



PATHOLOGY/BIOLOGY

Wednesday

Poster Session

- 11:30 a.m. - 1:00 p.m. **H1** **Stress Evaluation in Indonesian Civil Aviators**
*Meta Y. Candra, MSc**; *Nurtami Soedarsono, PhD*; *Dewi F. Suniarti, PhD*;
Febriana Setiawati, PhD
- 11:30 a.m. - 1:00 p.m. **H2** **The Application of Decomposition Scoring Methods to Predict Postmortem Submersion Interval (PMSI) in Human Bodies Recovered From Aquatic Environments: A Comparison Between Freshwater and Salt Water in Italian Areas**
*Chiara Palazzo, MD**; *Paolo Fais, PhD*; *Guido Pelletti, MD*; *Alberto Amadasi, MD*;
Federica Fersini, Filippo Pirani, MD; *Rosa Maria Gaudio, Adriano Tagliabracci, MD*;
Susi Pelotti, MD
(FSF Emerging Forensic Scientist Award Poster Presentation)
- 11:30 a.m. - 1:00 p.m. **H3** **Unusual Asphyxial Deaths: Sand, Soil, and Stool**
*Diana C. Nointin, MD**; *Pamela A. Ferreira, MD*; *Carol Allan, MD*; *Zabiullah Ali, MD*;
David R. Fowler, MD
- 11:30 a.m. - 1:00 p.m. **H4** **Strangulation to Stroke: A Fatal Case of Delayed Traumatic Internal Carotid Artery Dissection**
*Amber R. Wang, MD**; *Alan C. Wang, MD*; *Benjamin Mathis, MD*
- 11:30 a.m. - 1:00 p.m. **H5** **A Fatal Case of Candy Aspiration in a Child: Was It a Choking Death?**
*Giuseppe Davide Albano, MD**; *Pasquale Malandrino, MD*; *Massimiliano Esposito, MD*;
Aldo Liberto, MD; *Dario Condorelli, Monica Salerno, MD, PhD*; *Giulio Di Mizio, MD, PhD*
(FSF Emerging Forensic Scientist Award Poster Presentation)
- 11:30 a.m. - 1:00 p.m. **H6** **Litchenberg Figures in Electrocutation Deaths by Evaporative Cooler**
*Nilesh K. Tumram, MD**
- 11:30 a.m. - 1:00 p.m. **H7** **Modeling of Inflicted Head Injury by Shaking Trauma in Children—What Can We Learn? Part 1: A Systematic Review of Animal Models**
*Marloes E.M. Vester, MD**; *Rob A.C. Bilo, MD*; *Arjo J. Loeve, PhD*; *Rick R. Van Rijn, PhD*;
Jan Peter van Zandwijk, PhD
- 11:30 a.m. - 1:00 p.m. **H8** **Modeling of Inflicted Head Injury by Shaking in Children—What Can We Learn? Part 2: Mathematical and Physical Models**
*Jan Peter van Zandwijk, PhD**; *Arjo J. Loeve, PhD*; *Marloes E.M. Vester, MD*;
Rob A.C. Bilo, MD; *Rick R. Van Rijn, PhD*
- 11:30 a.m. - 1:00 p.m. **H9** **Chillin' in Hotlanta: A Five-Year Retrospective Study of Hypothermia Deaths in Fulton County, Georgia**
*Maxwell O. Rollins, MD**; *Jan M. Gorniak, DO*; *Jason Singh, MD*
- 11:30 a.m. - 1:00 p.m. **H10** **“Hot Deaths”: A Review of Foggia Hyperthermia Cases**
*Stefania De Simone, MD**; *Francesca Maglietta, MD*; *Lorenzo Spagnolo, MD*;
Santina Cantatore, Pietrantonio Ricci, MD, PhD; *Monica Salerno, MD, PhD*;
Francesco Sessa, MS; *Giuseppe Bertozzi, MD**
- 11:30 a.m. - 1:00 p.m. **H11** **The Strange Trajectories of Death: Avtomat Kalashnikov—The New Weapon of the Garganic Mafia**
Mauro A. Ciavarella, Lorenzo Spagnolo, MD; *Santina Cantatore, Gianfranco Guccia*;
Marcello Rendine, DBA; *Pietrantonio Ricci, MD, PhD*; *Irene Riezzo, MD, PhD**

- 11:30 a.m. - 1:00 p.m. **H12** **Cardiac Wounds Induced by Cardiopulmonary Resuscitation in a Context of Phlebotomy: A Case Report and a Review of the Literature**
*Erwan Le Garff, MD**; *Vadim Mesli, MD*; *Philippe Morbidelli, MD*;
Anne A. Becart, DDS, PhD; *Valéry C. Hedouin, MD, PhD*; *Didier Gosset, MD, PhD*
- 11:30 a.m. - 1:00 p.m. **H13** **Retinal Hemorrhages and Spinal Nerve Root Hemorrhages in Pediatric Resuscitated Near-Drownings: Recognizing Ischemia-Reperfusion Injuries**
*Anna G. McDonald, MD**; *Nathan S. Shaller, MD*; *Patrick E. Lantz, MD*
- 11:30 a.m. - 1:00 p.m. **H14** **Only the Vagus Nerve: A Pair of Unusual Homicides**
*Stacey L. Reed, DO**; *Todd M. Luckasevic, DO*; *Abdulrezak M. Shakir, MD*;
Karl E. Williams, MD
- 11:30 a.m. - 1:00 p.m. **H15** **Unusual Frangible Ammunition Used in a Homicide: A Case Report**
*Sandra E. Jones, BS**; *Michelle B. Aurelius, MD*; *Chad Moose*
- 11:30 a.m. - 1:00 p.m. **H16** **Plugged, Unplayable Lies: A Case Report of a Novel Suicide by Foreign Body Airway Obstruction**
*Stacey L. Reed, DO**; *Todd M. Luckasevic, DO*
- 11:30 a.m. - 1:00 p.m. **H17** **Death by Fractal Art: A Tale of Beauty and Electrocutation**
*Tasha Zemrus Greenberg, MD**; *Nizam Peerwani, MD*; *Stephen P. White*
- 11:30 a.m. - 1:00 p.m. **H18** **Homicidal Violence Against Children in Mississippi: Four Case Reports**
*Mark M. LeVaughn, MD**; *L.R. Funte, MD*; *Brent Davis, MD*; *Anastasia Holobinko, PhD*;
Steven A. Symes, PhD
- 11:30 a.m. - 1:00 p.m. **H19** **What a Dangerous Place: An Unusual Homicide in the Hospital**
*Roberto Vaglio; Alessandro Dell'Erba, PhD; Francesca Donno, MD**
- 11:30 a.m. - 1:00 p.m. **H20** **The "Tin Man": Another Mafia Homicide**
*Francesca Donno, MD**; *Alessandro Dell'Erba, PhD*; *Eloisa Maselli, MD*; *Roberto Vaglio*
- 11:30 a.m. - 1:00 p.m. **H21** **An Autopsy Case of Suicide With Three Knives: A Forensic and Anatomical Discussion**
*Beatrice Defraia**; *Martina Focardi*; *Niccolo Norberti*; *Stefano Colagrande*;
Vilma Pinchi, PhD; *Gian A. Norelli, PhD*
- 11:30 a.m. - 1:00 p.m. **H22** **An Analysis of Risk Factors Involving All-Terrain Vehicle (ATV) Deaths**
*Charlene Admissions, BA**; *Joanne Catania, MS*; *Theodore T. Brown, MD*
- 11:30 a.m. - 1:00 p.m. **H23** **Delayed Subdural Hematomas in Decedents on Anticoagulation Medication in the County of Santa Clara, California**
Michelle A. Jordan, MD; *Karin E. Wells, BA**
- 11:30 a.m. - 1:00 p.m. **H24** **Forensic Analysis in Mass Disasters: Were Gunpowder Explosions in a Fireworks Factory an Accident or a Terrorist Bombing?**
Francesca Tarantino, MD; *Maricla Marrone, MD*; *Valentina Ronco, MD**;
Paola Corsignano Carrieri; *Stefania Lonero Baldassarra*; *Alessandro Dell'Erba, PhD*;
Francesco Vinci, MD
(FSF Emerging Forensic Scientist Award Poster Presentation)
- 11:30 a.m. - 1:00 p.m. **H25** **Small RNA Sequencing and Real-Time Quantitative Polymerase Chain Reaction (RT-qPCR) Validation of Forensically Relevant Body Fluids**
*Karly L. Johannsen**; *Claire Glynn, PhD*



