

YFSF POSTER SESSION

Wednesday

Poster Session

11:30 am—1:00 pm	Y1	Feasibility of Using ATR-FTIR for the Differentiation of Different Brands of Brown Eyeliners Urja Desai, MS*
11:30 am—1:00 pm	Y2	Intimate Partner Violence Against Women Murders: Forensic Features and Differences With Domestic Violence Miguel Lorente, PhD*; María Cuadros, MCrim
11:30 am—1:00 pm	Y3	Comparative Analysis of Textile Damage Caused by Canines vs. Firearms and Knives Tabitha Hammond, BS*; Sandra Koch, PhD; Lawrence Quarino, PhD; Andra Lewis, PhD
11:30 am—1:00 pm	Y4	Investigating the Patterning of Postmortem Fractures in Human Dentition Bec Krolczyk, BS*; Danny Wescott, PhD
11:30 am—1:00 pm	Y5	The Differentiation and Identification of Fentanyl Analogs Using Portable Ion Trap Mass Spectrometry Mei Yuan, BS*; Ella M. Galvan, BS; Jeffery D. Johnson, Jr., PhD; Seth Fisher, BS; Pauline E. Leary, PhD ; Brooke W. Kammrath, PhD
11:30 am—1:00 pm	Y6	Comparative Evaluation of Machine Learning Models for Criminal Attribute Estimation: Explainable AI Perspectives Daisuke Imoto, PhD*; Kazuki Hirama, PhD; Kengo Furuhashi, PhD; Yusuke Otsuka, MPhil; Kaeko Yokota, PhD; Masakatsu Honma, PhD
11:30 am—1:00 pm	Y7	A Bloody Window to the Past: STR Analysis of DNA from a Bloodstained Civil War Surgical Table Nadia Walter*; Alyssa Spillar, BS; J. Thomas McClintock, PhD; Kristin Mossé, MScFS;
11:30 am—1:00 pm	Y8	Direct Analysis of Ink on Documents and other Substrates using Attenuated Total Reflectance Fourier Transform Infrared Microscopy Sophie Krumhansl, APM*; Cadence Manning, APM*; Boluwatife Olubusoye, BS; James Cizdziel, PhD
11:30 am—1:00 pm	Y9	Understanding Sleep-Related Infant Deaths: A Forensic Perspective on SIDS, SUID, and Safe Sleep Practices Sandra Shapiro, DNP*; Rachel Thomas, PhD; Orli Grinstein-Cohen, PhD
11:30 am—1:00 pm	Y10	Utilizing Fourier Transform Infrared Spectroscopy for Age-at-Death Estimations in Human Skeletal Remains: A Pilot Study Anna K. Maier, MSc*
11:30 am—1:00 pm	Y11	A Field-Ready Method for Wildlife Identification Using Noninvasive Genetic Sampling Rosemary van der Net, BS*; Pamela Marshall, PhD; Jan Janecka, PhD; Joshua Robinson, MS; Andrea Kautz, MS; Joseph Saxfield, BS
11:30 am—1:00 pm	Y12	A New Spin on DNA Extraction: Validating SpermX™ GenSpin Differential Extraction for Sexual Assault Evidence Processing Tori Tyree, BS; Amy McGuckian, MFS; Julie Sikorsky, MSc; Kelly Beatty, MSFS

