

Mixtures

ANNUAL REPORT: 2022–2023

May 1, 2022 to April 30, 2023

I. Officers/Committees

Officer	2022–2023	2023–2024
President:	Paul Price	Esra Mutlu
Vice President:	Esra Mutlu	Courtney Roper
Vice President-Elect:	Courtney Roper	Jennifer Schlezinger
Secretary/Treasurer:	Jennifer Schlezinger	Shannah Witchey
Past President:	Mansi Krishan	Paul Price
Councilors:	Allison Phillips	Allison Phillips
	Justin Conley	Christopher Kassotis
Postdoctoral Representative:	Rachel Dee	Kristin Eccles
Graduate Student Representatives:	Greylin Nielsen	Ishita Virmani
	Brianna Rivera	

Committees:

- SOT 2023 Program Review: Chair - Courtney Roper
- Nominations: Chair - Mansi Krishan
- Awards: Chair - Courtney Roper
- Webinar: Chair - Justin Conley
- Communications: Chair - Greylin Nielsen
- Membership: Chair - Allison Phillips
- Fundraising: Chair - Esra Mutlu
- Mentoring: Chair - Courtney Roper

II. 2022 Membership total: 115

III. Key Outcomes in 2022–2023:

- A. We are planning to hold two webinars (in connection with the Risk Assessment Specialty Section) for the fall and winter of 2023.
- B. We are planning to review proposals for sessions and courses for the 2024 meeting. (All other activities are described below.)

IV. Activities

A. SOT Annual Meeting Activities (e.g., courses, scientific sessions, receptions):

- Preparation and presentation of MixSS poster (March 19)
- Mixtures mentoring event (March 21)
- MixSS Reception (March 21)

- Annual officers breakfast meeting welcoming the new officers and thanking past officers for their contributions (March 20th).
- Mixtures Poster Session (March 22)
- Endorsed Symposium Session “New Approach Methodologies to Evaluate Botanical Safety” (March 20)
- Endorsed Workshop Session “Challenges and Future Directions in NAM Applications to Mixtures Risk Assessment” (March 21)
- Review of 103 posters for top 5 abstract selection
- Review 10 applications for post-graduate and postdoctoral awards

B. 2023 Awards Recipients:

- Postgraduate award winner (Winner received a \$500 award. Award underwritten by RTI international):

Kimberly Gaston (EPA)

Title: In vitro Evaluation of Polycyclic Aromatic Hydrocarbon Compound (PAC) Mixtures – Abstract #4504
- Postdoctoral award winner (Winner received a \$500 award. Award underwritten by RTI international):

Kristin M. Eccles (NIEHS)

Title: Mapping a Path to Disease: Quantifying the risk of exposure to environmental chemical mixtures via a common molecular target using a geospatial modeling approach – Abstract #2039

MixSS Best Abstract Award – Top 5 Abstract Winners (in order)

1. Catalina Cobos-Uribe (University of North Carolina at Chapel Hill) – Abstract #3436 The Upper Airway Exposomics Associated with E-cigarette Use
2. Jolyn Fernandez (University of Oklahoma Health Sciences Center) – Abstract #3385 Meconium as a Repository of In Utero Metal Exposures Defines Neonatal Metabolic Associations
3. Celeste Carberry (University of North Carolina at Chapel Hill) – Abstract #4517 Extracellular Vesicles Altered by Per- and Polyfluoroalkyl Substance Mixtures: In Vitro Concentration-Dependent Release, Chemical Content, and MicroRNA Signatures Involved in Liver Health
4. Cynthia Rider (NIEHS) – Abstract #4503 In Vivo Evaluation of Polycyclic Aromatic Compounds and Mixtures
5. Catherine Wise (Duke University) – Abstract #4510 Environmental Exposure Mixtures Associated with Bladder Cancer in Pet Dogs

C. Other Educational Activities Conducted (e.g., webinars, in-person meetings):

MixSS/RASS Webinar September 2022

Dr. Wibke Busch – UFZ Helmholtz Centre for Env. Research

“Combined effects of chemical mixtures are predictable for the whole transcriptome – A proof of concept study with zebrafish embryos”

Lucie Ford – Texas A&M University

“A population-based human in vitro approach to characterize inter-individual variability in responses to chemical mixtures”

MisSS/RASS Webinar January 2023

Dr. Andreas Kortenkamp – Brunel University

“Mixture assessment factors – motivations, derivations and uses”

D. Communication Activities:

1. Newsletter publication frequency: Newsletters were sent out in July 2022 and December 2022
2. Communication Highlights:
 - The mass email communications provided by SOT was used throughout the year.
 - The section made regular use of the section’s LinkedIn page to make announcements of awards and section activities.
 - Flyers were shared at the 2022 NCSOT meeting to increase the visibility of the section.
 - The section obtained a list of grantees who recently received EPA funding to study the toxicity mixtures. The section reached out to the winners and invited them to both become members and to submit applications for the SOT post-graduate and postdoctoral awards. In 2023 we received a two-fold increase in the number of applications for these awards over the prior year.
 - In 2024, the section created a new email address for communication with the members. This allows a central address for award communications.
 - A Google Drive was set up for storing section documents related to awards.
3. Highlights of website enhancements: No changes to the SOT Mixtures website were made other than updates for the new officers.

E. Mentoring Activities: MixSS held its second dedicated mentoring event at the 2023 SOT Annual Meeting. This mentoring event provided over forty toxicology trainees in their early careers an opportunity to interact and network with a panel of experts from different sectors, (i.e., government, industry, academia, CRO/consulting) including a unique perspective from a recruiting expert to explore different career paths in mixtures.

Mentors included:

- Brianna Rivera and Melissa Heintz from ToxStrategies, Inc.
- Yvonne Rericha and Iris Camacho from the EPA
- Keith Levine and Reshan Fernando from RTI International

V. Feedback and Ideas:

- A. In what ways is your group fostering and maintaining an inclusive environment? Please give examples of any current practices used to support inclusion in processes such as 1) leadership selection and promotion, 2) award descriptions and selection, and 3) endorsement of proposals for the annual meetings.

MixSS welcomes every individual, advances their ideas, recognizes them for their efforts and contributions, and provides an environment that nurtures their growth. We encourage all members to consider running for one of the section's offices.

B. What is one thing the Society should be doing that we currently do not do (or do not do effectively) that would be of importance/benefit to the members of your component group?

In recent years, MixSS' income from dues has not been sufficient to cover essential section activities (MixSS reception at SOT). Our membership and fundraising committees are working towards developing and implementing ideas for retaining existing members, expanding membership, and identifying contacts (names, contact information) for sources of potential funding. However, we would appreciate any assistance SOT could provide in this area either directly or through the identification of other mechanisms for raising funding, such as identifying possible sponsors with interests in specific areas such as mixtures. In addition, support such as the Matching Funds program for mentoring events are particularly helpful to our Specialty Section. We would not have had the funds for holding the 2023 mentoring event without this support. Continuing this program is critical to our Specialty Section engaging and supporting early career researchers interested in mixtures research.

C. What is one thing that the Society is currently doing that impacts your component group that should be changed (e.g., stopped, modified, etc.)?

It would be helpful if SOT can share suggestions/recommendations with smaller/relatively new Specialty Sections on how to increase membership and raise funds to help sustain SS activities.