***Ad hoc* peer reviewers selected for the September 17 to 20, 2024 Science Advisory Committee on Chemicals (SACC) Review of the "Draft risk evaluation for 1,1-dichloroethane and the draft human health hazard assessment for 1,2-dichloroethane." *Ad hoc* peer reviewers are temporary participants in SACC activities and augment the expertise of the SACC members. Brief biographies of the SACC members are available at https://www.epa.gov/tsca-peer-review/members-science-advisory-committee-chemicals.**

Bernard A. Engel, PhD, PE
Purdue University

Affiliation:

Professor of Agricultural and Biological Engineering, and Dean of Agriculture, Purdue University, West Lafayette, Indiana

Expertise:

Hydrology, Water Resources, Water Quality, Hydrologic/Water Quality Modeling, Environmental Decision Support Systems, GIS and Spatial Analysis, Soil and Water Conservation

Education:

PhD in Agricultural Engineering, Purdue University; MS in Agricultural Engineering, University of Illinois; BS in Agricultural Engineering, University of Illinois

Experience Summary:

Dr. Bernard Engel is Professor of Agricultural and Biological Engineering with more than 35 years of teaching and research experience on hydrology, hydrologic/water quality modeling, environmental decision support systems, soil and water conservation, and GIS and spatial analysis. He has published more than 330 peer-reviewed journal articles on his research. His hydrologic/water quality modeling efforts range in scales from small plots to fields, watersheds and river basins. His modeling and decision support tools are widely used within state and federal agencies as well as internationally. Dr. Engel's excellence in research was recognized by the American Society of Agricultural and Biological Engineers (ASABE) with their Outstanding Young Researcher Award and by the Purdue University College of Agriculture Outstanding Researcher Award. In addition, he has been designated a University Faculty Fellow by Purdue University. He is a Fellow of the American Society of Agricultural and Biological Engineers (ASABE) and recipient of the ASABE Hancor Soil and Water Conservation Engineering Award. Dr. Engel has served as a peer reviewer on numerous peer review panels. These include the Indiana Technical Advisory Guidance for Nutrients committee (2006–2010) and various U.S. Environmental Protection Agency's Scientific Advisory Panels.

Jose D. Hernandez-Betancur, PhD
Argonne National Laboratory

Affiliation:

Postdoctoral Researcher at System Assessment Center, Argonne National Laboratory, Lemont, Illinois

Expertise:

Chemical Engineering; Environmental Sustainability; Mathematical Modeling; Data-Driven Modeling; Data Engineering; Chemical Exposure

Education:

PhD in Chemical Engineering, University of Salamanca, Spain;
MSc in Materials and Processes Engineering, National University of Colombia, Colombia; BSc in Chemical Engineering, National University of Colombia, Colombia

Experience Summary:

Dr. Jose Hernandez-Betancur is a postdoctoral appointee at the Argonne National Laboratory of the U.S. Department of Energy, where he provides assistance in the development of the next generation of the Life Cycle Analysis Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation (LCA GREET) model. He possesses a decade of experience in the development of simulation and modeling frameworks pertaining to environmental sustainability. With the aim of streamlining chemical risk evaluation under TSCA, he has provided assistance to research endeavors at the U.S. EPA in the development of data-driven and data engineering methodologies for monitoring chemical flows throughout the end-of-life supply and management chain. This was accomplished by utilizing publicly accessible database systems such as TRI, RCRAInfo, and CDR. Additionally, Dr. Hernandez-Betancur assisted in the development of the initial release of the Standardized Emission and Waste Inventories (StEWI), which was created in collaboration with the U.S. EPA. StEWI aimed to integrate regulatory databases and supply Life Cycle Inventory (LCI) data in order to support the extended input-output model for Life Cycle Analysis (LCA). Dr. Hernandez-Betancur has been co-chair of the Sustainability and Consumer Products session of American Institute of Chemical Engineers (AIChE), published scholarly articles that have undergone peer review and served as a journal reviewer for journals including the Journal of Hazardous Materials and Resources, Conservation, and Recycling.

