2023 Undergraduate Educator Award Goes to Lauren Aleksunes

Lauren M. Aleksunes, PharmD, PhD, DABT, has been awarded the 2023 SOT Undergraduate Educator Award in recognition of her teaching and mentoring of undergraduate pharmacy students and her significant contributions to the development of new curricula and instructional approaches to attract, educate, and retain students in the field. This award, sponsored by the SOT Endowment, recognizes an SOT member who is distinguished by outstanding contributions to the teaching of undergraduate students in toxicology and toxicology-related areas and whose efforts support the Society's strategic efforts to “build for the future of toxicology.”

Dr. Aleksunes received a PharmD and PhD in pharmacology and toxicology from the University of Connecticut in 2002 and 2006, respectively. She completed a postdoctoral fellowship in pharmacology and toxicology at the University of Kansas Medical Center in 2009. She joined the faculty of Rutgers Ernest Mario School of Pharmacy in 2009 and currently serves as Professor. Also, Dr. Aleksunes is concurrently the Director of the Joint Graduate Program in Toxicology at the university.

The majority of her teaching is to undergraduate students (i.e., juniors and seniors). The Rutgers PharmD program is one of the few programs in the country where most students are accepted into the school while enrolled in high school. Dr. Aleksunes's primary teaching responsibility is the Pharmacology and Pharmacogenetics course that is held in the junior year. She teaches 55% of this course content, focusing on the toxicological perspective of covered topics, including dose-response, receptor signaling, regulation of pharmacokinetics/toxicokinetics, and pharmacogenetics/toxicogenetics. She teaches in several other core and elective courses, including Physiology, Pathophysiology, Pharmacotherapy Modules, Introduction to Research, and Developmental and Reproductive Toxicology.

In addition to her important contributions to classroom teaching, Dr. Aleksunes has significantly strengthened and expanded the research opportunities available to undergraduate students in the school. In 2010, she took over as Co-director of the Honors Research Program at the school, reorganizing the curriculum and professional activities of undergraduate pharmacy honors students.
Undergraduate Educator Award (con't)

Dr. Aleksunes also has worked with other faculty in the department to establish and promote Rutgers's now highly successful PharmD/PhD program. Rutgers has graduated five PharmD/PhD students in the field of pharmacology and toxicology, two of whom were trained by Dr. Aleksunes.

She also worked to expand the school's summer undergraduate research fellowship program, which she has taken over as Director. In addition to developing a more formal didactic program for the summer students, which includes career counseling and an industrial field trip, she was key in the department's success in obtaining three highly prestigious grants to support the program. These included grants from the American Society for Pharmacology and Experimental Therapeutics (ASPET) and SOT on which she is the Principal Investigator (PI). She also serves as a PI on a grant from the National Institutes of Environmental Health Sciences (currently in year 12 of funding).

Another notable accomplishment under Dr. Aleksunes's leadership has been the establishment of a pipeline of undergraduate researchers who pursue graduate education in pharmacology and toxicology, particularly students from underrepresented minority backgrounds, as well as those from small colleges without significant research opportunities. To accomplish this, Dr. Aleksunes partnered with the Research Intensive Summer Experience program at Rutgers that supports national recruitment. This pipeline has benefited the Rutgers Pharmacology/Toxicology PhD and postdoctoral program with a third of its trainees from underrepresented backgrounds.

Dr. Aleksunes also has been active in teaching one-on-one in her laboratory, and she holds a reputation as an outstanding teacher and mentor. Her students have won major awards at scientific meetings hosted by SOT and ASPET, and some have received fellowship funding from the National Institutes of Health, the American Foundation of Pharmaceutical Education (AFPE), and the Pharmaceutical Research Manufacturers of America.

