National Toxicology Program
U.S. Department of Health and Human Services

4th International Symposium on
**Systematic Review
and Meta-Analysis
of Laboratory Animal Studies**

SYSTEMATIC REVIEW   EPILEPSY   AUTOMATION   TOXICOLOGY

Agenda

Thursday, August 24

Time	Presentation
8:30 AM	**Welcome and Opening Remarks** John Bucher	*NIEHS, NTP*
8:40 AM	**Uptake of Systematic Review and Meta-Analysis in Toxicology and Public Health** Andrew Rooney	*NIEHS, NTP*
Session 1: Systematic Reviews or Meta-Analyses in Toxicology and Public Health Chair: Juleen Lam	
9:00 AM **Keynote**	**Navigating the Science – Opportunities to Improve Health Through Advances in Systematic Reviews** Tracey Woodruff	*University of California, San Francisco*
9:45	**Implementing the Systematic Review Approach in Non-Clinical Fields: The Importance of Education** Rob De Vries	*SYRCLE*
10:00	**Systematic Evidence Map of Transgenerational Inheritance of Health Effects** Vickie Walker	*NIEHS, NTP*
10:15	**Aerobic but Not Resistance Exercise Can Induce Inflammatory Pathways via Toll-like 2 and 4: A Systematic Review** Paula Andréa Malveira Cavalcante	*Federal University of São Paulo (UNIFESP), Brazil*
10:30 – 10:45 AM	**Break**
10:45	**Systematic Reviews and Meta-Analysis for Environmental Health: Proof-of-Concept Case Study Examples** Juleen Lam	*University of California, San Francisco*
11:00	**Ensuring Only High-quality Systematic Reviews Get Published: New Obligations and Strategies for Environmental Health Journals** Paul Whaley	*Lancaster University*
11:15	**Association Between Exposure to p,p'-DDT and its Metabolite p,p'-DDE With Obesity: Integrated Systematic Review and Meta-Analysis** Michele La Merrill	*University of California, Davis*
11:30	**Office of the Report on Carcinogens Systematic Review of Cancer Studies in Experimental Animals** Gloria Jahnke	*NIEHS, NTP*
11:45	**Performing Scoping Studies With SWIFT-Review and SWIFT-Active Screener** Brian Howard	*Sciome*
12:00 – 1:15 PM	**Lunch**

Session 2: Automation of Systematic Reviews
Chair: Andrew Rooney

Time	Presentation
1:15 PM **Keynote**	**Semi-Automating Evidence Synthesis via Machine Learning and Natural Language Processing** Byron Wallace | *Northeastern University*
2:00	**Systematic Review Facility (SyRF) – A Toolbox for Systematic Review and Meta-Analysis** Gillian Currie | *CAMARADES*
2:15	**Machine Learning Approaches to Assist the Screening Stage of Pre-Clinical Systematic Reviews** Alexandra Bannach-Brown | *University of Edinburgh, Aarhus University*
2:30	**SWIFT-Active Screener: Reducing Literature Screening Effort Through Machine Learning for Systematic Reviews** Ruchir Shah | *Sciome*
2:45	**The Vision of SLIM – A Systematic Living Information Machine** Jing Liao | *University of Edinburgh*
3:00 – 3:15 PM	**Break**
3:15	**Text Mining as a Tool to Aid the Assessment of Reporting of Risk of Bias and Other Methodological Quality Criteria** Zsanett Bahor | *University of Edinburgh*
3:30	**Applying the Key Characteristics Paradigm in Cancer Hazard Identification** Kate Guyton | *IARC Monographs*
3:45	**Lessons From the Conduct of Two Systematic Reviews in Risk Assessment: Focus on Collaborative Software Tools** Katya Tsaoiun | *Evidence-based Toxicology Collaboration, Johns Hopkins Bloomberg School of Public Health*
4:00	**Evaluation of Mechanistic Data Based on Key Characteristics of Carcinogens: Application of a Text Mining Tool and a Quantitative Evaluation Framework** Daniele Wikoff | *ToxStrategies*
4:15 PM	**General Discussion**
4:45 PM	**Poster Session/Social**
5:45 PM	**Adjourn**
7:00 PM	**Dinner**

