



INVITATION TO LECTURE

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Adverse Outcome Pathways – Development and Applications

Date: 08.09.2017, 9:00

Venue: lecture room RCX1 (A29/252), 2nd floor, RECETOX, Kamenice 5, Brno

Syllabus of lecture:

The adverse outcome pathway (AOP) framework was developed as a means for organizing biological and toxicological knowledge concerning the linkages between molecular-level perturbations of biological systems by stressors and the apical hazards (e.g., disease in humans, reduced survival, growth, reproduction in wildlife) that can result. As such, the AOP framework can help support greater use of mechanistic or pathway-based data in risk assessment and regulatory decision-making. The formal description of AOPs is guided by five principles of AOP development as well as weight of evidence considerations that are used to evaluate the scientific basis for, and limitations of, inference between different biological events along the pathway. Knowledge, organized via the AOP framework, is disseminated through a publically accessible, AOP knowledgebase (the AOP-Wiki; aopwiki.org). The AOP-Wiki is designed to facilitate efficient, crowd-sourced, AOP development and evaluation that is searchable, accessible, and transparent to users world-wide. The principles and practice of AOP development and evaluation will be presented using real-world examples, and potential applications of AOPs in a wide variety of environmental decision-making contexts will be discussed.

About the lecturer:



Daniel L. Villeneuve is a research toxicologist with the United States Environmental Protection Agency's Office of Research and Development (ORD). Dr. Villeneuve serves as Project Lead for a cross-ORD research program focused on the development and application of adverse outcome pathways (AOPs). He has over 20 years of experience conducting freshwater ecotoxicology research and has been recognized with 17 US EPA Scientific and Technological Achievement Awards, three Bronze Medal awards, and is a US National Academy of Sciences and Kavli Foundation Fellow. Dr. Villeneuve has authored or co-authored over 160 peer-reviewed papers in the field of ecotoxicology and serves as an associate editor of *Environmental Toxicology and Chemistry* and an international expert advisor on Molecular Screening and Toxicogenomics to the Organization for Economic Cooperation and Development (OECD).