

TOXICOLOGY

Wednesday

Poster Session

7:30 pm—9:00 pm	L1	A Complete and Optimized Toxicological Database Solution for Investigative and Routine Testing on GC/MS Jeremy Smith, MSc*
7:30 pm—9:00 pm	L2	A New Enzyme in Urine Drug Testing: A Comparative Evaluation of Enzymatic Hydrolysis Methods for Pain Management Drugs Lakshminiranjana Vanimireddy, PhD*; Matthew Liang, MS; Lucia Vu, BS; Alexander Nguyen, BS; Elías Villalobos, MS
7:30 pm—9:00 pm	L3	A Toxic Relationship: Advanced Analytical Screening Techniques for Decomposed Specimens Rachel Lindenberger, PhD*; Paul Crowley, BS; Sandra Bishop-Freeman, PhD
7:30 pm—9:00 pm	L4	Advancing Forensic Sample Preparation: Capsule Phase Microextraction (CPME) as an Efficient Tool for Trace Evidence Analysis Abuzar Kabir, PhD*; Kenneth Furton, PhD
7:30 pm—9:00 pm	L5	Analytical Challenges in the Detection of $\Delta 8$-Tetrahydrocannabinol and Its Metabolites in Dried Urine Spots R. Deanna Brambila, MSFS; Eduardo Geraldo de Campos, PhD*
7:30 pm—9:00 pm	L6	Benzodope and Beyond: The Detection of Benzodiazepine and Opioid Mixtures in Blood and Alternative Matrices Using LC/MS/MS Elizabeth Greco, BS*; Meredith Robbins, MS; Britni Skillman, PhD
7:30 pm—9:00 pm	L7	Can <i>Lucilia Sericata</i> Larvae Produce Ethyl Glucuronide? An Experimental Study for Forensic Implications Erika Buratti, PhD*; Giulia Ricchezza; Alice Cerioni, PhD; Marta Cippitelli, PhD; Roberto Scendonì, MD, PhD; Gianmario Miettì, PhD
7:30 pm—9:00 pm	L8	The Classification of Mitragynine and 7-Hydroxymitragynine of Commercial Online Kratom Products, Local Kratom Bars, and Smoke Shops Via LC/MS/MS Michaela Clarke, MS*; Anthony DeCaprio, PhD; Leonardo Maya, PhD; Kenneth Furton, PhD
7:30 pm—9:00 pm	L9	Designing an Analytical Method to Screen for Contaminants in Amanita Muscaria Gummies Using Triple Quadrupole LC/MS/MS Abigail Van de Water, BS*; Marisia Fikiet, PhD; Robert Powers, PhD
7:30 pm—9:00 pm	L10	The Development and Validation of a Method for the Quantitative and Qualitative Analysis of Psychedelic Compounds in Antemortem and Postmortem Blood Using Liquid Chromatography/Tandem Mass Spectrometry Paige Riley-Carrier, MS*; Rebecca Wagner, PhD
7:30 pm—9:00 pm	L11	Dissociation by Design: LC/MS/MS Detection and Validation of Phencyclidine, Ketamine, Metabolites, and Novel Structural Analogs in Blood and Urine Andrea Bernal, BS*; Britni Skillman, PhD
7:30 pm—9:00 pm	L12	Ethanol Inhibition of Morphine Glucuronidation Supraja Regunathan, BS*; Na Liu, PhD; Robert Powers, PhD