Yulia Kaluzhny, PhD
InVitroTox Solutions Consulting

Affiliation:

Founder and Director of InVitroTox Solutions Consulting, Newton, Massachusetts

Expertise:

Bioengineering; *In vitro* Toxicology, Alternatives to Animals; New Approach Methodologies (NAMs); Risk Assessment; Ocular / Dermal / Inhalation Toxicity

Education:

PhD in Biochemistry and Cell & Molecular Biology, Boston University School of Medicine; Specialist (equivalent to MS) in Biology and Chemistry, Moscow State University of Education, Moscow, Russia

Experience Summary:

Dr. Yulia Kaluzhny is a Founder and Director of InVitroTox Solutions consulting and is currently engaged in establishing and broadening her consulting services. She has over two decades of industry experience in bioengineering, assay development, and *in vitro* toxicology. Until 2023, Dr. Kaluzhny served as a Principal Scientist at MatTek Corporation where she was involved in international projects aiming at the validation and formal implementation of 3D reconstructed tissue models for toxicity testing of pharmaceuticals, chemicals, cosmetics, pesticides, and household products. Specifically, she was instrumental in the development and validation of the Eye Irritation Test (now OECD TG 492); updating OECD TG 431 for sub-categorization of skin corrosives; 3D skin genotoxicity test which is currently under consideration for acceptance into the regulatory framework; and most recently, OECD TG 498 for *in vitro* skin phototoxicity testing. Dr. Kaluzhny's initiatives were supported by Phase I/II grants awarded by the NIH, she published over 20 original manuscripts and book chapters, delivered over 100 poster and oral presentations, participated in the NIH/NIEHS SBIR Review Committees and Trans-Agency Scientific Meetings and programs. Dr. Kaluzhny has been an active member of the Society of Toxicology, and her recent work was recognized by the Risk Assessment Specialty Section.

Wayne G. Landis, PhD
Western Washington University

Affiliation:

Research Professor Emeritus at Institute of Environmental Toxicology and Chemistry, College of the Environment, Western Washington University, Bellingham Washington

Expertise:

Environmental toxicology and ecological risk assessment for chemicals, microplastics, nonindigenous species, engineered gene drives and climate change; probabilistic methods (Bayesian networks) to estimate risk due to multiple stressors

Education:

PhD in Zoology, Indiana University-Bloomington; MA in Biology, Indiana University-Bloomington; BA in Biology, Wake Forest University

Experience Summary:

Dr. Wayne Landis is a Research Professor at the Institute of Environmental Toxicology and Chemistry, College of the Environment at Western Washington University located at Bellingham, Washington from January 2022 to present. He conducts a research program funded by grants, using the Bayesian network relative risk model to investigate the impact of microplastics, chemical contamination, invasive species, and synthetic biology on the environment. He has been the Director and Professor at the Institute of Environmental Toxicology and Chemistry, Huxley College of the Environment, Western Washington University, Bellingham, Washington since September 1989, and he has instituted a new research and educational program in environmental toxicology and risk assessment. He was also the Department Chair of Environmental Sciences from June 2004 to June 2008.

Before joining Western Washington University, Dr. Landis worked as a Research Biologist and Toxicologist at the Environmental Toxicology Branch, Toxicology Division, Research Directorate, Chemical Research, Development, and Engineering Center (CRDC) from March 1982 to September 1989. He has also served on numerous EPA and other federal FACA committees and professional societies, the most recent being the SACC for formaldehyde.

Heather N. Lynch, MPH, DABT
Integral Inc.

