AMERICAN ACADEMY OF FORENSIC SCIENCES

February 22-27 2016

Transformation: Embracing Change

ADVANCE PROGRAM

Las Vegas, Nevada

68th Annual Scientific Meeting
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registration Information</td>
<td>3</td>
</tr>
<tr>
<td>Pre-Registration Form</td>
<td>5</td>
</tr>
<tr>
<td>About The AAFS</td>
<td>7</td>
</tr>
<tr>
<td>Officers &amp; Officials</td>
<td>8</td>
</tr>
<tr>
<td>General Information</td>
<td>12</td>
</tr>
<tr>
<td>Awards &amp; Receptions</td>
<td>13</td>
</tr>
<tr>
<td>Section Business Meetings</td>
<td>15</td>
</tr>
<tr>
<td>Las Vegas, NV</td>
<td>16</td>
</tr>
<tr>
<td>Accommodations</td>
<td>18</td>
</tr>
<tr>
<td>Continuing Education</td>
<td>19</td>
</tr>
<tr>
<td>Financial Contributors</td>
<td>22</td>
</tr>
<tr>
<td>Calendar of Events</td>
<td>23</td>
</tr>
<tr>
<td>Student Academy</td>
<td>30</td>
</tr>
<tr>
<td>Interdisciplinary Symposium</td>
<td>31</td>
</tr>
<tr>
<td>YFSF Special Session</td>
<td>35</td>
</tr>
<tr>
<td>FEPAC Session</td>
<td>39</td>
</tr>
<tr>
<td>Evening Session</td>
<td>41</td>
</tr>
<tr>
<td>Pre-Plenary — Open Forum</td>
<td>43</td>
</tr>
<tr>
<td>Plenary Session</td>
<td>44</td>
</tr>
<tr>
<td>Breakfast Seminars</td>
<td>47</td>
</tr>
<tr>
<td>Luncheon Seminar</td>
<td>57</td>
</tr>
<tr>
<td>Workshops</td>
<td>60</td>
</tr>
<tr>
<td>A.S.F.E.</td>
<td>108</td>
</tr>
<tr>
<td>N.A.M.E</td>
<td>110</td>
</tr>
<tr>
<td>N.I.J.</td>
<td>112</td>
</tr>
<tr>
<td>Scientific Sessions</td>
<td></td>
</tr>
<tr>
<td>Anthropology</td>
<td>117</td>
</tr>
<tr>
<td>Criminalistics</td>
<td>131</td>
</tr>
<tr>
<td>Digital &amp; Multimedia Sciences</td>
<td>155</td>
</tr>
<tr>
<td>Engineering Sciences</td>
<td>159</td>
</tr>
<tr>
<td>General</td>
<td>164</td>
</tr>
<tr>
<td>Jurisprudence</td>
<td>174</td>
</tr>
<tr>
<td>Odontology</td>
<td>181</td>
</tr>
<tr>
<td>Pathology/Biology</td>
<td>188</td>
</tr>
<tr>
<td>Psychiatry &amp; Behavioral Science</td>
<td>205</td>
</tr>
<tr>
<td>Questioned Documents</td>
<td>211</td>
</tr>
<tr>
<td>Toxicology</td>
<td>214</td>
</tr>
<tr>
<td>Last Word Society</td>
<td>225</td>
</tr>
<tr>
<td>Bring Your Own Slides Form</td>
<td>227</td>
</tr>
<tr>
<td>Financial Disclosure</td>
<td>229</td>
</tr>
<tr>
<td>Key Word Index</td>
<td>261</td>
</tr>
<tr>
<td>Presenting Author Index</td>
<td>275</td>
</tr>
</tbody>
</table>
REGISTRATION INFORMATION

The pre-registration deadline is January 27, 2016. Forms must be received by this date to qualify for the pre-registration rate and to register for Special Functions. Registration forms received after January 27, 2016, will be processed as on-site registrations.

Three Ways to Register

● Register online at www.aafs.org through the AAFS Account Portal.
● Scan & email your registration form (both pages) to tmccray@aafs.org.
● Mail your registration form, along with a check, money order, or purchase order to:
  AAFS
  410 North 21st Street
  Colorado Springs, CO 80904
  (Checks must be drawn on a U.S. bank in U.S. funds, made payable to AAFS.)
● Faxed registration forms are not accepted.

Registration Confirmation

● When you register online, you will receive an email confirmation immediately.
● When you email or mail your registration form to AAFS, a confirmation email will be sent once your registration form is processed.
● Bring a copy of your confirmation letter to the registration desk for meeting check-in.

