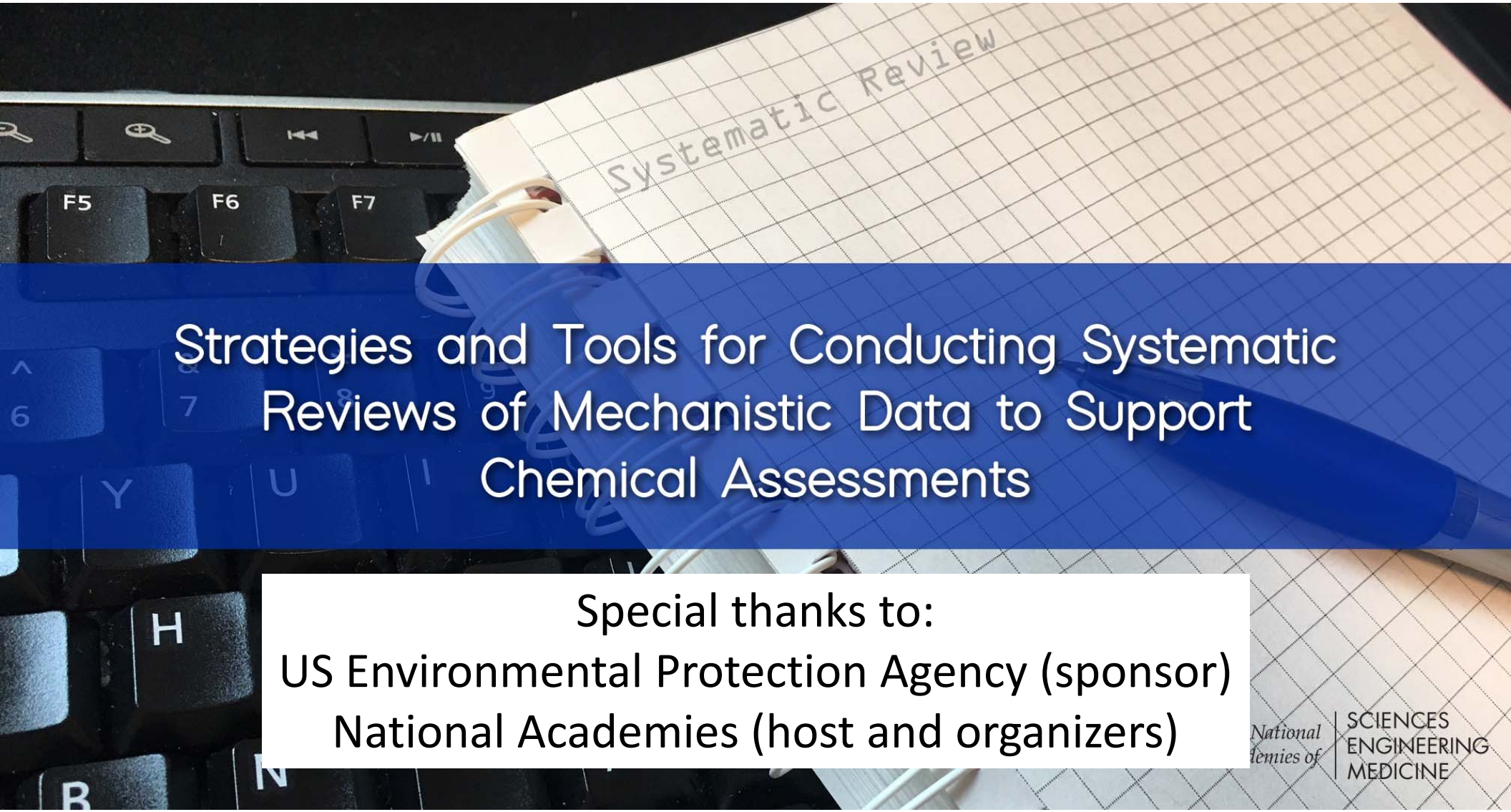

Strategies and Tools for Conducting Systematic Reviews of Mechanistic Data to Support Chemical Assessments

Special thanks to:
US Environmental Protection Agency (sponsor)
National Academies (host and organizers)

National Academies of SCIENCES ENGINEERING MEDICINE

Workshop Planning Committee

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Workshop 1 Overview

Objective: overview and discussion of current state-of-the-art in performing systematic reviews of **mechanistic data**

- Problem formulation and approaches for evaluating data
- Approaches to evaluating the validity of mechanistic studies
- Methods for assimilating information to support evidence synthesis and integration
- Practical experience with implementing systematic reviews of mechanistic evidence into human health assessments

