Kratom 2.0: High-Potency Alkaloids and Emerging Clinical Syndromes

Submission ID 3003953

Submission Type Workshop

Topic Addiction- Substance Use Disorders: Identifying, Diagnosing, Treating, and/or Managing

Status Submitted

Submitter Cornel Stanciu

Affiliation Dartmouth-Hitchcock Medical Center - New Hampshire

SUBMISSION DETAILS

Workshop Summary The clinical landscape of kratom use is rapidly evolving. Calls to poison centers about kratom increased more than 1,200% between 2015 and 2025. While traditional kratom has been associated with relatively low opioid toxicity, newer synthetic and semisynthetic derivatives labeled and sold as "kratom" including 7-hydroxymitragynine and mitragynine pseudoindoxyl are increasingly encountered in clinical practice. These compounds exhibit markedly different pharmacologic profiles, with higher receptor affinity and altered functional activity, leading to presentations that more closely resemble high-potency opioid exposure than traditional kratom use.

Workshop Interaction and Engagement Methods Digital Interactivity and Audience Response Systems - We encourage engagement using polling and audience response systems. Please inform AAAP staff prior to your workshop if you wish to use one of these methods for leaner engagement., Case Discussion - Use of cases to engage the audience in brainstorming about diagnosis, treatment planning, clinical issues., Other

Interactive Plan Description This 90-minute workshop is designed with a strong emphasis on active learning, case-based reasoning, and real-time audience engagement to support clinical translation of emerging pharmacologic concepts related to kratom-derived compounds.

The session will begin with a brief didactic presentation (approximately 45 minutes or less total) delivered in two focused segments. The first didactic segment (15–20 minutes) will introduce the evolving pharmacology of kratom, 7-hydroxymitragynine (7-OH), and mitragynine pseudoindoxyl (MP), emphasizing receptor-level differences, metabolic pathways, and clinical implications. The second didactic segment (20 minutes), interspersed between case discussions, will highlight diagnostic challenges, toxicology limitations, and emerging clinical syndromes associated with high-potency kratom-derived products.

Throughout the session, digital interactivity and audience response systems will be used repeatedly to maintain engagement and guide clinical reasoning. Polling questions will be embedded at key

decision points. Results will be displayed in real time and used to facilitate structured discussion, clarify misconceptions, and compare approaches across the audience.

The core of the workshop (approximately 45–50 minutes) will be dedicated to three progressively complex case discussions. Each case will represent a distinct clinical phenotype:

1. Traditional kratom use with low-potency opioid effects
2. Exposure to 7-OH–dominant products with intermediate-to-high opioid receptor activity
3. Suspected ingestion of mitragynine pseudoindoxyl or related semisynthetic compounds with high-potency opioid-like toxicity

For each case, participants will be guided through staged decision-making prompts using a combination of audience polling and facilitated discussion.

These interactive strategies are designed to shift the session from passive knowledge acquisition to active clinical reasoning. By repeatedly engaging participants in diagnostic and therapeutic decision-making under conditions of uncertainty, the workshop aims to improve retention, enhance pattern recognition, and build practical frameworks for managing an evolving and clinically heterogeneous class of substances.

Writing Educational Learning Objectives

Please list at least three (3) brief learning objectives below.

Learning Objective 1 Differentiate traditional kratom from synthetic and semisynthetic derivatives based on pharmacology and production pathways.

Learning Objective 2 Recognize emerging clinical syndromes associated with high-potency kratom-derived compounds, including atypical withdrawal and opioid-like toxicity.

Learning Objective 3 Apply evidence-informed strategies for assessment, diagnosis, and management across care settings.