



**PARTNERSHIP OF SCIENTIFIC SOCIETIES WITH THE GOAL  
OF IMPROVING PUBLIC HEALTH  
THROUGH A COLLABORATIVE INTERDISCIPLINARY APPROACH**

**Scientific Liaison Coalition (SLC) Annual Report**  
*July 2021-June 2022*

**SLC Mission**

**The mission of the Scientific Liaison Coalition (SLC) is to improve and enhance human and environmental health by promoting and strengthening scientific partnerships and expanding the reach of member societies.**

The primary guiding principle of the SLC is that greater collaboration between scientists across sectors (academia, industry, government) and disciplines advances the science that can be used to directly improve public and environmental health.

The SLC realizes its mission as an active and flexible coalition of scientific, biomedical, and health-based societies by 1) working collaboratively on cutting-edge webinars, conferences, and scientific symposia and continuing education courses at scientific meetings; and 2) cross-promoting science of mutual interest among SLC member organizations.

Organizations interested in joining the SLC may contact Virginia Hawkins, [vhawkins@aim-hq.com](mailto:vhawkins@aim-hq.com), 703.438.3115 ext. 1660.

<https://www.toxicology.org/slc>



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### Message from the Chair

SLC was formed to strengthen scientific collaboration to promote human health. Our member organizations benefit through global partnerships, promotion of interdisciplinary scientific advances, and content only available to members. We operate virtually through monthly teleconferences and an annual face-to-face gathering. These are opportunities for raised awareness of member society events and to update on the progress of SLC-planned events.

SLC work groups focus on issues of cross-cutting impact. During the past year, SLC groups organized events on multiple topics. Two aspects of **gene editing**, the therapeutic use against disease and ethical issues inherent in human reproduction, were presented in a two-part webinar series this spring. The challenges of **science and risk communication** - and possible solutions - were described in webinars that provided guidance to effective communication and use of social media to create a professional identity. **Occupational exposures** were a factor for our presentation on dermal toxicity. Our group focused on **Big Data** developed both virtual and in-person opportunities to better understand Big Data and how to make it FAIR (Findable, Accessible, Interoperable, Reusable). SLC members played key roles in FutureTox V: New Technologies to Evaluate Organ-Specific Effects for Drugs and Chemicals. You will find our recorded webinars under the Events tab and links to publications under Resources. Check out our newly updated website!

The accomplishments of the SLC are grounded in the expertise and energy of member society representatives. Their perseverance through the pandemic brought these projects to fruition.

Looking ahead, SLC has new work groups leading our efforts on existing and emerging challenges. The use of **animals in research** is a multifaceted issue at the convergence of basic and applied toxicology, risk management and new alternative methods. Wider exposure to **cannabis** raises new public health issues. Big Data efforts will pivot towards **data analysis and visualization**. A continuing education course on **pregnancy risk management considerations in the workplace** will be offered at the International Congress of Toxicology in September 2022. A course on risk communication has been accepted for the SOT annual meeting in 2023.

As the new SLC chair, I thank my predecessors, who have guided the SLC so ably, and the member representatives who bring their camaraderie and talents to our collaborations.

Best regards,

Linda G. Roberts, PhD, DABT  
Chair (2022 - 2023), Scientific Liaison Coalition



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### **Membership**

The SLC is composed of scientific and biomedical organizations which seek to promote the mission stated above. Annual dues are as follows:

**Yearly Participation Dues Levels:**

\$250 for Organizations with up to 250 Members

\$1,000 for Organizations with more than 250 but less than 1,000 Members

\$2,000 for Organizations with more than 1,000 but less than 5,000 Members

\$3,000 for Organizations with more than 5,000 Members

Dues for organizations whose memberships are not based on individuals are negotiated annually and may include non-monetary contributions.

Benefits of membership include:

- Expanded outreach and visibility through global partnerships
- Networking at the organizational and individual levels across diverse scientific societies
- Enhanced, inclusive volunteer and leadership opportunities to advance scientific initiatives
- Identify, foster, and promote awareness of cutting-edge interdisciplinary scientific advances
- Free live webinars for members
- Reduced registration rates at select conferences and meetings



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## **SLC Accomplishments and Activities, July 2021-June 2022**

### **Website**

A complete revamp of the SLC [website](#) was coordinated by the Science and Risk Communication Work Group.

