

TOXICOLOGY

Wednesday

Poster Session

- 7:30 pm – 9:00 pm **L1** **A Risk Assessment of Lead Exposure in Glass Industry Workers: Evaluating Occupational Toxicity**
*Nrashant Singh, PhD**
- 7:30 pm – 9:00 pm **L2** **An Alcohol Impairment Evaluation in Cases of Severe Injury**
Maria Pieri, PhD; Pascale Basilicata, PhD; Mariagrazia Marisei, MD; Angela Simonelli, PhD; Angela Silvestre, MD; Rossella Guadagni, PhD; Emanuele Capasso, MD, PhD; Massimo Niola, PhD*
- 7:30 pm – 9:00 pm **L3** **Biofluid Sampler: A Green and Robust Sampling and Sample Preparation Platform for Forensic Toxicological Analysis**
Abuzar Kabir, PhD; Kenneth Furton, PhD*
- 7:30 pm – 9:00 pm **L4** **Cannabis-Based Medicines and Driving: Current Legal Issues in Switzerland**
Cristian Palmiere, MD; Maria Pia Scarpelli, MD*
- 7:30 pm – 9:00 pm **L5** **Cocaine and Aortic Dissection: The Need to Overcome the Underreporting Bias**
Mariagrazia Marisei, MD; Pascale Basilicata, PhD; Antonio Lombardi, MD; Angela Simonelli, PhD; Angela Silvestre, MD; Rossella Guadagni, PhD; Massimo Niola, PhD; Maria Pieri, PhD*
(FSF Emerging Forensic Scientist Award Poster Presentation)
- 7:30 pm – 9:00 pm **L6** **Comparative Postmortem Blood Alcohol Concentrations in Cardiac and Peripheral Blood: A Case Series**
Giulia Ricchezza, MS; Erika Buratti, PhD; Alice Cerioni, PhD; Gianmario Mietti, PhD; Marta Cippitelli, PhD; Rino Froidi, MS; Mariano Cingolani, MD; Roberto Scendonì, MD, PhD*
- 7:30 pm – 9:00 pm **L7** **Ethanol Stability Over Time in Blood Samples Undergoing Headspace Analysis**
Ava La Lande; M. Denise Gemmellaro, PhD*
- 7:30 pm – 9:00 pm **L8** **Forensic “ToxAlcology”: Is It Really Over for the Forensic Human Community?**
Maria Pieri, PhD; Pascale Basilicata, PhD; Mariagrazia Marisei, MD; Angela Simonelli, PhD; Angela Silvestre, MD; Rossella Guadagni, PhD; Claudia Casella, PhD; Massimo Niola, PhD*
- 7:30 pm – 9:00 pm **L9** **Leveraging Surveillance Data for the Analysis of Trends, Adulteration, and Novel Substances in the District of Columbia Needle Exchange Programs: A Four-Year Review**
Snehal Parikh, BS; William Kim, BS*
- 7:30 pm – 9:00 pm **L10** **Mapping Mortality: A Decade’s Review of Drug Usage in Maryland (2014–2024)**
Nicholas Boire, MD; Stephanie Dean, MD; Rebecca Phipps, PhD*

