

# TOXICOLOGY

## Wednesday

### Poster Session

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|-------------------|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 7:30 PM – 9:00 PM | <b>L1</b>  | <b>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</b><br><i>Rebecca L. Smith, MS*</i> ; <i>Anthony P. DeCaprio, PhD</i>                                                                                                                                                                   |
| 7:30 PM – 9:00 PM | <b>L2</b>  | <b>4-Substituted AH-7921 Analogs: Isomer Selection During Synthesis and Pharmacological Profile</b><br><i>John L. Krstenansky, PhD, MBA*</i>                                                                                                                                                                                                                                                                      |
| 7:30 PM – 9:00 PM | <b>L3</b>  | <b>A Rare Case of Fatal Levamisole Toxicity</b><br><i>Mark E. Shelly*</i> ; <i>Robert Johnson, PhD</i> ; <i>Vanessa T. Lopez-Campos, BS</i> ; <i>Aria McCall, BS</i>                                                                                                                                                                                                                                              |
| 7:30 PM – 9:00 PM | <b>L4</b>  | <b>A Mass Disaster Caused by Gas Leaks: A Case Report and a Forensic Workflow Proposal</b><br><i>Massimiliano Esposito, MD*</i> ; <i>Federica Ministeri, MD</i> ; <i>Salvatore Rocuzzo, MD</i> ; <i>Nunziata Barbera, MD</i> ; <i>Fabrizio Vanaria</i>                                                                                                                                                            |
| 7:30 PM – 9:00 PM | <b>L5</b>  | <b>Postmortem Redistribution in Forensic Toxicological Investigations</b><br><i>Pietro Zuccarello, PhD*</i> ; <i>Monica Salerno, MD</i> ; <i>Massimiliano Esposito, MD</i> ; <i>Francesco Sessa, MS, PhD</i> ; <i>Nunziata Barbera, MD</i>                                                                                                                                                                        |
| 7:30 PM – 9:00 PM | <b>L6</b>  | <b>My Way: A Case of Lethal Intoxication of an Animal Euthanasia Drug in a Veterinary Doctor</b><br><i>Gianluca Musci, MD*</i> ; <i>Alessandra Petruzzellis, MD</i> ; <i>Gianluca Gravili, MD</i> ; <i>Giorgio De Donno, MD</i> ; <i>Stefania Galizia, MD</i> ; <i>Gianfrancesco Di Nunno, MD</i> ; <i>Antonio De Donno, MD</i>                                                                                   |
| 7:30 PM – 9:00 PM | <b>L7</b>  | <b>A Ten-Year (2013–2022) Retrospective Analysis of Road Traffic Deaths in the Northern Italian Region of Campania</b><br><i>Anna Carfora, PhD</i> ; <i>Alessandro Feola, MD, PhD*</i> ; <i>Raffaella Petrella, PhD</i> ; <i>Giusy Ambrosio, MD</i> ; <i>Stefano Festinese, MD</i> ; <i>Ilaria Fracassi, MD</i> ; <i>Paolo Palermo, MD</i> ; <i>Martina Zampone, MD</i> ; <i>Carlo Pietro Campobasso, MD, PhD</i> |
| 7:30 PM – 9:00 PM | <b>L8</b>  | <b>Trends in Neonatal Deaths From Fentanyl</b><br><i>Emily Fenton, MBA, MSFS*</i> ; <i>Kari M. Midthun, PhD</i> ; <i>Brianna Peterson, PhD</i>                                                                                                                                                                                                                                                                    |
| 7:30 PM – 9:00 PM | <b>L9</b>  | <b>WITHDRAWN</b>                                                                                                                                                                                                                                                                                                                                                                                                  |
| 7:30 PM – 9:00 PM | <b>L10</b> | <b>A Complete Review of Propofol Misuse in the Health Care System and as a Drug of Abuse</b><br><i>Jidabha Apiluk, BS*</i> ; <i>Sajeel Shah, PhD, MS</i> ; <i>Nikolas Lemos, PhD</i>                                                                                                                                                                                                                              |
| 7:30 PM – 9:00 PM | <b>L11</b> | <b>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</b><br><i>Jeri D. Roper-Miller, PhD*</i> ; <i>Megan Grabenauer, PhD</i> ; <i>Nichole D. Bynum, MS</i> ; <i>Nicolas Richardson, PhD</i>                                                           |
| 7:30 PM – 9:00 PM | <b>L12</b> | <b>Drops of Insanity? Tropicamide Recreational Usage: Early Warning Alarms in Forensic Science</b><br><i>Sushil Bhatt, m, PGDST*</i> ; <i>Jagmahender Singh Sehwat, PhD</i>                                                                                                                                                                                                                                       |
| 7:30 PM – 9:00 PM | <b>L13</b> | <b>Biofluid Sampler: A Promising Sampling and Sample Preparation Platform for Forensic Toxicological Investigations</b>                                                                                                                                                                                                                                                                                           |

