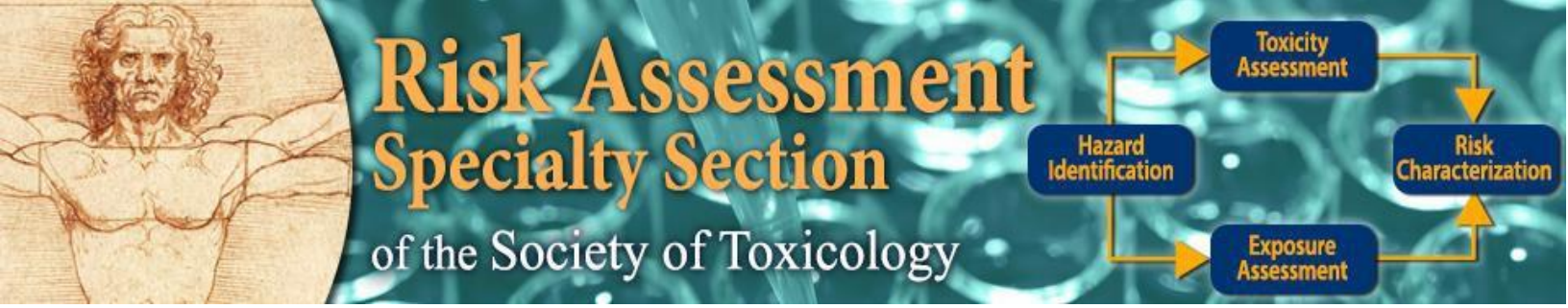

President's Message

Dear Fellow RASS Members:

What a year. I'm sure we can all agree that this has been one unlike any other in each of our lifetimes. I know I speak for all of us on the Executive Committee when I say we truly miss our in-person interactions with you: what we could have had both last year and at the 2021 Annual Meeting. We are actively planning how we can virtually interact with you during our reception on ***Monday, March 15, 2021*** (mark your calendars) and are looking toward other events and gatherings that will provide professional support to our membership in these challenging times.

I am quite grateful to be serving with a phenomenal team of officers on the Executive Committee. The drive to plan and execute novel mentorship and professional development opportunities is truly commendable: I hope many of you will take part as these efforts are unveiled. Please, if you have not already done so, provide your feedback regarding the **RASS Syllabus** (for more information, see page 4). I truly see this as a flagship offering of our Specialty Section, to provide continuous professional development and career growth across a range of career trajectories.

This is also the time of year we start thinking about **Awards…** how many of you realize that, all told, RASS offers ***8*** awards? Awards recognizing our hard-working graduate students and postdoctoral fellows, celebrating cross-cutting work through joint awards offered with the Biological Modeling and Mechanisms Specialty Sections, and highlighting efforts published in peer-reviewed literature – these have always been a high priority for RASS. Starting on page 4, three of our 2020 Award Winners, Sarah Burnett, Colette Miller and Durgesh Dwivedi, are highlighted in our **Trainee Spotlight.** Please join me in congratulating them again for their excellent research.

And almost as fulfilling as receiving an award, is being involved as a **Volunteer** during our review process! Please see page 9 for more information. I don't think there is a better way to get up to speed on some of the most novel and impactful work going on in our field than serving as a reviewer for these awards.

Once again **Annie Jarabek** has taken the lead in developing a top-notch slate of **webinars** for our 2020-2021 year. I hope you've been able to tune in for a few; an abbreviated listing is provided on page 2. This year we will also be more active in publicizing webinars offered by other Specialty Sections that may be of interest to the RASS membership.

As 2020 winds down, I wish you all the best for a healthy and safe holiday season. Although I feel like this wish may be a tad premature, I suspect many of you won't mind me wishing you a Happy New Year!

My Best Regards,

Barbara Wetmore, PhD

RASS President, 2020-2021

2021 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 five upcoming RASS officer vacancies for which nominations are being received: Vice President-Elect, Treasurer, Councilor, Postdoctoral Representative, and Graduate Student Representative. This year's RASS officer nominations committee is headed by our RASS Past President, Gary Minsavage (gary.d.minsavage@exxonmobil.com). Please submit your nomination of yourself or a colleague to Dr. Minsavage by **December 21, 2020**.

