UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

**FEDERAL INSECTICIDE, FUNGICIDE, AND RODENTICIDE ACT (FIFRA)
SCIENTIFIC ADVISORY PANEL (SAP)**

List of Candidates (including Biographical Sketches)

Docket Number: EPA-HQ-OPPT-2024-0118

NOTE: This list of candidates includes all interested and available nominees under consideration for appointment to the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) Scientific Advisory Panel (SAP) established in 1975 under FIFRA.

Please note that current members of the FIFRA SAP may be eligible for reappointment. Therefore, the FIFRA SAP appointments completed over the next year may include a mix of newly appointed and reappointed members. As additional background, the biographies of current FIFRA SAP members are available on the FIFRA SAP website at: **https://www.epa.gov/sap**

Public comments must be submitted through regulations.gov. When preparing and submitting your comments, see Commenting on EPA Dockets at: **https://www.epa.gov/dockets/commenting-epa-dockets**. Follow the online instructions for submitting comments. Do not electronically submit any information you consider to be Confidential Business Information or other information for which disclosure is restricted by statute. Copyrighted material will not be posted without explicit permission of the copyright holder. Members of the public should also be aware that personal contact information, if included in any written comments, may be posted on the internet at https://www.regulations.gov.

Antonio T. Baines, PhD

Affiliation: Associate Professor of Biological and Biomedical Sciences, North Carolina Central University, Durham, North Carolina

Expertise: Pharmacology; toxicology; environmental biology; cancer biology; cell biology

Education: PhD in Pharmacology and Toxicology, University of Arizona; BS in Biology, Norfolk State University

Experience Summary: Dr. Antonio Baines is an Associate Professor in Biological and Biomedical Sciences at North Carolina Central University (NCCU) and an Adjunct Associate Professor in Pharmacology at the University of North Carolina at Chapel Hill (UNC-CH). He has 18 years of experience as a faculty member teaching undergraduate and graduate classes and conducting cancer research. In addition, Dr. Baines has a joint appointment in the Cancer Research Program in the Julius L. Chambers-Biomedical and Biotechnology Research Institute at NCCU. He is a member on the Executive Committee for the Curriculum in Toxicology and Environmental Medicine at UNC-CH. Dr. Baines is a member of the Springer Nature US Research Advisory Council (2023-2024). He has served on a Working Group for the Advisory Committee for the Director of the National Institutes of Health focused on Novel Alternative Methods (NAMs) (2022-2023). Additionally, he serves on the Science Education and Career Advancement committee for the American Association for Cancer Research (AACR) (2022-2224). Currently, Dr. Baines serves as a Councilor on the Council of the Society of Toxicology (2021-2024). His primary research interests involve trying to validate novel drug targets in cancer, especially pancreatic cancer, to help develop better therapeutics for treatment and to help combat drug resistance. Also, Dr. Baines is interested in how environmental exposures can promote the development of cancer.

Steven R. Belmain, PhD, FRES, FHEA

Affiliation: Professor of Ecology, Natural Resources Institute, University of Greenwich, Central Avenue, Chatham Maritime, Kent ME4 4TB, United Kingdom (UK)

Expertise: Behavioral and chemical ecology; field ecology; environmental sciences; insect & small mammal pest management; rodent biology; behavior and ecology; invertebrate/vertebrate wildlife ecology; tri-tropic interactions; insecticide/rodenticide alternatives; biocontrol; ecosystem engineering; zoonosis

Education: PhD in Ecology, Birkbeck College, University of London, UK; MS in Entomology, Birkbeck College, University of London, UK; BS in Biology, University of Vermont

Experience Summary: Dr. Steven Belmain is one of the leading international scientists researching the ecology of rodents as pests in agriculture and as disease vectors, with research activities across Europe, Asia and Africa aimed at resolving vertebrate and invertebrate pest problems. His research has been crucial in understanding the transmission risks of zoonoses as well as the fundamental drivers of rodent population outbreaks. Dr. Belmain has more than 30-years of experience working in collaboration with scientists from over 40 countries, leading large multidisciplinary research projects with more than 25 million dollars (USD) funding won over the last 10 years from a wide range of donors. The donors included the UK's Foreign, Commonwealth and Development Office, United Kingdom Institute Research Councils, The European Commission Research and Technological Development (RTD) Framework and EuropeAid European Development Fund programmes: The African Union, The Netherlands Organisation for Scientific Research, The German Research Foundation, The Darwin Initiative, The World Bank, United Nations Development Programme, World Health Organization, and the McKnight Foundation. Dr. Belmain has worked closely with epidemic response team at the World Health Organization (WHO) and has advised the governments of The Bahamas, Hong Kong, Madagascar, Tanzania, Eswatini and Nepal on public health issues. He has published over 150 peer-reviewed papers, starred in nature documentaries and is Advisor to the WHO's Epidemic and Pandemic Preparedness Response Team (2010 to present). Dr. Belmain is a Fellow of the Royal Entomological Society (FRES) and is also a Fellow of the Higher Education Academy (FHEA).