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- 11:30 a.m. - 1:00 p.m. **H26** **A Forensic Volatolomic Approach: A Step Forward in the Characterization of Wound Pathogens**
*Shawna F. Gallegos**; Paola A. Prada, PhD; Kendra P. Rumbaugh, PhD
- 11:30 a.m. - 1:00 p.m. **H27** **Forensic Body Fluid Identification With the Epitect® Bisulfite Kit and the Reliability of DNA Methylation With Real-Time Quantitative Polymerase Chain Reaction (qPCR)**
*Mandy Pascu**; David San Pietro, PhD
- 11:30 a.m. - 1:00 p.m. **H28** **Evaluating Bioinformatic Pipeline Performance for Forensic Microbiome Analysis**
*Sierra Kaszubinski, BS**; Jennifer L. Pechal, PhD; Heather R. Jordan, PhD;
Carl J. Schmidt, MD; M. Eric Benbow, PhD
(FSF Emerging Forensic Scientist Award Poster Presentation)
- 11:30 a.m. - 1:00 p.m. **H29** **Investigating Commercially Available MicroRNA Extraction Kits for Use With Forensically Relevant Body Fluids**
*Autumn T. Muise**; Karly L. Johannsen; Claire Glynn, PhD
- 11:30 a.m. - 1:00 p.m. **H30** **Postmortem Submersion Interval (PMSI) Estimation From the Microbiome of Bone in a Freshwater Lake Across 4,750 Accumulated Degree Days (ADD)**
*Claire M. Cartozzo, MS**; Baneshwar Singh, PhD; Tal Simmons, PhD
(FSF Emerging Forensic Scientist Award Poster Presentation)
- 11:30 a.m. - 1:00 p.m. **H31** **The Mouse Thanatomicrobiome and Postmortem Interval (PMI) Estimation**
*Molly B. Still**; Scott S. Crupper, PhD
- 11:30 a.m. - 1:00 p.m. **H32** **Postmortem Hair Microbiome and Its Forensic Applications**
*Denise Wohlfahrt, BS**; Kailey Babcock*; Courtney Hutchens, BS; Vadim Mesli, MD;
Erwan Le Garff, MD; Valéry C. Hedouin, MD, PhD; Xavier Demondion, MD, PhD;
Baneshwar Singh, PhD
- 11:30 a.m. - 1:00 p.m. **H33** **Forensic Microbiology: An Analysis of a Series of Cases**
*Elvira Ventura Spagnolo, MD**; Cristina Mondello, MD*; Salvatore Rocuzzo, MD;
Francesco Daleo, MD; Stefania Zerbo, MD; Antonina Argo
- 11:30 a.m. - 1:00 p.m. **H34** **Calliphoridae of Forensic Importance of Campeche, Mexico**
*Carolina Núñez-Vázquez, PhD**
- 11:30 a.m. - 1:00 p.m. **H35** **Development of the Discrimination Procedures Between Nasal Secretion and Saliva by Real-Time Reverse Transcription Polymerase Chain Reaction (rRT-PCR) and Indirect Enzyme-Linked Immunosorbent Assay (ELISA)**
*Tomoko Akutsu, PhD**; Ken Watanabe
- 11:30 a.m. - 1:00 p.m. **H36** **The Estimation of Postmortem Submersion Interval (PMSI): Are Nails' Ultrastructure of Any Help?**
*Silvia D. Visona, MD; Ilenia G. Tredici, PhD; Elena Mercuri**; Chiara Siodambro*;
Matteo Moretti, MD; Luisa Andrello, MD; Gulnaz T. Javan, PhD; Giovanni Fassina;
Antonio M.M. Osculati, MD
- 11:30 a.m. - 1:00 p.m. **H37** **Intentional Body Dismemberment: A Difficult Path for the Forensic Pathologist in the Search for Truth**
*Aniello Maiese; Alessandra De Matteis; Matteo Scopetti, MD**; Alessandro Santurro, MD;
Vittorio Gatto, MD; Mariantonia Di Sanzo, MD; Luigi Cipolloni, MD, PhD;
Massimiliano dell'Aquila, MD

Thursday—Session I

Epidemiology and Others

Moderator: Todd M. Barr, MD
Cuyahoga County Medical Examiner's Office
Cleveland, OH

Co-Moderator: Rebecca Asch-Kendrick, MD
Midwest Medical Examiner
Ramsey, MN

- 8:30 a.m. - 8:45 a.m. **H38** **Buried Secrets: A Multidisciplinary Approach to Solving a Half-Century-Old Homicide**
*Elizabeth M. Sepulveda, BA**; *Ruth E. Kohlmeier, MD*
- 8:45 a.m. - 9:00 a.m. **H39** **Suicides Among the Young: A Ten-Year (2007–2017) Retrospective Analysis of Suicides Under the Age of 18 in Metro Detroit**
*Vera Mendes-Kramer, MA**; *Lynette Desjarlais, BA**; *LokMan Sung, MD*;
David Moons, MD, PhD; *Leigh Hlavaty, MD*; *Avneesh Gupta, MD**
- 9:00 a.m. - 9:15 a.m. **H40** **Difficult Suicide Cases: A Case-Based Approach**
*Wendy M. Gunther, MD**; *Michael Alan Hays, MD*
- 9:15 a.m. - 9:30 a.m. **H41** **A Broad Demographic Analysis of Chronic Ethanol Deaths and Sequelae From Two Different Medical Examiner Offices**
Anastasiya Haponyuk, BSc; *Sarah Lathrop, DVM, PhD*; *Lori A. Proe, DO*;
Daniel W. Dye, MD; *Matthew D. Cain, MD**
- 9:30 a.m. - 9:45 a.m. **H42** **A Review of Manner of Death in Denver's Homeless Population (2016–2018)**
*Shauna Kumar**; *Meredith A. Frank, MD*; *James Louis Caruso, MD*
- 9:45 a.m. - 10:00 a.m. **H43** **Mississippi Organ and Tissue Recovery: A Collaborative Success Story**
*Mark M. LeVaughn, MD**; *Anastasia Holobinko, PhD*; *Taylor Phillips*; *Carrie Deese, BS*;
Kevin Stump, BS
- 10:00 a.m. - 10:15 a.m. **H44** **A Death Investigation of Mining Fatalities: The Utah Experience**
*Kacy Krehbiel, MD**; *Joseph Pestaner, MD*; *Erik D. Christensen, MD*
- 10:15 a.m. - 10:30 a.m. **Break**

Administration

Moderator: Gregory A. Schmunk, MD
Polk County Medical Examiner's Office
Des Moines, IA

Co-Moderator: Casey P. Bitting, DO
Office of the Coroner-Arapahoe County
Centennial, CO

- 10:30 a.m. - 10:45 a.m. **H45** **Trends in the Certification of Choking-Related Deaths**
*Joshua Vandeburgh**; *Abigail Jacqueline Grande, MPH*; *Amanda O. Fisher-Hubbard, MD*
- 10:45 a.m. - 11:00 a.m. **H46** **Cremation Clearance by the Medical Examiner: What Is the Best Method?**
*James R. Gill, MD**; *Maura DeJoseph, DO*; *Holly Olko, MA*
- 11:00 a.m. - 11:15 a.m. **H47** **The Native American Graves Protection and Repatriation Act's (NAGPRA's) Broader Impact: Assessing NAGPRA Implementation Within the Medicolegal System**
*Megan K. Kleeschulte, MA**
(FSF Emerging Forensic Scientist Award Paper Presentation)



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- 11:15 a.m. - 11:30 a.m. **H48** **Next-of-Kin—May I? Providing Information to an Organ/Tissue Procurement Organization (O/TPO) on Out-of-Hospital Deaths**
*Jan M. Gorniak, DO**; *Charles M. Gammill, BA**
- 11:30 a.m. - 11:45 a.m. **H49** **A Novel Adaptation of Electronic Health Records (EHR) for Medical Examiner Use**
*Carley J. Holmes**; *Kaila Jakubczak, BS*; *Brian C. Hunter, MD*
- 11:45 a.m. - 12:00 p.m. **H50** **Mass Disaster Management and Disaster Victim Identification (DVI) Activities in the 2016 Central Italy Earthquake**
Luigi Cipolloni, MD, PhD; *Benedetta Baldari**; *Mariantonia Di Sanzo, MD*; *Livia Besi*; *Matteo Scopetti, MD*; *Alessia Quattrocchi*
- 12:00 p.m. - 1:00 p.m. **Lunch**

