

NAME OF SPECIALTY SECTION Risk Assessment

## **ANNUAL REPORT: 2017-2018**

May 1, 2017 to April 30, 2018

### **I. Officers/Committees:**

Officers	<u>2016-2017</u>	<u>2017-2018</u>
President:	Sean M Hays	Elaina M Kenyon
Vice President:	Elaina M Kenyon	George M Woodall
Vice President-Elect:	George M Woodall	Gary D Minsavage
Secretary/Treasurer:	Daniele Staskal Wikoff	Kan Shao
Past President	Hugh A Barton	Sean M Hays
Councilors:	John Norman	Nathan R Pechacek
	Betina J Lew	Betina J Lew
PDA Representative:	Kausar Begam Riaz Ahmed	Cissy Li
GSLC Representative:	Sloane Kathryn Tilley	Paige Bommarito

### **II. Activities:**

**2018 SOT Annual Meeting Reception** was held in San Antonio, Texas on Tuesday, March 13, 2018. Approximately 200 people were in attendance. Dr. Kenyon called the meeting to order at 6:30 PM. Meeting Summary: Dr. Kenyon opened the business meeting with a welcome to all attendees following an initial networking period. She thanked the outgoing officers and welcomed the incoming officers. RASS members receiving SOT awards were recognized, including Linda Birnbaum (Arnold J Lehman Award), Roger O. McClellan (Distinguished Toxicology Scholar Award) and Anna B. Lowit (Enhancement of Animal Welfare Award).

George Woodall and Gary Minsavage presented the 2018 Award Winners (student/post doc and best paper) with plaques and award checks. Handouts were available on tables listing award winners and the top 10 best abstract and best paper selections were recognized during the awards presentation.

### **Awards:**

#### **2018 RASS Student/Postdoc Award Winners**

##### **Perry J. Gehring Best Postdoctoral Fellow Abstract Award**

Tara Raftery Catron, Advisor: Tamara L. Tal

US EPA, Research Triangle Park, NC, Exploring the Role of Host-Associated Microbiota as Mediators of Bisphenol Chemical Toxicity in Zebrafish.

##### **Perry J. Gehring Best Graduate Student Abstract Award**

Laura E. Ewing, Advisors: Igor Koturbash & Annie Lumen

University of Arkansas for Medical Sciences, Little Rock, AR  
Dose-Response Effects of Dietary Methionine Intake on Radiation-Induced Toxicity: An Experimental and Computational Study.

**Robert J. Rubin Student Travel Award\***

Jalissa Nguyen Wynder, Advisor: William Ricke

University of Wisconsin-Madison, Madison, WI; ILSI North America, Washington, DC;  
Evaluating the Applicability of Read-Across Tools and High-Throughput Screening Data for Food Relevant Chemicals.

\*Joint award with Mechanisms Specialty Section

**John Doull Award**

Samantha C. Faber, Advisor: Shaun D. McCullough

University of North Carolina at Chapel Hill, Chapel Hill, NC.

Diesel Exhaust Particles Downregulate PI3K/Akt/mTOR Signaling and Mitochondrial Bioenergetics in a Novel Organotypic Model of the Airway Microenvironment.

**Andersen Clewell Trainee Award\*\***

Yi-Hsien Cheng, Advisor: Zhoumeng Lin

Kansas State University, Manhattan, KS.

Probabilistic Risk Assessment of Gold Nanoparticles by Integrating In Vitro and In Vivo Toxicity with Physiologically-Based Pharmacokinetic Modeling.

\*\*Joint award with Biological Modeling Specialty Section

**2017 BEST ABSTRACT AWARD WINNERS**

**Best Abstract**

**Broad Application of a Probabilistic Dose-Response Framework to Improve Chemical Risk Assessment.**

W.A. Chiu<sup>1</sup>, Q. Ouyang<sup>1</sup>, C. Dalaijamts<sup>1</sup>, D. Axelrad<sup>2</sup>, C. Dockins<sup>2</sup>, and G. Paoli<sup>3</sup>.

<sup>1</sup>Texas A&M University, College Station, TX; <sup>2</sup>US EPA, Washington, DC; and <sup>3</sup>Risk Sciences International, Ottawa, ON, Canada.