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- 7:30 pm – 9:00 pm **L11** **Revolutionizing Anti-Doping and Sports Forensics: Comprehensive Screening of Nutritional Supplements for WADA-Banned Substances Using High Resolution Mass Spectrometry**
*Astha Pandey, PhD**; *Anirudha Dixit, MS*; *Disha Kothari, PhD*; *Abhishek Trivedi, MS*
- 7:30 pm – 9:00 pm **L12** **The Opioid Crisis in Pakistan and Toxicological Interpretation: A Case Report**
*Muhammad Chaudhary, MPhil**
- 7:30 pm – 9:00 pm **L13** **WITHDRAWN**
- 7:30 pm – 9:00 pm **L14** **The Underreporting of Psychoactive Adulterants of Illicit Drugs of Abuse in Toxicological Samples**
*Shayna Kasher, MSFS**
(FSF Emerging Forensic Scientist Award Poster Presentation)
- 7:30 pm – 9:00 pm **L15** **A Comparison of Sample Preparation Techniques for the Analysis of Drugs of Abuse in Oral Fluids**
*Jared Burkhart**; *Samantha Herbick, MSFS*
- 7:30 pm – 9:00 pm **L16** **A Gas Chromatography/Mass Spectrometry Analysis of Tetrahydrozoline in Alcoholic Beverage Residue Related to Drug-Facilitated Sexual Assault**
*Alyssa Hampton, BS**; *Ellen Mwenesongole, PhD*
- 7:30 pm – 9:00 pm **L17** **A Look at Nitazenes Our Lab Has Detected Across the Country From 2020 to 2024**
*Stuart Kurtz, MS**; *Laureen Marinetti, PhD*; *Kevin Shanks, MS*
- 7:30 pm – 9:00 pm **L18** **A Ten-Year Retrospective Review of Death in Custody Toxicology Results From Jefferson County, Alabama**
*Amy Theriault, DO**; *Karen Scott, PhD*
- 7:30 pm – 9:00 pm **L19** **Accidental Acute Intoxication With Gummies Containing Delta-8-Tetrahydrocannabinol**
*Stjepan Brzica, MChem**; *Slavena Cukrov Bezbradica, PhD*; *Kristina Jurković, PhD*; *Martina Cvjetko Ljutić*
- 7:30 pm – 9:00 pm **L20** **An Assessment of Cross-Reactivity for Cannabinoids in Blood and Oral Fluid Using Enzyme Immunoassay Kits**
*Sara Jablonski, MSFS**; *Curt Harper, PhD*
- 7:30 pm – 9:00 pm **L21** **An Evaluation of Enzyme-Linked Immunosorbent Assay (ELISA) Screening Kits for the Detection of Nitazene Analogs**
*Amanda Pacana, MSFS**; *Britni Skillman, PhD*
- 7:30 pm – 9:00 pm **L22** **An Incident of Food Poisoning Attributed to Bongkreic Acid and a Forensic Examination of the Deceased in Taiwan**
*Chou Yihung, MS**
- 7:30 pm – 9:00 pm **L23** **Assessing the Stability of NPS Benzodiazepines in Blood, Urine, and Serum Using LC/QqQ/MS**
*Savannah Baker, MS**; *Sara Walton, MS*; *Donna Papsun, MS*; *Alex Krotulski, PhD*

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- 7:30 pm – 9:00 pm **L24** **Drug/Substance Toxicity-Related Deaths Examined at the West Tennessee Regional Forensic Center and Their Prescription Drug History: A Comparison of 2023 to 2013**
Madeleine Phan, BS; Ibrahim Ortanca, MD*
- 7:30 pm – 9:00 pm **L25** **Evaluating Extraction Parameters for the Detection of Chronic and Single-Dose Drug Exposure in Forensic Hair Analysis Using Design of Experiments**
Kaylyn Keith, BS; Anthony DeCaprio, PhD; Mariana Colome Pena*
- 7:30 pm – 9:00 pm **L26** **Evaluation of the Cross-Reactivity of 27 Parent and 26 Metabolite Tetrahydrocannabinol Analogs Using a Tetrahydrocannabinol Carboxylic Acid ELISA and HEIA Kit**
Taylor Yates, BS; Justin Poklis, BS; Alaina Holt, PhD; Ciena Bayard, BS; Michelle Peace, PhD; Stephen Raso, PhD*
- 7:30 pm – 9:00 pm **L27** **A Forensic Analysis of Environmental Fate and Biodegradation of Benzodiazepines in Synthetic Wastewater Using SPE-LC/MS**
*Ali Alawi, MS**
- 7:30 pm – 9:00 pm **L28** **Gabapentin Detection and Trends in Alabama Toxicology Cases (2017–2023)**
Belicia Sutton, MSFS; Curt Harper, PhD; Taylor Williams*
- 7:30 pm – 9:00 pm **L29** **Improving Liquid Chromatography/Mass Spectrometry Sensitivity for Barbiturates**
Ethan Khandaker, BA; William Campbell, PhD*
- 7:30 pm – 9:00 pm **L30** **Matrix-Matched Standards for Quantitative Elemental and Molecular Analysis of Hair in Forensic Toxicology**
Kaitlyn Bonilla, MS; Ashley Fox; Chloe Phillips, BS; Matthieu Baudelet, PhD*
(FSF Emerging Forensic Scientist Award Poster Presentation)
- 7:30 pm – 9:00 pm **L31** **Modification of a Liquid Chromatography/Tandem Mass Spectrometry Method Targeting Lysergic Acid Diethylamide and Its Primary Metabolite to Include Nine Analogs**
Amy Patton, PhD; Erin Karschner, PhD; Jeffrey Walterscheid, PhD; Jason Garcia, PhD*
- 7:30 pm – 9:00 pm **L32** **Old vs. New: A Novel Approach to Blood Alcohol Analysis In the Modern Day Forensic Laboratory.**
*Timothy Fassette, MS**
- 7:30 pm – 9:00 pm **L33** **Profiling Heavy Metals in Kratom Powder Purchased in Southeastern Pennsylvania and Southern New Jersey**
Xavia Pough; Tom Gluodenis, PhD*
- 7:30 pm – 9:00 pm **L34** **The Quantitation of an Oral Fluid Drug Panel, Including THC, Using High Resolution Accurate-Mass (HRAM) Orbitrap Mass Spectrometry**
Courtney Patterson, MPS; Kerry Hassell, PhD*
- 7:30 pm – 9:00 pm **L35** **Rapid Development of Analytical Methods and Prediction of Retention Times for Inhalants of Abuse on GC Stationary Phases Using Web-Based Modeling Software**
Jessi Collier, BS; Whitney Dudek-Salisbury, MS*

