



Dermal Toxicology Specialty Section
OF THE SOCIETY OF TOXICOLOGY



PRESIDENT'S MESSAGE



Hello and Welcome to the DTSS Membership!

As this is my first President's Message, I want to take a moment to recognize and thank last year's DTSS Executive Council and welcome new members.

This year, the Executive Council's aim is to increase visibility and communications to members, and we are starting by having two Newsletters in the 2024-2025 term. This is the first installment.

The growth of DTSS is dependent on recruiting new members and providing benefits to existing members via learning and growing our technical acumen in the field of dermal science.

We are hoping by having more touchpoints, including webinars throughout the year, highlighting publications of relevance to dermal toxicology, and having a Member Highlights section, we can raise awareness of our Specialty Section.

Please take a moment to think about what you want to see in this Specialty Section. What do YOU need to make it worth your while and urge others to join?

Now is the time to build and enhance our membership and the Executive Council is calling you all to action. Please check out the [DTSS Website](#) and join us!

Sarah Gilpin, PhD, DABT
DTSS President

IN THIS ISSUE

President's Message
Upcoming DTSS Fall Webinar
DTSS Awards Application Now Open
2024-2025 DTSS Executive Committee
2024 SOT Annual Meeting Highlights
Grad Student Perspective – Edgewell Awardee
Breaking New Ground in Skin Sensitization –
A Fresh Take on Nucleophiles
PCPC 2024 Science Symposium & Expo
Accomplishments/Announcements
2025 SOT Annual Meeting Information



2025 DTSS AWARDS

DTSS 2025 Award Applications Now Open!

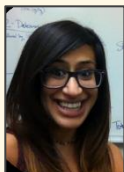
If you are a professional, graduate student, or postdoc member of DTSS, **please consider applying for one of our DTSS awards.**

The deadline for submission is December 19th. In addition to a monetary award and recognition at the DTSS Annual Reception, winning looks great on a CV!

Please read about the awards and apply at the [DTSS 2025 Awards](#) website. If you have any questions, please contact [Valentina Galbiati](#).



Clive Roper, BSc,
PhD, CBiol, CSci,
ERT, FRSB



Sid Ejaz, PhD

DTSS WEBINAR: MARK YOUR CALENDAR & [REGISTER](#) FOR OCTOBER 23RD

[A Comparative Study of the in vitro Dermal Absorption of Radiolabeled Benzophenone Through Human Skin](#)

Featuring

Sid Ejaz of Kenvue and Clive Roper of Roper Toxicology Consulting Limited

October 23rd at 11:00 AM ET

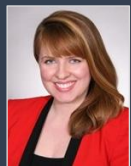
Don't miss this engaging and insightful session on benzophenone's dermal penetration. It's sure to be an event packed with valuable knowledge and expert analysis!

Meet the 2024-2025 DTSS Executive Committee Officers

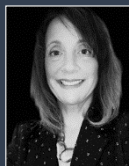
This year, our Executive Committee is fully stocked and dedicated to the DTSS mission!

We value the membership's ideas and needs so we're all ears for your feedback, comments, and brilliant suggestions, so don't hold back! And here's a heads-up: elections for positions with upcoming terms will kick off this winter. If you're ready to make an impact, why not consider running for office next year?

An Officer role not quite right for you? We are always in search of members to share ideas for webinars; newsletter/social media content; help with award judging. For more details on volunteer opportunities connect with the Past President, [Kimberly Norman](#).



Kimberly Norman
Past President & Councilor



Sarah Gilpin
President



Azita (AJ) Cuevas
Vice President



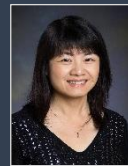
Jamie Coleman
Vice President-Elect



Prajakta Shimpi
Secretary/Treasurer



Valentina Galbiati
Sr. Councilor



Ying Huang
Jr. Councilor



Alexandra Nail
Postdoctoral Representative



Andrew Roney
Graduate Student Representative



2024 ANNUAL SOT MEETING HIGHLIGHTS

Attendees of the 2024 SOT Annual Meeting reveled in the beautiful Utah weather and forged valuable connections during the 2024 SOT program. Despite the challenge of overlapping events, the DTSS Reception had a great turnout.

This year, we proudly presented five awards to individuals leading the way in skin toxicology research. The competition was intense, highlighting the remarkable advancements and dedication in this field. Each winner gave a short summary of their research methods and conclusions. Since there was such interest in the work of the awardees, we hope in the future they will be willing to present their work in the form of a DTSS webinar. Well done winners, we congratulate each of you!



As per tradition, George de George from MB Laboratories sponsored the annual Android tablet raffle for Postdoc and Graduate Students. The lucky winner this year was 4th year graduate student, Ebenezar Okoyeocha, from Pharmacology & Toxicology at Michigan State University.