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

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September 9, 2020

Organizing Mechanism-related Information on Chemical Interactions Using a Framework based on the Aggregate Exposure and Adverse Outcome Pathways (Presentation Slides)
Paul S. Price, PhD
United States Environmental Protection Agency (retired)

October 14, 2020

The COVID-19 Pandemic Vulnerability Index (PVI) Dashboard: Monitoring County-level Vulnerability Using Visualization, Statistical Modeling, and Machine Learning (Presentation Slides)
David M. Reif, PhD
Associate Professor | Department of Biological Sciences (BioSci)
Director | Bioinformatics Consulting and Service Core (BCSC)
Director | DMAC, Center for Environmental and Health Effects of PFAS (Superfund)
Co-Director | IHSFC, Center for Human Health and the Environment (CHHE)
Bioinformatics Research Center (BRC)
North Carolina State University

November 11, 2020

Co-sponsored with the Mechanisms Specialty Section (MSS).

EPA's Work Plan for Developing, Testing and Applying New Approach Methods for Chemical Testing (Presentation Slides)
Russell Thomas, PhD
Director
Center for Computational Toxicology and Exposure (CCTE)
Office of Research and Development (ORD)
US EPA

International Progress on New Approach Methods for Developmental Neurotoxicity (Presentation Slides)
Tim Shafer, PhD
Research Toxicologist
Center for Computational Toxicology and Exposure (CCTE)
Office of Research and Development (ORD)
US EPA

December 9, 2020

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

An Assessment of the Impact of Multi-route Co-exposures on Human Variability in Toxicokinetics: A Case Study with Binary and Quaternary Mixtures of Volatile Drinking Water Contaminants
Mathieu Valcke, PhD
Department of Environmental and
Occupational Health, ESPUM, IRSPUM,
Université de Montréal, Montreal, QC, Canada

Sami Haddad, PhD
Institut national de santé publique du
Québec, Montréal, QC, Canada

January 13, 2021

Co-sponsored with the SOT Mixtures Specialty Section (MixSS)

Development of an AOP Network for the Developmental Effects of Exposure to the PFAS
L. Earl Gray, Jr., PhD
Research Biologist Center for Public Health and Environmental Assessment (CPHEA)
Office of Research and Development (ORD)
US EPA

RISK ASSESSMENT SYLLABUS

The Society of Toxicology Risk Assessment Specialty Section (RASS) leadership committee proposes the development of a dedicated "Risk Assessment Syllabus," a semi-regular opportunity for members to enhance their understanding of essential concepts and contemporary topics in the scientific practice of risk assessment.

RASS envisions a training series that will complement the existing RASS webinar series and other RASS-related mentoring initiatives. The objective of this course is to provide participants with an introduction to the fundamental concepts and terminology associated with chemical risk assessment, as well as a practical perspective on the application of risk assessment principles to inform decision making. Trainees will be provided with valuable insights that will enhance their awareness of the potential importance and sector-specific aspects of risk assessment in their professional careers as well as required skills for the respective job profiles. For current professionals, the syllabus will provide an opportunity to refresh and advance understanding of risk assessment principles and an opportunity to develop sector-specific perspectives on contemporary topics in human and environmental health sciences.

RASS currently envisions a web-based format to maximize attendance; combining webcasts with local in-person events may be considered for future training events. Individual events may be structured to contain a formal presentation focusing on a specific aspect relevant to risk assessment, followed by an open panel discussion with invited experts in the field. The initial event is planned to be organized in early 2021. RASS is currently seeking experts in any of the disciplines associated with chemical risk assessment to consider volunteering to participate as panelists and share their experiences and perspectives in one of the open discussions. In addition, we would like to use this opportunity to collect feedback on additional input and suggestions from the RASS.

Please take a moment to complete our Risk Assessment Syllabus survey, and provide feedback by Tuesday, **December 31, 2020**: **https://www.surveymonkey.com/r/F68BCZZ**

RASS Syllabus Planning Committee

Fabian Grimm, RASS Councilor 2019-2021
Miao Li, RASS Postdoc Representative 2019-2020
Anne Loccisano, RASS Councilor 2018-2020
Gary Minsavage, RASS Past President 2020-2021
Barbara Wetmore, RASS President 2020-2021
George Woodall, RASS Past President 2019-2020

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 Fabian Grimm (fabian.a.grimm@exxonmobil.com) an email.

We are looking forward to hearing from you!

Sarah Burnett, Texas A&M University

2020 John Doull Risk Assessment Award

1. ***Why did you choose to study/pursue research in the field of toxicology/RA?***
   I was inspired to pursue a career in toxicology during my undergraduate research internship at the National Center for Toxicological Research (NCTR). I found research to be very rewarding – the days where experiments worked successfully and we were able to answer interesting questions that impact our understanding of toxicological mechanisms were worth all the struggles scientists also face. During my graduate education in toxicology, I became fascinated by the field of risk assessment because it offers a unique opportunity to apply science for practical decision-making and to impact human health.

