

NAME OF SPECIALTY SECTION Risk Assessment

ANNUAL REPORT: 2018-2019

May 1, 2018 to April 30, 2019

I. Officers/Committees:

<u>Officers</u>	<u>2017-2018</u>	<u>2018-2019</u>
President:	Elaina M Kenyon	George M Woodall
Vice President:	George M Woodall	Gary D Minsavage
Vice President-Elect:	Gary D Minsavage	Barbara Wetmore
Secretary/Treasurer:	Kan Shao	Kan Shao
Past President	Sean M Hays	Elaina M Kenyon
Councilors:	Betina J Lew	Nathan R Pechacek
	Nathan R Pechacek	Anne Loccisano
PDA Representative:	Cissy Li	Jeanette Reyes
GSLC Representative:	Paige Bommarito	Paige Bommarito

Committees:

RASS Endowment Fund Steward Committee

- Anne Loccisano
- Theresa Onwordi Chiedu
- Laura Plunkett
- David Szabo

Volunteer Pool Coordinator: Alea Goodmanson

Student and Postdoc Award Committee

- Theresa Onwordi Chiedu
- Anne Loccisano
- Ankur Singhal
- Lisa Sweeney
- David Szabo
- Zemin Wang
- Barbara Wetmore (Chair)

RASS Best Abstract Awards Committee

- Sarah Campbell
- Jennifer Hsieh
- Kan Shao
- Barbara Wetmore (Chair)

Best Papers Awards Committees

- Demonstrating the Application of Risk Assessment
 - Sol Bobst
 - Marie Bourgeois
 - Neeraja Erraguntla
 - Fabian Grimm
 - Alison Harrill
 - Miao Li
 - Jessica Myers
 - Nathan Pechacek (Chair)
- Advancing the Science of Risk Assessment
 - Marie Bourgeois
 - Fabian Grimm
 - Miao Li
 - Gary Minsavage (Chair)
 - Jessica Myers
 - Kathryn Page

II. Activities:

2019 SOT Annual Meeting Reception was held in Baltimore, Maryland on Wednesday, March 13, beginning at 6:00 PM. Approximately 250 people were in attendance. Dr. Woodall called the meeting to order at 6:45 PM for the business meeting and awards presentation, allowing members to network beforehand. He then presented certificates of appreciation to the outgoing officers and welcomed the incoming officers. RASS members receiving SOT awards were recognized, including Suzanne Fitzpatrick (Enhancement of Animal Welfare Award), Yvonne Chang (Colgate-Palmolive Award for Student Research Training in Alternative Methods), Nitin Verma (Global Senior Scholar Exchange Program Scholar), and Mary Gulumian (SOT Endowment Fund/IUTOX Travel Award).

Dr. David Szabo, member of the RASS Endowment Fund Steward Committee, provided an update on the status of the RASS Endowment funds, the awards supported by the endowment funds, and encouraged members to continue to contribute to continue support for the next generation of toxicologists and risk assessors.

Gary Minsavage and Barbara Wetmore presented the 2019 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.

The meeting closed with a brief statement by Dr. Minsavage on the expectations for the coming year and continued networking among members.

Awards:

2019 RASS Student/Postdoc Award Winners

John Doull Award

Rance Nault, Advisor: Timothy R Zacharewski

Michigan State University, East Lansing, MI.

Application of toxicogenomics for the risk assessment of the food contaminant acetamide

Perry J. Gehring Best Postdoctoral Fellow Abstract Award

Miao Li, Advisor: Zhoumeng Lin.

Kansas State University, Manhattan, KS.

Integration of Food Animal Residue Avoidance Databank (FARAD) Empirical Methods for Drug Withdrawal Interval Determination with a Mechanistic Population-Based Interactive Physiologically Based Pharmacokinetic (iPBPK) Modeling Platform: Example for Flunixin Meglumine Administration

Perry J. Gehring Best Graduate Student Abstract Award

Axelle Marchand, Advisor: Pierre S. Haddad

Université de Montréal IRSPUM, Montreal, QC, Canada

Evaluating the Impact of Heat Stress on the Toxicokinetics of Volatile Solvents in Man Using PBPK Modeling

Robert J. Rubin Student Travel Award*

Robert Freeborn, Advisor: Cheryl Rockwell

Michigan State University, East Lansing, MI.

The synthetic food additive tBHQ impairs host-defense to influenza infection

*Joint award with Mechanisms Specialty Section

Andersen Clewell Trainee Award**

Wei-Chun Chou, Advisor: Zhoumeng Lin

Kansas State University, Manhattan, KS.