Further evidence of her teaching excellence can be found in her recent awards. In 2014, she was selected as a recipient of the highly prestigious Rutgers Presidential Fellowship for Teaching Excellence and in 2015 for the Mentor of the Year Award from AFPE. In 2018, she was awarded the Excellence in Teaching Award from the NJ Health Foundation, and in 2020, she was named the Rutgers University Chancellor's Educator of the Year. Recognizing her strong commitment to students, the graduating PharmD class of 2021 voted Dr. Aleksunes as the William and Helen Levine Teacher of the Year. Additionally, this year, she received the Rutgers Biomedical and Health Sciences Distinguished Mentor Award.

Please join us in congratulating Dr. Aleksunes for receiving the SOT Undergraduate Educator Award!

**Looking to Network with Amazing Undergraduate Educators?**

**Join ToXchange Undergraduate Educator Network**

ToXchange is an excellent venue to exchange ideas, learn about resources and opportunities, and receive SOT announcements for undergraduate faculty. Join ToXchange to harness the power of our UEN network!

1. Log in to ToXchange [https://toxchange.toxicology.org/home](https://toxchange.toxicology.org/home)
2. Click the “Communities” tab
3. Select “Open Groups”
4. Find “Undergraduate Educator Network” and select the “Join” button

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Undergraduate Educator e-Newsletter February 2023
FUTURE is pleased to announce the 2023 recipients of the SOT Undergraduate Research Award. These fourteen students were selected from a large and impressive pool of applicants. These awards recognize outstanding undergraduates who have not yet received their bachelor’s degrees and are presenting research at the SOT Annual Meeting and ToxExpo. The goal of these awards is to foster interest in graduate studies in the field of toxicology. Winners will receive travel support to attend the March SOT meeting as well as recognition and pairing with mentors. Congratulations to the students. FUTURE would also like to extend a special thank you to the research mentors of the 2023 award recipients!

Please add these posters to your schedule and stop by to congratulate the award recipients. The author will be at the poster at the time listed.

Monday, March 20

Isabella Boyack
University of Massachusetts, Amherst, Amherst, MA
#3517 Potential Recovery of Exocrine Pancreas Growth Following Embryonic PFAS Exposure in Zebrafish (Danio rerio)
9:00 am-10:45 am

Jenna Swihart
Purdue University, West Lafayette, IN
#3529: Comparing Effects of Atrazine Exposure on Neuroendocrine Molecular Targets at Two Developmental Exposure Periods in the Zebrafish
9:00 am-10:45 am

Shivani Ayyagari
North Carolina State University, Raleigh, NC
Research conducted at: NIEHS, RTP, NC
#3578: Evaluation of the Causal Relationship between PFAS and Lactation Impairment
10:45 am-12:30 pm

Rumaan Cheema
University of California Riverside, Riverside, CA
#3259: In Vitro Stem Cell Models to Predict Adverse Effects of Chemicals on Bone Development
10:45 am-12:30 pm

Chloe Kurr-Ing Chou
University of California Davis, Davis, CA
#3340: Effect of Metals on Wood Smoke PM2.5 Toxicity in Human Airway Epithelium
2:30 pm-4:15 pm

Abucar Mohamed
College of Idaho, Caldwell, ID
#3430: The Cytotoxic Effects of Unvaped VUSE-Alto® and JUUL E-Liquids on Human Osteoblast-Like Cells MG-63 Cells
2:30 pm-4:15 pm
Tuesday, March 21

**Anantha Akshitha Korrapati**
University of Alabama at Birmingham, Birmingham, AL
#3909: Heavy Metal Exposure Induces Senescence as a Mechanism of Dopaminergic Neurodegeneration
2:30 pm-4:15 pm

**Nivedita Krishnakumar**
Rutgers, The State University of New Jersey, Piscataway, NJ
#4007: Orexin 1 Receptor Antagonist SB-334876 Impairs Sustained Attention at Supra Pharmacologic Doses
2:30 pm-4:15 pm

**Sophie Alice McKenzie**
Western University, London, ON, Canada
Research conducted at: University of Calgary, Calgary, AB, Canada
#3952: Characterizing Neurogenesis in Zebrafish Exposed to RoundUp® over Neurodevelopmental Timepoints for Protection Against against Infant Respiratory Toxicity
2:30 pm-4:15 pm

