SCIENTIFIC ADVISORY PANEL (SAP)
November 28 to 30, 2017, MEETING
Ad Hoc CANDIDATE BIOGRAPHICAL SKETCHES
Docket Number: EPA-HQ-OPP-2017-0214

Melvin E. Andersen, PhD, CIH, DABT, ATS

Dr. Andersen is Scientist Emeritus at ScitoVation LLC in Research Triangle Park, NC. Over a 45-year toxicology career, he has held various positions, including Chief Science Officer at The Hamner Institutes for Health Sciences and Professor of Environmental Health at Colorado State University. Between 1971 and 1998, he worked in toxicology research programs in the federal government (DoD and US EPA) and private industry (Chemical Industry Institute of Toxicology and ICF Kaiser). His active research career focused on developing biologically realistic models of the uptake, distribution, metabolism, and biological effects of toxic chemicals and drugs and applying these models in quantitative health risk assessments. He has published over 450 papers and book chapters. Among his career awards are the Frank Blood (1982), Achievement (1984), Lehman (2004) and Merit Awards (2016) from the Society of Toxicology and the Mildred S. Christian Award (2016) from the Academy of Toxicological Sciences. From 2004 through 2007, he was on the US National Academy of Sciences Committee on toxicity testing of environmental agents. His current research projects use gene expression platforms, along with bioinformatic tools developed at ScitoVation for collating and visualizing large data sets, to assess correspondence between in vivo and in vitro responses and validate in vitro results for use in chemical safety assessment.

Ioannis Androulakis, Ph.D.

Dr. Androulakis a Professor in the Department of Biomedical Engineering, the Department of Chemical & Biochemical Engineering and holds an Adjunct faculty position in the Department of Surgery at the Rutgers-Robert Wood Johnson Medical School. His research focuses on systems biology and pharmacology of inflammation with special emphasis on the interactions between the circadian, cell cycle and immune systems. He was recently elected Fellow of the American Institute for Medical and Biological Engineering. His research has been funded by the NIH, EPA, NSF and ONR. Dr. Androulakis holds a BS degree from NTUA, Athens, Greece; MS/PhD from Purdue University, all in Chemical Engineering. He was a Research Associate at Princeton University and prior to joining Rutgers was with ExxonMobil's Corporate Strategic Research Laboratories in New Jersey.

Scott Belcher, Ph.D.

Dr. Scott Belcher is Research Professor of Biological Sciences in the College of Sciences at North Carolina State University. Prior to assuming his current position at North Carolina State University, Dr. Belcher served as Professor of Pharmacology and Cell Biophysics, and in the Department of Environmental Heath at the University of Cincinnati College of Medicine from 2004-2016.

He has previously served as an expert committee member on US EPA – FIFRA Scientific Advisory and World Health Organization/Food and Agriculture Organization of the United Nations panels assessing the toxicology and safety testing of endocrine disrupting chemicals.

His primary research efforts are aimed at understanding the role of estrogen signaling in development and disease. This research is focused on defining mechanisms of estrogen mediated signaling in childhood brain cancer, cardiovascular physiology, and how xenobiotics acting through nuclear receptors can impact development to cause cellular dysfunction and disease.

Veronica J. Berrocal, Ph.D.

Dr. Veronica J. Berrocal is Associate Professor of Biostatistics at the University of Michigan. Her expertise and research interests are in spatial and environmental statistics with a particular interest on development and application of statistical methods for environmental exposure risk assessment, particularly air pollution, weather and climate modeling, and their impact on health. Dr. Berrocal is the current core co-leader of the Integrated Health Sciences Core of the University of Michigan NIEHS-funded P30 center MLEEaD – Michigan Liftetime Environmental Exposure and Disease. She has also been and is currently co-Investigator on multiple NIH-funded, HEI-funded, and NSF-funded research projects, investigating the effect of the physical and built environment on health, the impact of climate change on health, as well as studies on rheumatic diseases, and brain cancer, among others.
Prior to joining the University of Michigan as faculty, Dr. Berrocal was a postdoctoral fellow at Duke University, in the Department of Statistical Science and in the Children Environmental Health Initiative center, and a National Research Council postdoctoral research associate at the U.S. Environmental Protection Agency in the National Exposure Research Laboratory.

Rebecca A. Clewell, Ph.D.

Dr. Rebecca A. Clewell, is the Chief Scientific Officer for ScitoVation, LLC. Her career path began with the Department of Defense, developing PBPK models, and moved on to in life toxicity studies and cell based assay development at The Hamner Institutes. In 2016, Rebecca and several colleagues started the small business ScitoVation, a research group focused on developing tools and methodologies to support in vitro based risk assessments. These goals are accomplished through the development of fit-for-purpose in vitro assays that encompass the relevant human biology and are predictive of alterations of cellular signaling processes (toxicity pathways) that may lead to adversity. Together with in vitro-in vivo extrapolation (IVIVE) and

exposure modeling, these cell-based methods are designed to provide a point of departure for safety assessments based solely on biologically relevant in vitro data.

Barry Delclos, Ph.D.

