MEETING AGENDA

Advanced Approaches for Species Surrogacy in Chemical Risk Assessment

1–2 November 2026 • Montreal, Quebec

Toward a Weight of Evidence Approach for Cross Species Extrapolation

Sunday, 1 November | Room 513a

Daily Theme: New approaches for evaluating toxicokinetic and toxicodynamic evidence for species surrogacy approaches will be highlighted.

Introduction		
Time (ET)	**Topic**	**Presenters**
8:00 a.m.	Arrival and Morning Beverages	
8:30 a.m.	Welcome and Introductory Presentation	K. Coady, C. Rivetti
Session 1: Toxicokinetics Across Species | Chairs: Michelle Embry, HESI Global; Jon Arnot, RC Arnot Research & Consulting		
Time (ET)	**Topic**	**Presenters**
9:30 a.m.	Framing Toxicokinetics Across Species: Data Streams, Applications and Gaps	M. Embry, J. Arnot
10:00 a.m.	Modelling Toxicokinetics Across Species: In Vitro Data and PBK Approaches for Fish and Birds	M. Brinkmann
10:20 a.m.	Refreshment Break	
10:50 a.m.	Characterizing Toxicokinetic Variation Across Fish Taxa	K. Johanning
11:10 a.m.	Predicting Toxicokinetics Across Species: In Silico Approaches for Fish and Mammals	A. Sangion
11:30 a.m.	Panel Discussion	
12:30 p.m.	Lunch (Room 513bc)	
Session 2: Toxicodynamics and Pathway Conservation | Chairs: Jessica Head, McGill University; John Colbourne, University of Birmingham		
Time (ET)	**Topic**	**Presenters**
1:30 p.m.	Introduction: Similarities to Exploit and Exceptions That May Matter	J. Head
1:40 p.m.	Toxicity by Descent: A Comparative Approach for Chemical Hazard Assessment	J. Colbourne
2:00 p.m.	Mechanistic Exploration of Networks for Team-based Omics Research (MENTOR) for Uncovering Pathway Conservation	J. Colbourne for D. Jacobson
2:20 p.m.	Behavioral Effects of Chemicals on Distantly Related Species at Sublethal Doses	L. Gandara
2:40 p.m.	Using Transcriptomics to Explain and Predict Species Sensitivity	J. Head
3:00 p.m.	Quantitative Adverse Outcome Pathways: Species Extrapolation and Applications to Ecological Risk Assessment	J. Doering
3:20 p.m.	Refreshment Break	
4:20 p.m.	Species Surrogacy: Does Theodosius Dobzhansky's Well-Known Statement (1973) - "Nothing in Biology Makes Sense Except in the Light of Evolution" - Also Apply to Predictive and Regulatory Toxicology?	
5:20 p.m.	Poster Session and Refreshments	
6:30 p.m.	Adjourn	

Poster Presentations | Room 513bc

Presentations will be available for viewing during breaks and poster sessions on Sunday and Monday.

1. Exploring Inter-Species Differences in Biotransformation Rates using In Vitro, In Vivo and In Silico Data | J. Arnot
2. Biodegradable Polymer Systems as Cross-Species Proxies for Microplastic Exposure and Fate in Soil Ecosystems | A. Upadhyay
3. A Read-Across Approach Using Fish and Mammalian Toxicokinetic and Toxicity Data to Evaluate Reproductive Toxicity Risk in Fish for a Pharmaceutical | M. Lee
4. Which Fish? Comparative Receptor Pharmacology and Toxicokinetics for Selecting and Interpreting a Fish Full-Life Cycle Study With an Estrogen Receptor Degrader | M. Lee
5. Transcriptomic Assay Assesses Hazard of 6PPD-Quinone to Fish Species-At-Risk | R. Chui
6. Semantic Similarity Analysis of Developmental Zebrafish Transcriptomes to Support Pathway-Based Species Surrogacy | L. St. Mary
7. Developing a Soil Nematode System as a Predictive Surrogate Platform for Mammalian Gut Barrier Vulnerability to Metabolic Toxicity | Y. Moon
8. Challenges in Species Surrogacy – A 6PPD-Quinone Case Study | M. Hecker
9. Implications of Population Vital Rates for the Use of Surrogate Species in Ecological Risk Assessment | J. D. Stark
10. Developing a Framework For Identifying Sentinel Taxa for the Non-Target Arthropod Risk Assessment Using Field Effect Studies – A Case Study With Carabidae | C. Elston
11. Trait-Based Clustering of North American Lepidoptera to Support Ecological Risk Assessment | M. Vaugeois
12. Bio-QSARs: Enhancing Ecotoxicity Predictions for Untested Species | M. Vaugeois
13. Predicting Chemical Potency and Species Sensitivity to AhR2 Activation Across Phylogenetically Diverse Fishes Using In Silico Approaches | J. Dubiel
14. Bridging Data Gaps in Terrestrial Insect Ecotoxicity Across Species and Experimental Variables | T. Purucker
15. Leveraging Existing Aquatic Toxicity Data and Integrating Multiple Lines of Evidence to Evaluate Species Surrogacy for Asian Species | A. C. Bejarano
16. From Fish to Frogs: Leveraging Fish Toxicity Data to Predict Chronic Pesticide Effects on Aquatic Amphibian Life Stages | K. Coady

