

**VCU Department of Forensic Science Faculty and Graduate Student
Presentations and Publications**

2013-2014

Publications

Budd, WT, **Seashols, SJ**, Weaver, D, Josephy, C., Zehner, Z. A Networks Method for Ranking microRNA Dysregulation in Cancer. *BMC Syst Biol.* 2013;7 Suppl 5:S3.

Poklis JL, Devers KG, Arbefeville EF, Pearson JM, Houston E, **Poklis A**. Postmortem detection of 25I-NBOMe [2-(4-iodo-2,5-dimethoxyphenyl)-N-[(2-methoxyphenyl)methyl]ethanamine] in fluids and tissues determined by high performance liquid chromatography with tandem mass spectrometry from a traumatic death. *Forensic Sci Int.* 2014 Jan;234:e14-20.

Poklis JL, Nanco CR, Troendle MM, **Wolf CE, Poklis A**. Determination of 4-bromo-2,5-dimethoxy-N-[(2-methoxyphenyl)methyl]-benzeneethanamine (25B-NBOMe) in serum and urine by high performance liquid chromatography with tandem mass spectrometry in a case of severe intoxication. *Drug Test Anal.* 2013 Sep 2.

Poklis JL, Charles J, **Wolf CE, Poklis A**. High-performance liquid chromatography tandem mass spectrometry method for the determination of 2CC-NBOMe and 25I-NBOMe in human serum. *Biomed Chromatogr.* 2013 Dec;27(12):1794-800. doi: 10.1002/bmc.2999.

Poklis JL, *Clay DJ*, **Poklis A**. High-performance liquid chromatography with tandem mass spectrometry for the determination of nine hallucinogenic 25-NBOMe designer drugs in urine specimens. *J Anal Toxicol.* 2014 Apr;38(3):113-21.

Thomas JT, Berlin RM, Barker JM, Dawson Cruz T. Qiagen's Investigator™ Quantiplex Kit as a predictor of STR amplification success from low-yield DNA samples. *J Forensic Sci.* 2013 Sep;58(5):1306-9.

Moran JJ, **Ehrhardt CJ**, Wahl JH, Kreuzer HW, Wahl KL. Integration of stable isotope and trace contaminant concentration for enhanced forensic acetone discrimination. *Talanta.* 2013 Nov 15;116:866-9.

P. Gardner, R. Weimer, M. F. Bertino, "Differentiation between Lip Cosmetics Using Raman Spectroscopy", *Journal of the American Society of Trace Evidence Examiners*, accepted for publication.

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Easter JL, Steiner RR (2014) Pharmaceutical Identifier Confirmation via DART-TOF. *Forensic Sci Int* 240:9-20.

Jacobs AD, Steiner RR, "Detection of the Duquenois-Levine chromophore in a marijuana sample", technical note, *Forensic Science International*, 239(2014), 1-5.

Wolf CE, Goldstein A, Poklis JL, Poklis A. Evaluation of an Enzyme Immunoassay for the Detection of Methadone Metabolite EDDP [2-Ethylidene-1,5-Dimethyl-3,3-Diphenylpyrrolidine] in Urine. *Journal of Clinical Laboratory Analysis* 2014;28:136-140.

Presentations

DJ. Clay, JL. Poklis, BM. Ignatowska-Jankowska, RA. Abdullah, M Mustafa, I Greig, C Zanato, M Zanda AH. Lichtman, and A Poklis. "A HPLC/MS/MS Method for the Detection and Quantitation of ZCZ-011, a Positive Allosteric Modulator of the CB₁ Receptor, in Mouse Brain using Clean Screen FAST™ Column Extraction." Carolina Cannabinoid Collaborative (CCC) Conference (2013) Virginia Commonwealth University, Richmond, VA

CR. Hayes; S Fleming, A Albornoz, BS; Zendra E. Zehner,; SJ. Seashols.* "An Analysis of microRNA Variation and Stability in Forensically Relevant Body Fluids." American Academy of Forensic Sciences Annual Meeting (2014). Seattle, WA.

C Engel. "Can We Expand Quantity without Compromising Quality. Validations Studies of the PowerPlex Fusion System." Mid-Atlantic Academy of Forensic Scientists Annual Meeting (2014). State College, PA.

A McClain, MT Miller, T Dawson Cruz. "Obtaining DNA from archived fingerprints: a sticky situation." Mid-Atlantic Academy of Forensic Scientists Annual Meeting (2014). State College, PA.