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- 7:30 pm – 9:00 pm **L36** **The Detection and Quantitation of Alcohol in Packed Red Blood Cells**
*Jordan Keller, BS**; *Connor Gailliot, BAS*; *Justin Poklis, BS*; *Carrol Nanco, MCLS*;
Carl Wolf, PhD; *Grace Williams, PhD*
- 7:30 pm – 9:00 pm **L37** **The Extraction, Isolation, and Analysis of Clonazepam From Blood Using the High-Performance Thin-Layer Chromatography (HPTLC) Technique in Different Solvent Systems**
*Sunil Sunil, MS**; *A.K Jaiswal, PhD*
- 7:30 pm – 9:00 pm **L38** **The Postmortem Distribution of the Synthetic Cathinone MDPHP in a Fatal Intoxication Case**
*Andrea Costantino, MD**; *Emma Croce, MS**; *Alexandra Dimitrova, RF**;
*Fabio Vaiano, PhD**; *Ilenia Bianchi, PhD*; *Vilma Pinchi, PhD*; *Martina Focardi, MD*
- 7:30 pm – 9:00 pm **L39** **The Validation of an Analytical Method for the Quantitation of Xylazine in Human Hair**
*Andre Sukta, MSFS**

Thursday

Annual Lectureship in Toxicology

- 8:00 am – 8:15 am **Welcome & Introductions**
- 8:15 am – 9:15 am **Invited Lectureship**
Michael Baumann, PhD
National Institute on Drug Abuse Intramural Research Program
- 9:15 am – 9:45 am **L40** **An Update on Standards Development Activities in Forensic Toxicology**
*Marc LeBeau, PhD**
- 9:45 am – 10:00 am **L41** **Smith vs. Arizona and Strategies to Support the Admissibility of Toxicology Testimony: Don't Stop Reading at Page 18**
*M.J. Menendez, JD**; *Barry Logan, PhD**
- 10:00 am – 10:15 am **Break**

Postmortem Toxicology and Drug Adulteration

- 10:15 am – 10:30 am **L42** **Beyond the Green Thumb—The Role of Technology in a Case of Suicide by Pesticide Poisoning**
*Luca Diani, MD**; *Giada Rovito, MD**; *Laura Camilla Gasparini, MD*;
Irene Pradelle, MD; *Matilde Ruju, MD*; *Donata Favretto, MS*; *Negar Eftekhari, PhD*;
Carmela Vaccaro, MS; *Matteo Marti, MS*; *Margherita Neri, MD, PhD*
- 10:30 am – 10:45 am **L43** **Comparisons of Blood, Vitreous Fluid, and Urine (When Available): Drug Screen Findings in Over 100 Cases**
*Laureen Marinetti, PhD**

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- 10:45 am – 11:00 am **L44** **The Determination of Measurement Uncertainty of Non-Routine Measurements in Forensic Toxicological Casework**
*Ingrid Bosman, PhD**; *Dick-Paul Kloos, PhD*; *Camille van Dijk, MS*; *Ivo Alberink, PhD*
- 11:00 am – 11:15 am **L45** **Evaluating the Pharmacokinetics of Xylazine in Humans: A Paired Forensic and Clinical Model**
*Alex Krotulski, PhD**; *Sara Walton, MS*; *Brittany Chapman, BS*; *Patricia Martinez, MD*; *Aidan Hampson, PhD*; *Jyothi Polackal, BS*; *Deborah Olabisi, MD*; *John Nguyen, BSN*; *John Broach, MD*; *Brianna Stang, MS*; *Alyssa Reyes, MS*; *Barry Logan, PhD*
- 11:15 am – 11:30 am **L46** **Paired Toxicology Assays for the Quantitation of Medetomidine and the Differentiation of Dexmedetomidine and Levomedetomidine**
*Sara Walton, MS**; *Brianna Stang, MS*; *Alex Krotulski, PhD*; *Sherri Kacinko, PhD*; *Barry Logan, PhD*
- 11:00 am – 1:00 pm **Break**

