National Institute of Justice

Forensic Science Research and Development Symposium

March 1–2, 2022

Virtual Event

AGENDA

DAY 1

Tuesday, March 1: 10:00 a.m.–5:50 p.m. Eastern Time (ET)

10:00–10:05	Welcome and Opening Remarks
10:05–1:15	Session I—Impression and Pattern Evidence/Trace Evidence
1:15–2:15	BREAK
2:15–2:20	Welcome and Opening Remarks
2:20–5:50	Session II—Seized Drugs and Toxicology

DAY 2

Wednesday, March 2: 10:00 a.m.–5:00 p.m. ET

10:00–10:05	Welcome and Opening Remarks
10:05-12:50	Session III—Forensic Biology/DNA
12:50–2:10	BREAK
2:10–2:15	Welcome and Opening Remarks
2:15–5:00	Session IV—Forensic Anthropology and Forensic Pathology

DAY 1—Tuesday, March 1: 10:00 a.m.–5:50 p.m. ET

10:00–1:15	**SESSION I—Impression and Pattern Evidence/Trace Evidence** Moderated by NIJ Program Manager Gregory Dutton
10:00–10:05	**Welcome and Opening Remarks** Gregory Dutton, National Institute of Justice
10:05–10:30	**Validating Conclusion Scales in the Forensic Sciences (2018-DU-BX-0212)** Thomas Busey, Indiana University
10:30–10:55	**Assessing Error Rates in Multiple Examiner Groups Using Regression Methods (2019-DU-BX-4011)** Larry Tang, University of Central Florida
10:55–11:20	**Evaluating the Spatial Distribution of Randomly Acquired Characteristics on Outsoles (2018-MU-MU-0003)** Jacqueline A. Speir, West Virginia University
11:20–11:35	**Q&A**
11:35–11:45	**BREAK**
11:45–12:10	**Advancing Reporting of Significance From the Analysis and Comparison of Glass Evidence: A Global Collaboration (2018-DU-BX-0194)** José R. Almirall, Florida International University
12:10–12:35	**Attenuated Total Reflection Infrared Microscopic Analysis of Simulated Automotive Paint Smears for Vehicle-Vehicle Collisions (2017-IJ-CX-0022)** Barry K. Lavine, Oklahoma State University
12:35–1:00	**Analysis of Small Particles Adhering to the Edges of Duct Tape as a Means to Make Associations in a Way That Is Independent of Manufactured Characteristics (2020-MU-CX-0018)** David A. Stoney, Stoney Forensic, Inc
1:00–1:15	**Q&A**
1:15–2:15	**Session I Adjourn**

DAY 1—Tuesday, March 1: 10:00 a.m.–5:50 p.m. ET

2:15–5:50	**SESSION II—Seized Drugs and Toxicology** Moderated by NIJ Program Manager Frances Scott
2:15–2:20	**Welcome and Opening Remarks** Frances Scott, National Institute of Justice
2:20–2:40	**Accurate THC Determinations in Seized Cannabis Samples for Forensic Laboratories (DJO-NIJ-20-RO-0009)** Walter Brent Wilson, National Institute of Standards and Technology
2:40–3:00	**Development of a Validated UHPLC-DAD Method with Optional ESI/TOFMS Detection for Rapid Quantification of Δ^9-THC and Δ^9-THCA Among Sixteen Cannabinoids in Hemp Concentrates (2020-DQ-BX-0021)** Liguo Song, Western Illinois University
3:00–3:20	**Quantitative Analysis of Δ^9-Tetrahydrocannabinol (THC) in the Presence of THC Isomers in Biological Specimens Using Liquid Chromatography Tandem Mass Spectrometry (2020-DQ-BX-0017)** Rebecca Wagner, Virginia Department of Forensic Science
3:20–3:40	**Blood Protein Modification Assay for Retrospective Detection of Abused Drug Exposure (2017-MU-BX-0002 and 2020-R2-CX-0023)** Anthony P. DeCaprio, Florida International University
3:40–4:00	**Q&A**
4:00–4:10	**BREAK**
4:10–4:30	**Development of an Open-Source Direct Analysis in Real Time Mass Spectrometry (DART-MS) Search Software and Library Building Tool for the Analysis of Complex Drug Mixtures (DJO-NIJ-20-RO-0012)** Edward Sisco and Arun S. Moorthy, National Institute of Standards and Technology
4:30–4:50	**Fusion of DART-HRMS-Derived Dark Matter and Infrared Spectroscopy for the Identification of New Psychoactive Substances (2017-R2-CX-0020)** Rabi Ann Musah, University of Albany—State University of New York
4:50–5:10	**Expert Algorithm for Substance Identification (EASI) From Mass Spectra (2018-75-CX-0033)** Glen P. Jackson, West Virginia University
5:10–5:30	**NPS Discovery Toolkits: Real-Time Identification and Dissemination of Information Regarding Novel Psychoactive Substances (2020-DQ-BX-0007)** Sara E. Walton, Center for Forensic Science Research and Education
5:30–5:50	**Q&A**
5:50	**Day 1 Adjourn**