Poster Session

- 11:30 a.m. - 1:00 p.m. **H51** **Acute Myocarditis Following PD-1 Inhibitor (Nivolumab) Treatment for Lung Carcinoma**
Peter Houston, MD; *Angelina I. Phillips, MD**
- 11:30 a.m. - 1:00 p.m. **H52** **Arrhythmogenic Atrioventricular Node Fibrosis—An Unexpected Cause of Death in the Young: Regarding Two Autopsy Cases**
Paulina Henry, MD; *Gregory Schmit, MD**; *Julie Lelotte, MD*; *Jessica Vanhaebost**
- 11:30 a.m. - 1:00 p.m. **H53** **Madelung’s Disease: A Rare and Benign Life-Threatening Condition**
*Helena D. Corro, MSc, MD**; *Carla Carreira*; *Rosa H. Gouveia, PhD*; *Ana S. Coelho, MSc*; *Joao E.S. Pinheiro, PhD, MD*; *Francisco Corte-Real, PhD*
- 11:30 a.m. - 1:00 p.m. **H54** **Disseminated Miliary Staphylococcal Infection: A Case of Pyomyositis and Bacterial Myocarditis in a Prisoner**
*Ariana Pape, BA**; *Wendy M. Gunther, MD*
- 11:30 a.m. - 1:00 p.m. **H55** **Deaths Due to Cardiomyopathy of Unknown Etiology in Children and Young Adults**
*Serenella Serinelli, MD**; *Ponni Arunkumar, MD*; *Steven M. White, MD, PhD*; *Lorenzo Gitto, MD**
- 11:30 a.m. - 1:00 p.m. **H56** **Alveolar Capillary Dysplasia With Misalignment of the Pulmonary Veins: Histopathology and Applicability to Autopsy**
*Rhonda M. Mittenzwei, MD**; *Elizabeth Pavlisko, MD*; *Laura Hale, MD, PhD*
- 11:30 a.m. - 1:00 p.m. **H57** **Exacerbation of Traumatic Brain Injury in the Presence of Diabetes Mellitus: An Experimental Study of Mice**
*Kazuhiko Kibayashi, MD**
- 11:30 a.m. - 1:00 p.m. **H58** **Primary Cardiac Tumor as a Cause of Sudden Death: A Report of a Rare Case of Atrial Lipoma**
Stefano D’Errico, MD, PhD; *Diana Bonuccelli, MD*; *Alberto Mandoli, MD*; *Massimo Martelloni, MD*; *Francesca Maglietta, MD**
- 11:30 a.m. - 1:00 p.m. **H59** **WITHDRAWN**

- 11:30 a.m. - 1:00 p.m. **H60** **Massive Portal Vein Thrombosis as a Rare Cause of Unexpected Death in a Non-Cirrhotic Patient**
Stefano D'Errico, MD, PhD; Sara Niballi, MD; Giuseppe Davide Albano;
Massimiliano Esposito, MD; Marco Conti, MD*
- 11:30 a.m. - 1:00 p.m. **H61** **Salmonella Urosepsis in a Postpartum Patient With Sickle Cell Trait**
Emilie Cook, DO; Patrick E. Lantz, MD; Anna G. McDonald, MD*
- 11:30 a.m. - 1:00 p.m. **H62** **Asbestos Fiber Burden in the Lungs of the Deceased From Asbestos-Related Diseases (ARD): An Epidemiological Study and Scanning Microscope/Energy Dispersive Spectroscopy (SEM/EDS) Analysis**
Silvia D. Visona, MD; Silvana Capella, PhD; Elena Belluso; Simona Villani, PhD;
Federica Manzoni; Yao Chen, MD; Giorgio Ardissino, MD; Francesca Russo;
Antonio M.M. Osculati, MD*
- 11:30 a.m. - 1:00 p.m. **H63** **WITHDRAWN**
- 11:30 a.m. - 1:00 p.m. **H64** **A Rare Case of Sudden Death From Hereditary Hemorrhagic Telangiectasia (HHT)**
Heather M. O'Connor, DO; Ellen C. Riemer, MD, JD*
- 11:30 a.m. - 1:00 p.m. **H65** **Silicosis: Medicolegal Implications of Diagnosis**
Brandon J. Bukovitz, BS; Jonathan G. Meiman, MD; Henry A. Anderson, MD;
Erin G. Brooks, MD*
- 11:30 a.m. - 1:00 p.m. **H66** **Pulmonary Alveolar Microlithiasis: A Case of Sudden Death**
Adrienne E. Sauder, MD; Marlon Osbourne, MD; Craig T. Mallak, JD, MD*
- 11:30 a.m. - 1:00 p.m. **H67** **Tau and Neurofilament Light Proteins in Cerebrospinal Fluid as Biomarkers of the Time of Death**
Pierre-Antoine Peyron, MD; Sylvain Lehmann, PhD; Constance Delaby, PhD;
Eric Baccino, MD; Christophe Hirtz, PhD*
- 11:30 a.m. - 1:00 p.m. **H68** **An Uncommon Fatal Ruptured Pseudoaneurysm of the Brachial Artery in an Injected Drug Abuser**
Silvia Trotta; Antonella Sorrentino, MD; Giuseppe Bertozzi, MD;
Pietrantonio Ricci, MD, PhD; Biagio Solarino, PhD**
- 11:30 a.m. - 1:00 p.m. **H69** **A Fatal Idiopathic Spontaneous Intraoperative Hemorrhage (Spontaneous Hemoperitoneum) in a 56-Year-Old Male With Cirrhosis**
Gregory M. Dickinson, MD; Hannah C. Jarvis, MRCS*; Jacob Steinberg, MD*
- 11:30 a.m. - 1:00 p.m. **H70** **A Case Report on the Death of a 20-Year-Old Female Due to Complications of Minimally Invasive Transcatheter Atrial Septal Defect (ASD) Closure**
Jan Ynav T. Quiz; Marco Ross, MD; Erica Curry, MD*
- 11:30 a.m. - 1:00 p.m. **H71** **Alcoholic Hepatomegaly: A Case Report and Review of the Literature**
Ashley M. Luebbers, MS; Wendy M. Gunther, MD*
- 11:30 a.m. - 1:00 p.m. **H72** **A Ruptured Infective Aneurysm Presenting as an Acute Subdural Hematoma: A Case of Sudden Death in a Drug Addict With Previously Undiagnosed Bacterial Endocarditis**
*Michael Alan Hays, MD**



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- 11:30 a.m. - 1:00 p.m. **H73** **Sudden Death in Adults With Congenital Heart Disease (CHD): A Retrospective Review of Cases in the Cook County Medical Examiner's Office**
*Lorenzo Gitto, MD**; *Steven M. White, MD, PhD*; *Ponni Arunkumar, MD*;
*Serenella Serinelli, MD**
- 11:30 a.m. - 1:00 p.m. **H74** **Strangulated and Incarcerated Internal Hernia: A Rare Complication of Meckel's Diverticulum**
*Mark A. Giffen, Jr., DO**; *Lauren E. Dvorscak, MD*
- 11:30 a.m. - 1:00 p.m. **H75** **Spontaneous Uterine Rupture as a Complication of Placenta Previa and Percreta**
*Mark A. Giffen, Jr., DO**; *Lauren E. Dvorscak, MD*
- 11:30 a.m. - 1:00 p.m. **H76** **A Ten-Year Retrospective Study of Risk Factors Associated With Deaths Due to Pulmonary Emboli in Washington, DC**
*Breanna M. Cuchara, MFS**; *Francisco J. Diaz, MD*; *Sasha Breland, MD*
- 11:30 a.m. - 1:00 p.m. **H77** **Determination of Hemoglobin A1c Levels by a High-Performance Liquid Chromatography (HPLC) Method in Bloodstains**
*Kemalettin Acar**; *Ayse Kurtulus*; *Esin Avci*; *Volkan Zeybek*; *Erdi Kutlu*; *Süleyman Demir*
- 11:30 a.m. - 1:00 p.m. **H78** **A Case of Necrotizing Pneumonia From a Marijuana Water Pipe: A Recreational Experience Gone Wrong**
*Drake Ryan Thrasher, BS**; *Deanna A. Oleske, MD*
(FSF Emerging Forensic Scientist Award Poster Presentation)
- 11:30 a.m. - 1:00 p.m. **H79** **Sudden Death in a Case of Hiatal Hernia Mimicking a Bochdalek Hernia**
*Vittorio Gatto, MD**; *Alessia Quattrocchi*; *Valentina Fazio*; *Matteo Scopetti, MD*;
Alessandro Santurro, MD; *Mariantonia Di Sanzo, MD*
- 11:30 a.m. - 1:00 p.m. **H80** **Death Due to External Compression of the Trachea in a Case of Multinodular Hemorrhagic Goiter**
*Massimiliano dell'Aquila, MD**; *Alessandra De Matteis*; *Alessandro Santurro, MD*;
Vittorio Gatto, MD; *Matteo Scopetti, MD*; *Aniello Maiese*
- 11:30 a.m. - 1:00 p.m. **H81** **Cryptococcal Central Nervous System (CNS) Disease in a Large Urban Forensic Population**
*Jonee Taylor, MD**; *Rebecca Folkerth, MD, PhD*
- 11:30 a.m. - 1:00 p.m. **H82** **A Review of Shellfish Illnesses and Deaths in Mississippi**
*Mark M. LeVaughn, MD**; *Brent Davis, MD*; *L.R. Funte, MD*; *Anastasia Holobinko, PhD*;
Steven A. Symes, PhD
- 11:30 a.m. - 1:00 p.m. **H83** **A Fatal Dental Extraction: A Case of Ceftriaxone-Induced Anaphylactic Shock in an Inmate**
Massimiliano Esposito, MD; *Federico Patanè, MD*; *Francesco Amico*; *Giulio Di Mizio, MD, PhD*;
Aldo Liberto; *Giuseppe Davide Albano*; *Angelo Montana, MD**
- 11:30 a.m. - 1:00 p.m. **H84** **An Intrapericardial Rupture of an Aortic Aneurysm in the Anatomic Aortic Arch Variant: A Multidisciplinary Approach**
*Enrica Calabrese, MD**; *Rosa Maria Gaudio*; *Raffaella Marino, MD*; *Letizia Alfieri, MD*;
Erica Bacchio, MD; *Mauro Coppone, MD*; *Paolo Frisoni, MD*; *Francesca Gualandi, MD*;
Matteo Fabbri, MSc; *Margherita Neri, MD, PhD*
(FSF Emerging Forensic Scientist Award Poster Presentation)



