



EMERGING SCIENCE FOR ENVIRONMENTAL HEALTH DECISIONS

AGENDA

Understanding Pathways to a Paradigm Shift in Toxicity Testing and Decision Making

NOVEMBER 20–21, 2017

THE NATIONAL ACADEMIES OF SCIENCES, ENGINEERING, AND MEDICINE

KECK CENTER, 500 FIFTH STREET NW, WASHINGTON, DC 20418

ROOM 100

THIS WORKSHOP WILL BE WEBCAST

ADVANCES IN THE ENVIRONMENTAL HEALTH

SCIENCES—from high-throughput cell-based *in vitro* studies to tissue chips to environment-wide association studies—have led to new approaches for understanding the toxicity of chemicals in humans. These new approaches are faster, less expensive, and potentially more comparable to real-life human exposures than legacy animal toxicity testing approaches. However, many questions remain about whether—and how—to make the paradigm shift to using these new data streams as the basis for research, policy, and regulatory decisions.

This workshop will bring together scientists, policymakers, risk assessors, and regulators to explore key factors that influence how new science is incorporated into the decision making process. Drawing on expertise from the social sciences on issues such as the type and quantity of data that is “sufficient” for decision making and trust in decisions influenced by new data streams, participants will investigate case studies that illustrate examples of how the environmental health community has used these new approaches for decision making.

MONDAY, NOVEMBER 20, 8:45 AM–5:00 PM

WELCOME AND CONTEXT

- 8:45 **Welcome & Opening Remarks**
- Keegan Sawyer, National Academies of Sciences, Engineering, and Medicine
 - Kim Boekelheide[†], Brown University
 - John Bucher[§], National Institute of Environmental Health Sciences
- 9:05 **Decision Contexts in a Changing Toxicology Paradigm—Gary Ginsberg^{†§}**, Connecticut Department of Public Health

[†] indicates a member of the Standing Committee on Use of Emerging Science for Environmental Health Decisions.

[§] Indicates a member of the Workshop Planning Committee for the Understanding Pathways to a Paradigm Shift in Toxicity Testing and Decision Making Workshop.

SESSION 1 THE SCIENCE AND PRACTICE OF DECISION MAKING UNDER SHIFTING PARADIGMS

Moderator: Kevin Elliott^{†§}, Michigan State University

- 9:15 **Standards of Proof, Presumptions, and Defaults: Tools for Thinking About Environmental Health Protections—Carl Cranor**, University of California, Riverside
- 10:00 **Building and Sustaining Trust in Decision Making Processes—Branden Johnson**, Decision Research
- 10:45 *Break*
- 11:00 **Decision Making Within Endocrine Disruptor Screening Program: A Conversation on Replacing the Uterotrophic Assay—Lynn Goldman**, The George Washington University, and **Stan Barone[§]**, U.S. Environmental Protection Agency
- 11:45 *Lunch* (continued)

**MONDAY, NOVEMBER 20, 8:45 AM–5:00 PM
(CONTINUED)**

**SESSION 2 CASE APPLICATIONS ON THE USE OF NEW DATA
IN DECISIONS**

Moderator: Jennifer McPartland[§], Environmental Defense Fund

- 1:00 Case Study: Towards Aquatic Monitoring of Emerging Contaminants—Tara Sabo-Attwood, University of Florida
- 1:20 Case Study: Product Development and Market Decisions—Meredith Williams, Department of Toxic Substances Control California
- 1:40 Panel Discussion
- Meredith Williams, Department of Toxic Substances Control California
 - Branden Johnson, Decision Research
 - Carl Cranor, University of California, Riverside
 - Kristi Pullen Fedinick^{†§}, Natural Resources Defense Council
 - Rick Becker, American Chemistry Council
 - Tara Sabo-Attwood, University of Florida
- 2:40 Overview of Breakout Activity—Patrick McMullen^{†§}, Scitovation
- 2:50 *Coffee and Organization Break*
- 3:05 Distilling and Identifying Key Questions and Common Themes: Breakout Groups—Water Monitoring; Product Development; Public Health Emergencies; Implementing New TSCA
- 4:15 Report Backs and Discussion
- Moderator:** Patrick McMullen^{†§}, Scitovation
- 5:00 Adjourn for the Day

Workshop Planning Committee

This workshop was organized by the following scholars/experts: **Stanley Barone**, Environmental Protection Agency; **John Bucher**, National Toxicology Program/National Institute of Environmental Health Sciences; **Kevin Elliott**, Michigan State University; **Kristi Pullen Fedinick**, Natural Resources Defense Council; **Gary Ginsberg**, Connecticut Department of Public Health; **Patrick McMullen**, Scitovation; **Jennifer McPartland**, Environmental Defense Fund; **Heather Patisaul**, North Carolina State University; **Melissa Perry**, George Washington University; **John Vandenberg**, Environmental Protection Agency.

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TUESDAY, NOVEMBER 21, 8:45 AM–12:30 PM

- 8:45 Welcome and Recap—John Vandenberg,[§] U.S. Environmental Protection Agency

**SESSION 3 MOTIVATING CHANGE AT THE INSTITUTIONAL
LEVEL**

Moderator: Kristi Pullen Fedinick^{†§}, Natural Resources Defense Council

- 9:00 Institutional Policy Changes and Growing Inequality in U.S. Health and Mortality—Mark Hayward, University of Texas, Austin
- 9:30 Experiences with Paradigm Change in U.S. Government Science and Regulatory Decision—James (“Jim”) Jones, Consumer Specialty Products Association
- 10:00 Case Study: Motivating Institutional Will to Change: ICCVAM Processes to Incorporate Data from Alternative Toxicity Testing Methods into Decisions About Classification, Labelling, and Risk Assessment—Anna Lowit, U.S. Environmental Protection Agency
- 10:20 *Break*
- 10:35 Experiences with Paradigm Change in European Union Science and Regulatory Decisions—Maurice Whelan, European Commission, Joint Research Centre (JRC), Ispra, Italy
- 11:05 Panel Discussion
- Moderator:** Gina Solomon[†], California Environmental Protection Agency
- James “Jim” Jones, Consumer Specialty Products Association
 - Anna Lowit, U.S. Environmental Protection Agency
 - Maurice Whelan, European Commission, Joint Research Centre (JRC), Ispra, Italy
 - John Bucher,[§] National Institute of Environmental Health Sciences
 - Mark Hayward, University of Texas, Austin
 - Jennifer McPartland[§], Environmental Defense Fund
- 12:00 Closing Remarks—Melissa Perry^{†§}, The George Washington University
- 12:30 Adjourn Workshop*

* Emerging Science for Environmental Health Decisions Committee Business Meeting 1:30pm–5pm. This meeting is open to Committee, Government Liaisons, and workshop participants.

For more information and to subscribe for updates, please visit
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Emerging Science meetings are free and open to the public.