# Society on the state of the sta

# PRESIDENT'S MESSAGE



As September arrives and summer begins to fade for many, I hope you are turning your attention toward our annual meeting in St. Louis where we will once again gather to enjoy a week of camaraderie filled with fun, food and great science. As I sit to write my report less than 60 days from the start of our meeting, it's hard for me to grasp that we are rapidly approaching an end of another year but I'm excited about what the next few months will bring.

The SOFT Board of Directors has had a busy year so far and it is full steam ahead for the rest of the year. In early June, the Executive Commit-

tee held their annual in-person meeting in Phoenix. During this two-day strategic planning session, we made great progress on a number of initiatives. We discussed edits to the Policies and Procedures manual proposed by the Membership Committee; developed procedures to further improve communication between the Board and committees, with the goal to improve their effectiveness; established a timeline to ensure selection of new Chairs, Vice Chairs and committee members is finalized by December each year; revised the Code of Conduct Policy; and began developing a procedure for investigating alleged code of conduct violations to ensure fairness and consistency. Whew!!! The full Board of Directors continues to hold monthly meetings where along with addressing routine SOFT business, will continue to push these initiatives toward the finish line. Stay tuned for more information in the coming months.

I would like to end my report by thanking Beth, CC, Hosts Sarah Riley and Justin Poklis, and the entire meeting planning committee for their efforts over the past year! This hard-working and incredibly talented group has put in countless hours to plan a fantastic meeting agenda for St. Louis. They have taken great care in listening to feedback received from past meetings and developed an agenda which I am absolutely certain is going to make it one of the best ever; there might even be a couple of surprises. Finally, I want to thank JAT Special Issue Editor Erin Karschner for her efforts this year. She has put together an

OXTAL

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# PRESIDENT'S MESSAGE CONTINUED

incredible issue full of articles covering a wide range of topics including regional prevalence of designer benzodiazepines, fentanyl, and other novel synthetic opioids; nitazine testing in hair; and case studies involving lethal carbon monoxide and caffeine.

I look forward to seeing you all in just a few short weeks. Remember think Bold and make sure you pack your best Halloween themed formal attire for the President's Reception and be prepared to "Eat, Drink, and Be Scary!" Safe travels everyone.

7ate Yeatman



SOFT EXECUTIVE COMMITTEE & STAFF IN PHOENIX

# The Society of Forensic Toxicologists

Presents the

# **LEGACY LUNCHEON SERIES**

#### **ABOUT THE LEGACY LUNCHEON SERIES:**

Our series seeks to go beyond the conventional boundaries of education, offering a space for the exchange of stories, advice, and historical insights. This is an opportunity for current toxicologists to connect with and learn from esteemed veterans who have played pivotal roles in the evolution of our field. The series will feature speakers who will share their journeys, including the triumphs, challenges, and valuable lessons learned along the way.

The Legacy Luncheon Series is more than just a webinar – it's a celebration of our collective history, a testament to the enduring spirit of learning, and an opportunity to connect with the pioneers of our field. We look forward to your active participation and the exciting journey that lies ahead.

#### **SERIES DETAILS:**

- Webinar Format: 1-hour sessions.
- Presentation Structure: 40-45 minutes presentation followed by Q&A with the speaker.
- Scheduling: 10 AM PST/1 PM EST
- Cost: FREE for SOFT Members!

#### **ON-DEMAND LEGACY LUNCHEONS:**

- Dr. Bill Anderson: "Toxicology: Rocky Top to Reno, A 50-year Journey"
- Dr. Vina Spiehler: "From Beckman Instruments (BI) to AI Expert Systems"
- Dr. Graham Jones: "(Why) I Never Wanted to Become a Forensic Toxicologist"
- Dr. Bruce Goldberger: "Synergy in Forensic Toxicology"

#### **UPCOMING LEGACY LUNCHEONS:**

**Dr. Marilyn Huestis:** "My Unusual Path to Improving Understanding of Cannabinoid Pharmacology through Three Decades of Controlled Human Cannabinoid Administration Studies"

Date: Tuesday, September 24 REGISTER HERE!

**Patrick Harding:** "The Legacy of the Robert F Borkenstein Courses" Date: Wednesday, November 20 <u>REGISTER HERE!</u>

REGISTER

**TODAY!** 

# **CONTINUING EDUCATION OPPORTUNITIES**

## **UPCOMING WEBINAR!**

## **FUNDING FORENSICS: NAVIGATING RESOURCES FOR ENHANCED TOXICOLOGY TESTING**

Date: September 25

Time: 10:00 AM - 12:30 PM PST/1:00 - 3:30 PM EST

Audience Knowledge Level: Basic

Registration: Registrants will need to register for both the TRC Webinar and SOFTopics Fireside Chat. Links are provided

below:

• TRC Webinar Registration

SOFTopics Fireside Chat Registration

# **REGISTER TODAY!**

Abstract: Resources. Resources. Resources. It is what stands between our forensic toxicology laboratories' ability to provide comprehensive testing and the continued use of stop-testing practices. Providing accurate data to state highway safety offices, federal organizations, and policymakers requires funding. Data from our toxicology laboratories is used to make decisions on public health initiatives such as countermeasures in impaired driving; provide direction to the criminal justice system on substance abuse treatments, and direct prevention and education efforts. The SOFT Toxicology Resource Committee presents an array of funding perspectives including federal dollars, state funding, and alternative approaches to overcoming challenges associated with the Buy America Act and getting the necessary equipment to provide appropriate testing. After all the presentations, stick around for a SOFTopics lead discussion group with the speakers. Make sure to sign up for both events from the links above.

#### Agenda:

1:00 - 1:10 PM: Introduction

1:10 - 1:40 PM: Federal Resources for Forensic Toxicologists: Lucas Zarwell

1:40 - 2:40 PM: Alternative Strategies for Securing and Implementing Resources in Forensic Toxicology: Rebecca Wagner

2:40 - 2:45 PM: Break

2:45 - 3:15 PM: "The Autopsy" of the Buy America Act: Issues and Success Stories: Sara Short

3:15 - 3:30 PM: Panel Discussion

3:30 - 4:30 PM:SOFTopics Fireside with Speakers

#### **Speakers:**

- Lucas Zarwell, Director, Office of Investigative and Forensic Sciences, National Institute of Justice
- Rebecca Wagner, Chemistry Research Section Supervisor, Virginia Department of Forensic Science
- Sara Short, Toxicology Technical Leader, Oregon State Police Forensic Laboratory

Webinar Chair: Sabra Jones, SOFT Toxicology Resource Committee Chair, Regional Toxicology Liaison Project Webinar Co-Chair: Joey Jones, SOFT Toxicology Resource Committee Co-Chair, North Louisiana Criminalistics Laboratory

# ACCESS THE SOFT LEARNING CENTER!

Explore available continuing education opportunities in SOFT's Learning Center! Unlock a wealth of knowledge through our live and on-demand webinars, specially crafted for both SOFT members and non-members. Enhance your expertise in diverse topics ranging from postmortem toxicology challenges to the latest advancements in instrumentation for NPS detection. Webinars are offered at an exclusive rate of \$25 for SOFT Members and \$35 for non-members.

## **AVAILABLE OPPORTUNITIES**

- Pros and Cons of Various Instrumentation Types for NPS Detection
- Navigating the Current Challenges in Postmortem Toxicology
- The What, Where and How of Novel Psychoactive Substance

#### **SOFT MEMBERS ONLY**

- Funding Forensics: Navigating Resources for Enhanced Toxicology Testing Roadside and Laboratory Oral Fluid Drug Testing
- Current State of Culture, Values and Diversity in SOFT
- Legacy Luncheon Series
- JAT Editor's Choice Article

# **Nominations**

The SOFT Nominating Committee is responsible for presenting a slate of Officers and Directors to the full membership of SOFT at least 30 days prior to the Annual **Business Meeting. The President** and President-Elect serve oneyear terms, while the Secretary and Treasurer each serve two-year terms, expiring in alternate years. Directors are elected for threeyear terms.

The 2024 SOFT Nominating Committee, composed of Erin Spargo (Chair), Dwain Fuller, and Michelle Peace, respectfully submits the following slate for consideration by the SOFT membership.

Below, you will find the bios of the nominated Officers and Directors.

# **SLATE OF OFFICERS**



JERI ROPERO-MILLER





ROBERT JOHNSON

Treasurer



**DANI MATA** 

Director



KIM SAMANO

Director

# **NOMINATIONS**

# ANNUAL BUSINESS MEETING

Please join us for the Annual SOFT Business Meeting on Thursday, October 31, to meet the slate of officers for 2025. You'll also hear from the SOFT 2024 Board of Directors as they present their annual reports and updates to the membership.

SOFT members in attendance will have the chance to win **free registration** to a future SOFT meeting!

# JERI ROPERO-MILLER, PH.D, F-ABFT

Dr. Jeri D. Ropero-Miller, F-ABFT, is a Senior Fellow in the Justice Practice Area of RTI International. With expertise in the areas of forensic toxicology and justice research, she has published on topics of postmortem drug studies, emerging drugs, hair drug studies, drug surveillance and intelligence, program evaluation, and technology evaluation and adoption. Ongoing projects she leads or supports include the National Institute of Justice's (NIJ's) Forensic Technology Center of Excellence and its Criminal Justice Technology, Testing and Evaluation Center, and the Bureau of Justice Statistics-funded 2022 Census of Medical Examiners/Coroners' Offices and 2023 Census of Publicly Funded Forensic Crime Laboratories. Until 2024, she also supported the Drug Enforcement Administration's National Forensic Laboratory Information System. She is a certified Fellow in the American Board of Forensic Toxicology (ABFT); serves on the Forensic Science Standards Board of the National Institute of Standards and Technology, Organization of Scientific Area Committees; and is completing 2 years of service as the Treasurer for the Society of Forensic Toxicologists. She co-hosted the 2007 SOFT meeting; has served on many SOFT committees; presented many times at SOFT annual meetings; and developed and chaired numerous SOFT workshops. She was the 2021-2022 President of the American Academy of Forensic Sciences and its 2022 Rolla N. Harger Award recipient for Career Excellence in Forensic Toxicology. She is a Laboratory Inspector for the ABFT and has also served as a Laboratory Inspector for the National Laboratory Certification Program (NLCP). She received her doctorate in Clinical Chemistry and Forensic Toxicology from the University of Florida College of Medicine. Her work has been extensively published, and she is recognized nationally and internationally for her work in forensic laboratory and justice research.