Affiliation:

Principal at Integral Inc., Boston, Massachusetts

Expertise:

Occupational and Consumer Exposure Assessment; Toxicology; Systematic Review

Education:

MPH in Environmental Health, Boston University School of Public Health; BA in Environmental Studies, Knox College

Experience Summary:

Ms. Heather Lynch is a Principal and board-certified toxicologist with 15 years of experience in toxicology and human health risk assessment. She has a BA in environmental studies and a Master of Public Health (MPH) in environmental health. Her areas of expertise include systematic review and weight-of-evidence analyses, regulatory and site-based risk assessment, and conducting exposure studies. She has extensive project experience designing studies to collect data on consumer products, including chemical characterization and chemical emissions studies, and occupational dermal and inhalation exposure data. Ms. Lynch previously worked as a contractor to several government agencies, including projects in which she managed large, chemical-specific risk assessments for the former EPA National Center for Environmental Assessment (NCEA), evaluated developmental and reproductive study submissions for the Office of Pesticide Programs, and conducted toxicity reviews of substances petitioned for inclusion in the USDA National Organic Program. Ms. Lynch has published numerous original peer-reviewed articles, including several systematic reviews, on a range of substances and health effects. She is a governor-appointed member of the Massachusetts Toxics Use Reduction Act Science Advisory Board (2019–present). Ms. Lynch also is a review editor for Frontiers in Environmental Health.

Silvia I. Maberti, PhD
ExxonMobil Biomedical Sciences, Inc.

Affiliation:

Senior Exposure Scientist at ExxonMobil Biomedical Sciences, Inc., Spring, Texas

Expertise:

Exposure assessment (quantitative and models) for occupational & consumer; Sample collection & analysis; Statistical analysis; Occupational Exposure Limit (OEL) derivation; Hierarchy of controls; Prevention through design; Near- and far-field and dispersion models; Human health risk assessment; Risk management and control.

Education:

PhD in Environmental Sciences and Occupational Health, The University of Texas School of Public Health at Houston; MS in Environmental Sciences and Occupational Health, The University of Texas School of Public Health at Houston; Chemical Engineer, Universidad Central de Venezuela, Caracas, Venezuela

Experience Summary:

Dr. Silvia Maberti is a senior exposure scientist at ExxonMobil Biomedical Sciences, Inc. (2009–present) with more than 20 years of experience in occupational and community health studies. Within ExxonMobil, she led a variety of projects ranging from industrial hygiene technology evaluation to assessment, quantification, and modeling of occupational exposures. In the past eight years, she has worked in community and consumer exposure modeling and assessment, as well as supporting the organization on regulatory compliance, including REACH and TSCA risk evaluations. She participates in multiple groups (*i.e.*, OECD, CEFIC LRI, and ACC) that foster or carry out research to advance science in support of regulatory requirements.

As a consultant (2005–2009), Dr. Maberti derived risk-based values in support of site remediation activities and carried out training in Risk-Based Corrective Action in Europe and Central and South America. In collaboration with Universidad Javeriana, she helped design and implement the exposure assessment strategy for Ecopetrol, the Colombian petroleum company.

Dr. Maberti is an active volunteer at the American Industrial Hygiene Association (1998–present), last committees to serve on: Content Portfolio Advisory Group (2017–2023) and AIHA TSCA Taskforce (2023–present), among others.

Jane L. Rose, PhD
The Procter & Gamble Company

Affiliation:

Principal Scientist at The Procter & Gamble Company, Cincinnati, Ohio

Expertise:

Toxicology with expertise in read-across; inhalation risk assessment and inhalation exposure modeling.

Education:

PhD in Pharmacology, Ohio State University; BS in Physiology, Michigan State University.

Experience Summary:

Dr. Jane Rose is Principal Scientist in Toxicology at the Procter & Gamble (P&G) Company. She has 17 years of experience as a toxicologist at P&G, where she has developed, applied and published chemical risk assessment methods to assess safety of various chemicals across the company. Her areas of expertise include application of read-across in chemical risk assessment, inhalation toxicology with a focus on inhalation Threshold of Toxicological Concern (TTC) approaches and inhalation exposure modeling. Dr. Rose was a member of the EPA Board of Scientific Counselors, Chemical Safety for Sustainability Subcommittee (2017–2021) and currently leads the read across work group within the International Collaboration on Cosmetic Safety for development of read-across case studies (2022–current).