Dr. Barry Delclos is a Research Pharmacologist in the Division of Biochemical Toxicology at the FDA's National Center for Toxicological Research in Jefferson, Arkansas. Early research efforts focused on chemical carcinogenesis, but more recently his focus has been on toxicities associated with endocrine active agents. He has and continues to serve as Principal Investigator on a series of studies conducted under and Interagency Agreement between the FDA and the National Toxicology Program to evaluate aspects of the hypothesis that exposure to low levels of hormonally active agents, particularly during development, adversely affects human health, including reproductive function and carcinogenesis. These studies have been designed to address data gaps and provide data of utility in safety assessments conducted by FDA and other regulatory agencies.

Nancy Denslow, Ph.D.

Dr. Nancy Denslow is a professor in the Department of Physiological Sciences and in the Center for Environmental and Human Toxicology at the University of Florida. She received her Ph.D. from the University of Florida in Biochemistry and Molecular Biology. She was the past director of the Proteomics Core Facility in the Biotechnology Program at the University of Florida. Nancy has pioneered the use of molecular technologies for environmental toxicology especially focusing on toxicogenomics and proteomics approaches for evaluating endocrine disruption in fish models including largemouth bass, fathead minnow and sheepshead minnow. Nancy has over 200 peer-reviewed publications and is an inventor on four patents relating to protein factors, biomarkers for endocrine disruption and proteomics methodologies. Nancy received several awards for her research including the prestigious Founders Award from the Society of Environmental Toxicology and Chemistry (SETAC) in 2016 for her cutting edge work in toxicogenomics. She is a member of SETAC, the Society of Toxicology (SOT, Molecular Biology Specialty Section, past president, 2014-2015; Reproductive and Developmental Toxicology Specialty Section, treasurer 2016-2018), American Society for Biochemistry and Molecular Biology (ASBMB) and the Association of Biomolecular Research Facilities (ABRF, Executive board member 2004-2009) and was a past member of the FASEB board of directors (2010-2014). She serves as an ad hoc reviewer for NIEHS, EPA, NSF, NSERC and for European grants and many scientific journals.

Robert Denver, Ph.D.

Dr. Robert J. Denver is Professor and Chair of the Department of Molecular, Cellular and Developmental Biology (MCDB), and Professor of Ecology and Evolutionary Biology (EEB) at the University of Michigan, Ann Arbor. He earned his B.S. in Physiology from Rutgers University, and the Ph.D. in Zoology from the University of California at Berkeley. His expertise is in experimental and comparative endocrinology, with a focus on developmental neuroendocrinology and molecular mechanisms of nuclear hormone receptor action. His current research is focused on three primary areas: 1) modulation of DNA methylation by thyroid hormone in the developing brain, 2) mechanisms of action of Krüppel-like factors in the nervous system, and 3) molecular and genomic mechanisms of nuclear receptor synergy. He is past

president of the International Federation of Comparative Endocrine Societies (IFCES), and was co-founder and first president of the North American Society for Comparative Endocrinology (NASCE).

Daniel R. Doerge, Ph.D.

Dr. Daniel R. Doerge was awarded the B.S. degree from Oregon State University and the Ph.D. degree from University of California, Davis. He was Assistant/Associate Professor of Environmental Biochemistry at the University of Hawaii. Since 1992, he has been a Research Chemist in the Division of Biochemical Toxicology at the U.S. Food and Drug Administration's National Center for Toxicological Research in Jefferson, AR. His areas of research specialization have been: chemical and biochemical mechanisms of toxicity; thyroid toxicology; toxicology of soy isoflavones, acrylamide, bisphenol A, and inorganic arsenic; applications of modern mass spectrometry that emphasize high throughput determinations of pharmacokinetics and DNA adducts; and chemical risk assessment. A common strategy in this food safety research is the integration of toxicokinetics and human biomonitoring with PBPK modeling to minimize uncertainty in the extrapolation of human risks from experimental animal toxicity testing. More than 270 peer-reviewed publications have resulted from this work. Dr. Doerge has served on chemical risk assessment advisory committees for the European Food Safety Authority (2008-2016), the World Health Organization (2005, 2010, 2016), and the U.S. Environmental Protection Agency (2008, 2014). He also served as Editor-in-Chief for *Archives of Environmental Contamination and Toxicology* (2006-2013).

J. Charles Eldridge, Ph.D

Dr. J. Charles Eldridge, is Professor of Physiology & Pharmacology at Wake Forest School of Medicine. After completing a Ph.D. in endocrinology at the Medical College of Georgia, Dr. Eldridge continued with post-doctoral fellowships at the University of Bordeaux, France, and at the Medical College of Georgia. He held a 5-year faculty position for analytical endocrinology in laboratory medicine at the Medical University of South Carolina before moving to Wake Forest in 1978. Dr. Eldridge is a researcher and educator in endocrinology, pharmacology, toxicology, and reproduction in medical and graduate school education. He has numerous and varied book chapters, invited publications, presentations, seminars, peer-reviewed manuscripts and conferences in both research and education. His lab activity focused on steroid hormones and receptors, and neuroendocrinology for problem areas of aging, stress, substance abuse, and endocrine disruption. He has also been invited to consult in these areas with organizations and officials of government, corporations, and private foundations. His service to the Endocrine Disruptor Screening Program has continued for more than 15 years as a member of the Endocrine Disruptor Methods Validation Subcommittee, an *ad-hoc* member of the FIFRA Science Advisory Panel of the EPA, and interagency peer review for the National Toxicology Program. In education Dr. Eldridge has remained active in the use of small-group, case-based facilitated learning for both medical and graduate curricula, importantly applying this method to graduate student development in bioethics and responsible conduct of research.