Questions

If you have any questions or need assistance with registration, contact the AAFS Office at (719) 636-1100 or email Tracie McCray (tmccray@aafs.org).
# Helpful Registration Tips

## Pre-Registration Savings

The benefits of pre-registration cannot be emphasized enough! 30% savings for AAFS members!

*This is the only chance to register for Special Functions (breakfasts, luncheons, workshops, and special sessions)!*

Your pre-registration form must be received by Wednesday, January 27, 2016.

### Registration Fees*

<table>
<thead>
<tr>
<th>1. AAFS Members &amp; Trainee Affiliates, Applicants**</th>
<th>Pre-Registration</th>
<th>On-Site Registration</th>
</tr>
</thead>
<tbody>
<tr>
<td>$295</td>
<td>$420</td>
<td></td>
</tr>
<tr>
<td>2. AAFS Student Affiliates</td>
<td>$100</td>
<td>$125</td>
</tr>
<tr>
<td>3. AAFS Retired Fellows</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>4. Non-Members</td>
<td>$450</td>
<td>$520</td>
</tr>
<tr>
<td>5. Non-Member Trainees**</td>
<td>$295</td>
<td>$420</td>
</tr>
<tr>
<td></td>
<td>(Must provide letter from employer verifying trainee status.)</td>
<td></td>
</tr>
<tr>
<td>6. Non-Member Full-Time Students**</td>
<td>$100</td>
<td>$125</td>
</tr>
<tr>
<td>7. IAI Members** and AFTE Members**</td>
<td>$295</td>
<td>$420</td>
</tr>
<tr>
<td>8. Daily Registrants</td>
<td>$145/day</td>
<td>$160/day</td>
</tr>
<tr>
<td></td>
<td>(Wednesday, Thursday, Friday, and/or Saturday admission to scientific sessions only)</td>
<td></td>
</tr>
</tbody>
</table>

*Includes admittance into AAFS sessions starting with the Tuesday evening Welcoming Reception through the Saturday morning Scientific Sessions (excludes all sessions found in section “SPECIAL FUNCTIONS” of the registration form).

**Registration Requirement:**

- **AAFS Applicants** must have a complete application on file by the January 27, 2016, pre-registration deadline.
- **Non-Member Trainees** must submit a letter from employer verifying trainee status to tmccray@aafs.org.
- **Full-Time Students** must provide a copy of spring 2016 class schedule verifying full-time status to tmccray@aafs.org.
- Not available to those in post graduate internships, residencies, or fellowships.
- **IAI and AFTE Members** must provide proof of current membership to tmccray@aafs.org.

## Pre-Registration Deadline

The deadline for pre-registration is January 27, 2016. Registration forms must be received by this date. Pre-registration forms received at the AAFS office after January 27, 2016, will be processed as on-site registrations and will cancel all Special Function selections (e.g., Breakfast and Luncheon Seminars, Workshops, and Special Sessions). Don’t delay; register today via online, mail, or scan and email your pre-registration form as soon as possible to ensure your full participation and reduced registration fees. *Faxed registration forms are not accepted.*

## Refunds

All requests for refunds must be made in writing via email (tmccray@aafs.org) or mail to the AAFS headquarters. Canceled registration fees will be refunded as follows:

- Prior to December 1: Full refund less $25 charge
- December 1-31: 75% refund
- January 1-31: 60% refund
- February 1-5: 50% refund

No refunds after February 5, 2016.

## Meeting Site

The 2016 AAFS Annual Scientific Meeting will be held at the Rio All-Suite Hotel & Casino in Las Vegas, NV.

## Guest Registration

Non-forensic scientist guest registration includes a name badge only and is not eligible for Continuing Education credit, Workshop, Special Session registration, or Certificates of Attendance; however, Breakfast Seminar and Luncheon Seminar tickets may be purchased by the pre-registration deadline. Guest registration is only available to those paying the full meeting registration fee (excludes Student registrants, Daily registrants, and Exhibit Hall Only registrants).
**American Academy of Forensic Sciences • Pre-Registration Form**

*68th Annual Scientific Meeting • February 22–27, 2016 • Las Vegas, NV*

**Pre-Registration Deadline – January 27, 2016**

**Three Ways to Register:**
- Register online at www.aafs.org
- Scan & email your registration form (both pages) to tmccray@aafs.org
- Mail your form with check, money order, or purchase order to:
  
  AAFS
  
  410 North 21st Street
  
  Colorado Springs, CO 80904

Faxed registration forms are not accepted.