**Top 10 Abstracts**

**A Tool for Systematic Integration of Traditional and New Approach Methods for Prioritizing Chemical Lists.**

R. Judson, A. Williams, C. Grulke, and R. Thomas.  
US EPA, Research Triangle Park, NC.

**Simulating Time Saved for Manual Screening of Literature for IRIS Assessments Using Text Analytics.** M. Cawley, A. Varghese, H. Hubbard, and C. Henning.  
ICF, Durham, NC. Sponsor: J. Wignall

**Developmental and Reproductive Toxicology: Risk-Based Reference Values.**

B. Gadagbui<sup>1</sup>, A. Rak<sup>2</sup>, A. Maier<sup>1</sup>, and M. Dourson<sup>1</sup>.

<sup>1</sup>Risk Science Center, University of Cincinnati, Cincinnati, OH; and <sup>2</sup>Noblis, Inc., Falls Church,

VA.

**Probabilistic Health Hazard Assessment of Cleaning Product Ingredients in All-Purpose Cleaners.**

D. Dinh<sup>1</sup>, Z. Wang<sup>1</sup>, and B.W. Brooks<sup>1,2</sup>.

<sup>1</sup>Baylor University, Waco, TX; and <sup>2</sup>Institute of Biomedical Studies, Waco, TX.

**Application of Quantitative Approaches to Assess Uncertainties in the Development of Toxicity Values: A Case Study Involving the Reference Dose (RfD) for 2,3,7,8-Tetrachlorodibenzo-p-Dioxin (TCDD).**

D. Wikoff<sup>1</sup>, P. Goodrum<sup>2</sup>, L. Haws<sup>3</sup>, and R. Budinsky<sup>4</sup>.

<sup>1</sup>ToxStrategies, Asheville, NC; <sup>2</sup>Integral, Fayetteville,

NY; <sup>3</sup>ToxStrategies, Austin, TX; and <sup>4</sup>The Dow Chemical Company, Midland, MI.

**The Future of Agrochemical Risk Assessment: Establishing a Platform for Early Estimation of Chronic Dietary Exposure for Agrochemicals.**

Z. Zhang, P. Geurs, and Z. Yan.

Dow AgroSciences, Indianapolis, IN.

**The Future of Agrochemical Risk Assessment: Framework for Conducting Chronic Risk Assessment with Enhanced Short-Term Toxicological Studies and Significantly Reduced Residue Trial Studies.**

Z. Yan<sup>1</sup>, K. Johnson<sup>2</sup>, C. Terry<sup>1</sup>, X. Wang<sup>1</sup>, L. Murphy<sup>2</sup>, P. Geurs<sup>1</sup>, Z. Zhang<sup>1</sup>, and R. Rasoulpour<sup>1</sup>.

<sup>1</sup>Dow AgroSciences, Indianapolis, IN; and <sup>2</sup>The Dow Chemical Company, Midland, MI.

**Application of Collaborative Analysis Methods to Address Human Health Risk Assessment Decisions.**

A. Maier, J. Patterson, and O. Ogbonmaya.

University of Cincinnati, Cincinnati, OH.

**A General Physiologically-Based Pharmacokinetic Model for Gold Nanoparticles of Different Sizes with Multiple Administration Routes in Rats.**

Y. Cheng<sup>1</sup>, J.E. Riviere<sup>1</sup>, N.A. Monteiro-Riviere<sup>2</sup>, W.G. Kreyling<sup>3</sup>, and Z. Lin<sup>1</sup>.

<sup>1</sup>Institute of Computational Comparative Medicine (ICCM), Department of Anatomy and Physiology, Kansas State University, Manhattan, KS; <sup>2</sup>Nanotechnology Innovation Center of Kansas State (NICKS), Department of Anatomy and Physiology, Kansas State University, Manhattan, KS; and <sup>3</sup>German Research Center for Environmental Health, Institute of Epidemiology <sup>2</sup>, Munich, Germany

**RASS Best Published Papers in Risk Assessment**

**Best Published Paper Advancing the Science of Risk Assessment Award (tie)**

Katherine A. Phillips, John F. Wambaugh, Christopher M. Grulke, Kathie L. Dionisioc, and Kristin K. Isaacs. High-throughput screening of chemicals as functional substitutes using

structure-based classification models. *Green Chem.*, 2017, 19, 1063

Julia E. Rager, Scott S. Auerbach, Grace A. Chappell, Elizabeth Martin, Chad M. Thompson, and Rebecca C. Fry. Benchmark dose modeling estimates of the concentrations of inorganic arsenic that induce changes to the neonatal transcriptome, proteome, and epigenome in a pregnancy cohort. *Chem. Res. Toxicol.*, published online on September 19, 2017.