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7:30 pm—9:00 pm	L13	The Extraction of Novel and Traditional Stimulants From Blood Using Protein Precipitation and Dispersive Pipette XTRaction for Liquid Chromatography/Triple Quadrupole Mass Spectrometry Analysis Alexus Ceasar-Walker, BS*; Eduardo Geraldo de Campos, PhD
7:30 pm—9:00 pm	L14	Fluorescent Detection of Heroin Using a Molecularly Imprinted Chitosan–UiO66 Metal Organic Framework (MOF)–Carbon Dot Hybrid Sensor Somayeh Mohammadi, PhD* Hamidreza Sharifan, PhD
7:30 pm—9:00 pm	L15	Forensic Toxicology on a Pre-Skeletonized Body: A Case Report on the Use of Multiple Biological Matrices Anna Antonia Capurso, MD*; Domenico Urso, MD; Valeria Santoro, MD, PhD; Francesco Introna, MD, PhD; Francesco Paolo Busardò, MD, PhD
7:30 pm—9:00 pm	L16	The Identification of the Novel Non-Opioid Analgesic Suzetrigine in Whole Blood and Urine using Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS) Isabelle Parry, BS*; Britni Skillman, PhD
7:30 pm—9:00 pm	L17	An LC/MS/MS Analysis of Nitazenes Hannah Kruse, MPS*; William Campbell, PhD
7:30 pm—9:00 pm	L18	A Lethal Intake of Cocaine: Accidental or Suicide? The Presentation of a Case After a Review of the Literature Giulia Ricchezza*; Alice Cerioni, PhD; Erika Buratti, PhD; Rino Foldi, MS; Roberto Scendonì, MD, PhD; Gianmario Miettì, PhD
7:30 pm—9:00 pm	L19	Lethal Sodium Nitrite Intoxication: The Contribution of Immunoistochemical Markers Roberta Bibbò, MD*; Stefania De Simone, PhD; Alessandro Santurro, MD, PhD; Giovanni Pollice, MD; Maria Antonella Bosco, MD; Francesco Orsini, MD
7:30 pm—9:00 pm	L20	Liquid Chromatography-Tandem Mass Spectrometry Analysis of Natural and Semi-Synthetic Cannabinoids in Authentic Postmortem Blood Samples Marco Ballotari, PhD*; Michael T. Truver, PhD; Jennifer Hoyer, MS; Chris Chronister, PhD; Bruce Goldberger, PhD
7:30 pm—9:00 pm	L21	Methods of Separating Isomers of Fentanyl Analogs Via High-Performance Liquid Chromatography David Cirota, MPS*; William Campbell, PhD
7:30 pm—9:00 pm	L22	PEth: One Drop to Track the Truth? Rethinking the Future of Alcohol Monitoring Through a Multi-Matrix Longitudinal Analysis Federica Trevisoi, MD*; Giacomo Germani, MD, PhD; Guido Viel, MD, PhD; Luca Morini, PhD; Giovanni Cecchetto, MD, PhD
7:30 pm—9:00 pm	L23	Postmortem Electrolyte Profiling as a Forensic Biomarker: Differentiating Causes of Death Ji Eun Jung, PhD*; Songhie An, PhD; Wooyong Park, MSc; Geum Mun Nam, PhD; Eunhui Park, MSc
7:30 pm—9:00 pm	L24	Potency Testing for 24 Cannabinoids in Hemp and Cannabis-Infused Products Mingjing Sun, PhD*
7:30 pm—9:00 pm	L25	Quadrupole Time-Of-Flight vs. Orbitrap: Scoring High Resolution Mass Spectrometry Performance for New Psychoactive Substance Screening in Human Matrices Akshita Verma, MS*; Anthony DeCaprio, PhD

