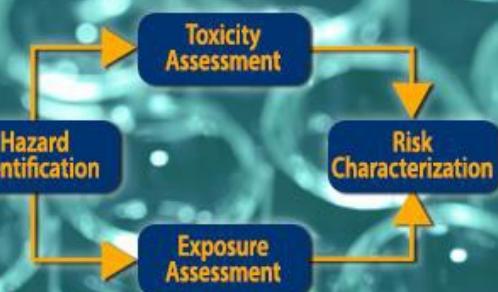




Risk Assessment Specialty Section

of the Society of Toxicology



Special thanks to Anne Loccisano, Nathan Pechacek, and Paige Bommarito for editing the RASS Newsletter.

President's Message

Dear SOT RASS Colleagues,

Based on inspiration from a number of you, this is the year of RASS experiments. The RASS Executive Committee (EC) and volunteers have had fun over the past few months brainstorming, experimenting, and reimagining how we provide great offerings for all of you. Here are a few of the RASS experiments and projects for which you'll be seeing some early results soon.

- **Newsletter Refresh:** Anne Loccisano (Senior Councilor) and Nathan Pechacek (Secretary/Treasurer) led an initiative to give the Newsletter a crisper look.
- **LinkedIn Rollout:** Miao Li (Postdoctoral Rep) opened a RASS LinkedIn account which will be an additional means of communication to all of you. Please check out LinkedIn page at: <https://www.linkedin.com/in/sotrass/>
- **Mentoring Value:** George Woodall (Past-President), Laura Plunkett (Vice President-elect), and Paige Bommarito (Student Rep) continue to progress collaborative mentoring initiatives for RASS Trainees.
- **Endowment Importance:** David Szabo (Endowment Fund Steward) and team identified a creative way to talk about the Endowment Fund process and status and to highlight Fund importance for Trainees.
- **Risk Assessment Syllabus:** Fabian Grimm (Councilor) and team have brainstormed to develop a novel RASS Risk Assessment Syllabus training session.
- **Webinar Collaborations:** Annie Jarabek (RASS Webinar Coordinator) pulled together another highly valuable RASS Webinar Series, with several cross-specialty section webinars.
- **Award Process:** The EC further evolved the Awards review process in order to efficiently identify the most outstanding work in risk assessment.
- **Sharing Ideas:** Barbara Wetmore (Vice President) will work to leverage RASS ideas objectives and ideas with the Specialty Section Collaboration and Communication Group (SS-CCG).

We've had fun thinking about what we hope will add even more value to RASS members. We recognize the exceptional talent and the many creative ideas within the wider RASS community. The EC is interested to hear about how you might be interested and able to help RASS initiatives and what experiments you'd like to propose. Please send us a note at SOTRASSAWARDS@gmail.com or send us a note on our LinkedIn page (<https://www.linkedin.com/in/sotrass/>) to let us know how you can help and/or what experiment you'd like us to try.

Thank you for the inspiration and we look forward to other ideas you may have!

Best regards,
Gary Minsavage, PhD, DABT, MBA
RASS President 2019-2020

2019 RASS Officer Nominations

RASS is one of the largest of the SOT specialty sections. Our members have a broad spectrum of scientific experience and 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. Serving as an officer presents a great opportunity to get involved in our specialty sections and SOT, and most importantly, serving on the Executive Committee is fun!

There are four upcoming RASS officer vacancies for which nominations are being received: Vice President-Elect, Councilor, Postdoctoral Representative, and Graduate Student Representative. This year's RASS officer nominations committee is headed by George Woodall (woodallg@gmail.com).

Please submit your nomination of yourself or a colleague to Dr. Woodall by November 30, 2019.

