

Academic Year 2023-2024

Development of a Novel Seized Drug Screening Method Utilizing DART-MS and Used Weigh Paper.

Detection of Explosives Residue using a Novel Subsampling Technique for DART-HRMS Analysis.

Identification of Isobaric Methyl-Substituted Fentanyl Analogs Using a Transportable Linear Ion Trap Mass Spectrometer.

Forensic Analysis of Recrystallized Inorganic Oxidizing Salts Used in Pyrotechnic-Based Improvised Explosive Devices Using Light Microscopy and Micro-Raman Spectroscopy.

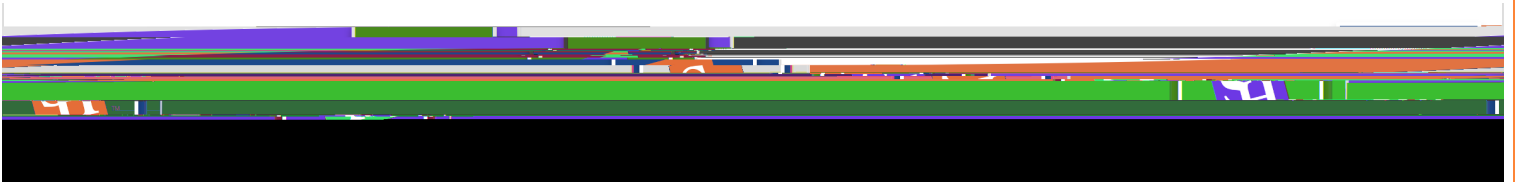
DNA Analysis of Chemically Treated Human Remains.

What's the Probability that DNA Evidence Isn't Relevant Anymore? Is Anything Possible?

Sequence Variation of Commercially Available Kratom Products at Universal DNA Barcode Regions.

Kirk's 'Ontogeny of Criminalistics' Revisited Under the Lens of the Sydney Declaration.

An Inter-Laboratory Comparison of Probabilistic Genotyping Parameters and Evaluation of Performance on DNA Mixtures from Different Laboratories.



Identification of Synthetic Cathinone Positional Isomers using Electron-activated Dissociation and Chemometrics.

Evaluation of Metal Ions and DNA Recovery from the Surface of Fired and Unfired Brass Ammunition to Improve STR Profiling. International Journal of Legal Medicine.

Ag-Ligand Ion Complexation: An Alternative Approach for Hemp and Marijuana Differentiation.

An Evaluation and Comparison of the Evidence MultiSTAT to GC/MS for the Detection of Morphine, Codeine, and Thebaine in Urine and Oral Fluid.

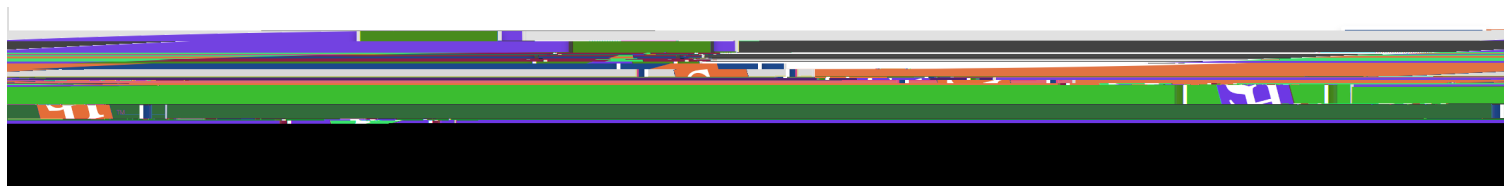
Investigating the Degradation of Benzodiazepines.

Assessment of a Combined Portable Raman Spectroscopy and Mass Spectrometry Approach for the Analysis of Seized Drugs.

An Exploration of a Sequence-Specific Stutter Model for STR Analysis in Next Generation Sequencing.

Structural Characterization of Nitazene Analogs Using Electron Ionization-Mass Spectrometry (EI-MS).

Quantitative Color Analysis of Burned Bone to Predict DNA Quantity, Quality, and Genotyping Success.



Persistence of DNA in Water from an Actively Decomposing Cadaver for Human Identification.

**Investigating
the Capacity of DART-MS for the Analysis of Intact Explosives and Explosives Residue.**

**Examination of the EZ2 Connect Fx
for Extra-Large Volume DNA Extraction and Purification from Skeletal Samples.**

**Analysis of Major Cannabinoids using Raman
Microscopy, Chemometrics, and a Novel Artificial Intelligence Approach.**

**Hidden Traces: An Alternative Analytical Scheme
for Seized Drug Analysis.**

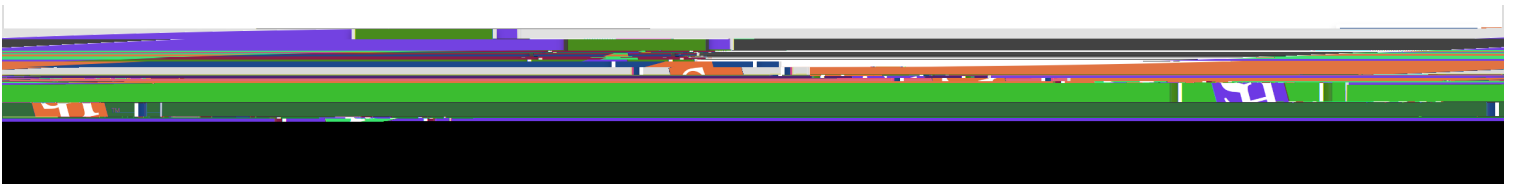
**Into the
"Sexome": Genital Microbiome Transfer and Applications.**

**Development of a Novel Five Dye
Insertion/Deletion (INDEL) Panel for Ancestry Determination.**

**Extraction of
Challenging Samples using the HID NIMBUS Presto System.**

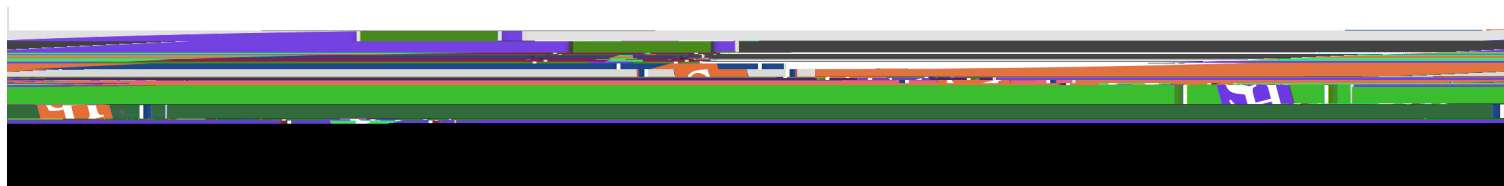
Trailside Murder: A Random, Vicious Attack.

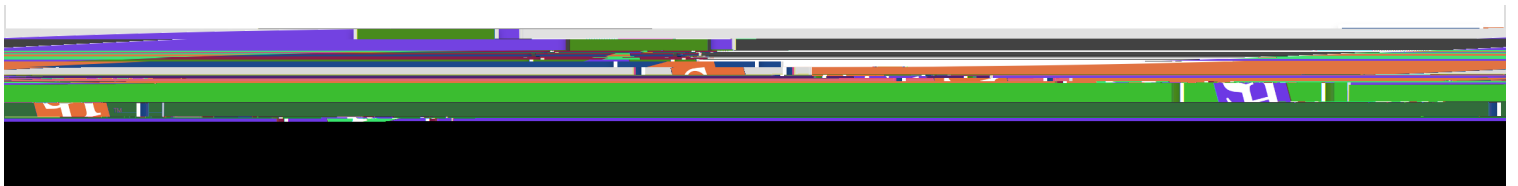
**Genotyping Strategies for Tissues Fixed with Various
Embalming Fluids for Human Identification, Databasing, and Traceability.**



A

**Validated Method for Quantification of Suboxone® and its Primary Metabolites
in Authentic Human Breastmilk, Maternal and Infant Plasma Samples using
Liquid Chromatography-Tandem Mass Spectrometry (LC-MS/MS).**





**Electron Activated
Dissociation-A Complementary Fragmentation Technique to Collision-induced
Dissociation for Metabolite Identification of Synthetic Cathinone Positional
Isomers.**

**Commentary on: Thompson
WC. Uncertainty in Probabilistic Genotyping of Low Template DNA: A Case
Study Comparing STRmix™ and TrueAllele™.**

**Investigating the Effect of Substitution Location on
Fentanyl Analog Identification for Methyl-substituted Fentanyl Analogs using
GC-EI-MS.**

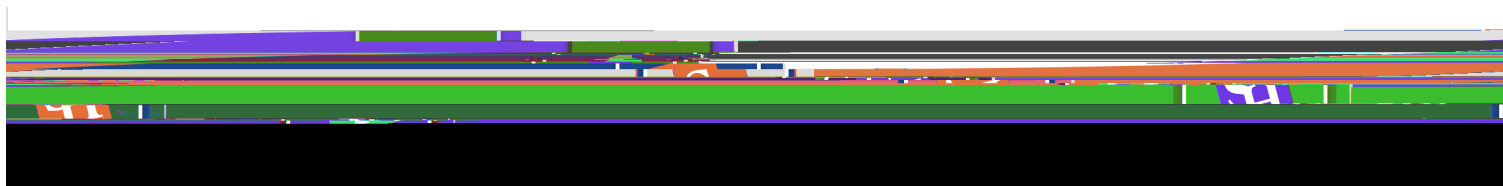
**Comprehensive Toxicological Screening of Common
Drugs of Abuse, New Psychoactive Substances and Cannabinoids in Blood using
Supported Liquid Extraction and Liquid Chromatography-Quadrupole Time-of-
Flight Mass Spectrometry.**

Across the “Sexome”: Understanding Genital Microbiomes.

**Comparison of Nine
Extraction Methods for Bacterial Identification using the ONT MinION
Sequencer.**

**Unveiling the Power of
the HID NIMBUS™ Presto in Tackling Challenging Samples.**

**Developing a Decision Tree for Streamlining Degraded Sample
Processing Across Capillary Electrophoresis and Next-**



**The
Differentiation of N-butyl pentylone Isomers using GC-EI-MS and NMR.**

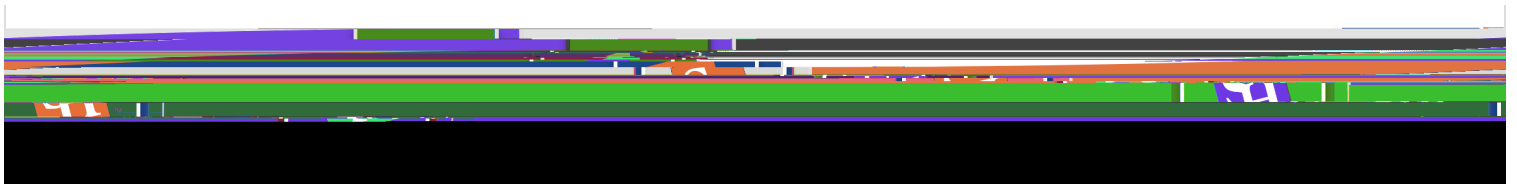
**Differentiating Marijuana from Hemp using
an NGS Panel and Rapid Genotyping Assays Targeting Cannabinoid Synthase
Genes.**

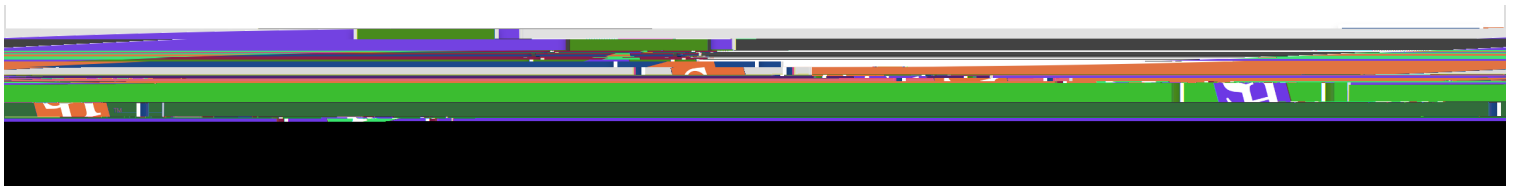
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**Differentiation of
Cannabinoids Through Selective Binding to Silver and Copper Phosphine
Complexes.**

**Extraction of
Challenging Samples using the HID NIMBUS Presto System.**

**Lipophilicity of Fentalogs: Comparison of
Experimental and Computationally Derived Data.**





**Optimization of InnoXtract™
Extraction and Purification System for DNA Extraction from Skeletal Samples.**

**A Cost Benefit Analysis of High Resolution Mass
Spectrometry (HRMS) - Based Drug Screening in Forensic Toxicology.**

**When and “Y” to Screen
With QIAGEN® Investigator® Casework GO!**

**The Intraspecies Variation of
Commercially Available Kratom Products in Common DNA Barcode Regions.**

**The Optimized Recovery of DNA From Exhaled Breath
Devices: From Drug Detection to Human Identification.**

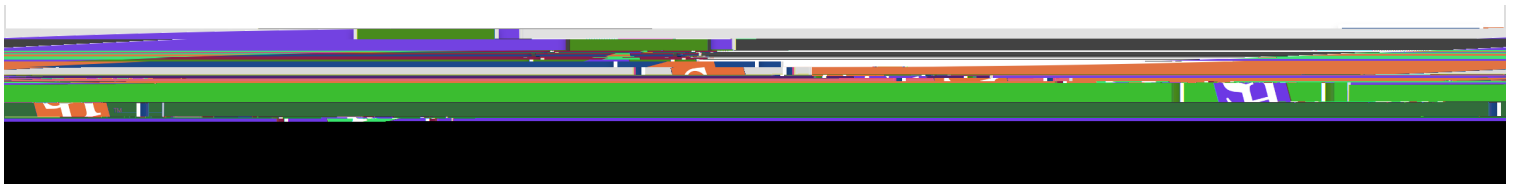
**The Development of a Five-Dye
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**Temperature and pH-Dependent Stability:
Identifying Fentanyl Degradation Pathways.**