# **ROBERT JOHNSON, PH.D., F-ABFT**

Dr. Robert Johnson joined the Tarrant County Medical Examiner's Office as the Chief Toxicologist in 2011. Prior to joining Tarrant County, he worked for 10 years as a Research Chemist at the Federal Aviation Administration's Civil Aerospace Medical Institute in Oklahoma City, OK. Dr. Johnson is active in SOFT, AAFS, OSAC, and the Southwestern Association of Toxicologists (SAT), he is the current Chair of the OSAC Forensic Toxicology Subcommittee, the past president of SAT, and a past chair of the National Safety Council's Alcohol, Drugs, and Impairment Division. Within SOFT, he serves on the Board of Directors, he is the past Chair of the Continuing Education Committee, the Co-Editor of ToxTalk, and he serves on the editorial board for the Journal of Analytical Toxicology. Outside of SOFT, he serves on the College of American Pathologists (CAP) Toxicology Committee. He has published 61 peer-reviewed articles in his career all of which deal with some aspect of forensic toxicology.

# NOMINATIONS

# DANI MATA, MSFS, D-ABFT-FT

Dani is currently a Senior Forensic Scientist for the Forensic Chemistry Bureau of the Orange County Crime Lab, CA where she has worked since 2007. Ms. Mata has been certified by the American Board of Forensic Toxicologists as a Diplomate in Forensic Toxicology since 2015 and is currently a Director on the Board. In 2015 and 2016 Ms. Mata served as an affiliate on the Organization of Scientific Area Committee Task Group on Report and Testimony and starting in 2020 became a member of the Toxicology Subcommittee in 2020. Ms. Mata has been a member of the California Association of Toxicologists (CAT) since 2009 and has co-hosted two of the meetings and presented at more than a dozen CAT meetings. For CAT, she has co-chaired the Research Grant Committee for 2012 – 2014 and Literature Review Committee for 2012 – 2018. Ms. Mata has been a member of the Society of Forensic Toxicology (SOFT) since 2011 and has served on the Young Forensic Scientist Committee from 2013 – 2016, The Award Committee 2017 – 2020, The Toxicology Resource Committee 2020 to present and the Designer Drug Committee 2016 – present, where she was the chair from 2017 - 2023. She was the Volunteer co-Coordinator for the 2016 SOFT meeting and was the co-host to the SOFT 2020 meeting, which ended up being cancelled due to the COVID-19 pandemic. She was awarded the SOFT 2012 Young Scientist Meeting Award, SOFT 2021 Young Forensic Toxicologist Service Award and the 2022 AAFS Toxicology Section's Ray Abernethy for Outstanding Forensic Toxicology Practitioner.

# KIM SAMANO, PH.D., D-ABFT-FD

Kim Samano earned her doctoral degree from Virginia Commonwealth University in Pharmacology and Toxicology and her Master of Science degree in Forensic Science from Arcadia University. Her undergraduate degree in Health Science, with a concentration in forensics, was completed at the University of Miami. Her National Institutes of Health (NIH)-funded dissertation research centered on the investigation of both analytical and preclinical aspects of synthetic cannabinoid drugs and was published in the Journals of Analytical Toxicology and Basic Clinical Physiology and Pharmacology.

She completed her postdoctoral training at Quest Diagnostics' forensic toxicology laboratory, which is both accredited by the College of American Pathologists (CAP) and certified by the Department of Health and Human Services (SAMHSA), where she was involved in the analysis and review of workplace drugs of abuse testing, QA/QC, and providing continuing education to laboratory staff. From 2016 to 2020, she served as Quest's Scientific Director and actively engaged in method development, data analysis, along with maintaining regulatory and quality assurance standards for workplace drug testing in urine, oral fluid, and hair. In 2020, she became the Chief Toxicologist at the Johnson County (Kansas) Medical Examiner's office, where she has worked to equip and establish postmortem toxicology services for the newly constructed medical examiner's system.

A member of the Society of Forensic Toxicologists (SOFT) and the American Academy of Forensic Sciences (AAFS), she has served on the Young Forensic Scientists and Professional Mentoring committees within SOFT since 2014, contributes as a reviewer for the Journal of Analytical Toxicology and Journal of Forensic Science, and has participated as lead inspector for the CAP Forensic Drug Testing laboratory accreditation program.

She met her husband, a fellow scientist, in graduate school and they currently share in the experimental work of parenting three young boys.

# **ERA & YSMA AWARD RECIPIENTS**

Congratulations to our 2024 ERA and YSMA Recipients! These distinguished awards commend students and young scientists who have demonstrated exceptional contributions to the field of forensic toxicology through their research endeavors. The recipients will have the opportunity to present their findings at SOFT's annual meeting in St. Louis, MO. Each award comprises complimentary meeting registration along with a \$2,500 stipend intended to defray travel expenses. We look forward to the enlightening presentations of the awardees at SOFT 2024.

## **EDUCATIONAL RESEARCH AWARD (ERA) AWARD RECIPIENTS**

#### **Award Recipient: Marthe Vandeputte**

**Title:** "Nitazenes of the past, present, and future: Insights from in vitro  $\mu$ -opioid receptor assays and in vivo behavioral studies in mice"

**Affiliation:** Laboratory of Toxicology, Department of Bioanalysis, Faculty of Pharmaceutical Sciences, Ghent University, Ghent, Belgium

### **Award Recipient: Natalie Ortiz**

**Title:** "Determining Cannabinoid Acetate Analog Metabolites (Δ9-THC-O-A, Δ8-THC-O-A, CBD-di-O-A) Using Human Liver Microsomes to Determine the Structure and Relative Appearance of Metabolism"

Affiliation: Virginia Commonwealth University (VCU), Richmond, VA

### **Award Recipient: Kerry Murr**

**Title:** "Comparison of Ketone Levels Using a Commercial Ketone Monitoring System to Screen for Beta-hydroxybutyrate Prior to GC-MS Analysis"

**Affiliation:** The University of Alabama at Birmingham (UAB)

## YOUNG SCIENTIST MEETING AWARD (YSMA) RECIPIENT

## **Award Recipient: Luette Muir**

**Title:** "Analysis of 28 Phytocannabinoids and Semi-Synthetic Cannabinoids in Blood and Urine

by LC-MS/MS"

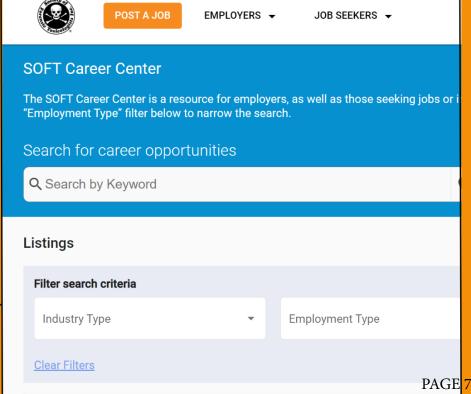
Affiliation: Armed Forces Medical Examiner System, Dover Air Force Base, DE, USA



AWARDS SESSION THURSDAY, OCTOBER 31 2:00 - 3:30 PM

AWARDS CEREMONY SOFT BUSINESS MEETING THURSDAY, OCTOBER 31 3:30 - 5:00 PM





# 40 YEARS LATER



**SOFT RETURNS TO ST. LOUIS** 



JOIN US FOR INNOVATION & EXCELLENCE

# SOFT 2024 - ST. LOUIS

**SOFT is thrilled to return to St. Louis after four decades**, bringing with us a rich legacy of innovation and excellence in forensic toxicology. This year's meeting holds a special place in SOFT's history, as it marks 40 years since we last gathered in this beautiful and historic city.

We are honored to have **Justin Poklis and Sarah Riley** as co-hosts of SOFT 2024. Justin's connection to this event is especially significant—his father, **Alphonse Poklis**, a pioneer in the field of toxicology, served as the host of the **1984 joint meeting with SAT**. This historic meeting, held from October 9-12 at the Breckenridge Inn, featured groundbreaking scientific presentations and discussions, including a symposium on succinyl choline deaths from Bexar County, Texas and lidocaine deaths from Riverside, California. Themed **"Murder by Poison**," it set the stage for decades of impactful work in the field.

As we return to St. Louis, we invite you to explore the legacy of SOFT and the Poklis family, whose contributions continue to shape the future of forensic toxicology. SOFT 2024 promises to be a landmark event, blending history with cutting-edge science, and we can't wait to share this moment with you. Join us as we honor our past and pioneer the future—together!

# DR. ALPHONSE POKLIS 1945-2016

Dr. Poklis earned his BS in Pharmacy from the University of Maryland in 1969. As a U.S. Public Health Service Fellow, he studied Forensic Toxicology under Dr. Henry Freimuth at the OCME in Baltimore, Maryland, and received his Ph.D. from the University of Maryland in 1974. His career included roles as a toxicologist at the OCME in Wilmington, Delaware; North Dakota State University and the Office of the State Toxicologist; director of the Forensic & Environmental Toxicology Laboratory in the Department of Pathology at St. Louis University School of Medicine; and director of the Toxicology Laboratories at

MCV Hospital. Dr. Poklis was a Diplomat of the American Board of Forensic Toxicology and regularly consulted and lectured on toxicology issues for various organizations, including the FBI Academy and the College of American Pathologists. He provided expert testimony in courts across the United States and contributed to over 200 peer-reviewed publications and books. Dr. Poklis was a past Chairman of the Toxicology Section of the American Academy of Forensic Sciences (AAFS) and past President of the Society of Forensic Toxicologists. In 1988, he received the Rolla Harger Award from the AAFS "in recognition of outstanding contributions to

the field and profession of forensic toxicology".

# SOFT 1984 - ST. LOUIS "MURDER BY POISON"

ween Moline Acres



# TOXTALK

**Publication of the Society of Forensic Toxicologists** 

# SEPTEMBER 1984

**VOLUME 8, No. 3** 

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### Meet Us in St. Louis!

SOFT members and friends are cordially invited to attend and participate in the 14th Annual SOFT Meeting which will be held jointly with the South-western Association of Forensic Scientists in St. Louis, October 9-12, 1984, at the eckenridge Inn. The meeting theme is "Murder by Poison". A special sym-posium on succinyl choline deaths, Bexar County, Texas, and lidocaine deaths, Riverside, California, will feature the ex-perts who testified on both sides presenting their scientific evidence.

In addition to the scientific presentations, the program will include a round table session on "Toxicology Report Writing" and two workshops: Computers in the Toxicology

Laboratory

Advanced Workshop for Toxi-Lab Users

Detailed information can be obtained from the program chairman, Dr. Al-phonse Poklis at (314) 727-6300.

