Message from the PDA Chair:

Greetings SOT Postdocs!

The days are getting longer; the temperatures are getting higher and birds are singing their songs in the morning here in Indiana. This morning, my walk to lab was accompanied by the smell of freshly mowed grass. I don't know about you, but for me this smell means spring is in the air! With spring comes the SOT Annual Meeting. I hope that all of you who were able to attend the meeting enjoyed it, made connections and talked lots of science. On behalf of the executive board, I want to thank all of you who attended activities hosted by the PDA. It was great to see many of you at the PDA Luncheon. Other activities organized by the PDA Executive Board were poster tours and the Career Exploration through Speed Informational Interviews event.

As Chair of the PDA Executive Board, I want to emphasize that SOT is trying its best to keep the specific and unique situation of postdocs in mind when they strategically plan the direction and goals for the upcoming years for the Society. This point was brought up by SOT’s President, Dr. Germolec, during her speech at our luncheon. SOT Council and the PDA Board frequently interact to make sure the needs of postdocs are incorporated in the decision-making process. In order to guarantee postdoc voices are heard, we need to hear from you! Please feel free to reach out to the PDA Executive Board with any questions or comments you may have. Also, you can help!

There are still SOT Component Groups, Special Interest Groups, and Specialty Sections looking for a postdoctoral representative. If you are interested in becoming more involved in the Society, these are great opportunities. A list with open positions is included in this newsletter.

Finally, this is my last message from the PDA Board to you. I really enjoyed serving my two-year term as Vice Chair and Chair. I learned a lot, faced challenges but also had many laughs. Now it is time to move on. I will leave the board in the capable hands of my successor, Dr Olawande Olagoke.

Sincerely,
Anke Tukker
Chair of the SOT PDA Executive Board
Congratulations to the Best Postdoctoral Publication Award Winners!

Andres Henriquez, PhD
Health Canada
Ottawa, ON, Canada

Stress drivers of glucose dynamics during ozone exposure measured using radiotelemetry in rats.
Environmental Health Perspectives, 130(12).
https://doi.org/10.1289/ehp11088

Rebekah Petroff, PhD
University of Michigan
Ann Arbor, MI

Mediation effects of DNA methylation and hydroxymethylation on birth outcomes after prenatal per- and polyfluoroalkyl substances (PFAS) exposure in the Michigan mother-infant Pairs cohort.
Clinical Epigenetics, 15(1).

Xian Wu, PhD
East Carolina University
Greenville, NC

Cardiac development in the presence of cadmium: an in vitro study using human embryonic stem cells and cardiac organoids.
Environmental Health Perspectives, 130(11).
https://doi.org/10.1289/ehp11208
What was your reaction upon receiving this award, and how will it help you pursue your research?

Surprise and gratitude. This award will help to disseminate our research and move forward techniques and ideas presented in our publication.

In non-technical terms, describe your research and work, including your future goals. Also, provide details on the specific research for which you won this award.

I am currently working as a postdoctoral researcher in inhalation toxicology at Health Canada. My goals include advancing the field of inhalation toxicology by quantifying endpoints associated with deleterious effects induced by different inhalants, establishing new systems aimed to realistically represent the interaction between cells and air pollutants, and unveil novel mechanisms by which different exposures might alter cell health. Our awarded research explored how ozone inhalation in rats induced rapid changes in circulating glucose using novel real-time monitoring and how these changes were regulated by stress hormones.
Best Postdoctoral Publication Award Awardees

Rebekah Petroff, PhD
University of Michigan, Ann Arbor, MI


What was your reaction upon receiving this award, and how will it help you pursue your research?

I was deeply honored and surprised to receive this award. This project was one that opened a lot of doors for my own research, and I hope that this award will allow it to reach more people and expand its impact.

In non-technical terms, describe your research and work, including your future goals. Also, provide details on the specific research for which you won this award.

I am currently an AAAS Science and Technology Policy Fellow, learning about ways our science supports and interacts with policy and policymakers. As part of my time as a fellow, I am embarking on a research project to understand the scientific and legal perspectives on uncertainty in toxicology and science more broadly. I hope that my career revolves around research that helps lower the toxic burden of chemicals in people, animals, and the environment.