**REGISTRANT INFORMATION**

<table>
<thead>
<tr>
<th>Salutation (Dr./Mr./Ms.):</th>
<th>First Name:</th>
<th>Last Name:</th>
<th>Highest Degree:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Mailing Address:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>City:</th>
<th>State/Province:</th>
<th>ZIP/Postal Code:</th>
<th>Country:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

**BADGE INFORMATION**

<table>
<thead>
<tr>
<th>Full Badge Name:</th>
<th>Badge Agency/School:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Badge City:</th>
<th>Badge State/Province:</th>
<th>Badge Country:</th>
</tr>
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<tbody>
<tr>
<td></td>
<td></td>
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</tbody>
</table>

**ADDITIONAL INFORMATION**

<table>
<thead>
<tr>
<th>Email:</th>
<th>Cell Phone:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Hotel:</th>
<th>First AAFS Meeting?</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Vocational Status:</th>
<th>Professional</th>
<th>Student</th>
<th>Academic</th>
<th>Decision Maker</th>
<th>Purchasing Agent</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Attendee Gender:</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Would you like to receive pre-meeting exhibitor mailings?</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Emergency Contact Name:</th>
<th>Emergency Contact Phone:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Non-forensic scientist guest registration includes a name badge only and is not eligible for Continuing Education credit, Workshop/Special Session registration, or Certificates of Attendance; however, Breakfast and Luncheon Seminar tickets may be purchased by the Pre-Registration deadline. Guest registration is only available to those paying the full meeting registration fee (excludes Student, Daily, and Exhibit Hall Only registrants.)

<table>
<thead>
<tr>
<th>Attending Guest:</th>
<th>Yes</th>
<th>No</th>
<th>Guest Name:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**ADA ACCOMMODATIONS**

*Please list any special dietary needs:*

Please list ADA accommodation requests:

**CONTINUING EDUCATION CREDIT**

- $100 Administrative Fee

Registrants must pick up a CE Credit Request Form at the registration counter and submit by the deadline for credit/certificate. AAFS is an accredited provider by the Accreditation Council for Continuing Medical Education (ACCME), Academy of General Dentistry (AGD), and American Association of Clinical Chemistry (ACC). In addition, credits for continuing legal education and general continuing education are offered.

**REGISTRATION FEES**

Includes admittance into AAFS sessions starting with the Tuesday evening Welcoming Reception through the Saturday morning Scientific Sessions (excludes all Special Functions). A complimentary beverage ticket is included with all registrations except Student, Daily, and Workshop Only.

<table>
<thead>
<tr>
<th>Category</th>
<th>Pre-Registration (through January 27)</th>
<th>On-Site Registration (effective January 28)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AAFS Members, Trainee Affiliates, Applicants*</td>
<td>$295</td>
<td>$420</td>
</tr>
<tr>
<td>AAFS Student Affiliates</td>
<td>$100</td>
<td>$125</td>
</tr>
<tr>
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<td>$0</td>
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<td>$420</td>
</tr>
<tr>
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<td>$100</td>
<td>$125</td>
</tr>
<tr>
<td>IAI Members*</td>
<td>$295</td>
<td>$420</td>
</tr>
<tr>
<td>AFTE Members*</td>
<td>$295</td>
<td>$420</td>
</tr>
<tr>
<td>Daily: ☐ Wed ☐ Thurs ☐ Fri ☐ Sat</td>
<td>$145/DAY</td>
<td>$160/DAY</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Workshop Only</th>
<th>See Special Functions (next page)</th>
<th>Not Available</th>
</tr>
</thead>
</table>

*Must provide/submit additional documentation by the January 27, 2016, Pre-Registration deadline (see below):*

- ♦ Applicants – Completed AAFS membership application on file with Academy Office.
- ♦ Non-Member Trainees – Letter from employer verifying trainee status.
- ♦ Non-Member Full-Time Students – Proof of full-time status.
- ♦ IAI & AFTE Members – Proof of current membership.

**Refund Policy:** All requests for refunds must be submitted via mail or email (tmccray@aafs.org). Phone and faxed requests are not accepted. Cancelled registration fees will be refunded accordingly: Dec 1-31 at 75%; Jan 1-31 at 60%; Feb 1-5 at 50%; no refunds after February 5.
### SPECIAL FUNCTIONS

The following sessions are priced separately and are not included in the Registration Fees. Special Functions fill quickly due to limited seating. Registration for all Special Functions officially closes as of the January 27, 2016, Pre-Registration deadline. AAFS has a firm policy that non-registered attendance or auditing is not permitted in these sessions. (AAFS Policy and Procedure Manual 3.1.3.3.)