Suzanne Fitzpatrick, Ph.D.

Dr. Suzanne Fitzpatrick is the Senior Advisor for Toxicology in the Office of the Center Director at Center for Food Safety and Applied Nutrition at the US Food and Drug Administration. Dr. Fitzpatrick is a board certified toxicologist here in the US and in Europe. She is the FDA lead for Tox 21 and is also an FDA Representative to ICCVAM. She is in charge of all toxicology research at CFSAN. Dr. Fitzpatrick represents CFSAN on several FDA Committees and Work Groups including the FDA Biomarkers Group, the NIH FDA Biomarkers Group, the FDA Senior Toxicology Workgroup, the HHS Environmental Justice Committee, and the FDA/NCATS/DARPA Collaboration on Organs/Human on a Chip. She represents FDA at several outside committees, including ILSI HESI Emerging Issues, ILSI North America, NRC Emerging Issues Committee, and the OSTP Subcommittee on Toxics and the Environment. Dr. Fitzpatrick is the FDA representative to the Federal Children's Environmental Health Task Force. Dr. Fitzpatrick is an FDA representative to several OECD Committees including the Work Group on Non-Genotoxic carcinogens, OECD Validation Management Group-Non-Animal and the OECD Advisory Group on Molecular Screening and Toxicogenomics. She is very active in the Society of Toxicology including serving on the planning committees for Future Tox I, II, III, and IV. She is on the planning committee for the 10th World Congress on Alternatives. Dr. Fitzpatrick is a Past President of the American College of Toxicology. Dr. Fitzpatrick is an Adjunct Professor at Johns Hopkins University. Dr. Fitzpatrick received her BA from the University of California at San Diego and her PhD from Georgetown University.

Paul M.D. Foster, Ph.D.

Dr. Paul Foster received his PhD 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 (CIIT). 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 responsible for all aspects of the Company's activities in this field in both the research and regulatory arenas. 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.

Dr. Foster was presented with the European Society of Toxicology's young scientist award in 1988 for his work on testicular toxicity and the Society of Toxicology (SOT)'s Reproductive and Developmental Toxicology specialty section award for best paper published in *Toxicological*

Sciences in 2001 and 2004. He has been awarded five NIH merit awards and an EPA Bronze medal. Dr. Foster has served on numerous national and international advisory committees (EPA, WHO, IPCS, ECETOC, OECD, INSERM, MRC, NRC/ NAS, SETAC) dealing with reproductive and developmental toxicology or endocrine disruption. Dr Foster is a member of a number of learned Societies dealing with toxicology and reproduction. He is a former Chair and member of the Continuing Education Committee (1996-1999) and Science Program Committee (2009-2013) of the Society of Toxicology (SOT) and is currently an SOT Councilor (2016-2019). Dr. Foster was a Past President of the Reproductive and Developmental Toxicology specialty section (1997-2001) of the SOT and in 2016 received the Specialty Section's lifetime achievement award. He is also a Fellow of the Academy of Toxicological Sciences (2011) and was elected to the Board of Directors in 2014 and is the current Secretary/ Treasurer. Dr. Foster has served on the editorial boards of *Reproductive Toxicology*, *Birth Defects Research: Developmental and Reproductive Toxicology* and as an Associate Editor of *Toxicological Sciences*. Dr Foster is the author or co-author of over 130 peer-reviewed publications and book chapters and numerous regulatory study reports. His funding at NTP is from the Federal Government.

J. David Furlow, Ph. D.

Dr. J. David Furlow is a Professor of Neurobiology, Physiology, and Behavior, in the College of Biological Sciences, at the University of California, Davis, where he has served on the faculty since 1998. Dr. Furlow is also Associate Dean for Undergraduate Education, and Director of the University Honors and First Year Seminars Programs since 2015. Dr. Furlow received his Bachelor of Science degree in Biochemistry from the Pennsylvania State University. He earned his Ph.D. in Biochemistry from the University of Wisconsin, Madison, and was a National Institutes of Health supported post-doctoral fellow at the Carnegie Institution of Washington, Department of Embryology, in Baltimore, MD, before joining the faculty at UC Davis. Dr. Furlow has served as a faculty member and director of the Physiology summer course at the Marine Biological Laboratory in Woods Hole, MA, where he has also been in residence as a Whitman Fellow visiting scientist. He has regularly served on grant review study sections for the National Institutes of Health and US EPA Scientific Advisory Panels. As an active member of two graduate groups at UC Davis, the Furlow laboratory investigates the control of gene expression by nuclear hormone receptors during development. The program has recently focused on the impact of environmental chemicals on thyroid hormone receptor activity and the development of novel synthetic thyromimetic compounds. This research includes a long-standing collaboration with Dr. Tinka Murk at Wageningen University in the Netherlands. Research in Dr. Furlow's laboratory has been funded by extramural grants from the National Institutes of Health, the USEPA, and the Netherlands Organization for Scientific Research.