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11:30 am—1:00 pm	Y13	Integrating Spectroscopy and Machine Learning for Forensic Discrimination of Wood Species and Sustainable Timber Trade Akanksha Sharma, MSc*; Vishal Sharma, PhD
11:30 am—1:00 pm	Y14	Revisiting the Resolution and Accuracy of Year-Of-Birth Estimations Based on Bomb Pulse Radiocarbon (14C) Dating of Human Enamel Camille Martin, BA*; Rhonda Quinn, PhD
11:30 am—1:00 pm	Y15	Fungal Succession During Decomposition: A DNA-Based Analysis of Forensic Significance: A DNA-Based Analysis of Forensic Significance Lewis Burnett*; Brittney Sylvester; Latavia Williams; Alyssa Lavasseur; Georgia Williams, MS; Meiko Thompson, PhD
11:30 am—1:00 pm	Y16	Exposing Forgery: Ink Analysis via Raman Spectroscopy Alex Potter, MSFS*; Ellen Hondrogiannis, PhD; Mary Devadas, PhD
11:30 am—1:00 pm	Y17	Enhancing Nuclear DNA Recovery from Soil: A Comparative Analysis of Resin, Silica Membrane, and Silica Bead Extraction Methods Ashley Espinoza, MS*; Todd Disotell, PhD
11:30 am—1:00 pm	Y18	Accuracy of the Transition Analysis 3 (TA3) Method for Age Estimation in the John A. Williams Human Skeletal Collection Blue Wonhof, MS*
11:30 am—1:00 pm	Y19	Visual Examination of Physical Properties of Blood as a Result of Ignitable Liquid and High Heat Affect From an Arson Scene Victoria Bascou, BS*;
11:30 am—1:00 pm	Y20	Quantitation of Organic Compounds in Smokeless Powder using High-Performance Liquid Chromatography Kayla South, BS*; Ellen Hondrogiannis, PhD
11:30 am—1:00 pm	Y21	Network Graphs for Visualizing Handwriting Individuality Clarissa Giefer, MS*; Cami Fuglsby, PhD; Janean Hanka, MS; Jack Hietpas, PhD; JoAnn Buscaglia, PhD; Christopher Saunders, PhD
11:30 am—1:00 pm	Y22	Direct Analysis in Real Time Tandem Mass Spectrometry (DART-MS/MS) for the Characterization and Profiling of Street-Level Fentanyl Samples Joel Moss*; Alexis Quinter, MASc; Heather Harris, MFS; Nicholas Khorozov, MS; Joshua DeBord, PhD
11:30 am—1:00 pm	Y23	Investigating the Effects of Soil pH and Fluoride Content on Hydroxyapatite Degradation Using pXRF Technology Madeline June Leeah, BA*;
11:30 am—1:00 pm	Y24	When Experts Lie: Fraudulent Forensics, Wrongful Convictions, and the Call for Basics and Reform Megan Cramer*; Jordan Stephens*
11:30 am—1:00 pm	Y25	Analysis of Smokeless Powder Using Infrared and Uv-Visible Spectroscopy With a Focus on Nitrated Derivatives of Diphenylamine Meredith Elko*; Ellen Hondrogiannis, PhD; Mary Devadas, PhD
11:30 am—1:00 pm	Y26	Suicide by Sodium Nitrite/Nitrate: A 10-Year Retrospective Review Rachel Guest, MD*; John Powell, MD

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11:30 am—1:00 pm	Y27	DNA Extraction from Bone: A Novel Workflow Using Theralin™ and Magnetic Beads Marguerite Godwin, BS*; Mark Wilson, PhD; Charla Marshall, PhD; Joseph DiZinno, DDS
11:30 am—1:00 pm	Y28	The Application of ATR-FTIR Spectroscopy for the Identification of Cosmetic Foundations Versus Environmental Materials Such as Food or Soil on Cloth Jaden Force, BS*; Kelly Elkins, PhD
11:30 am—1:00 pm	Y29	Optimizing DNA Extraction and Communicating PhenoTrivium Panel Results for Cold Case Skeletal Samples Madison Townsend, BS*; Britannia Bintz, MS; Maureen Hickman, MS; Tiffany Fracchia, PhD; Alice Gooding, PhD; Frankie West, PhD
11:30 am—1:00 pm	Y30	The Development of Recombinase Polymerase Amplification (RPA) to Augment mini STR Amplification of 'Touch' DNA Samples for Human Identification (HID) Workflows Joseph Rahm, MScFS*; DeEtta Mills, PhD
11:30 am—1:00 pm	Y31	Investigating the Correlation Between Body Mass and Hip Joint Measurements in a Taiwanese Nonadult Sample Rachel Riddell, BA; An-Di Yim, PhD
11:30 am—1:00 pm	Y32	Y32 Basic Tools, New Approaches: Using Mandibular Canine Index and 3D Imaging for Subadult Sex Determination Jorja Hill*; Satu Valoriani, PhD
11:30 am—1:00 pm	Y33	Differentiating Blunt Force Trauma Fractures From Thermal Fractures in Fleshed and Skeletal Deer Crania Alyssa Ranney, MS*
11:30 am—1:00 pm	Y34	Evaluating IR Spectra Variation of Pepper Based Defense Products Jocelyn Polanco, BS*
11:30 am—1:00 pm	Y35	Enhancing Forensic Toxicology Through Postmortem Applications: Evaluating the Viability of Skin Swabbing as a Drug Testing Matrix Hannah Schaeffer, BS*; Abigail Burke, MS; Rebecca Wagner, PhD; Jennifer Hammers, DO; Stephanie Wetzel, PhD

