Agent Orange: over 50 years of human and ecosystem harm

Dr. Khuong V. Dinh, YRT Principal Researcher and Senior Lecturer at University of Oslo

Dr. Khuong V. Dinh, an ecotoxicologist at the University of Oslo, investigates eco-evolutionary mechanisms underlying the vulnerability of marine and freshwater invertebrates to environmental stressors, including climate change and pollutants. His research, spanning Arctic to tropical ecosystems, integrates field, mesocosm, and laboratory approaches. Notably, he contributes to understanding the ecotoxicological impacts of Agent Orange (herbicides and dioxins) on ecosystems and human health. Dr. Dinh earned his PhD from KU Leuven, Belgium (2014) and held postdoctoral positions in Denmark (H.C. Ørsted Cofunded by Marie Curie Fellowship) and the USA. In 2021, he received a Young Research Talent Grant for Polar Night Stress Ecology and Ecotoxicology.

A Fireside Chat on Oceans and Human Health: Reflections on Research, Impact, and Inspiration

A conversation through a range of topics relevant to the conference, such as Oceans and Human Health, the UN Decade of Ocean Science, Cytochrome P450s, personal journey into this field, and advice to the next generation of scientists.

With **Dr. John Stegeman** (Woods Hole Oceanographic Institution, USA)

Moderate by **Dist. Prof. Daniel Schlenk** (University of California Riverside, USA)

Dr. J. Stegemann

Dr. John J. Stegeman is a Senior Scientist in the Biology Department at the Woods Hole Oceanographic Institution (WHOI), where he also serves as Director of the Woods Hole Center for Oceans and Human Health (WHCOHH). He earned his B.A. in Biology from St. Mary's College in 1966 and completed his Ph.D. in Biochemistry at Northwestern University in 1972.Dr. Stegeman's research focuses on biochemical toxicology, particularly the metabolism and effects of pollutants and natural products in marine organisms. His work has significantly advanced the understanding of cytochrome P450 enzymes, their evolution, regulation, and role in the metabolism of xenobiotics and steroid hormones across various aquatic species. His studies encompass a range of marine life, from vertebrates to deep-sea animals, and employ techniques such as cloning, expression analysis, and computational modeling to investigate structure-function relationships and species-specific responses to environmental contaminants .Throughout his career, Dr. Stegeman has contributed to numerous publications and has been instrumental in exploring the links between ocean health and human health. His leadership at WHOI and WHCOHH underscores his commitment to interdisciplinary research and education in marine science.

Dist. Prof. D. Schlenk

Daniel Schlenk, Ph.D. is Professor of Aquatic Ecotoxicology and Environmental Toxicology at the University of California Riverside. He has published more than 350 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 contaminant metabolism, and the linkage of molecular and bioanalytical responses associated with neuroendocrine development and whole animal effects on reproduction, growth and survival. A Fellow of AAAS and SETAC, he has served as a permanent member and chair of the USEPA TSCA Chemical Safety Advisory Committee from 2016-2023 and was a permanent member and Chair of the USEPA FIFRA Science Advisory Panel. He has also served on 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. He is currently an Executive and 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.