<table>
<thead>
<tr>
<th>Workshops</th>
<th>Fee</th>
<th>Qty</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mon 8:30-12:00 W1 Information Does Exist Beyond the First Page of Your Google® Search!</td>
<td>$100</td>
<td></td>
<td>$125</td>
</tr>
<tr>
<td>Mon 8:30-12:00 W2 Advanced Mass Spectrometry (MS) Techniques for Forensic Analysis: What Does the Future Hold?</td>
<td>$100</td>
<td></td>
<td>$125</td>
</tr>
<tr>
<td>Mon 8:30-12:30 W3 How and Why You Can and Should Integrate Adv Imaging Techniques Into Your Daily Autopsy Practice</td>
<td>$100</td>
<td></td>
<td>$125</td>
</tr>
<tr>
<td>Mon 8:30-12:30 W4 A Cloud Descends on the Courtroom: The Impact of Cloud Computing on Evidence in the Courtroom</td>
<td>$150</td>
<td></td>
<td>$175</td>
</tr>
<tr>
<td>Mon 8:30-12:30 W5 UVIS Dental Identification Module (UDIM) – A Hands-On Workshop</td>
<td>$250</td>
<td></td>
<td>$300</td>
</tr>
<tr>
<td>Mon 8:30-12:45 W6 Frequency Occurrence in Handwriting and Hand Printing Characteristics</td>
<td>$200</td>
<td></td>
<td>$250</td>
</tr>
<tr>
<td>Mon 8:30-12:45 W7 Extreme Violence – Military vs. Civilian Crime Scene Investigation (CSI) Cases</td>
<td>$200</td>
<td></td>
<td>$250</td>
</tr>
<tr>
<td>Mon 8:30-12:50 W8 From the Ashes – Transforming the Response to Mass Disasters</td>
<td>$200</td>
<td></td>
<td>$250</td>
</tr>
<tr>
<td>Mon 8:30-12:50 W9 Strategies for Scientific Problem-Solving With Physical Evidence</td>
<td>$200</td>
<td></td>
<td>$250</td>
</tr>
<tr>
<td>Mon 8:30-12:50 W10 Practical Homicide Investigations®: Child Victims, Child Offenders, and Equivocal Death Investigations</td>
<td>$200</td>
<td></td>
<td>$250</td>
</tr>
<tr>
<td>Mon 1:00-5:00 W11 Child Homicides: The Critical Role of Interdisciplinary Expert Collaboration</td>
<td>$100</td>
<td></td>
<td>$125</td>
</tr>
<tr>
<td>Mon 1:00-5:00 W12 Development of a Reasonable Minimum Documentation Standard for Latent Prints</td>
<td>$125</td>
<td></td>
<td>$150</td>
</tr>
<tr>
<td>Mon 1:00-5:00 W14 Vaping: What You Didn’t Know About Electronic Cigarettes – And Why You Should Care</td>
<td>$125</td>
<td></td>
<td>$150</td>
</tr>
<tr>
<td>Mon 1:00-5:00 W15 Addressing Damaged Mobile Devices for Data Acquisition</td>
<td>$150</td>
<td></td>
<td>$175</td>
</tr>
<tr>
<td>Tues 8:30-12:00 W16 The American Academy of Forensic Sciences (AAFS) Humanitarian and Human Rights Resource Center</td>
<td>$100</td>
<td></td>
<td>$125</td>
</tr>
<tr>
<td>Tues 8:30-12:00 W17 Postmortem Monocular Indirect Ophthalmoscopy (PMIO)</td>
<td>$150</td>
<td></td>
<td>$175</td>
</tr>
<tr>
<td>Tues 8:30-12:15 W18 Improving Your Image: How to Get the Best Out of Your Expensive X-Ray Equipment</td>
<td>$100</td>
<td></td>
<td>$125</td>
</tr>
<tr>
<td>Tues 8:30-12:30 W19 Diversity and Inclusion at the Forensic Science Workplace</td>
<td>$100</td>
<td></td>
<td>$125</td>
</tr>
<tr>
<td>Tues 8:30-1:00 W20 On the Leading Edge of Forensic Science</td>
<td>$100</td>
<td></td>
<td>$125</td>
</tr>
<tr>
<td>Tues 8:30-5:00 W21 Crime Assessment: Solving Crime Beyond Profiling</td>
<td>$200</td>
<td></td>
<td>$250</td>
</tr>
<tr>
<td>Tues 8:30-5:00 W22 Developing a Professional Code of Ethics in Digital Forensics</td>
<td>$200</td>
<td></td>
<td>$250</td>
</tr>
<tr>
<td>Tues 8:30-5:00 W23 Considerations for Implementing Next Generation Sequencing (NGS) Technologies Into a Forensic Lab</td>
<td>$250</td>
<td></td>
<td>$300</td>
</tr>
<tr>
<td>Tues 1:00-4:30 W24 Elder Abuse and Neglect: What’s Happening to Grandma?</td>
<td>$100</td>
<td></td>
<td>$125</td>
</tr>
</tbody>
</table>

### PAYMENT PROCESSING

Registrant Name: ________________________________

- Continuing Education Fee (From Page 1): $ __________
- Registration Fee (From Page 1): $ __________
- Special Functions Total (From Above): $ __________
- TOTAL AMOUNT DUE: $ __________

All payments to AAFS must be in US Funds drawn on a US bank. Attendee will automatically receive a registration confirmation via email.