## St. Louis Forensic Profile

In 1977, the City of St. Louis estab-lished a medical examiner's system and contracted all professional services, incontracted all professional services, in-cluding pathology and toxicology, to St. Louis University School of Medicine. Dr. George E. Gantner, Chief Medical Exami-ner of St. Louis County and professor of pathology at St. Louis University was appointed Chief Medical Examiner of the city. At this time Dr. Alphonse Poklis accepted a faculty appointment at the University and was made director of the Forensic and Environmental Toxicology Laboratory. The laboratory shares space and instrumentation with the toxicology laboratory of Ms. Mary Ann Mackell, Chief Toxicologist of St. Louis County at the County Medical Examiner's Office. In addition to Dr. Poklis and Ms. Mackell, a fulltime staff of three toxicologists perform analysis on approximately 900 city and 300 county autopsies. Additional forensic work includes analysis of blood and urine of drivers charged with "driving while under the influence of Specimens are submitted by both city and county law enforcement agen-

The laboratory also performs drug testing by contract with various agencies; drug treatment programs, preemployment urine screening, and emergency cologic analysis.

Due to its university association, the laboratory is mandated to contribute to and anotatory is manuated to commute to the teaching of residents and students. Forensic and clinical pathology residents regularly rotate through the laboratory. Clinical chemistry or forensic toxicology graduate students, as well as medical technology undergraduates, are also regu-larly provided bench experience with drug analysis. Ms. Mackell, as a clinical instructor in the department of patho-

# 1984 SOFT-SAT **MEETING**

Riverview ntaine Co. Par

Island

Mosenthein

Island

Joint Meeting of SOFT with Southwestern Association of **Toxicologists** 

October 9-13, 1984

Breckenridge Inn St. Louis, MO

Host: Dr. Alphonse Poklis

Workshops Scientific Papers Special Symposium

# **ToxTrivia**

#### The Gentle Art of Poisoning

"Murder by poison" is the theme of the 1984 SOFT meeting in St. Louis. Lovers of trivia and history may want to test their knowledge by matching the names of toxicologists with those of the poisons and defendants in ten famous trials.

TOXICOLOGIST	POISON	DEFENDAN	
Curry	Aconite	Armstrong	
Dal Cortivo/Rieders	Arsenic	Barlow	
Nickolls	Curare	Bocarme	
Orfila	Digitalin	Buchanan	
Stas	Insulin	Coppolino	
Stevenson/Dupre	Hyoscine	Crippen	
Tardieu	Morphine	Jascalevich	
Umberger	Nicotine	Lafarge	
Willcox	Secobarbital	Lamson	
Witthaus	Succinyl Choline	Pommerais	



# **TEST YOUR TOX TRIVIA KNOWLEDGE!**

Can you match each toxicologists to their famous trial?

PAGE 10

# SOFT 1984 - ST. LOUIS "MURDER BY POISON"



Society of Forensic Toxicologist, Inc. And

Southwestern Association of Toxicologist, Inc.

# ToxTrivia Quiz Answers

Curry, Insulin, Barlow; Dal Cortivo/Rieders, Jascalevich; Nickolls, Secobarbital, Armstrong; Orfila, Arsenic, Lafarge; Stas, Nicotine, Bocarme; Stevenson/Dupre, Aconite, Lamson; Tardiev, Digitalin, Pommerais; Umberger, Succinyl Choline, Coppolino; Wilcox, Hyoscine, Crippen; Witthaus, Morphine, Buchanan.



# FAMILY, FORENSICS & FORTY YEARS OF SOFT







JUSTIN POKLIS
2024 MEETING HOST

JUSTIN POKLIS REFLECTS ON FAMILY, FORENSICS, AND SOFT'S HISTORY

Can you provide an overview of your father's career in toxicology and his major contributions to the field? Dr. Poklis authored over 240 peer-reviewed articles and 26 book chapters, addressing a wide range of subjects, including thin layer chromatography, time-of-flight mass spectrometry, metals, metabolism, postmortem analysis, pain management, poison-related murders, and drug diversion. He was quick to adopt advancements in chromatography and mass spectrometry, recognizing their transformative potential. Dr. Poklis would consider his most significant contribution to be the students he mentored.

What were some of his most notable research projects or publications? I think Dr. Poklis would regard several of his contributions to forensic toxicology as particularly significant. These would include his research showing that nasal inhalants like Vick's Inhaler could produce a positive methamphetamine urine test. He might highlighted his work on pentazocine and tripelennamine tablets used as heroin substitutes, as well as his investigations into the pharmacokinetics of contemporary novel psychoactive substances, such as NBOMes, cannabimimetics, and fentanyl analogues.

How did he become involved with SOFT, and what roles did he serve within the organization? As an active forensic toxicologist, Dr. Poklis recognized the significance of attending and participating in the most important meetings in the field. He made his first presentation at SOFT during the 1980 joint meeting with the Canadian Society of Forensic Science, where he discussed "Murder by Arsenic Poisoning." In 1984, he joined the Board of Directors and served as the Meeting Program Chair for the conference held in St. Louis, MO.

What were the significant achievements or milestones during his tenure in SOFT? In 1990, Dr. Poklis chaired the membership committee, and by the time he became President, he highlighted in his President's ToxTalk that membership had surged by over 100 individuals, more than doubling since his initial involvement with the Board. He also emphasized the importance of financial accountability and administrative efficiency within SOFT, acknowledging the "Herculean task" faced by the treasurer.

How did his leadership influence the direction and growth of SOFT? Under Dr. Poklis's leadership, he strongly encouraged members to join and actively participate in the organization. In his ToxTalk message while preparing for the Phoenix meeting, he urged readers to "strap on your gun belt, saddle up, and join the posse!" Dr. Poklis valued transparency and efficient communication, as demonstrated by his decision to publish the SOFT Hair Drug Testing consensus opinion in Forensic Science International after addressing some membership concerns. As an academic and natural teacher, he also highlighted the new Continuing Education and Training Committee's role in collaborating with AAFS, AACC, and CAT to enhance training opportunities.

What personal qualities and professional skills made Al Poklis an effective leader and host for the 1984 SOFT meeting? Dr. Poklis was a straightforward communicator who rarely minced words and developed clear visions for initiatives. At the same time, he emphasized personal responsibility, encouraging people to be engaged and make decisions. This approach was encapsulated in his well-known phrase among his former students: "continue to march."

Are there any memorable stories or anecdotes from colleagues and peers about Al Poklis's contributions to SOFT? Anecdotes about Dr. Poklis are rich and multifaceted. Anyone who met him knew he loved a good story, whether it was about science, fishing, football, Woody Allen films, or pop culture. One story shared with me recounts an Elmer Gordon discussion where Dr. Poklis entered the room, listened to the ongoing issue, then remarked, "That was done 40 years ago," citing a 1970s reference before walking out with a slice of cake. This anecdote highlights his encyclopedic knowledge. Dr. Poklis was disheartened by the profession's lack of historical understanding, which he attributed to the field's rapid expansion and the resulting gaps in training, apprenticeships, and

mentoring. I believe he would greatly appreciate the efforts made by the SOFT mentoring program.

How do you see your father's influence in your own approach to toxicology and your role in SOFT? My father advised me that if you conduct research but don't publish or present it, it might as well not have been done. He emphasized the importance of presenting your work at every opportunity. In early 2010s, my father became even more dedicated to training students, primarily from the Department of Forensic Science. At that time, I was also working in the Department of Pharmacology & Toxicology, and together we were able to collaborate to trained 2-3 students each year until his passing.

What lessons from your father's career and his involvement with SOFT do you find most valuable? In one of the ToxTalk articles, my father remarked, "The strength and success of any group is the sum of the commitment and contributions of its members. There is much work to be done by our committees, which can benefit from the talents, abilities, and creativity of all our members." With so many enthusiastic and talented members in the organization, everyone should have the opportunity to contribute and serve.

In what ways do you hope to build upon your father's legacy in your work with SOFT and the field of toxicology? My father started the "Virginia Commonwealth University Family Pictures" 20 years ago. Each year, we continue this tradition by gathering everyone at the annual SOFT meeting who graduated from or worked at VCU. The first photo included 5 people (with Dr. Poklis taking the picture himself), and by the time of his passing, the group had grown to 35. This tradition highlights the importance of building relationships and mentoring that I hope to continue.





Can you share a bit about your professional journey and current role within the field of toxicology? Over the years, I've had the pleasure of working in a wide range of areas directly and indirectly related to forensic toxicology. My experience spans regulated urine drug testing, DUI and DUID testing, therapeutic drug monitoring (TDM) and emergency clinical toxicology, postmortem toxicology, as well as method development for novel psychoactive substances (NPS) and the evaluation of collection and analytical testing devices.

How did your father influence your career path and interest in toxicology? My father helped me secure my first forensic toxicology job with his former student and old lab manager, Les Edinboro, at a regulated urine drug testing lab. I also spent a few years working in my father's clinical and forensic laboratory and later collaborate with him on numerous projects. In my current role, I regularly collaborate with his former students, Michelle Peace and Carl Wolf.

What were some of the key topics and advancements in toxicology discussed during the 1984 meeting? The more things change, the more they stay the same. As I reviewed the abstracts and workshop titles, the phrase "what's old is new again" came to mind. We are dealing with the same issues, just with a different perspective.

How do you think the field of toxicology has evolved since the 1984 meeting your father hosted? My father's meeting took place in 1984, and since then technology and funding have broadened the scope of the field from postmortem and DUID testing to include regulated drug testing, which began in 1986, and pain management testing.

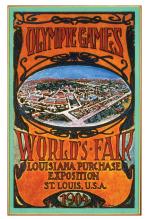
What inspired you to take on the role of hosting the SOFT 2024 meeting? Even though I haven't lived in St. Louis for 30 years, it still feels like home. I'm thrilled to host in my hometown.

What are some of the challenges and rewards you have experienced in planning this event? I share a similar mindset with my father—focusing on the future of the meeting and considering changes to accommodate more presentations, especially given our increased size. People are eager to participate. I'm looking forward to seeing the meeting evolve into a fantastic experience for our members, featuring impressive science, excellent food, new connections, and meaningful interactions with our vendors.

How do you balance the legacy of your father's contributions with your own vision for the meeting? We need to keep looking ahead. My father was dedicated to building membership and encouraging involvement. We should continue this forward momentum by creating opportunities for members to participate, grow, and engage.

Is there anything else you would like to share with the attendees and members of SOFT? I hope all the attendees have a fun, safe, and educational experience, and that they get the chance to enjoy some of the unique attractions St. Louis has to offer.

The Society of Forensic Toxicology's annual meeting is quickly approaching! We're thrilled about the upcoming meeting in St. Louis and hope you are too! As the world's attention focuses on the Olympic Games, I recently discovered a story that intertwines the Olympics, St. Louis, and drugs. It's the story of Thomas Hicks, a British long-distance runner who competed in the 1904 Olympics, in conjunction with the 1904 World's Fair, held in—you guessed it—St. Louis!



Hicks won the gold in the marathon held on August



30 1904, but he might not have if he had run today. Hicks used strychnine and brandy as a little pick me up to get to the finish line. According to reports, he used a least two doses of 1/60 of a grain (approximately 1.1 mg) along with brandy during his run. Strychnine was added to the list of illegal substances by the international Olympic Committee in the 1960s.