S Fleming. "Variation in microRNA abundance in forensically relevant body fluids." Mid-Atlantic Academy of Forensic Scientists Annual Meeting (2014). State College, PA.

M Goldstein. "The Use of QIAGEN's Investigator Lyse& Spin Basket as an Alternative to Differential Extractions." Mid-Atlantic Academy of Forensic Scientists Annual Meeting (2014). State College, PA.

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J Hong, HE Parker, S. Weitz, T. Bille, T Dawson Cruz. "qPCR mixture determination using melting curve analysis of STR Loci." Mid-Atlantic Academy of Forensic Scientists Annual Meeting (2014). State College, PA.

Kiersten LaPorte "Evaluation of within-roll variability in duct tape physical characteristics.. Mid-Atlantic Academy of Forensic Scientists Annual Meeting (2014). State College, PA.

A Alborno. "Variation of MicroRNA Expression in Blood, Menstrual Blood and Vaginal Fluid over Biological Time." Mid-Atlantic Academy of Forensic Scientists Annual Meeting (2014). State College, PA.

J Cox , T. Dawson Cruz, TK Sikes, Y. Ouyang, JP Landers. "Toward a Forensic DNA Microdevice & Integration of a 'Pinwheel' Quantitation Module." Mid-Atlantic Academy of Forensic Scientists Annual Meeting (2014). State College, PA.

Poklis JL, Raso SA (presenter), Alford K, Poklis A, **Peace MR.** "A Direct Analysis in Real Time AccuTOF™ Mass Spectrometry (DART-MS) Method for the Analysis of 25I-NBOMe and Other Dimethoxyphenyl-N-[(2-methoxyphenyl) methyl]ethanamine) Derivatives". Platform Presentation, SOFT, Grand Rapids, MI, October 2014.

Raso S, Alford K, Poklis J, Poklis A, Peace MR. "The Characterization of 12 "Legal High" Solids Sold Online as "Bath Salts" or "Herbal Incense Products" Using Direct Analysis in Real Time Accu-TOFTMMass Spectrometry", Platform Presentation, MAAFS, Penn State, May 2014.

M Goldstein. "The Identification of Marker Proteins in Menstrual Blood Using LC-MALDI Mass Spectrometry." Mid-Atlantic Academy of Forensic Scientists Annual Meeting (2014). State College, PA.

B Singh. Workshop #5 — Forensic Microbiology: Where Do We Begin? American Academy of Forensic Sciences Annual Meeting (2014). Seattle, WA.

A Poklis. "Postmortem Detection of 25I-NBOMe in Fluids and Tissues of a Young Man Who Fell Seven Stories to His Death." American Academy of Forensic Sciences Annual Meeting (2014). Seattle, WA.

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*M Goldstein** "Identification of Marker proteins in Menstrual Blood Using LC-MALDI Mass Spectrometry." American Academy of Forensic Sciences Annual Meeting (2014). Seattle, WA.

*S Fleming**, *A Albornoz*, *C Hayes*, **S Seashols** "Optimized Methods for Isolation of microRNAs From Forensically Relevant Body Fluids." American Academy of Forensic Sciences Annual Meeting (2014). Seattle, WA.

L Dean, **T Dawson Cruz**, **S Seashols**, **C Ehrhardt***. "Separation of Complex Biological Mixtures Using Human Leukocyte Antigen Probes and Fluorescence Activated Cell Sorting (FACS)." American Academy of Forensic Sciences Annual Meeting (2014). Seattle, WA.

*K LaPorte**. "Evaluation of Within-Roll Variability in Duct Tape Physical Characteristics." American Academy of Forensic Sciences Annual Meeting (2014). Seattle, WA.

*YJ Kwon**, **T Dawson Cruz**, **S Seashols**, **C Ehrhardt**. "Application of Molecular Antibody Probes and Flow Cytometry to Resolve Individual Contributions from Four Persons' Whole Blood Mixtures and Contact Epithelial Cell Mixtures." American Academy of Forensic Sciences Annual Meeting (2014). Seattle, WA.

MC Goldstein, **T Dawson Cruz**. "Evaluation of the QIAGEN QIAcube for Forensic Stain, Swab, and Differential DNA extractions. American Academy of Forensic Sciences Annual Meeting (2014). Seattle, WA.