Multidisciplinary Session: Pathology/Biology and Toxicology

- 1:00 pm – 1:15 pm **L47** **Two Fatalities Involving Hydroxychloroquine**
*Teresa Gray, PhD**; *Jennifer Ross, MD*; *Marianne Beynon, MD*
- 1:15 pm – 1:30 pm **L48** **An Unexpected Fatal Methadone Ingestion in a Child**
*Jordan Taylor, MD**
- 1:30 pm – 1:45 pm **L49** **A Toxicological and Pathological Re-Evaluation of Media-Reported Mitragynine (Kratom) Deaths in Florida**
*Marilyn Huestis, PhD**; *Karl Williams, MD*
- 1:45 pm – 2:00 pm **L50** **Endogenous Carbon Monoxide Due to Hemolytic Anemia: A Forensic Red Herring**
*Orianna Thomas, MSFS**; *Sandra Bishop-Freeman, PhD*
- 2:00 pm – 2:15 pm **I66** **Drug-Related Deaths in the Elderly: A Five-Year Overview of Western Michigan**
*Abigail Grande, MPH**; *Gemma Harkin, MPH*; *Bo Collins, MPH*; *Amanda Fisher-Hubbard, MD*
- 2:15 pm – 2:30 pm **I67** **Fatal Intoxications vs. Congenital Cardiac Disorders in Sudden Death: Where to Draw the Line?**
*Alexandra Dimitrova, RF**; *Simone Grassi, MD*; *Fabio Vaiano, PhD*; *Vincenzo Arena, MD*; *Oscar Campuzano, MD*; *Sabina Strano Rossi, PhD*; *Ramon Brugada, MD*; *Antonio Oliva, MD, PhD*
- 2:30 pm – 2:45 pm **I68** **Illicit Drug Deaths in Decedents Over 60 Years of Age in the City and County of San Francisco From 2020 to 2024**
*Ellen Moffatt, MD**; *Luke Rodda, PhD*; *Anson Tsang, MS*
- 2:45 pm – 3:00 pm **I69** **Sodium Azide/Nitrite Suicides in the Netherlands Between 2015 and 2022**
*Karen van den Hondel, PhD**; *Dominique van Pelt, MS*; *Lizanne Schweren, PhD*; *Manon Ceelen, PhD*

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3:00 pm – 3:15 pm **I70** **Fatal Drug Intoxication in the Pediatric Population of El Paso, Texas**
*Romina Malerba, MD**; *Alejandro Partida Contreras, MD*; *Adam Gonzalez, MD*;
Mario Rascon, MD

3:15 pm – 3:30 pm **BREAK**

Toxicology Special Session: Drugs and Driving

3:30 pm – 3:45 pm **L51** **Recommendations for Drug Testing in Driving Under the Influence of Drugs (DUID) and Motor Vehicle Fatality Cases—2025 Update**
*Amanda D’Orazio, MS, D-AFBT-FT**; *Barry Logan, PhD*; *Amanda Mohr, MS*;
Ayako Chan-Hosokawa, MS; *Curt Harper, PhD*; *Marilyn Huestis, PhD*; *Sarah Kerrigan, PhD*;
Jennifer Limoges, MS; *Amy Miles, BS*; *Colleen Scarneo, MS*; *Karen Scott, PhD*

3:45 pm – 4:00 pm **L52** **New York’s Drug Recognition Expert (DRE) Oral Fluid Field Certifications**
*Jennifer Limoges, MS**

4:00 pm – 4:15 pm **L53** **How High Will It Go? The Alarming Rise of Fentanyl Tolerance**
*Ayako Chan-Hosokawa, MS**; *Zachary Shaner*

4:15 pm – 4:30 pm **L54** **Driving Under the Influence Snapshot: Uncovering Drug Prevalence Trends in Washington, DC**
*Kimberley Heine, MFS**; *Samantha Tolliver, PhD*

4:30 pm – 4:45 pm **L55** **Drug Use by Drivers in Fatal Traffic Crashes**
*Amanda Mohr, MS**; *Grace Cieri, MS*; *James Gill, MD*; *Barry Logan, PhD*

4:45 pm – 5:00 pm **L56** **Impaired Driving Cases With Gabapentin**
*Nicholas Tiscione, MS**; *Edward Zumaeta, MS*