MEETING AGENDA

Advanced Approaches for Species Surrogacy in Chemical Risk Assessment

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Toward a Weight of Evidence Approach for Cross Species Extrapolation

Monday, 2 November | Room 513a

Daily Theme: Species traits and existing data sources that may challenge or strengthen surrogacy decisions will be discussed in a weight of evidence context.

Introduction		
Time (ET)	**Topic**	**Presenters**
8:00 a.m.	Arrival and Morning Beverages	
8:30 a.m.	Welcome and Summary of Day 1	K. Coady, C. Rivetti
Session 3: Ecological and Organismal Traits | Chairs: Mark S. Johnson, Wageningen University; Paul J. Van den Brink, Wageningen University		
Time (ET)	**Topic**	**Presenters**
8:40 a.m.	Introduction Covering Individual, Population and Community-Level Traits Relevant to Species Surrogacy	M. Johnson, P. van den Brink
8:50 a.m.	Species Traits and Functional Diversity – Considerations for Humans and Terrestrial Vertebrates	M. Johnson
9:10 a.m.	Using Traits-Based Methods to Predict Effects on Individuals, Populations and Communities	P. van den Brink
9:40 a.m.	Using Traits-Based Approaches to Inform Surrogate Species Selection for Ecological Risk Assessment	V. Forbes
10:00 a.m.	Refreshment Break	
10:40 a.m.	Integrating Empirical Mesocosm Data with Predictive Models to Assess Pesticide Impacts on Freshwater Biodiversity and Stability Endpoints	A. Rico, P. van den Brink
11:00 a.m.	Ecotox Screening Based on Environmental DNA and Non-Target Analysis	A. Deines
11:20 a.m.	Break-out Group discussions	
12:20 p.m.	Lunch (Room 513bc)	
Session 4: Integration of Existing Data | Chairs: Rebecca Dalton, Environment and Climate Change Canada; Luigi Margiotta-Casaluci, King's College London		
Time (ET)	**Topic**	**Presenters**
1:20 p.m.	Introduction: From Fragmented Data to Coherent Evidence in Species Extrapolation	L. Margiotta-Casaluci
1:40 p.m.	Maximizing Data Use and Minimizing Fish Testing in Pharmaceutical (and Other Chemicals) Risk Assessment	C. Tyler
2:00 p.m.	A Systematic Evaluation of Toxicity Across Distantly Related Species	J. Shaw
2:20 p.m.	Case Studies from Individual to Population Effects	V. Roeben
2:40 p.m.	Weight-of-Evidence in Chemical Risk Assessment	R. Dalton
3:00 p.m.	Refreshment Break	
3:30 p.m.	Panel Discussion	
Closing and Next Steps		
Time (ET)	**Topic**	**Presenters**
4:30 p.m.	Perspectives on Incorporating Lines of Evidence in Regulatory Processes	P. Browne
4:50 p.m.	Summary and Closing	K. Coady, C. Rivetti
5:20 p.m.	Adjourn	

Meeting Supporters

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Program Committee

- Co-chair: Katherine Coady, Bayer Crop Science
- Co-chair: Claudia Rivetti, Unilever
- Jon Arnot, Arnot Research and Consulting
- Paul J. van den Brink, Wageningen University
- John Colbourne, University of Birmingham
- Rebecca Dalton, Environment and Climate Change Canada
- Michelle Embry, Health and Environmental Sciences Institute
- Jessica Head, McGill University
- Mark Johnson, US Army Public Health Center (Retired)
- Luigi Margiotta-Casaluci, King's College London