This research project was focused on understanding how the common class of chemicals, called PFAS, impacts the epigenome in early life development. The epigenome is the collection of chemical marks that regulates gene expression without changing the genome. We found that in utero PFAS exposure is associated with changes in two different types of marks in the epigenome, which could be related to health effects later in life.
Best Postdoctoral Publication Award Awardees

Xian Wu, PhD
East Carolina University, Greenville, NC


What was your reaction upon receiving this award, and how will it help you pursue your research?

After reading the email twice, my excitement about winning the award bubbled up, and I quickly shared the news with my postdoc mentor, Erik. He had always been very receptive to the project ideas for the paper. This award has cemented my confidence in employing the self-organized organoid for developmental cardiotoxicology research. It also guides me in steering my interdisciplinary research, which utilizes human stem cell models for studying environmental toxicology and human disease, in my current role as a faculty member in the Department of Pharmacology and Toxicology at East Carolina University. Moving forward, I aim to broaden the scope of this human-relevant model to include more studies on emerging contaminants and their mechanisms.

In non-technical terms, describe your research and work, including your future goals. Also, provide details on the specific research for which you won this award.

My research involves using human stem cells to create models that mimic how diseases affect the heart and brain. We’re particularly interested in how harmful substances in the environment can impact human health during the early stages of
development. We use techniques that let us see how cells respond to these substances and build tiny organ-like structures to study these effects more closely. Our work also looks into how these substances can change the way genes work in cells.

Additionally, we're exploring how to use stem cells to better understand diseases that affect the heart and brain, like Parkinson's disease. We have been working on creating tiny heart-like structures to study heart diseases such as cardiac fibrosis and cardiomyopathy, and we have also developed models to study how brain cells, including microglia, are affected in Parkinson's disease, focusing particularly on the parts of the cells that supply them with energy. Looking forward, we aim to deepen our understanding of how diseases develop and progress, especially those related to the heart and brain. We hope to use this knowledge to find new ways to prevent and treat these conditions.

In the cardiac development in the presence of cadmium research, we've developed a special 3D model to explore how being exposed to a metal called cadmium might cause heart problems in newborn babies. Each year, about 40,000 babies in the U.S. are born with these heart issues, making it a common birth defect. Cadmium gets into the environment from mining and factories and can be found in air, soil, water, and even tobacco. Plants can soak up cadmium from the soil, which then gets into our food.

Our approach, utilizing human stem cells, demonstrates the early development of a baby's heart during the neonatal stage. We found that even a small amount of cadmium can interfere with the growth of important heart cells. This helps us understand how cadmium might cause heart defects. Also, we noticed that cadmium harms the overall working of the model heart. Interestingly, we found that cadmium has a strong negative effect on heart cell development if the exposure happens early on, but this isn't the case if the exposure occurs later.
Disclaimer: Everyone should follow their own path to success. Everyone should tailor the definition of success based on their own standards. Here is my story and I hope parts of it will resonate in different ways for different readers.

Now I can move forward and introduce myself. My name is Alessandro and I am an Assistant Professor. I am not the most talented scientist there ever will be. I am definitely not the most organized. I am a bit obsessive-compulsive. I like to give a 100% effort for everything I am passionate about, but I have to give 150% effort (pardon the mathematical fallacy) when I do not like something.

I have mixed memories of my postdoctoral experience. After receiving my PhD in 2015, I spent a year in the same institution to complete my papers and identify the right home for the next chapter of my training. When I moved to the department of Respiratory and Critical Care Division at the U. of Pennsylvania, I transitioned into a new scientific field. While I loved life in Philadelphia, I felt I was losing my connection with the two themes that used to identify me: toxicology and environmental health.

During my Rutgers University days, I was mesmerized of the impact the Society of Toxicology community has on the development of a young scientist-to-be. As a
graduate student and a foreign national, I wanted to generate those strong scientific and personal connections, so I committed to become an active member of the Society through service with specialty sections and regional chapters.