**An Assessment of Field-
Portable Instrumentation for Pre-Blast Explosives Detection.**

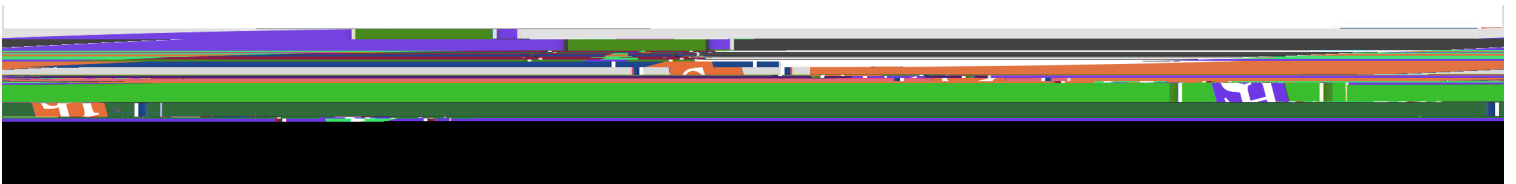
**Assessing the Individual and Joint
Use of Ultraviolet/Visible (UV/VIS) Microspectrophotometry and Scanning
Electron Microscopy/Energy Dispersive Spectroscopy (SEM/EDS) to the
Differentiation of Colored Spray Paint.**

**The Effectiveness of Various Strategies to Improve
DNA Analysis of Formaldehyde-damaged Tissues from Embalmed Cadavers for
Human Identification Purposes.**



If the

Trap Fits: Immunomagnetic Isolation of Spermatozoa.



Detection and Analysis

of DNA Mixtures with the MiSeq FGx.

**Investigation of Downstream Processing
Methods for Challenging Skeletal Samples.**

**Development of a
Next Generation Sequencing Panel Targeting Cannabinoid Synthase Genes to
Distinguish between Marijuana and Hemp.**

**Evaluation of Metal Ion and DNA
Recovery from the Surface of Brass Ammunition to Improve STR Profiling.**

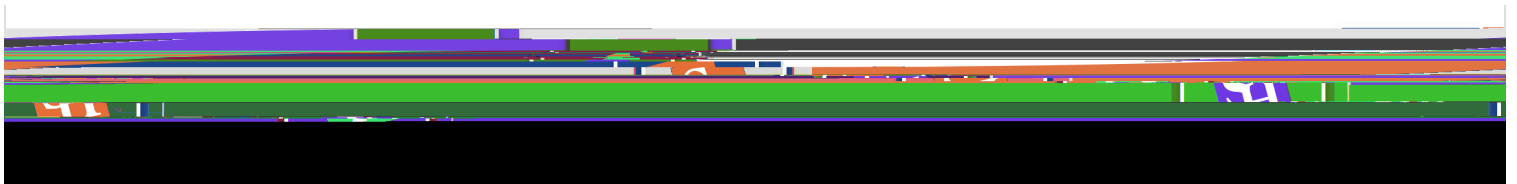
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**Assessment of the Similarity Between In-
Source Collision-Induced Dissociation (IS-CID) Fragment Ion Spectra and
Tandem Mass Spectrometry (MS/MS) Product Ion Spectra for Seized Drug
Identifications.**

**Guiding Proposition Setting in Forensic
DNA Interpretation.**

**Plexity Considerations for the
ForenSeq MainstAY Kit.**

**Mind Your X's and Y's:
Screening with QIAGEN Casework GO!**

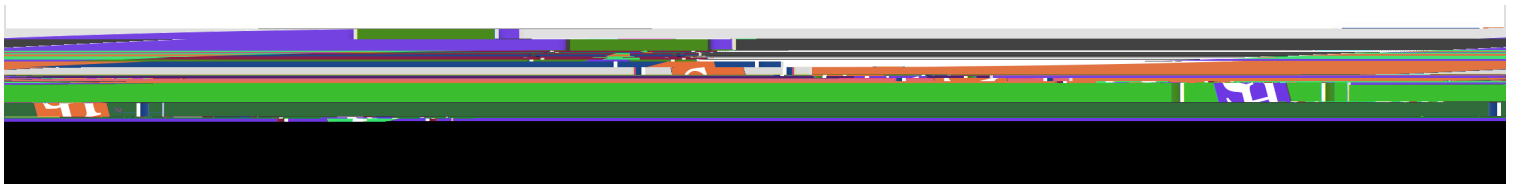


**Exploring
Environmental and Genetic Influences on Substance Abuse Behavior.**

**Massively Parallel Sequencing of
Cannabis sativa Chloroplast Hotspots for Forensic Typing.**

**The Effect
of Ultraviolet Radiation on Dyed Man-Made Textile Fibers Using UV-Vis
Microspectrophotometry (MSP): Technical Aspects on Spectral Alterations in
Time.**

**Investigation into the
Effect of Mixtures Comprising Related People on Non-donor Likelihood Ratios,
and Potential Practices to Mitigate Providing Misleading Opinions.**



An Analysis of Methylphenidate, Ethylphenidate, Lisdexamfetamine, and Amphetamine in Oral Fluid by Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS).

Hyperspectral Imaging and Gray Value Analysis of Porous-Tipped Pen Samples Composed of Unknown Inks.

The Effect of Pull-Up on the Allele Peak Heights and the Weights of Genotypes for Minor Donors.

The Detection of Animal Blood Using Green Synthesized Surface-Enhanced Raman Spectroscopy (SERS).

Proteomic Genotyping in Compromised Skeletal Remains.

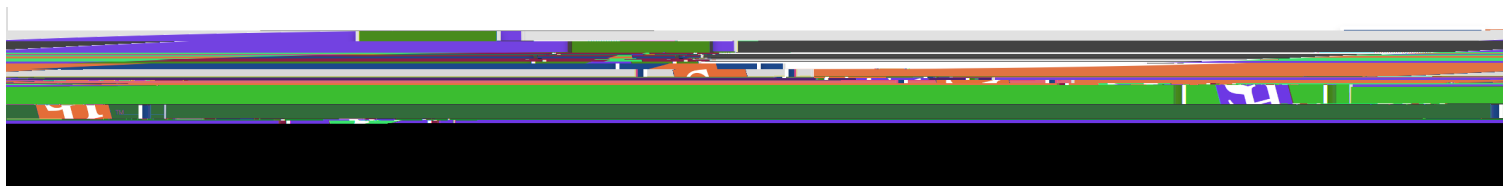
Evaluating the Effectiveness of Microbial DNA Extraction Kits for Intimate Samples.

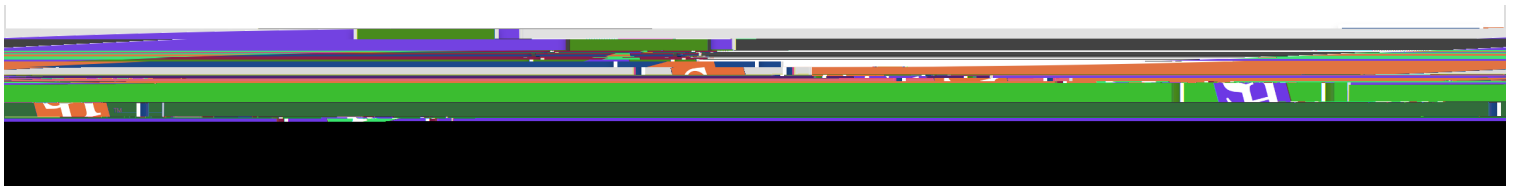
A Pilot Study of Microbial Succession in Human Rib Skeletal Remains During Terrestrial Decomposition.

A Retrospective Review of Hemp/Marijuana Decision Point Assays in Operational Laboratories.

A Microscopical Examination and Elemental Analysis of Automotive Lubricating Greases.

Identifying the Similarity Between In-Source Collision-Induced Dissociation (IS-CID) Fragment Ion Spectra and Tandem Mass Spectrometry (MS/MS) Product Ion Spectra for Seized Drug Identifications.





Internal Validation of the ForenSeq™ Kintelligence Kit for Application to Forensic Genetic Genealogy Cases.

The Detection and Analysis of DNA Mixtures with the MiSeq® FGx™.

The Effects of Storage Time, Adverse Storage Conditions, and Lab Exposure on Blood Alcohol Concentrations.

Magnetic Bead Capture of Sperm Cells by Sperm-Specific Antibodies.

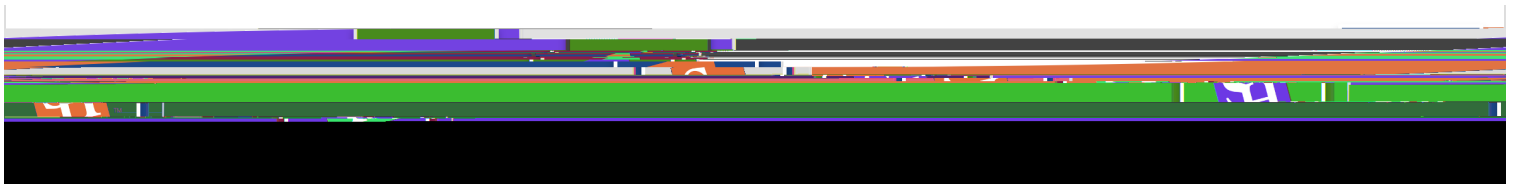
50 Years of Taphonomic Research: From Death's Acre to a Global Footprint.

Interpreting DNA Mixtures with Extreme Allele Overlap.

The Classification of Cannabis Varieties Through Headspace Chemical Analysis and Transfer Learning.

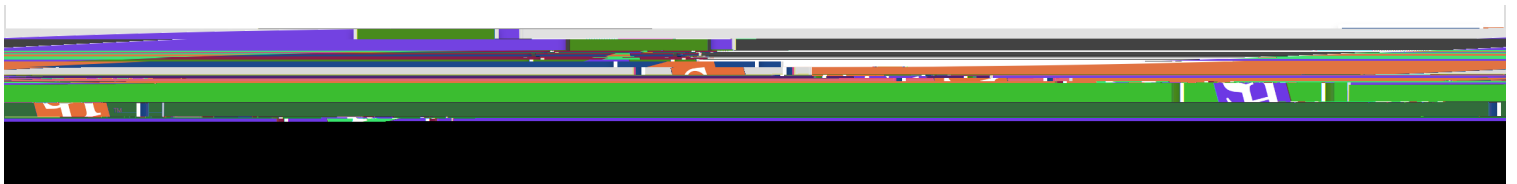
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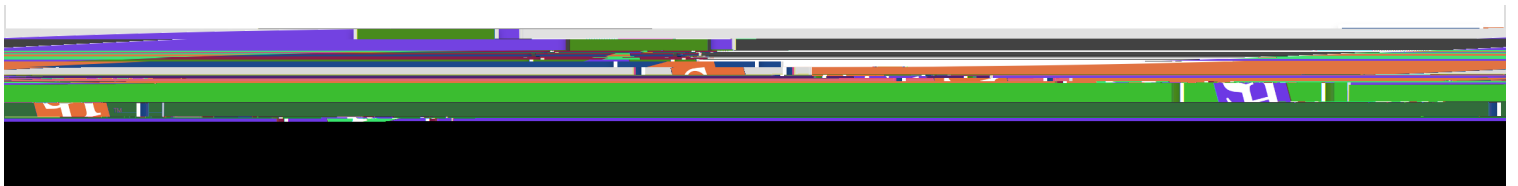
Factors Influencing the *In Situ* Formation of Psychoactive Cannabinoids from Cannabidiol During Gas Chromatography/Mass Spectrometry (GC/MS) Analysis.