Bayesian Evaluation of Physiologically Based Pharmacokinetic (PBPK) Modeling for Perfluorooctanesulfonate (PFOS) to Characterize the Interspecies Uncertainty between Mice, Rats, Monkeys, and Humans

**Joint award with Biological Modeling Specialty Section

2018 BEST ABSTRACT AWARD WINNERS**Best Abstract****Retrospective and Prospective Case Studies to Accelerate the Pace of Chemical Risk Assessment.**

K. Paul Friedman¹, M. Gagne², T. Barton-Maclaren², J. Bucher³, R. Thomas¹, M. Rasenberg⁴, and T. Sobanski⁴.

¹US EPA/NCCT, Research Triangle Park, NC; ²Health Environments and Consumer Safety Branch, Health Canada, Ottawa, ON, Canada; ³NIEHS/NTP, Research Triangle Park, NC; and

⁴Computational Assessment Unit, European Chemicals Agency, Helsinki, Finland.

Top 10 Abstracts

FDA Assessment of Coronary Heart Disease Risk of Industrially-Produced Trans Fatty Acids in Partially Hydrogenated Oils.

J. Park, K. Koehler, C. Whiteside, E. Anderson, M. Honigfort, and A. Zajac.
US FDA, College Park, MD.

Use of a PBPK-Quantitative Adverse Outcome Pathway Model to Resolve the Species Specificity of Lung Carcinogens.

T. Hill III, M. Marikar, and R. Conolly.
US EPA, Research Triangle Park, NC.

Evaluating Potential Refinements to Existing Thresholds of Toxicological Concern Values for Environmentally Relevant Compounds.

M. D. Nelms^{1,2}, P. Pradeep^{1,2}, and G. Patlewicz².
¹ORISE, Oak Ridge, TN; and ²US EPA/NCCT, Durham, NC

The Extrapolation of a Safe Oral Dose from Lab Animals to Humans Differs by Agency.

J. A. Brickel. Burdock Group, Orlando, FL.

Cancer Risk Assessment for Agrochemicals: Are Non-cancer Endpoints Protective of Tumor Endpoints?

Z. Yan, Y. Li, and C. Terry. Corteva Agriscience, Indianapolis, IN.

A Novel Risk Assessment Model for Incorporating Co-exposures Provides Preliminary Guideline Values for Unregulated Chemicals.

E. M. Tanner¹, C. Bornehag², and C. Gennings¹.
¹Mount Sinai School of Medicine, New York, NY; and ²Karlstad University, Karlstad, Sweden

Adding Context to Tox21/ToxCast Data: Linking In Vitro Assays to Toxicity Outcomes

L. Karmaus¹, S. M. Bell¹, D. G. Allen¹, W. Casey², and N. C. Kleinstreuer³.

¹ILS, Research Triangle Park, NC; ²NIEHS, Research Triangle Park, NC; and

³NIEHS/NICEATM, Research Triangle Park, NC

The Utility of Informative Prior in Benchmark Dose Modeling for Animal Reduction.

K. Shao¹, W. A. Chiu², and A. Shapiro³.

¹Indiana University, Bloomington, IN; ²Texas A&M University, College Station, TX; and

³Independent Consultant, Durham, NC.

An Integrated Approach to Evaluate Common Mechanisms of Toxicity in Pesticides to Support Cumulative Risk Assessment. J. Leonard¹, M. Nelms¹, E. Craig², S. Dobreniecki², M. Perron², H. Pope-Varsalona², A. Lowit², and C. Tan².

¹Oak Ridge Institute for Science and Education, Oak Ridge, TN; and ²US EPA, Washington, DC

RASS 2018 Best Published Papers in Risk Assessment

Best Published Paper Advancing the Science of Risk Assessment Award

Kleinstreuer NC, Hoffmann S, Alépée N, Allen D, Ashikaga T, Casey W, Cluzel M,

Desprez B, Gellatly N, Göbel C, Kern PS, Klaric M, Kühnl J, Martinozzi-Teissier S, Mewes K,

Miyazawa M, Strickland J, van Vliet E, Zang Q, Petersohn D.

Non-animal methods to predict skin sensitization (II): an assessment of defined approaches.

Crit. Rev. Toxicol. 2018 48:359-374. <http://doi.org/10.1080/10408444.2018.1429386>.

Best Published Paper Demonstrating an Application of Risk Assessment Award

Zhang Q, Li J, Middleton A, Bhattacharya S, Conolly RB. Bridging the Data Gap From in vitro Toxicity Testing to Chemical Safety Assessment Through Computational Modeling. Front. Public Health. 2018 6:261. <http://doi.org/10.3389/fpubh.2018.00261>.