RASS Webinar Series

RASS webinars are held from Fall through Spring, generally on the 2nd Wednesday of each month. If you cannot participate in any of the live RASS webinars, links to the past webinar slides and recordings are available on the RASS website: <https://www.toxicology.org/groups/ss/RASS/downloads.asp>

September 11, 2019

Co-sponsored with the Mixtures Specialty Section (MixSS)

A Novel Empirical Strategy using Human Biomonitoring Data to Estimate Regulatory Guideline Values

Eva Tanner, PhD and Chris Gennings, PhD

Department of Environmental Medicine and Public Health, Icahn School of Medicine at Mount Sinai
New York, NY

October 9, 2019

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

Comparison of Various Approaches to AOP Quantification

Frederic Bois, PharmD, PhD

Simcyp Division, Certara UK Limited
Sheffield, UK



Eva Tanner



Chris Gennings



Frederic Bois

November 13, 2019

Chemical Carcinogenicity Revisited in Three Parts

Part 1: A Unified Theory of Carcinogenicity based on Contemporary Knowledge

Penelope Fenner-Crisp, PhD, DABT

Independent Consultant
North Garden, VA

Part 2: Current Knowledge of Carcinogenesis Shows that Categorization as a Carcinogen or Non-Carcinogen is not Scientifically Credible

Rita Schoeny, PhD

Rita Schoeny LLC
Washington, DC

Part 3: Risk Assessment of Carcinogenic Potential Based on the Current State of Knowledge of Carcinogenesis in Humans

Samuel Cohen, MD, PhD

Havlik-Wall Professor of Oncology
University of Nebraska Medical Center
Omaha, NE



Penelope Fenner-Crisp



Rita Schoeny



Sam Cohen

December 11, 2019

Dose-Response Modeling for Risk Assessment—BMDS 3.2 and Bayesian Model Averaging

Allen Davis, MSPH

USEPA NCEA
Cincinnati, OH

Jeff Gift, PhD

USEPA NCEA
RTP, NC

Matt Wheeler, PhD

NIOSH
Cincinnati, OH



Allen Davis



Jeff Gift



Matt Wheeler

Trainee Spotlight

We are spotlighting three trainee members of RASS 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 Anne Loccisano (aoccisano@exponent.com) an email.

We are looking forward to hearing from you!



Paige Bommarito, University of North Carolina at Chapel Hill
RASS Graduate Student Representative

1. Why did you choose to study/pursue research in the field of toxicology/RA?

I would actually describe myself as an epidemiologist with a part-time gig in toxicology. Going into graduate school, I really struggled with which path to take, since I felt that both approaches were needed in order to make the best possible judgement about environmental exposures. Ultimately, I pursued both! I felt that it was important, as an environmental and molecular epidemiologist, to understand how data are collected and analyzed in *in vitro* experiments because we rely on these studies to inform epidemiology. I hope that I'll carry my graduate school experiences in toxicology with me throughout my career as an epidemiologist.

2. How does your research support risk assessment?

My dissertation research is interdisciplinary, with both population-level and *in vitro* approaches to the study of toxic metals and the placenta. My hope is that my research supports risk assessment by identifying potential exposure-response relationships in human populations, which are then supported by detailed mechanistic studies *in vitro*. As an aside, I'm also interested in exposure assessment and I've have done a lot of work validating biomarkers of exposure to and metabolism of inorganic arsenic, which I hope will improve current approaches for studying the health effects of arsenic.

3. What do you like to do outside of work?

When I'm at home, I spend a lot of time cooking and experimenting with food preservation (i.e. canning and pickling). Most nights, you can also find me at our local rock climbing gym. And whenever we get the chance, my husband and I love to go hiking and backpacking in Western North Carolina, or whatever national park we can get away to.

4. What do you think is the next big advancement in risk assessment?

Well, I can't speak to the next big advancement in risk assessment as a whole, but I currently work on questions related to chemical mixtures. This is a hot topic in environmental epidemiology and the field has seen an influx of new methods for both their identification and analysis. I hope to continue working on chemical mixtures in my postdoctoral training and I'm interested to see how this may bleed over into new approaches for toxicology and risk assessment. It's definitely an important avenue for future work.

5. How should SOT attract future graduate students and post-docs into the field of risk assessment?

I know we've been discussing this since our last annual meeting, but I would love to see RASS start up an online training course in the basics of risk assessment. I'd also like for RASS to support mentoring activities throughout the year and not just at the annual meeting. So many graduate students, myself included, have an interest in risk assessment, but lack resources at our own institutions to explore or prepare for it as a career option.

