

International Conference on

FORENSIC RESEARCH & TECHNOLOGY

&

ANNUAL BIOMARKERS CONGRESS

September 17-18, 2018 | Osaka, Japan

**Bai Hsiun Chen**

Kaohsiung Medical University, Taiwan

Simultaneous drug identification in urine of sexual assault victims by using liquid chromatography tandem mass spectrometry

According to domestic and international epidemiological investigation, the proportion of substance involved sexual assault has the trend of ascent. In the past, laboratory methods that investigated urine sample of the sexual assault victims was to screen with enzyme immunoassay and then confirmed with mass spectrometry. The objective of the study is to simultaneously identify abused drugs in 126 decoded urine samples of sexual assault victims by liquid chromatography tandem mass spectrometry. The instrument was operated in multiple-reaction monitoring with an electro-spray positive ionization mode. Chromatograms were separated with ACE5 C18 column on a gradient of acetonitrile. After liquid-liquid extraction, samples were passed through a 0.22 mm PVDF filter before

injection into the system. The limits of quantitation ranged from 0.2 to 10 ng/mL. The precision (CV) results were below 12.9% (intraday) and 15.0% (interday). The intraday accuracy ranged from 84.8 to 121.0%, interday accuracy ranged from 72.0 to 117.3%. We found that 29 (23.0%) were positive for drugs. The most common drug identified is flunitrazepam (11.1%), followed by nimetazepam and ketamine (7.9%), some new psychoactive substances, such as 2C-B, mephedrone, methylone, PMA and PMMA were also identified. We identified abused drugs, benzodiazepines, and new psychoactive substances in urine of sexual assault victims by using liquid chromatography tandem mass spectrometry.

Biography

Bai Hsiun Chen is a Professor from Graduate Institute of Clinical Medicine, Kaohsiung Medical University and he is a Attending physician in Department of Laboratory Medicine, Kaohsiung Medical University Hospital, Kaohsiung, Taiwan. He is also a Supervisor, Taiwan Society of Clinical Pathology and Laboratory Medicine

d670014@kmu.edu.tw