



Strategies and Tools for Conducting Systematic Reviews of Mechanistic Data to Support Chemical Assessments

The National Academies of
SCIENCES
ENGINEERING
MEDICINE

December 10-11, 2018

NAS Building | 2101 Constitution Avenue NW | Washington, DC | Lecture Room

Monday, December 10, 2018

8:30 **Welcome and Overview of the Workshop**
Ivan Rusyn, Texas A&M University*

8:40 **Systematic Review: Best Practices and Special Considerations for Mechanistic Data**
Holger Schünemann, McMaster University*

9:00 **The Systematic Review of Mechanistic Data in IRIS Assessments**
Catherine Gibbons, US Environmental Protection Agency

SESSION 1: Problem Formulation for Evaluating Mechanistic Data

9:20 **Principles of Problem Formulation and Approaches to Considering Mechanistic Data**
Julian Higgins, University of Bristol

9:50 **Problem Formulation: Lessons and Tools from Practical Applications Involving Systematic Review of Mechanistic Data**
Daniele Wikoff, ToxStrategies

10:20 **Panel Discussion:**
Moderator: Holger Schünemann, McMaster University*
Discussants: Session 1 Speakers; Andrew Rooney, National Toxicology Program; Maureen Gwinn, US Environmental Protection Agency*

11:30 **Poster Session** (East Court adjacent to Lecture Room)

12:30 *Lunch (Will not be provided. There is a cafeteria on Lower Level)*

SESSION 2: Approaches to Evaluating the Validity of Mechanistic Studies

1:30 **Consideration of Internal and External Validity in Mechanistic Studies**
Andrew Rooney, Office of Health Assessment and Translation, National Toxicology Program*

* Member of workshop organizing committee.

1:55	Quality Assessment of Big and Complex Data in Pharmaceutical Target and Chemical Safety Assessment <i>Matthew Martin, Pfizer Drug Safety Research & Development</i>
2:20	OECD Good In Vitro Method Practices (GIVIMP) Guidance and Its Implementation <i>Sandra Coecke, European Commission Joint Research Centre</i>
2:45	The SciRAP Tool for Evaluating the Quality of In Vitro Studies <i>Anna Beronius, Karolinska Institutet</i>
3:10	<i>Break</i>
3:30	Panel Discussion: <i>Moderator: Ivan Rusyn*, Texas A&M University</i> <i>Discussants: Session 2 Speakers; David Dorman, North Carolina State University; Julian Higgins, University of Bristol; Tala Henry, US Environmental Protection Agency</i>
4:30	Poster Session (East Court adjacent to Lecture Room)
6:00	<i>End of Day 1</i>

Tuesday, December 11, 2018

8:30 Welcome and Opening Remarks
Ivan Rusyn, Texas A&M University*

SESSION 3: Assimilating and Using Mechanistic Information to Support Evidence Synthesis and Integration

8:40 **Experiences with the Mode-of-Action Framework as an Organizing Framework for Mechanistic Data**
James Klaunig, Indiana University

9:10 **Development and Use of Quantitative Adverse Outcome Pathways: Lessons Learned from Application to Cardiotoxicity**
Weihsueh Chiu, Texas A&M University

9:40 **The Key Characteristics Approach to Evaluating Mechanistic Data in Hazard Identification and Risk Assessment**
Martyn T. Smith, University of California, Berkeley

10:10 **GRADE Evidence-to-Decision Frameworks for Considering Mechanistic Data with Animal and Human Data to Support Evidence Synthesis and Integration**
Holger Schünemann, McMaster University*

10:40 *Break*

11:00 **Panel Discussion:**
Moderator: Joyce Tsuji, Exponent*
Discussants: Session 3 Speakers; David Dorman, North Carolina State University; Heather Lynch, Gradient Corporation; Elizabeth Méndez, US Environmental Protection Agency

12:00 *Lunch (Will not be provided. There is a cafeteria on Lower Level)*

1:00 **Poster Session** (East Court adjacent to Lecture Room)

* Member of workshop organizing committee.

**SESSION 4: Practical Experience with Implementing Systematic Reviews of
Mechanistic Evidence into Human Health Assessments**

2:00	Integrating Mechanistic Evidence into TCEQ Assessments <i>Sabine Lange, Texas Commission on Environmental Quality</i>
2:30	Approaches Used to Integrate Mechanistic Data into the Report on Carcinogens by the National Toxicology Program <i>Amy Wang, Office of the Report on Carcinogens, National Toxicology Program</i>
3:00	Implementing Systematic Review Methods and Approaches in TSCA Risk Evaluations <i>Iris Camacho, US Environmental Protection Agency</i>
3:30	Panel Discussion: <i>Moderator: Katya Tsaion*, Johns Hopkins University</i> <i>Discussants: Session 4 Speakers; Daniele Wikoff, ToxStrategies; Heather Lynch, Gradient Corporation; Andrew Kraft, US Environmental Protection Agency</i>
4:45	Closing Remarks <i>Ivan Rusyn*, Texas A&M University</i>
5:00	<i>Workshop Adjourns</i>

* Member of workshop organizing committee.