



# Risk Assessment Specialty Section

## of the Society of Toxicology



*Special thanks to Nathan Pechacek and Paige Bommarito for editing the RASS Newsletter.*

### President's Message

Greetings RASS Members,

I have been privileged to serve as RASS President this year. I am very grateful for the engaged and supportive Executive Committee and the volunteers who have helped us to accomplish much. However, we still have more to get done before my term runs out on May 1<sup>st</sup>.

This newsletter is timed to assist you in finalizing your plans for the upcoming annual meeting of SOT – in Baltimore this year. The annual meeting brings us all the chance to present what we have most recently discovered, learn from the accomplishments of others, recognize the worthy achievements of our colleagues and trainees, have a chance to reconnect with long-time friends, and perhaps do a bit of networking. RASS is well represented in the Program as primary endorser on 4 CE Courses and 5 Sessions, and as a secondary endorser on 3 CE Courses and 9 Sessions.

Jeanette Reyes and Paige Bommarito (RASS Postdoc and Student Representatives, respectively) have worked with the Regulatory and Safety Evaluation Specialty Section (RSESS) to coordinate a mentoring luncheon on the Wednesday of the 2019 SOT Annual Meeting (March 13). They and their Postdoc and Student counterparts from RSESS have been very successful in finding a balance of volunteer mentors from both RASS and RSESS. Thank you to all who have answered the call to serve as a mentor for this event.

The award selection committees have once again performed a phenomenal job. The Best Paper awards committee was led by current Vice President Gary Minsavage with assistance from Senior Councilor Nathan Pechacek, and volunteer Fabian Grimm who managed the coordination of the two committees.

Other volunteer members included the following:

- Miao Li
- Jessica Myers
- Daniele Wikoff
- Marie Bourgeois
- Kathryn Page
- Alison Harrill
- Neeraja Erraguntla
- Marie Bourgeois
- Jessica Myers
- Sol Bobst

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Trainee Awards and Best Abstract Awards selections were led by VP-Elect Barbara Wetmore with assistance from Junior Counselor Anne Loccisano and volunteer committee members:

- Theresa Onwordi Chiedu
- Ankur Singhal
- Lisa Sweeney
- David Szabo
- Zemin Wang
- Sarah Campbell
- Jennifer Hsieh
- Kan Shao

Speaking of awards, the Endowment Funds make our Student and Postdoc Awards possible. RASS is the beneficiary of the far-sighted investments in the future made by generous members who established the current funds. Our current Endowment Fund Stewards are Tami McMullin and Theresa Onwordi Chiedu, with former stewards Anne Loccisano and David Szabo working closely with them as liaison to the EC and consultant, respectively. More information regarding the Endowment Funds is presented elsewhere in this Newsletter.

Almost immediately after the annual meeting will come the call for session proposals for SOT 2020. RASS will be asked to review submissions requesting our endorsement. Prior to the official submission deadline, the RASS Executive Committee (EC) has traditionally offered an informal, “non-binding” review of proposals from Session Chairs hoping for RASS endorsement. RASS provides constructive comments for these “pre-submission” reviews, but we do not promise to endorse prior to our receiving the full slate of proposals submitted to SOT; there are simply too many and not all proposals seeking endorsement are presented for pre-submission review. Proposal review will be another opportunity for volunteers to assist the EC.

I continually appreciate the organizational legacy left to RASS by those who have preceded me as President and others who have served as EC officers. The current EC has been active in revisiting one of those legacies – the [Executive Committee Officer Roles and Responsibilities](#) document – which is being revised based on the experiences of the current members to more equitably distribute those responsibilities. One aspect being added to this document are guidelines for requests for sending notifications to the RASS membership, and requests for RASS endorsement and sponsorship for events outside SOT. This may be useful not only for future Executive Committees but also for members considering submitting these types of requests.

RASS has successfully been collaborating with many other Specialty Sections to mutual benefit. Risk assessment is an eclectic science which borrows expertise from many fields. As such, RASS has wide overlap with many other Specialty Sections. As noted earlier, we are collaborating with RSESS for a mentoring luncheon. Another prime example of this collaboration is seen in many of the Webinars scheduled this year and from recent years; see the list of webinars elsewhere in this Newsletter and on the RASS Website -- <https://www.toxicology.org/groups/ss/RASS/downloads.asp>. A HUGE thank you to Annie Jarabek for her indefatigable stewardship of this important RASS activity.