Thursday

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11:30 am—1:00 pm	Y36	Color Spectrophotometer as a Powerful Tool to Evaluate Human Fluid Stains on Denim Fabrics Shelby Barrager*; Mazeyar Parvinzadeh Gashti, PhD
11:30 am—1:00 pm	Y37	Determination of Assembly Time of 80% Firearms and Subsequent Operability Elisabeth Smith, BS*; Caitlin Baker, MS; Anita Lorenz, MS; John Viator, PhD; Matthew Regentin, MS; Pamela Marshall, PhD
11:30 am—1:00 pm	Y38	Towards Mass Spectrometry Imaging of Latent Prints Using Visible Matrix-Assisted Laser Desorption Electrospray Ionization Julia Morelli*; Kenyon Evans-Nguyen, PhD
11:30 am—1:00 pm	Y39	Assessing the Prevalence of p-Phenylenediamine in Henna Tattoo Inks Purchased in Northern Delaware Lael Sands*; Muhammed Taimoor Chaundry, MPhil; Tom Gluodenis, PhD; John Stallworth, BS

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11:30 am—1:00 pm	Y40	Petroleum-Utilizing and Hemolytic Soil Microbes: Environmental Impacts on Decomposition in Forensic Contexts Tristen Howell*; Lewis Burnett; Brittney Sylvester; Latavia Williams; Georgia Williams, MS; Meiko Thompson, PhD
11:30 am—1:00 pm	Y41	The Evaluation and Comparison of Portable FTIR/Raman Instruments for Field Testing of Illicit Drugs Sydney Ma, BS*; Alexandra Evans, MFS; Ya-Chih (Jessica) Cheng, PhD; Ira Lurie, PhD
11:30 am—1:00 pm	Y42	Microbial Succession in Uncovered Remains: Establishing a Baseline for Postmortem Interval Estimation Diamon Raymond*; Brittney Sylvester; Latavia Williams; Alyssa Lavasseur; Georgia Williams, MS; Meiko Thompson, PhD
11:30 am—1:00 pm	Y43	Determination of Neurotransmitter Levels in Rat Brain Following Opioid-Sedative Exposure Using Liquid-Chromatography Quadrupole-Time-of-Flight Mass Spectrometry Laerissa Reveil, MS*; Maria Lasaosa, PhD; Amanda Furman, MS; Alia Marie Iqbal O'Meara, MD; Matthew Halquist, PhD
11:30 am—1:00 pm	Y44	Using Positive and Negative Image overlap for Image Forensics: Examples from Taiwan Teng-Kai Shih, BASc*; Min-Neng Hsu, PhD; Wen-Chao Yang, DSc; Wen Chung Chen, LLM; Yi Fang, MSc
11:30 am—1:00 pm	Y45	Vitreous Fluid as a Stable Matrix for Postmortem Toxicology Miriam Fisher, MD*; Ben Murie, MD
11:30 am—1:00 pm	Y46	The Effects of Latent Print Development Techniques on Over the Counter Drug Detection by Liquid Chromatography Triple Quadrupole Mass Spectrometry Jessica Pichat, BS*; Ashley Ebert, PhD; Lyndsie Ferrara, PhD; Stephanie Wetzel, PhD
11:30 am—1:00 pm	Y47	Lying Labels? Analysis of Caffeine Content in Common United Kingdom Caffeinated Products Noah Cannon*; John Paul Planchet*; Carolina Sartori*
11:30 am—1:00 pm	Y48	An Assessment of the FARO Freestyle 2 Handheld Scanner on Skeletal Analyses in the Estimation of the Biological Profile Chloe R. Cummings, BS*; An-Di Yim, PhD
11:30 am—1:00 pm	Y49	Vicarious Trauma and its Effects on Public Safety Professional's Ability to Complete Unbiased Investigations Madison Turner*; Kelly Crockett, MSFS
11:30 am—1:00 pm	Y50	Evaluation of Immunoassay Test Strips for Detection of Medetomidine in Urine and Drug Products Liliane Audet, APM*; Alex Krotulski, PhD; Heather Harris, MFS; Alyssa Reyes, MS
11:30 am—1:00 pm	Y51	An Evaluation of Alternative Solvents For Forensic Fire Debris Analysis Tessa Monroe*; Jenna Leppek, BS; Hannah LaVoie, BS; Ruth Waddell Smith, PhD; Kenyon Evans-Nguyen, PhD
11:30 am—1:00 pm	Y52	Evaluation of Vapor Pressures of Ignitable Liquids, Water and Fire Debris Analysis, and the Effects on Extraction Carson Kleider, BS*