Speakers

- Anna Beronius, Karolinska Institutet
- Iris Camacho, US Environmental Protection Agency
- Weihsueh Chiu, Texas A&M University
- Sandra Coecke, European Commission Joint Research Centre
- Catherine Gibbons, US Environmental Protection Agency
- Julian Higgins, University of Bristol
- James Klaunig, Indiana University
- Sabine Lange, Texas Commission on Environmental Quality
- Matthew Martin, Pfizer
- Andrew Rooney*, National Toxicology Program
- Holger Schünemann*, McMaster University
- Martyn Smith, University of California, Berkeley
- Amy Wang, National Toxicology Program
- Daniele Wikoff, ToxStrategies

*Member of Workshop Committee

Discussants

- David Dorman, North Carolina State University
- Maureen Gwinn, US Environmental Protection Agency
- Tala Henry, US Environmental Protection Agency
- Julian Higgins, University of Bristol
- Andrew Kraft, US Environmental Protection Agency
- Heather Lynch, Gradient Corporation
- Elizabeth Méndez, US Environmental Protection Agency
- Andrew Rooney*, National Toxicology Program
- Daniele Wikoff, ToxStrategies

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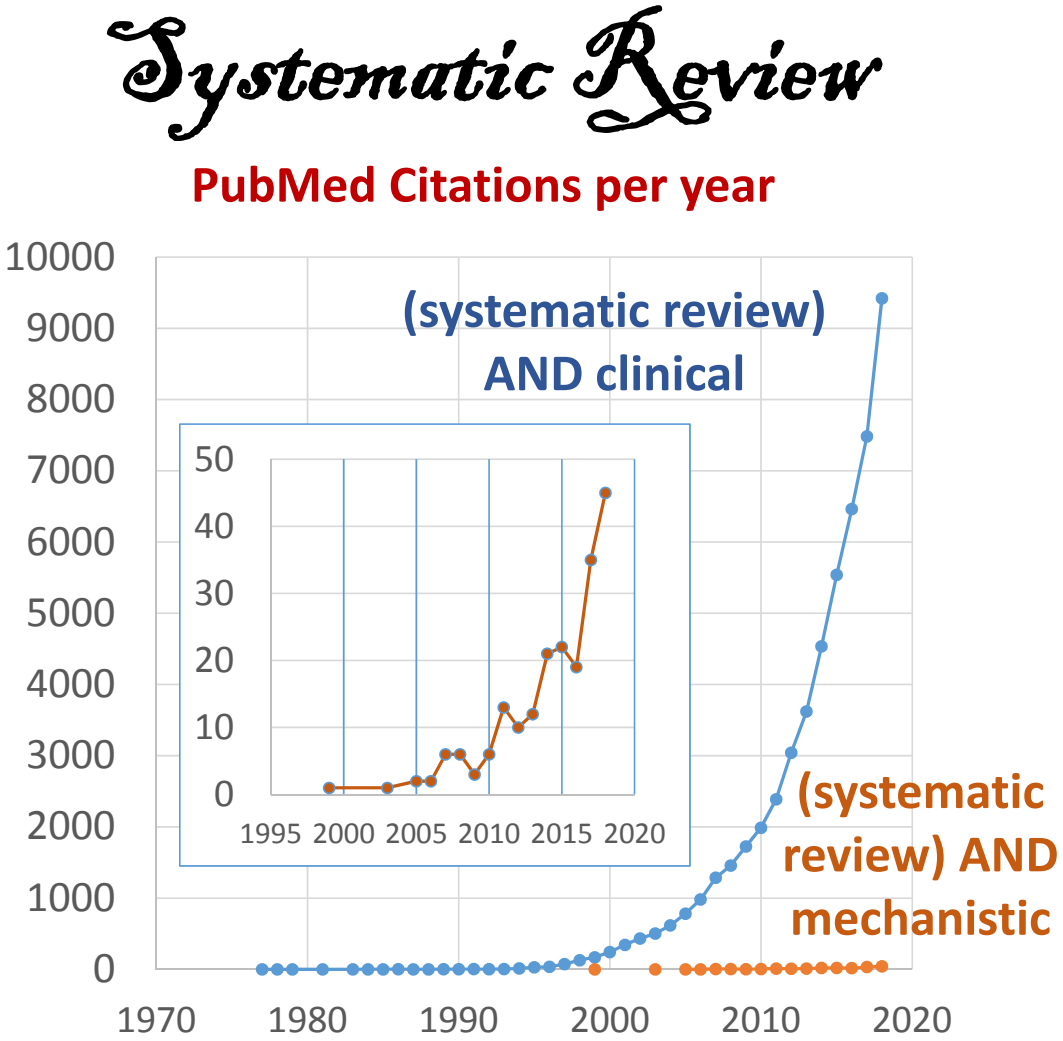
Systematic Review