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Friday, August 25

Time	Presentation
8:30 AM	**Welcome Back and Opening Remarks** Andrew Rooney	*NIEHS, NTP*

Session 3: Systematic Review/Meta-Analysis Methods Development
Chair: David Howells

Time	Presentation
8:35 AM **Keynote**	**Do's and Don'ts in Meta-Analysis of Animal Study Data** Kim Wever	*SYRCLE*
9:20	**Impact of Choice of Effect Size and Meta-Analysis Method on Identifying Differences Between Groups of Animal Studies** Malcolm Macleod	*University of Edinburgh*
9:35	**Lessons Learned From a Systematic Review of Prenatal Exposure to Bisphenol A and Hyperactivity** Carol Kwiatkowski	*The Endocrine Disruption Exchange (TEDX)*
9:50	**Preferred Reporting Items in Systematic Reviews and Meta-Analysis – In Vivo Animal Research Extension (PRISMA–IVA)** Marc Avey	*ICF*
10:05	**An Application of the Aggregate Exposure Pathway (AEP) and Adverse Outcome Pathway (AOP) Frameworks to Mechanistically Integrate Data Sources Across Multiple Species Into Cumulative Risk Assessment (CRA)** David Hines	*U.S. Environmental Protection Agency*
10:20 – 10:35 AM	**Break**
10:35	**Network Meta-Analysis for Preclinical Studies** Emily Sena	*University of Edinburgh*
10:50	**Application of SR to Fit-For-Purpose Evaluation of Tox21 Assays** Robert Wright	*Johns Hopkins University*
11:05	**Protocol Registration for Systematic Reviews of Animal Studies Relevant for Human Health in PROSPERO** Marc Avey	*ICF*
11:20	**Identification of Key Characteristics of Male Reproductive Toxicants as an Approach for Screening and Sorting Mechanistic Evidence** Xabier Arzuaga	*U.S. Environmental Protection Agency*
11:35	**Meta-Analysis of Animal Studies in Environmental Health: Challenges, Opportunities, and Lessons Learned From Evaluating Evidence From Endocrine Active Chemicals** Weihsueh Chiu	*Texas A&M University*
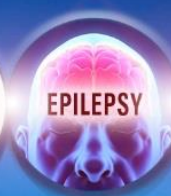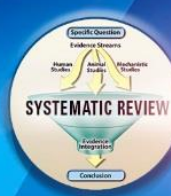
Session 4: New/Late Breaking Systematic Reviews or Meta-Analyses
Chair: Rob De Vries

Time	Presentation
11:50	**MVA85A TB Vaccine: Synthesis of Animal Studies Raised Fundamental Questions** Paul Garner	*Centre for Evidence Synthesis in Global Health, Liverpool School of Tropical Medicine*
12:05	**A Perfect Storm of Bias – The Use and Misuse of Observational Scoring in Animal Studies Exemplified by the Rat Grimace Scale** Otto Kalliokoski	*University of Copenhagen*
12:20	**How Authors of Biomedical Research Describe the Design Aspects of the Study and Implications for Variance Estimation and Automation of Reviews** Annette O'Connor	*Iowa State University*
12:35 – 1:45 PM	**Lunch**

Session 5: Systematic Reviews or Meta-Analyses in Epilepsy and Other Human Diseases
Chair: Emily Sena

Time	Presentation
1:45 PM **Keynote**	**Identification and Characterization of Outcome Measures Reported in Animal Models of Chronic Epilepsy** Michele Simonato	*University of Ferrara*
2:30	**Why Be Systematic – Preclinical Stroke as an Exemplar** David Howells	*University of Tasmania, Australia*
2:45	**Systematic Evidence Mapping of Chemical Exposures and Parkinson's Disease to Support Future Research** Ana Antonic	*University of Melbourne, Melbourne School of Engineering*
3:00	**Language Inclusion and Search Approaches in "Systematic" Reviews of Animal Toxicity and Communicable Disease Studies** Kristine Alpi	*North Carolina State University*
3:15 PM	**General Discussion**
3:45 PM	**Closing Remarks**
4:00 PM	**Adjourn**