

# TOXICOLOGY

## Wednesday

### Poster Session

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7:30 pm – 9:00 pm	<b>L1</b>	<b>A Risk Assessment of Lead Exposure in Glass Industry Workers: Evaluating Occupational Toxicity</b> <i>Nrashant Singh, PhD*</i>
7:30 pm – 9:00 pm	<b>L2</b>	<b>An Alcohol Impairment Evaluation in Cases of Severe Injury</b> <i>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</i>
7:30 pm – 9:00 pm	<b>L3</b>	<b>Biofluid Sampler: A Green and Robust Sampling and Sample Preparation Platform for Forensic Toxicological Analysis</b> <i>Abuzar Kabir, PhD*; Kenneth Furton, PhD</i>
7:30 pm – 9:00 pm	<b>L4</b>	<b>Cannabis-Based Medicines and Driving: Current Legal Issues in Switzerland</b> <i>Cristian Palmiere, MD*; Maria Pia Scarpelli, MD</i>
7:30 pm – 9:00 pm	<b>L5</b>	<b>Cocaine and Aortic Dissection: The Need to Overcome the Underreporting Bias</b> <i>Mariagrazia Marisei, MD*; Pascale Basilicata, PhD; Antonio Lombardi, MD; Angela Simonelli, PhD; Angela Silvestre, MD; Rossella Guadagni, PhD; Massimo Niola, PhD; Maria Pieri, PhD</i> <i>(FSF Emerging Forensic Scientist Award Poster Presentation)</i>
7:30 pm – 9:00 pm	<b>L6</b>	<b>Comparative Postmortem Blood Alcohol Concentrations in Cardiac and Peripheral Blood: A Case Series</b> <i>Giulia Ricchezza, MS*; Erika Buratti, PhD; Alice Cerioni, PhD; Gianmario Mietti, PhD; Marta Cippitelli, PhD; Rino Froidi, MS; Mariano Cingolani, MD; Roberto Scendoni, MD, PhD</i>
7:30 pm – 9:00 pm	<b>L7</b>	<b>Ethanol Stability Over Time in Blood Samples Undergoing Headspace Analysis</b> <i>Ava La Lande*; M. Denise Gemmellaro, PhD</i>
7:30 pm – 9:00 pm	<b>L8</b>	<b>Forensic “ToxAlcology”: Is It Really Over for the Forensic Human Community?</b> <i>Maria Pieri, PhD*; Pascale Basilicata, PhD; Mariagrazia Marisei, MD; Angela Simonelli, PhD; Angela Silvestre, MD; Rossella Guadagni, PhD; Claudia Casella, PhD; Massimo Niola, PhD</i>
7:30 pm – 9:00 pm	<b>L9</b>	<b>Leveraging Surveillance Data for the Analysis of Trends, Adulteration, and Novel Substances in the District of Columbia Needle Exchange Programs: A Four-Year Review</b> <i>Snehal Parikh, BS*; William Kim, BS; Marsha Cox</i>
7:30 pm – 9:00 pm	<b>L10</b>	<b>Mapping Mortality: A Decade’s Review of Drug Usage in Maryland (2014–2024)</b> <i>Nicholas Boire, MD*; Stephanie Dean, MD; Rebecca Phipps, PhD</i>
7:30 pm – 9:00 pm	<b>L11</b>	<b>Revolutionizing Anti-Doping and Sports Forensics: Comprehensive Screening of Nutritional Supplements for WADA-Banned Substances Using High Resolution Mass Spectrometry</b> <i>Astha Pandey, PhD*; Anirudha Dixit, MS; Disha Kothari, PhD; Abhishek Trivedi, MS</i>
7:30 pm – 9:00 pm	<b>L12</b>	<b>The Opioid Crisis in Pakistan and Toxicological Interpretation: A Case Report</b> <i>Muhammad Chaudhary, MPhil*</i>
7:30 pm – 9:00 pm	<b>L13</b>	<b>WITHDRAWN</b>

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- 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 Burkhardt\*; 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*
- 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*