Panos G. Georgopoulos, Ph.D.

Dr. Panagiotis (Panos) Georgopoulos is a professor in the Department of Environmental and Occupational Health at Rutgers Biomedical and Health Sciences, School of Public Health. Since 1989, he has served on the faculty of Robert Wood Johnson Medical School and on the Graduate Faculties of Chemical & Biochemical Engineering, of Biomedical Engineering, and of Environmental Sciences at Rutgers University. He is a member of the Environmental and Occupational Health Sciences Institute (EOHSI) of Rutgers, where he directs the Informatics and Computational Toxicology Core of the National Institute of Environmental Health Sciences (NIEHS) Center for Environmental Exposures and Disease (CEED).
Dr. Georgopoulos received his M.S. and Ph.D. Degrees in Chemical Engineering from the California Institute of Technology (Caltech) and his Dipl. Ing. Degree from the National Technical University of Athens. At EOHSI, he established and directs the Computational Chemodynamics Laboratory (CCL), a state-of-the-art facility for informatics and modeling of environmental and biological systems. Dr. Georgopoulos' teaching and research activities at Rutgers include development and implementation of innovative methods for high-content to high-throughput environmental risk analysis and informatics.

Darcy Kelley, Ph.D.

Dr. Darcy Kelley is the Harold Weintraub Professor of Biological Sciences at Columbia University. Her primary research interests include the hormonal control of sexually differentiated vocal muscles and neural circuits in *Xenopus*, a widely used vertebrate system for the identification of endocrine disruptors. She is a Co-Director and Co-PD of the Doctoral Program in Neurobiology Behavior and an HHMI Professor.

Seth W. Kullman, Ph.D.

Dr. Kullman received his Ph.D. from the University of California at Davis in Pharmacology and Toxicology (1996), completed postdoctoral fellowship within the Department of Veterinary Medicine at the University of California at Davis (2000) and served as assistant director of UC Davis Ecotoxicology program. Dr. Kullman joined the faculty of the Integrated Toxicology Program at Duke University in 2000 and served as director of the Duke University Superfund Center Functional Genomics Core (2004-2007). He joined the faculty of North Carolina State University in 2008 and is a Full Professor of Toxicology in the Department of Biological Sciences. Dr. Kullman has a long-standing history of employing small aquarium fish models in mechanistic toxicity studies with an emphasis on developmental biology, endocrine biology and environmental factors influencing human and environmental health. His research involves elucidating the mechanism by which environmental exposures modulate ligand activated transcription factors (nuclear receptors and AhR) associated with embryogenesis, fetal origins of adult disease and endocrine disruption. Dr. Kullman has over > 70 peer-reviewed publications, book chapters and technical reports. He has been a visiting scholar at the Mount Desert Island Biological Laboratory. He has participated in proposal review panels for the NSF, NOAA, and

the National Institute of Environmental Health Sciences. He has participated as an ad hoc member for scientific review with the Environmental Protection Agency, FIFRA-Scientific Advisory Panel Endocrine Disruptor Screening Committee, Water Environment Research Foundation Project Advisory Committee, American Water Works Association Research Foundation Project Advisory Committee, and is a full member of the Society of Toxicology, Society for Environmental Toxicology and Chemistry (SETAC) and the Endocrine Society.

Gerald A. LeBlanc, PhD

Dr. LeBlanc is a Professor and Head of the Department of Biological Science, North Carolina State University. Prior to his current position, he served the University for seven years as Head of the Department of Environmental and Molecular Toxicology. Dr. LeBlanc maintains an active research program in environmental endocrine toxicology. This research involves elucidating processes that contribute to the endocrine regulation of reproduction and development, the role of environmental cues in regulating these processes, and the disruption of these processes by environmental chemicals. Dr. LeBlanc has published over 150 research articles and 17 textbook chapters in toxicology. He has served on numerous federal and international science advisory committees, panels, and boards, including the National Research Council's Committee on Ecological Risk Assessment and as chairman of the USEPA Endocrine Disruptors Methods Validation Advisory Committee. He also has served as steering committee member, session chair, and keynote speaker for several national and international scientific symposia and as an associate editor or editorial board member for numerous scientific journals.