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7:30 pm—9:00 pm	L26	A Rapid LC/MS/MS Analysis of EtG and EtS in Urine Samantha Herbick, MFS*; Jamie York, PhD; Jared Burkhart, BSc
7:30 pm—9:00 pm	L27	Real-Time Intelligent Tools for Mitigating Carryover in LC/MS-Based Targeted Drug Quantification Jingshu Guo, PhD*; Courtney Patterson, MS; Kerry Hassell, PhD; Lauren Bishop, PhD; Kimy Young, PhD
7:30 pm—9:00 pm	L28	A Review of Xylazine-Related Deaths Over a Two-Year Period at the West Tennessee Regional Forensic Center Anfisa Baiandurova, MD*; Danielle Harrell, DO
7:30 pm—9:00 pm	L29	Screening for Nitazene Analogs Using Neutral Losses and Common Fragments by Liquid Chromatography/Quadrupole Time-of-Flight/Mass Spectrometry Angelique McDowell, BS*; Barry Logan, PhD; Alex Krotulski, PhD; Joshua DeBord, PhD
7:30 pm—9:00 pm	L30	Semi-Synthetic Cannabinoids: The Newest Challenge in Analyzing THC Isomers Jared Burkhart, BSc; Haley Berkland, MSFS*
7:30 pm—9:00 pm	L31	A Stability Assessment of Nitazenes in Aqueous Solutions for the Development of Sample Preparation Procedures Sara Kuberski, BS*; Britni Skillman, PhD
7:30 pm—9:00 pm	L32	Substance Consumption Informative Research (SCIRe): Testing Hair From Electronic Music Festivals Ana Pego, PhD*; Bruno Pereira dos Santos, MSc; Marta Concheiro-Guisan, PhD; Joao Pedro Matias, MS; Sarah Eller, PhD; Tiago Franco de Oliveira, PhD
7:30 pm—9:00 pm	L33	Teaching Undergraduates Toxicology Skills Via a Mock Urinalysis LC/MS/MS Protocol George Cattan*; Nina Ratusznik, BS; Anna Duggar, PhD; CJ Stephenson, PhD; Michael Sosin, MSc
7:30 pm—9:00 pm	L34	The Chiral Separation of Hexahydrocannabinol (HHC) Metabolites Reveals 9S-4'OH-HHC as Major Urinary Side-Chain Hydroxylation Markus Roman, BSc; Wu Xiongyu, PhD; Robert Kronstrand, PhD*; Henrik Gréen, PhD
7:30 pm—9:00 pm	L35	Tracking Toxicity: A Preliminary Forensic-Epidemiological Overview of Drug-Related Deaths in Northwestern Italy (2012–2024) Federica Trevisoi, MD*; Valentina Martini, MSc; Guido Viel, MD, PhD; Luca Morini, PhD; Camilla Torriani, MSc; Maria Cristina Monti, PhD
7:30 pm—9:00 pm	L36	Urine Drug Testing in a Few Drops: Assessing Dried Urine Spots for the Detection of Synthetic Cathinones Using Liquid Chromatography/Triple Quadrupole/Mass Spectrometry Julia Hintermeister, BA*; Eduardo Geraldo de Campos, PhD
7:30 pm—9:00 pm	L37	Using the New Stellar Mass Spectrometer and Automated Extraction for Drugs of Abuse Testing in Whole Blood Courtney Patterson, MS*; Jingshu Guo, PhD; Kerry Hassell, PhD
7:30 pm—9:00 pm	L38	Δ^9-THCP and Δ^9-THCH Biomarkers Formed by Human Liver Microsomes Kathryn James, BS*; Alaina Holt, PhD; Michelle Peace, PhD; Justin Poklis, BS

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Thursday

Annual Lectureship in Toxicology

Moderator: Svante Vikingsson, PhD

Co-Moderator: Curt Harper, PhD

8:30 am—8:35 am		Welcome & Introductions
8:35 am—9:35 am		Invited Lectureship
9:35 am—10:00 am	L39	An Update on Standards Development Activities in Forensic Toxicology Marc LeBeau, PhD*
10:00 am—10:15 am	L40	WITHDRAWN
10:15 am—10:30 am		BREAK

Drugs and Driving

Moderator: Kayla Neuman, MS

Co-Moderator: Curt Harper, PhD

10:30 am—10:45 am	L41	Expiration, Collection, and Storage: A Multi-Factor Investigation of Blood Alcohol Testing Sarah Douglas, MS; Roth Woolley, BS*
10:45 am—11:00 am	L42	Behind the Calm: Benzodiazepines in Blood and Oral Fluid Samples in Alabama Kristin Umstead, BS*; Curt Harper, PhD
11:00 am—11:15 am	L43	Bromazolam in Driving Investigations: An Update Jolene Bierly, MSFS*; Donna Papsun, MS; Barry Logan, PhD
11:15 am—11:30 am	L44	The Detection of Fluorofentanyl in Urine Driving Under the Influence (DUI) Cases Kenson Jean, BS*; Kristin Kahl, MS; Lisa Reidy, PhD
11:30 am—1:15 pm		BREAK