- 11:30 a.m. - 1:00 p.m. **H85** **An Interesting Case of a Pregnant Female With Systemic Calcification and Thromboemboli**
Tasha Zemrus Greenberg, MD; Joshua Smith, BS*
- 11:30 a.m. - 1:00 p.m. **H86** **Carbohydrates That Kill: Death From Refeeding Syndrome?**
Carolyn E. Lemieux, MD; Vickie Willoughby, DO; Keith Pinckard, MD, PhD*
- 11:30 a.m. - 1:00 p.m. **H87** **A Very Affordable Postmortem Computed Tomography (PMCT) Angiography Kit: A Feasibility Study Using an Immersion Pump and 3D-Printed Parts**
Wolf Schweitzer; Markus Enders, Präparator; Dominic Gascho; Michael Thali, MD**

Biology

*Moderator: Heather R. Jordan, PhD
Mississippi State University
Mississippi State, MS*

*Co-Moderator: Jennifer L. Pechal, PhD
Michigan State University
East Lansing, MI*

- 1:00 p.m. - 1:15 p.m. **H88** **The Detection of Insect Stains From Four Species of Necrophagous Flies on Household Materials Using Immunoassays**
David B. Rivers, PhD; Gregory Cavanagh, BS; Valerie Greisman, BS; Rebecca Brogan, PhD; Andrew Schoeffield, PhD*
- 1:15 p.m. - 1:30 p.m. **H89** **Diurnal Oviposition Timing by Blow Flies (Diptera: Calliphoridae) in Different-Aged Carrion**
*Kristi Bugajski, PhD**
- 1:30 p.m. - 1:45 p.m. **H90** **DNA Methylation for Donor Age Estimation in Touch DNA Samples Associated With Child Labor**
Emily Neverett; Lisa M. McEwen, PhD; Julia MacIsaac, PhD; Michael S. Kobor, PhD; Claire Glynn, PhD; Timothy M. Palmbach, JD*
- 1:45 p.m. - 2:00 p.m. **H91** **Transcriptional Markers of Sex Determination for Forensic Entomology**
Michelle Jonika; Ashleigh M. Faris, PhD; Carl E. Hjelman, PhD; Aaron M. Tarone, PhD*
- 2:00 p.m. - 2:15 p.m. **H92** **An Investigation of Volatile Profiles of Specific Human Organs During Decomposition**
Lena M. Dubois, MSc; Pierre-Hugues Stefanuto, PhD; Katelynn A. Perrault, PhD; Jean-François M. Focant, PhD
(FSF Emerging Forensic Scientist Award Paper Presentation)*
- 2:15 p.m. - 2:30 p.m. **H93** **An Investigation of the Decomposition Odor Profile Produced by Postmortem Microbes**
*Terezie Cernosek; Kevin E. Eckert, MS; David O. Carter, PhD; Katelynn A. Perrault, PhD**
- 2:30 p.m. - 2:45 p.m. **H94** **Estimating Postmortem Interval (PMI) Using Microbial Succession in Human Cadaver Rib Bones**
Heather L. Deel; Aerial D. Belk, MS; Aaron M. Lynne, PhD; Sibyl R. Bucheli, PhD; Zech Xu Zhenjiang, MS; Franklin E. Damann, PhD; David O. Carter, PhD; Rob Knight, PhD; Jessica L. Metcalf, PhD*
- 2:45 p.m. - 3:00 p.m. **H95** **Investigating Italian Criminal Cases' Postmortem Microbiome Signatures**
Gulnaz T. Javan, PhD; Holly L. Lutz; Sheree J. Finley, PhD; Neil Gottel, BSc; Silvia D. Visona, MD; Antonio M.M. Osculati, MD; Jack A. Gilbert, PhD*
- 3:00 p.m. - 3:15 p.m. **Break**



PATHOLOGY/BIOLOGY

Biology

*Moderator: M. Eric Benbow, PhD
Michigan State University
Departments of Entomology &
Osteopathic Medical Specialties
East Lansing, MI*

*Co-Moderator: Cristin Marie Rolf, MD
State of Alaska Medical Examiner's Office
Anchorage, AK*

- 3:15 p.m. - 3:30 p.m. **H96** **The Application of Eukaryotic Community Succession on Porcine Remains for Postmortem Interval Estimation**
*Luisa Forger, MS**; *Michael Shane Woolf, MS*; *Tal Simmons, PhD*; *Jenise Swall, PhD*;
Catherine Cupples Connon, PhD; *Baneshwar Singh, PhD*
- 3:30 p.m. - 3:45 p.m. **H97** **iFly: Mobile Software for Recording Data From a Carrion Source or Death Scene**
*Trevor I. Stamper, PhD**
- 3:45 p.m. - 4:00 p.m. **H98** **International Associations of the Postmortem Microbiome**
*Jennifer L. Pechal, PhD**; *Carl J. Schmidt, MD*; *Heather R. Jordan, PhD*; *M. Eric Benbow, PhD*
- 4:00 p.m. - 4:15 p.m. **H99** **The Composition and Shifts of Soil Bacterial and Fungal Communities Following Cadaver (*Sus Scrofa Domestica*) and Plant Litter (*Quercus Robur*) Burial**
*Chawki Bisker, MSc**
- 4:15 p.m. - 4:30 p.m. **H100** **A Field Study on the Effects of Morphine on the Carrion Decomposition Process and Dipteran Larvae Development**
*Abigail J. Props, MS**
- 4:30 p.m. - 4:45 p.m. **H101** **Building a Microbial Model to Estimate the Postmortem Interval (PMI) Using Data Collected During the Spring Season at Three Anthropological Facilities**
*Ariel D. Belk, MS**; *Heather L. Deel*; *Zech Xu Zhenjiang, MS*; *David O. Carter, PhD*;
Sibyl R. Bucheli, PhD; *Aaron M. Lynne, PhD*; *Melissa A. Connor, PhD*;
Dawnie W. Steadman, PhD; *Giovanna M. Vidoli, PhD*; *Rob Knight, PhD*;
Jessica L. Metcalf, PhD
- 4:45 p.m. - 5:00 p.m. **H102** **Using Larvae of Carrion Beetles to Estimate the Time of Death in a Highly Decayed Corpse in Southwestern China: A Case Report**
*Zhou Lyu, PhD**; *Zeying Tang, LLM**
- 5:00 p.m. - 5:15 p.m. **H103** **Scanning Electron Microscopy (SEM) in the Identification of Fly Artifacts (FAs): A Preliminary Qualitative Study**
Guido Pelletti, MD; *Paolo Fais, PhD*; *Alberto Amadasi, MD**; *Chiara Palazzo, MD*;
Maria Carla Mazzotti, MD; *Laura Ingrà, PhD*; *Desiree Martini, PhD*; *Susi Pelotti, MD*



Thursday—Session II

Radiology

*Moderator: Veena D. Singh, MD
New Mexico Office of the Medical Investigator
Albuquerque, NM*