I look forward to seeing you all in Baltimore!

Best regards,  
George M. Woodall, Jr., PhD  
RASS President 2018-2019

## Election Results

Thank you everyone who volunteered to run for an officer position and for casting your ballot. Based on the results of the recent election for RASS officers, the incoming officers for 2018 - 2019 are:

**Vice President-Elect:** Laura Plunkett, PhD, DABT  
**Secretary-Treasurer:** Nathan Pechacek, MS, DABT  
**Councilor:** Fabian Grimm, PhD  
**Postdoc Representative:** Miao Li, PhD

## RASS Webinar Series

RASS Webinar Series. RASS webinars are held Fall – Spring, every 2<sup>nd</sup> Wednesday of each month. If you cannot participate in any of the live RASS webinars, links to the past webinar slides and recordings may be found on the RASS website.  
<http://www.toxicology.org/groups/ss/RASS/downloads.asp>

April 10, 2019

Information-based Casual Modeling (IBCM): Applications in Clinical and Environmental Epidemiology

Sharon-Lise Normand, PhD  
Harvard Medical School and School of Public Health  
Boston, MA

and

Anthony Cox, PhD  
Cox Associates  
Denver, CO

May 8, 2019

*Co-sponsored with the SOT MixSS*

**EuroMix: An Assessment of mixture toxicity using *in vitro* analyses of liver steatosis to develop an adverse outcome pathway**

Alfonso Lampen, PhD

German Federal Institute for Risk Assessment  
Berlin, Germany

Submit your topic and  
speaker suggestions for the  
2019-2020 season of the  
RASS Webinar Series by

May 31<sup>st</sup>, 2019

## 2019 Annual SOT Meeting RASS Highlights

### RASS Meeting/Reception

Wednesday, March 13, 6:00 PM to 7:30 PM  
Baltimore Hilton, Holiday 3

### RASS Mentoring Event (RSVP Required)

Wednesday, March 13, 12:00 PM to 1:15 PM  
CC Room 345

# **2019 SOT Annual Meeting RASS Endorsed Sessions**

\* Indicates those sessions where RASS is the primary endorser.

## **Sunday, March 10**

### **Handling Uncertainties in Evaluating Mixtures: What's the Difference between a "Similar" and a "Sufficiently Similar" Mixture?**

SR01: Continuing Education Course  
7:00 AM to 7:45 AM, CC Room 314

### **Publicly Available Exposure Tools to Inform the Toxic Substances Control Act**

SR02: Continuing Education Course  
7:00 AM to 7:45 AM, CC Room 316

### **Industrial Application of Computational Toxicology in the 21<sup>st</sup> Century**

AM06: Continuing Education Course  
8:15 AM to 12:00 PM, CC Ballroom II

### **\*Role of Toxicokinetics in Human Health Safety Assessments**

AM07: Continuing Education Course  
8:15 AM to 12:00 PM, CC Ballroom I

### **\*Applications and Review of Physiologically Based Pharmacokinetic Modeling for Regulatory Risk Assessment**

PM09: Continuing Education Course  
1:15 PM to 5:00 PM, CC Room 316

### **\*Conducting Systematic Review in Toxicology- Why, When, How?**

PM11: Continuing Education Course  
1:15 PM to 5:00 PM, CC Room 321

### **\*Current Dose-Response Modeling Strategies and Applications in Chemical Risk Assessment**

PM12: Continuing Education Course  
1:15 PM to 5:00 PM, CC Ballroom II

## **Monday, March 11**

### **\*Assessing Acute Health Risk: Potential Application of Next-Generation Toxicological Tools Symposium Session**

9:15 AM to 12:00 PM, CC Ballroom I

### **Electronic Waste: An Evolving Global Health Concern and Risk Assessment Challenge**

Informational Session  
12:10 PM to 1:30 PM, CC Room 309

### **\*A Herculean Switch? Rethinking Chemical Carcinogenicity Assessment**

Workshop Session  
1:45 PM to 4:30 PM, CC Room 314

## **Tuesday, March 12**

### **Predicting Metabolic Clearance Rates for Drug Leads and Environmental Chemical Risk Assessment**

Workshop Session  
8:00 AM to 10:45 AM, CC Room 309

### **\*Challenges and Opportunities Encountered with TSCA Reform: Working toward a Shared Vision for Product Safety**

Informational Session  
11:00 AM to 12:20 PM, CC Room 314

### **Science at the Nexus of Wildfire Smoke and Public Health**

Informational Session  
11:00 AM to 12:20 PM, CC Room 316

### **Integrated 'Omics Approaches to Toxicity Assessments**

Symposium Session  
1:00 PM to 2:30 PM, CC Room 316

## Wednesday, March 13

**Establishing Effective Alternatives for Acute Oral and Inhalation Systemic Toxicity Testing**  
Symposium Session  
8:00 AM to 10:45 AM, CC Ballroom IV

