Risk Assessment in the 21st Century (RISK21)

OUR MISSION
The committee's mission is to promote a transparent, purpose-driven, structured approach to risk assessment based on key principles, including problem formulation, tiered, integration of both hazard and exposure at each step, and fit for purpose.

ADVISORY BOARD AND ADVISORS

**RISK21 Science Advisory Board**
Dr. Jon Arnot (Arnot Research and Consulting)
Dr. Ammie Bachman (ExxonMobil Biomedical Sciences Inc.)
Dr. Rair Beck (American Chemistry Council)
Dr. Juliana Braz (Brazilian Health Regulatory Agency, ANVISA)
Dr. Sandrine Deglin (HESI)
Dr. Michelle Embry (HESI)
Dr. Judy La Kind (LaKind Associates)
Dr. Camila Moreira (Brazilian Health Regulatory Agency, ANVISA)
Dr. Angelo Moretto (University of Milan)
Dr. Justin Teeguarden (Pacific Northwest National Laboratory)
Dr. Claire Terry (Corteva Agriscience)
Dr. Marcelo Wolansky (University of Buenos Aires)
Dr. Doug Wolf (Syngenta)

**RISK21 Ad-Hoc Advisors**
Dr. Tara Barton-McClaren (Health Canada)
Dr. Patience Browne (Organization for Economic Cooperation and Development, OECD)
Dr. Zuzana Kloslova (European Chemicals Agency)
Dr. Gino Scarano (US Environmental Protection Agency)
Dr. Maria Trainer (Australian Pesticides and Veterinary Medicines Authority)
Dr. Maurice Whelan (European Commission, Joint Research Centre)
Dr. Angelika Zidek (Health Canada)

2019 COMMITTEE HIGHLIGHTS

**Participating Organizations**
8 government/regulatory agencies, 2 academic/research institutes, 3 consulting, 7 industry

**Scientific Meetings and Trainings**
2 trainings/courses (Brasilia and São Paulo, Brazil)

**Outreach**
9 presentations
- American Chemistry Society Annual Meeting (August 2019 in San Diego, California)
- Gordon Conference on Cellular and Molecular Mechanisms of Toxicity (Manchester, New Hampshire)
- SETAC North America Annual Meeting (November 2019 in Toronto, Canada)
- Webinar at Indiana University–Purdue University Indianapolis School of Public Health (April 2019 in Indianapolis, Indiana)
- Poster presentation on RISK21 at the NTP Converging on Cancer Workshop (April 2019 in Washington, DC)
- Presentation on “Prioritization of Chemicals in Canadian Drinking Water” at the Toxicology Forum Meeting on “Determining Relevant Low-Level Chemical Exposures for Safety Assessments of Consumer Products” (May 2019 in Brussels, Belgium)
- RISK21 Webinar on “Prioritization of Chemicals in Canadian Drinking Water” (May 2019)
- Webinar with Australian Pesticides and Veterinary Medicines Authority (APVMA) regarding RISK21 and potential participation in future activities/training (September 2019)
- Presentation on “Overview of RISK21 Principles” at the XXI Brazilian Congress of Toxicology workshop session on “Improving Toxicity Testing and Risk Assessment with RISK21” (October 2019 in Aguas de Lindoia, Brazil)

**Geographic Representation**
Argentina, Australia, Brazil, Canada, Finland, France, Italy, United States

HESI STAFF
Dr. Sandrine E. Deglin (sdeglin@hesiglobal.org)
Dr. Michelle R. Embry (membry@hesiglobal.org)
WORKING GROUPS

- **Problem Formulation.** A problem formulation subteam was formed in early 2018 to better integrate the concept of “problem formulation” to the RISK21 framework and further underscore the concept of “fit for purpose.” Work was initiated 4Q 2018 to build a conceptual-model tool that can be used to advance this work.

- **EcoRISK21.** This group is examining the application of the RISK21 principles to ecological risk assessment.

- **Brazil Pesticide Prioritization Work.** A contract was initiated in September 2019 to develop a database of information necessary to estimate pesticide exposure (and obtain parameters for exposure models) in Brazil. Pesticide use and application information will be extracted from the Brazilian Health Regulatory Agency (ANVISA) monographs and from Agrofit, Brazil’s pesticide registration tool, and pulled into an easily searchable, publicly accessible database. A project advisory team had its first call in September 2019 and will monitor and support the project, with an anticipated completed date of March 2020.

AREAS OF FOCUS FOR 2020

- The RISK21 Committee is holding the first Risk Assessment Summit on 18–19 February 2020 in Washington, DC. The goal of this meeting is to offer a platform for the risk assessment community of practice to share case studies, identify challenges, and leverage discussions to address gaps and needs in the field.

- The committee will also be represented at the 2020 SOT meeting through a session focused on RISK21.

- An exposure-focused subgroup will be formed with the aim to develop a strategic plan that links to ongoing RISK21 and other efforts.

STRATEGIC IMPACT AREAS

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<th>Enhanced Efficiency and Accuracy in Safety Assessment Practice</th>
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<td>The RISK21 committee is promoting problem-formulation-based, risk-based, transparent and fit-for-purpose risk assessment.</td>
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<th>Increasing the Audiences for Collaborative Safety Science</th>
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<td>The RISK21 community of practice appears to be growing internationally (e.g., posters presented at international conferences, training given in South America), demonstrating an encouraging uptake of the principles underpinning the framework.</td>
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<th>Development of Scientists Skilled in Translational Science</th>
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<td>RISK21 training programs have reached people worldwide via over 10 hands-on workshops in 7 countries around the world.</td>
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PARTICIPATING ORGANIZATIONS

**Government/Regulatory Agencies**

- Australian Pesticides and Veterinary Medicines Authority
- Brazilian Health Regulatory Agency (ANVISA)
- European Chemicals Agency
- European Commission, Joint Research Centre
- Health Canada
- Organization for Economic Cooperation and Development (OECD)
- Pacific Northwest National Laboratory
- US Environmental Protection Agency

**Academic/Research Institutes**

- University of Buenos Aires
- University of Milan

**Consulting**

- Arnot Research and Consulting
- LaKind Associates
- Summit Toxicology

**Industry**

- BASF
- Bayer
- Corteva Agriscience
- DuPont
- ExxonMobil Biomedical Sciences Inc.
- Syngenta
- Sumitomo Chemical