

Workshop #11: Forensic Interpretation of Novel Psychoactive Substances in Challenging Cases

Date: Tuesday, October 31

Time: 8:00 AM – 12:00 PM

Cost:

MEMBER RATES		
Early Bird Registration June 1 – Aug 31 \$150	Late Registration Begins Sept 1 \$175	On-site Registration Begins October 11 \$200
NON – MEMBER AND DAILY RATES		
Early Bird Registration June 1 – Aug 31 \$200	Late Registration Begins Sept 1 \$225	On-site Registration Begins October 11 \$250

Chairs

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Associate Director

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Abstract

The SOFT Novel Psychoactive Substances (NPS) Committee presents an engaging workshop involving approaches to interpretation of forensic toxicology casework involving NPS, both with and without other drugs present. Since the initial proliferation of NPS decades ago, forensic toxicologists have been challenged by various aspects associated with the continued, revolving emergence of new drugs which require advance mental vigor to remain at the forefront of interpretive toxicology practice. This workshop has been sub-divided into three parts. Part I will focus on pre- and post-analytical factors that affect downstream interpretation of case results. These aspects that affect NPS interpretation include: selecting the appropriate matrix type, developing methods for the appropriate drug targets, understanding individual drug stability, and the reoccurring debate of quantitative vs. qualitative testing. In addition, time will be spent discussing the impacts of NPS isomers as they relate to the need for analytical separation vs. accurate reporting and overall case significance vs. resource needs. Part 2 of this workshop will focus on tools and workflows that can be useful when interpreting cases involving NPS. The main focus will be how to best understand pharmacology research and newly published literature articles. Two interpretation workflows will be discussed to illustrate the manner in which forensic toxicologists tackle complex and more esoteric cases, and how information regarding activity, potency, reference ranges, similar polydrug cases, etc. can be collected. Finally, in Part 3, forensic toxicologists from different parts of the country will present case examples to showcase the challenging aspects associated and how they interpreted results based on complete history, circumstances, other forensic evidence, and analytical testing. Cases will include examples where NPS were detected for the

first time or where NPS were detected alone and circumstance surrounding excited delirium, drug delivery homicide, polydrug use, and drug impaired driving.

Learning Objectives

1. Inform attendees about the tools necessary for interpretation of forensic toxicology cases that contain NPS, with and without other drugs.
2. Provide attendees with NPS data and information on aspects related to analytical testing factors, pharmacology, comparative literature sources, and interpretive toxicology.
3. Showcase how forensic toxicologists handle complex cases involving NPS and discuss how laboratories handle the initial uncertainty surrounding novel drugs.

Faculty

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Simon Elliott, PhD
Director
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Donna Papsun, MS, D-ABFT-FT
Forensic Toxicologist
NMS Labs

Helen Chang, MS
Forensic Scientist III – Toxicology
Orange County Crime Lab

Michael T. Truver, PhD
Deputy Director
Department of Pathology, Immunology, and Laboratory Medicine, University of Florida College of Medicine

Audience Knowledge Level

Intermediate - Involves more advanced concepts requiring some technical working knowledge or prior exposure to the subject matter

Workshop Agenda

Time	Topic	Speaker
8:00-8:05 am	Welcome and NPS Committee Update	Alex Krotulski & Dani Mata
8:05-8:25 am	Introduction - Understanding Factors that Influence Downstream Interpretation	Dani Mata
8:25-8:50 am	Handling NPS Isomers – From Analytical Separation to Reporting	Melissa Fogarty
8:50-9:20 am	Understanding NPS Pharmacology Studies – In Vitro vs. In Vivo Data	Mike Baumann
9:20-9:40 am	The Toxicology Significance Score (TSS) for Interpretation of NPS Cases	Simon Elliott
9:40-10:00 am	Developing an Interpretation Workflow for Toxicology Cases Involving NPS	Alex Krotulski
10:00-10:30 am	Break	
10:30-10:40 am	Interpretation of Cases Involving NPS Stimulants in Postmortem Investigations	Donna Papsun
10:40-10:50 am	Interpretation of Cases Involving NPS Opioids in Postmortem Investigations	Donna Papsun
10:50-11:00 am	Impaired Driving Case Involving NPS Benzodiazepines	Helen Chang
11:00-11:10 am	Applying Interpretation Tools to Cases Involving para-Fluorofentanyl	Helen Chang
11:10-11:20 am	Early NPS Case Involving New Synthetic Cannabinoids	Alex Krotulski
11:20-11:30 am	Evaluation of a Case Series Involving N,N-Dimethylpentylone	Michael Truver
11:30-11:40 am	New Cases Involving the Novel Benzodiazepine Rilmazofone	Michael Truver
11:40 AM -12:00 pm	Q&A	All Speakers