Although the use of strychnine and brandy won't disqualify you from the Karla Mooree Tox 'N Purge Fun Run/Walk, we strongly advise against it. But we hope Hicks' story inspires you to run/walk and sign up for this year's **Karla Moore Memorial 5k!** This year's course will take you to the gateway national park, home of the St. Louis Arch. As a bonus, it is a fundraiser for the American Cancer Society in memory of SOFT's own Karla Moore. All levels of athletes are encouraged to participate! REGISTER FOR THE KARLA MOORE FUN RUN /WALK!

# OPENING PLEANARY SPEAKER - BEN WESTHOFF WEDNESDAY, OCTOBER 30 - 8:00 - 9:00 AM

We are thrilled to announce Ben Westhoff as the Pleanary Speaker for this year's meeting! Ben is the author of the best-selling nonfiction book Fentanyl Inc: How Rogue Chemists are Creating the Deadliest Wave of the Opioid Crisis, which was named a Telegraph Book of the Year. As an investigative



journalist, Ben conducted an undercover investigation into the synthetic-drug epidemic traveling to China to meet with clandestine chemists supplying precursor materials to illicit fentanyl manufacturers. He will be sharing his insights and experiences with us.



OCTOBER 27 – NOVEMBER 1, 2024 UNION STATION HOTEL

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Come ready to experience some great social events. We'll be visiting the world renowned and historic Anheuser Busch Brewery on Wednesday night. Come have some local food and beverages and meet one of the world-famous Budweiser Clydesdales! You'll have the opportunity to tour the brewery campus, which is truly a unique St Louis experience. You'll also enjoy the music of the very popular, local, Funky Butt Brass Band. On Thursday, get dressed up in spooky attire for President Yeatman's Skull & Crossbones Ball!





The St. Louis Union Station Hotel, our meeting venue, is ideal for socializing



after the scientific sessions, whether with colleagues, friends and/or family if they join you. It features several restaurants and bars, as well as a variety of entertainment options. Among the attractions at the venue are the St. Louis Aquarium and a 200-foot-tall Ferris wheel, offering a spectacular view of the city from enclosed, climate-controlled cabins.

The scientific content at the meeting will

be spectacular. **The Workshop Program Coordinators, Alex Krotulski and Vanessa Meneses**, have done an incredible job with the workshop program

and we are proud to have an excellent selection of workshops to choose from. Likewise, Matt Juhascik and Sara Dempsey, the Scientific Program Coordinators, have done a terrific job. They are finalizing what will be a comprehensive scientific program featuring 189 presentations and posters, and we look forward to sharing it with you.



We want to extend a special thanks to our entire Planning Committee, the SOFT Staff, and President Yeatman for their hard work and support through the planning process without them this meeting would not be possible. We would also like to thank our Exhibitors, and all the SOFT members who have and will contribute to the meeting. This is going to be an outstanding meeting because of you!

See you (soon) in St. Louis!

Justin and Sarah



OCTOBER 27 – NOVEMBER 1, 2024 UNION STATION HOTEL

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# REGISTRATION



REGISTRATION RATE INCREASES: Early Bird Rate: June 26 - September 11

Late Rate: Begins September 12
Onsite Rate: Begins October 10

# **2024 RATES & INCLUSIONS**

	Early Bird (June 26 - Sep 11)	Late (Begins Sept 12)	Onsite (Begins Oct 10)		
Member	\$599	\$799	\$899		
Student	\$299	\$499	\$699		
Non-member	\$799	\$999	\$1,099		
Exhibitor	\$600	\$600	\$600		
Guest	\$500	\$500	\$500		
Workshop (Member)	\$150	\$175	\$200		
Workshop (Non- Member)	rkshop (Non- Member) \$200 \$225		\$250		
Workshop Only	Workshop Only (workshop fee only) (workshop fee only)		(workshop fee only)		
Fun Run	\$30 Donation	\$30 Donation	\$30 Donation		

	WS Participants Only Breakfasts & Breaks (M/T)	Breakfasts, Lunch & Refreshment Breaks (W/TH/F)	Networking Events (T/W/TH)	Scientific Sessions (W/TH/F)	Digital Program Book	SOFT Bag	SOFT Giveaways
Member	Х	Х	χ	Х	Х	Χ	Х
Student	Х	X	Х	Х	Х	Χ	Х
Non-member	Х	Х	χ	Х	Х	Χ	Х
Workshop only	Х						
Guest		Х	Х	Х	Х	Χ	Х
Exhibitor		X	Х	Х	Х	Х	Х

# **REGISTER HERE!**

# HOTELS

#### St. Louis Union Station Hotel

1820 Market Street St. Louis, Missouri 63103 Room Rate: \$189

## **Drury Inn St. Louis at Union Station**

201 S. 20th Street St. Louis, Missouri 63103 Room Rate: \$187

Located across the street from Union

Station

Courtyard St. Louis Downtown West 2340 Market Street

St. Louis, Missouri 63103 Room Rate: \$135

Located .4 miles from Union Station

#### Fairfield Inn & Suites St. Louis Downtown

2144 Market Street St. Louis, Missouri 63103 Room Rate: \$189

Located .5 miles from Union Station



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# **SCIENTIFIC PROGRAM**

We extend our sincere gratitude to everyone who submitted an abstract for SOFT 2024. Our Program Coordinators, Sara Dempsey and Matt Juhascik, have been diligently reviewing and organizing the submissions. We are pleased to announce that we received a record total of 205 abstract submissions this year!

The Scientific Program will take place from Wednesday, October 30th to Friday, November 1st. Poster Presentations will be held in the Midway West Exhibit Hall in Pregram.

Please Contact the <u>Scientific Program</u>
<u>Coordinators, Sara Dempsey and Matt</u>
<u>Juhascik</u> with any questions. We look forward to seeing you in St. Louis!



## **WEDNESDAY, OCTOBER 30**

- Poster Prep, 7:00 11:00 AM
- Platform Presentations, 9:00 AM
   5:00 PM

**PROGRAM SCHEDULE** 

Poster Session #1, 12:00 - 2:00
 PM

#### **THURSDAY, OCTOBER 31**

- Poster Prep, 7:00 11:00 AM
- Platform Presentations, 8:00 AM
   3:00 PM
- Poster Session #2, 12:00 2:00
   PM

#### **FRIDAY, NOVEMBER 1**

Platform Presentations, 8:00 AM
 - 12:00 PM





# WORKSHOP PROGRAM

SOFT 2024 workshops are offered on Monday, October 28 and Tuesday, October 29 from 8:00 am - 5:30 pm. The program will focus on half day workshops with some offered in two parts (parts I & II).

Below you will find a concise overview of the Workshop Program. Further details, including abstracts and supplementary workshop information will be posted to the Workshop Program Webpage.

# **2024 WORKSHOP RATES**

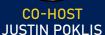
	Early Bird (June 26 - Sep 11)	Late (Begins Sept 12)	Onsite (Begins Oct 10)
Workshop (Member)	\$150	\$175	\$200
Workshop (Non- Member)	\$200	\$225	\$250
Workshop Only	(workshop fee only)	(workshop fee only)	(workshop fee only)



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# 2024 WORKSHOP PROGRAM

MONDAY, OCTOBER 28

MORNING WORKSHOPS, 8:00 AM -12:00 PM

Workshop 1: Psychedelics: Promising Treatment Applications and Concerns for Impaired Driving

Chairs: Kristin Kahl & Michael Wagner

Audience: Basic

Workshop 2: More Likely Than Not: Navigating Civil Cases in Forensic Toxicology

Chairs: Madeleine Swortwood & Curt Harper

Audience: Basic

Workshop 3: Forensic Aspects of Doping

Chairs: Pascal Kintz & Anne-Laure Pélissier

Audience: Intermediate

Workshop 4: Chasing Impairment – Advancement in Technologies or a Paradigm Shift? – You be the Judge!

Chairs: Suman Rana & Jasmine Maxwell

Audience: Intermediate

**MONDAY, OCTOBER 28** 

AFTERNOON WORKSHOPS, 1:30-5:30 PM

Workshop 5: ASB Standards: Overview, Implementation, and Updates

Chairs: Robert Johnson & Kei Osawa

Audience: Basic

Workshop 6: Breath Alcohol Testing Program Operation and Management

Chairs: Nita Bolz & Jasmine Maxwell

Audience: Basic

Workshop 7: Are we Entering the Post-fentanyl Era - Or Have We Already Entered It?

Chairs: Marthe Vandeputte & Sara Walton

Audience: Intermediate

TUESDAY, OCTOBER 29

MORNING WORKSHOPS, 8:00 AM -12:00 PM

Workshop 8: Laboratory Development: Where to Start and How to Continually Improve

Chairs: Dani Mata & Luke Rodda

Audience: Intermediate

Workshop 9: Recent Research on the Semi-synthetic Cannabinoids  $\Delta 8$ -THC, THCO, and HHC

Chairs: Szabolcs Sofalvi & Svante Vikingsson

Audience: Intermediate

Workshop 10: Presenting Oral Fluid Drug Testing Results in Court

Chairs: Amanda Mohr & Nathalie Desrosiers

Audience: Intermediate

Workshop 11: The ABCs of ABFT Certification – Part I: General Information

Chairs: Marissa Finkelstein & Erika Phung

Audience: Basic

TUESDAY, OCTOBER 29

AFTERNOON WORKSHOPS, 1:30 - 5:30 PM

Workshop 12: The ABCs of ABFT Certification – Part II: Study Topics in Forensic Toxicology

Chairs: Marissa Finkelstein & Erika Phung

Audience: Intermediate

Workshop 13: How Am I Suppose To Analyze That?! A Master Class in Sample Preparation

Chairs: Victor Vandell & Sarah Bartock

Audience: Intermediate

Workshop 14: Laboratory Information Management Systems (LIMS): Streamlining Forensic Toxicology Workflows

Chairs: Hunter Fleming & Allie Mannella

Audience: Intermediate

Workshop 15: Come as You are: Building a Diverse and Accessible Organization

Chairs: Oliver Grundmann & Samantha Tolliver

Audience: Basic



OCTOBER 27 – NOVEMBER 1, 2024 UNION STATION HOTEL

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# **SOFT 2024 EXHIBITORS**

Abbott
Absolute Standards, Inc.
Agilent
American Solutions for Busi-

ness

**ANSI National Accreditation** 

**Board** 

ARK Diagnostics, Inc.
Axiom Diagnostics

Biochemical Diagnostics

Biotage, LLC

**Bruker Scientific LLC** 

**Campbell Science Corporation** 

**Cayman Chemical Company** 

**CFSRE** 

Clinisys

**College of American Patholo-**

gists

**DPX Technologies** 

Draeger, Inc.

