NIJ SESSIONS AT PITTCON 2018

Orange County Convention Center in Orlando, Florida, February 26–March 1, 2018

WEDNESDAY

NIJ – Emerging Technologies for the Analysis of Trace Evidence Materials Collected from Crime Scenes 1210
Wednesday morning, Room 311AB

8:30 Introductory Remarks – Igor K. Lednev and Gregory Dutton

8:35 Forensic Science Research and Development Funding Program at the National Institute of Justice: Opportunities in Analytical Chemistry, Applied Spectroscopy and Bioanalysis – Gregory Dutton, National Institute of Justice; Minh Nguyen

9:10 Retracing Lifestyles of People from Objects Using Mass Spectrometry – Pieter Dorrestein, University of California San Diego

9:45 The Burglary Microbiome Project: Detecting Personal Microbiome Signatures at Artificial Crime Scenes – Jack Gilbert, University of Chicago

10:20 Break

10:35 3D Surface Topography Analysis and Virtual Microscopy for Firearm Forensics – Ryan Lilien, Cadre Research

11:10 Vibrational Spectroscopy and Advanced Statistics for Detection and Characterization of Gunshot Residue – Igor K. Lednev, University at Albany, SUNY

NIJ – Analytical Methods in Forensic Biology and DNA Analysis – Proteomics, Genomics, and Bioinformatics 1450
Wednesday afternoon, Room 311CD

1:30 Introductory Remarks – Igor K. Lednev and Minh Nguyen

1:35 NIJ Research – Human Identification by Single Amino Acid Polymorphisms Using Proteomic Mass Spectrometry – Donald Siegel, New York City Office of Chief Medical Examiner; Heyi Yang, Tatiana Perez, Erin Butler, Samantha Monier, David Fenyo, Emmanuel Chang, Adam Essene, Amy Mundorff

2:10 Forensic Epigenetics, A Novel Method for Body Fluid Identification and Phenotyping – Bruce McCord, Florida International University; Joana Antunes, Kuppareddi Balamurugan, George Duncan, Deborah Silva, Hussain Alghamin

2:45 Population Haplotype Analysis of 2,543 STRs and their Flanking SNPs Using a Massively Parallel Next–Generation Sequencing Technology – Giwon Shin, Stanford University School of Medicine; Susan M Grimes, Billy T Lau, Hojoon Lee, Matthew Kubit, Hanlee P Ji

3:20 Break

3:35 Democratizing DNA Fingerprinting – Sophie Zaaijer, New York Genome Center and Cornell Tech, Yaniv Erlich

4:10 The Research and Development Progress of Enhancing Mixture Interpretation with Highly Informative STRs – Bruce Budowle, University of North Texas Health Science Center; Jonathan L King, Nicole M Novroski, Maiko Takahashi, Frank R Wendt, August E Woerner

THURSDAY

Innovations and Trends in Forensic Examination of Seized Drugs and Forensic Toxicology 1740
Thursday morning, Room 309AB

8:30 Application of Headspace Solid Phase Micro Extraction in Chemical Forensics – Jorn Chi Chung Yu, Sam Houston State University; Austin McDaniel, Frank Liu

8:50 Forensic Identification of Plant–based "Legal Highs" by Chemometric Processing of Direct Analysis in Real Time Mass Spectrometry (DART–MS)–derived Chemical Fingerprints – Rabi Ann Musah, University at Albany, SUNY

9:10 Statistical and Mass Spectral Tools for the Identification and Characterization of Synthetic Phenethylamines – Ruth Smith, Michigan State University; Alexandria Anstett, Fanny Chu, David E Alonso, Victoria L McGuffin

9:30 Decreasing the Uncertainty of Peak Assignments for the Chromatographic Separation of Emerging Drugs – Ira Lurie, The George Washington University

9:50 Break

10:05 Evaluation of Drugs Other Than Nicotine (DOTNs) in an Aerosol Formed by an Electronic Cigarette – Haley A. Mulder, Virginia Commonwealth University; Michelle R Peace, Justin L Poklis, Matthew S Halquist, Joseph Turner, Alphonse Poklis

10:25 Analysis of Drug–Protein Modifications in Forensic Toxicology – Anthony P. DeCaprio, Florida International University; Richard A Gilliland

10:45 Aptamer–based Assays for On–site Drug Detection – Yi Xiao, Florida International University

11:05 Post–Mortem Drug Screening Using Paper Spray High Resolution Tandem Mass Spectrometry – Nicholas Manicke, Indiana University – Purdue University Indianapolis; Josiah McKenna

NIJ Forensic Science Research & Development Poster Session 2190

Thursday afternoon, Exposition Floor, Aisles 2000–2700

1:30 – 3:00 Poster Session

3:15 Student Poster Awards Announced