Moving away from toxicology was somewhat heartbreaking because I was afraid to lose the surrogate family I built at SOT. Luckily, my postdoctoral mentor was extremely supportive of my desire to remain involved despite carrying out a project with limited-to-no toxicology emphasis. During this time, I found my way as the postdoctoral representative for the Immunotoxicology Specialty Section. While my duties initially focused on coordinating the immunotoxicology SS newsletters and networking event, I received incredible support to develop and submit scientific symposia to be presented at the annual meeting. The successes in those endeavors gave me an immense amount confidence in my leadership abilities and represent the foundation to my subsequent experiences as a Councilor and now Vice President for the Specialty Section.

Collectively, my postdoctoral experiences have shaped my desire to stay in academia where I hope to facilitate the development of the next generation of scientists. At the same time, my continued service as a representative strengthened my connections within the toxicology field and allowed me to find my place back in the environmental sciences as a faculty member.
The Transformative Role of Postdoc Representative Experience in Career Development

As a former Postdoc Representative within the Specialty Section of Biological Modeling (BMSS) in the Society of Toxicology (SOT), I can confirm that it has had a significant impact on my career development. Serving as a coordinator between postdoctoral researchers and the broader scientific community not only obtained invaluable experience in leadership skills but also opened a window to numerous career opportunities.

One of the most significant ways in which my experience as a Postdoc Rep shaped my career was by enhancing my communication and networking abilities. Through organizing events, attending conferences, and facilitating discussions, I trained my interpersonal skills and a robust professional network within the field of toxicology. These connections facilitate accessing job opportunities, collaborating on research projects, and even acquiring funding for my work. In particular, I organized mentoring events within the BMSS in both 2022 and 2023.

These events provided a platform for me to connect with established researchers, industry professionals, graduate students, and fellow postdocs, allowing me to develop meaningful relationships and expand my professional circle. During the events, the interactions not only provided valuable insights into current trends and advancements in the field but also paved the way for collaborative research efforts and mentorship opportunities.

Wei-Chun Chou, PhD
Assistant Professor
Department of Environmental Sciences,
University of California, Riverside
Furthermore, this role enabled me to actively participate in discussions surrounding important issues facing early-career scientists, ranging from navigating publication processes to mastering grant writing and career development. By participating in these discussions, I gained valuable insights and practical knowledge that furthered my professional growth.

In summary, the role of Postdoc Rep not only provided me with invaluable experiences and skills but also played a significant role in shaping my journey towards securing an Assistant Professor position. The leadership, advocacy, and networking opportunities provided by this role have been essential in establishing myself as a successful academic and contributing member of the scientific community.
A Winsome Winter Webinar

Kruuttika Satbhai, PhD, Councilor, PDA
Anke Tukker, PhD, Chair, PDA

PDA began 2024 with a winter webinar entitled “Presenting Your Ideas Effectively at Scientific Meetings, Conferences, and 1-on-1’s” on February 6th. This webinar was presented by Drs. Lester Hoffman and Ofelia Olivero. The speakers had extensive experience and expertise in presentation skills and have authored several journal articles. The webinar was very informative and was held at an apt time—right before the SOT Annual Meeting! One important message was to practice your talk along with tips on delivery techniques and strategies on audience engagement. One thing that stayed with us is that you should ask someone else to proofread your slides because one sees what one meant to say, not what is actually written on the slide.

A few questions addressed at the end of the webinar are paraphrased below:

Q. Sometimes I feel I have lost the audience in the middle of the talk; how do I get their attention back?
A. A good strategy would be to pause and summarize or review what you have talked about so far and then continue again.

Q. How do I give a presentation to address the different levels of expertise among the audience?
A. It is a good idea to get to know your audience, but if that is not possible—start with an average level and then you can go into more detail if the audience is keen or asks questions.

We also thank the PDA members who participated and helped to make the webinar successful! Looking forward to such exciting and informative webinars in the future!