# TOXICOLOGY

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*Abuzar Kabir, PhD\**; *Marcello Locatelli, PhD*; *Kenneth G. Furton, PhD*

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| 7:30 PM – 9:00 PM | <b>L14</b> | <b>Quantitation of Delta-8-Tetrahydrocannabinol in Postmortem Specimens by the Method of Standard Addition</b><br><i>Robert M. Lockwood, PhD*</i> ; <i>Taikeria Adams, BS</i> ; <i>Curt E. Harper, PhD</i>                                                                                                                                                                       |
| 7:30 PM – 9:00 PM | <b>L15</b> | <b>Fabric Phase Sorptive Extraction: A Green Sample Preparation Strategy for Forensic Toxicology</b><br><i>Abuzar Kabir, PhD</i> ; <i>Kenneth G. Furton, PhD*</i> ; <i>Marcello Locatelli, PhD</i>                                                                                                                                                                               |
| 7:30 PM – 9:00 PM | <b>L16</b> | <b>A Comparative Analysis of Accuracy, Precision, and LOD in AAS and TMA for the Quantification of Cadmium in the Blood Samples</b><br><i>Jatin Kumar Drall, BTech*</i> ; <i>Ajay Kumar Kataria, MTech</i>                                                                                                                                                                       |
| 7:30 PM – 9:00 PM | <b>L17</b> | <b>The Determination of Cadmium in Blood by Voltammetry Using Hanging Mercury Drop Electrode (HMDE)</b><br><i>Ashok Kumar Jaiswal, PhD*</i>                                                                                                                                                                                                                                      |
| 7:30 PM – 9:00 PM | <b>L18</b> | <b>Identifying Designer Benzodiazepines in Blood Using Gas Chromatography/Mass Spectrometry</b><br><i>Devin Baer*</i> ; <i>Michael T. Truver, PhD</i> ; <i>Sara C. Brogan, BS</i> ; <i>Jennifer L. Hoyer, MS</i> ; <i>Michele Crosby</i> ; <i>Chris W. Chronister, PhD</i>                                                                                                       |
| 7:30 PM – 9:00 PM | <b>L19</b> | <b>The Impact of Gold Top SST (Gel and Clot) Collection Tubes on Cannabinoid Quantitative Analysis in Blood</b><br><i>Bridget O’Leary, MS</i> ; <i>Marta Concheiro-Guisan, PhD*</i>                                                                                                                                                                                              |
| 7:30 PM – 9:00 PM | <b>L20</b> | <b>Designer Benzodiazepine ELISA Cross-Reactivity</b><br><i>Leonela M. Placencia, BS*</i> ; <i>Nicholas B. Tiscione, MS</i>                                                                                                                                                                                                                                                      |
| 7:30 PM – 9:00 PM | <b>L21</b> | <b>EC-SERS and DART®-TOF/MS for Toxicological Screening</b><br><i>Colby E. Ott, PhD*</i> ; <i>Edward Sisco, PhD</i>                                                                                                                                                                                                                                                              |
| 7:30 PM – 9:00 PM | <b>L22</b> | <b>A Validated Method for Quantification of Buprenorphine/Naloxone and Its Primary Metabolites in Clinical Human Breast Milk, Maternal and Infant Plasma Samples Using Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS)</b><br><i>Munchelou M. Gomonit, BS*</i> ; <i>Krystle McConnell, BA, MPH</i> ; <i>Lauren M. Jansson, MD</i> ; <i>Madeleine J. Swortwood, PhD</i> |
| 7:30 PM – 9:00 PM | <b>L23</b> | <b>An Evaluation and Comparison of the Evidence MultiSTAT to GC/MS for the Detection of Morphine, Codeine, and Thebaine in Urine and Oral Fluid</b><br><i>Amanda L. Pacana, BS, MSFS*</i> ; <i>Britni Skillman, PhD</i> ; <i>Madeleine J. Swortwood, PhD</i> ; <i>Stacie Terry, MSFS</i>                                                                                         |
| 7:30 PM – 9:00 PM | <b>L24</b> | <b>An Investigation of Phthalate Levels in Teething Devices for Children in the United Arab Emirates</b><br><i>Vipula Aravamudhan*</i> ; <i>Nrashant Singh</i> ; <i>Deveshi Kachroo</i> ; <i>Noora Najeeb</i>                                                                                                                                                                    |
| 7:30 PM – 9:00 PM | <b>L25</b> | <b>The Validation of an LC/QqQ/MS Method for the Detection of Single Doses of Drugs in Hair</b><br><i>Kaylyn Ann Keith*</i> ; <i>Anthony P. DeCaprio, PhD</i>                                                                                                                                                                                                                    |
| 7:30 PM – 9:00 PM | <b>L26</b> | <b>The Development of a Reference Material for Chemical Hair Analysis</b><br><i>Kaitlyn Bonilla, BS*</i> ; <i>Charlene Harris, BS</i> ; <i>Chloe Phillips</i> ; <i>Matthieu Baudelet, PhD</i>                                                                                                                                                                                    |

