

Mixtures Specialty Section

A mixture of business, social, and news

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From the President

Dear SOT Mixtures Specialty Section (MixSS) members,

The 2024 SOT Annual Meeting in Salt Lake City is around the corner. We are looking forward

to seeing you there, especially at the MixSS reception on Monday evening. We will have our annual Mentoring Event from 6:00-6:30 PM, right before the reception activities. I want to give a special thanks to Dr. Courtney Roper (Vice President) for leading this effort several years in a row dutifully with outstanding success. She is a phenomenal leader and an amazing mentor. If you would like volunteer as a mentor for this event, please reach out to us at sotmixss@gmail.com.

MixSS officers worked diligently on the 2024 SOT Annual Meeting. Upon reviewing 11, and endorsing 9 proposals, 6 of those proposals made it into the 2024 program (for more details, please see page 5). There are so many amazing sessions and events going on at SOT, which makes it very difficult to pick from. But please don't forget to add the Mixtures

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From the President continued

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Poster Session, taking place on Wednesday, to learn more about the mixtures related research that is being conducted and presented at SOT (page 5). Five of those posters were selected as the Top 5 MixSS abstracts, among 86 abstracts considered, and will be given MixSS ribbons at the time of their presentation. Please see page 7 of the newsletter for more details on the Top 5 abstracts.

As is our tradition, we reviewed applications for the MixSS Best Student/Postdoc Abstract Awards. We received a total of 13 applications via SOT's new award application system, SOT Apply. One best student and one best postdoctoral awardee was selected, following a comprehensive review by our MixSS officers. This task was not easy in any way, considering the phenomenal work accomplished by the students and postdocs. My thanks goes to MixSS officers for their thorough review of the applications. Our sincere thanks go to [RTI International](#) for agreeing to sponsor this important award 2 years in a row! This award would not have been possible without RTI's support of our students and postdocs. Please see page 6 to meet our winners.

In addition, this year, the MixSS hosted a virtual event where students, postdocs, and young investigators had the opportunity to present projects related to the mixtures field and competed for the MixSS Jane Ellen Simmons (JES) SOT Travel Award to support their travel to the 2024 SOT Annual Meeting in Salt Lake City. The travel award was conferred in honor and remembrance of our dear colleague, [Dr. Jane Ellen Simmons](#). The review process for the JES award was vigorous. We had 13 excellent applications. A comprehensive pre-review was conducted by MixSS officers to select the top 5 finalists. Then, each finalist presented their research virtually via an SOT organized webinar. The finalist presentations were judged by experts in the field of Mixtures. First of all, we want to thank all the finalists, Juliana Agudelo Areiza, Amelia Craze, Samantha Heldman, Erin McNell, and Shikshita Singh, for their outstanding talks. Each one of you are incredible scientists and presented excellent talks, which made it very difficult for our judges! Also, we would like to thank our judges (Drs. Linda Birnbaum, David DeMarini, Richard Hertzberg, Jason Lambert, and Cynthia Rider) and SOT (Julia Melone) for their support.

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From the President continued

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Our sincere gratitude goes to Dr. Linda Birnbaum, Dr. Cynthia Rider and MixSS for sponsoring the award. Please see page 6 to meet our winner. If you would like to consider sponsoring or contributing towards this award, please send an email to SOTmixSS@gmail.com or [Donate Here](#).

Join us at the MixSS reception in celebrating the success of our young scientists and supporting their determination to take the mixtures studies to the next level. Plaques for all 3 awards and the best overall abstract will be presented during MixSS reception.

MixSS also hosted [2 webinars](#) since the 2023 SOT Annual Meeting. I want to give a special thanks to Dr. Allison Phillips (Senior Councilor) for leading and organizing the webinars. You did an amazing job not only finding speakers who are experts in their fields but also played a critical role for hosting the webinars with success. MixSS also thanks our esteemed speakers, Drs. Kristin Eccles, Paul Price, and Jason Lambert.

The first webinar took place in September 2023 and presented a perspective on Mixture Toxicity in the 21st Century. Dr. Kristin Eccles presented “Methodological Details for Quantifying the Risk of Exposure to Environmental Chemical Mixtures via a Common Molecular Target Using a Geospatial Modeling Approach” and Dr. Paul Price discussed “The Hazard Index at Thirty-Seven.”

The second webinar, titled “Advancing the Science of PFAS Mixtures Assessment” was presented by Dr. Jason Lambert in January 2024. The presentation discussed mixture assessment approaches contained in the draft “Framework for Estimating Noncancer Health Risks Associated with Mixtures of Per- and Polyfluoroalkyl Substances (PFAS)” developed by US EPA’s Office of Water and Office of Research and Development.

We can’t wait to see you at the SOT Annual Meeting! In the meantime, please stay posted for updates on the MixSS [website](#) and follow our [LinkedIn Page](#) to stay up to date on MixSS events.

Sincerely,

Esra Mutlu, PhD, DABT

President, MixSS (2023-2024)

Recent Webinars

The Risk Assessment Specialty Section (RASS) hosts monthly webinars, and twice a year, RASS graciously teams up with MixSS to co-host seminars at the intersection of risk assessment and mixtures toxicology.

Wednesday, September 20, 2023: Mixture Toxicity in the 21st Century: Assessment Methods Presentations



“Methodological Details for Quantifying the Risk of Exposure to Environmental Chemical Mixtures via a Common Molecular Target Using a Geospatial Modeling Approach”

Kristin Eccles, PhD | Research Scientist | Health Canada

“A Population-Based Human In Vitro Approach to Quantify Inter-Individual Variability in Responses to Chemical Mixtures.”