Rebecca C. Fry, PhD

Affiliation: Distinguished Professor and Acting Chair of Environmental Sciences and Engineering, University of North Carolina at Chapel Hill, North Carolina

Expertise: Use of epigenetic and toxicogenomic techniques to identify mechanisms that underlie the deleterious impacts of toxic exposures during the prenatal period on maternal and fetal health

Education: Post-doctoral fellow at the Massachusetts Institute of Technology (MIT); PhD in Biology, Yale University; MS in Biology, Yale University; BS in Biology, William Smith College

Experience Summary: Dr. Rebecca Fry is the Carol Remmer Angle Distinguished Professor in Children's Environmental Health (2017-present) and Interim Chair (2023-present) in the Department of Environmental Sciences and Engineering at the Gillings School of Global Public Health at UNC-Chapel Hill. Dr. Fry is the founding Director of the Institute for Environmental Health Solutions (IEHS) at UNC-Chapel Hill (2017-present). She is the Director of the UNC Superfund Research Program (2020-present) and the Director of the T32 in Biostatistics (2010-present). A primary goal of Dr. Fry's research is to increase awareness of the deleterious impacts of toxic exposures during the prenatal period with a focus on the epigenome and developmental origins of health and disease. Dr. Rebecca Fry has more than 260 peer-reviewed publications.

James J. Galligan, PhD

Affiliation: Associate Professor of Pharmacology and Toxicology at the University of Arizona, Tucson, Arizona

Expertise: Analytical chemistry; biochemistry; toxicology; chemical biology

Education: PhD in Pharmacology, University of Colorado Anschutz Medical Campus; BS in Physiology, Michigan State University

Experience Summary: Dr. James Galligan is an Associate Professor of Pharmacology and Toxicology at the University of Arizona. His research interests focus on the intersection of metabolism and cell signaling, particularly as it pertains to epigenetics. Dr. Galligan is keenly interested in post-translational modifications, his research focuses on reactive metabolites deleterious cell health. Current work centers on histone modifications derived from cell metabolism in diabetes and cancer. Recipient of several Society for Free Radical Biology and Medicine Young Investigator Awards, he also received the Harold C. Hein Award for Outstanding Performance in Graduate Studies and Research and Norman Weiner Graduate Student Award for Research Excellence. His numerous journal articles and presentations focus on histones, oxidative stress, and cell metabolism.

Thomas Hartung, MD, PhD

Affiliation: Doerenkamp-Zbinden-Chair for Evidence-based Toxicology, Johns Hopkins University, Bloomberg School of Public Health, Baltimore, Maryland

Expertise: Toxicology; pharmacology; infectious diseases; immunology; engineering; public health; new approach methodologies; artificial intelligence

Education: PhD in Biochemical Pharmacology, Konstanz, Germany; MD, Tübingen, Germany; Diploma in Biochemistry, specialization toxicology, University of Tübingen, Germany

Experience Summary: Dr. Thomas Hartung is Professor and Chair with five academic appointments at Johns Hopkins University, Georgetown University and University of Konstanz, Germany. He worked for seven years for the European Commission heading their validation body for alternative methods (ECVAM, 2002-2008). He has organized more than 60 workshops, and numerous international conferences (World Congresses for Alternative Methods, Pan American Conference for Alternative Methods, European Society of Toxicology In Vitro, Microphysiological Systems World Summits). He has more than 30 years of teaching experience. His toxicology classes on Coursera had more than 19,000 active learners. He is Field Chief Editor of Frontiers in Artificial Intelligence and has numerous editorial appointments. He has authored more than 670 scientific publications with more than 47,000 citations (h-index 113; i.e., at least 113 papers that have each been cited at least 113 times).

Eunha Hoh, PhD

Affiliation: Professor of Environmental Health, School of Public Health, San Diego State University, San Diego, California

Expertise: Environmental chemistry; fate and transport of contaminants; environmental monitoring; exposure assessment to wildlife and humans; novel contaminants; nontargeted chemical analysis

Education: PhD in Environmental Science, Indiana University Bloomington; MS in Environmental Science, Indiana University Bloomington; MS in Chemistry, Korea Advanced Institute of Science & Technology (KAIST); BS in Chemistry, KAIST

Experience Summary: Dr. Eunha Hoh is a Professor of Environmental Health with 15 years of teaching and research on the investigation of diverse chemical pollutants in the environment and their impact on human health. Dr. Hoh has 23 years of experience in the analysis of trace levels of chemical contaminants in various sample matrices utilizing chromatography and mass spectrometry. This includes both the identification and quantification of organic compounds. She has developed a nontargeted analytical approach, and with that, she discovered and identified numerous previously unknown and novel contaminants and has implemented the technology on comprehensive contaminant analysis for environmental monitoring, exposure assessment, fate and transport, and remediation/treatment efficiency assessment. Dr. Hoh worked as a postdoctoral researcher in the field of food safety at the United States Department of Agriculture-Agricultural Research Service. She is an Advisory Board Member of Environmental Science and Technology Letters (2013-present).