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| 7:30 PM – 9:00 PM | <b>L27</b> | <b>Streamlining Blood LC/MS/MS Workflows to Meet ASB/OSAC Recommendations for Medicolegal Death and Impaired Driving Cases</b><br><i>Jason Truskowski, BS*</i>                                                                                                                                                                          |
| 7:30 PM – 9:00 PM | <b>L28</b> | <b>Streamlining Urine LC/MS/MS Workflows to Meet ASB/OSAC Recommendations for Drug-Facilitated Crime Investigations</b><br><i>Jason Truskowski, BS*</i>                                                                                                                                                                                 |
| 7:30 PM – 9:00 PM | <b>L29</b> | <b>“Hang on a Minute”: Developing Improved Separation Methodologies for Weakly Retained Polar Molecules in LC/MS/MS</b><br><i>Briana Rose Alarcon, BS*; William H. Campbell, PhD</i>                                                                                                                                                    |
| 7:30 PM – 9:00 PM | <b>L30</b> | <b>The Separation of Fentanyl Analogs and Fentanyl Analog Isomers by LC/MS/MS</b><br><i>Erika L. Sitch, MPS*; Briana Rose Alarcon, BS*; William H. Campbell, PhD</i>                                                                                                                                                                    |
| 7:30 PM – 9:00 PM | <b>L31</b> | <b>What Are You Smoking? A Derivatization to Improve the Analysis of Tetrahydrocannabinol (THC) Isomers Via LC/MS/MS</b><br><i>Olesia Leonna Headen*; William H. Campbell, PhD</i>                                                                                                                                                      |
| 7:30 PM – 9:00 PM | <b>L32</b> | <b>The Quantitation of 106 Drugs in Urine Using a High-Throughput, Seven-Minute Method by High Resolution Mass Spectrometry and Triple Quadrupole</b><br><i>Courtney Patterson*; Mark Tracy; Kristine van Natta; Stephanie Samra; Kerry Hassell</i>                                                                                     |
| 7:30 PM – 9:00 PM | <b>L33</b> | <b>Urine Immunoassay Cross-Reactivity of Various OTC and Prescription Drugs</b><br><i>Fatima Chavez-Esparza, BS*; Courtney Sellens, MS, BS; Qiyang Zhang, PhD; Melissa M. Bailey, MSFS, PhD; Timothy P. Rohrig, PhD; Connor DeJesus, MS, BS</i>                                                                                         |
| 7:30 PM – 9:00 PM | <b>L34</b> | <b>Don’t Huff Before You Blow!</b><br><i>Genevieve Huppe, MSc*; Julie Motard, MSc; Cynthia Roy, MSc; Anthony Gelinas, BSc; Pascal Mireault, MSc</i>                                                                                                                                                                                     |
| 7:30 PM – 9:00 PM | <b>L35</b> | <b>Evaluating Drug Positivity Trends in Fatally Injured Drivers, Passengers, and Pedestrians in Connecticut</b><br><i>Amanda L.A. Mohr, MS*; Grace Cieri, BS; James R. Gill, MD; Barry K. Logan, PhD</i>                                                                                                                                |
| 7:30 PM – 9:00 PM | <b>L36</b> | <b>Drivers Under the Influence of Alcohol and Drugs: A Six-Year (2017–2022) Retrospective Analysis in a Southern Italian Region</b><br><i>Anna Carfora, PhD; Alessandro Feola, MD, PhD*; Raffaella Petrella, PhD; Giusy Ambrosio, MD; Ilaria Fracassi, MD; Paolo Palermo, MD; Martina Zampone, MD; Carlo Pietro Campobasso, MD, PhD</i> |
| 7:30 PM – 9:00 PM | <b>L37</b> | <b>Pediatric Poisoning: A Plan of Action for Early Diagnosis and Treatment</b><br><i>Pascale Basilicata; Mariagrazia Marisei, MD; Rossella Guadagni; Angela Simonelli; Gaetano Di Donna, MD; Anita Sammarco, MD; Massimo Niola, PhD; Maria Pieri*</i>                                                                                   |
| 7:30 PM – 9:00 PM | <b>L38</b> | <b>The Effects of Ethanol on GABA Catabolism Via GABA-Transaminase</b><br><i>Mary Corrigan*; Robert H. Powers, PhD</i>                                                                                                                                                                                                                  |
| 7:30 PM – 9:00 PM | <b>L39</b> | <b>Crotalus Snake Venoms of North and South America: Their Symptoms, Treatments, and Potential Medical Applications</b><br><i>Victoria Hudson, MSc*; Sajeel Shah, PhD, MS; Nikolas Lemos, PhD</i>                                                                                                                                       |
| 7:30 PM – 9:00 PM | <b>L40</b> | <b>A Review of Popular Illegal Performance-Enhancing Drugs in Sports and Gyms</b><br><i>Rami Abbas, BS*; Sajeel Shah, PhD, MS; Nikolas Lemos, PhD</i>                                                                                                                                                                                   |