2. **How does your research support risk assessment?**
   I work with Drs. Ivan Rusyn and Weihsueh Chiu at Texas A&M University, and we are interested in applying high-throughput functional *in vitro* models to assess the cardiotoxicity hazard and population variability of chemicals. We use iPSC-derived cardiomyocytes from a population of healthy human donors to characterize the potential cardiotoxic effects of pharmaceuticals and environmental chemicals. This research supports the risk assessment of environmental chemicals, as many of these compounds (e.g. pesticides, flame retardants, industrial chemicals) have not been adequately tested for their human health effects. Our work also aims to quantify the extent of population variability in cardiotoxicity hazard, supporting risk assessment by showing that it is feasible to derive estimates of human toxicodynamic variability *in vitro*.

3. **What do you like to do outside of work?**
   Outside of work, my favorite hobby is playing the piano (all genres, but Beethoven and other classical music is my favorite to practice). I also like to go hiking or kayaking with my dog – my favorite hikes are in Northwest Arkansas along the Buffalo National River, where my family lives. I also like to read books and cook/bake.

4. **What challenges do you see the area of risk assessment facing in the near future?**
   I see population variability as a critical challenge facing the field of risk assessment. We need approaches that can characterize the extent of inter-individual variability in the population, both in baseline risk and in chemical-related effects. With the right method, we could replace default uncertainty factors for human toxicodynamic variability with chemical-specific estimates, enabling us to better protect sensitive subpopulations and conduct risk assessment more effectively.

5. **How should SOT attract future graduate students and post-docs into the field of risk assessment?**
   I think that educating trainees about risk assessment and careers in risk assessment is important for attracting the next generation of toxicologists into the field. Texas A&M University incorporates risk assessment as a major focus throughout the Toxicology graduate program, but it is difficult for trainees at many institutions to learn about risk assessment principles and practices. I think that courses or webinar series targeted at early career trainees on hazard/risk assessment principles, methods, practices, and career opportunities would be beneficial and inspire a passion for risk assessment in many young toxicologists.

Colette Miller, United States Environmental Protection Agency

2020 Perry J. Gehring Postdoctoral Risk Assessment Award Winner

1. **Why did you choose to study/pursue research in the field of toxicology/RA?**
   My background is in nutrition science and as a graduate student, my research focused heavily on the regulation of energy balance and the dietary and genetic factors that drive metabolic disease. It was not until very late in my graduate training that I was introduced to the role that environmental chemicals may have in inferring similar risks, and this came to shape my interest in what I wanted to study for my postdoctoral training.

2. **How does your research support risk assessment?**
   I study how prenatal exposures to air pollutants alter offspring risk to cardiometabolic disease. With that, a significant proportion of my work to date has been investigating the effects of ozone on adverse pregnancy outcomes and, as we have consistently reported, exposure to ozone during a susceptible window in pregnancy (implantation) results in fetal growth restriction in a rodent model. Our work has provided some of the first evidence of biological plausibility behind the epidemiological observations that relate gestational ozone exposure to intrauterine growth restriction. Together, this evidence, including my laboratory-based assessments, helps to inform some of the causality determinations made in the Integrated Science Assessment for Ozone.

3. **What do you like to do outside of work?**
   Before COVID-19, I was heavily involved in volunteering at a local animal shelter. However, since our prolonged quarantined, I've resorted to adopting another cat! I also am an avid reader of non-fiction and welcome any recommendations on my current reading focus on nuclear proliferation.

4. **What challenges do you see the area of risk assessment facing in the near future?**
   As the NIH requirements for the consideration of sex as a biological variable in study design continues to roll out, there is likely to be increasing evidence in the future that necessitates the differentiation of AOPs (beyond reproductive effects) by sex. While I view this as a positive challenge, I'm looking forward to seeing more consideration of sex in both toxicology studies and risk assessment.

5. **How should SOT attract future graduate students and post-docs into the field of risk assessment?**
   Engagement with undergraduates is critical, especially with those who do not attend institutions with degree programs in toxicology or environmental health and are unlikely to know about this career path. Alumni engagement through undergraduate mentorship and internship programs, especially at institutions where no degree options in toxicology exist, is important for introducing the field to those early in their career path. It would be wonderful to see SOT provide an incentive for this sort of outreach.