Jack L. Leonard, Ph.D

Dr. Jack L. Leonard, is a senior faculty member and a tenured Professor of Microbiology and Physiological Systems and Anesthesiology at the University of Massachusetts Medical School. During his 30 years at UMMS, he served as the Director of the Graduate Program for the Department of Cell and Molecular Physiology, Deputy Associate Chancellor for Tissue Engineering, Vice Chair of the Program in Tissue Engineering, and founded the Molecular Endocrinology Laboratory at UMASS Medical School where his research team characterized the molecular details of the thyroid hormone metabolizing enzymes, discovered and characterized the key non-genomic action of thyroid hormone responsible for brain development. He has a 30+ year history of NIH support and led the discovery of a new regulatory component of the Wnt-Beta Catenin signaling pathway that is essential for embryonic development. This regulatory component is missing in most, if not all, cancer. He leveraged this discovery to develop a family of anti-cancer molecules that cause tumor death. He also defined key therapeutic domains, established mode-of-action, developed a production platform and validated its therapeutic potential in Patient Derived Zenograft mouse models of human Pancreatic, Ovarian, and Colon cancer.

Sue Marty, Ph.D.

Dr. Sue Marty is the Science Director in Toxicology & Environmental Research and Consulting (TERC) at The Dow Chemical Company in Midland, Michigan. In this role, Dr. Marty develops science strategy and directs internal research to support TERC's Predictive Toxicology program in the areas of cheminformatics (QSARs), bioprofiling (in vitro), toxicokinetic modeling and exposure. She is a diplomate of the American Board of Toxicology (D.A.B.T.). Dr. Marty serves on the US EPA Chartered Science Advisory Board as well as several international committees, including the OECD Expert Group for Reproductive Toxicology, the OECD Working Party of the National Test Guideline Coordinators (WNT), and the United Nations Environment Programme (UNEP) Advisory Group on Endocrine Disrupting Chemicals. Prior to her role as Director, she worked for many years in Dow's toxicology laboratory, conducting both guideline and investigative studies in developmental/reproductive, endocrine and neuro-toxicology.

Susan Nagel, Ph.D.

Dr. Susan C. Nagel is an Associate Professor of Obstetrics, Gynecology and Women's Health at the University of Missouri. Dr. Nagel is Director of OBGYN Resident Research and the OBGYN Research Success Center. Her primary research interests are in steroid receptor action and endocrine disrupting chemicals, particularly those that program development and alter adult health and disease. Dr. Nagel has an NIH funded research program to investigate the endocrine disrupting properties of chemicals used in hydraulic fracturing for natural gas and oil. She uses human cell culture in vitro bioassays in an effects directed analysis to identify chemicals in surface and ground water near oil and gas development that have EDC activity. Prior to joining the faculty at MU, she worked as a postdoctoral fellow at Duke University where she studied mechanisms of estrogen receptor action.

James Nagler, Ph.D.

Dr. James J. Nagler is a Professor of Zoology and Chair of the Department of Biological Sciences at the University of Idaho. His primary research interests are environmental influences on the physiology of fishes, with an emphasis on reproductive endocrinology. A significant component of research endeavor has been the effect of estrogenic endocrine disruptors in both female and male fish models. For 5 years he served as the Associate Director of the Washington State University-University of Idaho Center for Reproductive Biology. He is a member of the University of Idaho's Aquaculture Research Institute.

Elizabeth N. Pearce, Ph.D.

Dr. Elizabeth N. Pearce received her undergraduate and medical degrees from Harvard and a masters' degree in epidemiology from the Boston University School of Public Health. She completed her residency in internal medicine at Beth Israel Deaconess Medical Center, and her fellowship in endocrinology at Boston University. She is currently an Associate Professor of Medicine at Boston University School of Medicine in the Section of Endocrinology, Diabetes, and Nutrition. She has served as a member of the board of directors of the American Thyroid Association and is currently the Regional Coordinator for North America for the Iodine Global Network. She has served on multiple editorial boards, including those for Endocrine Practice, Thyroid, the Journal of Clinical Endocrinology and Metabolism, Clinical Endocrinology, and Lancet Diabetes & Endocrinology. She recently co-chaired the American Thyroid Association's Thyroid in Pregnancy Guidelines Task Force. Her research interests include the sufficiency of dietary iodine in the U.S., thyroid function in pregnancy, the thyroidal effects of environmental endocrine disruptors, and the cardiovascular effects of subclinical thyroid dysfunction. Dr. Pearce was the 2011 recipient of the American Thyroid Association's Van Meter Award for outstanding contributions to research on the thyroid gland.

Michael L. Pennell, Ph.D.

Dr. Pennell is an Associate Professor of Biostatistics in the College of Public Health at The Ohio State University. Prior to joining the faculty at Ohio State in 2006, he received his PhD in Biostatistics from the University of North Carolina at Chapel Hill and was both a predoctoral and postdoctoral trainee at the National Institute of Environmental Health Sciences. Dr. Pennell also holds a B.S. in Biology from the University of Puget Sound in Tacoma, Washington. His research interests are in Bayesian nonparametric and Bayesian survival analysis methods motivated by applications in toxicological risk assessment. His methodological research has been published in top-tier biostatistical journals including *Biometrics* and *Statistics in Medicine*. Dr. Pennell is also an active collaborator having worked with investigators in cancer prevention, biomedical informatics, cardiology, and veterinary medicine and has been a co-Investigator on grants from the National Cancer Institute, Breast Cancer Research Foundation, and National Heart, Lung, and Blood Institute. Dr. Pennell has 68 peer reviewed publications which are mixture of statistical methodology and collaborations in biomedical studies. He was also the 2016 recipient of the James E. Grizzle Distinguished Alumnus Award from the University of North Carolina at Chapel Hill Department of Biostatistics, which is one of the largest biostatistics departments in the country.