**\*The Necessity of Uncertainty: Quantifying Uncertainty for Regulatory Application of New Approach Methodologies**  
Roundtable Session  
11:00 AM to 12:20 PM, CC Room 314

**Order from Chaos: Pattern Recognition in Challenging Human Health Datasets**  
Workshop Session  
1:30 PM to 4:15 PM, CC Room 308

**Risk Assessment of Consumer Products and Articles: Critical Considerations and Case Studies for Characterizing and Quantifying Consumer-Relevant Exposures to Chemicals and Nanomaterials**

Workshop Session  
1:30 PM to 4:15 PM, CC Room 309

**A Multi-Stakeholder Dialogue on Using Proprietary Modeling Platforms to Support Risk Assessment and Regulatory Decisions**  
Roundtable Session  
4:30 PM to 5:50 PM, CC Room 314

## Thursday, March 14

**Nerve Agent and Pesticide Poisoning: Best Practice Methodologies for Assessing Long-Term Health Effects**  
Symposium Session  
8:30 AM to 11:15 AM, CC Room 309

**\*Potential Alternatives to Systematic Review: Evidence Maps and Scoping Reviews**  
Workshop Session  
8:30 AM to 11:15 AM, CC Room 310



*Incoming and Outgoing RASS Executive Committee Members at the 2018 SOT Annual Meeting. Pictured from left to right: Sean Hays, Betina Lew, Cissy Li, Kan Shao, Jeanette Reyes, Paige Bommarito, Nathan Pechacek, Elaina Kenyon, George Woodall, Gary Minsavage, and Anne Loccisano.*

## 2019 Student and Postdoc RASS Award Winners

### John Doull Award

**Rance Nault**, B. Bals<sup>2</sup>, F. Teymour<sup>2</sup>, M. Black<sup>3</sup>, M. Andersen<sup>3</sup>, S. Krishnan<sup>4</sup>, N. Kuravadi<sup>4</sup>, S. Kumar<sup>5</sup>, K. Kannan<sup>5</sup>, K. C. Jayachandra<sup>5</sup>, L. Alagappan<sup>5</sup>, B. D. Patel<sup>5</sup>, B. Gollapudi<sup>6</sup>, J. Klaunig<sup>7</sup>, T. Zacharewski<sup>1</sup>, and V. Bringi<sup>2</sup>. <sup>1</sup>Michigan State University, East Lansing, MI; <sup>2</sup>Michigan Biotechnology Institute, Lansing, MI; <sup>3</sup>Scitovation, Research Triangle Park, NC; <sup>4</sup>Syngene International, Bengaluru, India; <sup>5</sup>Eurofins Advinus, Bengaluru, India; <sup>6</sup>Exponent, Menlo Park, CA; and <sup>7</sup>Indiana University Bloomington, Bloomington, IN.

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

Abstract #2749 in Poster Session: Risk Assessment II

Wednesday, March 13, 9:15 AM to 10:45 AM

Advisor: Timothy R Zacharewski

### Perry Gehring Postdoc Award

**Miao Li<sup>1</sup>**, Y. Cheng<sup>1</sup>, J. Chittenden<sup>2</sup>, R. Baynes<sup>2</sup>, L. Tell<sup>3</sup>, J. Davis<sup>4</sup>, T. Vickroy<sup>5</sup>, J. Riviere<sup>1,2</sup>, and Z. Lin<sup>1</sup>. <sup>1</sup>Kansas State University, Manhattan, KS; <sup>2</sup>North Carolina State University, Raleigh, NC; <sup>3</sup>University of California Davis, Davis, CA; <sup>4</sup>Virginia-Maryland College of Veterinary Medicine, Blacksburg, VA; and <sup>5</sup>University of Florida, Gainesville, FL.