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| 7:30 PM – 9:00 PM | <b>L41</b> | <b>An Evaluation of Long-Term Health Effects From Acute Exposure to Toxic Chemicals</b><br><i>Theresa Pennington*</i>                                                                                                      |
| 7:30 PM – 9:00 PM | <b>L42</b> | <b>Future Strategies in Drug Trend Monitoring and Harm Reduction</b><br><i>Agnieszka Urban, BSc*</i> ; <i>Geraldine Dowling, PhD, MSc</i> ; <i>Sajeel Shah, PhD, MS</i> ; <i>Nikolas Lemos, PhD</i>                        |
| 7:30 PM – 9:00 PM | <b>L43</b> | <b>A Review of Factors Affecting the Interpretability of Postmortem Cannabinoid Concentrations and Their Limitations</b><br><i>Sherri L. Kacinko, PhD</i> ; <i>Daniel S. Isenschmid, PhD</i> ; <i>Barry K. Logan, PhD*</i> |

## Thursday

### Annual Lectureship in Toxicology

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| 8:30 AM – 9:45 AM   | <b>L45</b> | <b>Annual Lectureship in Toxicology</b>                                                                    |
| 9:45 AM – 10:15 AM  | <b>L46</b> | <b>An Update on Standards Development Activities in Forensic Toxicology</b><br><i>Marc A. LeBeau, PhD*</i> |
| 10:15 AM – 10:30 AM |            | <b>BREAK</b>                                                                                               |

