

Emerging Drugs of Abuse: What Was New Yesterday Is NEW Today

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We are pleased to present this special focus issue of the *Journal of Medical Toxicology* on emerging drugs of abuse. Since early humans first experienced euphoria with psychotropic plants more than 6,000 years ago, creative individuals have explored new ways of achieving drug-induced euphoria without getting in trouble with the law or dying. This issue is appropriately timed because the availability of new drugs has accelerated at a mind-boggling pace over the last decade. Ivory Wave? Meow Meow? Spice? These are not terms of affection for one's significant other, but instead street names for emerging drugs of abuse readers should have heard by now and will learn more about in this issue. The drugs of abuse described in this issue are **n**ontraditional, **e**merging, and **w**eb-based—so for simplicity, we will refer to them collectively as NEW drugs.

It is now estimated that 100 persons die of drug overdose daily in the USA, a threefold increase in overdose deaths in less than 20 years [1]. Although misuse and diversion of prescribed opioids have clearly been linked to this increase, a significant proportion of increasing deaths can also be attributed to NEW drugs as illustrated in two sobering case reports included in this issue: Murray and colleagues from North Carolina report a death from bath salts; Warrick and coauthors describe a death from a methylnone—butylone product in Michigan [2, 3].

Twenty years ago, the USA made up 60% of the world's recreational drug market, but now this problem is a global one. Although we are no longer surprised, the internet has contributed significantly to the global explosion of emerging drugs. The potential impact of the internet on this problem was news when first reported by Paul Wax 10 years ago in his prescient paper cleverly titled “Just a click away: recreational drug web sites on the internet” [4]. Toxicologists have an underappreciated expertise and unique perspective on emerging drug problems, so we are fortunate this issue includes two excellent reviews from experts on the cutting edge of these trends. Prosser and Nelson provide a focused, high-level review of bath salts, an epidemic described in vivid detail on the front page of every major US newspaper in the last year; Rosenbaum and coauthors provide a broader examination of NEW drugs with their review of synthetic cathinones, kratom, salvia, methoxetamine, and piperazines in their smartly titled paper, “Here today, gone tomorrow...and back again?” [5, 6].

Partisan websites on the internet, instant text messaging on smartphones, and other new technology have allowed easier connections between users and imaginative chemists staying ahead of legislative efforts to limit the availability of these drugs [7, 8]. As Barbara Carerno of the DEA commented: “It's hard to keep up with everything...there are a lot of gifted chemists out there.”

Understanding the effects of these NEW drugs is complicated because clinicians primarily interface with users only when a complication results in an emergency department visit—the majority of NEW drug users never end up in a health care facility. Getting a handle on this rapidly evolving problem demands better understanding of unexpected complications, such as seizures from synthetic cannabinoids

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described by Schneir in this issue, and gaining insights from users who never seek medical care [9]. Useful knowledge can be gained from innovative approaches. In this issue of the *Journal of Medical Toxicology (JMT)*, Edward Boyer continues to push the conventional limits of clinical toxicology scholarship with preliminary findings from his iHeal project—clearly his work is grounded in the technological age of the twenty-first century where iPods, iPhones, and iEverything are ubiquitous [10]. Boyer and his team developed iHeal to gain insights into drug craving using modern technology. We eagerly await subsequent findings from their ambitious project.

Up until recently, the best way to learn about NEW drug trends was to read nonmedical reports and surf the net. This issue of *JMT* provides a valuable contribution to the growing body of peer-reviewed literature on this topic. The articles here should inform toxicologists, front line clinicians, policy makers, and the community about the dangers of NEW drugs and empower us to act collaboratively. So pay attention, learn NEW lingo, think outside conventional boxes, and contribute your observations to this journal in the same way the authors represented in this issue have done.

Please also tune in to the new *Journal of Medical Toxicology* podcast where editorial board members Howard Greller and Dan Rusyniak discuss articles from this issue in more detail. The *JMT* podcast is available at the ACMT website (<http://www.acmt.net/ACMTPodcasts.html>) and the iTunes Store.

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