### **Webinars**

Six webinars were organized and hosted by SLC Representatives. Recordings for five are available on the [Resources page](#) of the SLC website.

#### **Profile Building and Research Sharing using Social Media Tools for Scientists**

**Speaker:** Antony Williams, PhD, US EPA, Center for Computational Toxicology and Exposure

**Moderator:** Michele M. Taylor, PhD, US EPA, Center for Public Health and Environmental Assessment; SLC Science and Risk Communications Work Group Chair and representative of the Developmental Neurotoxicology Society

**Date:** June 2, 2022

**Abstract:** This webinar demonstrated how scientists can leverage social media platforms to develop their “**professional science brand**,” accelerate dissemination of their research, and gather alternative metrics for data usage. Many platforms exist for scientists to network and develop a community around our science. The presenter, Antony Williams, offered personal experiences on sharing information, best approaches to engage with both the scientific and non-scientific community, and the benefits of investing time to develop an online profile, as well as the challenges. This work related to effective scientific engagement and communication and the techniques that were presented are useful at any career stage.

### **SLC Accomplishments and Activities, July 2021-June 2022**

#### **Upward in Human Reproduction?: Ethical Issues in Reproductive Gene Editing**

**Speaker:** Megan Allyse, PhD Associate Professor of Biomedical Ethics, Mayo Clinic

**Moderator:** Alan Hoberman, PhD, Charles River Laboratories, Inc, SLC Gene Editing Work Group Chair and representative for North American 3Rs Collaborative (NA3RsC)

**Date:** May 19, 2022

**Abstract:** In November 2018, the scientific community was rocked when He Jiankui, a Chinese biophysicist, claimed that he had overseen the birth of twin girls from embryos gene-edited at *CCR5*, a gene associated with resistance to HIV. He claimed that the infants were healthy and promised to provide sequencing data but declined to make the babies available for medical evaluation, ostensibly for their protection. While problematic on many levels, this incidence must be evaluated in the context of the history of assisted reproductive technologies, all of which have been experimental at some point in time. This presentation reviewed this history briefly in order to highlight the cross-cutting ethical issues that must be considered when considering any new application of assisted reproductive technologies. These included defining the limits of parental freedom to use experimental technologies on future children, the legitimate targets of fertility interference, and issues of justice and equity in applying such technologies.

#### **Considerations on Safety and Efficacy for Gene Therapy of Hemoglobinopathies**

**Speaker:** Olivier Negre, PhD, Co-Founder and Partner at Biotherapy Partners

**Moderator:** Alan Hoberman, PhD, Charles River Laboratories, Inc, SLC Gene Editing Work Group Chair and representative for North American 3Rs Collaborative (NA3RsC)

**Date:** April 11, 2022

**Abstract:** Hemoglobinopathies are severe genetic disorders affecting more than 300,000 newborns worldwide annually. Sickle cell disease is due to a point mutation in the adult  $\beta$ -globin (*HBB*) gene which results in amino acid substitution (Glu  $\rightarrow$  G6 Val) and in the conversion of Hemoglobin A (HbA) to sickle cell hemoglobin (HbS). HbS can polymerize to form long fibers that cause the red cells to become rigid and block blood flow in capillaries. Beta-thalassemia is characterized by reduced or absent production of functional beta-globin. The only curative treatment is allogeneic stem cell transplantation and only a small proportion of patients can benefit from a compatible donor. Different gene therapy strategies are currently being explored and are at different stages of development, from the preclinical proof of concept to clinical trials and marketing authorization. Safety and efficacy considerations were presented for different modalities of gene therapy currently being developed.

### **SLC Accomplishments and Activities, July 2021-June 2022**

#### **Toxmasters: Feedback Makes Perfect**

**Speakers:** Anne Chappelle, SafeBridge Regulatory and LifeSciences Group;  
Andrew Watkins, Speakin' Ezy Toastmasters, US EPA

**Moderator:** Barb Kaplan, Mississippi State University and SLC Science and Risk Communication Work Group representative

**Date:** March 1, 2022

**Abstract:** Effective science communication is a skill that must be consistently practiced and honed to provide meaningful, understandable, and actionable information to a variety of audiences. And although you can practice in front of a mirror, you won't improve without honest feedback. This webinar not only provided training in how to effectively communicate, but to also how to provide critical and useful feedback.