2019 SOT Annual Meeting Courses/Sessions

Sponsored 3 Symposia, 5 Workshops, 3 Roundtables, 1 Informational Session, 1 Education-Career Development Session, 4 Continuing Education Courses, and 1 Regional Interest Session

Endowment Fund Details (as of March 2019):

- John Doull Student Award Fund Net Assets: \$47,690
- Perry J. Gehring Risk Assessment Student Award Net Assets: \$49,025
- Robert J. Rubin Student Travel Award Fund (MSS) Net Assets: \$46,584
- Andersen-Clewell Trainee Award (BMSS) Net Assets: \$55,426

Newsletters (October 2018, February 2019)

Available online at <https://www.toxicology.org/groups/ss/RASS/newsletters.asp>

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
 - Co-sponsored webinar with the International Society for Exposure Science (ISES)

September 12, 2018:

The Key Characteristics Approach to Evaluating Mechanistic Data in Hazard Identification and Risk Assessment

Martyn Smith

School of Public Health, University of California, Berkeley CA

October 10, 2018

U.S. EPA Strategic Plan to Promote the Development and Implementation of Alternative Test Methods

Louis Scarano (Presented by Anna Lowit)

US Environmental Protection Agency, Office of Chemical Safety and Pollution Prevention, Washington, DC

November 14, 2018

A Mechanistic Approach for Source-to-Outcome Risk Assessment Across Human Health and Ecological Endpoints Using the Aggregate Exposure Pathway (AEP) and Adverse Outcome Pathway (AOP) Frameworks

David Hines

US Environmental Protection Agency, National Health and Environmental Effects Research Laboratory, Research Triangle Park, NC

December 12, 2018

In Vitro to in Vivo Extrapolation (IVIVE) to Support New Approach Methodologies (NAMs)-based Safety Assessment: A Tiered Approach with a Focus on the Consideration of Kinetics and Metabolism

Miyoung Yoon

ToxStrategies, Inc., Research Triangle Park, NC

January 9, 2019 – Student Presentations, Co-sponsored by Biological Modeling Specialty Section (BMSS)

Use of Chemometrics and Multivariate Statistical Analysis to Determine Toxic Constituents Within Various Crude Oils

Josh Salley

University of Louisiana at Monroe, School of Pharmacology, Dept. of Toxicology, Monroe, LA
-and-

Temporal Trends of Cumulative Risks from Six Phthalates in Biomonitoring Data

Jeanette M. Reyes

Oak Ridge Institute for Science and Education (ORISE) Research Participation Program, hosted at US Environmental Protection Agency, RTP, NC

February 13, 2019 – Co-sponsored with the International Society for Exposure Science (ISES)

Epidemiology and Risk Assessment—Bridging the Gap

Judy LaKind

President, LaKind Associates, LLC

Adjunct Associate Professor, Department of Epidemiology and Public Health

University of Maryland School of Medicine

-and-

Carol J. Burns, PhD

Burns Epidemiology Consulting, LLC

Sanford, MI

April 10, 2019

Causal Modeling with Applications in Clinical and Policy Studies

Sharon-Lise T. Normand, PhD

S. James Adelstein Professor of Health Care Policy

Harvard Medical School

Professor, Department of Biostatistics

Harvard T.H. Chan School of Public Health

Director, FDA Medical Device Epidemiology Network Methodology Center
-and-

Information-based Causal Modeling (IBCM) and Applications

Anthony Cox, PhD
President, Cox Associates
Denver, CO

May 9, 2019 – Jointly Sponsored Webinar with Mixtures Specialty Section (MixSS)

EuroMix: An assessment of mixture toxicity using in vitro analyses of liver steatosis to develop an adverse outcome pathway-based strategy

Prof. Alfonso Lampen, PhD
Head of the Department of Food Safety
German Federal Institute for Risk Assessment
Berlin, Germany

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 2018 meetings were posted. RASS webinars and recordings are posted to the website for each presentation. The RASS Executive Committee updated the Officer Roles & Responsibilities document located on the RASS Officers page prior to the officer elections held in late 2018.

Other Specialty Section 2018-2019 Activities:

- RASS and RSESS Jointly sponsored a mentoring lunch at the Annual Meeting on Wednesday, March 13.
- The RASS Executive Committee developed guidance for responding to requests for announcements, sponsorship, and/or endorsements coming from outside SOT and included those in the revised Officer Roles & Responsibilities document.