*Co-Moderator: Erin G. Brooks, MD
University of Wisconsin Hospital and Clinics
Wisconsin Institutes for Medical Research
Madison, WI*

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|------------|---|------------|--------------|---|
| 8:30 a.m. | - | 8:45 a.m. | H104 | Forensic Imaging in Two Cases of Survived Car Surfing in Zurich, Switzerland
<i>Michela Lanfranchi*; Michael Thali, MD*; Wolf Schweitzer*</i> |
| 8:45 a.m. | - | 9:00 a.m. | H105 | Postmortem Computed Tomography (PMCT) Versus the Skeletal Survey in Children: A Pathology-Proven Study
<i>Esther L. Van De Mortel, MSc; Judith Fronczek, MD, PhD; Simon G.F. Robben, MD, PhD; Rick R. Van Rijn, PhD*</i> |
| 9:00 a.m. | - | 9:15 a.m. | H106 | Upper Versus Lower Limb Pediatric Fracture Healing: A Radiographic Study of Time Since Injury (TSI)
<i>Diana L. Messer, MS*; Brent H. Adler, MD; Farah W. Brink, MD; Huiyun Xiang, MD, PhD; Amanda M. Agnew, PhD
(FSF Emerging Forensic Scientist Award Paper Presentation)</i> |
| 9:15 a.m. | - | 9:30 a.m. | H107 | Virtopsy in Clinical Forensic Medicine: A Trauma Case Series With Clinical Emergency Computed Tomography (CT) Reconstruction Details
<i>Eddie Surer, MD*; Michael Thali, MD*; Rosa M. Martinez, MD*; Valeria Hofer*; Michela Lanfranchi*; Wolf Schweitzer*</i> |
| 9:30 a.m. | - | 9:45 a.m. | H108 | My Darkest Hour: Bringing a Consumer LED Torch Light Into Forensic Macrophotography Through 3D-Design of a Lamp Mount for a Consumer Point-and-Shoot Camera
<i>Wolf Schweitzer*; Valeria Hofer*; Rosa M. Martinez, MD*; Michael Thali, MD*</i> |
| 9:45 a.m. | - | 10:00 a.m. | H109 | Role of Postmortem Computed Tomography (PMCT) as a Triage Tool Between External Inspection and Full Autopsy
<i>Vasiliki Chatzaraki, MD*; Jakob Heimer, MD; Michael Thali, MD; Wolf Schweitzer*</i> |
| 10:00 a.m. | - | 10:15 a.m. | H110 | Postmortem Fetal Angiography: A Tool for Better Understanding Congenital Vascular Malformations
<i>Jessica Vanhaebost*; Xavier De Spiegeleire, Bac; Gregory Schmit, MD; Catherine Behets, PhD; Emmanuel Coche, PhD</i> |
| 10:15 a.m. | - | 10:30 a.m. | Break | |



PATHOLOGY/BIOLOGY

Radiology

*Moderator: Rebecca Jufer Phipps, PhD
Office of the Chief Medical Examiner
Baltimore, MD*

*Co-Moderator: Mario Rascon, MD
El Paso County
Office of the Medical Examiner
El Paso, TX*

- 10:30 a.m. - 10:45 a.m. **H111** **The Value of Craniocervical Magnetic Resonance Imaging (MRI) Following Non-Fatal Strangulation**
*Jakob Heimer, MD**; *Carlo Tappero*; *Dominic Gascho*; *Patricia Flach, PD*; *Thomas Ruder, PD*; *Michael Thali, MD*; *Sabine Franckenberg, MD*
- 10:45 a.m. - 11:00 a.m. **H112** **Evaluation of Arterial Injuries Using Contrast and Conventional X-Rays: A Practical Method for the Assessment of Arterial Injuries in Forensic Settings**
*Nikki Mourtzinis, DO**; *Zabiullah Ali, MD*; *David R. Fowler, MD*
- 11:00 a.m. - 11:15 a.m. **H113** **The Needle in the Haystack: Histology of Postmortem Computed Tomography (CT) -Guided Biopsies Versus Autopsy-Derived Tissue**
*Bartholomeus G.H. Latten, MSc**; *Frans Bakers*; *Paul Hofman, PhD*; *Axel zur Hausen, MD, PhD*; *Bela Kubat, PhD*
- 11:15 a.m. - 11:30 a.m. **H114** **Deep Learning on Volumetric Radiologic Imaging Datasets for Forensic Pathology Investigations**
*Summer J. Decker, PhD**; *Lars C. Ebert, PhD**; *Jonathan M. Ford, PhD*; *Akos Dobay, PhD*; *Natalie L. Adolphi, PhD*; *Kurt B. Nolte, MD*
- 11:30 a.m. - 11:45 a.m. **H115** **Simulation-Based Learning in Forensic Medicine: The Use of 3D Photogrammetry**
*Vadim Mesli, MD**; *Erwan Le Garff, MD*; *Vincent Deffaux*; *Elodie Marchand, MD*; *Anne A. Becart, DDS, PhD*; *Valéry C. Hedouin, MD, PhD*; *Didier Gosset, MD, PhD*
- 11:45 a.m. - 12:00 p.m. **H116** **Anatomical Distribution and Autopsy Features of Gunshot Injuries to Discriminate Between Homicides and Suicides: A Five-Year Retrospective Study From the Onondaga County Medical Examiner's Office**
*Lorenzo Gitto, MD**; *Serenella Serinelli, MD**; *Robert Stoppacher, MD*
- 12:00 p.m. - 1:00 p.m. **Lunch**

Pediatrics

*Moderator: Francisco J. Diaz, MD
Office of the Medical Examiner
Washington, DC*

*Co-Moderator: Deanna A. Oleske, MD
District 23 Medical Examiner's Office
St Augustine, FL*

- 1:00 p.m. - 1:15 p.m. **H117** **The Value of Elevated Transaminases, Lipase, and Amylase in Children for Predicting Abdominal Injury After Blunt Abdominal Trauma: Is Laboratory Screening Valuable for Recognizing Physical Child Abuse? A Literature Review**
Daniel H. Hoekstra, MD; *Joost G. Daams, MA*; *Wouter A. Karst, MD*; *Rick R. Van Rijn, PhD**
- 1:15 p.m. - 1:30 p.m. **H118** **Optic Nerve Hemorrhage: A Sensitive or Specific Marker of Trauma?**
*Melissa M. Blessing, DO**; *Merrill O. Hines III, MD*; *Dwayne A. Wolf, MD, PhD*; *Glenn D. Sandberg, MD*



- 1:30 p.m. - 1:45 p.m. **H119** **The Correlation of Pediatric Cervical Nerve Root and Dorsal Root Ganglia Hemorrhage With Hemorrhage at Other Spinal Cord Levels**
*Marianne E. Beynon, MD**; *Miriam E. Soto Martinez, PhD*; *Jo Elle G. Peterson*; *Si Gao, MS*;
Jennifer C. Love, PhD; *Dwayne A. Wolf, MD, PhD*; *Glenn D. Sandberg, MD*
- 1:45 p.m. - 2:00 p.m. **H120** **Ventriculoperitoneal Shunt Occlusion Resulting in Acute Hydrocephalus and Death in Developmentally Delayed Patients: Two Case Reports**
*Joshua White, BS**; *Joseph A. Prahlow, MD*
- 2:00 p.m. - 2:15 p.m. **H121** **Biochemical and Histopathological Findings in Sudden Unexpected Death in Epilepsy**
Shyam Kishore, MD; *Chittaranjan Behera, MD**; *Sudhir K. Gupta, MD*; *Sudheer Arava, MD*;
Asit Ranjan Mridha, MD; *Ashok K. Jaiswal, PhD*
- 2:15 p.m. - 2:30 p.m. **H122** **Evaluation of the Role of Polymerase Chain Reaction (PCR) -Based Postmortem Respiratory Infectious Disease Panels in Infant Death Investigations**
*Abigail Jacqueline Grande, MPH**; *Joyce L. deJong, DO*; *Amanda O. Fisher-Hubbard, MD*
- 2:30 p.m. - 2:45 p.m. **H123** **Severe Pulmonary Artery Hypertension Persisting After a Late Atrial Septal Defect (ASD) Closure: Presentation of a Case**
*Serenella Serinelli, MD**; *Lorenzo Gitto, MD**
- 2:45 p.m. - 3:00 p.m. **Break**

Brain and Heart

Moderator: Giancarlo Di Vella, MD, PhD
University of Torino
Department of Public Health Sciences
Sezione di Medicina Legale
Torino, ITALY