Wednesday, March 22

**Kaitlyn Lewars**
Duke University, Durham, NC
#4629: The Impact of Age on Ozone Responses in Rodents
9:00 am-10:45 am

**Keerthana Sai Prayaga**
Texas A&M University, College Station, TX
#4694: Quantification of Sulforaphane Metabolites in Human Breast Milk for Protection against Infant Respiratory Toxicity
10:45 am-12:00 pm

**Celine Yvonne Campos**
Regis University, Denver, CO
Institution at which research was conducted: Colorado State University, Fort Collins, CO
#4556: Manganese-Induced Neurobehavioral Abnormalities and Related Neurotoxicity
2:30 pm-4:15 pm

**Sawyer H. Smith**
Park University, Parkville, MO
Research conducted at: University of Kansas Medical Center, Kansas City, KS
#4758: Delayed Liver Regeneration and Enhanced Neutrophil Recruitment After after Severe Acetaminophen Overdose in Female Mice
2:30 pm-4:15 pm

**Chrisula M. Stone**
Northern Kentucky University, Highland Heights, KY
Research conducted at: Northern Kentucky University, Highland Heights, KY, and Weber State University, Ogden, UT
#4394: A Bander's Contribution to Ecotoxicology: Comparison of Mercury Concentration in Feathers and Blood of Nestling Tree Swallows Demonstrates Feathers' Suitability as a Biomonitoring Tool
2:30 pm-4:15 pm
Undergraduate Activities

Undergraduate Education Program Sunday, March 19
Undergraduate students learn more about the breadth of science related to toxicology through presentations and a case study, with the opportunity to network with graduate students and toxicologists. Breakout sessions feature tips on applying to and succeeding in graduate school and career opportunities in different employment sectors. The afternoon concludes with open time to meet with representatives of various graduate programs in toxicology. Davidson Ballroom A, 8:00 am-5:00 pm

Student/Postdoctoral Scholar Mixer Sunday, March 19
This event, which follows the SOT Welcome Reception, is the opportunity for undergraduates to network with other undergraduates, graduate students, and postdoctoral scholars as well as learn more about involvement in SOT component groups. Davidson Ballroom B, 7:30 pm-9:00 pm

In Vitro Lecture and Luncheon Monday, March 20
During lunch, the speaker will present a case study topic which will then be discussed at each table. Guests at this event include undergraduates, graduate students, and postdoctoral scholars, and the toxicologists who serve as hosts and discussion facilitators. Davidson Ballroom A, 12:00 noon-1:30 pm

Undergrad Gab with a Grad over Grub Tuesday, March 21
All undergraduate students are invited to this informal gathering to learn more about engaging with SOT and to network with graduate students. Learn about their experiences as trainees and what different graduate programs are like. Room 104E, 12:30 pm-1:30 pm

Activities for Undergraduate Educators

CDI Reunion Saturday, March 18
Meet the 2023 Undergraduate Diversity Program students and greet friends and supporters of the program at this networking event. Davidson Ballroom A, 7:30 pm-8:30 pm

Undergraduate Educator Network Meeting Monday, March 20
The Undergraduate Educator Network Meeting is for all faculty involved in the teaching of toxicology to undergraduates, trainees thinking about teaching, and for those interested in including toxicology at the undergraduate level. Learn about initiatives for undergraduate faculty, provide your input, network with your colleagues, and discuss shared interests. Room 104E, 4:30 pm-5:30 pm

Education, Ethics, Legal, and Social Issues Poster Session, Tuesday March 21
Come to discuss new educational innovations with the presenters and your Colleagues. ToxExpo, Hall C, author attended 2:30 pm-4:15 pm
ToxScholar Undergraduate Outreach—A Toxicologist’s Story

The SOT ToxScholar Program provides an opportunity for SOT members to visit primarily undergraduate college campuses domestically or internationally to present toxicology content to students majoring in disciplines such as chemistry, biology, and environmental science and to discuss career opportunities in toxicology. Below, Dr. William Beierschmitt shares his experience returning to his alma mater, Mount St. Mary’s, as a ToxScholar.