DrugImpairment.com

**Forensic Advantage Systems** 

Forensic Technology Center of

**Excellence** 

**Full Spectrum Lab Services** 

from CBRE

**Golden West** 

**IMCS** 

Impairment Science, Inc.

**Indigo BioAutomation** 

**INTEGRA Biosciences** 

Intoximeters

JEOL USA, Inc Finden Kura Lin-Zhi International, Inc. LNI Swissgas MilliporeSigma

Neogen

**NMS Labs** 

Office of Justice Programs (OJP)

**Peak Scientific Inc** 

**Peeke Scientific** 

**PinPoint Testing LLC** 

Phenomenex, Inc

Phytronix Technologies Inc.

**Providion** 

Randox Toxicology

**Restek Corporation** 

RTI International

**SCIEX** 

Shimadzu Scientific Instr., Inc.

Siemens Healthineers

Sigsense Technologies
Thermo Fisher Scientific

· · · · · ·

Thomson Instrument Company

**UCT LLC** 

University of Florida College of

**Pharmacy Forensic Sciences** 

**UTAK Laboratories, Inc.** 

**Validity Diagnostics** 

Versaterm Public Safety US, Inc.

Waters Corporation

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FUN RUN COORDINATOR
MADISON BEFFA AND KIMBERLY KARIN

# **EXHIBIT HALL**

Thank you to our Exhibitors and Sponsors for your participation in SOFT **2024!** Your presence is invaluable in making this year's event a success.

The Exhibit Hall is located in the **Midway West Exhibit Hall** and will open on **Tuesday, October 29 at 6:30 pm for the SOFT 2024 Welcome Reception**. The Welcome Reception is open to all meeting attendees and is a highly attended event. The hall will also be open during the following hours at SOFT 2024:

- Tuesday, October 29, 6:30 9:30 pm
- Wednesday, October 30, 9:30 am 4:00 pm
- Thursday, October 31, 9:30 am 3:30 pm

VIEW THE EXHIBIT HALL MAP!

TIER I SPONSOR - \$15,500









TIER II SPONSOR - \$7.500





















TIER III SPONSOR - \$3,500







TIER IV SPONSORSHIP - \$1,500

ARK DIAGNOSTICS, INC. LIN-ZHI INTERNATIONAL, INC. INDIGO BIOAUTOMATION **UTAK LABORATORIES, INC.** 

TIER V SPONSORSHIP - \$1.000

**DRUGIMPAIRMENT.COM** JEOL USA, INC. **NEOGEN** SIEMENS HEALTHINEERS



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# NETWORKING OPPORTUNITIES

**SUNDAY, OCTOBER 27** 



YFT Symposium and Professional Development Fair Time: 5:00 - 9:00 pm

**Symposium:** Join us for a night of professional networking designed for younger toxicologists. Enjoy drinks and

hors d'oeuvres while you connect with peers in your field. This event is exclusively for attendees aged 41 and

under. Sign-in will be at the door.

### **Symposium Panel Speakers:**

- **Dr. Teresa Gray** Certification/Professional Organization
- Dr. Nathalie Desrosiers Public Lab
- Andre Sukta Research & Development
- Dr. Alex Krotulski Higher Education
- Dr. Jennifer Colby Private Lab

### **SUBMIT A QUESTION FOR THE PANEL SPEAKERS!**

**Professional Development Fair:** Representatives from various accreditation and certifying agencies, graduate programs, and laboratories will be available to discuss opportunities for continuing education, professional training, board certification, academic advancement, and career opportunities, including scientific writing.

If you would like to participate as a PDF representative, please complete our <u>RESERVATION FORM</u> by September 20. A Table with two chairs will be provided to each representative.

#### **MONDAY, OCTOBER 28**



**Morning Yoga** 

**Time:** 6:00 - 7:00 am

We're excited to announce morning yoga sessions at this year's SOFT Meeting! Join us **Monday, Tuesday, and Wednesday** from 6-7 AM to start your day with relaxation and rejuvenation.

Whether you're a seasoned yogi or new to the practice, all are welcome to participate. Equipment is provided.

#### **Sponsored Lunch and Learns**

Time: 12:00 - 1:30 pm

Take advantage of the opportunity to enjoy lunch while learning about the latest topics in toxicology, courtesy of our 2024 sponsors. Each sponsor manages their own registration, so be sure to sign up through the links provided via email.



**TUESDAY, OCTOBER 29** 

## **Sponsored Lunch and Learns**

**Time:** 12:00 – 1:30 pm

Continue your learning journey with another round of Lunch and Learns. Once again, be sure to register through the provided links.



OCTOBER 27 – NOVEMBER 1, 2024 UNION STATION HOTEL

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Welcome Reception Time: 6:30 - 9:30 pm

Join us for the grand opening of SOFT's Exhibit Hall! Explore the exhibits, reconnect with colleagues, and enjoy the provided food and beverages. Don't forget to check out the <a href="EXHIBIT HALL">EXHIBIT HALL</a>
<a href="MAP">MAP</a>. This event is open to all SOFT attendees.

## **Elmer Gordon Forum Dessert Reception**

Time: 8:30 - 10:00 pm

SOFTopics and the Elmer Gordon Forum are teaming up again this year at the 2024 SOFT Meeting in St. Louis, MO! Join us on Tuesday, October 29 after visiting the exhibitors at the Welcome Reception and meet some of the people you've gotten to know over our virtual discussions. Don't be shy in asking your fellow toxicologists in the room your burning questions or share interesting observations from your laboratory – when do you have so many toxicologists in one room?!



**ELMER GORDON SEPTEMBER 1976** 

This year, we are also taking any suggestions for topics or questions you'd like to submit for discussion during the forum before the meeting. So, if you have a question that you're afraid you may forget between now and the meeting, feel free to submit them by using the <a href="ELMER GORDON FORUM FORM">ELMER GORDON FORUM FORM</a> and we will make sure they get asked during the forum.

This event is open to all SOFT attendees.



# MilliporeSigma Nite Owl Reception

Time: 10:00 pm - 12:00 am

End your evening at the Nite Owl Reception, hosted by our Tier II sponsor, MilliporeSigma.

This event is open to all SOFT attendees.

## **WEDNESDAY, OCTOBER 30**

## **First Time Attendee Breakfast**

Time: 7:00 - 8:00 am

Is this your first time attending a SOFT meeting? Fantastic! Don't miss the chance to connect with the SOFT Board of Directors and fellow newcomers at the First-Time Attendee Breakfast towards the end of the meeting. It's a great way to enhance your experience and build lasting connections!

This event is open to all First Time Attendees!

#### **Anheuser Busch Brewery**

Time: 6:00 - 10:00 pm

Don't miss this exciting off-site event! Transportation will be provided to and from the venue, food and beverages will be available on-site. Meet one of the world-famous Clydesdales!



This event is open to all SOFT attendees.



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**THURSDAY, OCTOBER 31** 

Karla Moore Fun Run/Walk

Time: 6:30 - 8:00 am

Join us for the Karla Moore Fun Run/Walk, a tradition that began in 1997 with the Tox 'N Purge run, created by Dr. Karla Moore. Proceeds from this event will be donated to the American Cancer Society in her memory. **Donation: \$30** (includes a lapel pin & shirt)





President Yeatman's Skull & Crossbones Ball Cocktail Hour: 6:00 - 7:00 pm

Dinner and Dancing: 7:00 pm - 12:00 am

Enjoy an elegant evening of dinner, drinks, and dancing. We encourage attendees to Dress to Impress as we celebrate together! Cocktail attire is suggested with a playful emphasis on skulls, bones and Halloween.

# EAT, DRINK, AND BE SCARY!

# KARLA MOORE FUN RUN/WALK



Join us for the Karla Moore Fun Run/Walk bright and early on Thursday, October 31 at 6:30 am! Participants may run or walk the route. Volunteers with signage will be along the route to help direct you. Prizes are not provided for winners but you get bragging rights! Your \$30 donation includes a Fun Run shirt & lapel pin. Proceeds are donated to the American Cancer Society in Dr. Moore's memory.

#### **FUN RUN/WALK HISTORY**

The original Tox 'N Purge run was created by Dr. Karla Moore in 1997 for the Salt Lake City meeting. In addition to her involvement in the field of toxicology and participation in SOFT, she was an officer in the United States Air Force. After her passing in 2008, the run was memorialized in her honor. Expenses for the event are supported by our SOFT exhibitors. **Thank you to our 2024 Fun Run/Walk Sponsors!** 

#### **FUN RUN/WALK SHIRT**



#### **FUN RUN/WALK SPONSORS**

Campbell Science Corporation
Chesapeake Toxicology Resources LLC
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JEOL USA, Inc
Finden Kura
LNI Swissgas
SCIEX

Shimadzu Scientific Instr., Inc.
THINKTOX
UCT LLC

**REGISTER HERE!** 



OCTOBER 27 – NOVEMBER 1, 2024 UNION STATION HOTEL

## PLANNING COMMITTEE







CO-HOST SARAH RILEY

SCIENTIFIC PROGRAM COORDINATORS
SARA DEMPSEY AND MATT JUHASCIK

WORKSHOP COORDINATORS
ALEX KROTULSKI AND VANESSA MENESES

FOOD & BEVERAGE COORDINATORS
ANN MARIE GORDON, DENICE TEEM, AND
DELISA DOWNEY

MOBILE APPLICATION COORDINATORS
RUSTY LEWIS, ROXANE RITTER, AND
SUNDAY HICKERSON

AV COORDINATOR FRANK WALLACE

YOUNG FORENSIC TOXICOLOGISTS
ERIN STRICKLAND

JAT SPECIAL ISSUE EDITOR ERIN KARSCHNER

VOLUNTEER COORDINATORS
EMILY SMELSER AND TONYA MITCHELL

# **VOLUNTEER AT SOFT!**



**BECOME A SOFT 2024 VOLUNTEER!** We're on the lookout for enthusiastic volunteers, whether you're a SOFT member or not, to help make the SOFT 2024 Annual Meeting a resounding success! Apply to be a Volunteer!

**WHY VOLUNTEER?** Volunteering is not only a fantastic way to contribute to our event, but it also offers you the chance to:

- Be at the Heart of the Action: Assist attendees at the Check-in Desk and be their first point of contact.
- Explore Behind the Scenes: Get a unique behind-the-scenes perspective on how a major conference is organized, gaining insights into the logistics and operations of event planning.
- Learn new skills: Join the Audio Visual Coordinator to support our AV setup and management.
- **Enjoy Early Morning Energy**: Help direct participants during the Karla Moore Fun Run/Walk on Thursday morning.
- Network and Connect: Meet and interact with professionals from diverse backgrounds, fostering new connections and strengthening your professional network
- Have Fun and Give Back: Enjoy the dynamic environment, make new friends, and contribute to the success of an event that brings together the forensic community.