In addition to his research, Dr. Pennell has been involved in the field of risk analysis through education and service activities. For the past ten years, he has taught a unit on dose-response assessment in the Principles of Risk Assessment course at Ohio State. In terms of service, he has been an Associate Editor of the journal *Lifetime Data Analysis* for the past three years and has held a few different positions in the Section on Risk Analysis of the American Statistical Association (Program Chair Elect in 2015, Program Chair in 2016, and Chair Elect in 2017). He has also served on two EPA Scientific Advisory Board review panels (Trichloroetylene in 2010

and Libby Amphibole Asbestos in 2012) and was a member of the Chemical Safety Advisory Subcommittee for 1-Bromopropane in 2016.

Edward J. Perkins, Ph.D.

Dr. Edward J. Perkins currently serves as Senior Research Scientist (ST) in Environmental Networks and Genetic Toxicology in Environmental Laboratory at the U.S. Corps Engineers Army Engineer Research and Development Center. Dr. Perkins received his PhD at Washington State University investigating the molecular biology of 2,4-D degradation by *Alcaligenes eutrophus* JMP4. Prior to joining ERDC, Dr Perkins worked in development of transgenic plants for phytoremediation and molecular measures of soil quality. Dr. Perkins joined the ERDC Environmental Laboratory in 1996 where he established a genetics research lab. His research focuses on using toxicogenomics and systems biology to understand chemical impacts on a wide range of species including rat, bobwhite quail, Japanese quail, earthworms, fish (Fathead Minnow and Zebrafish), invertebrates (daphnia) and coral. His current work focuses on development and application of new toxicogenomic tools, computational models and approaches for understanding the impact of chemicals on animals in the environment. Dr. Perkins provides guidance for the Army on basic and applied research programs, in addition to consulting on issues of national and international importance for the US Army Corps Engineers, DoD, and the Organization for Economic Cooperation and Development.

Carey Pope, Ph.D.

Dr. Carey Pope is a Regents Professor of Pharmacology and Toxicology and Sitlington Chair in Toxicology at Oklahoma State University, Center for Veterinary Health Sciences. His primary research interests are in pesticide toxicology. He is the Director of the OSU Interdisciplinary Toxicology Program involving faculty and students from six colleges. Prior to joining OSU in 2000, he was Professor and Head of Toxicology, and the Director of the B.S. Toxicology Program, at the University of Louisiana-Monroe. Dr. Pope is a fellow of the Academy of Toxicological Sciences and past member of EPA's Scientific Advisory Panel under FIFRA.

Catherine Propper, Ph.D.

Dr. Catherine Propper is a Professor of Environmental Endocrinology in the Department of Biological Sciences at Northern Arizona University, Flagstaff, AZ and has also served as Director for Research Capacity Development in the Office of the Vice President for Research at Northern Arizona University and as Associate Chair for Graduate Programs for the Department of Biological Sciences. Dr. Propper received her Bachelor's degree in Zoology from the University of California, Berkeley in 1982. She received her Ph.D. in Zoology at Oregon State University in 1989. She was supported by a National Institute of Mental Health NRSA Postdoctoral Fellowship at University of Colorado, Boulder from 1989-1990. Dr. Propper was hired in the Department of Biological Sciences at Northern Arizona University as an Assistant Professor in 1991 and has been a Professor since 2002. Dr. Propper has served as secretary for the Division of Comparative Endocrinology in the Society of Integrative and Comparative Biology and on proposal review panels for the NSF, USEPA and the China-Canada Joint Health Research Initiative. Dr. Propper currently serves on both the City of Flagstaff's Contaminants of Emerging Concern Panel and the Arizona Department of Environmental Quality's Advisory

Panel on Emerging Contaminants. Dr. Propper was a reviewer for the U.S. EPA's Endocrine Disruptor Screening Program's Amphibian Metamorphosis Assay Protocol and served as an *ad hoc* member on three past U.S. EPA's FIFRA Scientific Advisory Panels. Her research interests include how environmental information, including exposure to environmental contaminants, is translated into endocrine responses that influence development, reproduction and behavior. Dr. Propper's teaching responsibilities include courses in Endocrinology, Animal Physiology and Vertebrate Evolution. She has published 62 peer-reviewed journal articles, technical reports and book chapters.

Stephen Safe, Ph.D.