### Novel Psychoactive Substances

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| 10:30 AM – 10:45 AM | <b>L47</b> | <b>Quantitation of Hexahydrocannabinol and Metabolites in Blood From Recreational Users</b><br><i>Robert Kronstrand, PhD*</i> ; <i>Markus Roman</i> ; <i>Henrik Gréen</i> ; <i>Michael T. Truver, PhD</i>                                                                                                                                                   |
| 10:45 AM – 11:00 AM | <b>L48</b> | <b>Determining Delta 9-THC Acetate Analog Metabolites Using Human Liver Microsomes to Determine the Structure and Rate of Metabolism</b><br><i>Natalie Ortiz, BS*</i> ; <i>Justin L. Poklis, BS</i> ; <i>Kimberly Karin, MS</i> ; <i>Grace R.R. Williams, PhD</i> ; <i>Carl E. Wolf, PhD</i>                                                                |
| 11:00 AM – 11:15 AM | <b>L49</b> | <b>The Metabolism of THC-O-Acetate (THCO)—An Emerging Drug Threat</b><br><i>Ya-Chih (Jessica) Cheng, MS*</i> ; <i>Charles R. Perkins, MS, BS</i> ; <i>Sarah Kerrigan, PhD</i>                                                                                                                                                                               |
| 11:15 AM – 11:30 AM | <b>L50</b> | <b>A Quantitative Confirmation Assay of New and Emerging Synthetic Cannabinoids by LC/QqQ/MS</b><br><i>Haley Lynn Bibey, BS*</i> ; <i>Sara Walton, MS</i> ; <i>Heather L. Harris, MFS, JD</i> ; <i>Alex J. Krotulski, PhD</i>                                                                                                                               |
| 11:30 AM – 11:45 AM | <b>L51</b> | <b>A Case Series Involving the Synthetic Cathinone Alpha-PiHP in Postmortem Forensic Investigations</b><br><i>Sara Walton, MS*</i> ; <i>Donna M. Papsun, MS</i> ; <i>Michael E. Lamb, MSFS, BS</i> ; <i>Alex J. Krotulski, PhD</i> ; <i>Simon Elliott, BSc, PhD</i> ; <i>Kerry Taylor, BSc</i> ; <i>Michael T. Truver, PhD</i> ; <i>Barry K. Logan, PhD</i> |
| 11:45 AM – 1:00 PM  |            | <b>BREAK</b>                                                                                                                                                                                                                                                                                                                                                |

### Multidisciplinary Session: Pathology/Biology and Toxicology

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| 1:00 PM – 1:15 PM | <b>L52</b> | <b>2C or Not Tusi? The Emergence of a New Drug Combination in Miami</b> |
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# TOXICOLOGY

*Rocio Potoukian, BS\*; Diane Moore, PhD; Kenneth Hutchins, DM*

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| 1:15 PM – 1:30 PM | <b>L53</b> | <b>The Frequency and Analysis of Kratom in Postmortem Cases</b><br><i>William M. Schroeder, II, MS*; Donna M. Papsun, MS; Justin Brower</i>                                                                                                                       |
| 1:30 PM – 1:45 PM | <b>L54</b> | <b>Postmortem Diagnosis of Ketoacidosis: The Importance of Beta-Hydroxybutyrate Quantification as Part of Routine Toxicological Screening at Autopsy</b><br><i>Jeroen Roosendaal, PhD*; Astrid Christiaens, MD; Kiki Van Langen, MD; Ingrid Bosman, PhD, MSFS</i> |
| 1:45 PM – 2:00 PM | <b>L55</b> | <b>A Case Series of Suicides by Sodium Azide Ingestion: An Update</b><br><i>Ingrid Bosman, PhD, MSFS*; Roelof Oosting, PharmD; Dick-Paul Kloos, PhD; Bart Ruiter; Jeroen Roosendaal, PhD; Kristof Maudens, PhD</i>                                                |
| 2:00 PM – 2:15 PM | <b>I78</b> | <b>I Didn't Want to Kill Him! The Role of Cocaine in Pseudoasphyxia by Compression of the Carotid Sinus</b><br><i>Eleonora Mezzetti, MD*; Matteo Leoni, MD; Andrea Costantino, MD; Carla Occhipinti, MD; Rebecca Pieretti, MD; Aniello Maiese, MD</i>             |
| 2:15 PM – 2:30 PM | <b>I79</b> | <b>Not So Much the "Spice" of Life: Identifying a Source for a Series of MDMB-4en-PINACA Deaths</b><br><i>Michael Chaump, MD*; Robert Johnson, PhD; Aria McCall, BS; Kei Osawa, MFS; Steven J. Hemberger, DO; Mark E. Shelly; Richard Fries; Dana Hopson, MD</i>  |
| 2:30 PM – 2:45 PM | <b>I80</b> | <b>Elevated Beta-Hydroxybutyrate Within a Pediatric Population and Its Associated Pathology: A Retrospective Case Series</b><br><i>Nasim Haghandish, MDCM, PhD*; Chris Milroy, MD, LLB; Jacqueline Parai, MD; Anthea Lafreniere, MD</i>                           |
| 2:45 PM – 3:00 PM | <b>I81</b> | <b>Pediatric Fatalities Due to Methadone Toxicity in Cook County, Illinois: Considerations on the Manner of Death</b><br><i>Lorenzo Gitto, MD*; Daniel S. Isenschmid, PhD; Ponni Arunkumar, MD</i>                                                                |
| 3:00 PM – 3:15 PM |            | <b>BREAK</b>                                                                                                                                                                                                                                                      |