Dr. Miao Li, USFDA, National Center for Toxicological Research
RASS Postdoctoral Representative
2019 Perry J. Gehring Postdoctoral Risk Assessment Award Winner



1. Why did you choose to study/pursue research in the field of toxicology/RA?

My career goal is to apply bench research to support policy and decision making. Toxicology is exactly the area for my goal. I believe the results we get from lab work are invaluable to protect human health and to avoid potential unsafe exposure to chemicals.

2. How does your research support risk assessment?

I'm currently working on Physiologically Based Pharmacokinetic (PBPK) modeling, after I completed PhD training in toxicology. My current research focuses on the application of PBPK modeling for food safety. I see PBPK modeling as a bridge between pharmacokinetic/toxicokinetic studies and risk assessment – the bridge helps to understand and reduce uncertainties in risk assessment.

3. What do you like to do outside of work?

I like traveling to see different parts of the world. I extremely enjoy the national parks in the US. My current goal is to get stamps for all national parks.

4. What challenges do you see the area of risk assessment facing in the near future?

As the reduction of animal studies will be the future of toxicology, more and more alternative methods and computational tools will be developed for risk assessment. How to apply these alternative methods and reduce the new uncertainties associated with these methods will continue to bring new challenges.

5. How should SOT attract future graduate students and post-docs into the field of risk assessment?

I have to say not many graduate students or newly graduated post-docs know risk assessment well. The mentoring events by RASS and reaching out to graduate students to let them know about potential careers in risk assessment would help.

Robert Freeborn, Michigan State University

2019 Perry J. Gehring Postdoctoral Risk Assessment Award Winner



1. Why did you choose to study/pursue research in the field of toxicology/RA?

As an undergrad at Cal Poly, I took a course on the chemistry of drugs and poisons which was my first exposure to pharmacology and toxicology. At the same time, I was interviewing for various graduate programs and was exposed to the toxicology program at Michigan State University. During my interviews, I met my current mentor, Cheryl Rockwell. The relevance of her research to human health and the methods used in the lab are what got me interested in pursuing toxicology.

2. What are some of the most exciting aspects of your work?

I have always had an interest in working with viruses, but never knew how I would get into that without a microbiology degree. I now get to use influenza virus as a tool to study T cell-mediated immunity during infections, which is by far my favorite part of what I do now.

3. What do you like to do outside of work?

Outside of work, I love to play guitar (I was originally going to go to college for studio jazz guitar instead of biochemistry), play video games, play with my dogs, and spend time with my girlfriend who puts up with my shenanigans.

4. What advice do you have for other grad students/post-docs who want to pursue work in risk assessment?

In addition to the traditional PhD/post-doc training, I highly recommend seeking external opportunities to learn more about toxicology outside of academia. This summer I did an internship at Genentech and found it to be a great way to learn about toxicology in an industrial setting, especially with regard to how toxicologists need to think during the various stages of drug development.

5. How should SOT attract future graduate students and post-docs into the field of risk assessment?

I think the best way to attract future graduate students and post-docs is to pique their interest in risk assessment early. In my experience, not many undergraduates know about toxicology as a field. If we can increase the visibility of toxicologists to younger students and the public, we might be able to get more toxicology graduate students and post-docs who can then get into risk assessment.