Reflecting on so many fortuitous events in my professional life, I have always realized that I wanted to give back to Mount St. Mary’s, the place where it all started. As such, I have been a member of the external Board of Advisors to the School of Natural Science and Mathematics (SNSM) for several years now, providing assistance and suggestions to help where I can based on my own life and work experiences. In this capacity, given that toxicology is seldom a scientific discipline found in most undergraduate institutions, I approached both Dr. Christine McCauslin (Dean of SNSM) and Dr. Betty Eidemiller (Education Director of SOT) about my interest in conducting some sort of outreach to the SNSM on toxicology as a potential career choice. Dr. Eidemiller introduced me to the activities of SOT’s Faculty United for Toxicology Undergraduate Recruitment and Education (FUTURE) Committee, and coordinated having them sponsor a ToxScholar presentation at the SNSM. After receiving materials and advice from Dr. Eidemiller on a path forward, the plan was put in place for me to present on campus (Wednesday, October 19th) with the enthusiastic support of Dean McCauslin. To help me present I reached out to a colleague, Dr. Tim McMahon, another toxicologist (and member of SOT) and a graduate of Mount St. Mary’s who is currently employed at the Environmental Protection Agency (EPA) in Washington DC.

The agenda developed by Dr. McCauslin and the faculty was comprehensive and interactive. Both Tim and I were given time (about 20 minutes) to speak to students attending a General Chemistry (freshman taught by Dr. Sarah Krueger) and Anatomy and Physiology (Sophomores and Juniors taught by Dr. Kari Taylor-Burt) class about what toxicology is, how one becomes a toxicologist, and the diverse types of work that we do. In both instances we ended with a Q&A session, and we were excited to see how engaged and interested the students were, receiving some particularly good queries from them! Next we had formal presentations in the main auditorium of the science building, with about 35 students and several faculty in attendance. The presentations were also broadcast and made available to students and staff via the Zoom meeting on-line platform. Topics included Toxicology as a Career Choice, Toxicological Risk Assessment of Impurities in Pharmaceutical Products, Regulatory Toxicology, and the Science Behind Pesticide Registration. The main purpose was to communicate to the students that while we are both trained toxicologists, that there are many specialty areas that exist within our field, but in the end we share the same goal of helping to make the world a safer place. What struck me when I began the first talk was that I was presenting in the same room as Dr. Morgenroth when he came to Mount St. Mary’s to talk with us students about toxicology all those years ago, only I was the one standing at the front of the class now. In terms of undergraduate outreach as it relates to toxicology, I had come full circle.
Both Tim and I were pleased with how the presentations went, and the engaging Q&A session that followed. We received positive feedback from faculty and students concerning our presentations and the overall visit. I do feel that we met our objective of introducing toxicology as a potential career path to the students, and based on some interactions that both Tim and I had during our visit feel we did spark some genuine interest in many of the students that attended the event. It is truly outstanding that SOT had the foresight to develop the many programs and opportunities that are available to undergraduates to foster interest in toxicology, and I would encourage any student to visit the SOT website to learn more about them.

To read the full story, please visit the SOT Blog.

Interested in becoming a ToxScholar visitor?
If you are interested in planning a visit yourself and have identified a college and potential host, you can use SOT resources such as introductory toxicology slides and interest cards. For more information, visit the SOT ToxScholar page.

**Undergraduate Educator Network Webinar Series**

The next Undergraduate Educator Network Webinar “Programs Supporting Underrepresented Undergraduate Students in STEM” will be March 3, 2023, at 12:30 pm ET.

This webinar will feature two faculty discussing efforts to increase underrepresented students in toxicology and research. Speakers include Dr. Prakash Nagarkatti, Senior Research Advisor to the President of the University of South Carolina, Columbia, SC, and Dr. Celia Dodd, Director of Undergraduate Research and Associate Professor of Biology, Fort Valley State University, Fort Valley, GA. Federal agencies support several grant programs to retain undergraduate students on STEM pathways and into STEM-based careers. Each speaker will provide overviews of their experiences with federally funded programs to encourage progression of undergraduates to careers in the sciences, including developing courses and creating laboratory experiences. The presentations will be followed by a panel discussion and attendees will have the opportunity to ask questions.