Email a receipt copy to: ________________________________

**AAFS FEIN: 87-0287045**
ABOUT THE AAFS

For sixty-eight years, the American Academy of Forensic Sciences (AAFS) has served a distinguished and diverse membership. Its over 7,000 members are divided into eleven sections spanning the forensic enterprise. Included among the Academy’s members are physicians, attorneys, dentists, toxicologists, anthropologists, document examiners, digital evidence experts, psychiatrists, engineers, physicists, chemists, criminalists, educators, and others. Representing all 50 United States, Canada, and 68 other countries worldwide, they actively practice forensic science and, in many cases, teach and conduct research in the field as well. Each section provides opportunities for professional development, personal contacts, awards, and recognition. Many sections publish periodic newsletters and mailings which keep their members abreast of activities and developments in their fields.

As a professional society dedicated to the application of science to the law, the AAFS is committed to the promotion of education and the elevation of accuracy, precision, and specificity in the forensic sciences. It does so via the Journal of Forensic Sciences (its internationally recognized scientific journal), newsletters, its annual scientific meeting, the conduct of seminars and meetings, and the initiation of actions and reactions to various issues of concern. For its members and affiliates, AAFS provides expert witness referrals, job opportunity listings, as well as scientific reference studies. As the world’s most prestigious forensic science organization, the AAFS represents its membership to the public and serves as the focal point for public information concerning the forensic science profession. Founded in 1948, the AAFS is headquartered in Colorado Springs, CO.

AAFS Annual Scientific Meeting

Each February, the AAFS scientific meeting gathers together approximately 5,000 world-renowned professionals to present the most current information, research, and updates in their fields. More than 1,000 scientific papers, seminars, workshops, and other special sessions are presented. In addition, approximately 180 exhibitors will be present to showcase the cutting-edge technology and services of this ever-changing profession.

Future Annual Meetings

2017 AAFS Annual Meeting
February 13-18, 2017
Hyatt Regency New Orleans
New Orleans, LA

2018 AAFS Annual Meeting
February 19-24, 2018
Washington State Convention Center
Seattle, WA

2019 AAFS Annual Meeting
February 18-23, 2019
The Baltimore Convention Center
Baltimore, MD

2020 AAFS Annual Meeting
February 17-22, 2020
Anaheim Convention Center
Anaheim, CA

2021 AAFS Annual Meeting
February 15-20, 2021
George R. Brown Convention Center
Houston, TX

410 North 21st Street
Colorado Springs, CO 80904
Phone: (719) 636-1100
Fax: (719) 636-1993
Email: membership@aafs.org
Website: www.aafs.org

Anne Warren, Executive Director
OFFICERS & OFFICIALS

Officers

President: Victor W. Weedn, MD, JD
President-Elect: John E. Gerns, MFS
Past President: Daniel A. Martell, PhD
Vice President: Zeno J. Geradts, PhD
Vice President: Norm Sauer, PhD
Secretary: Susan M. Ballou, MS
Treasurer: Betty Layne DesPortes, JD, MS

Directors

Anthropology: Laura C. Fulginiti, PhD
Criminalistics: C. Ken Williams, MS, JD
Digital & Multimedia Sciences: David W. Baker, MFS
Engineering Sciences: Laura L. Liptai, PhD
General: Julie A. Howe, MBA
Jurisprudence: Roderick T. Kennedy, JD
Odontology: John P. Kenney, DDS, MS
Pathology/Biology: Gregory G. Davis, MD
Psychiatry & Behavioral Science: Christopher R. Thompson, MD
Questioned Documents: Carl R. McClary, BA
Toxicology: Ruth E. Winecker, PhD

