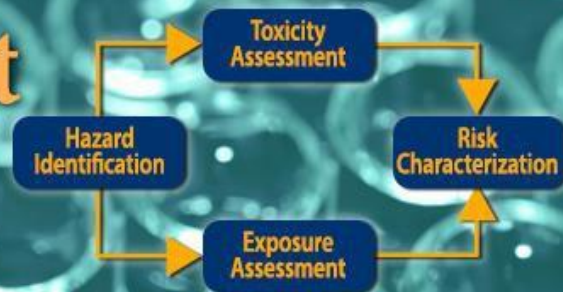


# Risk Assessment Specialty Section

of the Society of Toxicology



## President’s Message

Greetings RASS Members,

I am grateful for the opportunity to serve as the RASS President. The remarkable group of elected officers that form the current RASS Executive Committee are invaluable partners in effectively managing all the various RASS scientific activities, many of which are covered in separate articles in this current newsletter.

RASS is one of the largest and most active Specialty Sections in SOT. The success of RASS is built upon the legacy left by those who preceded us. The Officers tab on the RASS Website lists the names of those who have served on prior Executive Committees: <https://www.toxicology.org/groups/ss/RASS/officers.asp>. Several names are seen more than once in this list; some were student or postdoc representatives who later served in other roles, and some were elected as councilors or secretary-treasurers and later became part of a presidential chain. What is not shown, however, is how many of these folks also served as volunteers (many continue to volunteer). For those who may aspire to a lead role in RASS, I can think of no better way to start the process than to become visible through active participation as a volunteer.

I cannot overemphasize the role of volunteers in the success of RASS. These are the “doers” that help evaluate the proposals sent to RASS for endorsement ensuring they are scientifically meritorious; they review and judge the applications for trainee awards, best papers of the year awards, and best abstract awards for the SOT Annual Meeting; they serve on nominating committees; and volunteers provide many other services that go beyond the ability of what the Executive Committee can do on its own. Let me also acknowledge the volunteer who keeps track of our volunteers – Alea Goodmanson. If you have volunteered in the past and want to continue to be on the list, please send her an update of your contact information – too often calls for volunteers result in bounce-backs from inactive email addresses. Endowment Funds make our Student and Postdoc Awards possible. RASS is

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

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## **President's Message (continued)**

the beneficiary of the far-sighted investments in the future made by generous Members. The Endowment Fund Board has requested we name Stewards for our endowment funds to continue the success of these funds and work toward a self-sustainable status. Tami McMullin and Theresa Onwordi have agreed to take on the role of Endowment Fund Stewards. Past Stewards Anne Loccisano and David Szabo have also agreed to assist in advisory roles to ensure continuity in those efforts.

RASS has successfully been collaborating with many other Specialty Sections to mutual benefit. Risk assessment is an eclectic science which necessarily borrows expertise from many fields. As such, RASS has wide overlap with many other Specialty Sections. A 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>.

Another area ripe for collaboration is in mentoring. The SOT Career Resource and Development (CRAD) Committee has been supporting mentoring activities within the Specialty Sections for years, and at the 2015 SOT Meeting in San Diego, RASS held its first Mentoring luncheon supported in part by CRAD. In later annual meetings, we noted some conflicts for our trainees and mentors where other events were similarly scheduled. Paige Bommarito and Jeanette Reyes (RASS Student and Postdoc Representatives, respectively) are working with the Regulatory and Safety Evaluation Specialty Section (RSESS) to coordinate mentoring events for the 2019 SOT Annual Meeting. The plan is to alternate who leads the event at the annual meeting, thereby sharing resources and avoiding future schedule conflicts. We will also be looking for volunteers to help with these efforts as planning for the 2019 SOT Annual Meeting begins in earnest.

Let me also mention another group for your attention related to collaboration and coordination. This is the Specialty Section Collaboration and Communication Group (SS-CCG). The name is a mouthful and the SS-CCG is looking to perhaps change its moniker but that is secondary to its purpose. Please take a moment or two to see the description of the group and its mission at the top of the listing of Specialty Sections on the SOT Web Page: <https://www.toxicology.org/groups/ss/ss.asp>. I was personally challenged when proposing an SOT session a few years back with broad appeal across multiple groups; however, the session was not a prime interest for any Specialty Section, Special Interest Group, or other endorsing component of SOT. Obviously, I was not alone and recognizing that important issues might go unaddressed was one of the reasons to call this group into existence. I served on this group from 2016-2018; Ed Ohanion and I were requested to stay on as Ex-Officio members for an additional year. Please consider the SS-CCG for issues that may not fit any single group within SOT (including session endorsements) and keep your eye out for future announcements from this group.