Other DTSS highlights from the Annual Meeting included the success of two DTSS-endorsed sessions: "From My Cosmetics to Smart Watch: Toxicology Touches It All!" and "The Modernization of Cosmetics Regulation Act: Perspectives on Recent Implementation and Confirming Safety in Cosmetic Products." Both sessions provided valuable insights into the latest approaches and key developments in their respective topics.

We hope to see you at DTSS sponsored events at the upcoming 2025 SOT Annual Meeting in Orlando. ♣

2024 DTSS Award Winners

Thank you to our Sponsors for making these awards possible!



DTSS Paper of the Year

Satya Achanta, DVM, PhD, DABT - Duke University
Pharmacologic Inhibition of Transient Receptor Potential Ion Channel Ankyrin 1 Counteracts 2-Chlorobenzalmononitrile Tear Gas Agent-Induced Cutaneous Injuries



Stratacor Award

Alexandra Nail - University of Louisville
A Novel Arsenic Methyltransferase Splice Variant is Expressed in Human Keratinocytes



Edgwall Personal Care Awards

Rachel Goff - University of Louisville
Arsenic Induced Suppression of Autophagic Protein Degradation is Zinc Dependent



Andrew Roney - Michigan State University
Long-Term Inflammatory Effects Arising from Acute Cutaneous Nitrogen Mustard Exposure



Informa Healthcare Publication Award

Ayşe Gölge Bedir
Gölge Bedir A, Yanmaz LE. *The Effects of Cream-Based Triticum Vulgare With and Without Therapeutic Ultrasound on Excisional Wound Healing in Diabetic Rats.*
Cutaneous and Ocular Toxicology 2023 Jun; 42 (2):61-67.

Assoc. Editors of COT accepted award on behalf of Dr. Bedir

Graduate Student Perspective – 2024 Edgewell Personal Care Awardee

By Andrew Roney

Hello, I am Andrew Roney, a 3rd-year PhD student at Michigan State University.

During the DTSS reception at the 2024 Annual Meeting earlier this year, I was twice

honored: I

The Edgewell Personal Care Student Award was the first award I had received from an organization of the scale and prestige as SOT.

was awarded the Edgewell Personal Care Student Award, and I was elected as the DTSS

Graduate Student Representative. I would like to deeply thank the DTSS for this award and for the privilege and responsibility of representing my fellow graduate students.

The Edgewell Personal Care Student Award was the first award I had ever received from an organization of the scale and prestige as SOT. I would like to thank all the members of my lab who had helped me through every step of the work that culminated in this award. I was very happy to have received such an award and both my lab and my family were excited when I shared the news with them! I believe it was especially gratifying to my lab as last year's DTSS winner was also a graduate student from our lab. Producing two back-to-back award winners speaks volumes of my mentor.

Serving as the DTSS Graduate Student Representative will mark my first experience holding a position of this level of responsibility. It remains surreal - being on such an important committee with full-fledged scientists while still just being a graduate student. While in this office I plan to increase our members' engagement with the graduate and undergraduate presenters at the Annual Meeting. As the students represent the next generation of scientists, **I believe it is important to encourage them and show them that the established researchers are interested in their research and their development as researchers!** ♣

Breaking New Ground in Skin Sensitization – A Fresh Take on Nucleophiles

By: A.J. Cuevas, PhD, DABT, MS, MPH

David W. Roberts *et al.* are shaking up the world of skin toxicology with their latest paper, **Updating Reaction Mechanistic Domains for Skin Sensitization: 1. Nucleophilic Skin Sensitizers**. In this well-constructed and insightful study, the team addresses a significant gap in the existing literature: the role of nucleophiles in skin sensitization, and, further, how to evaluate them.

The article not only presents compelling evidence of nucleophilic sensitizers but also demonstrates how current non-animal assays fail to detect them. This is significant because it challenges the prevailing assumption that skin sensitization predominantly involves electrophiles. The authors dive deep into mechanistic chemistry, explaining how nucleophilic compounds—such as sulfur, phosphorus, and carbon-based nucleophiles—react with skin proteins, particularly disulfide linkages, to trigger sensitization. The paper meticulously documents the findings, citing experimental data from the Local Lymph Node Assay (LLNA), making it clear that these nucleophiles aren't rare exceptions but could be more prevalent than previously thought.