2016 Annual Scientific Meeting Program Committee

Program Chair: Andrew M. Baker, MD
Program Co-Chair: Julie A. Howe, MBA
Plenary Session: Matthew R. Wood, MS; Joanna L. Collins, MFS
Poster Sessions: Tanisha V. Henson, MFS; Vincent J. Desiderio, Jr., MS
Workshops: Jane A. Lewis, MFS; Christopher R. Thompson, MD
Breakfast Seminars: Adam J. Freeman, DDS; Laura C. Fulginiti, PhD
Luncheon Seminars: Jeffery K. Tomberlin, PhD; Gregory G. Davis, MD
Last Word Society: James E. Sturs, LLM; Kenneth E. Melson, JD
Bring Your Own Slides: Michael M. Baden, MD; Joseph A. Prahlow, MD
Student Academy: Julie A. Howe, MBA; Marilyn T. Miller, EdD
Interdisciplinary Symposium: Jeri D. Roper-Miller, PhD; Marla E. Carroll, BS
Local Arrangements: Lisa A. Gavin, MD
Anthropology: Gregory E. Berg, PhD; Kate Spradley, PhD
Criminalistics: Vincent J. Desiderio, Jr., MS; Kristy Kadoh, PhD
Digital & Multimedia Sciences: Samuel I. Brothers, BBA; Jeff M. Smith, MS
Engineering Sciences: David Pienkowski, PhD
General: Arthur S. Chancellor, MA; Melissa A. Connor, PhD
Jurisprudence: Lauri Traub, JD; Ted W. Vosk, JD
Odontology: Adam J. Freeman, DDS
Pathology/Biology: Joyce L. deJong, DO
Psychiatry & Behavioral Science: R. Gregg Dwyer, MD, EdD; Varendra Gosein, MD
Questioned Documents: Jan S. Kelly, BA
Toxicology: Fiona J. Couper, PhD; Nikolas P. Lemos, PhD
OFFICERS & OFFICIALS

Past Presidents

*R.B.H. Gradwohl, MD .......................... 1949-51
*S.A. Levinson, MD, PhD ................ 1951-52
*R.N. Harger, PhD .............................. 1952-53
*Louis P. Regan, MD, LLB ............ 1953-54
*A.W. Freireich, MD ......................... 1954-55
*Fred E. Inbau, BS, LLB, LLM ...... 1955-56
*Alan R. Moritz, MD ....................... 1956-57
*Val B. Satterfield, MD ................. 1957-58
*John F. Williams, BS ..................... 1958-59
*Ordway Hilton, MA ....................... 1959-60
*Russel S. Fisher, MD ..................... 1960-61
*S.R. Gerber, MD, LLB ................. 1961-62
*Milton Helsper, MD ....................... 1962-63
*Oliver C. Schroeder, Jr., JD .... 1963-64
*Dwight M. Palmer, MD ............ 1964-65
*Robert B. Forney, PhD ............... 1965-66
*Jack L. Sachs, JD ......................... 1966-67
*Charles S. Petty, MD ............... 1967-68
*Maier I. Tuchler, MD ..................... 1968-69
*James W. Osterburg, MPA ............... 1969-70
*Edwin C. Conrad, JD, PhD .......... 1970-71
*Cyril H. Wecht, MD, JD ............. 1971-72
*Douglas M. Lucas, MSc, DSc .... 1972-73
*Morton F. Mason, PhD ................. 1973-74
*David A. Crown, DCrim ........... 1974-75
*Robert J. Joling, JD ............... 1975-76
*James T. Weston, MD ............... 1976-77
*B. Edward Whittaker, BS .......... 1977-78
*Kurt M. Dubowski, PhD .......... 1978-79
*June K. Jones, MS ...................... 1979-80
*Lowell J. Levine, DDS ............ 1980-81
*Joseph H. Davis, MD ............... 1981-82
*Anthony Longhetti, BA .............. 1982-83

*George E. Gantner, MD .......... 1983-84
*Maureen Casey Owens, AB ..... 1984-85
*Arthur D. Goldman, DMD ........ 1985-86
*Don Harper Mills, JD, MD .... 1986-87
*Yale H. Caplan, PhD .............. 1987-88
*Richard S. Frank, BS ............. 1988-89
*Richard C. Froede, MD .......... 1989-90
*Ellis R. Kerley, PhD ............... 1990-91
*Homer R. Campbell, Jr., DDS ... 1991-92
*Marina Stajić, PhD ................. 1992-93
*Enrico N. Togneri, BA ....... 1993-94
*Steven C. Batterman, PhD .... 1994-95
*Haskell M. Pitluck, JD ........ 1995-96
*Richard Rosner, MD .............. 1996-97
*Michael A. Peat, PhD .......... 1997-98
*Barry A.J. Fisher, MS, MBA ... 1998-99
*Patricia J. McFeeley, MD ...... 1999-00
*John D. McDowell, DDS, MS ... 2000-01
*Mary Fran Ernst, BLS .......... 2001-02
*Graham R. Jones, PhD .......... 2002-03
*Kenneth E. Melson, JD ........ 2003-04
*Ronald L. Singer, MS ........ 2004-05
*Edmund R. Donoghue, MD .... 2005-06
*James G. Young, MD ........ 2006-07
*Bruce A. Goldberger, PhD ...... 2007-08
*Carol E. Henderson, JD .... 2008-09
*Thomas L. Bohan, PhD, JD ... 2009-10
*Joseph P. Bono, MA .......... 2010-11
*Douglas H. Ubelaker, PhD ... 2011-12
*Robert E. Barsley, DDS, JD ... 2012-13
*Barry K. Logan, PhD .... 2013-14
*Daniel A. Martell, PhD ...... 2014-15