The goal of this webinar is to share examples of successful programs and provide ways faculty and institutions can create environments that retain undergraduate students, especially those who are underrepresented in the sciences, in science and into toxicology-related careers.

Speakers are Dr. Prakash Nagarkatti (left) and Dr. Celia Dodd (right).
North Carolina Regional SOT Chapter Welcomes Undergraduates

The North Carolina Society of Toxicology (NCSOT) Regional Chapter hosted its annual scientific conference October 19, 2022 in-person at the North Carolina Central University in Durham, NC. The theme of this year's event was “Climate, Chemicals, and Carolina”. Keynote speakers Dan Wiltzie, Drs. Jennifer Runkle, Meghan Reboli, Shu Yang, and Donna Hill were invited to discuss the intersection of climate change and toxicology, challenging the toxicology community to consider the impact of climate exposures on human health, and how we can better leverage our methods, approaches, and interdisciplinary collaborations. In addition, the meeting showcased from 75 undergraduate, graduate and postdoctoral trainees from across North Carolina.

One highlight from the meeting was the Undergraduate Session where trainees were invited to learn more about toxicology as a discipline, and the diverse career opportunities within the industry, academia, and government sectors. Moderated by Dr. AtLee Watson, the event began with a lunch and learn presentation by Dr. Brandy Beverley (Division of Translational Toxicology, NIEHS) entitled “Toxicology: Past, Present, and Future.” Following lunch, trainees then went on guided poster tours and were able to network with exhibitors. The session concluded with a career panel and Q&A with local professionals from the EPA, NIEHS, Inotiv (contract research organization), ICF (consulting), and North Carolina A&T University (academia). An estimated 40 undergraduates attended the session.

Overall, approximately 220 scientists attended the annual meeting from 23 organizations including seven businesses, 13 universities, and three state/federal government organizations. There were 118 trainees in attendance (50 undergraduate students, 47 graduate students, and 21 postdoctoral trainees). Seven exhibitors were also present at the meeting to advertise internships and early career job opportunities.
Resources for Educators

CourseSource is a peer-reviewed and open-access journal that publishes tested, evidence-based undergraduate activities. The articles include details in a format, style, and voice that supports replicability. Publishing activities in CourseSource provides authors with recognition of the creativity, experience, and time needed to develop effective classroom materials, while also supporting the dissemination of evidence-based teaching practices.

Authors can list CourseSource articles in the peer-reviewed publication section of their curriculum vitae and use them as evidence for excellence in teaching.

CourseSource has partnered with SOT to include a Toxicology library among its evidence-based teaching resources.

The Workshop from SOT 2022 in San Diego is still available!

Publishing Educational Toxicology Exercises in CourseSource: A Step-by-Step Workshop for Preparing Your Manuscript.

There are currently three items in the CourseSource Toxicology library.

Pick your Poison: A Semester-Long Case Study for Undergraduate Toxicology
Joshua P. Gray, US Guard Academy
Students are each assigned to or choose their own individual toxicant as a case study from a pre-selected list of toxicants (poisons) that align with the theme of the course. As content is covered in the course, students complete ten scaffolded, low-stakes writing modules that are shared with groupmates of 4-5 students.

A Case Study for Teaching Toxicology: Using Whales as an Indicator for Environmental Health
Bryanna Rupprecht, Washington College; John Pierce Wise, University of Louisville; Mindy Reynolds, Washington College
In this activity, upper-level students in an introductory toxicology course learn to interpret data from primary literature, draw conclusions about how toxicants, specifically metals, can impact susceptible populations, and understand the One Environmental Health approach.