Co-Moderator: Rudy J. Castellani, MD
Center for Neuropathology
Kalamazoo, MI

- 3:00 p.m. - 3:15 p.m. **H124** **Chronic Traumatic Encephalopathy Pathology Following Shotgun Injury to the Brain**
*Rudy J. Castellani, MD**; *Taylor Tribett, BS*; *Theodore T. Brown, MD*
- 3:15 p.m. - 3:30 p.m. **H125** **Massive Intracranial Bleeding Due to the Rupture of a Rare Spontaneous Pseudoaneurysm of the Middle Cerebral Artery in a Pediatric Patient: A Case Report With Clinical, Radiological, Gross, and Microscopic Findings**
*Lorenzo Gitto, MD**; *Serenella Serinelli, MD**
- 3:30 p.m. - 3:45 p.m. **H126** **Dorsal Root Ganglia and Nerve Root Hemorrhage in Resuscitated Respiratory Syncytial Virus (RSV) Bronchiolitis**
*Nathan S. Shaller, MD**; *Anna G. McDonald, MD*
- 3:45 p.m. - 4:00 p.m. **H127** **An Evaluation of Cardiac Implantable Electronic Devices in Forensic Practice: How It Can Improve the Medicolegal Analysis of Cause of Death in Postmortem Analysis and Even Answer Unexpected Questions in the Living**
*Justine Canales, MD**; *Camille Rerolle, MD*; *Pauline Saint-Martin, MD, PhD*
- 4:00 p.m. - 4:15 p.m. **H128** **A Comparison of Coronary Artery Stenosis Estimates Made by Forensic Pathologists and Medical Students**
*Mitchell Messner, BA**; *Sarah Meyers, MD*; *Walter L. Kemp, MD, PhD*



PATHOLOGY/BIOLOGY

- 4:15 p.m. - 4:30 p.m. **H129** **Coronary Calcifications in Sudden Cardiac Death (SCD) Cases in Postmortem Computed Tomography (PMCT)**
*Katarzyna Michaud, MD**; *Stefano Draisci, MD*; *Diego Proccichiani, MD*;
Silke Grabherr, PhD; *Fabrice Dedouit, MD, PhD*
- 4:30 p.m. - 4:45 p.m. **Break**

Miscellaneous

Moderator: Jennifer L. Pechal, PhD
Michigan State University
East Lansing, MI

Co-Moderator: Heather R. Jordan, PhD
Mississippi State University
Mississippi State, MS

- 4:45 p.m. - 5:00 p.m. **H130** **Manual Large Volume DNA Extraction and Purification From a Large Substrate**
*Abigail Chesness**; *Rachel L. Creager*; *Thomas A. Meyer, MS*
- 5:00 p.m. - 5:15 p.m. **H131** **Eye Temperature Measured After Death in Human Bodies as an Alternative Method of Time-of-Death Estimation in the Early Postmortem Period**
*Michal Kaliszczan, PhD**; *Magdalena Wujtewicz, PhD*
- 5:15 p.m. - 5:30 p.m. **H132** **Cold Case Homicides: DNA Testing of Retained Autopsy Sexual Assault Smears**
*Michelle S. Clark, MS**; *Angela McGuire, MD*; *Kristin Sasinouski, MSFS*; *James R. Gill, MD*
- 5:30 p.m. - 5:45 p.m. **H133** **Normalization of Polymerase Chain Reaction (PCR) -Based Quantification Using 9947A Human Standard DNA**
*Grace S. Woods, BS**; *Rachel L. Creager*
- 5:45 p.m. - 6:00 p.m. **H134** **Body Coloration Artifacts in Forensic Autopsy**
*Asit Kumar Sikary, MD**; *Chittaranjan Behera, MD*
- 6:00 p.m. - 6:15 p.m. **H135** **A Study on Detection of A-Helix Protein in Post-Traumatic Epileptogenic Focus by Fourier Transform Infrared (FTIR) Mapping**
*Bin B. Dai**; *Siyang Xiang*; *Xu Wang, MD*; *Tiantong Yang*

Friday—Session I

Multidisciplinary Session: Pathology/Biology I/Toxicology—Postmortem Forensic Toxicology, Part I

Moderator: Rebecca Jufer Phipps, PhD
Office of the Chief Medical Examiner
Baltimore, MD

- 8:30 a.m. - 8:45 a.m. **H136** **Trends in Novel Opioid Use in the United States From January 2014 Through April 2018 in Medicolegal Death Investigations (MDIs) and Strategies to Improve Early Identification, Detection, and Interpretation**
*Barry K. Logan, PhD**; *Sherri L. Kacinko, PhD*; *Donna M. Papsun, MS*;
Amanda L.A. Mohr, MSFS

PATHOLOGY/BIOLOGY



- 8:45 a.m. - 9:00 a.m. **H137** **Acetaminophen Toxicity Deaths in New Mexico: 1990–2016**
*Lori A. Proe, DO**; *Sarah Lathrop, DVM, PhD*
- 9:00 a.m. - 9:15 a.m. **K69** **Infant and Toddler Deaths Associated With Potent Opioid Exposure**
*Robert Hargrove, BS**; *Sandra C. Bishop-Freeman, PhD**; *Ruth E. Winecker, PhD*
- 9:15 a.m. - 9:30 a.m. **H138** **Comparative and Correlation Studies of Biochemical Substances in Vitreous Humor (VH) and Synovial Fluid (SF)**
*Supawon Srettabunjong, MD, MSc, MTox, LLB**; *Wantawanop Thongphap, BSc**; *Anchalee Chittamma**; *Wanna Thongnoppakhun**
- 9:30 a.m. - 9:45 a.m. **K70** **A Comparison of Cannabinoid Concentrations in Central and Peripheral Postmortem Blood Samples**
*Daniel S. Isenschmid, PhD**; *William H. Anderson, PhD*; *Barry K. Logan, PhD*
- 9:45 a.m. - 10:00 a.m. **H139** **The Outbreak of Fentanyl-Related Deaths in Cook County, Illinois, Between October 2015 and December 2017: A Retrospective Study and a Comparison With Previous Data**
*Lorenzo Gitto, MD**; *Steven M. White, MD, PhD*; *Ponni Arunkumar, MD*; *Serenella Serinelli, MD**
- 10:00 a.m. - 10:15 a.m. **Break**
*Sponsored by: The Center for Forensic Science Research and Education at the
Fredric Rieders Family Foundation
Lemos Toxicology Services LLC
NMS Labs*

Multidisciplinary Session: Pathology/Biology I/Toxicology—Postmortem Forensic Toxicology, Part II

*Moderator: Laura M. Labay, PhD
NMS Labs
Willow Grove, PA*

*Co-Moderator: Douglas E. Rohde, MS
Lake County Crime Laboratory
Painesville, OH*

- 10:15 a.m. - 10:30 a.m. **K71** **A Comparison of Syringe Contents to Respective Biological Counterparts in 43 Medical Examiner Cases**
*Sophia Brathwaite, BSc**; *Lucas W. Zarwell, MFS*; *Samantha Tolliver, PhD*; *Chikarlo R. Leak, PhD*; *Roger A. Mitchell, Jr.*
- 10:30 a.m. - 10:45 a.m. **H140** **Loperamide Intoxication: Case Reports and a Review of the Literature**
*Paul Uribe, MD**
- 10:45 a.m. - 11:00 a.m. **K72** **Suicide by Pesticide? A Case Study of Fenobucarb Ingestion**
*Marissa J. Finkelstein, MS**; *Katherine L. Kenerson, MD*; *George W. Hime, MS*; *Diane Boland, PhD*
- 11:00 a.m. - 11:15 a.m. **H141** **Cocaine as the Sole Intoxicant in an Unusual Suicidal Overdose**
*Michael Heninger, MD**
- 11:15 a.m. - 11:30 a.m. **K73** **Death Due to Acute Nicotine Intoxication**
*Tiffany A. Hollenbeck, DO**; *Marius Tarau, MD*; *Lindsey J. Haldiman, DO*
- 11:30 a.m. - 11:45 a.m. **H142** **The Utilization of Preliminary Urine Drug Screens in Heroin- and Fentanyl-Related Deaths**
*Gerald Feigin, MD**
- 11:45 a.m. - 1:00 p.m. **Lunch**