RASS Awards

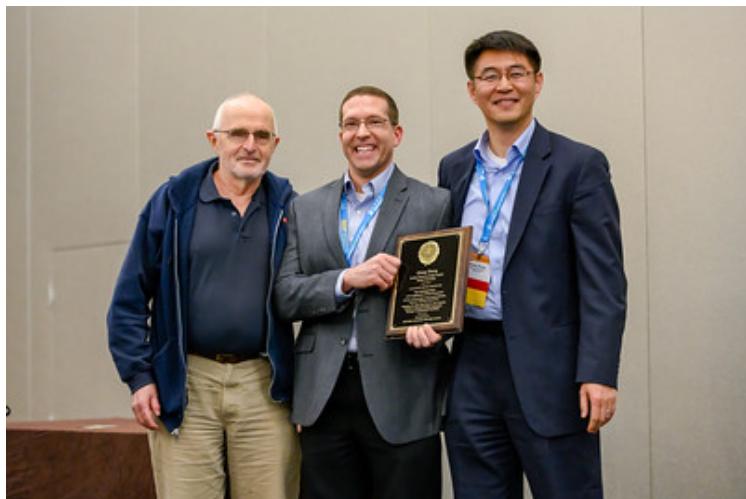
Nominate yourself or a well-deserving Toxicologist for the awards:

Please Contact: [RASS](mailto:sotrassawards@gmail.com) (sotrassawards@gmail.com) to apply for one of the following awards:

- **Best Overall Abstract Award**
- **Best Published Paper Advancing the Science of Risk Assessment Award**
- **Best Published Paper Demonstrating an Application of Risk Assessment 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**

The deadline for application is December 31st!

Application details can be found [here](#)



2019 Best Paper Demonstrating the Application of Risk Assessment Co-Authors (Rory Conolly and Qunwei Zhang) with RASS president Gary Minsavage



2019 Best Overall Abstract Award winner (Katie Paul Friedman) with RASS Vice President Barbara Wetmore



2019 Best Paper Advancing the Science of Risk Assessment (lead author Nicole Kleinstreuer) with RASS president Gary Minsavage



2019 Perry Gehring Postdoc Award winner (Axelle Marchand) with RASS Vice President Barbara Wetmore



2019 Andersen-Clewell Trainee Award winner (Wei-Chun Chou) with RASS Vice President Barbara Wetmore



2019 Perry Gehring Postdoc Award winner (Miao Li) with RASS Vice President Barbara Wetmore



2019 John Doull Award winner (Rance Nault) with RASS Vice President Barbara Wetmore



2019 Robert Rubin Travel Award winner (Robert Freeborn) with RASS Vice President Barbara Wetmore

ENDOWMENT FUNDS

RASS has four endowment funds supporting awards to students and postdocs – the John Doull Student Award Endowment Fund, Perry J. Gehring Risk Assessment Student Award Endowment Fund, Robert J. Rubin Student Travel Award Endowment Fund, and the Andersen-Clewell Trainee Award Endowment Fund. We encourage our members to contribute to our endowment funds, as our endowment funds provide stipends to graduate student and postdoc members who display excellence 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 toxicologist. Please visit the Endowment website to see current contributors and learn more about the endowments. Contributing is easy: <http://www.toxicology.org/endowment/contribute/donate.asp>

Initiatives are being undertaken to increase awareness of our endowment funds and share stories about how their contributions help our Trainees:

--The endowment fund committee will be sending out quarterly updates to RASS membership to share status updates and reminding us to consider contributing to our endowment awards. As donations come in, the committee will use a "thermometer" graphic in order to illustrate the progress and target goal for each fund.

-- An incentive to those that contribute \$50 or more will receive a congratulatory "Endowment Contributor Toast" at the annual RASS reception with a group photo posted on the website and following newsletter.

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 reviewing and judging of best papers are moving into full force. Your help is greatly needed! Benefits of serving as a RASS volunteer include the following:

- Getting your name and your ability to help recognized. When you get involved, your willingness to serve and help out get recognized. This is especially important for graduate students and postdocs who are looking to get more involved in SOT.
- Working with colleagues. In volunteering, you have the opportunity to work on committees with people that you might not otherwise have the opportunity to work with, in a fun and collegial way.
- It is an AWESOME learning opportunity. When you review award applications and candidates for best paper, you have the opportunity to learn about recent developments in risk assessment. Helping out and learning about risk assessment—what more can one ask for?



If you would like to enter your name into the RASS Volunteer Pool, please email Alea Goodmanson (aleagoodmanson@chevron.com).

