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

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	Weihsueh Chiu (Texas A&M)
9:30 – 9:50 AM	Using APROBA for integrated TDI derivation and uncertainty analysis – the case of BPA	Matthias Herzler (BfR)
9:50 – 10:10 AM	APROBA case study application in EPA human health assessment	Todd Blessinger (EPA/ORD/CPHEA)
10:10 – 10:30 AM	Break	
10:30 – 10:50 AM	Deoxynivalenol (DON) probabilistic risk assessment	Weihsueh 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: Gary Ginsberg (NYS DOH Center for Environmental Health), Thomas Hartung (Johns Hopkins), Maria Doa (EDF), Susan Chemerynski (Johns Hopkins)	Moderated by Weihsueh Chiu (Texas A&M)
12:00 – 2:00 PM	Lunch/Poster Session	
Session 2: Ongoing research methods		
Subtopic 1: Probabilistic exposure		
2:00 – 2:45 PM	Application of ORD's SHEDS-IEUBK Probabilistic Multi-Media Aggregate Exposure-BLL Modeling with a focus on Soil Pb and Dust Pb	Rogelio Tornero-Velez (EPA/ORD/CCTE)
	Gap filling methods for exposure modeling	Katherine Phillips (EPA/ORD/CCTE, Virtual)
	Reverse dosimetry in TKPlate to reconstruct exposure distributions using biomonitoring data	Jean-Lou Dorne (EFSA, Virtual)
2:45 – 3:25 PM	Moderated Panel Discussion Panelists: Keeve Nachman (Johns Hopkins), Cronan McNamara (Creme Global), Sarah Tozer (P&G UK)	Moderated by John Wambaugh (EPA/ORD/CCTE)
3:25 – 3:35 PM	Break	
Subtopic 2: Probabilistic toxicokinetics		
3:35 – 4:20 PM	Characterizing Uncertainty/Variability in PBPK parameters	Paul Schlosser (EPA/ORD/CPHEA)
	Impact of PBPK model parameter distribution assumptions on distributional estimates of HEDs	Celia Schact (EPA/ORD/CPHEA)
	QIVIVE and variability distributions in elimination using TKPlate	Jean-Lou Dorne (EFSA, Virtual)
4:20 – 5:00 PM	Moderated Panel Discussion Panelists: Harvey Clewell, Andy Nong, Ans Punt	Moderated by John Wambaugh (EPA/ORD/CCTE)

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, recorded)/Mary Jacketti (EPA/OMS, in person)
	Chloroform case study	Todd Blessinger (EPA/ORD/CPHEA)
	Probabilistic points of departure and reference dose	Weihsueh Chiu (Texas A&M)
9:50 – 10:30 AM	Moderated Panel Discussion Panelists Jose Cortinas (EFSA, Virtual), Marc Aerts (Hasselt University, Virtual), Mike Pennell (OSU, Virtual)	Moderated by Todd Blessinger (EPA/ORD/CPHEA)
10:30 – 10:40 AM	Break	
Subtopic 4: Probabilistic toxicity value determination		
10:40 – 11:25 AM	A multi-tiered hierarchical Bayesian approach to derive TEFs	Caroline Ring (EPA/ORD/CCTE)
	NGRA approach for probabilistic skin sensitization	Nicole Kleinstreuer (NIH/NIEHS/NICEATM)
	Benefit-Cost analysis	Chris Dockins (EPA/AP/RPSD)
11:25 AM – 12:05 PM	Moderated Panel Discussion Weihsueh Chiu (Texas A&M), Dingsheng Li (U. Nevada – Reno), Dan Axelrad (Virtual), Tracey Woodruff (UCSF, Virtual)	Moderated by Caroline Ring (EPA/ORD/CCTE)
12:05 – 1:30 PM	Lunch	
Session 3: Next steps		
1:30 – 1:50 PM	Recap and Discussion Questions	Todd Zurlinden (EPA/ORD/CPHEA)
1:50 – 3:30 PM	Moderated Panel Discussion with charge questions [Final panel will be composed of previous speakers and panelists along with audience participation]	Moderated by Weihsueh Chiu (Texas A&M)
3:30 PM	Adjourn	