PATHOLOGY/BIOLOGY

Poster Session

- 11:30 a.m. - 1:00 p.m. **H143** **WITHDRAWN**
- 11:30 a.m. - 1:00 p.m. **H144** **A Modern Application of Forensic Anthropology in Coroner and Medical Examiner Offices: A Preview**
*Katharine Chapman Pope, MA**; *Lindsay H. Trammell, PhD*; *Sharon M. Derrick, PhD*; *Elizabeth A. Miller, PhD*
- 11:30 a.m. - 1:00 p.m. **H145** **The Histomorphology of Cranial Fracture Healing: Case Examples**
*Carolyn V. Isaac, PhD**; *Jered B. Cornelison, PhD*; *Joseph A. Prahlow, MD*
- 11:30 a.m. - 1:00 p.m. **H146** **A Comparison of Three Methods for Assessment of Bone Decalcification Time and Quality of Histological Slides for Cranial Fracture Healing Investigation**
*Jered B. Cornelison, PhD**; *Carolyn V. Isaac, PhD*; *Joseph A. Prahlow, MD*
- 11:30 a.m. - 1:00 p.m. **H147** **Drugs and Homicide in Memphis and Shelby County: A Continued Epidemic of Violence—2014–2016**
*David W. Coates, MS**; *Benjamin J. Figura, PhD*; *Sherri L. Kacinko, PhD*; *Kevin Jenkins, MD*; *Paul V. Benson, MD*
- 11:30 a.m. - 1:00 p.m. **H148** **Violence Against Vulnerable Persons: The Death of a Transgendered Individual in Mississippi**
L.R. Funte, MD; *Mark M. LeVaughn, MD**; *Brent Davis, MD*; *Anastasia Holobinko, PhD*; *Steven A. Symes, PhD*
- 11:30 a.m. - 1:00 p.m. **H149** **The Tale of an Operating Room Fire Fatality**
*Tasha Zemrus Greenberg, MD**
- 11:30 a.m. - 1:00 p.m. **H150** **The Botanical Survey in the Collection of Scientific Evidence for Reconstructing the Dynamics of Deaths From High Falls: A Case Report and Review of Literature**
*Isabella Aquila, MD**; *Matteo A. Sacco, MD**; *Fabrizio Barbagallo, MD*; *Francesco Sicilia, MD**; *Vincenzo Rania, MD*; *Santo Gratteri, MD*; *Pietro Tarzia, MD*; *Pietrantonio Ricci, MD, PhD*
- 11:30 a.m. - 1:00 p.m. **H151** **Deaths Due to Illegal Immigration: Always Drowning?**
*Isabella Aquila, MD**; *Fabrizio Cordasco, MD**; *Francesco Sicilia, MD**; *Santo Gratteri, MD*; *Matteo A. Sacco, MD*; *Pietrantonio Ricci, MD, PhD*
- 11:30 a.m. - 1:00 p.m. **H152** **An Unusual Case of Suicide Due to a Gas Mixture Poisoning**
*Isabella Aquila, MD**; *Matteo A. Sacco, MD**; *Roberto Raffaele, BE**; *Santo Gratteri, MD*; *Luigi De Aloe, MD**; *Pietrantonio Ricci, MD, PhD*
- 11:30 a.m. - 1:00 p.m. **H153** **A Multidisciplinary Forensic Approach in the Analysis of Skeletal Remains: A Chronology of Injuries and Dynamics of Events**
Sara Sablone, MD; *Antonio De Donno, PhD*; *Chiara Lauretti*; *Ilaria Santoiemma**; *Francesco Introna, MD*
- 11:30 a.m. - 1:00 p.m. **H154** **Spleen Attenuation and Routine Measurements With Regard to Cause of Death and Estimation of Spleen Weight: A Study on Postmortem Computed Tomography (PMCT)**
*Vasiliki Chatzaraki, MD**; *Wolf Schweitzer**; *Michael Thali, MD*; *Garyfalia Ampanozi, MD*



- 11:30 a.m. - 1:00 p.m. **H155** **“Enlightened”: The Effect of Training Forensic Pathology Residents With LED-Enhanced Point-and-Shoot Cameras for Forensic Macro Photography**
*Valeria Hofer**; *Michael Thali, MD**; *Rosa M. Martinez, MD**; *Wolf Schweitzer**
- 11:30 a.m. - 1:00 p.m. **H156** **Multiplanar Reconstruction (MPR) of Antemortem Computed Tomography (CT) Images to Visualize Sphenoidal Sinus and Cranial Base Morphology for Identification Purposes**
*Carlos J. Zambrano, PhD**; *Angela Berg, MA, RN*; *Marc Allen Harrison, MD*; *Eric Duval, DO*; *Inas Z. Yacoub, MD*
- 11:30 a.m. - 1:00 p.m. **H157** **3D Anatomical Model Acquisition and Reproduction of Human Organs: Which Perspectives for Forensic Pathology?**
*Antonio Guajana**; *Francesco Di Paola*; *Marco Arrigo*; *Stefania Zerbo, MD*; *Elvira Ventura Spagnolo, MD*; *Gennaro Baldino*; *Daniele Daricello, MD*; *Dario Saguto, MD*; *Mariella Farella, MD*; *Giosue’ Lo Bosco, PhD*; *Fabio Bucchieri, MD*; *Francesco Cappello*; *Antonina Argo*
- 11:30 a.m. - 1:00 p.m. **H158** **The Value of Postmortem Computed Tomography (PMCT) in the Examination of Advanced Decomposed Bodies**
*Alessandro Santurro, MD**; *Gaia Cartocci*; *Matteo Scopetti, MD*; *Vittorio Gatto, MD*; *Mariantonia Di Sanzo, MD*; *Raffaele La Russa, MD*
- 11:30 a.m. - 1:00 p.m. **H159** **An Interesting and Timely Dental Identification in a Uniquely Posed Decomposed Female Using Premortem Computed Tomography (CT) Images and Postmortem Radiographs**
*Tasha Zemrus Greenberg, MD**; *Roger D. Metcalf, DDS, JD*
- 11:30 a.m. - 1:00 p.m. **H160** **Postmortem Computed Tomography (PMCT) Investigation in Cases of Suspected Infanticide**
*Nivia A.M. Matias, MD**; *Sara Anieli Costa Braz Fonseca, MD*
- 11:30 a.m. - 1:00 p.m. **H161** **Fatal Nitrous Oxide Intoxication—Suicide or Accident?**
Serge Schneider, PhD; *Martine Schaul, MD*; *Thorsten Schwark, MD**
- 11:30 a.m. - 1:00 p.m. **H162** **Accidental Corrosive Acid Poisoning in an Infant: A Case Report**
*Manoj Bhausahab Parchake, MD**
- 11:30 a.m. - 1:00 p.m. **H163** **Homicide by Intramuscular Cyanide Injection: Investigation and Adjudication**
*Megan R. Hall, BA**; *Wendy M. Gunther, MD*
- 11:30 a.m. - 1:00 p.m. **H164** **Validation of a Urine Drug Screen Assay in the Postmortem Setting**
*Emily Wolak, DO**; *Sarah Lathrop, DVM, PhD*; *Monique Dodd, PharmD*; *Hannah A. Kastenbaum, MD*
- 11:30 a.m. - 1:00 p.m. **H165** **An Immunohistochemical Study of Central Nervous System (CNS) Damage in Two Drug Abusers (Synthetic Cannabinoids, Synthetic Cathinones, and Phenethylamine Derivatives)**
*Mio Takayama, PhD**; *Masayuki Kashiwagi, PhD*; *Aya Matsusue, PhD*; *Brian Joseph Waters, MS*; *Kenji Hara, PhD*; *Natsuki Ikematsu, BPharm*; *Shin-ich Kubo, PhD*
- 11:30 a.m. - 1:00 p.m. **H166** **Filicide-Feticide-Suicide: An Unusual Variant of Triadic Death**
*Nilesh K. Tumram, MD**