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11:30 am—1:00 pm	Y53	A Quick Method of Measuring Bullet Angles on Auto Metal Surface at Crime Scenes: A Novel Method Using a Digital Angle Measurer Heather Armistead, BS; John Wang, PhD*
11:30 am—1:00 pm	Y54	Developmental Changes in Frontal Sinus Morphology: Significance in a Forensic Context Allison L. Deemter, MA*
11:30 am—1:00 pm	Y55	Single Step Fingerprint Fumigation with Common Dyes Abigail Proffitt*; Jared Filegar*; Kristin Mossé, MScFS
11:30 am—1:00 pm	Y56	When Cleanliness Obscures: How Can Common Disinfecting Cleaners Hinder Forensic Investigations? Shaifer Goalen, BS*; Kristin Ornelas
11:30 am—1:00 pm	Y57	Comparison of Genetic Analysis Methodologies on Spermatozoa DNA Recovered from the Orifices of Burned Human Remains Andrew Brown*; Brittania Bintz, MS; Darren Solomon, MS; David Schuable, BS; Charles Giblin, PE; Rebecca George, PhD
11:30 am—1:00 pm	Y58	The Impact of Firearm Type and Orientation on Gunshot Residue Distribution Patterns on a Shooter Emily Miller, BS*; Peter Valentin, PhD; Virginia Maxwell, DPhil, BSc
11:30 am—1:00 pm	Y59	Effects on Skeletonization and Skeletal Weathering Across Contrasting Annual Seasonal Cycles Maeghan Fisher, BS*; Kristy Henson, PhD
11:30 am—1:00 pm	Y60	Y60 Investigating the Postmortem Degradation of Identifiable Fingerprint Minutiae Over Time Emma L. Scheidt, BA; Sahar Rahman, BA
11:30 am—1:00 pm	Y61	Y61 An Evaluation of DNA Recovery From Fingernails Post-Hair Washing Alexia A. Cassman, BS*; Tyra Volney, MS; Tim Kalafut, PhD
11:30 am—1:00 pm	Y62	Evaluating the Efficiency of Laundry Sanitizers on the Removal and Transfer of DNA in a Washing Machine Nicole Agre, BS*; Rhonda Williams, PhD
11:30 am—1:00 pm	Y63	An Expanded Evaluation of XRD and SEM-EDS for the Characterization of Inorganic Particles in Eyeshadows Taylin Naquin*; Anna Duggar, PhD
11:30 am—1:00 pm	Y64	Analysis of Changes in Fingerprints Before and After Recent Death on Paper Documents Using Statistical and Technical Methods Khalid Aldaoud, BA*; Zainab almansoor, MS; Sara Alsubaie, MA
11:30 am—1:00 pm	Y65	Development and Validation of an Analytical Method for the Determination of Stress Biomarkers in Hair Brooke Fontaine, BS*; Alexis Palma*; Marta Concheiro-Guisan, PhD
11:30 am—1:00 pm	Y66	A Forensic Approach to the Identification and Interpretation of Intimate Partner Violence (IPV) in Human Skeletal Remains Catarina Vazquez*