Durgesh Dwivedi, National Institute of Pharmaceutical Education & Research (NIPER) S.A.S. Nagar

2020 Perry J. Gehring Postdoctoral Risk Assessment Award Winner

1. **Why did you choose to study/pursue research in the field of toxicology/RA?**
   In July 2015, I started my PhD studies in NIPER S. A. S. Nagar, India. The reputation of Dr. G. B. Jena's lab, which has received many prestigious SOT awards over the past few years, has inspired me to work with more enthusiasm on my own research. I am grateful for the opportunity to apply for these awards and interact with distinguished Toxicologists from all over the world.

2. **What are some of the most exciting aspects of your work?**
   Safety assessment is an essential part of risk assessment. Animal studies play an important and decision-making role in safety studies. My research was based on the development of an improved animal model of early stages of liver carcinogenesis, which could be used either for performing safety assessment of a drug with a new indication for liver anti-carcinogenic potential or for screening of new drug molecules having anti-cancer potential.

3. **What do you like to do outside of work?**
   I like to travel around the globe and learn about different languages and cultures of different communities. In normal days, I like to spend my time with my family and friends. I have an interest in singing. I like socializing with my friends often.

4. **What advice do you have for other grad students/post-docs who want to pursue work in risk assessment?**
   There is a need for comprehensiveness in communicating all the components of risks associated with exposures, along with communicating possible causes. There also is the need to properly communicate these risks succinctly to external stakeholders or to upper management, who are less interested in the details. Furthermore, decide when it is important to focus on low probability/high severity risks versus high probability/low severity risks.

5. **How should SOT attract future graduate students and post-docs into the field of risk assessment?**
   There is a need for online courses to provide a fundamental as well as advanced knowledge about risk assessment. There is a need to create an awareness for risk assessment studies for undergraduate, graduate students and post-doctoral associates. Organizing several webinars will be helpful in attracting students and post-docs.

RASS AWARDS

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

Please Contact: RASS (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.

ENDOWMENT FUNDS

RASS has four endowments funds supporting awards to students and postdocs – the John Doull Student Award Endowment Fund, Perry J. Gehring Risk Assessment Student Award Fund, Robert J. Rubin Student Travel Award, Mechanisms and Risk Assessment, 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.

The Risk Assessment Specialty Section (RASS) Endowment Funds have provided numerous awards for excellence and have supported outstanding student and postdoctoral members with critical roles in advancing the future practice and science of risk assessment. Thank you for all the support you have given thus far. We want to do more and with your help and generosity we can get there. Our goal in the next year is to increase each fund by at least $2,000 ($8,000 in total). With your help to reach this goal, the annual RASS merit-based Endowment Fund awards will continue to increase each year.

The RASS Endowment Funds encourage research and training, scientific progress, collaboration, and modernization of the fields of risk/safety evaluation and/or regulatory toxicology, primarily by providing outstanding graduate students and/or postdocs monetary awards based on scientific excellence of their work. Consider making a tax-deductible charitable donation to one or more of the funds above to help RASS provide trainee awards. As expert risk assessors, please weigh the risk vs. reward and consider donating any small amount (e.g., $25). Donate online or download a donation form.

2020 Financial Overview SOT/RASS Endowment Funds

Endowment Fund	Opening Balance*	Member Contribution*	Investment Gains/Losses*	Year-End Balance*
Andersen Clewell Trainee Award Fund	55,362	25	3,161	58,548
John Doull Student Award Fund	48,502	-	2,769	51,271
Perry J. Gehring Risk Assessment Student Award Fund	49,379	-	2,764	52,143
Robert J. Rubin Student Travel Award	48,863	-	2,790	51,653

*all amounts in US $

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 2020/21

Past President
Gary Minsavage
ExxonMobil

President
Barbara Wetmore
US EPA

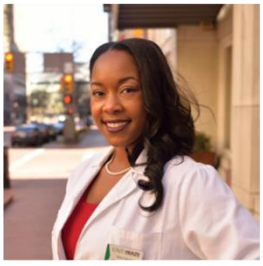
Vice President
Laura Plunkett
Integrative Biostrategies

Vice President Elect
Daniele Wikoff
ToxStrategies Inc.

Secretary/ Treasurer
Nathan Pechacek
Ecolab

Councilor
Fabian Grimm
ExxonMobil

Councilor
Li Yang
Cal EPA/DTSC



Postdoc Representative
Kiara Fairman
US FDA/NCTR