**Analysis of Methylphenidate, Ethylphenidate,
Lisdexamfetamine, and Amphetamine in Oral Fluid by Liquid Chromatography-
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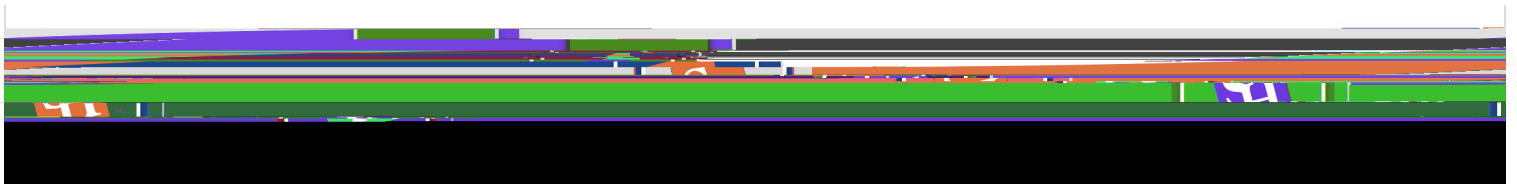
**Chiral Separation and Quantification of d,l-
methylphenidate, d,l-ethylphenidate and Ritalinic Acid in Blood by LC-MS/MS.**





**The Differentiation of Synthetic Cathinone Isomers
using GC-EI-MS and Multivariate Analysis.**

**Technical Note: The Assessment of
the Impact of Induction Spatial Effects on Magnetic Flux Measurements of Toner-
printed Documents to the Detection of Forged or Altered Documents.**



**Potential Impacts of
3D Modeling and 3D Printing in Firearm Toolmark Examinations.**

**Development of Crime Scene Intelligence Using a
Hand-Held Raman Spectrometer and Transfer Learning.**

**Long-Term Stability of 13 Fentanyl Analogs
in Blood.**

**Novel Extraction Chemistry and
Alternative Amplification Strategies for Use with Rootless Hair Shafts.**

**Kratom: A Systematic Review of Toxicological
Issues.**

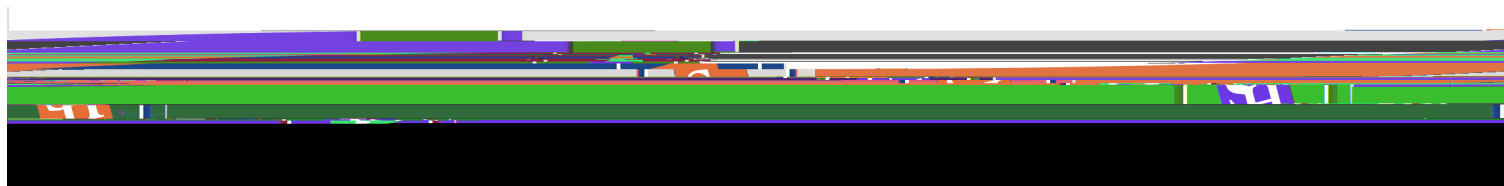
**Technical Note: A
Preliminary Evaluation of a Method for the Examination of Text Substitutions
using Magneto-optical Measurements.**

**Hard Mixtures!—Should I Report This or Not, and What Would Reverend
Bayes Say?**

**Application of
Proteomic Genotyping to Forensic Science Applications in Challenging Skeletal
Remains.**

**Comparison of Nine
Extraction Methods for Bacterial Identification using a Sequencer.**

**A Sensitive LC-MS/MS Method for the Quantitation of
-oxycodol, and
-oxycodol in Human Blood.**



**The
Development of a Multivariate Mass Spectral Algorithm for the Identification of
Seized Drugs.**

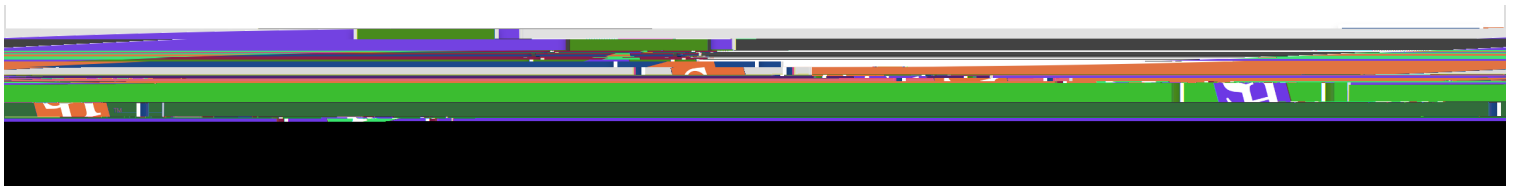
**The Effect of Modifications to the Core
Fentanyl Structure on the Observed Product Ion Spectra.**

**Recommendations for Drug Testing in Driving Under the Influence of
Drugs (DUID) and Motor Vehicle Fatality Cases—2021 Update.**

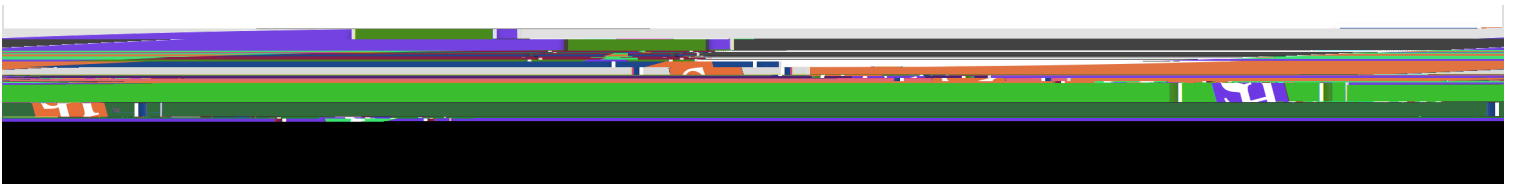
**Digital Walkthrough of the Validation of a Method for
Measuring Magnetic Flux of Toner-Printed Documents.**

**An Evaluation of Gray Value Measurements and
Hyperspectral Imaging (HIS) as a Method for Differentiating Optical
Characteristics of Porous-Tipped Ink Pens.**

**Chiral Separation and Analysis
of Methylphenidate, e (a)4 (hy)4 (l)cesoe,eTJ0 Tc 0 Tw enhw 0.33 -2 (s) (l)-2 (e)4nMon dae,**



Evaluation of the *trnK-matK-trnK*, *ycf3*, and *accD-*

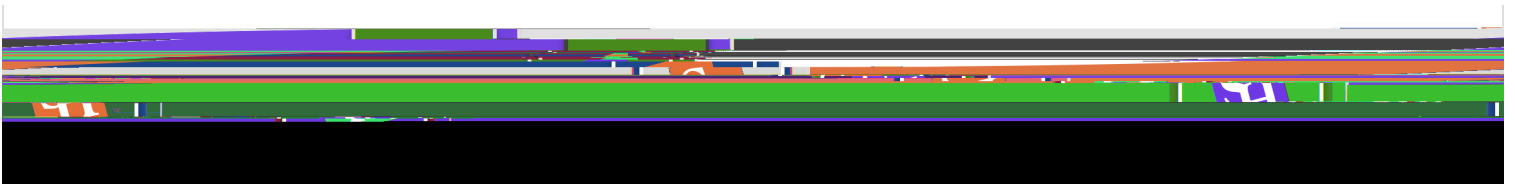


Statistics for Forensic Toxicology **Principles of
Forensic Toxicology.**

**Alternative Processing Techniques
for Highly Degraded Samples.**

Opioids **Principles of Forensic Toxicology.**

The Differentiation of



Pharmacodynamics and Pharmacokinetics of the Novel Synthetic Opioid, U-47700, in Male Rats.

Identification of Five Mitragyna Alkaloids in Blood and Tissue using Liquid Chromatography-Quadrupole/Time of Flight Mass Spectrometry.

CYP450-Mediated Metabolism of Suvorexant and Investigation of Metabolites in Forensic Case Specimens.

Identifying and Quantifying Cannabinoids in Biological Matrices in the Medical and Legal Cannabis Era.

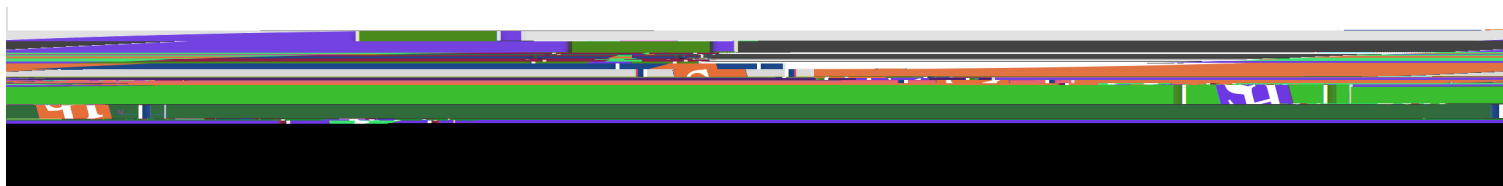
HRMS-based Drug Screening in Forensic Toxicology: Data Acquisition Comparison.

Characterization of Nylanthrene Dyes in the Differentiation of Macroscopically Similar Black Fibers using Light Microscopy and UV-Visible Microspectrophotometry.

Investigating the Interlaboratory Reproducibility of Magnetic Flux Measurements of Toners.

Chiral Separation of Methylphenidate, Ethylphenidate, and Ritalinic Acid in Blood.

Direct Polymerase Chain Reaction Using MicroFLOQ® Direct Swabs with a Modified Qiagen®



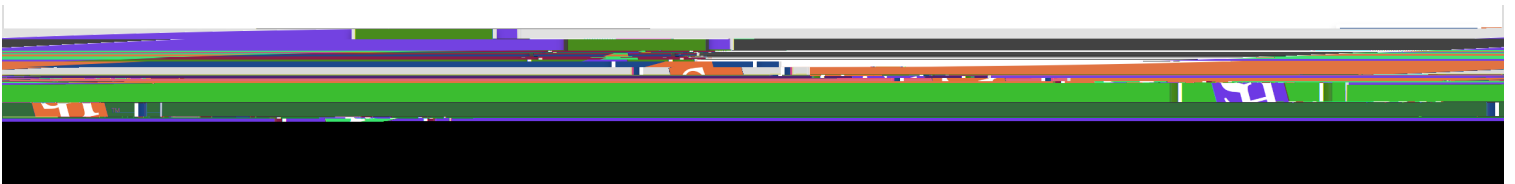
Comparison of Data Acquisition Methods for High Resolution Mass Spectrometry Drug Screening.

Quantification of Furanyl Fentanyl and its Metabolites in Human and Rat Plasma using LC-MS/MS.

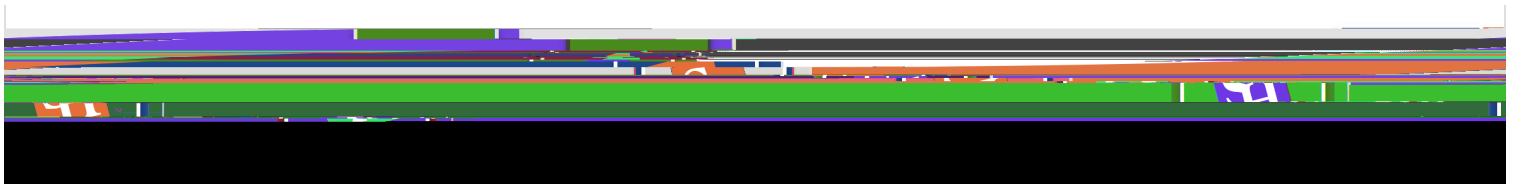
Evaluation of the Investigator® 26plex QS STR Kit and Comparison with Two Commercially Available STR Kits.

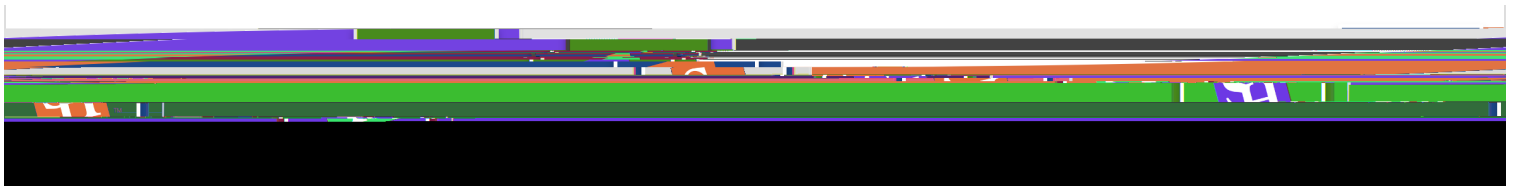
Fentalogs: Lipophilicity.

