

WS03: A Closer Look at Pediatric Toxicology: Unraveling the Mysteries of Pediatric Testing

Date: Monday, October 27

Time: 8:00 AM – 12:00 PM

Rates:

Membership	Early Bird (June 25 - Sep 10)	Late (Begins Sept 11)	Onsite (Begins Oct 9)
Member	\$150	\$175	\$200
Student	\$150	\$175	\$200
Non-Member	\$200	\$225	\$250

Workshop Chairs:

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Abstract

The SOFT Postmortem Committee presents a workshop addressing the unique challenges of interpreting pediatric toxicology. This session will provide a foundational understanding of pediatric toxicology by defining its scope and discussing why special considerations are necessary for this population. It will also explore the definition of a "child" in the context of toxicology, spanning a wide age range—from neonates to adolescents—each with distinct physiological characteristics.

Children are not simply smaller adults; they exhibit significant pharmacological differences in both pharmacokinetics and pharmacodynamics, making comparisons of effects and concentrations between pediatric and adult populations more complex. Children's absorption, distribution, metabolism, and excretion processes differ from those of adults, which impacts how toxic substances are processed in their bodies.

In addition to these physiological differences, pediatric toxicology is further complicated by limitations in sample collection, specimen types, and sample sizes, all of which pose challenges for analytical testing. The workshop will delve into these topics in depth, emphasizing the key differences and limitations. Case studies in pediatric toxicology will also be presented, offering opportunities for interactive discussions on interpretation. These discussions will focus on providing different approaches to testing, ensuring the most accurate and reliable results while considering the unique pharmacological and physiological factors in pediatric patients.

Learning Objectives

1. Inform attendees what pediatric toxicology is, focusing on the study of toxic substances' effects on children and infants. Highlight the unique aspects of toxicology in pediatric populations as opposed to adults.
2. Discuss the difficulties in collecting samples from pediatric patients and the complexities of analytical testing with smaller sample sizes and varied specimen types.
3. Provide attendees with real-life pediatric toxicology cases, showcasing a variety of scenarios that illustrate the complexities involved in diagnosing and interpreting toxicology results in children.

Speakers

Speaker	Job Title	Organization/Agency
Dr. Robert Middleberg	Core Laboratory Director	NMS Laboratory
Dr. Nikolas Lemos	Forensic Toxicologist & Director/Professor	Cameron Forensic Medical Sciences and Queen Mary University of London
Dr. Christopher Milroy	Forensic Pathologist/Full Professor	Eastern Ontario Regional Forensic Pathology Unit/University of Ottawa
Dr. Kimberley Molina	Chief Medical Examiner	Bexar County Medical Examiner's Office

Workshop Agenda

Time	Topic	Speaker
8:00-8:15 AM	Who Are Children in Forensic Toxicology?	Dr. Middleberg
8:15-9:00 AM	From Absorption to Elimination: Exploring Pediatric Forensic Toxicology	Dr. Lemos
9:00-9:30 AM	Pediatric Pharmacodynamics in Forensic Toxicology: Exploring Systemic Effects in Children	Dr. Middleberg
9:30-9:45 AM	Analytical Considerations in Pediatric Toxicology: Navigating Specimen Collection and Testing Limitations	Dr. Lemos
9:45-10:00 AM	Q&A	Panel
10:00-10:30 AM	Break	
10:30-11:15 AM	Decoding Pediatric Postmortem Toxicology: Case Examples and Collaborative Analysis	Dr. Molina
11:15 AM-12:00 PM	Pediatric Postmortem Toxicology: Engaging Case Studies and Audience Interpretation	Dr. Milroy