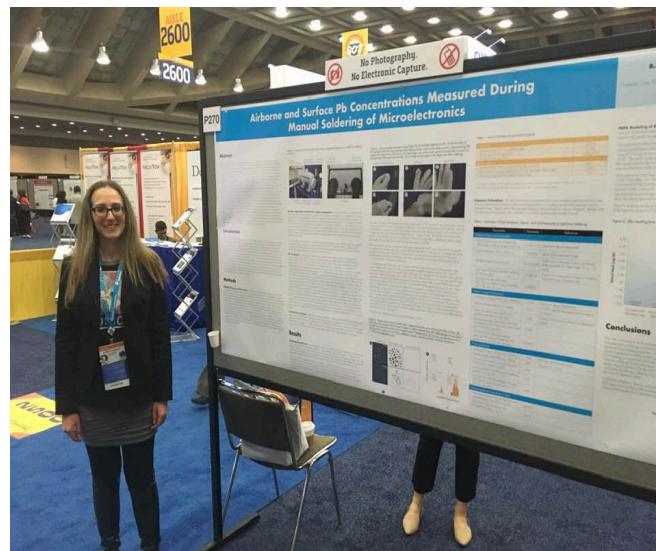
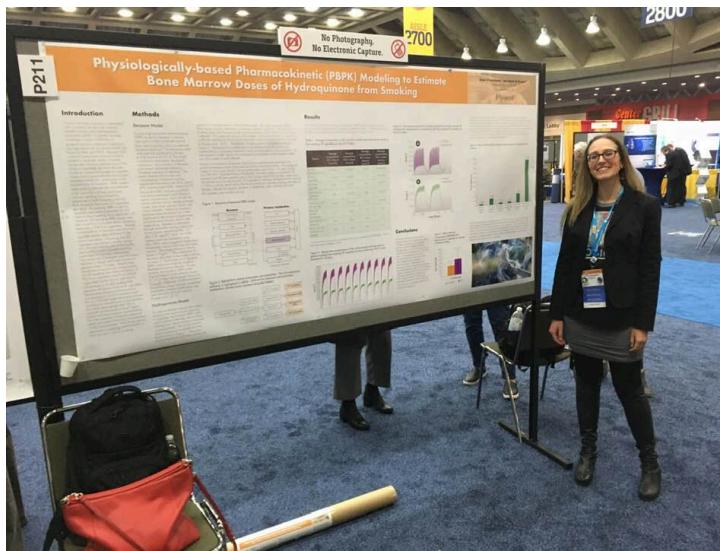
RASS Officers

			
Past President George Woodall USEPA	President Gary Minsavage ExxonMobil	Vice-President Barbara Wetmore USEPA	Vice-President Elect Laura Plunkett Integrative Biostrategies
			
Secretary/Treasurer Nathan Pechacek Ecolab	Councilor Anne Loccisano Exponent	Councilor Fabian Grimm ExxonMobil	Postdoc rep Miao Li USFDA NCTR
			Grad student rep Paige Bommarito UNC



RASS Executive Committee at the reception. From left to right: Laura Plunkett, Miao Li, Nathan Pechacek, George Woodall, Kan Shao, Anne Loccisano, Barbara Wetmore, Jeanette Reyes, Paige Bommarito, Fabian Grimm, and Gary Minsavage

PHOTOS FROM THE 2019 ANNUAL MEETING



Anne Loccisano presents her risk assessment posters at the annual meeting.



Janice Lee, David Szabo, and Om Makwama always have fun at the RASS reception.



Bob Sonawane, Bette Meek, and Abdel Kadry catch up at the RASS reception.



Mel Andersen and Hugh Barton like to talk about risk assessment.



David Szabo, Linda Birnbaum, and Anne Loccisano discuss their latest work in risk assessment.



Martin Phillips is excited to hear about the RASS 2019 award winners.



Mike Dourson and Abdel Kadry catch up at the RASS reception.



RASS officers Jeanette Reyes, Nathan Pechacek, and Kan Shao chat at the reception.



Paige Bommarito is excited to hear about the RASS 2019 award winners.