## Drugs and Driving Special Session

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| 3:15 PM – 3:30 PM | <b>L56</b> | <b>Ketamine in Driving Under the Influence of Drugs (DUID) Cases: 2015–2023</b><br><i>Amanda L. D'Orazio, MS*; Ayako Chan-Hosokawa, MS</i>                                                                               |
| 3:30 PM – 3:45 PM | <b>L57</b> | <b>DUID Cannabinoid Investigations: Blood, Oral Fluid, or Urine—Which Is the Superior Specimen?</b><br><i>Curt E. Harper, PhD*; Clarissa Lawen; Kristin Tidwell, BS; Gil Sapir, JD, MSc</i>                              |
| 3:45 PM – 4:00 PM | <b>L58</b> | <b>The Detection of Cannabinoids in Exhaled Breath Condensate After Cannabis Use</b><br><i>Jennifer L. Berry, PhD*; Kavita M. Jeerage, PhD; Cheryle N. Beuning, PhD; Ashley Brooks-Russell, PhD; Tara Lovestead, PhD</i> |
| 4:00 PM – 4:15 PM | <b>L59</b> | <b>Cocaine and Benzoylcegonine in Blood and Oral Fluid of DUID Cases (2018–2022)</b><br><i>Michael L. Weaver*; Clarissa Lawen; Christopher Bartle; Curt E. Harper, PhD</i>                                               |
| 4:15 PM – 4:30 PM | <b>L60</b> | <b>Mile High: A Five-Year Review of Fentanyl Trends in Colorado Impaired Driving Cases</b><br><i>Stephanie Olofson, BS, MS*</i>                                                                                          |

# TOXICOLOGY

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4:30 PM – 4:45 PM      **L61**      **Impaired Driving Cases With Bromazolam**  
*Nicholas B. Tiscione, MS\*; Edward Zumaeta*

## Friday

### General Forensic Toxicology

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8:30 AM – 8:45 AM      **L62**      **An Outlook on Fentanyl Adulteration: Polydrug Circumstances, Trends, and Tomorrow's Forecast**  
*Alex J. Krotulski, PhD\*; Sara Walton, MS; Donna M. Papsun, MS; Joshua S. DeBord, PhD; Barry K. Logan, PhD*

8:45 AM – 9:00 AM      **L63**      **Controlled Oral Kratom Leaf Administration to Healthy Humans: Abuse Potential- and Withdrawal-Related Effects, Adverse Events, and Mitragynine and 7-Hydroxy-Mitragynine Plasma Pharmacokinetics**  
*Marilyn A. Huestis, MS, PhD\*; John Bothmer, PhD; Thomas Hudzik, MS, PhD; Jack E. Henningfield, BA, PhD; Ramsey Atallah, BA*