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

## 2018 RASS Officer Nominations

RASS is one of the largest of the SOT specialty sections. Our members have a broad spectrum of scientific influence and participate in many of the most important decisions for applying toxicology for the greater good. This standing is and will continue to be only as strong as the RASS leadership. If you or someone you know would be interested in helping direct RASS's continuing presence in the field, then there are officer opportunities for which you may be a terrific fit. There are four upcoming RASS officer vacancies for which nominations are being received: Vice President-Elect, Secretary-Treasurer, Councilor, and Postdoctoral Representative. This year's RASS officer nominations committee is headed by Elaina M. Kenyon ([Kenyon.Elaina@epa.gov](mailto:Kenyon.Elaina@epa.gov)).

Please submit your nomination of yourself or a colleague to one of these committee members by November 30, 2018.

## 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>

### September 12, 2018

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

Martyn Smith, PhD

School of Public Health, Univ. California, Berkeley, CA

### October 10, 2018

*Carrying out the Strategic Plan for the Use and Development of Alternative Test Methods and Strategies Under the 2016 Amendments of TSCA*

Louis (Gino) Scarano, PhD

US EPA

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 EPA

Research Triangle Park, NC

### December 12, 2018

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

*In vitro to in vivo extrapolation (IVIVE) to support new approach methods (NAMs)-based safety assessment – A tiered approach with a focus on the consideration of kinetics and metabolism*

MiYoung Yoon, PhD

The Center of Excellence for 21<sup>st</sup> Century Toxicology  
ToxStrategies, Inc

## Trainee Spotlight

We are spotlighting two of the 2018 Annual Meeting RASS award recipients as they describe the current state of their career and aspirations for next steps. If you would like to be the next trainee in the spotlight, please send Nathan Pechacek ([Nathan.Pechacek@ecolab.com](mailto:Nathan.Pechacek@ecolab.com)) an email. We will be analyzing the candidates and two will be in this section in the next issue.

We are looking forward to hearing from you!

### **Dr. Tara R. Catron**

*Perry J. Gehring Postdoctoral Risk Assessment Award.*

Dr. Catron is currently an Ecotoxicologist at BASF Corporation – Agricultural Solutions in Research Triangle Park, NC. In this role, she is responsible for conducting ecological risk assessments and providing support for agricultural product registrations. Dr. Catron received a PhD in Environmental Health Sciences from the University of South Carolina under the advisement of David Volz, where her dissertation research focused on developing and optimizing a high-content screening assay in zebrafish for identification and prioritization of potential developmental neurotoxicants. She then completed a postdoctoral fellowship at Duke University followed by a second postdoctoral fellowship at the U.S. Environmental Protection Agency's (EPA) Office of Research and Development in Durham, NC.

At the EPA, Dr. Catron studied how host-associated microbial communities interact with Bisphenol A (BPA) and four structurally similar BPA alternatives to influence toxicity outcomes in zebrafish. Zebrafish are an alternative animal model well-suited for developmental toxicity studies because the organism undergoes rapid, external development and can be directly exposed to xenobiotics. Zebrafish have recently become an established model for studying microbiome interactions. Similar to humans, they contain complex resident microbial communities. Straightforward established methods exist to generate microbe-free axenic or colonized zebrafish, which can then be used simultaneously with various toxicity assays to explore microbiota interactions with environmental chemicals. Dr. Catron's research illuminated an inverse relationship between host developmental toxicity and disruption of zebrafish-associated microbes, suggesting that xenobiotic exposures that are better tolerated by the host may be more likely to perturb the community structure of host-associated microbes by, in part, selecting for bacterial taxa that are putatively capable of chemical efflux or metabolism. This novel finding has important implications for hazard identification as it will help us better understand whether host-associated microbiota should be considered as a modifying factor for potential health outcomes related to environmental chemical exposure. Dr. Catron was grateful to be the recipient of the 2018 Perry J. Gehring Postdoctoral Risk Assessment Award for her research efforts and is thankful for the mentorship and support of her advisor, Dr. Tamara Tal, who encouraged her to apply for the award. Dr. Catron's EPA research has also been recognized by the North Carolina SOT Chapter, where she was the recipient of the highly competitive President's Award for Research



*RASS Vice President, Gary Minsavage, and Tara Catron at the 2018 SOT RASS Awards Ceremony*



Competition, and the North Carolina Genetics and Environmental Mutagenesis Society (Fall 2017 Best Presentation Award).