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11:30 am—1:00 pm	Y67	Postmortem Predators: Identifying and Tracking Scavengers of Remains in a Northwest European Context Sarina Riechmann, MSc*
11:30 am—1:00 pm	Y68	Attempting more detailed discrimination of plants using Next-Generation Sequencing Ryuta Nakamura, MS*; Hitomi Kikkawa, PhD; Koichiro Tsuge, PhD
11:30 am—1:00 pm	Y69	Unveiling the Interference of Alcohol Intoxication on Salivary Detection of Codeine: A UV-Vis Spectroscopic Insight Danae Alvarez*; Madison Carrillo*; Hamidreza Sharifan, PhD
11:30 am—1:00 pm	Y70	Investigating Distal Humerus Morphology for Estimating Sex in Hispanic Populations: A Pilot Study Using CT Scans from The New Mexico Decedent Image Database Shivani Sanger, MSc*; Ellen Shakeshaft, MSc; Luke Gent, PhD; Matteo Borrini, PhD
11:30 am—1:00 pm	Y71	Homicide by Hot Dog: Choking in the Setting of Blunt Force Trauma of the Jaw by Another Reece Foehr, BS*; Kayden Hadlock, BS; Katie Hanson, MD
11:30 am—1:00 pm	Y72	Deadlining: Gentrification and the Spatial Forensics of Missing and Murdered Black Women in Washington, DC Avery Bernard Johns*

Friday

Poster Session

11:30 am—1:00 pm	Y73	Identification of Ignitable Liquids in the Post-Fire Carpet Debris by Complementary GC-MS and DART-MS Methods Mikayla Miles, BS*; Shruthi Perna, PhD; Ngee Chong, PhD; Mengliang Zhang, PhD
11:30 am—1:00 pm	Y74	A Preliminary Study on How Shooting Distance and Lens Focal Length at Crime Scenes Affect Footwear Impression Examination Wen Chung Chen, LLM*; Kuo Lan Liu, PhD; Min-Neng Hsu, PhD
11:30 am—1:00 pm	Y75	Would You Like Fries With That? A Case of Fatal Asphyxia Due to Food Bolus Airway Obstruction in the Setting of Xylazine and Fentanyl Intoxication Kayden Hadlock, BS*; Reece Foehr, BS; Katie Hanson, MD
11:30 am—1:00 pm	Y76	Microbial Succession in Clothed Remains: Forensic Insights into Postmortem Interval ‘ Estimation Brittney Sylvester ⁸ ; Latavia Williams; Lewis Burnett; Alyssa Lavasseur; Georgia Williams, MS; Meiko Thompson, PhD
11:30 am—1:00 pm	Y77	Development of a Psilocybin-Selective Molecularly Imprinted Polymer for the Analysis of Unregulated Psilocybin Drug Products Hannah Peterson, BS*; Balaji Nagarajan, APM; Matthew Halquist, PhD
11:30 am—1:00 pm	Y78	Back to Basics: Approaching Cold Cases with Open-Source Intelligence: An Undergraduate Perspective Maylynn Burns*; Kelly Crockett, MSFS; Maylynn Burns*