Paul Price | Exposure Scientist | Risk Science International



Wednesday, January 10, 2024: Advancing the Science of PFAS Mixtures Assessment



“Advancing the Science of PFAS Mixtures Assessment: Draft Framework for Estimating Noncancer Health Risks Associated with Mixtures of Per- and Polyfluoroalkyl Substances (PFAS)”

Jason Lambert | Supervisory Toxicologist | US EPA

Access these presentations and other past MixSS webinars [HERE](#).

Looking Ahead: SOT 2024

MixSS Endorsed SOT 2024 Sessions

Monday, March 11th, 2024

Symposium Session: Botanical-Induced Toxicity: Liver Injury and Botanical Drug Interactions, **1:45 PM to 4:30 PM, Grand Ballroom A**

Workshop Session: Using Geographical Information to Promote Environmental Health and Justice, **1:45 PM to 4:30 PM, Room 251 D**

Tuesday, March 12th, 2024

Workshop Session: Integrating Aggregate Exposure Pathways and Adverse Outcome Pathways for Comprehensive Risk Assessment of Chemical Mixtures, **8:00 AM to 10:45 AM, Grand Ballroom B**

Informational Session: Methods and Transdisciplinary Frameworks to Evaluate Cumulative Impacts to Advance Equity in Community Health, Well-Being, and Quality of Life, **3:00 PM to 4:20 PM, Grand Ballroom F**

Wednesday, March 13th, 2024

Symposium Session: The “Cocktail Effect”: Studying the Greatest Uncontrolled Experiment Ever Launched!, **8:00 AM to 10:45 AM, Room 251 A**

Poster Sessions: **11:45 AM to 1:45 PM, Exhibit Hall C**

Thursday, March 14th, 2024

Workshop Session: Making Sense of Chaos: Recent Advances in Complex Mixtures Research and Regulation, **8:30 AM to 11:15 AM, Room 250 D**

MixSS Reception

Monday March 11th, 2024

Mentoring event: 6:00-6:30 PM

Reception: 6:30-7:30 PM

Salt Lake Ballroom A, Hyatt Regency

Have a topic you'd like to see endorsed by the Mix SS in the future?

[Submit your ideas HERE](#)



2024 SOT Award Winners

Jane Ellen Simmons Travel Award Winner: **Samantha Heldman, Wayne State University**

Early Developmental Exposure to Liquid
Crystal Monomer Mixtures Impacts Zebrafish
Locomotive Behavior, Cellular Respiration, and
Adiposity



Student Award Winner: Juliana Agudelo Areiza, University of Rhode Island

Evaluation of Legacy and Replacement Per- and
Polyfluoroalkyl Substances (PFAS) in Human
Livers Banked Over the Past 20 Years

Postdoc Award Winner: Elise Hickman, UNC Chapel Hill

Chemical and Non-Chemical Stressors in a
Postpartum Cohort through Wristband and Self
Report Data: Novel Links between Increased
Chemical Burden, Economic, and Racial
Stress



Top Overall Mixtures Abstracts for SOT 2024

Best Abstract: Erin McNell , (UNC Chapel Hill/NIEHS) – **Abstract # 4558, Title:** Prenatal Exposure to Phthalates and Replacements in Association with Maternal Blood Pressure and Risk of Preeclampsia: Results from the Human Placenta and Phthalates Study – **Wednesday 11:45 am-1:45 pm**

2nd Place: Tingjie Zhan, (Rutgers University) – **Abstract #3890, Title:** Dioxins in Surface River Water Organic Extracts Induce Ovarian Disrupting Effects Through Activating the Aryl Hydrocarbon Receptor – **Tuesday 2:15 pm-4:25 pm**

3rd Place: Anita Wayne, (University of Illinois at Chicago) – **Abstract # 3857, Title:** Chemical Mixture Dysregulates Placental Cell Signaling Pathways, Hormone Secretion, and Antiangiogenic Properties in Term Human Placentas – **Tuesday 11:45 am-1:45 pm**

4th Place: Lucie Ford, (Texas A&M University) – **Abstract # 4097, Title:** Concentration-Response Modeling and Risk Characterization of 20 Defined PFAS Mixtures Using *In Vitro* Assays – **Tuesday 2:15 pm-4:25 pm**

5th Place: Pius Joseph, (CDC-NIOSH) – **Abstract # 4139, Title:** Pulmonary Response to Crystalline Silica and Coal Dust Exposure in Rats – **Tuesday 11:45 am-1:45 pm**

2023-2024 Officers



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Paul S. Price



President
Esra Mutlu



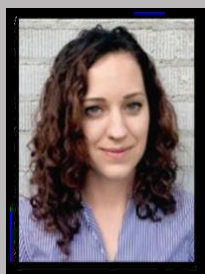
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Don't forget to vote in our election—ballot out now!!



Positions up for election include:

- Vice President-Elect
- Junior Councilor
- Postdoctoral Representative
- Graduate Student Representative

Check your email for the link.

HELP US RECRUIT EMERGING TOXICOLOGISTS!

SOT ToxScholar Program

Goal: Increase awareness of toxicology as a science and as a career field

How: Toxicology and career presentations to primarily undergraduate academic audiences



We need YOU to be a ToxScholar.

More information: [ToxScholar Outreach](#)

Faculty United for Toxicology Undergraduate Recruitment and Education (FUTURE) Committee



Are you on LinkedIn? Now we are too!
Connect with the Mixtures Specialty Section on LinkedIn to stay up to date on Specialty Section announcements, SOT Annual Meeting deadlines, and upcoming webinars.

[Find the MixSS LinkedIn Page HERE](#)