Multidisciplinary Session: Pathology/Biology and Toxicology

Moderator: Laura Labay, PhD

Co-Moderator: Ponni Arunkumar, MD

1:00 pm—1:15 pm	L45	Postmortem Hair Testing for Fentanyl and Analogs: Experimental, Forensic, and Interpretative Aspects Nicola Pigaiani, MD, PhD* Marco Ballotari, PhD; Federica Bortolotti, MD, PhD; Gregory Davis, MD; Rossella Gottardo, PhD; Karen Scott, PhD
1:15 pm—1:35 pm	I92	A Forensic Investigation of Kratom-Related Fatalities: The Mitragynine Paradox Giulia Bambagiotti, MD*; Diletta Berardinelli, PhD*; Eva Montanari, PhD; Prentiss Jones, PhD; Gary W. Kunsman, PhD; Francesco Paolo Busardò, MD, PhD; Marilyn A. Huestis, PhD
1:35 pm—1:50 pm	L46	MDMA Toxicity: A Fatal Case of Ayus-Arieff Syndrome Chiara Carsana, MD*; Bianca Beltrame, MD*; Andrea Verzeletti, MD, PhD; Mauro Minoli, BPharm; Lorenzo Franceschetti, MD, PhD

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1:50 pm—2:05 pm	L47	Positivity of Clonazepam and 7-Aminoclonazepam in DUID versus Postmortem Casework: Microbial Biotransformation as a Pre-analytical Factor Haley Bibey, MSFS*; Donna Papsun, MS; Brittany Casey, PhD; Shayna Kasher, MSFS
2:05 pm—2:20 pm	L48	“The Matrix”: Is the Brain Suitable to Overcome PM Redistribution in Cocaine Overdoses? Pascale Basilicata, PhD; Mariagrazia Marisei, MD; Maria Pieri, PhD*; Angela Silvestre, PhD; Angela Simonelli, PhD; Rossella Guadagni, PhD
2:20 pm—2:35 pm	L49	Unintentional Fentanyl Overdoses Among Cocaine Users: Investigating “Powder and Rock Confusion” Through a Scene-Integrated Toxicological Model Emily Dalgo, MA; Alana Golding, BS*; Maria Esquivel, BA*; Rhonda Mittenzwei, MD*
2:35 pm—2:55 pm	I93	Trends in Cannabinoid Positivity in Fatal Motor Vehicle Collisions: A Retrospective Toxicological Analysis in Connecticut (2018–2024) Stacy Thomas, MD, PhD*; James Gill, MD; Amanda Mohr, MS; Michelle Clark, MS
2:55 pm—3:10 pm	L50	Ketamine-Induced Nephritis and Cystitis: A Forensic Autopsy Case Report Kanokphun Chaisaksiri, MD*; Peerayuht Phuangphung, MD, PhD; Ngoentra Tantranont, MD; Sakda Sathirareuangchai, MD
3:10 pm—3:30 pm		BREAK

Cannabinoids

Moderator: Jennifer Limoges, MS

Co-Moderator: Jessemia Meekins, BS

3:30 pm—3:45 pm	L51	The Fog of Regulation: Adverse Events and Cannabinoid Products Kelsey Moss, BS*; Alaina Holt, PhD; Michelle Peace, PhD; Justin Poklis, BS
3:45 pm—4:00 pm	L52	Exploring the Prevalence of Delta-8 THC in the United States: A Comprehensive Review Across Multiple Matrices and Casework Populations Jennifer Swatek, MS*; Samantha Curran, BS; Ayako Chan-Hosokawa, MS
4:00 pm—4:15 pm	L53	High Hopes: Assessing Label Accuracy and Microbiological Contamination of Cannabis E-Liquids Logan Peters, BS*; Ankita Gola, BS; Michelle Peace, PhD; Alaina Holt, PhD; Justin Poklis, BS
4:15 pm—4:30 pm	L54	Chemical Roulette: The Safety Gamble of Over-the-Counter Nutraceuticals Lillie Thomas, MS*; Justin Poklis, BS; Michelle Peace, PhD
4:30 pm—4:45 pm	L55	Analysis of Δ^8-Tetrahydrocannabinol, Δ^9-Tetrahydrocannabinol, and Cannabidiol Metabolites in Meconium Samples Marco Ballotari, PhD*; Michael T. Truver, PhD; Bruce Goldberger, PhD; Sarah Bartock, PhD; Wen Dui, PhD; Kay Roussos-Ross, MD
4:45 pm—5:00 pm	L56	The Laboratory Impact of a Paradigm Shift in Reporting Postmortem Cannabinoids Shayna Kasher, MSFS*; Daniel Isenschmid, PhD; Donna Papsun, MS; Sherri Kacinko, PhD; Haley Bibey, MSFS