It's a wonderful opportunity to reconnect with familiar faces and meet new friends while helping us host another memorable meeting!

**HOW TO APPLY** Explore the various volunteer roles and find the one (or more!) that suits you best. <u>Apply by September 15</u> to be part of SOFT 2024 Volunteer Team!

#### **VOLUNTEER OPPORTUNITIES:**

- Registration Preparation (Saturday, 10/26)
- YFT Symposium (Sunday, 10/27)
- Check-in Desk/Registration (Sunday, 10/27 Thursday, 11/01)
- AV Support (Monday, 10/28 & Tuesday, 10/29)
- Workshop Registration/Monitoring (Monday, 10/28 & Tuesday, 10/29)
- Poster Session (Wednesday, 10/30 & Thursday, 10/31)
- Anheuser Busch Off-Site Event (Wednesday, 10/30)
- Karla Moore Fun Run (Thursday, 10/31)
- SOFT Business Meeting (Thursday, 10/31)
- President's Banquet (Thursday, 10/31)



OCTOBER 27 – NOVEMBER 1, 2024 UNION STATION HOTEL

## PLANNING COMMITTEE



CO-HOST JUSTIN POKLIS



CO-HOST SARAH RILEY

SCIENTIFIC PROGRAM COORDINATORS
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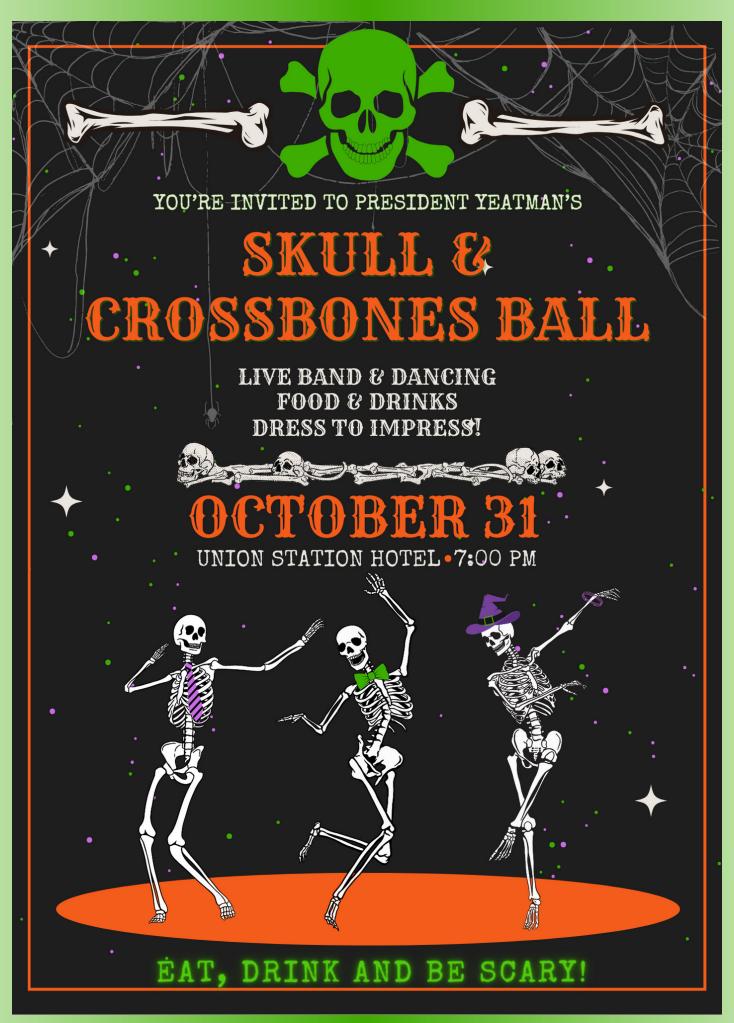
AV COORDINATOR FRANK WALLACE

YOUNG FORENSIC TOXICOLOGISTS

ERIN STRICKLAND

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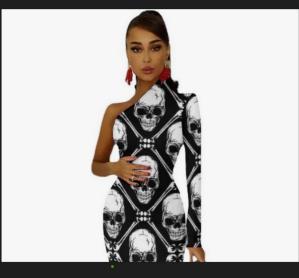
WHAT TO EXPECT AT THE SKULL & CROSSBONES BALL

# + SUGGESTED ATTIRE

We encourage SOFT attendees to DRESS TO IMPRESS as we celebrate together! Cocktail attire is suggested with a playful emphasis on skulls, bones, and Halloween. Examples are included below:









EAT, DRINK AND BE SCARY!

# YOUNG FORENSIC TOXICOLOGISTS (YFT)



Hello Young Forensic Toxicologists!

The Young Forensic Toxicologist committee is looking forward to a very special YFT Symposium this year at SOFT as it is YFT's 15<sup>th</sup> anniversary! To honor this anniversary, we are asking all former committee members to attend and partake in the celebration! Special thanks to former YFT Committee member Joe Kahl for designing a celebration logo for our 15th anniversary!

The SOFT YFT Committee was founded at the 2009 SOFT Meeting in Oklahoma City. The founding members, Teresa Gray (Chair), Jayne

Thatcher (Secretary), Erin Karschner, Dave Schwope, Michele Merves, and Tim Grambow, developed the committee to coordinate activities that would encourage active participation in the field and networking opportunities for the younger generation of Forensic Toxicologists.

What started off with six individuals has grown into a committee with an Executive Board (Chair, Vice Chair, Secretary, Immediate Past Chair) and five subcommittees: Symposium, Professional Development Fair, Student Enrichment Program, Awards, and ToxTalk Contributor. Each subcommittee plays a role in contributing to the mission of YFT, in brief, promoting the education, networking, and interaction among young forensic toxicology practitioners.

YFT SYMPOSIUM: Join us Sunday, October 27<sup>th</sup> at 5:00PM for an exciting night with presentations by past Leo Dal Cortivo award winners, the SOFT Board of Directors, and we have brought together, for the second year, a panel of former YFT Committee Members to discuss the variety of paths a young practitioner can take including, pursing higher education and/or certification (Dr. Teresa Gray and Dr. Alex Krotulski), employment by private and public laboratories (Dr. Nathalie Desrosiers and Dr. Jennifer Colby), or working in research and development (Andre Sukta). If you have any questions that you would like answered by our panel, please submit them <a href="here">here</a>. Hors d'oeuvres and drinks will be provided.

**PROFESSIONAL DEVELOPMENT FAIR (PDF):** The PDF will be held during the first hour of the YFT Symposium (5:00-6:00 PM) and invites employers, degree programs, and academic programs to promote their organizations and provide networking opportunities. Additionally, YFT will be hosting a job/resume board to help young forensic toxicologists find new opportunities and job prospects. The job/resume board can be found near the registration area.

**STUDENT ENRICHMENT PROGRAM (SEP):** The Student Enrichment Program will be held Monday, October 28. This year YFT has partnered with the SLUCare Forensic Toxicology Laboratory and St. Louis Public Schools to introduce local high students to forensic toxicology. The students will spend the day learning through presentations, virtual laboratory tours, and hands-on activities in partnership with SOFT's Diversity Task Force.

We look forward to an exciting evening and hope you will be able to join us! If anyone has pictures from past YFT events or would like to provide a testimonial of your time/experience with YFT, please send them to us at <a href="mailto:yft@soft-tox.org">yft@soft-tox.org</a>. We will highlight all

**HAPPY 15TH ANNIVERSARY YFT!** 



**COMMITTEE MEMBERS:** 

ERIN STRICKLAND, CHAIR

ELISA SHOFF, VICE CHAIR

WHITNEY BROWN, SECRETARY

MARISSA FINKELSTEIN, PAST CHAIR

SARA DEMPSEY

**ARACELIS VELEZ** 

AMANDA BROOKING

**KAYLA NEUMAN** 

**EDWARD ZUMAETA** 

**ERIKA PHUNG** 

**LAUREN WOLFE** 

LINDSAY GLICKSBERG

**LUKE GARCIA** 

**SARA WALTON** 

KIMBERLY KARIN



Committee Members oversee the planning and coordination of the YFT Symposium, Professional Development Fair, Student Enrichment Program, and the Leo Dal Cortivo Awards at the annual SOFT meeting



PROJECT MANAGER: AMY MILES, amy.miles@slh.wisc.edu

REGION 5: SABRA JONES, <u>sabra@soft-tox.org</u>
REGION 7: CHRIS HEARTSILL, <u>chris@soft-tox.org</u>
REGION 9: KRISTEN BURKE, <u>kristen@soft-tox.org</u>

In April, the RTLs had the opportunity to attend and present during the annual Lifesavers conference. Before the conference, the RTLs were invited to participate in a meeting of the JOLs, TSRPs, and LELs. This was an incredible opportunity for the RTLs to introduce the program to other highway safety partners and learn from others the role they play in impaired driving prevention. Lifesavers is not a typical meeting for toxicologists to attend. However, the consensus after the conference was for the RTLs to promote the meeting to laboratories and see if highway safety offices will provide travel assistance.

The court treatment group AllRise is partnering with the RTL program. AllRise is a training, membership, and advocacy organization for justice system innovation that addresses substance use and mental health at every intercept point. They feel that toxicology plays an important role in understanding and treating substance use. The RTLs look forward to collaborations with AllRise.

Toxicology summits are planned for the states in RTL Region 7. This is an opportunity for all partners within highway safety to join together and discuss the role of toxicology in impaired driving. Upon completion, the RTLs plan to evaluate the usefulness and need for summits in the other states within the RTL regions. If you want to hear more about the toxicology summits, please contact any of the RTLs or the Project Manager.

Testimony training continues to be a request of laboratories, and several are scheduled for the remainder of the year.

As the RTL program plans to expand into more states in the coming months, please let the RTLs and Project Manager know of any special topics, technical assistance, or training requests you may have. This program is for you, the toxicologist, and we want to hear from you!

Amy Miles

# VISIT THE RTL WEBPAGE!

# SOFT MEMBERSHIP

Unlock an unparalleled realm of professional growth with the Society of Forensic Toxicologists. We extend a warm invitation to individuals seeking excellence in their forensic science careers. Take your career to new heights by exploring the diverse membership options we offer:

**STUDENT MEMBERSHIP:** Elevate your academic journey with SOFT for just \$40! Join as a student member and embrace a wealth of educational resources at discounted rates.

**ASSOCIATE & FULL MEMBERSHIPS:** Unleash the full potential of your professional growth for \$150. Associates and Full members gain exclusive access to a spectrum of benefits designed to advance their careers. Full members having voting rights at the Annual SOFT Business Meeting.

**EMERITUS & RETIRED MEMBERSHIPS:** For those with a legacy of contributions, the application and renewal fee are complimentary. For just \$40, subscribe to the Journal of Analytical Toxicology (JAT) to stay abreast of cutting-edge industry advancements.