Lifang Hou, MD, PhD

Affiliation: Director, Robert J. Havey, MD Institute for Global Health-Center for Global Oncology, Northwestern University, Chicago, Illinois; Chief of Cancer Epidemiology and Prevention in the Department of Preventive Medicine, Northwestern University, Chicago, Illinois; Professor of Preventive Medicine (Cancer Epidemiology and Prevention) and Pediatrics, Northwestern University, Chicago, Illinois

Expertise: Cardiovascular disease; digestive cancer (esophagus, stomach, colon, rectum); environmental health; epidemiology; prostate cancer

Education: MD, University of Tsukuba, Japan

Experience Summary: Dr. Lifang Hou, is a Professor of Preventive Medicine, with a multidisciplinary background in medicine, basic science, and epidemiology. Dr. Hou's research interest lies in integrating traditional epidemiologic methods with the ever-advancing molecular techniques in multi-disciplinary research focusing on identifying key molecular markers and understanding their potential impact on disease etiology, detection, and prevention. Dr. Hou's major research efforts to date have focused on two areas: 1) identification of risk factors that may cause chronic diseases; and 2) identification of biomarkers that serve as indicators of an individual's past exposure to disease risk factors and/or predict future disease risks and/or prognosis. The environmental/lifestyle risk factors that Dr. Hou has studied include air pollution, pesticides, overweight, physical inactivity, and reproductive factors in relation to chronic diseases. The biomarkers that Dr. Hou has investigated include genetic factors (i.e., polymorphisms, telomere length shortening, mitochondria DNA copy number variations); and epigenetic factors (i.e., DNA methylation, histone modifications, and microRNA profiling). Her overarching research goal is to understand the biological mechanisms linking environmental risk factors with subclinical or clinical disease development, which ultimately lead to development of effective strategies for prevention of chronic diseases. In addition to being a Principal Investigator (PI) of several National Institutes of Health funded grants, Dr. Hou is the co-director and Co-PI of the Northwestern Consortium for Early Phase Cancer Prevention Trials of the Division of Cancer Prevention (DCP) Consortia, National Cancer Institute (http://prevention.cancer.gov/clinicaltrials/management/consortia).

Pamela J. Lein, PhD, MSEH

Affiliation: Professor of Neurotoxicology at the University of California at Davis, California

Expertise: Research on the molecular and cellular mechanisms by which chemicals promote neurological disease with a focus on neurotoxicity

Education: PhD in Pharmacology and Toxicology, University of Buffalo; MS in Environmental Health, East Tennessee State University, BS in Biology, Cornell University

Experience Summary: Dr. Pamela Lein has been a faculty member at the University of California-Davis (UC Davis) for 15 years. Currently, she is Professor of Neurotoxicology (7/2010-present) and Chair of the Department of Molecular Biosciences (2018-present) in the UC Davis School of Veterinary Medicine. Dr. Lein holds a faculty appointment in the UC Davis Medical Investigation of Neurodevelopmental Disorders (MIND) Institute. She is a Fellow of the American Association for the Advancement of Science, Lead of the Career Development Program in the Environmental Health Sciences Center at UC Davis (2015-present), Director and Principal Investigator of the UC Davis CounterACT Center of Excellence (2012-present), Editor-in-Chief of the journal NeuroToxicology (2017-present), and Associate Editor for the journal Environmental Health Perspectives (2021-present). Dr. Lein's research focuses on the cellular and molecular mechanisms by which environmental stressors contribute to the pathogenesis of neurodevelopmental and neurodegenerative disorders.

Bo Li, PhD

Affiliation: Marjorie Roberts Professor and Chair for the Department of Statistics at the University of Illinois Urbana-Champaign, Illinois

Expertise: Spatial and spatio-temporal statistics and environmental statistics concerning climatology, atmospheric sciences, public health, forestry, and agriculture

Education: PhD in Statistics, Texas A&M University; BS in Navel Architecture and Ocean Engineering, Shanhai Jiao Tong University, China