Data Fusion from Spectroscopic Techniques



**Identification of Mitragyna Alkaloids and
Metabolites as Biomarkers of Kratom Use in Postmortem Urine Samples.**





**A Modified Direct
PCR Protocol for DVI Applications using microFLOQ® Direct Swabs from
Decomposing Human Remains Coupled with the Qiagen Investigator 24plex GO!
Kit.**

**Characterization of New Chloroplast Polymorphisms to Determine
Biogeographical Origin and Crop Type of Cannabis sativa Samples.**

**Evaluation of the Investigator® 26plex QS STR Kit and Comparison with
Two Commercially Available STR Kits.**

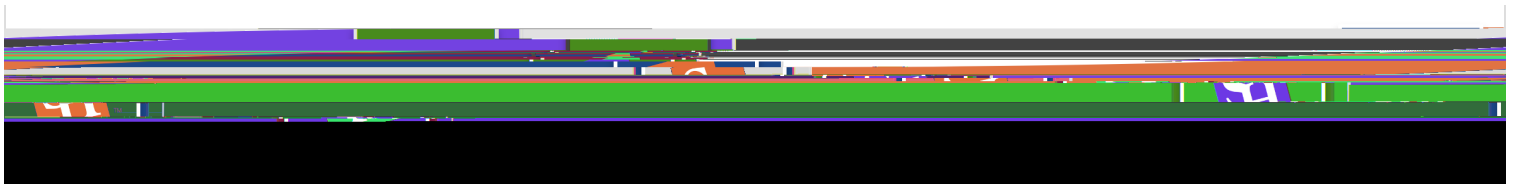
**5F-MDMB-PICA Metabolite
Identification and Cannabinoid Receptor Activity.**

**Oral Fluid and Drug
Impairment: Pairing Toxicology with Drug Recognition Expert
Observations.**

**European Validation of a Cannabis sativa 13-
locus STR Multiplex Kit for Genetic Identification: A Preliminary Study.**

**European Validation of a Cannabis sativa
13-locus STR Multiplex Kit for Genetic Identification: A Preliminary Study.**

**Effectiveness of STR Quality Sensors to Inform
Rework Strategies for Challenging Database and Casework Samples using a
Semi-Automated Workflow.**



**Alternative DNA Profiling Strategies for Rootless
Hair Shafts.**

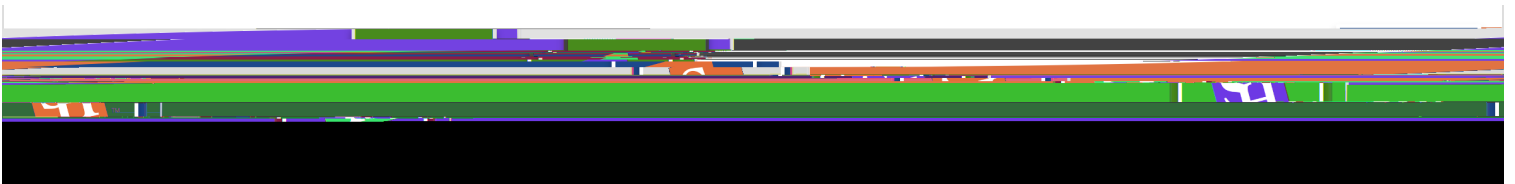
**Improved Mitochondrial Control Region Analysis of
Degraded Bone and Hair Samples for the Miseq FGX.**

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**Assessing the Impacts of Induction Spatial Effects on Magnetic Flux
Measurements of Toners.**

**Analysis of Colored Felt-tipped Blending Marker Ink
using Gray Value Measurements of Visual Spectral Data.**

**Utility of the Ion S5™ and MiSeq FGx™ Sequencing
Platforms to Characterize Challenging Human Remains.**

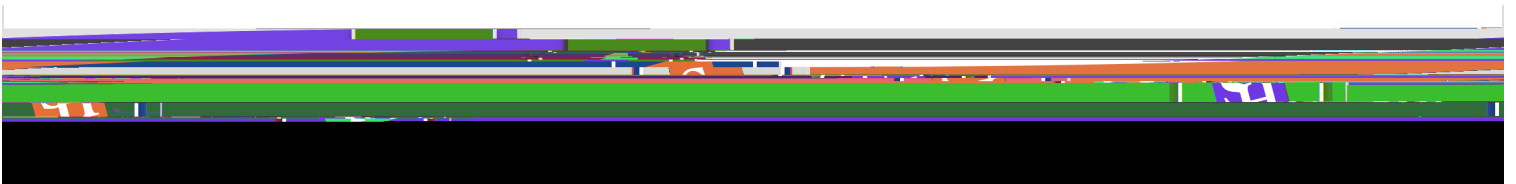


Cases of Kava Impairment in Iowa

Drivers.

Conceptualization of Assessing the Evidential Value of Vehicular Transmission Fluids, Brake Fluids, and Lubricating Greases.

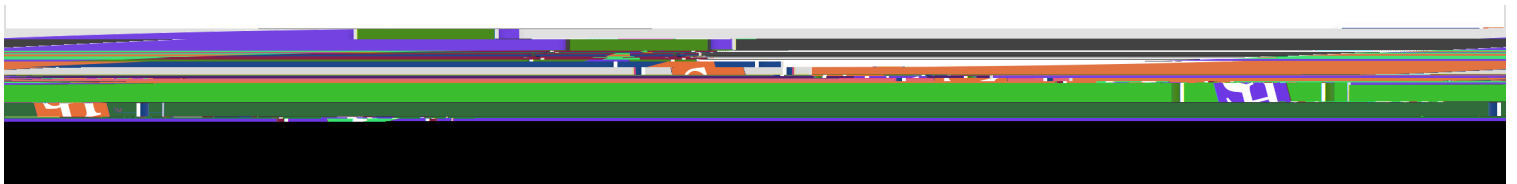
The Application of Targeted mRNA Massively Parallel Sequencing for Body Fluid Identification on Challenging and Mock Casework-type Samples.

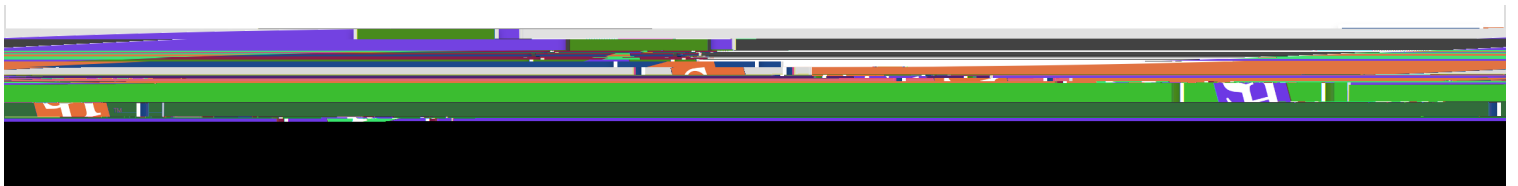


Side-by-Side Comparison of LC-Q/TOF-MS and LC-MS/MS Validation Parameters for the Detection of Suvorexant in Blood.

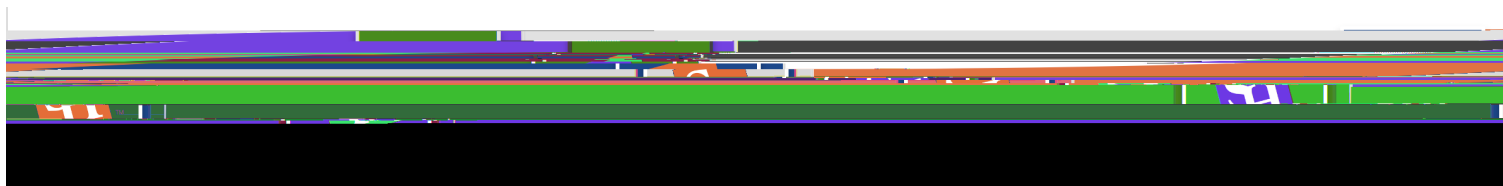
Immunoassay-based Detection of Fentanyl Analogs in Forensic Toxicology.

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**A Chemical Analysis of Controlled Substances Using Automated
Headspace Solid-Phase Microextraction-Gas Chromatography/Mass**



Massively Parallel Sequencing (MPS) of 12 Autosomal Short Tandem Repeats (STRs) in Cannabis sativa.

The Development of Magnetic Carbon Nanotubes (Mag-CNT) for Dispersive Solid Phase Extraction (Dspe) of Cyanide Metabolite (2-Aminothiazoline-4-Carboxylic Acid) in Biological Samples.

Psychedelic Fungus (Psilocybe sp.) Authentication in a Case of Illegal Drug Traffic: Sporological, Molecular Analysis and Identification of the Psychoactive Substance.

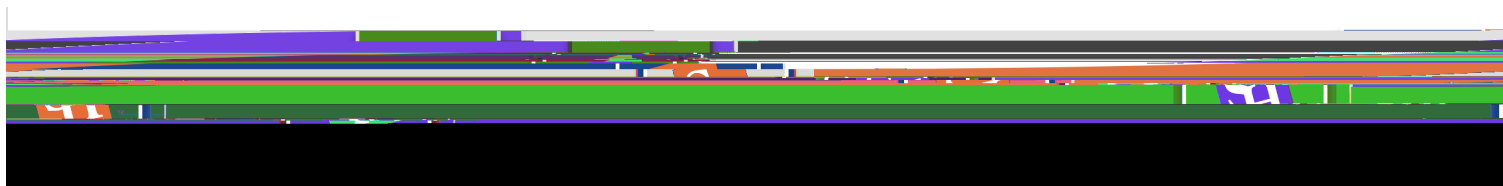
Quantification of Seven Novel Synthetic Opioids in Blood Using LC-MS/MS.

Immunoassay-Based Detection of Fentanyl Analogs in Forensic Toxicology.

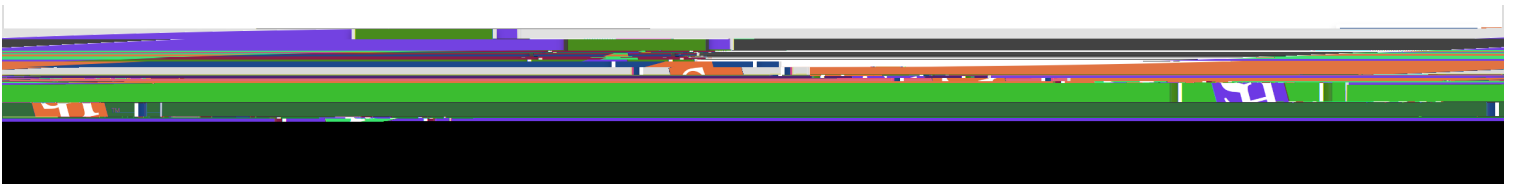
The Potential Use of 2-aminothiazoline-4-carboxylic acid (ATCA) as a Forensic Marker for Cyanide Exposure in Medicolegal Death Investigation: A Review.

Assessment of Impact of DNA Extraction Methods on Analysis of Human Remain Samples on Massively Parallel Sequencing Success.

Toward the Identification of Marijuana Varieties by Headspace Chemical Forensics.



The Relationship between the MAOA-



**Identification of Novel Synthetic
Benzodiazepines by GC-MS.**

**Effective Communication Skills for Successful Forensic Toxicology
Practice: How to Search for Relevant References.**

**Incorporating the Updated NSC ADID Lab Guidelines into
Casework: Pharmacology of Fentanyl, Buprenorphine, and Tramadol.**

**Immunoassay-Based Detection of Fentanyl
Analogues in Forensic Toxicology.**

**Quantitative Analysis of Novel Synthetic
Opioids, Morphine, and Buprenorphine in Oral Fluid by LC-MS/MS.**

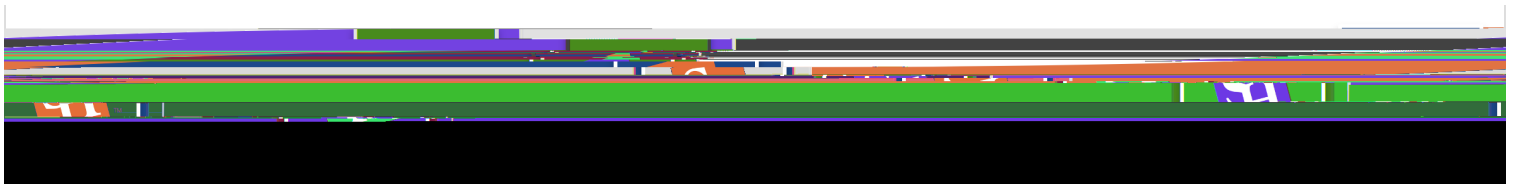
**Quantitative Analysis of Novel Synthetic
Opioids, Morphine, and Buprenorphine in Oral Fluid by LC-MS/MS.**

**Phase I Metabolism of Mitragynine using In Vitro
Methods.**

**Maternal Smoking and Changes in Drug Metabolising Enzymes in the Human
Fetus.**

**In-field Collection and
Preservation of Decomposing Human Tissues to Facilitate Rapid Purification and
STR Typing.**

**In utero
Exposure to Cigarette Smoke and NAFLD Pathways: Sex and Age Specific Effects
in the Human Fetus.**



**microFLOQ®:
Collection and Direct Amplification Methods Using the GlobalFiler™ Kit for
DNA Recovered from Common Pipe Bomb Components.**

**Using the Ion S5™ and MiSeq FGx™ Systems to Identify
Challenging Human Remains.**

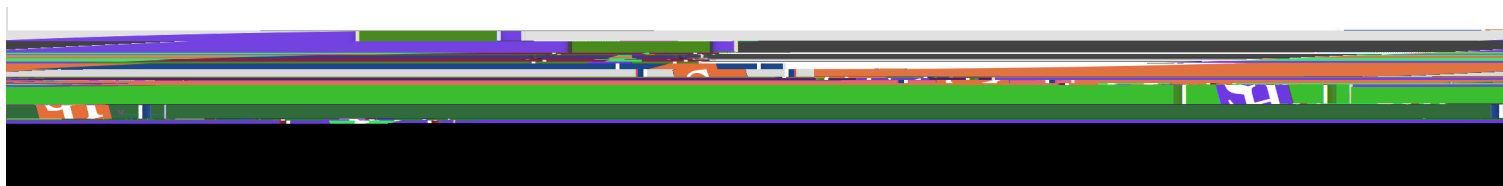
**Effective Powder-free DNA Extraction
Workflow for Skeletal Samples using the PrepFiler® BTA™ and AutoMate
Express™ Systems.**

**A Cost-
effective Workflow for Massively Parallel Sequencing of Drug Metabolising
Enzymes.**

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**Quantification of Suvorexant in Blood Using Liquid
Chromatography-Quadrupole/Time of Flight (LC-Q/TOF) Mass Spectrometry.**

**Assessing the
Forensic Potential of Magnetic Flux Measurements of Toners.**



**Investigation of
Ancestry Markers in the Cannabis sativa Chloroplast Genome for Determination
of Biogeographical Origin and Crop Type.**

**The Discrimination of Inkjet
Printer Inks using Micro Raman Spectroscopy.**

Massively Parallel Sequencing of 12 Autosomal STRs in Cannabis sativa.