* Deceased
Section Officers

Anthropology
Chair: Phoebe R. Stubblefield, PhD
Secretary: Angi M. Christensen, PhD

Criminalistics
Chair: John J. Lentini, BA
Secretary: Karolyn L. Tontarski, MS

Digital & Multimedia Sciences
Chair: Rhesa G. Gilliland, MS
Secretary: Marcus Rogers, PhD

Engineering Sciences
Chair: John Nixon, MBA
Secretary: Michelle R. Hoffman, MS

General
Chair: Claire E. Shepard, MS
Secretary: Joanna L. Collins, MFS

Jurisprudence
Chair: Christine Funk, JD
Secretary: Stephanie Domitrovich, JD, PhD

Odontology
Chair: Iain A. Pretty, DDS, PhD
Secretary: Raymond G. Miller, DDS

Pathology/Biology
Chair: Kathryn H. Haden-Pinneri, MD
Secretary: James Louis Caruso, MD

Psychiatry & Behavioral Science
Chair: Karen B. Rosenbaum, MD
Secretary: Dean Michael De Crisce, MD

Questioned Documents
Chair: Thomas W. Vastrick, BS
Secretary: Linton Mohammed, PhD

Toxicology
Chair: Sarah Kerrigan, PhD
Secretary: Dan T. Anderson, MS

R.B.H. Gradwohl Laureates

*Milton Helpern, MD ........................................... 1978
*Rolla N. Harger, PhD ........................................ 1979
*James T. Weston, MD ....................................... 1984
*Oliver C. Schroeder, Jr., JD ................................ 1987
Abel M. Dominguez, PhD .................................. 1993
Douglas M. Lucas, MSc, DSc ............................... 1995
Kenneth S. Field, MBA ...................................... 1997
*Sidney Kaye, PhD ........................................... 1998
*Richard C. Froede, MD .................................... 2002
*Joseph H. Davis, MD ...................................... 2005
Barry A.J. Fisher, MS, MBA ................................. 2008
Kurt M. Dubowski, PhD ................................... 2011
James E. Starrs, LLM ....................................... 2012
Thomas T. Noguchi, MD .................................. 2015

Douglas M. Lucas Medalists

Sir Alec J. Jeffreys, DPhil .................................... 1999
*Alan S. Curry, PhD ......................................... 2002
Joseph Almog, PhD ......................................... 2005
*Clyde C. Snow, PhD ........................................ 2008
Pierre A. J.-L. Margot, PhD ................................. 2011
Duarte N. Vieira, PhD, MD ................................. 2014