Experience Summary: Dr. Bo Li is a Professor in Statistics with 18 years of teaching and research on environmental statistics. She is a Fellow of the American Statistical Association (ASA) and serves on the National Science Foundation (NSF) Advisory Committee on Environmental Research and Education (2023-2026). Dr. Li was the Chair of the ASA Section on Statistics and the Environment (2023) and also the Chair of the International Society for Bayesian Analysis Environmental Science Section (2017-2018). She served on the ASA Climate Change Policy Committee for five years (2015-2020), during which she represented ASA to meet with staffers of Senators and House representatives from Illinois and Michigan to illustrate climate change and its impact. Dr. Li has been invited to serve on many NSF panels and has served as Associate Editor and Guest Editor for several journals including the Journal of the American Statistical Association, Journal of Agricultural, Biological, and Environmental Statistics, and Environmetrics. Her research interests focus on pesticide-related children's cancer incidence rate, vector-borne infectious diseases such as West Nile virus disease, heatwave caused morbidity, and human immunodeficiency virus intervention and prediction.

Michael H. Parsons, PhD

Affiliation: Senior Investigator, Centre for Urban Ecological Solutions, LLC, Houston, Texas

Expertise: Urban ecology; rodentology; research on creative solutions for system-level rodent control, emphasizing social hygiene, public education, exclusion, and data-driven assessments

Education: PhD in Environmental Biology, Curtin University (Australia); BS, Biology, Appalachian State University

Experience Summary: Dr. Michael Parsons is a senior investigator for the Centre for Urban Ecological Solutions, LLC. His research interests focus on exploitation of scents to influence the behavior of free-ranging rodents within field assays. Dr. Parsons has written approximately 60 peer-reviewed scientific articles and 12 research grants. He has specific training in olfaction-based research of predator-prey interactions (e.g., fear ecology), rodentology, molecular ecology, and comprehensive data analytical tools for behavioral analyses. For the last decade, Dr. Parsons' specific research interests focused on the construction of biological field assays to provide environmental (e.g., real-world) context to research questions typically addressed in the laboratory. He has utilized technological tools such as radio frequency identification (RFID), tri-axis accelerometers, and GPS to enable the marking and repeated identification of free-ranging individuals in highly-variable populations. His work is on the cutting edge of translational science, whereby findings in the laboratory are extended into context-enriched environments, before making their way into clinical settings.

Irfan Rahman, PhD

Affiliation: Director, Center for Inhalation and Flavoring Toxicological Research, University of Rochester Medical Center Department of Environmental Medicine, Rochester, New York

Expertise: Circadian biology; chromatin remodeling; inflammation, sirtuin1 deacetylase (SIRT1) dynamic; and oxidants related to the impact of tobacco products on lung toxicology

Education: Postdoctoral fellowship on lung toxicology, University of Miami and Georgetown University; PhD in Biochemistry on neutrophil functions, University of Nagpur, India

Experience Summary: Dr. Irfan Rahman has been a longstanding pioneer with seminal contributions and cutting-edge research on mitophagy, steroid resistance, and lung cellular senescence and is a leader in the role of oxidative stress and redox signaling in gene transcription in tobacco-related pulmonary diseases. In addition, he also has been a leader in the molecular biology of chromatin remodeling and cellular senescence in the lung in response to oxidative stress and cigarette smoke and was the first to show chromatin remodeling and cellular senescence in the lung in response to cigarette smoke. Dr. Rahman has identified several exciting potential therapies that could prevent tobacco-related lung complications from progressing. Dr. Rahman's mechanistic discoveries and experience translated rapidly to address major issues for human health in the past five years, namely COVID-19 and e-cigarette toxicity. Of critical importance, he is constantly evolving his research to meet the challenging landscape of tobacco/e-cigarette products for lung health. For example, with regard to the rapid emergence of e-cigarettes in the high school population and the hookah waterpipe tobacco bars in college communities, Dr. Rahman already has published several papers on these products. During the pandemic, Dr. Rahman worked on COVID-19 biospecimens and showed that smokers/vapers are more susceptible to infection and are more likely to develop strong lung inflammatory response via upregulation of ACE2 via nicotine receptor alpha 7, particularly in older individuals.

Brian J. Reich, PhD

Affiliation: Gertrude M. Cox Distinguished Professor of Statistics at North Carolina State University, Raleigh, North Carolina

Expertise: Bayesian methods; causal inference; environmental statistics; health effects; spatial statistics

Education: PhD in Biostatistics, University of Minnesota; MS in Biostatistics, University of Minnesota; BS in Mathematics, University of Wisconsin-River Falls

Experience Summary: Dr. Brian Reich is a Distinguished Professor of Statistics at North Carolina State University with 19 years of experience teaching and conducting research on environmental statistics. He is a Fellow of the American Statistical Association (2019) and served as Editor-in-Chief for the Journal of Agricultural, Biological and Environmental Statistics (2019-2021) and Associate Editor for several journals including the Journal of the American Statistical Association (2014-2018). Dr. Reich's research interests include causal inference, spatial statistics, and environmental epistemology.