#### **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**

Abstract #1816 in Poster Session: Biological Modeling

Tuesday, March 12, 10:45 AM to 12:15 PM

Advisor: Zhoumeng Lin

### Perry Gehring Student Award

**Axelle Marchand<sup>1</sup>**, J. Ménard<sup>1</sup>, P. Brochu<sup>2</sup>, and S. Haddad<sup>1</sup>.

<sup>1</sup>Université de Montréal IRSPUM, Montreal, QC, Canada; and <sup>2</sup>Université de Montréal, Montreal, QC, Canada

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

Abstract 1829 in Poster Session: Biological Modeling

Tuesday, March 12, 10:45 AM to 12:15 PM

Advisors: Pierre S. Haddad



### Robert J. Rubin Student Travel Award

#### Robert Freeborn

Michigan State University, East Lansing, MI

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

Abstract #3247 in Platform Session: Immunotoxicity

Wednesday, March 13, 4:00 PM to 4:15 PM

Advisor: Cheryl Rockwell

2018 Perry Gehring Student Award winner Laura Ewing (right) with RASS Vice President, Gary Minsavage (left), at the 2018 SOT RASS Awards Ceremony.

## Andersen-Clewell Trainee Award

### Wei-Chun Chou

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

Abstract #1717 in Platform Session: SPC Highlights Emerging Scientists: Adverse Effects of Perfluorinated Alkyl Substances

Tuesday, March 12, 8:00 AM to 8:15 AM

Advisor: Zhoumeng Lin

## 2018 Best Abstract and Published Paper RASS Award Winners

### 2018 Best Abstract

#### Retrospective and Prospective Case Studies to Accelerate the Pace of Chemical Risk Assessment.

K. Paul Friedman<sup>1</sup>, M. Gagne<sup>2</sup>, T. Barton-Maclaren<sup>2</sup>, J. Bucher<sup>3</sup>, R. Thomas<sup>1</sup>, M. Rasenberg<sup>4</sup>, and T. Sobanski<sup>4</sup>.

<sup>1</sup>US EPA/NCCT, Research Triangle Park, NC; <sup>2</sup>Health Environments and Consumer Safety Branch, Health Canada, Ottawa, ON, Canada; <sup>3</sup>NIEHS/NTP, Research Triangle Park, NC; and <sup>4</sup>Computational Assessment Unit, European Chemicals Agency, Helsinki, Finland.

Abstract #1737; Poster #P113 (3/12; 10:45 AM to 12:15 PM)

### Top Ten 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.

Abstract #2646; Poster #P111 (3/13; 10:45 AM to 12:15 PM)

#### 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.  
Abstract #1824; Poster #205 (3/12; 10:45 AM to 12:15 PM)

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

M. D. Nelms<sup>1,2</sup>, P. Pradeep<sup>1,2</sup>, and G. Patlewicz<sup>2</sup>.  
<sup>1</sup>ORISE, Oak Ridge, TN; and <sup>2</sup>US EPA/NCCT, Durham, NC

Abstract #1782; Poster #P158 (3/12; 10:45 AM to 12:15 PM)

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

J. A. Brickel. Burdock Group, Orlando, FL.  
Abstract #2804; Poster #P308 (3/13; 9:15 AM to 10:45 AM)

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

Z. Yan, Y. Li, and C. Terry.

Corteva Agriscience, Indianapolis, IN.

Abstract #1918; Poster #P303 (3/12; 3:00 PM to 4:30 PM)

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

E. M. Tanner<sup>1</sup>, C. Bornehag<sup>2</sup>, and C. Gennings<sup>1</sup>.

<sup>1</sup>Mount Sinai School of Medicine, New York, NY; and <sup>2</sup>Karlstad University, Karlstad, Sweden

Abstract #3053; Poster #P522 (3/13; 3:00 PM to 4:30 PM)

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

L. Karmaus<sup>1</sup>, S. M. Bell<sup>1</sup>, D. G. Allen<sup>1</sup>, W. Casey<sup>2</sup>, and N. C. Kleinstreuer<sup>3</sup>.

<sup>1</sup>ILS, Research Triangle Park, NC; <sup>2</sup>NIEHS, Research

Triangle Park, NC; and <sup>3</sup>NIEHS/NICEATM, Research Triangle Park, NC  
Abstract #1745; Poster #P121 (3/12; 10:45 AM to 12:15 PM)

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

K. Shao<sup>1</sup>, W. A. Chiu<sup>2</sup>, and A. Shapiro<sup>3</sup>.

<sup>1</sup>Indiana University, Bloomington, IN; <sup>2</sup>Texas A&M University, College Station, TX; and <sup>3</sup>Independent Consultant, Durham, NC.