Dr. Safe's laboratory is focused on two major areas of research, namely development of novel mechanism-based drugs for cancer chemotherapy and studies on the aryl hydrocarbon receptor (AhR) and its ligands and their health impacts. Dr. Safe's cancer research program has identified novel and potent ligands for the orphan nuclear receptor NR4A family and has demonstrated that NR4A1 is an important drug target for treating solid tumors. His research laboratory is also focused on anticancer drugs that target both Sp transcription factors and the AhR, and these studies include a focus on repositioning clinically approved drugs for non-cancer endpoints for treatment of pancreatic and other cancers. Dr. Safe and several collaborators at Texas A&M University are focused on microbiota and environmental-derived AhR ligands and their impacts on the microbiome, colon stem cells, inflammatory bowel disease and colon cancer. Most of these projects have emerged from his previous studies on the environmental impacts of persistent organic pollutants (POPs) and endocrine active compounds (EACs). His research has spanned organic chemistry, environmental toxicology, oncology and drug development. Google Scholar indicates that his publications (>745) have received over 63,700 citations (h-index 113; i10-index 676). Dr. Safe has extensive experience working with local, regional, national and international scientific-based committees, panels and societies including the Environmental Protection Agency, Institute of Medicine, National Academy of Sciences, World Health Organization, National Institute of Environmental Health Sciences, NATO, ILSI Health and Environmental Sciences Institute, Health and Welfare Canada, Ontario Ministry of the Environment, and the Society of Toxicology. Dr. Safe also has extensive research and training leadership and experience; he has previously been PI and Director of several NIEHS-sponsored collaborative programs including the Center for Environmental and Rural health (P30), a Superfund Basic Research Program project (P42) and an Environmental Toxicology Training Grant (T32). He is currently a co-PI on recently funded Center and Training grants from NIEHS. He also has mentored 95 PhD students and 20 MS students who have graduated from his laboratory.

Daniel Schlenk, Ph.D.

Dr. Daniel Schlenk, is Professor of Aquatic Ecotoxicology and Environmental Toxicology at the University of California Riverside. Dr. Schlenk received his PhD 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. A Fellow of AAAS, he has served on two Scientific Advisory Panels supported by the California State Water Board in the USA focused on the monitoring of recycled and surface waters for Emerging Contaminants. Since 2016, he has been a permanent member of the USEPA Chemical Safety Advisory Committee, and from 2007-2014, he was a permanent member of the USEPA FIFRA Scientific Advisory Panel, which he Chaired from 2012-2014. He is currently an Associate Editor for *Environmental Science*

and Technology, and *ES&T Letters.* He was co-editor-in chief of *Aquatic Toxicology* from 2005-2011 and currently serves on its editorial board as well as the editorial boards of *Toxicological Sciences*, and *Marine Environmental Research*. He has published more than 240 peer reviewed journal articles and book chapters on the identification of Molecular Initiating and Key Events within Adverse Outcome Pathways for emerging and legacy contaminants in wildlife and humans. He has particular expertise in the linkage of molecular and bioanalytical responses associated with neuroendocrine development and whole animal effects on reproduction, growth and survival. He has been 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; a visiting Scholar in the Department of Biochemistry, Chinese University of Hong Kong; a Visiting Scientist at the CSIRO Lucas Heights Laboratory, in Sydney Australia, a Distinguished Fellow of the State Key Laboratory for Marine Environmental Science of Xiamen University, China, and Outstanding Foreign Scientist at Sungkyunkwan University in Korea. His research is supported by funding from the USGS, NIEHS (Superfund Research Program), USDA, and USEPA.

Irwin Schultz, Ph.D.

Dr. Schultz has been involved in toxicological research since 1986 with interests associated with both ecological and human health problems. His areas of expertise include bioaccumulation and exposure assessments, in vitro in vivo extrapolation and computational biological modeling, biotransformation, analytical chemistry and environmental and human toxicological issues such as endocrine disruption. Dr. Schultz is an affiliate professor at University of Washington's School of Aquatic and Fisheries Sciences and also works as contractor for NOAA Fisheries NW Fisheries Science Center. Previously, Dr. Schultz was a senior scientist at the Pacific NW National Laboratory from 1996-2017.

S. Stoney Simons, Ph.D.

Dr. Simons obtained a background in organic chemistry at both the undergraduate (Princeton Univ., Phi Beta Kappa) and graduate (Ph.D., Harvard) level. He has 44 years of experience in the field of steroid hormone action, first as a postdoctoral fellow at UCSF and then for 41 yr at NIH, where he was the Chief of the Steroid Hormones Section, NIDDK, for 31 yr. His research concentrated on the mechanism of action of glucocorticoid and progesterone receptors in tissue culture cells. He designed and utilized the first affinity label for a steroid receptor, analyzed structure-activity relationships of glucocorticoid receptor ligands, examined the role of transcription factors (and cloned and characterized a new transcription factor) in steroid hormone action, and elucidated the mechanistic basis for the frequent quantitative dissociation of dose-response curves for steroid binding to receptors vs. steroid control of gene expression. Dr. Simons collaborated with Dr. Chris Austin (NCATS, NIH) to construct a new high-throughput screening assay to identify novel small molecule modulators of glucocorticoid receptor activity and with Dr. Carson Chow (NIDDK, NIH) to develop and apply a general mathematical approach to analyzing whole cell experimental data that determines both the relative reaction position and mode of action of any factor involved in the expression of glucocorticoid-regulated gene induction or repression. Dr. Simons headed the Transcription Factor Interest Group at NIH for 25 yr, was on numerous grant and journal review committees, was invited to give lectures at various international meetings, and served on a HESI study group for five years that published a final report on the use of mode of action information in risk assessment.

