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Cannabis in forensic toxicology: Poison or panacea?

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Abstract

Other than alcohol, cannabis (marijuana, pot) is the drug most often encountered by forensic toxicologists in both postmortem cases as well as human performance cases. This presentation aims inform audience members on the current state of knowledge on cannabis. A review of cannabis is presented including a brief historical account as well as a discussion of the naturally occurring endocannabinoids and the body's cannabinoid receptors CB1 and CB2. The drug's current use in therapy and mechanism of action will be discussed. A review of the pharmacokinetics and pharmacodynamics of cannabis including physiologic and behavioral effects as well as tolerance and dependence and its effects on driving will be presented. A selection of human performance cases involving cannabis (primarily driving under the influence of drugs (DUID) and drug facilitated sexual assaults (DFSA, date rapes) will be presented. A review of cannabis in postmortem cases will be presented with special attention on the interpretative challenges they present associated with postmortem interval (PMI) and postmortem redistribution (PMR). The involvement of cannabis in deaths in San Francisco will be discussed and current research findings on cannabis' involvement in cause and manner of death will be presented in association with the well-established cardiotoxic effects of cannabis in the living.

Biography

Nikolas P. Lemos was born in Athens, Greece and currently lives in San Francisco where he is Clinical Professor in the Department of Laboratory Medicine, School of Medicine, University of California, San Francisco and Chief Forensic Toxicologist and Forensic Laboratory Director at the Office of the Chief Medical Examiner of the City and County of San Francisco. He is the holder of many scholarships, research and equipment grants and awards including a 2005 Proclamation of Achievement by the 109th Congress of the United States of America. He has co-authored over 50 peer-reviewed published papers, abstracts, and book chapters and has previously served as Science Editor of *Medicine, Science and the Law*, the official journal of the British Academy of Forensic Sciences. He continues to serve on numerous journal editorial boards and professional committees. He is Member of The International Association of Forensic Toxicologists, the Society of Forensic Toxicologists, the California Association of Criminalists, the California Association of Toxicologists, the American Society of Crime Laboratory Directors, the American Chemical Society, the British Academy of Forensic Sciences, and affiliate member of the National Association of Medical Examiners. He is Fellow of the Toxicology Section of the American Academy of Forensic Science and Fellow of the Royal Society of Chemistry