Dr. Catron became involved in the SOT community as a graduate student. Since that time, she has attended many SOT meetings and has thoroughly enjoyed meeting and interacting with scientists of all levels. She continuously looks forward to the stimulating scientific program and discussions that occur every year. Dr. Catron is very appreciative of her wonderful training experiences, excellent graduate and postdoctoral advisors, and the networking opportunities that were available to her through SOT, such as the Mentor Match and Chat with an Expert programs. Dr. Catron also enjoys mentoring undergraduate students and has previously participated in the SOT 2016 Undergraduate Mentoring “Networking for the Next Generation” Event as well as other local North Carolina STEM outreach events for K-12 students. She looks forward to continuing her career in risk assessment and providing others with the same resources that have helped her in her scientific career.

### ***Dr. Yi-Hsien Cheng***

#### ***Anderson-Clewell Trainee Award***

I am currently a postdoctoral researcher at the Institute of Computational Comparative Medicine (ICCM) at Kansas State University since December 2016, advised by Drs. Zhoumeng Lin and Jim Riviere, where I am implementing physiologically based pharmacokinetic (PBPK) modeling for nanoparticles (NPs) in healthy and tumor-bearing animals to gain insights into the effects of NP physicochemical properties on tissue/tumor distribution and potential toxicity. PBPK modeling for tumor-bearing animals and subsequent analyses contribute greatly to optimize NP-based anticancer drug design with higher tumor delivery efficiency and therapeutic index. I received my PhD in Bioenvironmental Systems Engineering from National Taiwan University with Dr. Chung-Min Liao, where I was trained to apply mathematical modeling to describe the external and internal dosimetry of chemicals and link them with biological modeling to quantify potential toxicity and/or risk. This useful approach can be implicated to other areas, including occupational and public health, as well as epidemiology. I really appreciate the training I received from Dr. Chung-Min Liao, which led me to the current postdoctoral position.

Even though chemical or NP risk assessment isn't foreign to me, this was my first time attending the SOT Annual Meeting and the RASS reception, where I was the recipient of the 2018 Andersen-Clewell Trainee award. The award was a great honor in the risk assessment field and will definitely help propel me into the field. As an introverted person, I appreciated my postdoctoral mentor, Dr. Zhoumeng Lin, for encouraging me to apply for the travel awards offered by RASS and BMSS. I was also grateful that I had a chance to chair a poster platform and gain experience in collaborating with other chairpersons, who are senior scientists, and get to know people in my research areas better. I was excited to finally have the chance to meet those extraordinary



*RASS Vice President, Gary Minsavage, and Yi-Hsien Cheng at the 2018 RASS Reception.*

scientists in person rather than just reading their published research. I appreciated that everyone was friendly and willing to share their own experiences and provide mentors.

My advice for students and trainees involved or interested in the biological modeling and risk assessment: be passionate about your research, be curious and open-minded to fields that you are not familiar with, and dare to challenge yourself and walk out of your own comfort zone. For future first-time SOT attendees, be sure to participate in the specialty sections and regional chapters, be sure to check out studies you are interested in, be open to others and get your name out there by introducing yourself and your research and by volunteering (e.g., as student/postdoc representative or chairing a platform). Most importantly, try to identify mentors that could guide you at academic performances as well as career paths.

## **RASS Awards**

Nominate yourself or a well deserving Toxicologist for the awards:

Please Contact: [RASS](mailto:SOT_RASS_Awards@gmail.com) (SOT\_RASS\_Awards@gmail.com) to apply for one of the following awards:

- **Best Overall Abstract Award**
- **Perry J. Gehring Best Graduate Student Abstract Risk Assessment Endowment Award**
- **Perry J. Gehring Best Postdoctoral Fellow Abstract Risk Assessment Endowment Award**
- **Robert J. Rubin Student Risk Assessment SS Travel Award**
- **John Doull Risk Assessment Endowment Award**
- **Andersen-Clewell Trainee Award**
- **Best Published Paper Advancing the Science of Risk Assessment Award**
- **Risk Assessment SS Trainee Award**