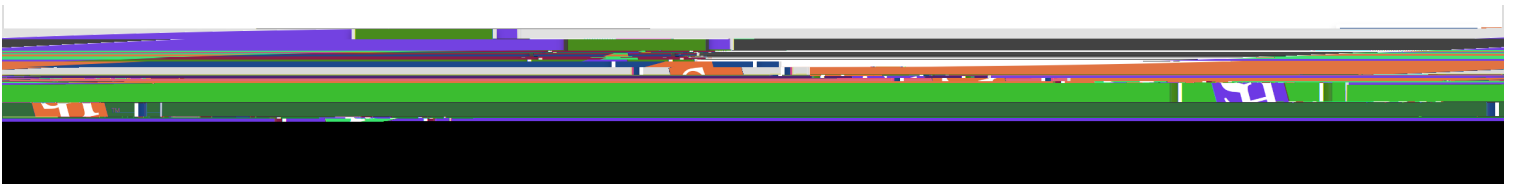
**Quantification of Morphine,
Codeine, and Thebaine in Home-Brewed Poppy Seed Tea by LC-MS/MS.**

**Applications of Raman Spectroscopy in Forensic
Science. I: Principles, Comparison to Infrared Spectroscopy, and
Instrumentation.**

**Applications of Raman Spectroscopy in Forensic
Science. II: Analysis Considerations, Spectral Interpretation, and Examination of
Evidence.**

**Comparative Tolerance of Two Massively Parallel Sequencing Systems to
Common PCR Inhibitors.**

Postmortem



Initial Evaluation of the Stability and Persistence of mRNA and miRNA for Body Fluid Identification in Forensic Samples.

Optimization of Direct Amplification Methods for DNA Samples from Common Pipe Bomb Substrates using the GlobalFiler® Kit.

Assessment of Five Common DNA Extraction Methods for the Analysis of Human Remains using the Ion Ion S5™ and MiSeq FGx™ Systems.

Is Magnetic Flux a Valuable Tool for the Analysis of Electro Photographic Printed Documents?

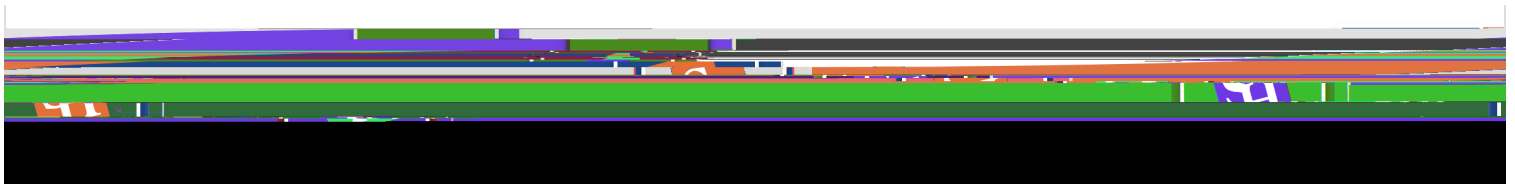
The Effect of Ultraviolet Radiation on the Microspectrophotometry (MSP) of Dyed Fibers Part 1- Photobleaching Effect.

The Effect of Ultraviolet Radiation on the Microspectrophotometry (MSP) of Dyed Fibers Part 2- Spectral Differences as a Function of Time.

Evaluation of the Criteria for the Discrimination of Inkjet Printer Inks using Micro Raman Spectroscopy.

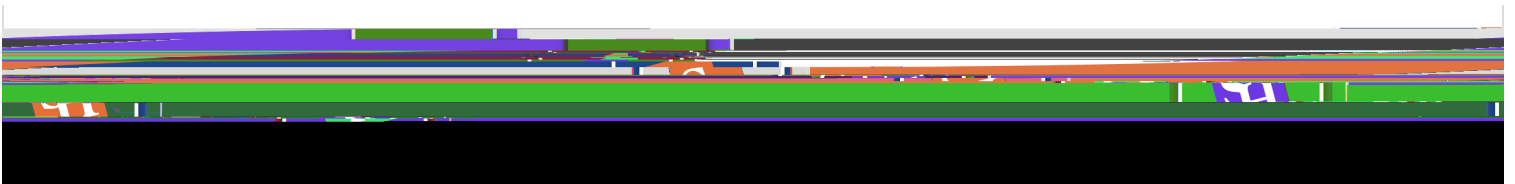
Evidence Evaluation and Functional Data Analysis.

Maternal Smoking and Changes in Drug Metabolizing Enzymes in the Human Fetus.



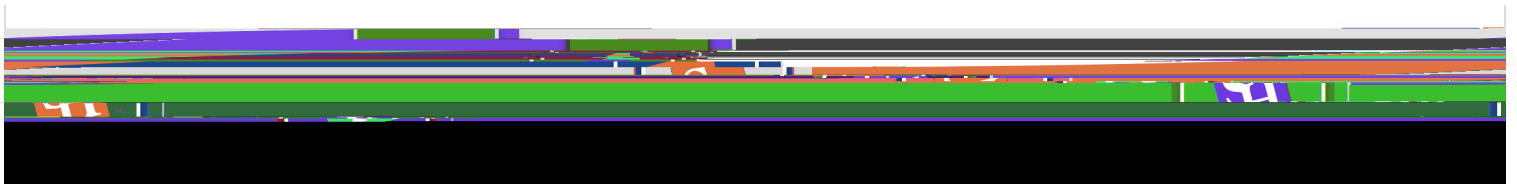
**Evaluation of Four Commercial Quantitative Real-Time PCR Kits
with Inhibited and Degraded Samples.**

In-



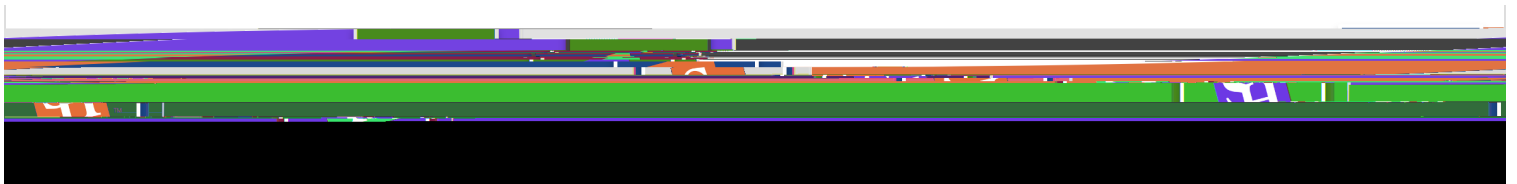
**Trace Level Extraction of the Cyanide
Biomarker, 2-amino-2-thiazoline-4-carboxylic Acid (ATCA), from Biological
Samples by Applying Magnetic Nanomaterials in Dispersive Solid Phase
Extraction.**

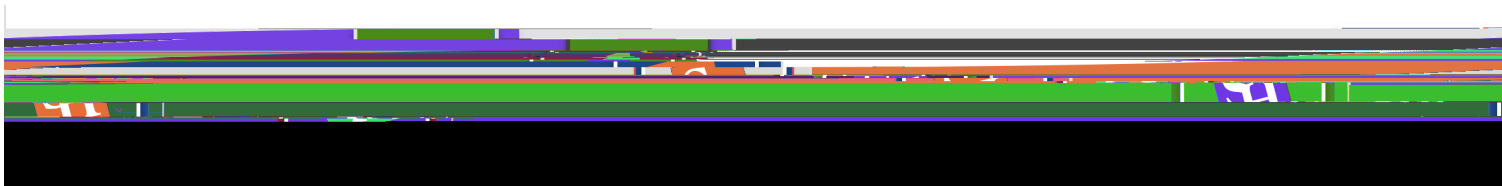
**In-field Collection of
DNA Samples from Decomposing Remains for More Direct Analysis: Experiences
with Investigator Quality Sensors.**



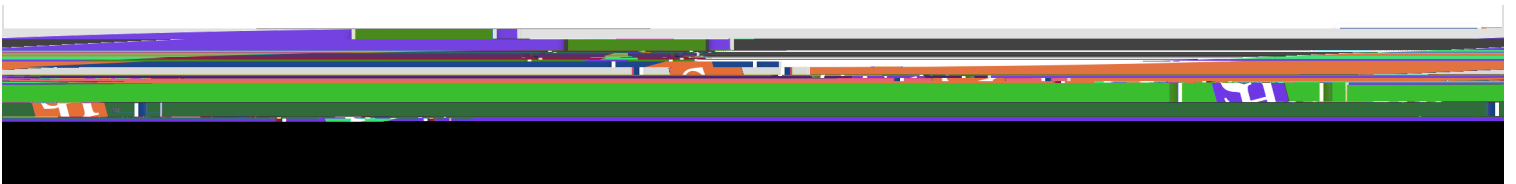
Raman Spectroscopy for Trace Evidence Examinations.

Applications of

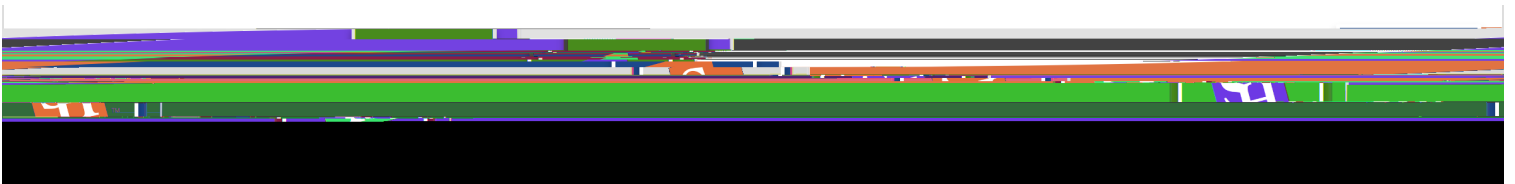




**Nuclear, Chloroplast, and
Mitochondrial Data of a US Cannabis DNA Database.**



**Validation of
the Total Body Score/Accumulated Degree-Day Model at Three Human
Decomposition Facilities.**



Modelling Foetal Exposure to Maternal Smoking Using Hepatoblasts from Pluripotent Stem Cells.

Internal Validation of the Rapid HIT® ID System.

Alternate Methods for Collection, Room Temperature Storage, and Processing of DNA Samples from Human Remains: A New DVI Approach.

A Capillary Electrophoresis Method for Identifying Forensically Relevant Body Fluids Using miRNAs.

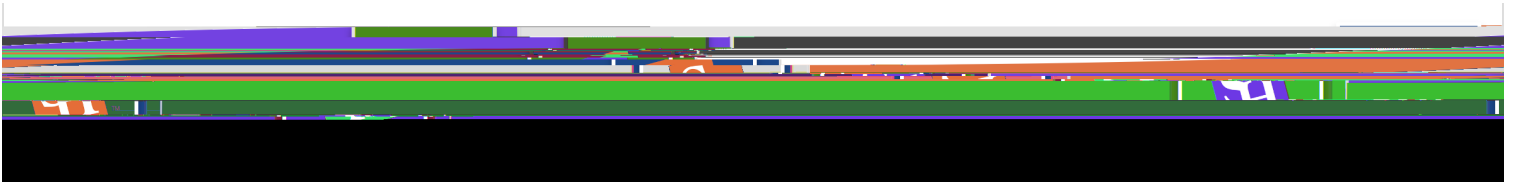
Efficacy of DNA Recovery and Room-Temperature Storage from Assault Rifle Magazines.

Comparing the Scoring of Human Decomposition from Digital Images to Scoring Using On-site Observations.

Comparative Tolerance of Two Massively Parallel Sequencing Platforms to Common PCR Inhibitors for Missing Person Cases.

Classification and Quantification of the Weight of Evidence of Textile Fibers by Microspectrophotometry.

Nuclear, Chloroplast, and Mitochondrial Data of a US Cannabis DNA Database.

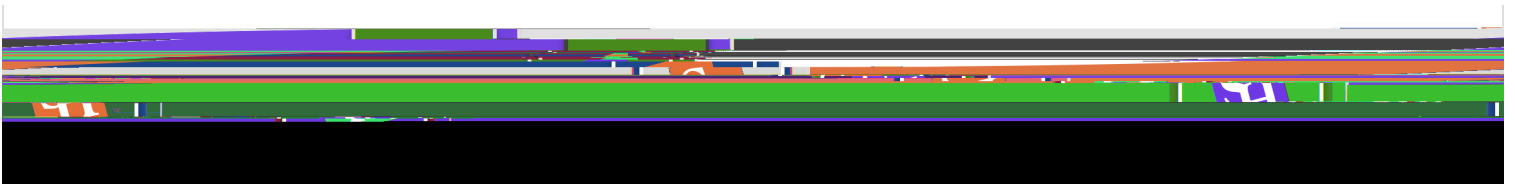


Academic Year 2016-2017

**Alternate Methods for
Collection, Room Temperature Storage, and Processing of DNA Samples from
Human Remains: A New DVI Approach.**

**Stress, Genes, and Generalization Across Gender: Effects
of MAOA and Stress Sensitivity of Crime and Delinquency.**

**Comparative Tolerance of Two Massively Parallel Sequencing Platforms to
Common PCR Inhibitors for Missing Person Cases.**



Analysis of DNA from Post-blast Pipe Bomb Fragments for Identification and Determination of Ancestry.

