

# TOXICOLOGY

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## Wednesday

### Poster Session

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- 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*
- 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 Frolidi, 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\**
- 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 Bongkreikic 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*
- 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

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- 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

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- 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**

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## Multidisciplinary Session: Pathology/Biology and Toxicology

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- 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

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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

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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*

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

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- 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*
- 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*
- 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

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