One of the study's key strengths is its use of a Quantitative Mechanistic Model (QMM), which provides a robust framework for explaining how nucleophilic chemicals—often overlooked in traditional testing protocols—can still function as potent skin sensitizers. By combining Hammett σ^+ constants and logP values, the QMM adds significant depth

and precision to our understanding of sensitization processes. While the dataset used in the model was somewhat limited, the QMM lays a strong foundation for future research, offering a powerful

tool for exploring the complexities of skin sensitization mechanisms and improving non-animal testing approaches. What makes this paper stand out is how it pushes the boundaries of conventional toxicology thinking, encouraging a broader scope in evaluating chemicals for sensitization risks. It doesn't just reinforce existing knowledge—it expands it, offering fresh perspectives and highlighting areas where current non-animal assays fall short. This is one of those rare pieces that both challenges the status quo and suggests clear, actionable steps forward. The work adds a significant layer to the existing literature, setting the stage for further exploration of nucleophilic mechanisms in skin sensitization.

In summary, this article is more than just a good read—it's a game-changer. It's thorough, methodologically sound, and adds much-needed nuance to the ongoing discussion of skin sensitization mechanisms. If you're invested in toxicology research, this is one to put on your must-read list! ♣

Chemical Research in Toxicology
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Updating Reaction Mechanistic Domains for Skin Sensitization: 1. Nucleophilic Skin Sensitizers
David W. Roberts,¹ Anne Marie Api, Amur Aputa, Isabelle Lee, and Holger Moustakas

Cite This: <https://doi.org/10.1021/acs.chrestox.4c00207> | [Read Online](#)

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ABSTRACT: It has long been recognized that skin sensitizers either are electrophilic or can be activated to electrophilic species. Several nonanimal assays for skin sensitization are based on this premise. In the course of a project to update dermal sensitization thresholds (DST), we found a substantial number of sensitizers with no electrophilic or pro-electrophilic alerts that could be simply explained in terms of the sensitizer acting as a nucleophile. In some cases, the nucleophilic center is a sulfur or phosphorus atom, while in others, it is an aromatic carbon atom. For carbon-centered nucleophiles, a quantitative mechanistic model based on a combination of Hammett σ^+ and logP values has been derived. This has been applied to rationalize several groups of known sensitizers with no electrophilic or pro-electrophilic alerts, including aromatic acids and carbols, which are known human sensitizers associated with, *inter alia*, castor nut oil, mango, and Geritol. The possibility of nucleophilic sensitization needs to be considered when evaluating new chemicals for skin sensitization potential and potency by nonanimal assays, particularly those based on the premise that skin sensitization is dependent upon reactions of electrophiles with skin protein-based nucleophiles.

DON'T MISS THE PERSONAL CARE PRODUCTS COUNCIL 2024 SCIENCE SYMPOSIUM & EXPO

PCPC will have two leading experts in cosmetics and drug safety from US FDA, **Drs. Linda Katz and Theresa Michele**, present at the upcoming **Science Symposium**. Their insights into regulatory developments and the US FDA's enforcement activities will provide valuable knowledge for professionals navigating the evolving landscape of cosmetic and drug safety regulations.



Oct. 8-9, 2024 | The Ritz-Carlton Pentagon City, Arlington, VA.
For more information visit: [2024 PCPC Science Symposium](#)

DTSS THANKS OUR SPONSORS - WE APPRECIATE YOUR GENEROSITY

Thank you for inspiring Skin-Related Research via Awards and through other giving opportunities. If you or your company are interested in sponsoring an award, donating to the DTSS, please email [Prajakta Shimpi](mailto:Prajakta.Shimpi).



Don't forget to submit an abstract for the 2025 SOT Annual Meeting!

Submission deadline is Wednesday, November 13.



ACCOMPLISHMENTS

Congrats to DTSS's own Alexandra Nail (Postdoctoral Representative) – Alexandra was awarded a NIH K99/R00 career development award in August for 5 years that is highly competitive for early-stage investigators. The K99 portion is mentored career development for 2 years and the R00 is 3 years funding where she will start her faculty position and her own lab. The grant will help Alexandra to establish independence from her current postdoctoral lab where she will focus on investigating how cadmium exposure promotes triple-negative breast cancer initiation and progression.

Congrats to all DTSS student members who had successful semesters, passed qualifying exams, defended their master's or PhD thesis, etc.

Congrats to DTSS members who passed any certifying, licensing, exams, landed dream jobs, had successful presentations, etc.

Tell us! Don't be modest, tell us your achievements and good news so we can celebrate with you! Please email [Jamie Coleman](mailto:Jamie.Coleman) to be featured in the newsletter.

SOT MARCH 16-20 ORLANDO

Attending SOT 2025? Join us at the DTSS Annual Reception

We look forward to seeing you the DTSS Annual Business Meeting and Member Reception

This is a great networking event for new and existing members, sharing of announcements, and learning about cutting edge skin-related research.

More details to come, check our LinkedIn page for the latest updates!

Event details, the program, and the online planner can be found here: [2025 SOT Annual Meeting Website](#)



Scan to join DTSS LinkedIn Page!