ACS-GHS August Seminar
Dr. Madeleine Swortwood

Tuesday, August 10th
6:30 - 8:00 pm
via Zoom

Register to receive the meeting link at https://acsghs.wildapricot.org/event-4271772

Analytical Challenges of Cannabinoid Testing in Toxicology

With the advent of liquid chromatography-tandem mass spectrometry (LC-MS/MS), analytical sensitivity has improved for cannabinoid testing in toxicology. However, challenges remain with regards to matrix effects, availability of reference standards, lengthy hydrolysis steps, limited specimen volume, and complex matrices. Sample preparation remains the most important consideration for cannabinoid testing and will be reviewed for traditional and emerging matrices. More recently, the popularity of cannabinoid products containing cannabidiol (CBD) and Δ8-tetrahydrocannabinol (Δ8-THC) created new analytical challenges. In particular, compound conversion and separation of isomers will be discussed. In order to better understand cannabinoid analyses and data interpretation, analytical challenges must be considered and assessed as the demand for cannabinoid identification and quantification continues to increase.

Biography: Dr. Madeleine Swortwood is an Assistant Professor in the Department of Forensic Science at Sam Houston State University. She received a Bachelor's degree in Biochemistry from Duquesne University and a Ph.D. in Chemistry from Florida International University. She completed a postdoctoral fellowship with the National Institute on Drug Abuse, a division of the National Institutes of Health (NIH) where she investigated drug metabolism and conducted a controlled cannabis administration clinical trial. Dr. Swortwood's research group at SHSU focuses on drug metabolism, marijuana oral fluid drug testing, in utero drug exposure, novel psychoactive substances, and analytical method development. She has authored and co-authored more than thirty manuscripts and more than fifty peer-reviewed oral and poster presentations presented at national and international conferences.