### **Best Published Paper Demonstrating an Application of Risk Assessment Award**

Richard A. Becker, David A. Dreier, Mary K. Manibusan, Louis A. (Tony) Cox, Ted W. Simon, and James S. Bus. How well can carcinogenicity be predicted by high throughput “characteristics of carcinogens” mechanistic data? *Regulatory Toxicology and Pharmacology* 90 (2017) 185-196.

### **2018 SOT Annual Meeting Courses/Sessions:**

Sponsored 3 Symposia, 4 Workshops, 3 Roundtable, 1 Informational Session, 1 Regional Interest, 1 Education Career Development, 4 Continuing Education Courses

### **Newsletters (November 2017, March 2018)**

#### **Teleseminars:**

- Series summary
  - 4 in Fall (Sept – Dec) and 4 in Spring (Jan, Feb, April, May)
  - Average attendance: 60 lines
  - Diverse set of cutting-edge topics and speakers across all sectors
  - Recordings can be found at: <https://www.toxicology.org/groups/ss/RASS/downloads.asp>
- Noteworthy:
  - Continuing co-sponsorship with Mixtures Specialty Section
  - Co-sponsorship with Biological Modeling Specialty Section

September 13, 2017

#### **Mixing Hazardous Agents in a Mouse Model: Noise with Lead and Cadmium**

Krystin Carlson

PhD Candidate

University of Michigan

October 11, 2017

#### **A Source to Outcome Approach for Inhalation Risk Assessment**

Paul M. Hinderliter, PhD

Senior Research Scientist, Product Metabolism ADME

Syngenta Crop Protection Inc.

November 8, 2017

#### **Systematic Review: Concept and tool development with application in the Integrate Risk Information System (IRIS) assessment process**

Vickie Walker, PhD

National Institutes of Environmental Health Sciences

Michele M. Taylor, PhD

Integrated Risk Information System

National Center for Environmental Assessment (NCEA)

December 13, 2017

**Co-sponsored with the Biological Modeling Specialty Section (BMSS)**

**A Liver-Centric Multiscale Modeling Framework for Xenobiotics**

James Sluka, PhD

Biocomplexity Institute

Indiana University

January 10, 2018

**Assessing the Health Impact of Diverse Mixtures in the Environment**

Moiz Mumtaz, PhD, FATS

ATSDR/CDC

Peter McClure, PhD

Syracuse Research Corporation

February 14, 2018

**Exposure Assessment for Chemical and Non-chemical Exposures for Urban Epidemiology**

Jane E. Clougherty, MSc ScD

Drexel University Dornsife School of Public Health

Philadelphia, PA

April 11

**Use of the “Exposome” in the Convergence of Toxicology and Epidemiology: A Primer on – Omic Technologies for Achieving Health Impact**

Tania Carreón-Valencia, PhD

National Institute for Occupational Safety and Health (NIOSH)

May 9

**Overview of an Uncertainty Analysis Tool to Increase Transparency and Communication of Uncertainty in Chemical Risk Assessment**

Jennifer Foreman, PhD

Toxicology and Environmental Sciences Division

ExxonMobil Biomedical Sciences, Inc.

**Endowment Fund Details (March 2018):**

- John Doull Student Award Fund Net Assets: \$48,727
- Perry J. Gehring Risk Assessment Student Award Net Assets: \$50,629
- Robert J. Rubin Student Travel Award Fund (MSS) Net Assets: \$46,679
- Andersen-Clewell Trainee Award (BMSS) Net Assets: \$54,601

**White Papers:** None

Contributions to SOT website: The RASS website was updated several times during the year to provide current information for members. Newsletters, award winners, and photographs from 2017 meetings were posted. RASS webinars and recordings are posted to the website for each presentation.