**MEMBERSHIP PROMOTION:** Are you ready to promote your membership? Apply today for free!

Ready to take the leap towards professional distinction? Delve into the detailed information by clicking on the options to the right and uncover the enriching world of opportunities that SOFT has meticulously curated for your success. Your professional journey begins with SOFT!

**BENEFITS** 

**REQUIREMENTS** 

**SPONSORS** 

**APPLY** 



# PROFESSIONAL MENTORING PROGRAM

The Professional Mentoring Committee is recruiting mentors and mentees for the upcoming 2025 program (February 2025- January 2026. All levels of experience are encouraged! Not quite sure what getting involved in the program entails? Check out some roles of the mentor and mentee and some answers to common questions below.

#### ROLES OF A MENTOR:

- Provide a safe environment for knowledge transfer
  - o Leadership/management, data/research, validations, work-life balance, etc.
- Develop and foster future leaders in the field
- Provide one-on-one career advice
- Support the advancement of SOFT and the Toxicology field

## **ROLES OF A MENTEE:**

- Develop interpersonal skills
- Enhance networking opportunities
- Develop technical skills
- Be willing to ask questions and listen to advice

#### STILL UNDECIDED?!

- Most participants only meet one time per month via phone or zoom
- The Mentoring committee provides webinars and resources throughout the year to assist in the partnership
- As we know life isn't always static, goals for the program can be changed/updated throughout the year as needed

Be on the lookout for the Menotring Program Application in early November. Please be specific in your application information so we can make the most of your pair based on your needs or skillsets! Have any questions?! Feel free to reach out to anyone on the committee or talk to us at SOFT! We are so excited for another year of mentoring!

## PROFESSIONAL MENTORING PROGRAM COMMITTEE

Courtney Wardwell, Chair Kim Samano, Vice Chair Afton Martinez Amanda Cadau Ashley Ann Johnson Dawn Sklerov Helen Chang Kaitlyn Palmquist Marta Concheiro-Guisan

2025 PROFESSIONAL MENTORING PROGRAM APPLICATION WILL OPEN IN NOVEMBER 2024!



# SCIENTIFIC CONTENT

# A SNAPSHOT OF XYLAZINE PREVALENCE IN DRIVERS IN CENTRAL VIRGINIA SUBMITTED BY: MELISSA LLOYD

#### **BACKGROUND/INTRODUCTION**

There has been a significant increase in the human consumption of xylazine in the past decade. Due to the increase in prevalence seen across the United States, the Virginia Department of Forensic Science validated a quantitative method in early 2024 to help determine the impact locally.

#### **OBJECTIVES**

This study was conducted to better understand the prevalence of xylazine in the driving population in Central Virginia.

#### **METHODS**

Impaired driving cases are defined by the Code of Virginia §§ 18.2 268.2-268.7. These case types are first analyzed for ethanol. Samples with ethanol concentrations below 0.100% are tested by enzyme linked immunosorbent assay (ELISA) for eighteen drug targets/panels. Blood samples with ethanol concentrations below 0.100% which screen positive on ELISA for one or more of the following drug targets/panels: cocaine metabolites, opiates, oxymorphone/oxycodone, fentanyl, tramadol, and methadone are further analyzed by the Opioid, Cocaine, Benzoylecgonine, and Cocaethylene Quantitation and Confirmation by LCMSMS method (OpiCoc method). The limit of detection and quantitation for xylazine is 1 ng/mL and the upper limit of quantitation is 200 ng/mL. Data included in this study was mined from samples tested by the OpiCoc method on an Agilent 6460 Triple Quadrupole LC/MS between late February 2024, when the xylazine assay was first placed online, through the end of May 2024.

#### **RESULTS**

During this period, seventy-four driver cases were analyzed for xylazine by the OpiCoc method along with morphine, oxymorphone, hydromorphone, oxycodone, hydrocodone, 6-acetylmorphine, codeine, fentanyl, acetylfentanyl, methadone, tramadol, cocaine, benzoylecgonine, and cocaethylene. Fourteen of these cases (19%) were positive for xylazine with an average (median) concentration of 34 (9.7) ng/mL. Xylazine concentrations ranged from 1.1 to 201 ng/mL. All fourteen positive xylazine cases were also positive for fentanyl with an average (median) concentration of 36 (18) ng/mL. Benzoylecgonine was the second most frequently co-detected drug followed by cocaine and methadone, respectively.

### CONCLUSION/DISCUSSION

In regard to xylazine and impaired driving, there is limited published information. Since xylazine is almost always found present with another opioid, as shown in the present study as well as Kacinko at et al., additional studies are needed to more fully characterize the extent which xylazine may cause or contribute to impairment.

# **VIEW MORE HERE**

# SOFT-DFC SNAPSHOT – DELTA 9-TETRAHYDROCANNABINOL SUBMITTED BY: MARC A. LEBEAU & MARCELA VELASCO

#### BACKGROUND/INTRODUCTION

The growing legalization and decriminalization of cannabis have expanded the availability of products containing delta-9-tetrahydrocannabinol (THC), leading to concerns about potential misuse in drug-facilitated crimes (DFCs). THC's popularity as a recreational drug aligns with its frequent appearance in studies on DFCs. THC is consistently cited as one of the most common findings in prevalence studies.1-6

Unlike traditional "date rape" drugs, THC – on its own – does not induce the classic unconsciousness often seen in DFC cases.4 Consequently, the importance of the role of cannabis products may not immediately be recognized. Nonetheless, it is essential to recognize that THC's pharmacological effects can lead to behavioral alterations, potentially rendering an individual more vulnerable to DFCs, such as sexual assault.2

# SCIENTIFIC CONTENT

It is known that cannabis potency has markedly increased over the last two decades, potentially influencing its use in DFCs. For instance, the average THC content in confiscated marijuana plants escalated from 4% in 1995 to over 16% in 2022.7

The proliferation of cannabis-infused edibles and vaping products on the market may also play a role in DFCs. These concentrated products are frequently consumed without a clear understanding of the dosage, resulting in potentially more pronounced pharmacological effects compared to smoking cannabis. Additionally, edibles can be easily misrepresented as innocuous items, making surreptitious administration more likely than in previous years.

Lastly, cannabis products may be shared with the victim, and once they are under its influence, the offender exploits the impaired state – an occurrence known as an "opportunistic" DFC.8

# VIEW MORE HERE

# NEW AND EMERGING "NITAZENE" ANALOGUES APPEARING IN MEDICOLEGAL DEATH INVESTIGATIONS: N-PYRROLIDINO PROTONITAZENE & N-DESETHYL ISOTONITAZENE

# SUBMITTED BY: SARA WALTON, DONNA PAPSUN, ELISA SHOFF, ALEX KROTULSKI, AND KAYLA ELLEFSEN

#### **BACKGROUND/INTRODUCTION**

The "nitazene" sub-class of novel synthetic opioids has been increasingly identified since the emergence of isotonitazene in 2019. The emergence of this novel opioid, repurposed from pharmaceutical research, occurred after domestic legislation was enacted to curb the proliferation of fentanyl related substances, but it was only the first benzimidazole opioid to hit the recreational drug market (1). The "nitazene" subclass backbone is structurally distinct from fentanyl to evade the fentanyl-related compound scheduling, but compounds of this subclass still retain opioid receptor activity. Preclinical studies have estimated that the potency of nitazene analogues vary per substance, but many have been studied to be as potent or more potent than fentanyl (2). The "nitazenes" have infiltrated the illicit drug supply, and many end users may be unwitting in their exposure, as the "nitazene" analogues are often reported in seized drug and toxicology casework with fentanyl and/or designer benzodiazepines, in additional to other substances.

Similar to fentanyl-related analogues, slight chemical modifications to the core structure have resulted in new compounds within the subclass emerging, especially in response to scheduling efforts to curb these novel opioids. Isotonitazene was the first "nitazene", followed by other nitazene analogues that emerged in waves but also varied in both prevalence and geographical distribution. Some of the more prevalent substances included the following: metonitazene (2020), etodesnitazene (2021), N-pyrrolidino etonitazene (2022) and protonitazene (2022) (Figure 1). The nitazene analogues have been identified globally but appear to be most detected in the midwestern part of the United States. More recently, N-desethyl isotonitazene and N-pyrrolidino protonitazene are two additional nitazene compounds that have emerged, further snowballing this category of novel opioids as even the "legacy" nitazene compounds continue to be detected in forensic casework.

#### **OBJECTIVES**

N-Desethyl isotonitazene was first identified by the CFSRE in a drug material submitted in December 2022, while N-pyrrolidino protonitazene was first detected in a biological sample submitted in January 2023 (3, 4). Due to these subsequent new emergences, a standard addition method was developed for the identification and quantitation of the "new generation" nitazene analogues, including N-pyrrolidino protonitazene, N-pyrrolidino metonitazene, N-pyrrolidino isotonitazene, N-desethyl isotonitazene and N-desethyl protonitazene.

# SCIENTIFIC CONTENT

#### **METHODS**

Chromatographic separation is necessary for structural isomers, especially for N-desethyl isotonitazene and N-desethyl protonitazene as their precursor and product ions are identical, with no unique fragment ions to target for quantitation. These drugs are both metabolites of the respective compounds isotonitazene and protonitazene, which are also isomers. Isotonitazene-D7 was used as the internal standard. Samples were prepared via a basic single-step liquid-liquid extraction. The quantitative range was assessed from 0.2-50 ng/mL. Quantitation was performed using a Waters Xevo TQ-S Micro liquid chromatograph tandem quadrupole mass spectrometer (LC-QQQ-MS). The method was successfully validated using standard addition based on ASB standards 036 and 054 (5, 6).

#### **RESULTS**

N-Pyrrolidino protonitazene and N-desethyl isotonitazene (Figure 2) were commonly detected substances of the "nitazene" subclass from forensic cases in 2023 and continue to be reported in 2024. Both drugs were qualitatively and quantitatively identified in postmortem blood across the United States (primarily northeast and Midwest) and United Kingdom (UK). N-Pyrrolidino protonitazene was qualitatively identified in 39 samples and quantitated in 26 postmortem samples with concentrations ranging from 0.3 to 55 ng/mL (mean ± standard deviation: 8.0±17, median: 1.2 ng/mL). N-Desethyl isotonitazene was identified in 16 samples and successfully quantified in 9 postmortem samples ranging from 0.82 to 8.3 ng/mL (mean ± standard deviation: 4±2, median: 3.4 ng/mL). In one case from the UK, N-pyrrolidino protonitazene was identified at a concentration of 55 ng/mL in subclavian blood, with no other traditional or synthetic opioids detected (other findings: bromazolam, caffeine, cotinine, naloxone). N-Pyrrolidino protonitazene and N-desethyl isotonitazene were commonly detected alongside other novel psychoactive substances (e.g., bromazolam, para-fluorofentanyl), traditional drugs (e.g., fentanyl, psychostimulants) and common adulterants (e.g., quinine, xylazine).