9:00 AM – 9:15 AM      **L64**      **The Extraction's Always Greener on the Other Side**  
*Madeleine E. Wood, MS\*; Joshua Z. Seither, PhD; John J. Kristofic, BS; Erin Karschner, PhD; Jeffrey P. Walterscheid, PhD*

9:15 AM – 9:30 AM      **L65**      **Homoamphetamine: A Cautionary Tale**  
*Laura Friederich, BS\*; Sandra Bishop-Freeman, PhD*

9:30 AM – 9:45 AM      **L66**      **The Bath Salts State: A Comprehensive Review of Substituted Cathinones in Miami From 2011 to 2023**  
*Elisa N. Shoff, MS\*; Zaney E. Mary, BS; Diane Moore, PhD*

9:45 AM – 10:00 AM      **L67**      **The Search for the K-Hole: A Six-Year Study of Ketamine in Postmortem Cases From the Miami-Dade County Medical Examiner Department, 2018–2023**  
*Jennifer Gonyea, BS\*; Diane Moore, PhD*

10:00 AM – 10:15 AM      **L68**      **Segmented Workflows and the Confrontation Clause: Achieving Congruence Between Constitutional Guarantees, Laboratory Productivity, and Toxicological Expertise**  
*M.J. Menendez, JD\*; Barry K. Logan, PhD; Daniel T. Anderson, MS; Donna M. Papsun, MS*

10:15 AM – 10:30 AM      **BREAK**

### Alternative Matrices

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10:30 AM – 10:45 AM      **L69**      **A Quantitative Analysis of Cannabis Exposure Biomarkers in Exhaled Breath Condensate and Oral Fluid**  
*Meena Swaminathan, MSFS\*; Anthony P. DeCaprio, PhD*

10:45 AM – 11:00 AM      **L70**      **The Use of Hair Analysis as a Potential Predictor of Tolerance in Decedents With High Fentanyl Concentrations in Fentanyl-Related Deaths: Preliminary Results**  
*Nicola Pigaiani, MD\*; Marco Ballotari, PhD, MA; Brandi C. McCleskey, MD; Francesco Taus, PhD; Federica Bortolotti, MD, PhD; Rossella Gottardo, PhD; Gregory G. Davis, MD, MSPH; Karen S. Scott, PhD*

11:00 AM – 11:15 AM      **L71**      **A Quantitative Assessment of Five Hair Drug Testing Laboratories With a Commercial Hair Reference Material**  
*Edwin Dale Hart, BS\*; Svante Vikingsson, PhD; Ruth E. Winecker, PhD;*

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# TOXICOLOGY

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*Eugene D. Hayes, PhD; Lisa S. Davis, MS; Ron Flegel, MS*

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| 11:15 PM – 11:30 AM | <b>L72</b> | <b>The Gonadotoxic Effects of Tobacco Smoking on Human Seminal Fluid</b><br><i>Nadeem-Ul-Hassan Khan*; Allah Rakha*; Rahat Abdul Rehman*; Shahid Nazir, PhD; Tahmina Rehman</i>                                                                                                                           |
| 11:30 AM – 11:45 AM | <b>L73</b> | <b>The Identification of the New Synthetic Opioid N-Piperidinyl Etonitazene (Etonitazepipne) in Postmortem Alternative Matrices</b><br><i>Erika Buratti, PhD*; Gianmario Mietti, PhD; Alice Cerioni, PhD; Marta Cippitelli, PhD; Rino Frolidi, MSc; Mariano Cingolani, MD, MSc; Roberto Scendoni, PhD</i> |
| 11:45 AM – 1:00 PM  |            | <b>BREAK</b>                                                                                                                                                                                                                                                                                              |

## 23rd Annual Postmortem Pediatric Forensic Toxicology Session

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| 1:00 PM – 3:00 PM | <b>L74</b> | <b>Postmortem Pediatric Forensic Toxicology</b><br><i>Robert A. Middleberg, PhD*; Nikolas Lemos, PhD*; Katherine Kenerson, MD*; Andrew Baker, MD*; Sterling J. McLaren, MD*; Diane Moore, PhD*; Zaney E. Mary, BS*</i> |
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