Worlds Converge: A New Approach to Analyzing CE and MPS-based STRs.

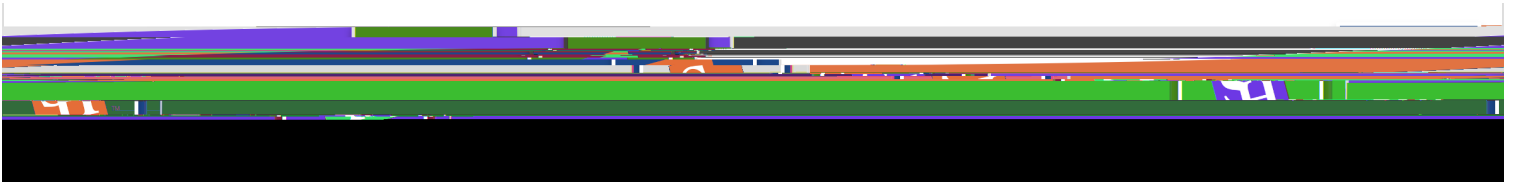
Magnetism Analysis of Black & White Electrophotographic Printed Documents.

Developmental and Internal Validation of a Novel 13 loci STR Multiplex Method for Cannabis sativa DNA Profiling.

Alternate Methods for Collection, Preservation and Processing of DNA Samples from Decomposing Human Cadavers: A DVI Strategy.

Detection of Marijuana Varieties Based on Heated Sample Headspace Chemical Signatures.

Total Vaporization of Derivatization Reagent for In Situ Headspace Derivatization Solid Phase Microextraction.



Botanical DNA

Evidence in a Case of Illegal Drug Trafficking: The Use of High-Resolution Melting with the Internal Transcribed Spacer Approach in the Identification of Psychedelic Fungus (*Psilocybe* sp.).

The Results of the National Safety Council's Alcohol, Drugs and Impairment Division Survey of Drug Testing in Driving Under the Influence of Drugs and Traffic Fatality Investigations.

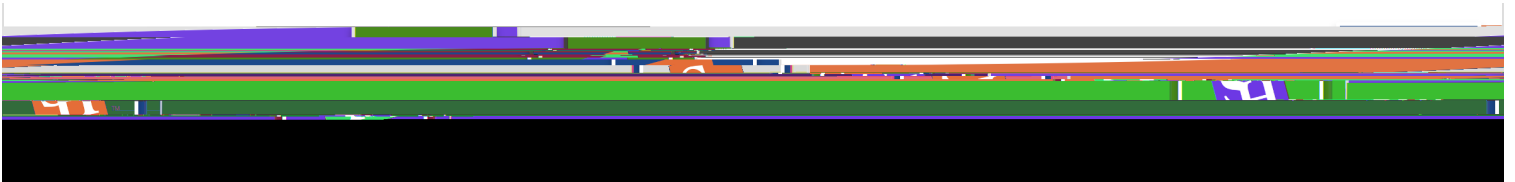
Characteristics of Drug Use among Drivers in the City of Houston.

Comparison of Headspace Cannabinoid Profiles Detected from Different Structures of Dried Cannabis Inflorescences.

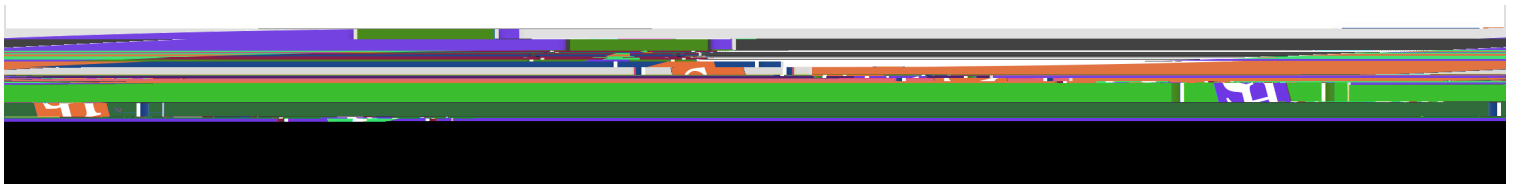
Development and Initial Evaluation of miRNA System for Forensically Relevant Fluids Using Capillary Electrophoresis.

Evaluation of Instrument Sensitivity and Stability for Magnetic Flux Measurement Relative to Toner Area as a Screening Tool for Casework Application.

Relationship of Oxytocin and the Serotonin Transporter (5-HTT) Single Nucleotide Polymorphisms and Antisocial Behavior.



Validation of the Total Body Score/Accumulated Degree Days Equation at 100, 300, 500, and 1,000 ADD on 30 Human Subjects with a Known Postmortem



The Effect of Using an Extra PCR Cycle with GlobalFiler when Amplifying Skeletal Samples.

Our Future Reflects Our Past: The Evaluation of Criminalistics.

Development and Validation of a New 13-loci STR Multiplex System for *Cannabis sativa* Genetic Identification.

Postmortem Interval Estimation Using the Blackened Osteocyte Method.

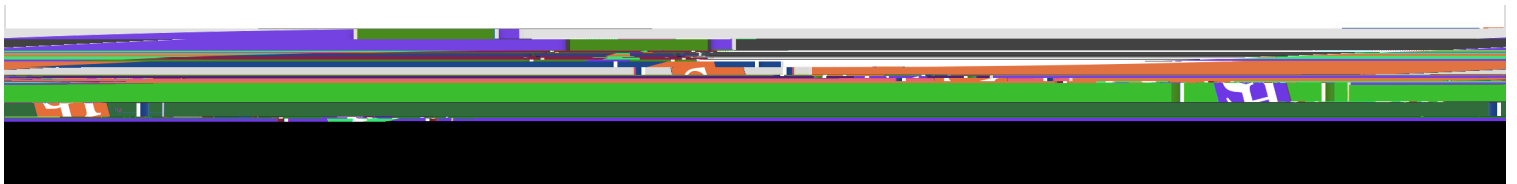
Differentiating Between Sharp Force Trauma Defects and Insect Invasion of the Skin of Human Cadavers Throughout the Decomposition Process in a Terrestrial and Fluvial Environment.

Comparison of DNA Yield and STR Success Rate from Different Tissues in Embalmed Bodies.

Long Term Stability of Cannabinoids in Oral Fluid After Controlled Cannabis Administration.

On-site Oral Fluid - tetrahydrocannabinol (THC) Screening After Controlled Smoked, Vaporized, and Oral Cannabis Administration

Quantification of Suvorexant in Urine Using Gas Chromatography/Mass Spectrometry.

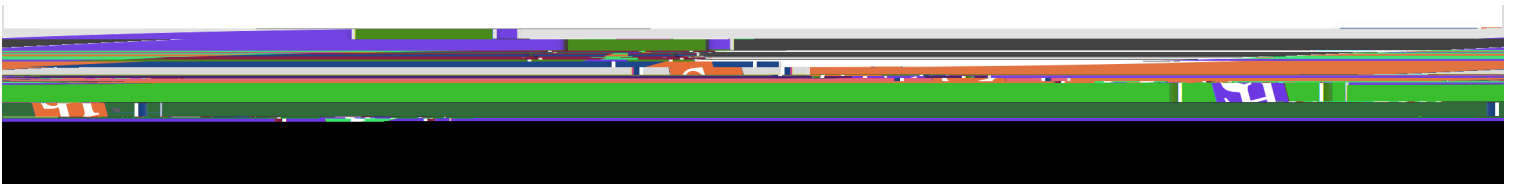


**Free and Glucuronide Whole Blood
Cannabinoids' Pharmacokinetics after Controlled Smoked, Vaporized and Oral
Cannabis Administration in Frequent and Occasional Cannabis Users:
Identification of Recent Cannabis Intake**

**Preservation and Rapid Purification of DNA from Decomposing Human
Tissue Samples.**

**HID & MPS for Post-blast Bomb Fragments
and Highly Inhibited Samples.**

**Massively Parallel
Sequencing of 68 Insertion/Deletion Markers Identifies Novel Microhaplotypes for
Utility in Human Identity Testing.**



**Comparative
Tolerance of Short Tandem Repeat and Massively Parallel Sequencing
Chemistries to Inhibited Samples.**

**Developmental Validation of a Novel 13-loci STR Multiplex Method for Cannabis
sativa DNA Profiling.**

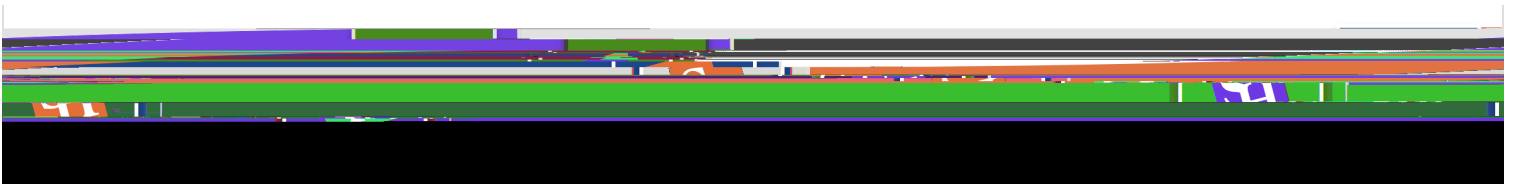
Academic Year 2015-2016

**Development and Initial Evaluation of a miRNA
System for Forensically Relevant Body Fluids Using Capillary Electrophoresis.**

**Identification and Persistence of Pinus Pollen DNA on
Cotton Fabrics: A Forensic Application.**

**Analysis of
DNA from Post-blast Fragments for Identification and Determination of Ancestry.**

Direct-to-

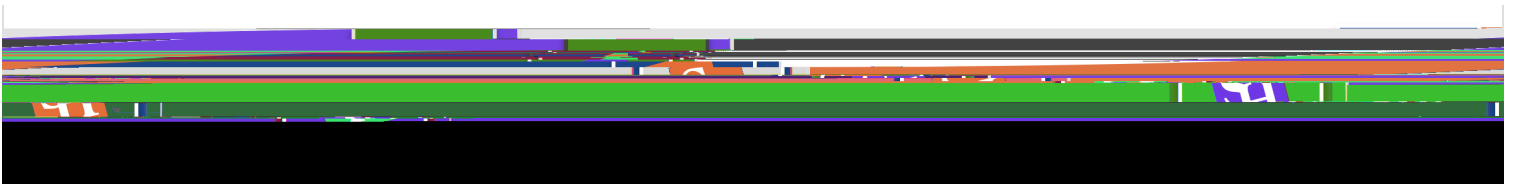


Bones and Bombs; Human Identification.

Bodies,

a 13-

Evaluation of



Can DNA Data Be Used to Establish a Cut-Off Time for Juvenile Sexual Assault Exams?

Genetic Study of Single Nucleotide Polymorphisms (SNPs) in the Oxytocin Receptor (OXTR).

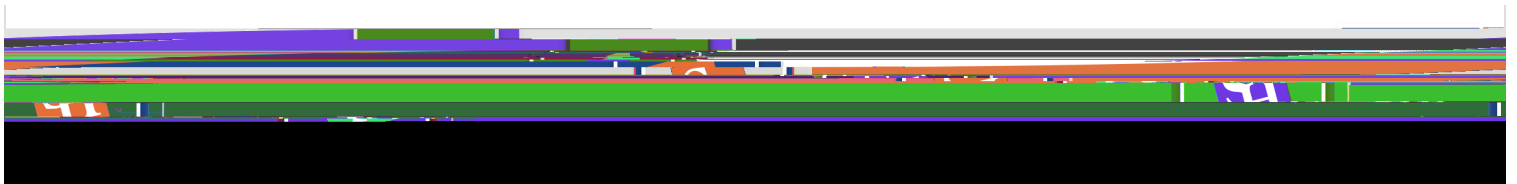
Comparing Decomposition Assessments from Digital Images to In Situ Observations.

Identification of Regioisomers Via Gas Chromatography Coupled with Vapor-Phase Infrared Detection (GC-IRD).

Differentiation of Seized Marijuana Samples Using Automated Headspace/ Solid-Phase Microextraction Coupled to Gas Chromatograph/Mass Spectrometer/Flame Ionization Detector (HS/SPME-GC/MS/FID) and Principal Component Analysis (PCA).

Differentiating Between Sharp Force Trauma (SFT) Defects and Insect Invasion of Skin of Human Cadavers Throughout the Decomposition Process.