Between October 2023 and April 2024, NMS Labs reported N-desethyl isotonitazene qualitatively in 24 postmortem blood samples in the absence of isotonitazene, with the earliest collection date listed in August 2023. In addition, NMS Labs has reported N-pyrrolidino protonitazene qualitatively in 29 postmortem bloods, with the earliest collection date listed as October 2023. For these two compounds, samples were submitted from 20 different US states, four Canadian provinces, and the UK. The 11 different states were geographically diverse, including states from across the country. The Miami-Dade Medical Examiner Dept (MDME) reported two postmortem cases in October 2023 that were positive for N-pyrrolidino protonitazene and one case in January 2024 positive for N-desethyl isotonitazene, without the presence of isotonitazene. Of note, all three cases were also positive for bromazolam

While N-desethyl isotonitazene is a known active metabolite of isotonitazene, it was identified in this case series in the absence of isotonitazene. As N-desethyl isotonitazene has since been detected in drug materials as the primary drug and has not been identified as a metabolite without the presence of isotonitazene, it is assumed that N-desethyl isotonitazene was the drug consumed in these cases (7, 8). N-desethyl isotonitazene was commonly found alongside designer benzodiazepines, specifically bromazolam, while N-pyrrolidino protonitazene was commonly discovered with other nitazene analogues, such as metonitazene, protonitazene, and N-pyrrolidino metonitazene.

#### CONCLUSION/DISCUSSION

The Center for Forensic Science Research and Education (CFSRE) was able to identify and quantify low levels of N-pyrrolidino protonitazene and N-desethyl isotonitazene using standard addition methodology in postmortem medicolegal death investigations. For detailed method and case information, please visit the Archives of Toxicology Journal which recently accepted the manuscript entitled "In Vitro Structure-Activity Relationships and Forensic Case Series of Emerging 2-Benzylbenzimidazole 'Nitazene' Opioids (De Vrieze & Walton et al. 2024). The CFSRE and SOFT NPS Committee release quarterly scope recommendations, where N-desethyl isotonitazene and N-pyrrolidino protonitazene have been listed as recommended or strongly recommended since Q1 2023 and Q3 2022, respectively (9). The rapid identification of emerging nitazene analogues and isomers remains a constant challenge for forensic toxicologists, and the low to sub-ng/mL concentrations of these drugs forces the use of sensitive methodology and instrumentation, in addition to frequent scope updates in response to surveillance efforts.

**VIEW MORE HERE** 

# **NEWS FROM AAFS**

#### PROMOTION APPLICATION

We invite eligible AAFS members to submit their application for promotion to Member or Fellow by the October 1 deadline. Please review the <u>requirements for promotion</u> which include attendance to the AAFS meetings and the Toxicology session business meetings, as well as service to the organization.

If you fall just short on the requirements for Fellow this year, we are now looking for Members interested in moderating our scientific sessions at the 2025 meeting in Baltimore. Please contact program chair <u>Erin Karschner</u> and co-chair <u>Svante</u> <u>Vikingsson</u>. Those needing service for promotion will be given priority.

#### **SOFT & AAFS ORAL FLUID COMMITTEE**

## SUBMITTED BY: KRISTIN UMSTEAD, D-ABFT

The SOFT/AAFS Oral Fluid Committee would like to highlight presentations given during the 2024 AAFS Meeting in Denver, Colorado in which oral fluid is used as a matrix of interest. Summaries from the abstracts of each presentation are included below.

Comparing the Performance of LC-QQQ-MS vs. LC-QTOF-MS for Targeted Analysis of NPS With a Test Mixture of 40 NPS and Metabolites in Whole Blood, Urine, and Oral Fluid

Rebecca L. Smith\*, Florida International University, Miami, FL; Anthony P. DeCaprio, Florida International University, Miami, FL

- Comparison of two effective methods of targeted analysis for Novel Psychoactive Substances (NPS).
- Methods were evaluated by their sensitivity, linear range, precision, matrix effects, and specificity in whole blood, urine, and oral fluid.
- This study identified which of the targeted methods was more effective for general forensic toxicological screening of a wide range of NPS in each of three essential specimen matrices.

A Retrospective Analysis of Results From United States Court-Ordered Mandatory Drug Testing of Oral Fluid and Hair and the Impacts of Expanding the Testing Scope for Fentanyl and Fentanyl-Related Compounds

Jeri D. Ropero-Miller\*, RTI International, Creedmoor, NC; Megan Grabenauer, RTI International, Research Triangle Park, NC; Nichole D. Bynum, RTI International, RTP, NC; Nicolas Richardson, Research Analyst, RTI International, RTP, NC

- Oral fluid (OF) and hair are advantageous matrices for court-ordered mandatory drug testing (COMDT) due to their ease of collection and the longer window of detection hair provides.
- A random, national COMDT sampling of 959,237 OF and 65,645 hair test results were analyzed. Specimens in the
  historical dataset were tested for misused substances by screening with immunoassay and confirmatory testing
  was performed on a subset of OF and all hair positive specimens by LC-MS/MS or -HRMS.
- The screening positivity rate in oral fluid was 34.0% with 7.8% total confirmed, whereas the hair overall positivity rate was 56.0% (36,778 positive of 65,645). This is up to 5 times higher than oral fluid and hair in a U.S. workforce population during a similar time period (10.2% and 10.9%, respectively).

An Evaluation and Comparison of the Evidence MultiSTAT to GC/MS for the Detection of Morphine, Codeine, and Thebaine in Urine and Oral Fluid

Amanda L. Pacana\*, Sam Houston State University, Conroe, TX; Britni Skillman, Sam Houston State University, Huntsville, TX; Madeleine J. Swortwood, Robson Forensic, Inc., Denver, CO; Stacie Terry, Sam Houston State University, Huntsville, AL

- The Randox Evidence MultiSTAT is a new immunoassay tool that conveniently uses cartridges which house all required reagents for testing many drug classes for one sample. The opiate panel demonstrates a low cross-reactivity to thebaine, but offers low detection limits for other opiates to identify opiate-positive samples, which could be beneficial for poppy seed confirmation.
- Authentic urine and OF samples were collected from 12 participants (7 female, 5 male) after the consumption of

# **NEWS FROM AAFS**

- Betty Crocker<sup>™</sup> poppy seed muffins. OF was collected at specified time points until 24 hours, while urine samples were collected at every void until 24 hours. Samples were analyzed using the Evidence MultiSTAT and GC/MS.
- For laboratories looking to test for thebaine as a poppy seed marker, the Evidence MultiSTAT would be a sufficient screening method. Based on these studies, a separate thebaine-only confirmatory method should be utilized using GC-MS, or other methods such as LC/MS/MS could be explored as a viable alternative.

# DUID Cannabinoid Investigations: Blood, Oral Fluid, or Urine—Which Is the Superior Specimen?

Curt E. Harper\*, Alabama Department of Forensic Sciences, Hoover, AL; Clarissa Lawen, Alabama Department of Forensic Sciences, Hoover, AL; Kristin Tidwell, Alabama Department of Forensic Sciences, Hoover, AL; Gil Sapir, Chicago, IL

- A review of test results from 1,585 cases was performed over a five-year period (2018–2022). Median (average) concentrations, positivity rates, and the prevalence of cannabinoids and their metabolites (i.e., delta-9-THC, hydroxy-THC, and carboxy-THC) in blood, oral fluid, and urine were determined.
- Based on the five-year review, blood or oral fluid, but not urine, can provide important information on the potential source of impairment and recency of cannabinoid use.
- The ability to collect oral fluid proximate to the time of driving (e.g., at the roadside) presents a distinct advantage. Laboratories should consider the use of oral fluid as an additional or alternative specimen in DUID cases. The use of oral fluid may particularly appeal to states that currently use urine only in DUID testing.

### Cocaine and Benzoylecgonine in Blood and Oral Fluid of DUID Cases (2018–2022)

Michael L. Weaver\*, Alabama Department of Forensic Sciences, Birmingham, AL; Clarissa Lawen, Alabama Department of Forensic Sciences, Birmingham, AL; Christopher Bartle, Alabama Department of Forensic Sciences, Water Valley, MS; Curt E. Harper, Alabama Department of Forensic Sciences, Hoover, AL

- Since implementing the OF testing program for DUIDs, data has shown that cocaine has better detection in OF and at higher concentrations.
- OF-to-blood median ratio was 11:1 for cocaine and 1:1 for benzoylecgonine.
- OF is a specimen containing active parent drugs and cocaine is often present in OF when not found in the blood due to its rapid metabolism and short half-life.

# A Quantitative Analysis of Cannabis Exposure Biomarkers in Exhaled Breath Condensate and Oral Fluid

Meena Swaminathan\*, Florida International University, Miami, FL; Anthony P. DeCaprio, Florida International University, Miami, FL

- Exhaled Breath Condensate (EBC) and OF are alternative, non-invasive sample matrices that hold promise for identification of cannabis exposure biomarkers.
- This work focuses on the assessment of an extraction method and the validation of a previously developed LC/ QqQ/MS dynamic Multiple Reaction Monitoring (dMRM) method for the analysis of the cannabis exposure biomarkers from EBC and OF samples.
- The developed method is capable of extracting, detecting, and quantifying 25 cannabinoids. Once the method
  has been fully validated, it will be used to analyze OF and EBC samples obtained from a human cohort of cannabis smokers with different user profiles to differentiate between licit vs. illicit, recent vs. past, and episodic vs.
  regular use.

# TOXTALK

TOXTALK® is the official publication of the Society of Forensic Toxicologists and is published quarterly.

#### **2024 PUBLISHING SCHEDULE**

Issue 4: Submissions due by 11/17, Publishing week of December 16

## **NEW FORMAT OVERVIEW**

ToxTalk will be formatted to include organizational information such as SOFT updates, Annual Meeting information, committee updates, award opportunities and continuing education opportunities.

All science related submissions will now be included on their own webpage on the SOFT website. They will be stored there indefinitely and can be accessed at any point by both members and non-members. Scientific submissions will now need to include an abstract, a template has been included on the ToxTalk Webpage. The abstract will be included in the issue of ToxTalk and a link will be included to direct readers to the full article.

# VIEW PAST TOXTALK ISSUES

SUBMIT AN UPDATE

# SUBMIT A SCIENTIFIC ARTICLE

# SOFT OFFICE



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# **FUTURE MEETINGS**



#### **SOFT 2025**

Oregon Convention Center October 26-October 31, 2025 Hosts: Amy Miles and Sara Short



#### SOFT/TIAFT 2026

Hilton Chicago September 19-24, 2026 Hosts: Luke Rodda and Andre Sukta

# 2024 COMMITTEE CHAIRS

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