Abstract #2766; Poster #P252 (3/13; 9:15 AM to 10:45 AM)

## **An Integrated Approach to Evaluate Common Mechanisms of Toxicity in Pesticides to Support Cumulative Risk Assessment**

J. Leonard<sup>1</sup>, M. Nelms<sup>1</sup>, E. Craig<sup>2</sup>, S. Dobreniecki<sup>2</sup>, M. Perron<sup>2</sup>, H. Pope-Varsalona<sup>2</sup>, A. Lowit<sup>2</sup>, and C. Tan<sup>2</sup>. <sup>1</sup>Oak Ridge Institute for Science and Education, Oak Ridge, TN; and <sup>2</sup>US EPA, Washington, DC.

Abstract #2762; Poster #P248 (3/13; 9:15 AM to 10:45 AM)

## **2018 Best Published Paper Award Winners**

### **RASS 2018 Best Published Paper Advancing the Science of Risk Assessment Award**

Kleinstreuer NC, Hoffmann S, Alépée N, Allen D, Ashikaga T, Casey W, Clouet E, Cluzel M, Desprez B, Gellatly N, Göbel C, Kern PS, Klaric M, Kühnl J, Martinuzzi-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. doi.org/10.1080/10408444.2018.1429386.

### **RASS 2018 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. doi: 10.3389/fpubh.2018.00261.

## **RASS Endowments**

As one of the largest specialty sections at SOT, RASS has established four endowment funds to honor notable toxicologists that have made significant contributions to the risk assessment field. These funds provide stipends to graduate student and postdoc members who display excellency in the theory and practice of risk assessment.

**Your financial support to these funds is a great way to show your commitment to continuing the RASS legacy of developing outstanding toxicologists.**

Please consider supporting the endowment funds:

- **Perry J. Gehring Fund**
- **Robert J. Rubin Student Travel Fund**
- **John Doull Student Award Fund**
- **Andersen-Clewell Trainee Award Fund**

More information on each endowment funds can be found on the RASS website.

Donations can be made online or you can download the Donation form.

Online donations:

<https://www.aim-hq.com/netforumsot/eweb/DynamicPage.aspx?WebCode=AddDonation&Action=Add&Site=SOT>

Donation form:

[http://www.toxicology.org/endowment/docs/Endowment\\_Donor\\_form.pdf](http://www.toxicology.org/endowment/docs/Endowment_Donor_form.pdf)

We appreciate your support!

## **Volunteer Pool**

There are numerous opportunities for RASS members to get involved with RASS-related activities. Your help is greatly needed! If you would like to enter your name into the RASS Volunteer Pool, please email Alea Goodmanson ([aleagoodmanson@chevron.com](mailto:aleagoodmanson@chevron.com)). Additionally, if you have volunteered in the past and your contact information has changed, please reach out to Alea to update your information.

## RASS Officers 2018-2019

President	Vice President-Elect	Secretary/Treasurer	Councilors	
George Woodall 2018-2019	Barbara Wetmore 2018-2019	Kan Shao 2017-2019	Nathan Pechacek 2017-2019	Anne Loccisano 2018-2020



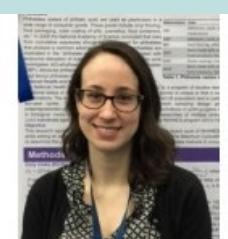
Vice President
Gary Minsavage
2018-2019

Past President
Elaina Kenyon
2018-2019



Postdoctoral Representative
Jeanette Reyes
2018-2019

Student Representative
Paige Bommarito
2017-2020



## Newly Elected RASS Officers 2019-2020

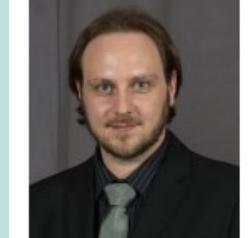
Vice President-Elect
Laura Plunkett
2019-2020



Secretary/Treasurer
Nathan Pechacek
2019-2021



Councilor
Fabian Grimm
2019-2021



Postdoctoral Representative
Miao Li
2019-2020