PATHOLOGY/BIOLOGY

- 11:30 a.m. - 1:00 p.m. **H167** **The Evolution of the Opioid Crisis in Cuyahoga County, Ohio, From 2012 to 2016**
*Vaishali S. Deo, MD**; *Thomas P. Gilson, MD*
- 11:30 a.m. - 1:00 p.m. **H168** **Drug and Alcohol Trends in Fatally Injured Drivers in the State of Maryland (2007–2018)**
*Gruschenka Mojica Sanchez, MD**; *Rebecca Jufer Phipps, PhD*; *David R. Fowler, MD*
- 11:30 a.m. - 1:00 p.m. **H169** **Aqueous Fluid as a Viable Substitute for Vitreous Fluid in Postmortem Chemistry Analysis**
*Daniel C. Butler, MD**; *Cynthia A. Schandl, MD, PhD*; *S. Erin Presnell, MD*
- 11:30 a.m. - 1:00 p.m. **H170** **The Frequency of Cannabinoids in a Medical Examiner Population**
Caitlin N. Markey; *Michael A. Markey, MD**; *Patrick A. Hansma, DO*; *Luke R. Vogelsberg*
- 11:30 a.m. - 1:00 p.m. **H171** **Generalized Organomegaly and the Use of Performance-Enhancing Substances Identified Following Sudden Death**
*Stephanie Diu, BA**; *Jennifer L. Hammers, DO*
- 11:30 a.m. - 1:00 p.m. **H172** **Three Deaths in Tarrant County, Texas, Related to the Use of 25H-NBOMe, 25B-NBOMe, or 25I-NBOMe**
*Tasha Zemrus Greenberg, MD**; *Robert D. Johnson, PhD*; *Richard C. Fries, DO*; *Susan J. Roe, MD*
- 11:30 a.m. - 1:00 p.m. **H173** **Accidental Overdose Deaths Involving Fentanyl and the Growing Trend of Counterfeit Prescription Pills in New Mexico**
*Jolee T. Suddock, DO**; *Sarah Lathrop, DVM, PhD*; *Garon Bodor, MS*; *Matthew D. Cain, MD*
- 11:30 a.m. - 1:00 p.m. **H174** **A Five-Year Retrospective Study of Drug Abuse Deaths in Maryland (2013–2017)**
*Ayomide Oludoyi, BSc**; *Sarah J. Sides, BS**; *Alyssa Dean, MS**; *Allison C. Klein, BA*; *David R. Fowler, MD*; *Mary G. Ripple, MD*; *Ling Li, MD*
- 11:30 a.m. - 1:00 p.m. **H175** **Fatal Rodenticide Poisoning in Association With Synthetic Cannabinoid Use—Is It Industrial Contamination?**
*Rochelle A. Simon, MD**; *David R. Fowler, MD*; *John Stash, DO*
- 11:30 a.m. - 1:00 p.m. **H176** **An Excipient-Induced Oxycodone Fatality**
Deanna A. Oleske, MD; *Drake Ryan Thrasher, BS**; *Jeff Walterscheid, PhD*
- 11:30 a.m. - 1:00 p.m. **H177** **A Medical Examiner's Office Review of Mechanisms of Injury in Crush-Related Deaths**
*Catherine Rood, BS**; *Robert J. Bready, MS*; *Dennis J. Chute, MD**
- 11:30 a.m. - 1:00 p.m. **H178** **Blunt Force Decapitation in West Tennessee: A Ten-Year Review (2008–2018)**
*William Sago, MD**; *Paul V. Benson, MD*
- 11:30 a.m. - 1:00 p.m. **H179** **Accidental Residential Fire-Related Fatalities: A Seven-Year Study in a Forensic Autopsy Population (2010–2017)**
*Allison C. Klein, BA**; *Kelsey Mason, BS**; *David R. Fowler, MD*; *Mary G. Ripple, MD*; *Ling Li, MD*



Natural Disease

*Moderator: Giancarlo Di Vella, MD, PhD
University of Torino
Department of Public Health Sciences
Sezione di Medicina Legale
Torino, ITALY*

*Co-Moderator: Thomas P. Gilson, MD
Cuyahoga County Medical Examiner's Office
Cleveland, OH*

- 1:00 p.m. - 1:15 p.m. **H180** **Trousseau's Syndrome in Forensic Medicine**
*Henry J. Carson, MD**
- 1:15 p.m. - 1:30 p.m. **H181** **Exercise-Associated Hyponatremia: An Update**
*Paul Uribe, MD**
- 1:30 p.m. - 1:45 p.m. **H182** **Sudden Unexpected Death in Pemphigus Vulgaris: An Autopsy Report**
*Asit Kumar Sikary, MD**
- 1:45 p.m. - 2:00 p.m. **H183** **Sudden Death Caused by Bilateral Diaphragmatic Eventration in Myotonic Dystrophy Type 1**
Sulin Wu, PhD; Joseph A. Prahlow, MD*
- 2:00 p.m. - 2:15 p.m. **H184** **Mutations of Plakophilin-2 (PKP2) in Sudden Unexplained Death (SUD)**
*Junyi Lin; Bi Xiao; Ziqin Zhao, MS; Sisi Cheng; Yiwen Shen; Mingchang Zhang**
- 2:15 p.m. - 2:30 p.m. **H185** **The Use of High-Mobility Group Protein (HMGB1) to Determine Time Since Death: An Autopsy-Based Study**
Puneet Setia, MD; Rutwik D. Shedge, MSc; Anupama Modi, MSc; Purvi Purohit, PhD; Praveen Sharma*
- 2:30 p.m. - 2:45 p.m. **H186** **Fatal Angioedema Due to a Delayed Hypersensitivity Reaction Associated With Hair Dye and a Temporary Tattoo**
Ami L. Jackson, DO; Jerri McLemore, MD*
- 2:45 p.m. - 3:00 p.m. **H187** **Fatal Clostridial Necrotizing Fasciitis Resulting From Skin Popping in Heroin Abusers**
Hannah Elyse Bielamowicz, MD; Kendall V. Crowns, MD; Keith Pinckard, MD, PhD; Michelle S. Montonera, MS*
- 3:00 p.m. - 3:15 p.m. **Break**

Trauma

- 3:15 p.m. - 3:30 p.m. **H188** **Cable-Tie Neck Ligatures: A Series of Five Cases**
Nicole B. Ahmed, BA; Laura Bauler, PhD; Joyce L. deJong, DO; Jacqueline J. Pender, MD; Theodore T. Brown, MD; Joseph A. Prahlow, MD*
- 3:30 p.m. - 3:45 p.m. **H189** **Unrecognized Anatomical Larynx Variants May Lead to More Than 70% of False Larynx Fractures**
Joao E.S. Pinheiro, PhD, MD; José L. Cascallana, PhD; Benito Lopez de Abajo, MD; Xose L. Otero, PhD; María Sol Rodríguez-Calvo, PhD*



PATHOLOGY/BIOLOGY

- 3:45 p.m. - 4:00 p.m. **H190** **It's Not Just Assault Rifles: A Case Study of a Mass Shooting Involving a Shotgun**
Brooke H. Blake, MD; Erin A. Barnhart, MD*
- 4:00 p.m. - 4:15 p.m. **H191** **Elevator-Related Deaths**
Joseph A. Prahlow, MD; Zuhha Ashraf; Natalie Plaza, MD; Christopher B. Rogers, MD; Pamela A. Ferreira, MD; David R. Fowler, MD; Melissa M. Blessing, DO; Dwayne A. Wolf, MD, PhD; Michael A. Graham, MD; Kelly L. Sandberg, MS; Krista L. Timm, MD; Theodore T. Brown, MD; Patrick E. Lantz, MD*
- 4:15 p.m. - 4:30 p.m. **H192** **Who Pulled the Trigger ... First?: The Biomechanics of a Ballistic Injury**
Steven A. Symes, PhD; Mark M. LeVaughn, MD; Ericka N. LAbbe, PhD*
- 4:30 p.m. - 4:45 p.m. **H193** **Tractor-Related Fatalities**
*Tracy C. Johnson, BS; Abigail Jacqueline Grande, MPH; Amanda O. Fisher-Hubbard, MD**
- 4:45 p.m. - 5:00 p.m. **H194** **Postmortem Computed Tomography (PMCT) in Shooting Fatalities**
Marloes E.M. Vester, MD; Rick R. Van Rijn, PhD; Chandra Y. Gerrard, BS; Kurt B. Nolte, MD; Reinoud D. Stoel, PhD; Gary M. Hatch, MD*

Friday—Session II

Jay Dix Memorial Bonus Day

- 9:00 a.m. - 9:10 a.m. **H195** **Jay Dix Memorial Bonus Day Introduction**
*Michael A. Graham, MD**
- 9:10 a.m. - 10:00 a.m. **H195** **Firearm Injuries**
*Andrew M. Baker, MD**
- 10:00 a.m. - 10:15 a.m. **Break**
- 10:15 a.m. - 11:05 a.m. **H195** **Update on the Investigation of Infant Sudden Deaths**
*Tracey S. Corey, MD**
- 11:05 a.m. - 11:55 a.m. **H195** **An Investigation of Suicide**
*Jonathan Hayes, MD**
- 11:55 a.m. - 2:00 p.m. **Lunch**
- 2:00 p.m. - 2:50 p.m. **H195** **An Investigation of Environment-Related Deaths**
*Joseph A. Prahlow, MD**
- 2:50 p.m. - 3:05 p.m. **Break**
- 3:05 p.m. - 3:55 p.m. **H195** **Sports-Related Deaths**
*Joyce L. deJong, DO**
- 3:55 p.m. - 4:45 p.m. **H195** **Asphyxia**
*James R. Gill, MD**