*Dr. Lester Hoffman and Dr. Ofelia Olivero are authors of a program entitled “Proven Strategies for Professional Development For Scientists,” which consists of seven modules. This webinar was a preview of the “Presenting Your Ideas Effectively at Scientific Meetings, Conferences, and 1-on-1’s” module. If you are interested to learn more about this program and how to bring it to your institution, please contact Dr. Olivero at dr.ofelia@positive-coach.com.*
PDA Guide to

PDA Luncheon
Tuesday, March 12, 12:00 PM–1:00 PM

- Casual luncheon to network and relax with your peers
- Recognized awardees of the Best Postdoctoral Publication Awards
- Raffle for participants
- Advertised vacant postdoctoral rep positions in Component Groups
Career Exploration through Speed Informational Interviews
Tuesday, March 12, 1:30-2:50 PM

- This limited-seating and ticketed event is designed for graduate students and postdocs who want to gain insight into different career sectors in toxicology.

- Groups of trainees rotated through a series of short discussions with career representatives from academia, government, and industry.
Becoming a Postdoctoral Leader: Opportunities and Resources

- **Society of Toxicology Postdoc Representatives**
  - Regional Chapter Representatives
  - Special Interest Group Representatives
  - Specialty Section Representatives
  - https://toxchange.toxicology.org/volunteeropportunities/i-volunteer

- **SACNAS Postdoc Leadership Institute**
  - Society for the Advancement of Chicanos/Hispanics and Native Americans in Science: https://www.sacnas.org/
  - Leadership Training For STEM Professionals in SACNAS

- **Alan Alda Center for Communication**
  - Women in STEM Leadership Program
  - https://aldacenter.org/professional-development/WiSLP.php

- **SPDB Torrey Pines Leadership Development Program**
  - sbpleaders.org

- **Annual Biomedical Research Conference for Minoritized Scientists**
  - Can be a judge virtually or apply to be in an in person judge/mentor
  - https://abrcms.org/index.php/become-a-judge

- **National Postdoc Association**
  - Run for a position on the postdoctoral council
  - Become a committee member
  - https://www.nationalpostdoc.org/page/Volunteer
Becoming a Postdoctoral Leader: PDA Representative Vacancies

- **Specialty Section Representatives**
  - Medical Device and Combination Product
  - Ethical, Legal, Forensics, and Societal Issues
  - Food Safety
  - Stem Cells

- **Regional Chapter Representatives**
  - Allegheny-Erie
  - Northland
  - South Central

- **Special Interest Group Representatives**
  - Korean Toxicologists in America
  - Toxicologists of African Origin

*The above Component Groups are still seeking postdoctoral representatives as of April 2024. If you are a member of the group and interested in the role, please contact the president of the group.*
Renew Your SOT Membership!

Fredrick Ekuban, PhD, Membership Committee
Postdoctoral Representative, 2023-2024

Renewing your Postdoctoral membership provides unparalleled networking opportunities, recognition from your peers, and is a vital component of lifelong learning through continuing education, postdoctoral events, and SOT Annual Meetings. We encourage you to renew your Postdoctoral membership today!

If you have recently completed graduate or postdoctoral studies or achieved the requisite number of years or publications in the field, you may qualify to upgrade to the next level of SOT membership. Upgrade requires sponsorship by two Full Members and Membership Services is happy to help.

Benefits for both the Postdoctoral and Associate membership levels:

Leadership opportunities
- Participating as representatives for SOT Regional Chapters, Special Interest Groups, Specialty Sections, and Committees.
- Hosting academic sessions and webinars

Educational Opportunities
- SOT Annual Meeting sessions, CE courses, symposia, and workshops
- Webinars

Networking Potential
- SOT Annual Meeting
- Regional Chapters
- ToXchange online member community

Discounted Rates Exclusive to Members
- ToxSci journal subscription
- SOT Annual Meeting registration
- Registration for webinars and other meetings/events

Connection to News and Hot Topics
- Communiqué Blog
- Specialty Sections and Special Interest Groups

Additional benefit of postdoc membership:
- One free Specialty Section and Special Interest Group membership
- Postdoc awards for SOT, Specialty Sections, and Special Interest Groups

Visit the SOT website to determine what membership level is right for you. If you have any questions or need assistance renewing your membership, please email Membership Services at: sothq@toxicology.org or call 703.438.3115