Do the Bulk Area and the Exterior Surface of Modern



The
Ethics and Best Practices of Human Decomposition Facilities in the United States

Medicolegal and Forensic Factors in Cyanide
Poisoning *Toxicology of Cyanides and Cyanogens: Experimental, Applied and Clinical Aspects*

Alternative Body Fluids Analysis in Encyclopedia
of Forensic and Legal Medicine

Direct-to-PCR Tissue Preservation for DNA Profiling

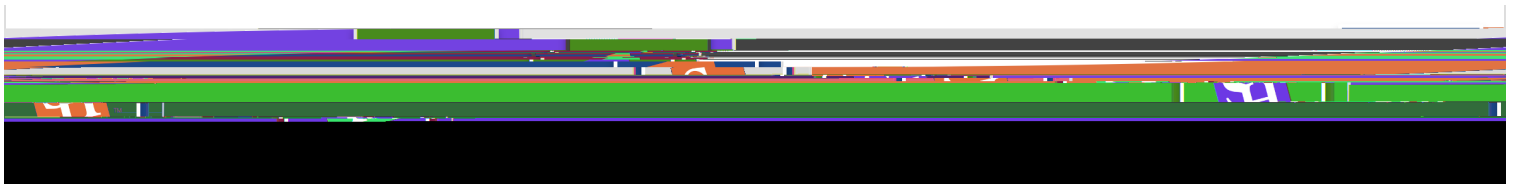
Evaluation
of a One-Step DNA Extraction Method for “touch” Samples

Simultaneous Identification of Twenty-Two
Synthetic Cathinones in Urine using LC/Q-TOF-MS

Evaluation of
a 13-loci STR Multiplex for *Cannabis sativa* Genetic Identification

Molecular Genetic Underpinnings of Self-Control: 5-
HTTLPR and Self-Control in a Sample of Inmates

Direct-to-PCR Tissue Preservation for DNA Profiling.



Academic Year 2014-2015

Using DNA

Profiling to Discriminate Marijuana Sources

**Development and Validation of
a Rapid PCR Method for the PowerPlex® 16 HS System for Forensic DNA
Identification.**

Application of Soil in Forensic Science: Residual Odor and HRD Dogs

**Improved
Preservation and Purification Methods for DNA in Decomposing Human Tissue
Samples; A DVI Application**

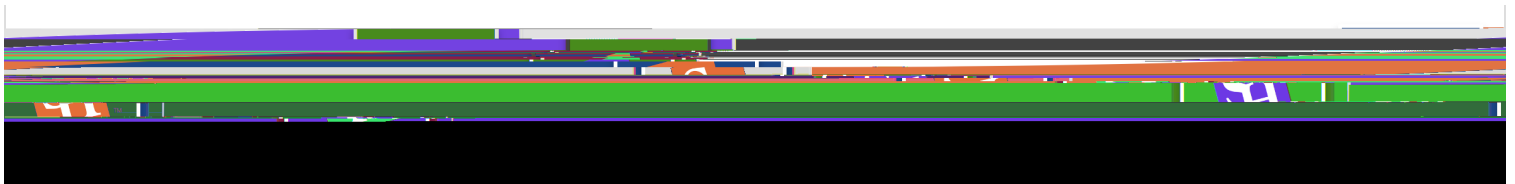
**Room Temperature DNA Preservation and Rapid
Purification of Decomposing Human Tissue Samples: An Alternative DVI
Approach**

**Criminal Behavior and Single Nucleotide
Polymorphisms in Genes Related to Dopamine and Serotonin Modulation.**

**Interobserver Reliability of the Total
Body Score System for Quantifying Human Decomposition**

**Analysis of Cannabinoids
Found in Seized Marijuana Using Automated Headspace Solid-phase
Microextraction Coupled with Gas Chromatography/Mass Spectrometry**

Identification of Synthetic Cathinones from Electron Impact Mass Spectra



Gunshot Residue on Evidence Packaging

**Characterization and Discrimination of Inkjet Printer
Inks Using Micro-Raman Spectroscopy**

**The
Making of the Criminalistics Maestro- On the Skills, Knowledge, and Abilities to
Work Proficiently on Non-Routine and Complex Cases**

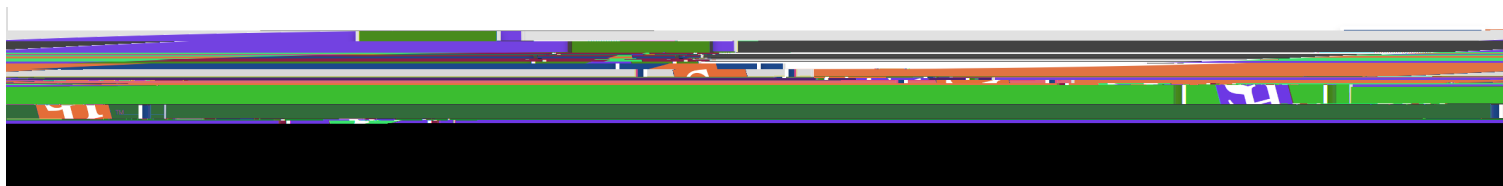
**Identification of Synthetic Cathinones from Electron
Impact Mass Spectra**

**Fingerprint
Replication Utilizing Latent Fingerprints for Conducting Forensic Analysis on
Mobile Devices with Biometric Security**

**A Validated Method for the
Determination of Salvinorin A and Salvinorin B in Forensic Toxicology Samples**

**A Hydrologic
Retention System and Water Quality Monitoring Program for a Human
Decomposition Research Facility: Concept and Design**

Application of Soil Chemistry in Forensic Entomology **Forensic**



**Room Temperature DNA
Preservation and High-Throughput Purification of Decomposing Human Tissue
Samples, An Improved DVI Approach.**

Academic Year 2013-2014

**Room Temperature DNA
Preservation and Rapid Purification of Decomposing Human Tissue Samples; A
DVI Application.**

**Monoamine Oxidase A Genotype, Childhood Adversity, and Criminal
Behavior In An Incarcerated Sample.**

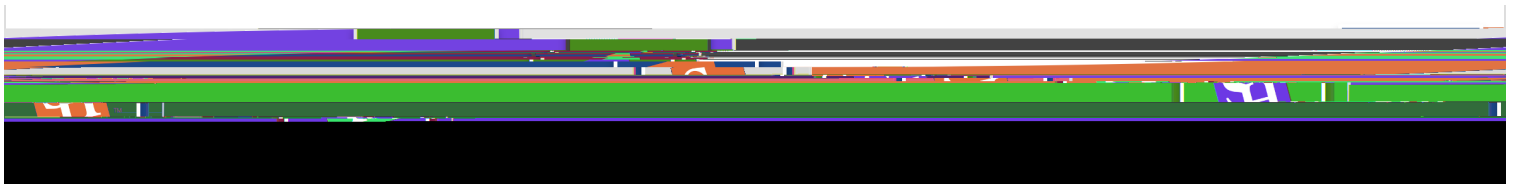
**DNA Preservation and Rapid
Purification of Decomposing Human Tissue Samples; A DVI Application.**

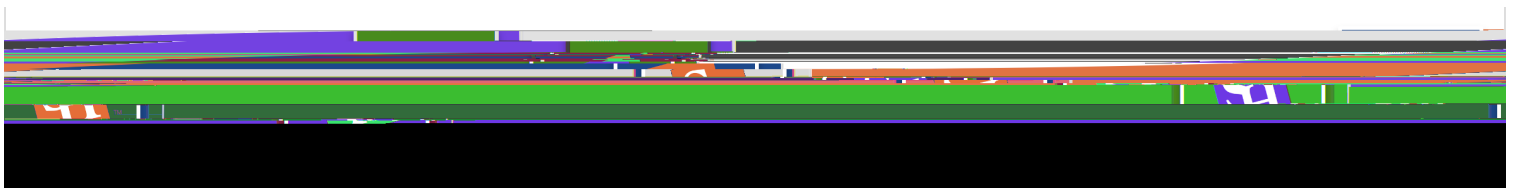
**Development and Evaluation
of a Rapid PCR Method for the PowerPlex® S5 System for Forensic DNA
Profiling.**

**Analysis of Ethyl
and Methyl Centralite Vibrational Spectra for Mapping Organic Gunshot
Residues.**

**Stamping Surface-enhanced Raman spectroscopy for Label-free, Multiplexed,
Molecular Sensing and Imaging.**

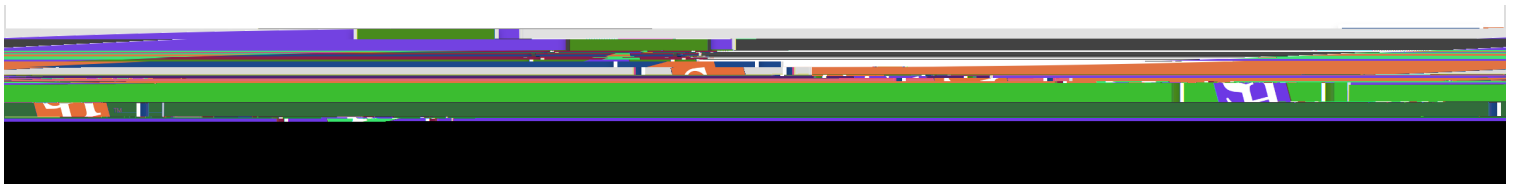
**Benefits of Deconvolution
Reporting Software in Forensic Toxicology.**





**Optimization of Headspace Solid Phase
Microextraction Coupled with Gas Chromatography/Mass Spectrometry for
Marijuana Profiling.**

**Two Month Stability and Distribution
and Study of the Benzodiazepine Phenazepam.**



**Population data for
DXS6800, DXS101 and DXS8377 loci from Buenos Aires (Argentina).**

Opioids in Principles of Forensic Toxicology

Sampling, Storage and Stability in Clarke's Analytical Forensic Toxicology

**Using *Pinus* STR Profiling to Discriminate Pollen Sources at the
Regional Level: A Potential Tool for Forensic Investigations.**

**Quantification of Color Changes in
Human Decomposition Using Image Processing Software.**

**Phenazepam Impairment: A Case
Report.**

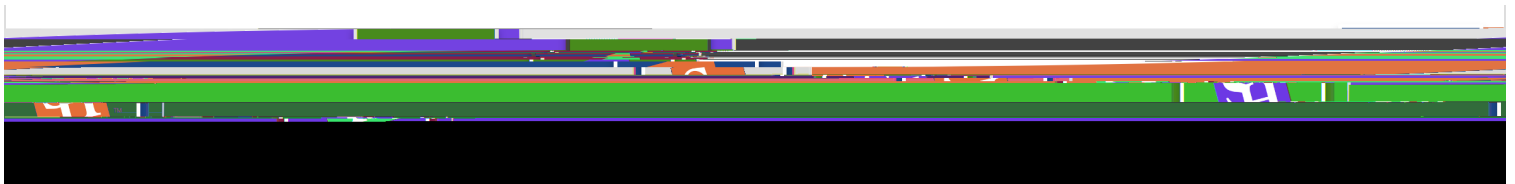
**A Molecular
Approach: Species Composition of the Maggot Mass in Human Cadavers in the
Pineywoods Ecoregion of Southeastern Texas.**

**A Proposed Means for the Detection and
Quantification of Bath Salts from Blood.**

**Determining Postmortem Interval using
Glycoproteinous Adhesion Deposits by *Balanus improvisus* on Human Skeletal
and Dental Remains.**

**Pyrolysis
Products of Linear Alkylbenzenes - Implications in Fire Debris Analysis.**

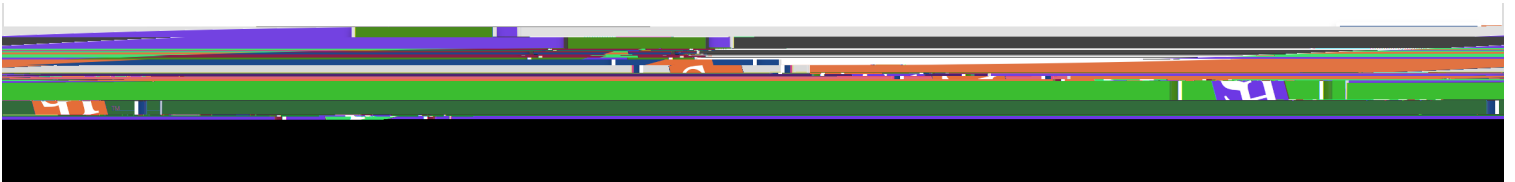
**LC-MS/MS Analysis of 2-aminothiazoline-4-carboxylic acid as a
Forensic Biomarker for Cyanide Poisoning.**



Academic Year 2011-2012

Detection of Beta-Keto Amphetamines in Urine by

GC/MS.



A Comparison of Alprazolam

Levels in Blood and Urine.

Method Development and Validation for the Detection of Cannabinoids in Blood Using LC/MS/MS.

Comparison of Genetic Markers and Developmental Validation of the Multicopy LINE-1 Marker for Use in a Sensitive Real-Time Quantification Method.

An Atypical Burn Pattern Associated with Forensically Significant Human Remains.

Stages of Decomposition of Human Remains in a Subtropical Humid Environment.