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Friday

Novel Psychoactive Substances

Moderator: Michele Crosby, PhD

Co-Moderator: Muhammad Taimoor Chaudhary, MPhil

8:30 am—8:45 am	L57	A Comparison of Selectivity and Peak Shape of Forensically Relevant Compounds Between Four Column Types Margaret Frohnhofer, BSc*; William Campbell, PhD
8:45 am—9:00 am	L58	Tiny Samples, Big Impact: Detecting Prenatal Alcohol Exposure Using PEth in Dried Blood Spots and LC/MSMS Stephanie Rodriguez, BS*; Baylee Clore, BS; Marta Concheiro-Guisan, PhD
9:00 am—9:15 am	L59	Sealed Syringe Rotation Saturation Improves Safety and Efficiency in Postmortem CO-Hb Measurement Songhie An, PhD*; Yujeong Kim, PhD; Wooyong Park, MSc
9:15 am—9:30 am	L60	Strategies for Mitigating the Effects of High Gabapentin Concentrations in Urine Specimens Haley Berkland, MSFS*
9:30 am—9:45 am	L61	The Optimization and Validation of a Method for Detecting Single Doses of Diphenhydramine in Hair From a Controlled Dosing Study Kaylyn Keith, MS*; Anthony DeCaprio, PhD
9:45 am—10:00 am	L62	Analyzing the Impact of Centrifugation and Sample Preparation on Drugs of Abuse in Oral Fluids Samantha Herbick, MFS*; Jared Burkhardt, BSc
10:00 am—10:15 am	L63	The Critical Role of Ascorbic Acid and Sodium Fluoride Preservative in the Stability of 4-Pro-DMT in Blood Christopher McGrowder, BS*; Marta Concheiro-Guisan, PhD
10:15 am—10:30 am		BREAK

Analytical Advancements

Moderator: Amanda Jenkins, PhD

Co-Moderator: Madison Schackmuth, PhD

10:30 am—10:45 am	L64	Nitazene Analogs Placed Under Generic Control in China: Understanding the Framework and Preparing for the Next Novel Synthetic Opioid Wave Alex Krotulski, PhD*; Sara Walton, MS; Donna Papsun, MS; Joshua DeBord, PhD; Barry Logan, PhD
10:45 am—11:00 am	L65	Pharmacodynamic Effects and Plasma Pharmacokinetics of N,N-Dimethyltryptamine (DMT) After Intranasal Versus Subcutaneous Administration in Male Rats Sara Walton, MS*; Michael Baumann, PhD; Alex Krotulski, PhD; Grant Glatfelter, PhD; Christopher Witowski, PhD; Jacqueline von Salm, PhD
11:00 am—11:15 am	L66	The Prevalence of Other Additive Novel Psychoactive Substances and Polydrug Positivity in Clinical Urine Specimens Jillian Neifeld, MS*; Theresa Meli, MS; Sarah Bartock, PhD; Alicia Bland, MS; Michael Smith, PhD

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11:15 am—11:30 am **L67** **The Emergence of Synthetic Cannabinoids in Maryland Correctional Facilities: 2023–2025**
Stephanie Dean, MD*; Jack Titus, MD; Rebecca Phipps, PhD*

11:30 am—1:00 pm **BREAK**

Pediatric Toxicology

Moderator: Nikolas Lemos, PhD

Co-Moderator: Timothy Rohrig, PhD

1:00 pm—3:00 pm **L68** **Pediatric Postmortem Forensic Toxicology: Children Are Not Small Adults**
Nikolas Lemos, PhD*; Timothy Rohrig, PhD; Kari Midthun, PhD; Carl Schmidt, MD;
D. Kimberley Molina, MD; Sarah Riley, PhD