

Workshop: Advancing Quantitative Analysis in Human Health Assessments through Probabilistic Methods

Draft Agenda

Monday, October 7, 2024 – 9:00 a.m. - 5:00 p.m.

Tuesday, October 8, 2024 – 9:00 a.m. - 3:30 p.m.

U.S. Environmental Protection Agency, Research Triangle Park, NC and online

Day 1: October 7

Time (U.S. Eastern)	Topic	Speaker(s)
Session 1: Introduction and Past examples of Probabilistic Methods in Risk Assessment		
9:00 – 9:10 AM	Welcome and introductions	Kris Thayer (EPA/ORD/CPHEA)
9:10 – 9:30 AM	Introduction to probabilistic methods in risk assessment	Weihshueh Chiu (Texas A&M)
9:30 – 9:50 AM	Using the World Health Organization's APROBA tool for integrated tolerable daily intake (TDI) derivation and uncertainty analysis – the case of BPA	Matthias Herzler (BfR)
9:50 – 10:10 AM	APROBA overview with acrolein/chloroform case studies	Todd Blessinger (EPA/ORD/CPHEA)
10:10 – 10:30 AM	Break	
10:30 – 10:50 AM	Deoxynivalenol (DON) probabilistic risk assessment	Weihshueh Chiu (Texas A&M)
10:50 – 11:10 AM	NGRA for systemic toxicity	Ans Punt (Unilever)
11:10 -12:00 PM	Moderated panel discussion Panelists: <ul style="list-style-type: none"> • Susan Chemerynski (Johns Hopkins) • Maria Doa (Environmental Defense Fund) • Gary Ginsberg (New York State Dept. of Health Center for Environmental Health) • Thomas Hartung (Johns Hopkins) 	TBD, moderator
12:00 – 2:00 PM	Lunch/poster session	
Session 2: Ongoing Research Methods		
Subtopic 1: Probabilistic Exposure		
2:00 – 2:45 PM	Application of the Stochastic Human Exposure and Dose Simulation (SHEDS) probabilistic multimedia aggregate exposure model for lead in soil and dust	Rogelio Tornero-Velez (EPA/ORD/CCTE)
	Predicted probability of associated functional use	Katherine Phillips (EPA/ORD/CCTE)
	Probabilistic biomonitoring	Speaker TBD (European Food Safety Authority [EFSA])
2:45 – 3:25 PM	Moderated panel discussion Panelists: <ul style="list-style-type: none"> • Cronan McNamara (Crème Global) • Keeve Nachman (Johns Hopkins) • Sarah Tozer (Procter & Gamble, UK) 	TBD (EFSA), moderator
3:25 – 3:35 PM	Break	
Subtopic 2: Probabilistic Toxicokinetics		
3:35 – 4:20 PM	Characterizing uncertainty/variability in physiologically based pharmacokinetic (PBPK) parameters	Paul Schlosser (EPA/ORD/CPHEA)

	Impact of PBPK model parameter distribution assumptions on distributional estimates of human equivalent doses (HEDs)	Dustin Kapraun OR Celia Schact (EPA/ORD/CPHEA)
	In vitro uncertainty for PBPK modeling	EFSA (Virtual)
4:20 – 5:00 PM	<p>Moderated panel discussion</p> <p>Panelists:</p> <ul style="list-style-type: none"> • Harvey Clewell (Ramboll) • Andy Nong (Health Canada) • Ans Punt (Wageningen Food Safety Research) 	John Wambaugh (EPA/ORD/CPHEA), moderator

Day 2: October 8

Time (U.S. Eastern)	Topic	Speaker(s)
9:00 – 9:05 AM	Welcome back and overview for day	Nicole Kleinstreuer (NIH/NIEHS/NICEATM)
Session 2 (cont.): Ongoing Research Methods		
Subtopic 3: Probabilistic Benchmark Dose Modeling and Model Averaging		
9:05 – 9:50 AM	Benchmark dose model averaging	Matt Wheeler (NIEHS)
	Chloroform case study	Todd Blessinger (EPA/ORD/CPHEA)
	Probabilistic points of departure and reference dose	Weihshueh Chiu (Texas A&M)
9:50 – 10:30 AM	Moderated panel discussion Panelists; <ul style="list-style-type: none"> • Marc Aerts (Hasselt University) • Jose Cortinas (EFSA) • Mike Pennell (Ohio State University, Virtual) 	Todd Blessinger (EPA/ORD/CPHEA), moderator
10:30 – 10:40 AM	Break	
Subtopic 4: Probabilistic Toxicity Value Determination		
10:40 – 11:25 AM	Benefit-cost analysis	Chris Dockins (EPA/AP/RPSD)
	A multi-tiered hierarchical Bayesian approach to derive toxic equivalency factors (TEFs)	Caroline Ring (EPA/ORD/CCTE)
	Next-generation approach for probabilistic risk assessment of skin sensitization	Nicole Kleinstreuer (NIH/NIEHS/NICEATM)
11:25 AM – 12:05 PM	Moderated panel discussion <ul style="list-style-type: none"> • Dan Axelrad (Independent Consultant, Washington D.C.) • Dingsheng Li (U. Nevada – Reno) • Tracey Woodruff (U. California – San Francisco) 	Caroline Ring (EPA/ORD/CCTE), moderator
12:05 – 1:30 PM	Lunch	
Session 3: Next steps		
1:30 – 1:50 PM	Recap	EPA
1:50 – 3:30 PM	Moderated panel discussion with charge questions, panelists TBD with audience participation	Weihshueh Chiu (Texas A&M), moderator
3:30 PM	Adjourn	