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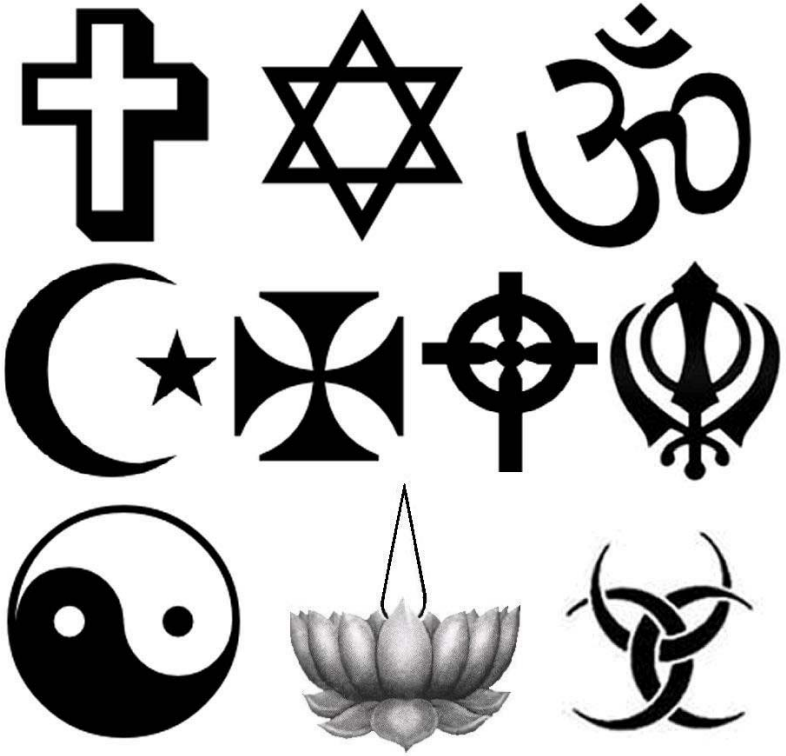
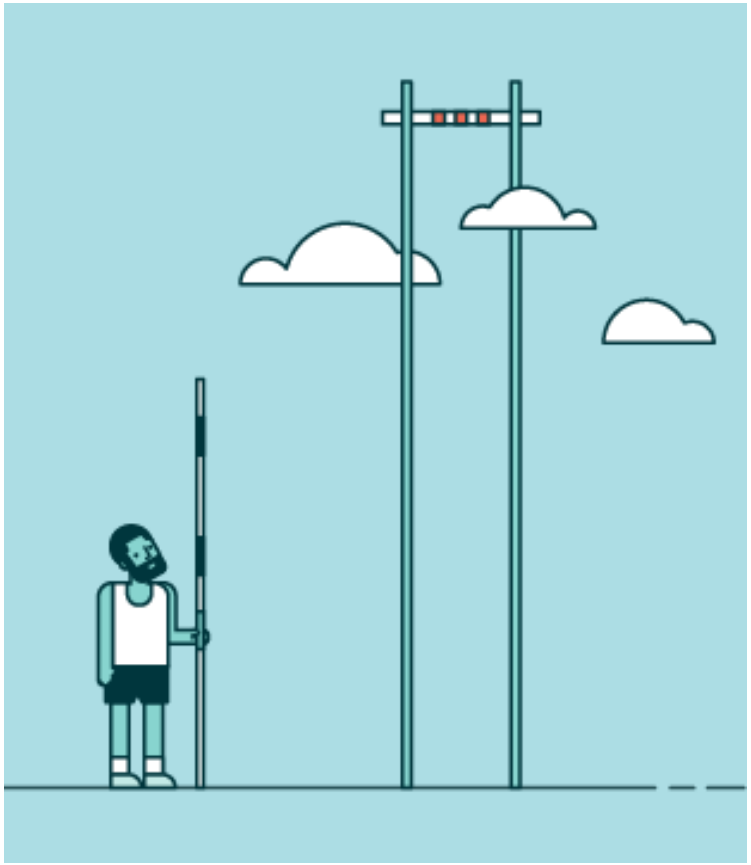
A shining city upon a hill…

VS



Systematic reviews… inside each “data stream”



Reducing “bias” or
reducing the database?

Systematic *vs* systematic review *vs* "a good faith effort to.

- "We will not be able to meet the statutory mandates…"
- Need to find balance between detailed documentation and evaluation of the voluminous data and the realities of the existing workflows and deadlines
- The researchers can do a much better job documenting their studies
- Many tools/protocols/frameworks exist for systematic review of the […] data
- "Methods need to be adapted to the context of the mechanistic evidence"
- A "phased approach" may be needed that considers "deadlines" & "purpose"

Workshop 2:

Evidence Integration in Chemical Assessments: Challenges Faced in Developing and Communicating Human Health Effect Conclusions

March 28-29, 2019

- **SESSION I. Lessons learned from the previous workshops on systematic review and evidence integration**
- **SESSION II. Best Practices in Evidence Integration**
- **SESSION III. Approaches for Using Mechanistic Data to Integrate Evidence from Animal and Human Studies**
- **SESSION IV. Systematic Review-Enabled Evidence Integration: Case Studies**
- **SESSION V. Practical Approaches to Expedited Evidence Integration**

Posters will be presented on these topics