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7:30 pm – 9:00 pm	<b>L27</b>	<b>A Forensic Analysis of Environmental Fate and Biodegradation of Benzodiazepines in Synthetic Wastewater Using SPE-LC/MS</b> <i>Ali Alawi, MS*</i>
7:30 pm – 9:00 pm	<b>L28</b>	<b>Gabapentin Detection and Trends in Alabama Toxicology Cases (2017–2023)</b> <i>Belicia Sutton, MSFS*;</i> <i>Curt Harper, PhD;</i> <i>Taylor Williams</i>
7:30 pm – 9:00 pm	<b>L29</b>	<b>Improving Liquid Chromatography/Mass Spectrometry Sensitivity for Barbiturates</b> <i>Ethan Khandaker, BA*;</i> <i>William Campbell, PhD</i>
7:30 pm – 9:00 pm	<b>L30</b>	<b>Matrix-Matched Standards for Quantitative Elemental and Molecular Analysis of Hair in Forensic Toxicology</b> <i>Kaitlyn Bonilla, MS*;</i> <i>Ashley Fox;</i> <i>Chloe Phillips, BS;</i> <i>Matthieu Baudelet, PhD</i> <i>(FSF Emerging Forensic Scientist Award Poster Presentation)</i>
7:30 pm – 9:00 pm	<b>L31</b>	<b>Modification of a Liquid Chromatography/Tandem Mass Spectrometry Method Targeting Lysergic Acid Diethylamide and Its Primary Metabolite to Include Nine Analogs</b> <i>Amy Patton, PhD*;</i> <i>Erin Karschner, PhD;</i> <i>Jeffrey Walterscheid, PhD;</i> <i>Jason Garcia, PhD</i>
7:30 pm – 9:00 pm	<b>L32</b>	<b>Old vs. New: A Novel Approach to Blood Alcohol Analysis In the Modern Day Forensic Laboratory.</b> <i>Timothy Fassette, MS*</i>
7:30 pm – 9:00 pm	<b>L33</b>	<b>Profiling Heavy Metals in Kratom Powder Purchased in Southeastern Pennsylvania and Southern New Jersey</b> <i>Xavia Pough*;</i> <i>Tom Gluodenis, PhD</i>
7:30 pm – 9:00 pm	<b>L34</b>	<b>The Quantitation of an Oral Fluid Drug Panel, Including THC, Using High Resolution Accurate-Mass (HRAM) Orbitrap Mass Spectrometry</b> <i>Courtney Patterson, MPS*;</i> <i>Kerry Hassell, PhD</i>
7:30 pm – 9:00 pm	<b>L35</b>	<b>WITHDRAWN</b>
7:30 pm – 9:00 pm	<b>L36</b>	<b>The Detection and Quantitation of Alcohol in Packed Red Blood Cells</b> <i>Jordan Keller, BS*;</i> <i>Connor Gailliot, BAS;</i> <i>Justin Poklis, BS;</i> <i>Carrol Nanco, MCLS;</i> <i>Carl Wolf, PhD;</i> <i>Grace Williams, PhD</i>
7:30 pm – 9:00 pm	<b>L37</b>	<b>WITHDRAWN</b>
7:30 pm – 9:00 pm	<b>L38</b>	<b>The Postmortem Distribution of the Synthetic Cathinone MDPHP in a Fatal Intoxication Case</b> <i>Andrea Costantino, MD*;</i> <i>Emma Croce, MS*;</i> <i>Alexandra Dimitrova, RF*;</i> <i>Fabio Vaiano, PhD*;</i> <i>Ilenia Bianchi, PhD;</i> <i>Vilma Pinchi, PhD;</i> <i>Martina Focardi, MD</i>
7:30 pm – 9:00 pm	<b>L39</b>	<b>The Validation of an Analytical Method for the Quantitation of Xylazine in Human Hair</b> <i>Andre Sukta, MSFS*</i>

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## Thursday

### Annual Lectureship in Toxicology

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Moderator: Erin Karschner, PhD

Co-Moderator: Svante Vikingsson, PhD

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

### Postmortem Toxicology and Drug Adulteration

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Moderator: Stephen Raso, PhD

Co-Moderator: Lauren Richards-Waugh, PhD

10:15 am – 10:30 am	<b>L42</b>	<b>Beyond the Green Thumb—The Role of Technology in a Case of Suicide by Pesticide Poisoning</b> <i>Luca Diani, MD*</i> ; <i>Giada Rovito, MD*</i> ; <i>Laura Camilla Gasparini, MD</i> ; <i>Irene Pradelle, MD</i> ; <i>Matilde Rujú, MD</i> ; <i>Donata Favretto, MS</i> ; <i>Negar Eftekhari, PhD</i> ; <i>Carmela Vaccaro, MS</i> ; <i>Matteo Marti, MS</i> ; <i>Margherita Neri, MD, PhD</i>
10:30 am – 10:45 am	<b>L43</b>	<b>Comparisons of Blood, Vitreous Fluid, and Urine (When Available): Drug Screen Findings in Over 100 Cases</b> <i>Lauren Marinetti, PhD*</i>
10:45 am – 11:00 am	<b>L44</b>	<b>The Determination of Measurement Uncertainty of Non-Routine Measurements in Forensic Toxicological Casework</b> <i>Ingrid Bosman, PhD*</i> ; <i>Dick-Paul Kloos, PhD</i> ; <i>Camille van Dijk, MS</i> ; <i>Ivo Alberink, PhD</i>
11:00 am – 11:15 am	<b>L45</b>	<b>Evaluating the Pharmacokinetics of Xylazine in Humans: A Paired Forensic and Clinical Model</b> <i>Alex Krotulski, PhD*</i> ; <i>Sara Walton, MS</i> ; <i>Brittany Chapman, BS</i> ; <i>Patricia Martinez, MD</i> ; <i>Aidan Hampson, PhD</i> ; <i>Jyothi Polackal, BS</i> ; <i>Deborah Olabisi, MD</i> ; <i>John Nguyen, BSN</i> ; <i>John Broach, MD</i> ; <i>Brianna Stang, MS</i> ; <i>Alyssa Reyes, MS</i> ; <i>Barry Logan, PhD</i>
11:15 am – 11:30 am	<b>L46</b>	<b>Paired Toxicology Assays for the Quantitation of Medetomidine and the Differentiation of Dexmedetomidine and Levomedetomidine</b> <i>Sara Walton, MS*</i> ; <i>Brianna Stang, MS</i> ; <i>Alex Krotulski, PhD</i> ; <i>Sherri Kacinko, PhD</i> ; <i>Barry Logan, PhD</i>
11:30 am – 1:00 pm		<b>BREAK</b>