*J Cox**, *T Sykes*, **T Dawson Cruz**,. "Toward a Forensic Microdevice on a Rotation-Driven Platform and Integration of a "Pinwheel" Quantification Module." American Academy of Forensic Sciences Annual Meeting (2014). Seattle, WA.

B Singh. "Just How Filthy Are Maggots? Bacteria Associated With the Blow Fly Sister Species *Lucilia Sericata* and *Lucilia cuprina*(Diptera: Calliphoridae)." American Academy of Forensic Sciences Annual Meeting (2014). Seattle, WA.

"**B Singh**. An Initial Assessment of the Structure and Function of the Postmortem Human Microbiome: Forensic Applications." American Academy of Forensic Sciences Annual Meeting (2014). Seattle, WA.

B Singh*. "Utility of Bacteria Associated with Human Cadavers in Estimation of Postmortem Interval (PMI)" American Academy of Forensic Sciences Annual Meeting (2014). Seattle, WA.

B Singh. "Swine as a Model for Decomposition: A Comparison of Postmortem Microbiomes ." American Academy of Forensic Sciences Annual Meeting (2014).

**VCU Department of Forensic Science Faculty and Graduate Student
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Seattle, WA.

A Zimmermann, C Ehrhardt. "Chemical Profiling of Trichloroisocyanuric Acid-(TCCA) Based Explosives for the Forensic Attribution of Precursor Materials." American Academy of Forensic Sciences Annual Meeting (2014). Seattle, WA.

J Goss.* "Raman Spectroscopy as a Tool to Measure Laboratory Production Processes of Bacillus Cereus Spores." American Academy of Forensic Sciences Annual Meeting (2014). Seattle, WA.

M Romanelli, E Lapatovich, C Stanciu, K Asal, D Jessup, C Ehrhardt.* "Chemical Profiling of Forensically Relevant Bacterial Threat Agents with Direct Analysis in Real Time-Mass Spectrometry (DART-MS) and Fatty Acid Methyl Ester (FAME) Analysis." American Academy of Forensic Sciences Annual Meeting (2014). Seattle, WA.

J Goss, C Stanciu, Christopher Ehrhardt.* "Single Cell Characterization of Bacillus Spores: Novel Forensic Signatures for Biothreat Agents." American Academy of Forensic Sciences Annual Meeting (2014). Seattle, WA.

A Mohs.* "Analysis of Thirteen Designer Drugs Using GCMS, UV-Vis, and FTIR." American Academy of Forensic Sciences Annual Meeting (2014). Seattle, WA.

M Romanelli, K Asal, J Turner, C Ehrhardt. "Chemical Profiling of Forensically Relevant Bacterial Threat Agents with Direct Analysis in Real-Time Mass Spectrometry (DART-MS)." Pittcon (2014). Chicago, IL.

Elizabeth Lapatovich, Cristina E Stanciu "Trace Chemical Profiling of Laboratory Grown and Naturally Cultivated Pathogens." Pittcon (2014). Chicago, IL.

C Stanciu, C Ehrhardt, D Jessup, E Lapatovich, J Goss. "Cell Surface Fatty Acid Methyl Ester (FAME) Analysis of Bacillus Spores." Pittcon (2014). Chicago, IL.

A Zimmermann, C Ehrhardt. "Chemical Profiling of Trichloroisocyanuric Acid (TCCA) Based Explosives for Forensic Attribution." Pittcon (2014). Chicago, IL.

J Easter. "Pharmaceutical Identifier Confirmation Via AccuTOF DART." American Society for Mass Spectrometry (2014). Baltimore, MD.

Singh, B. Human necromicrobiome clock for estimation of postmortem interval (PMI). Lambda Alpha Society, VCU, Richmond, VA, March 25, 2014.

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S Greenspoon, C Engel (2013) PowerPlex® Fusion: Is Bigger Better? Oral presentation in the technical leader's workshop at the 23rd International Symposium on Human Identification.

T Dawson Cruz (speaker), *TK Sikes, JO Cox, Y Ouyang, JP Landers*. Prototype Development of a Forensic Microdevice Using Infrared-mediated Heating and a Rotation-driven Platform. 23rd International Symposium on Human Identification.

T Dawson Cruz. Scorpions, SNPs, and Telomere Stretches: Moving Forensic DNA Analysis Beyond 'Barcoding'. 2nd Annual Mid-Atlantic Advanced DNA Technical Workshop, Charlottesville, VA, September, 2013.