Pesticides in My Smoothie Bowl?
Shuangying Yu, Central Piedmont Community College; Scott M. Weir, Queens University of Charlotte
This case introduces concepts and processes of ecological and human health risk assessment in pesticide registration by the US EPA. In Part 1, dialogues among three college friends introduce organic food, pesticides, and the concept of risk. Part 2 and Part 3 build on Part 1 and focus on ecological risk assessment and human health risk assessment, respectively.

Spotlight on Diversity, Equity, and Inclusion in Education

Equitable Accommodations
A recent article published by the American Society for Microbiology, “Microbiology for Blind or Visually Impaired Students,” highlighted steps to create equitable classroom environments for students with visual disabilities. The article provides tangible examples of how faculty can facilitate accessible and inclusive learning opportunities through in-classroom accommodations, safety considerations, and creating accessible online content. Options of low-cost safety considerations include using tactile indicators like sand paper to indicate that a lab material may be dangerous and considering protective equipment for service animals was discussed. Access the full article here.

Advocating for Deaf Scientists
A recent article published by the American Society for Microbiology highlighted Dr. John Dennehy, a Professor of Biology at Queens College, City University of New York. Dr. Dennehy was a member of a team monitoring SARS-CoV-2 evolution by surveilling wastewater from New York City. The article also contains an interview with Dr. Dennehy on his experiences as a deaf scientist including discrimination, accommodations, changes in career path, and need for self-advocacy.

Access the article “Advocating for Deaf Scientists: Spotlight on John Dennehy” here.
Resources for Educators

Confronting Failure: Approaches to Building Confidence and Resilience in Undergraduate Researchers

Edited by Lisa A. Corwin and Louise K. I. Charkoudian (Haverford College) with Jennifer S. Heemstra

In this open-access book, authors from a range of disciplines—from geosciences to drama—capture how failure manifests and can be productively supported in a range of undergraduate research experiences. Whether the learning environment is a STEM research lab, a course-based undergraduate research experience (CURE), a humanities summer undergraduate research experience, a library, or the stage, students can benefit from support when they experience a gap between an expected/desired result and their lived experience. These perspectives and disciplinary contexts address failure from different vantage points and lenses, with the common focal point of nurturing undergraduate success through leveraging failure as an opportunity to build confidence and resilience. Represented are different institutional types, classroom and non-classroom environments, and programmatic and individual efforts. Download your free copy here.

St. John's Celebrates First Annual Toxicology Week

The Toxicology Program at St. John's University observed the first annual “Toxicology Week” from November 6-11, 2022. They will be continuing it as a tradition in the future and have created a logo. This particular week was chosen to encompass one of the days ascribed as Paracelsus’ birthday and comes in the middle of the fall semester.

St. John’s held two events for the 2022 observation. The first was the “Dean’s Hour Toxicology Career Night,” which they hold annually to give their undergraduate and graduate toxicology students the opportunity to interact with their wonderful alumni. The second event was “Toxicology Movie Night,” which featured “Dark Waters” along with a side of popcorn. Sue Ford, originator, said, “It’s time that toxicology has its own National Week the same as other disciplines and professions have theirs, such as “National Chemistry Week” and “…. Month.” They hope that it catches on to celebrate our discipline and its contributions.

P.S. Did you know that Paracelsus (as a statue) makes an appearance in one of the Harry Potter movies? If you are interested in planning events for November 2023, please contact Sue Ford at St. John’s University.
FUTURE Committee Member Profile: Dr. Wilson Rumbeiha

This newsletter feature highlights a FUTURE member in their final year of service on the committee. SOT members may access the full list of **FUTURE Committee members**.

**Q: Describe your journey in toxicology. When did you first become interested in the subject?**

My first introduction was through the curriculum in veterinary school at Makerere University, Kampala, Uganda. After veterinary school, I worked as a teaching assistant for veterinary toxicology for three years. I subsequently joined graduate school at University of Guelph in Ontario, Canada, where I investigated the toxic interaction between methylmercury and alcohol on the kidney. It was really in graduate school where I fully became aware of the importance and breadth of toxicology as a profession, and I became fully vested in this beautiful profession.