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## Multidisciplinary Session: Pathology/Biology and Toxicology

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Moderator: Gregory Schmunk, MD

Co-Moderator: Rebecca Hartman, PhD

- 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*
- 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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Moderator: Ayako Chan-Hosokawa, MS

Co-Moderator: Sara Dempsey, PhD

- 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\**

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4:00 pm – 4:15 pm	<b>L53</b>	<b>How High Will It Go? The Alarming Rise of Fentanyl Tolerance</b> <i>Ayako Chan-Hosokawa, MS*; Zachary Shaner</i>
4:15 pm – 4:30 pm	<b>L54</b>	<b>Driving Under the Influence Snapshot: Uncovering Drug Prevalence Trends in Washington, DC</b> <i>Kimberley Heine, MFS*; Samantha Tolliver, PhD</i>
4:30 pm – 4:45 pm	<b>L55</b>	<b>Drug Use by Drivers in Fatal Traffic Crashes</b> <i>Amanda Mohr, MS*; Grace Cieri, MS; James Gill, MD; Barry Logan, PhD</i>
4:45 pm – 5:00 pm	<b>L56</b>	<b>Impaired Driving Cases With Gabapentin</b> <i>Nicholas Tiscione, MS*; Edward Zumaeta, MS</i>

## Friday

### Novel Psychoactive Substances

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Moderator: Tate Yeatman, MS

Co-Moderator: Lynn Wagner, PhD

8:00 am – 8:15 am	<b>L57</b>	<b>2024 Novel Psychoactive Substance Trends and a Comparison Against NPS Discovery Scope Recommendations</b> <i>Donna Papsun, MS*; Alex Krotulski, PhD; Barry Logan, PhD</i>
8:15 am – 8:30 am	<b>L58</b>	<b>Metabolic Profiling of the Semi-Synthetic Tetrahydrocannabinols (THCs), Delta 10-THC, and Delta 6a,10a-THC, Using Human Liver Microsomes and LC/MS</b> <i>Nathan Layle, MS*; Jonathon Bassman, MS; Marc Gregerson, PhD; Jeffrey Williams, MS; Donna Iula, PhD</i>
8:30 am – 8:45 am	<b>L59</b>	<b>Cytochrome P450-Mediated Metabolism of Isotonitazene, a Novel Synthetic 2-Benzylbenzimidazole Opioid</b> <i>Madison Schackmuth, PhD*; Sarah Kerrigan, PhD</i> <i>(FSF Emerging Forensic Scientist Award Oral Presentation)</i>
8:45 am – 9:00 am	<b>L60</b>	<b>Metabolite Profile Commonalities of Methoxylated Fentanyl Analogs</b> <i>Jillian Morgan, MS*; Candice Bridge, PhD</i>
9:00 am – 9:15 am	<b>L61</b>	<b>Novel Psychoactive Substance Presence in Fentanyl/Norfentanyl-Positive Clinical Urine Specimens</b> <i>Theresa Meli, MS*; Jillian Neifeld, MS; Sarah Bartock, PhD</i>
9:15 am – 9:30 am	<b>L62</b>	<b>The Prevalence of p-Fluorofentanyl and Xylazine in Postmortem Fentanyl Casework: A Three-Year Retrospective Study</b> <i>Marco Ballotari, PhD*; Michael Truver, PhD; Jennifer Hoyer, MS; Bruce Goldberger, PhD; Chris Chronister, PhD</i>
9:30 am – 9:45 am	<b>L63</b>	<b>The Detection of Novel Psychoactive Substances in Urine Specimens From a Large United States Prison System</b> <i>Jillian Neifeld, MS*; Theresa Meli, MS; Sarah Bartock, PhD</i>
9:45 am – 10:00 am	<b>L64</b>	<b>Two Fatal Cases Involving N-Ethylpentadone in a Secured Forensic Psychiatric Clinic</b> <i>Jeroen Roosendaal, PhD*; Ingrid Bosman, PhD; Pieter Van Driessche, MD; Janneke Hulshof, PhD; Bas van de Velde, MS; Theo Klein, PhD; Kristof Maudens, PhD</i>

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10:00 am – 10:15 am

**BREAK**

## Alcohol & General Forensic Toxicology

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Moderator: Michael Wagner, MS, PA

Co-Moderator: Melissa Rodriguez, MS

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 Review of Findings Between 2019 and 2023**

*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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Moderator: Nikolas Lemos, PhD

Co-Moderator: Timothy Rohrig, PhD

1:00 pm – 3:00 pm

**L70**

**Postmortem Pediatric Forensic Toxicology: Children Are Not Small Adults**

*Nikolas Lemos, PhD\**; *Timothy Rohrig, PhD\**