Szabina A. Stice, PhD
U.S. Food and Drug Administration

Affiliation:

Senior Toxicologist at U.S. Food and Drug Administration, College Park, Maryland

Expertise:

Toxicology (structure-toxicity relationships, read-across, and grouping); Analytical and Bioanalytical Chemistry

Education:

PhD in Chemistry, Florida International University; MS in Pharmacy and Pharmaceutical Sciences, University of Florida; BA in Chemistry, Brooklyn College, City University of New York

Experience Summary:

Dr. Szabina Stice has been a senior toxicologist at the U.S. Food and Drug Administration (FDA) for almost 10 years. She serves as a toxicology reviewer, consultant to other toxicologists within FDA, and the project lead and SME for the development of a computational toxicology tool aimed at predicting the chronic toxic potential of a wide variety of chemicals and safe exposure levels. Dr. Stice is an expert in structure-toxicity relationships, read-across, and grouping. Dr. Stice is a member of her center's In Silico Expert Consultation Group, Genetic Toxicology Team, and Biomarkers Expert Group. In addition, Dr. Stice has been representing FDA at JECFA (Joint Food and Agriculture Organization (FAO) and World Health Organization (WHO) Expert Committee on Food Additives) as a WHO expert toxicologist since January 2020 and she is the chair of International Life Sciences Institute (ILSI) Europe's Expert Group on Building cumulative assessment groups for combined exposure risk assessment based on Threshold of Toxicological Concern (TTC) thresholds or read-across. Dr. Stice has authored multiple publications and participated in the reviews of numerous scientific articles, FDA safety evaluations, draft guidances, WHO publications, and two draft OECD Guidelines. In addition to having an expertise in toxicology, Dr. Stice has nine years of experience in analytical and bioanalytical R&D and two years of physical chemistry R&D.

Hao Zhu, PhD
Tulane University

Affiliation:

Professor, Center for Biomedical Informatics & Genomics, School of Medicine, Tulane University, New Orleans, Louisiana

Expertise:

Computational toxicology; Cheminformatics; Read-across; and Machine learning modeling.

Education:

PhD in Computational Chemistry, Case Western Reserve University; MS in Applied Chemistry, Department of Technical Physics, Peking University (Beijing, China); BS in Inorganic Chemistry, Department of Chemistry, Jilin University (Changchun, Jilin, China)

Experience Summary:

Dr. Hao Zhu is a Professor of Biomedical Informatics and Genomics at the Tulane University Medical School. He has over 20 years of experience of developing predictive models for chemical toxicities and performing risk assessments using machine learning modeling. His research interests of predictive modeling include the use of cheminformatics tools to develop predictive models to directly predict the chemical efficacy and side effects based on the public big data and molecular structure information. His other research interests include data-driven modeling, artificial intelligence algorithm development and computer-aided nanomedicine design. He is the Principal Investigator (PI) of several prestigious research grants (NIH R01, U01, R15, NSF, etc.) with total amount over $8 million. Dr. Zhu is author/co-author of 92 peer-reviewed journal articles and 10 book chapters with over 7200 citations (H-index as 47). His research was recognized with different awards, such as Rutgers Chancellor's Award for Outstanding Research and Creative Activity, Society of Toxicology Best Paper of the Year (two times, 2021 and 2023), National Institute of Environmental Health Sciences (NIEHS) Extramural Paper of the Month (three times, 2019, 2020 and 2022) and Drug Discovery Today top citation paper of the year (2018). Dr. Zhu currently serves as an associate editor for the Ecotoxicology and Environmental Safety.