Alexander Tropsha, PhD

Dr. Tropsha is K.H. Lee Distinguished Professor and Associate Dean for Pharmacoinformatics and Data Science at the UNC Eshelman School of Pharmacy (recently ranked #1 in the country by US News & World Report), UNC-Chapel Hill. Prof. Tropsha obtained PhD in Chemical Enzymology in 1986 from Moscow State University, Russia and came to UNC-Chapel Hill in 1989 as a postdoctoral fellow. He joined the School of Pharmacy in 1991 as an Assistant Professor and became full professor in 2002. His research interests are in the areas of Computer-Assisted Drug Design, Computational Toxicology, Cheminformatics, and Structural Bioinformatics. His has authored or co-authored more than 200 peer-reviewed research papers, reviews and book chapters and co-edited two monographs. He is an Associate Editor of the ACS Journal of Chemical Information and Modeling. His research has been supported by multiple grants from the NIH, NSF, EPA, DOD, and private companies.

Grant B. Weller, Ph.D.

Dr. Grant B. Weller is a Senior Research Scientist at Savvysherpa, Inc. in Minneapolis, Minnesota, a research and development company working on innovations in healthcare delivery. In his current position, he develops and leads research to support implementation of venture initiatives with stakeholders in the healthcare industry, including provider systems, clinical researchers, health insurance companies, medical device manufacturers, and pharmaceutical companies. His recent work has focused on statistical methodology for data-driven clinical risk prediction and population health management. Dr. Weller's research interests within statistics also include extreme value theory, time series forecasting, and spatial models in epidemiology. He received a Ph.D. in Statistics in 2013 from Colorado State University, and was previously a visiting assistant professor in the Statistics department of Carnegie Mellon University.

Yiliang Zhu, Ph.D.

Dr. Zhu is professor in the Department of Epidemiology and Biostatistics, College of Public Health, as well as professor in the Department of Internal Medicine Morsani College of Medicine, at the University of South Florida. He was the founding director of the Center for Collaborative Research and the founding director of the Biostatistics PhD program until 2012 when he took a Fulbright Fellowship in China. While doing policy research on China's rural cooperative insurance system, he assembled a multi-discipline, cross-culture team to launch the Loess Health Project. LHP is an 18-year cohort study of rural health and development in Northwestern China, which blends interventions within a natural experiment environment. From 2013 to 2015 he was at US Environmental Protection Agency in Washington DC as a Science and Technology Policy Fellow of the American Association for Advancement of Science; he worked on issues related to indoor environment and health, integrative modeling of endocrine disruption tests. His current research interests include health risk assessment, integrative system modeling guided by adverse outcome pathway network; exposure assessment of indoor health hazards; evaluation of healthcare policies, systems, and outcomes; biostatistical and analytical methods for spatiotemporal data. Dr. Zhu has served on a number of the National Research

Council/National Academies of Science Committees, including those on US EPA's assessment of dioxin and dioxin related compounds, tetrachloroethylene, and formaldehyde, and the Committees on Science for the Future of EPA, EPA's IRIS Process Review. Most recently he served on the Institute of Medicine's committee on Shipboard Hazard and Defense Study (2012-2015). He also served on the Advisory Committee of Organ Transplantation for the Department of Health and Human Services (2006-2011), as a reviewer of *phthalates* for the Chronic Hazard Advisory Panel of the Federal Commission on Consumer Product Safety (CHAP). He was also a member of several US EPA external panels that reviewed EPA's Integrated Risk Information System (IRIS) documents. His other services include membership of a number of study sections of the National Institute of Health and review panels of EPA's Star programs. Dr. Yiliang Zhu obtained post-doctoral training in environmental health from Health Canada, a PhD from the University of Toronto and a Master from Queen's University Canada, both in Statistics. His undergraduate study was in applied mathematics and computer science from the Shanghai University (of Science and Technology).

R. Thomas Zoeller, Ph.D.

Dr. R. Thomas Zoeller, is Professor of Biology at the University of Massachusetts, Amherst. His early training was in molecular neuroendocrinology at the National Institutes of Health in Bethesda, MD. His current research focuses on the role of thyroid hormone in brain development with an emphasis on the fetal brain. Dr. Zoeller's lab also studies the mechanisms by which environmental endocrine disruptors can interfere with thyroid hormone action in the brain and his laboratory has published over 100 peer reviewed papers on these topics. Dr. Zoeller was a member of the U.S. EPA's Endocrine Disruptor Screening and Testing Advisory Committee working group on Screening and Testing in the 1990's and has served on several EPA committees since then, including the Chartered Science Advisory Board, chair of their Exposure and Human Health Committee, and two other SAPs. He has received numerous awards for his work, including the "Scientist of the Year – 2002" from the Learning Disabilities Association, a Samuel F. Conti Award for Research Excellence, and recently received the UMass Chancellor's Medal for research. He has written extensively on issues of Endocrine Disruption and Public Policy, and was one of the editors of the recent State of the Science of Endocrine Disruption published by a joint United Nations/World Health Organization project.