**The deadline for application is December 31<sup>st</sup>!**  
**Application details can be found [here](#)**



*2018 Best Paper Demonstrating an Application of Risk Assessment Award co-authors, Jim Bus and Ted Simon, with RASS President, George Woodall.*



*2018 Best Published Paper Advancing the Science of Risk Assessment author, Julia Rager, with RASS President, George Woodall.*

## **RASS Financial Status:**

*(as of August, 2018)*

### **Dues-paying members:** 765

Student: 46 (6 international members)

Postdoc: 29 (8 international members)

### **RASS General Fund:**

Net assets: \$26,058

### **John Doull Endowment Fund:**

Net Assets: \$48,846

### **Perry J. Gehring Endowment Fund:**

Net Assets: \$50,752

### **Robert J. Rubin Endowment Fund:**

Net Assets: \$47,796

### **Andersen-Clewell Endowment Fund:**

Net Assets: \$54,735

### **Attention Members:**

We encourage our members to contribute to our endowment funds. Our endowment funds provide stipends to graduate student and postdoc members who display excellency in Risk Assessment. We are currently striving to raise all of our endowment funds to \$50,000. Some funds, such as the Andersen-Clewell Endowment Fund, are thriving and have already met this goal. However, there is still work to do for several funds, including the John Doull Endowment Fund and the Robert J. Rubin Endowment Fund. Please help us meet this goal and continue to support the next generation of toxicologists.

#### **Contributing is easy:**

<http://www.toxicology.org/endowment/contribute/donate.asp>

*Visit the SOT Endowment website to see current contributors and learn more about the endowments.*

## **Endowment Funds Stewards**

The RASS officers would like to introduce the Endowment Fund Steward committee: Teresa Onwordi and Tami McMullin. This committee is developing a strategy to meet the goal of raising all RASS's endowment funds to the \$50,000 level desired by SOT for recognition as permanent funds. RASS has four endowments funds supporting awards to students and postdocs - John Doull Endowment Fund, Perry J. Gehring Endowment Fund, Robert J. Ruben Endowment Fund, and the Andersen-Clewell Endowment Fund. See further information above in report on the RASS financial status.

## **Volunteer Pool**

There are numerous opportunities for RASS members to get involved with RASS-related activities. The Fall and Winter are all busy times of the RASS year, as the canvassing and judging of best papers are moving into full swing. 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)).

## Risk Assessment Links and Resources

Below are some links to Government programs, reviews, and upcoming events that may be of interest to those in the risk assessment community:

- EPA IRIS program, What's New: <http://www.epa.gov/iris/recent.htm>
- EPA OPPT TSCA Work Plan Chemicals: <https://www.epa.gov/assessing-and-managing-chemicals-under-tsca/tsca-work-plan-chemicals>
- EPA Environmental Justice: <http://www.epa.gov/environmentaljustice/>
- NIEHS/NTP/OHAT Systematic Review: <https://ntp.niehs.nih.gov/pubhealth/hat/review/index-2.html>
- ATSDR Toxicological Profiles: <http://www.atsdr.cdc.gov/toxprofiles/index.asp>
- NIOSH What's New: <http://www.cdc.gov/niosh/whatsnew/default.html>
- National Academies, Review of EPA's draft paper State of the Science on Non-monotonic Dose Response: <https://www.nap.edu/catalog/18608/review-of-the-environmental-protection-agencys-state-of-the-science-evaluation-of-nonmonotonic-dose-response-relationships-as-they-apply-to-endocrine-disruptors>
- National Academies, Review of the IRIS Process: <https://www.nap.edu/catalog/18764/review-of-epas-integrated-risk-information-system-iris-process>
- SOT Calendar of events: <https://www.toxicology.org/events/calendar/events.asp>

### RASS Officers

#### President

George Woodall



#### Vice President-Elect

Barbara Wetmore



#### Secretary/Treasurer

Kan Shao



#### Councilors

Nathan Pechacek



Anne Loccisano



#### Vice President

Gary Minsavage



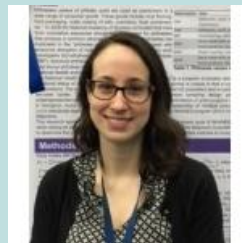
#### Past President

Elaina Kenyon



#### Postdoctoral Representative

Jeanette Reyes



#### Student Representative

Paige Bommarito