DAY 2—Wednesday, March 2: 10:00 a.m.–5:00 p.m. ET

10:00–12:50	**SESSION III—Forensic Biology/DNA** Moderated by NIJ Program Manager Tracey Johnson
10:00–10:05	**Welcome and Opening Remarks** Tracey Johnson, National Institute of Justice
10:05–10:25	**Evaluation of Precision ID GlobalFiler NGS STR Panel (2018-DU-BX-0166)** Elisa Wurmbach, New York City Office of Chief Medical Examiner
10:25–10:45	**Verification and Evaluation of a miRNA Panel for Body Fluid Identification Using DNA Extracts (2012-DN-BX-K017, 2016-DN-BX-0163, and 2019-NE-BX-0005)** Sarah Seashols-Williams, Virginia Commonwealth University
10:45–11:05	**Variation in Laboratory Policies and Procedures Related to Interpretation of DNA Mixtures (2020-R2-CX-0049)** R. Austin Hicklin, Noblis, Inc.
11:05–11:20	**Q&A**
11:20–11:35	**BREAK**
11:35–11:55	**Interpretation of Y Chromosome STRs for Missing Persons Cases (2020-DQ-BX-0018)** Jianye Ge, University of North Texas Health Science Center
11:55–12:15	**Assessment of Sexual Assault Kit (SAK) Evidence Selection Leading to Development of SAK Evidence Machine-Learning Model (SAK-ML Model) (2019-NE-BX-0001)** Julie L. Valentine, Brigham Young University College of Nursing
12:15–12:35	**Interpretation of Y-STR Evidence (2020-DQ-BX-0022)** Bruce Weir, University of Washington
12:35–12:50	**Q&A**
12:50–2:10	**Session III Adjourn**

DAY 2—Wednesday, March 2: 10:00 a.m.–5:00 p.m. ET

2:10–5:00	**SESSION IV—Forensic Anthropology and Forensic Pathology** Moderated by NIJ Program Manager Danielle McLeod-Henning
2:10–2:15	**Welcome and Opening Remarks** Danielle McLeod-Henning, National Institute of Justice
2:15–2:35	**Discovering Clandestine Human Remains Using Unmanned Aerial System Remote Sensing (2019-DU-BX-0027)** Daniel J. Wescott, Texas State University
2:35–2:55	**Microbial Clock of Human Decomposition Accurately Estimate Postmortem Interval (2015-DN-BX-K016 and 2016-DN-BX-4194)** Zachary M. Burcham and Jessica L. Metcalf, Colorado State University
2:55–3:15	**Progress Towards the Development of a Database of Chemical Fingerprint Signatures for Species Identification of Necrophagous Insects (2020-MU-MU-0016)** Rabi Ann Musah, University of Albany—State University of New York
3:15–3:30	**Q&A**
3:30–3:45	**BREAK**
3:45–4:05	**Exploring Phenotypic Variation Throughout Ontogeny and Its Impact on Forensic Anthropology (2015-DN-BX-K409 and 2019-DU-BX-0039)** Kyra E. Stull, University of Nevada, Reno
4:05–4:25	**Human Identification From Computed Tomography Derived 3D Models Using Part-to-Part Comparison Analysis (2019-DU-BX-0031)** Summer J. Decker, University of South Florida Morsani College of Medicine
4:25–4:45	**Solving Cases of Sudden Unexpected Natural Death in the Young through Comprehensive Postmortem Genetic Testing (2018-DU-BX-0204)** Yingying Tang, New York City Office of Chief Medical Examiner
4:45–5:00	**Q&A**
5:00	**Day 2 Adjourn**

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