Friday

8:00 am – 8:15 am **L57** **2024 Novel Psychoactive Substance Trends and a Comparison Against NPS Discovery Scope Recommendations**
*Donna Papsun, MS**; *Alex Krotulski, PhD*; *Barry Logan, PhD*

8:15 am – 8:30 am **L58** **Metabolic Profiling of the Semi-Synthetic Tetrahydrocannabinols (THCs), Delta 10-THC, and Delta 6a,10a-THC, Using Human Liver Microsomes and LC/MS**
*Nathan Layle, MS**; *Jonathon Bassman, MS*; *Marc Gregerson, PhD*;
Jeffrey Williams, MS; *Donna Iula, PhD*

Novel Psychoactive Substances

8:30 am – 8:45 am **L59** **Cytochrome P450-Mediated Metabolism of Isotonitazene, a Novel Synthetic 2-Benzylbenzimidazole Opioid**
*Madison Schackmuth, PhD**; *Sarah Kerrigan, PhD*
(FSF Emerging Forensic Scientist Award Oral Presentation)

8:45 am – 9:00 am **L60** **Metabolite Profile Commonalities of Methoxylated Fentanyl Analogs**
*Jillian Morgan, MS**; *Candice Bridge, PhD*

9:00 am – 9:15 am **L61** **Novel Psychoactive Substance Presence in Fentanyl/Norfentanyl-Positive Clinical Urine Specimens**
*Theresa Meli, MS**; *Jillian Neifeld, MS*; *Sarah Bartock, PhD*

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- 9:15 am – 9:30 am **L62** **The Prevalence of P-Fluorofentanyl and Xylazine in Postmortem Fentanyl Casework: A Three-Year Retrospective Study**
*Marco Ballotari, PhD**; *Michael Truver, PhD*; *Jennifer Hoyer, MS*;
Bruce Goldberger, PhD; *Chris Chronister, PhD*
- 9:30 am – 9:45 am **L63** **The Detection of Novel Psychoactive Substances in Urine Specimens From a Large United States Prison System**
*Jillian Neifeld, MS**; *Theresa Meli, MS*; *Sarah Bartock, PhD*
- 9:45 am – 10:00 am **L64** **Two Fatal Cases Involving N-Ethylpentedrone in a Secured Forensic Psychiatric Clinic**
*Jeroen Roosendaal, PhD**; *Ingrid Bosman, PhD*; *Pieter Van Driessche, MD*;
Janneke Hulshof, PhD; *Bas van de Velde, MS*; *Theo Klein, PhD*;
Kristof Maudens, PhD
- 10:00 am – 10:15 am **BREAK**

Alcohol & General Forensic Toxicology

- 10:15 am – 10:30 am **L65** **Insights Into Phosphatidylethanol (PEth) 16:0/18:1 Formation and Degradation Analysis by Supercritical Fluid Chromatography-Tandem Mass Spectrometry**
*Munchelou Gomonit, BS**; *Markus Roman, MS*; *Britni Skillman, PhD*;
Michael Truver, PhD; *Robert Kronstrand, PhD*
(FSF Emerging Forensic Scientist Award Oral Presentation)
- 10:30 am – 10:45 am **L66** **Alcohol Extrapolation: Contentions Within the Scientific and Legal Systems**
*Kira Bochard, MScFS**; *Lynne Seborowski, JD*; *John Brick, PhD*
(FSF Emerging Forensic Scientist Award Oral Presentation)
- 10:45 am – 11:00 am **L67** **Performing Blood Alcohol Calculations According to ASB 122 Using a Simple Spreadsheet**
*Rebecca Hartman, PhD**; *Svante Vikingsson, PhD*
- 11:00 am – 11:15 am **L68** **Drug-Facilitated Crime: A Seven-Year Review of Drug Positivity**
*Meaghan Hessler, MSFS**; *Sherri Kacinko, PhD*; *Barry Logan, PhD*
- 11:15 am – 11:30 am **L69** **An Investigation Into the Utility of Creatinine and the Submaxillary Gland Androgen-Regulated Protein 3B as Adulteration Biomarkers and Normalization Factors in Oral Fluid**
*Marta Concheiro-Guisan, PhD**; *Christopher McGrowder, BS*;
Alejandro Ocampo, MS; *Mechthild Prinz, PhD*
- 11:30 am – 1:00 pm **BREAK**

Toxicology Special Session: Pediatric Toxicology

- 1:00 pm – 3:00 pm **L70** **Postmortem Pediatric Forensic Toxicology: Children Are Not Small Adults**
Nikolas Lemos, PhD; *Timothy Rorhig, PhD*