**Q: How has being a member of the FUTURE Committee of SOT helped you from a faculty development perspective?**

Serving on the FUTURE Committee with passionate and experienced undergraduate educators has been a blessing to me. I have learned a lot from my interactions with undergraduate educators, and have been exposed to cloud-based curriculum resources. The interaction with UEN educators has been immensely valuable to me, as it has shaped my approach in developing teaching modules for the ToxMSDT program targeted to undergraduate students. Therefore, when my term ends on this committee I plan to remain engaged with the UEN.

**Q: What advice can you give to members of the UEN who are new to toxicology or who are looking to incorporate toxicology into the courses they teach?**

Through this network your work will become a lot easier as new ideas are constantly exchanged, and new teaching resources are developed and shared. As you develop courses to teach toxicology take advantage of shared undergraduate teaching resources available online. Good examples include ToxMSDT e-learning modules, CourseSource, LifeSciTRC, *Beyond Benign Toxicology for Chemists*, and resources on the SOT website including Eminent Toxicologist Lectures.

**Q: In three to four sentences, which is not easy to do, describe your research to our readership.**

For basic toxicology I am investigating the role of the environment in neurodegeneration and am focused on understanding mechanisms of hydrogen sulfide-induced neurotoxicity and neurodegeneration. For translational research I am currently developing a simple tissue-based method for diagnosis of sodium monofluoroacetate poisoning in veterinary diagnostic laboratories.

**Q: Aside from toxicology, what hobbies or other interests do you pursue?**

I enjoy walking, biking, current affairs, traveling, investing, and soccer. The World Cup soccer season is especially an exciting time for me and my family.

**Q: How can toxicology help to make a more equitable and inclusive world?**

I say through education of the minority communities and workforce capacity building in toxicology in developing countries around the world. The poor around the world are the most vulnerable to toxic-induced diseases. Until the time when toxicants will become as recognized cause of disease as much as malnutrition and infectious diseases, the world will not be equitable and inclusive. I grew up in sub-Saharan Africa, where the impact of toxicology is still abysmal partly because lack of workforce capacity of trained toxicologists. When communities become aware of the impact of toxicants in their environment and community they will likely solve those problems.

**Q: This is your final year on the FUTURE committee. What will you miss most about serving SOT in this way?**

I have really enjoyed my time serving on this dynamic committee. Undergraduate education is the bedrock and future of toxicology, and this committee has important work to do. I will miss the learning part of it through interaction with colleagues and reading SOT Undergraduate Research Award applications from which I have also learned a lot about the important research going on in laboratories across the country.
Undergraduate Faculty Grant Applications Due April 7

Two grants are available from SOT: 1) SOT Undergraduate Faculty Research Grant, and 2) the SOT Undergraduate Faculty Development Grant. These grants provide up to $1,500 in support for an undergraduate research project research or a faculty professional development endeavor. SOT provides this funding to support faculty at primarily undergraduate institutions, which are often underresourced for research, to encourage their professional development and engagement in toxicology as well as acknowledge and aid their potential for recruiting students into toxicology. Applications are due April 7, 2023, for projects in summer 2023 or in the 2023-2024 academic year. Let’s all work to help keep SOT’s future bright!

Session Proposals for the 2024 SOT Meeting Due May 15

Workshops and symposium sessions at the SOT Annual Meeting provide an opportunity for undergraduate educators to emphasize the importance of training undergraduates in toxicology. There have been many forces influencing toxicology education in the last few years, and these could be highlighted in a workshop or symposium at the 2024 Annual Meeting. Topics could touch on innovative teaching strategies, novel risk communication approaches, affordable toxicology laboratory activities, summer training activities and opportunities for undergrads, active learning and problem-based learning approaches in toxicology, translating toxicology to the public, or any other area or issue that would be of interest to SOT members, especially those involved in training of students or educating laypersons.