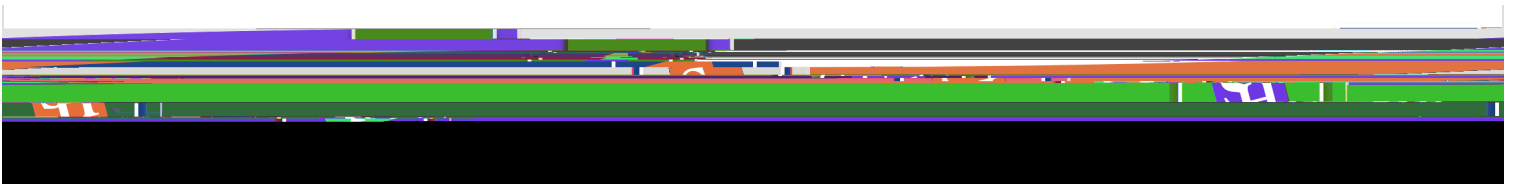
Evaluation of the Immunalysis Tapentadol Enzyme Immunoassay Kit.

Extraction of Methamphetamine from Postmortem Blood Samples by Molecularly Imprinted Polymers for Selective Solid Phase Extraction.

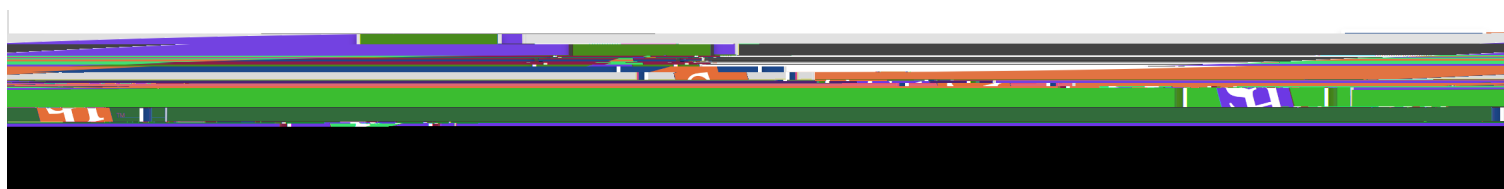
Estimation of the Postmortem Interval of Human Remains in a Subtropical Humid Environment Using Accumulated Degree-Days and Total Body Scoring.

Preparation of Molecularly Imprinted Monolithic Polymers as the Stationary Phase for Liquid Chromatography.

Designer Amphetamines in Forensic Toxicology Casework.



Organ-distribution of the Metabolite 2



**Application of a Handheld Vacuum-Filter Device for
Differential Sperm Separation.**

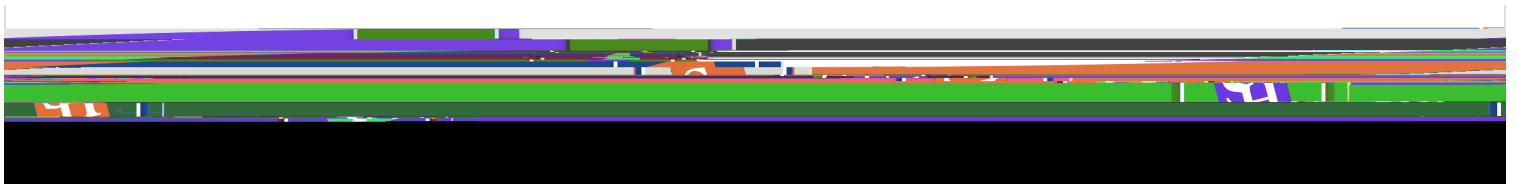
**Optimizing
Sperm Cell Recovery from Cotton Swabs prior to Christmas Tree Staining and
p30 Test.**

Quantitative Analysis of Salvinorin A (*Salvia*) in Blood.

**The Use of Infrared Imaging to
Facilitate Fired Cartridge Case and Bullet Comparisons.**

**Study of L-2-
Aminothiazoline-4-Carboxylic Acid as a Biomarker for Cyanide Poisoning by LC-
MS/MS Analysis.**

3 C € Prevalence



-2010

**A Geometric Morphometric Approach to Sex
Determination of the Human Adult Os Coxa.**

**Necrophagous Caterpillars Provide
Human mtDNA Evidence.**

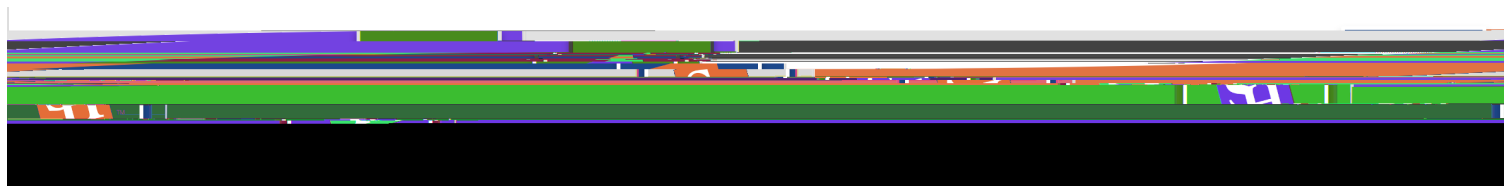
**Molecularly Imprinted Polymers for Ochratoxin an
Extraction and Analysis.**

**Removal of Urothelium Affects Bladder Contractility and Release of ATP but Not
Release of NO in Rat Urinary Bladder.**

Determination of Salvinorin A in Urine by GC/MS.

**Analytical
Method Development for Determining the Biomarker Cyanide Metabolite 2-
Aminothiazoline-4-Carboxylic Acid in Mice Liver After Cyanide Exposure.**

**Quantitative Analysis of Gamma-
Hydroxybutyrate (GHB) at Endogenous Concentrations in Hair using Liquid**



**Analysis of Non-Toxic Ammunition by Double Shot
Pyrolysis Gas Chromatography/Mass Spectroscopy (DY-PY GC/ MS).**

Insect

Succession Model for Southeast Texas in Early Spring.

**Pollen DNA: A New Tool for Forensic
Investigations.**

**Precision of Coordinate Landmark Data Acquired from the
OS Coxa.**

**Southeast Texas Applied Forensic Science Facility (STAFS) at Sam
Houston State University: A New Forensic Anthropology Human Decomposition
Facility.**

**Analytical
Method Development for Determining the Biomarker, 2-Aminothiazoline-4-
Carboxylic Acid (ATCA), in Mice Liver after Cyanide Exposure.**

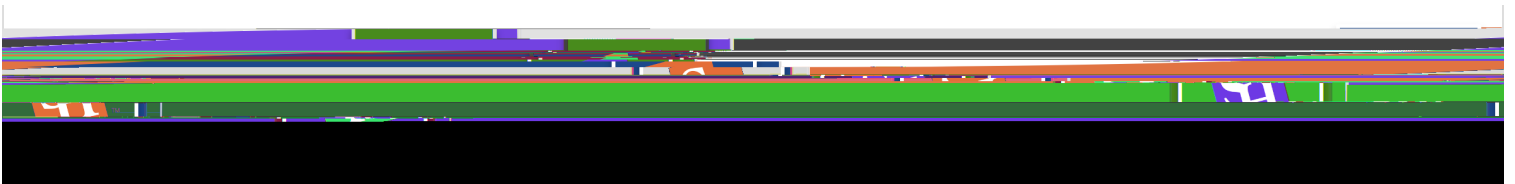
Postmortem Interval of Surface Remains in Spring Season in Southeast Texas.

**Comparative Study on Stability of
DNA in Alternative Sample Tissues for Use in the Identification of Decomposed
Cadavers.**

**Internal Validation of an Automated
Extraction Robot.**

**Application of mini-STRs to Low Copy Number DNA
Samples.**

The Collection of Forensic Evidence from

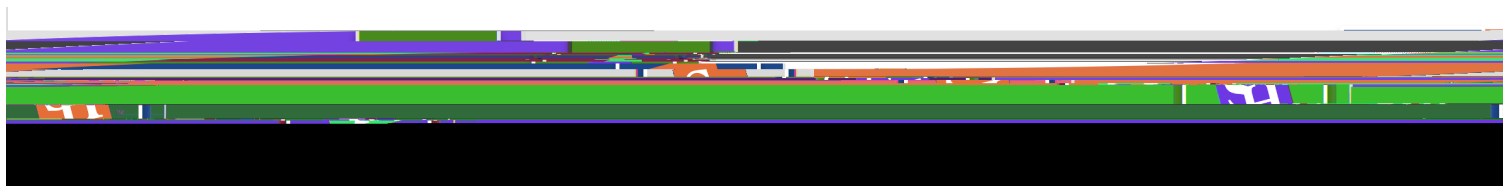


Opioids *in Principles of Forensic Toxicology*

Forensic Toxicology *in Forensic Nursing*

The Use of Alcohol to Facilitate Sexual Assault.

**Molecularly Imprinted Polymer Nanomaterials for
Mycotoxin Extraction.**



**Insect Successional
Pattern of a Corpse in Cooler Months of Subtropical Southeastern Texas.**

**Skeletal Remains in a Fluvial
Environment: Microscopic Evidence of Glycoproteinous Adhesive of Balanus
Improvisus on the Occlusal Surface of Mandibular Teeth.**

**PCP and Drug Impaired Driving in San
Francisco, California.**

**Brake Pad Friction
Particles: SEM-EDX Analysis and Comparisons to Gunshot Residue.**

**Validation of Opiate Detection and Quantification in Human Urine
Using Liquid Chromatography and Tandem Mass Spectrometry (LC/MS/MS).**

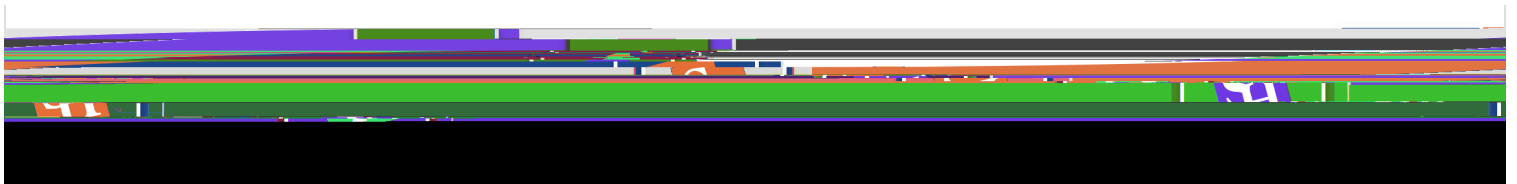
**Molecular Palynology Study in Central East Texas: A
New Approach to Linking Crime Scenes.**

**A Simple Liquid-Liquid Extraction of Carisoprodol and the Metabolite
Meprobamate from Suspected Blood and Urine DUI Specimens for GC/MS
Analysis.**

**GC/MS Method Development for the Quantitation
of Quetiapine in Various Biological Specimens.**

**What Lies Beneath: Re-Examining a
Cold Case Homicide from a Forensic Anthropological Perspective: A Case
Report.**

**Driving Under the Influence of
Methamphetamine in the City & County of San Francisco, California.**



**Postmortem Analysis of
Buprenorphine/Norbuprenorphine from Whole Blood by GC/MS.**

**Quantitative Determination of Caffeine
and Alcohol in Energy Drinks and the Potential to Produce Positive Transdermal
Alcohol Concentrations in Human Subjects.**

**Chronic
Nicotine Relieves Anxiogenic-like Behavior in Transgenic Mice Carrying the
Human Acetylcholinesterase-R Gene.**

**Encapsulation Efficiency of Organophosphorous Hydrolase in Lecithin
Liposomes as Determined by Capillary Electrophoresis.**

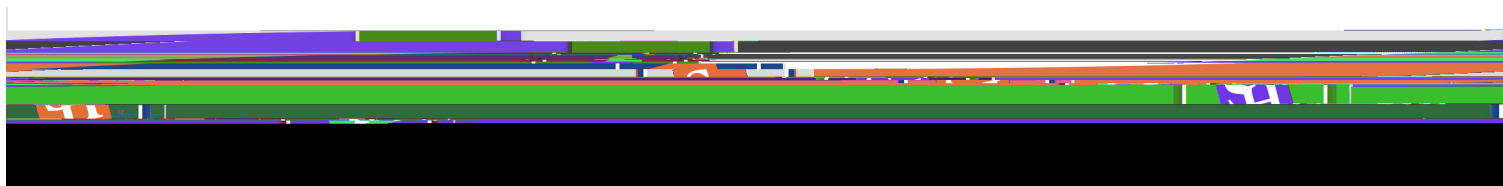
**Muscle: An Alternative Post-Mortem Specimen for Drug Screening by
Enzyme Linked Immunosorbent Assay.**

**Discovery of Molecular Markers
for Gunshot Residues by Solid Phase Micro Extraction- Gas
Chromatography/Nitrogen Phosphorous Detector (SPME-GC/NPD).**

**A Hollow Fiber Assisted Ionic Liquid Surface for
Stir Bar Sorptive Extraction.**

Academic Year 2007-2008

**Botulinum Toxin Type A Normalizes
Alterations in Urothelial ATP and NO Release Induced by Chronic Spinal Cord
Injury.**



**Forensic Analysis of Single Gun Powder Particle
by SPME-GC/NPD (Solid Phase Micro-Extraction – Gas
Chromatography/Nitrogen Phosphorus Detector).**

A

Stability Study on Ritalinic Acid in Urine.

Validation of the