#### **Dermatotoxicology: Occupational and Environmental Aspects**

**Speaker:** Dr. Howard Maibach, Professor of Dermatology, University of California, San Francisco, USA and clinician at The Environmental Dermatoses Clinic, UCSF

**Moderator:** Robert A. Nocco, SLC Occupational Exposures Work Group Chair and representative of the American Industrial Hygiene Association

**Date:** September 21, 2021

**Abstract:** Dermatotoxicology, a toxicology subspecialty, addresses problems associated with skin exposure to chemicals. This webinar with Dr. Howard Maibach reviewed the common environmental occupational skin conditions faced by industrial hygienists, occupational physicians, general toxicologists, and allied health care workers. In addition to reviewing common conditions including dermatitis, learners explored exposure tools for percutaneous penetration, a passive process that can occur following skin exposure to chemicals, as a tool to understand other organ effects.

#### **How to Make Your Little Data Big by Being FAIR**

**Speakers:** Dr. Charles Schmitt, NIEHS; Dr. Sean Watford, US EPA; Dr. Michelle Heacock, NIEHS; and Dr. Christine Kirkpatrick, [GO-FAIR US](#)

**Moderator:** Dr. George Woodall, US EPA and SLC Chair

**Date:** September 2, 2021

**Abstract:** Connecting and tagging your digital information can make it reusable to others. Your research can have a greater impact and you might find new partnerships to further the science. How to do this? By implementing FAIR—a set of guiding principles to make data Findable, Accessible, Interoperable and Reusable. Building upon the SLC webinar *Big Data: What Is It and What Does It Mean to Me?* (April 2020), four speakers were recruited to explain and translate how to use and apply FAIR principles across disciplines. An interactive discussion session closed out the webinar to address questions from registrants. The conversation was continued in a Breakout Session at the Future Tox V meeting held in May 2022.



## SLC Accomplishments and Activities, July 2021-June 2022

### FutureTox V

The SOT FutureTox series focuses on building the road for 21st-century toxicology and risk assessment practices, utilizing *in vitro* data and *in silico* models for predictive toxicology, and taking the high-throughput risk assessment paradigm forward to address challenges in implementing the emerging big-data toolbox for risk assessment and regulatory decision-making.

The proposal for ***FutureTox V: New Technologies to Evaluate Organ-Specific Effects for Drugs and Chemicals*** resulted from SLC discussions. The conference was co-chaired by SLC At-Large Member Dr. Thomas Knudsen; the roster of organizers included SLC At-Large Member Dr. Donna Mendrick and STP representative on the SLC Dr. Kevin McDorman. The SLC Big Data Work Group organized a breakout session which was co-chaired by DNTS Representative to the SLC Dr. Michele Taylor. Originally planned to take place November 18-19, 2020, due to the COVID-19 pandemic, this conference was held May 10-11, 2022 at the Friday Conference Center in Chapel Hill, North Carolina. A manuscript will be submitted to *Toxicological Sciences* where FutureTox I-IV meet summaries are published.

### SLC Collaboration and Networking

Over the course of this past year, 10 meetings of the full SLC membership were held. These meetings focused on fostering ongoing communication, enhancing member organization's collaborations, and generating ideas for future initiatives.

The four active topical workgroups during this period (Big Data, Gene-Editing, Occupational Exposures, and Science and Risk Communication) met on a regular basis to advance their specific initiatives and activities, including organizing webinars, as detailed above.

The SLC did not convene for its annual face-to-face meeting in 2021 due to the COVID-19 pandemic and subsequent change to a virtual format of the Society of Toxicology 2021 annual meeting. However, the SLC convened for a face-to-face meeting March 27, 2022 during the SOT Annual Meeting.

From May 1, 2021 through April 30, 2022, George Woodall served as Chair. On May 1, 2022, Linda Roberts assumed the one-year Chair role, and Richard Becker began a one-year term as Incoming Chair.