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11:30 am—1:00 pm	Y79	A Comparative Analysis of Volatile Memory Analysis Tools in Digital Forensics Jaden McIntosh, BS*
11:30 am—1:00 pm	Y80	Bone & Tooth: Elemental Analysis of Cremated Remains Ella Mitchell*; Dustin Holland*
11:30 am—1:00 pm	Y81	ATR-FTIR Characterization of Pressure Sensitive Adhesives: Before and After Chemical Fingerprint Processing Meagan MiguelPablo*; Khanh-Hoa Tran-Ba, PhD
11:30 am—1:00 pm	Y82	Investigation of Gas Chromatography (GC) Coupled With Mass Spectrometry (MS) and Vacuum Ultraviolet (VUV) Spectroscopy for Analysis of Ignitable Liquid Samples Bryn Boznanski, BS*; Ira Lurie, PhD; Walter Rowe, PhD
11:30 am—1:00 pm	Y83	Protective and Risk Factors in Sex Trafficking Sophia Thompson*
11:30 am—1:00 pm	Y84	Determining the Feasibility of UV-Vis and ATR-FTIR in Identifying Neat Analytes in Smokeless Powders Rorie Anderson, BS*; Ellen Hondrogiannis, PhD; Mary Devadas, PhD
11:30 am—1:00 pm	Y85	Transfer of Material Derived from Polymer-Jacketed Bullets During Cycling and Discharge Ethan Frazer, MS*; Peter Diaczuk, PhD
11:30 am—1:00 pm	Y86	Microbes in the Mist: Microbiological Analysis of E-liquids and Aerosols Ankita Gola, BS*; Jessemia Meekins, BS; Alaina Holt, PhD; Justin Poklis, BS; Christopher Ehrhardt, PhD; Michelle Peace, PhD
11:30 am—1:00 pm	Y87	Microbial Succession in Buried Remains: A Controlled Pig Study at Three Feet Depth Latavia Williams*; Brittney Sylvester; Alyssa Lavoisier; Lewis Burnett; Georgia Williams, MS; Meiko Thompson, PhD
11:30 am—1:00 pm	Y88	Various Animal Species Microscopic Hair Analysis Bryanna Smith*; Kristin Mossé, MScFS
11:30 am—1:00 pm	Y89	Investigation of Water Effect on Ignitable Liquid Residue Analysis by Coupling Solid-Phase Microextraction with Direct Analysis in Real Time Mass Spectrometry Victoria Bascou, BS*
11:30 am—1:00 pm	Y90	WITHDRAWN
11:30 am—1:00 pm	Y91	Time Since Intercourse and Serological Testing in Sexual Assault Homicides: A Case Report and Brief Review of the Literature Peyton Byers, BS*; Pamela Marshall, PhD
11:30 am—1:00 pm	Y92	Development of Preprocessing Workflow for Computed Tomography Images for Artificial Intelligence Applications in Forensic Anthropological Research Gargi Jani, MSc*; Smit Patel, BEng; Mohendra Roy, PhD; Bhoomika Patel, PhD
11:30 am—1:00 pm	Y93	Recalibrating Forensic Science: DNA, Microbial Signatures, and Methodological Equity in Montana's Differential Burial Contexts Kaylee M. Hinds, MA*; Meradeth H. Snow, PhD

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11:30 am—1:00 pm	Y94	Microbial Succession in Carpet-Wrapped Remains: Implications for Postmortem Interval Estimation Alyssa Lavoisier*; Brittney Sylvester; Latavia Williams; Lewis Burnett; Georgia Williams, MS; Meiko Thompson, PhD
11:30 am—1:00 pm	Y95	Y95 A Reevaluation of a Mandibular Tori Scoring Method: Limitations and Revisions Amanda Jokela, BA*; Danny J. Wescott, PhD; Michele M. Bleuze, PhD
11:30 am—1:00 pm	Y96	Optimizing Trace DNA Recovery: A Comparative Evaluation of Swab Types on Various Substrates Mara Dominguez, BA*; Anna Franzoni, MSc; Nicole Novroski, PhD; Fabio Oldoni, PhD
11:30 am—1:00 pm	Y97	Characterization of Microsatellite Markers for Forensic Identification of <i>Gypsophila</i> Laila Mansour*; Nathan Lents, PhD
11:30 am—1:00 pm	Y98	The Correlation of the Dimensions of Hands and Feet with Height in an Indigenous Population of the Tribal District of Himachal Pradesh, India Yatiraj Singi, MD*; Dipen Dabhi, MD
11:30 am—1:00 pm	Y99	Ear Lobe Crease as a Coronary artery disease Risk Stratification Tool in Autopsies of Asian Populations Minjung Hong, MD*; Seong Ho Yoo, MD, PhD
11:30 am—1:00 pm	Y100	Dermestid (Flesh-Eating) Beetle Effect on Skeletal Remains Study Gabriella Ramm*; Kristy Henson, PhD
11:30 am—1:00 pm	Y101	Sick as a Dog: A Case of a Missing Face Maura Thurber, MHS*; Alexis Kollasch-McGarvey, MD; Eric Bracken, MS;; Dennis Firchau, MD; Robert Weis, MD; Melissa Blessing, DO
11:30 am—1:00 pm	Y102	Forensic Differentiation of Canine Hair Allison Kelley*; Kristin Mossé, MScFS
11:30 am—1:00 pm	Y103	Taphonomic Processes Etch Bones: An Experimental Look at Plant Root Etching on Bovine Bones Emily Caudill, BS*; Shannon Hodge, PhD; Thomas Holland, PhD
11:30 am—1:00 pm	Y104	Surveillance Shopping of Unregulated Dual Chamber E-cigarette Devices Assessing Accessibility and Consumer Risk Kevin Lester*; Michelle Peace, PhD; Alaina Holt, PhD; Justin Poklis, BAS