The deadline to submit session proposals for the 2024 Annual SOT Meeting is May 15, 2023. It takes time to put together an attractive session proposal, to line up speakers, and to obtain buy-in from one or more component groups before submission, so get together soon with a colleague or two to brainstorm and write a great proposal. Bring your ideas to the Undergraduate Educator Network meeting during SOT or share them with a FUTURE member for more discussion.

Helpful information can be found on the SOT website beginning in March.

ToxMSDT Applications Due April 28

The Toxicology Mentoring and Skills Development Training Program (ToxMSDT), housed at the University of California Davis, is a special opportunity for underrepresented undergraduate students to participate in a year-long mostly remote toxicology training and mentoring program. Funded by the National Institute of Health, the goal of this program is to attract diverse undergraduate students from around the United States to pursue careers in biomedical research, especially in the field of toxicology. Successful applicants will be teamed with a mentor meeting remotely throughout the year. In-person activities include the program kickoff workshop at the University of California Davis, a visit to the mentor’s work site, attendance of the annual Society of Toxicology meeting, and a celebration of the program successes at the Capstone Event at Tuskegee University. Online learning modules are provided throughout the duration of the program to increase mentees knowledge about toxicology. Travel cost support for programmatic activities will be provided by ToxMSDT. This program supplements the regular academic pursuits of students. Start date is September 05, 2023, with the end date of May 31, 2024.

ToxMSDT Mentee Applications can be submitted until April 28, 2023.

ToxMSDT Eligibility Requirements:

• Minimum cumulative GPA of 3.0
• Completion of at least one semester of general biology and general chemistry
• Enrolled in an accredited undergraduate institution at the time of application, with continuing enrollment for the next academic year concurrent with the ToxMSDT program
• Member of a group underserved in the biomedical sciences (more information can be found in this NIH notice).
• US citizen or US permanent resident

For more information, please contact Wilson Rumbeigha.
The Faculty United for Toxicology Undergraduate Recruitment and Education (FUTURE) Committee is tasked with recruitment, retention, training, and education of undergraduates interested in toxicology. “Faculty” in FUTURE is inclusive, including those outside of academia, who promote toxicology career paths for undergraduate students.

Members (2022–2023)
Emily Notch Ford, PhD, Chair, Western New England University; Jaime Mirowsky, PhD, Co-Chair, SUNY ESF; Robin Bright, PhD, Fort Valley State University; Tirupapuliyar Damodaran, PhD, North Carolina Central University; Nick Filipov, PhD, University of Georgia; Jodi A. Flaws, PhD, University of Illinois, Urbana-Champaign; Katie Paul Friedman, PhD, US EPA ORD-NCCT; Paige Lawrence, PhD, University of Rochester Medical Center; Courtney Roper, PhD, University of Mississippi; Robert Roth, PhD, Michigan State University (emeritus); Wilson Kiiza Rumbeihia, PhD, University of California Davis; Karen Watanabe, PhD, Arizona State University; AtLee Watson, PhD, Inotiv; Kimberly Zaccaria, PhD, SRC, Inc.; David Blake, PhD, Liaison from CDI, Fort Lewis College; Alyssa Merrill, BS, Graduate Student Representative, University of Rochester; Dorothy You, PhD, Postdoctoral Representative, University of California Davis; Christine Perdan Curran, PhD, SOT Council Liaison, Northern Kentucky University; Robyn Leigh Tanguay, PhD, SOT Council Liaison, Oregon State University; and Betty Eidemiller, PhD, SOT Staff, SOT Headquarters.

Thanks to the members completing their terms on FUTURE April 30, 2023
Emily Ford, PhD, Chair 2022-2023
Jodi A. Flaws, PhD
B. Paige Lawrence, PhD
Katie Paul Friedman, PhD
Wilson Kiiza Rumbeihia, DVM, PhD, DABT, DABVT

Ideas for the SOT Undergraduate e-Newsletter?
Contact Tirupapuliyar Damodaran or Kimberly Zaccaria, Newsletter Leads; Courtney Roper, Newsletter Team; or Emily Ford, FUTURE Chair

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

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