* Deceased
# OFFICERS & OFFICIALS

## Distinguished Fellows

<table>
<thead>
<tr>
<th>Name</th>
<th>Year</th>
<th>Name</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abel M. Dominguez, PhD</td>
<td>1990</td>
<td>Robert B. J. Dorion, DDS</td>
<td>2002</td>
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<td>Kenneth S. Field, MBA</td>
<td>1990</td>
<td>Richard S. Frank, BS</td>
<td>2002</td>
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<td>*Ordway Hilton, MA</td>
<td>1990</td>
<td>Carla M. Noziglia, MS</td>
<td>2003</td>
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<tr>
<td>Douglas M. Lucas, MSc, DSc</td>
<td>1990</td>
<td>James L. Frost, MD</td>
<td>2004</td>
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<tr>
<td>Irwin N. Perr, MD, JD</td>
<td>1990</td>
<td>*Gerald L. Vale, DDS, JD</td>
<td>2004</td>
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<td>Kurt M. Dubowski, PhD</td>
<td>1991</td>
<td>Michael Finnegan, PhD</td>
<td>2005</td>
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<tr>
<td>*June K. Jones, MS</td>
<td>1991</td>
<td>Michael A. Peat, PhD</td>
<td>2006</td>
</tr>
<tr>
<td>*Oliver C. Schroeder, Jr., JD</td>
<td>1991</td>
<td>Thomas T. Noguchi, MD</td>
<td>2007</td>
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<tr>
<td>*Clyde C. Snow, PhD</td>
<td>1991</td>
<td>Kenneth E. Melson, JD</td>
<td>2008</td>
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<td>*Richard C. Froede, MD</td>
<td>1992</td>
<td>Randy L. Hanzlick, MD</td>
<td>2009</td>
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<tr>
<td>*Emanuel Tanay, MD</td>
<td>1992</td>
<td>Jay A. Siegel, PhD</td>
<td>2009</td>
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<td>*Joseph H. Davis, MD</td>
<td>1993</td>
<td>Ronald L. Singer, MS</td>
<td>2010</td>
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<td>*Anthony Longhetti, BA</td>
<td>1993</td>
<td>*Robert Thibault, M.F.S</td>
<td>2010</td>
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<tr>
<td>*Don Harper Mills, JD, MD</td>
<td>1993</td>
<td>Mary Fran Ernst, BLS</td>
<td>2011</td>
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<td>William M. Bass III, PhD</td>
<td>1994</td>
<td>Patricia J. McFeeley, MD</td>
<td>2011</td>
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<tr>
<td>Henry C. Lee, PhD</td>
<td>1994</td>
<td>Richard Rosner, MD</td>
<td>2011</td>
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<tr>
<td>Charles J. Stahl III, MD</td>
<td>1995</td>
<td>Haskell M. Piituck, JD</td>
<td>2012</td>
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<tr>
<td>*Irving Sunshine, PhD</td>
<td>1995</td>
<td>John D. McDowell, DDS, MS</td>
<td>2013</td>
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<tr>
<td>Yale H. Caplan, PhD</td>
<td>1996</td>
<td>Marina Stajić, PhD</td>
<td>2013</td>
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<td>James E. Starrs, LL.M.</td>
<td>1996</td>
<td>Edmund R. Donohue, MD</td>
<td>2014</td>
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<tr>
<td>*Homer R. Campbell, Jr, DDS</td>
<td>1998</td>
<td>Graham R. Jones, PhD</td>
<td>2014</td>
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<td>John J. Harris, BS</td>
<td>1998</td>
<td>Marilyn A. Huestis, PhD</td>
<td>2015</td>
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<tr>
<td>*James V.P. Conway</td>
<td>2000</td>
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<tr>
<td>Robert E. Gaesslen, PhD</td>
<td>2000</td>
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<td>Steven C. Batterman, PhD</td>
<td>2001</td>
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<tr>
<td>*B.G. Brogdon, MD</td>
<td>2001</td>
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<tr>
<td>Barry A.J. Fisher, MS, MBA</td>
<td>2001</td>
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*Deceased
GENERAL INFORMATION

Registration Desk Hours
Rio All-Suite Hotel & Casino

<table>
<thead>
<tr>
<th>Day</th>
<th>Start Date</th>
<th>Start Time</th>
<th>End Time</th>
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<tbody>
<tr>
<td>Sunday</td>
<td>February 21</td>
<td>1:00 p.m.</td>
<td>5:00 p.m.</td>
</tr>
<tr>
<td>Monday</td>
<td>February 22</td>
<td>6:45 a.m.</td>
<td>5:00 p.m.</td>
</tr>
<tr>
<td>Tuesday</td>
<td>February 23</td>
<td>6:45 a.m.</td>
<td>6:00 p.m.</td>
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<tr>
<td>Wednesday</td>
<td>February 24</td>
<td>6:45 a.m.</td>
<td>5:00 p.m.</td>
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<tr>
<td>Thursday</td>
<td>February 25</td>
<td>6:45 a.m.</td>
<td>5:00 p.m.</td>
</tr>
<tr>
<td>Friday</td>
<td>February 26</td>
<td>6:45 a.m.</td>
<td>4:00 p.m.</td>
</tr>
<tr>
<td>Saturday</td>
<td>February 27</td>
<td>7:30 a.m.</td>
<td>9:30 a.m.</td>
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</tbody>
</table>

Exhibit Hall Hours
Rio All-Suite Hotel & Casino

<table>
<thead>
<tr>
<th>Day</th>
<th>Start Date</th>
<th>Start Time</th>
<th>End Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wednesday</td>
<td>February 24</td>
<td>11:30 a.m.</td>
<td>4:00 p.m.</td>
</tr>
<tr>
<td>Thursday</td>
<td>February 25</td>
<td>9:00 a.m.</td>
<td>2:00 p.m.</td>
</tr>
<tr>
<td>AAFS Reception</td>
<td>(Exhibits Open)</td>
<td>6:00 p.m.</td>
<td>8:00 p.m.</td>
</tr>
<tr>
<td>Friday</td>
<td>February 26</td>
<td>9:00 a.m.</td>
<td>1:00 p.m.</td>
</tr>
</tbody>
</table>

Attention Meeting Presenters

The Journal of Forensic Sciences encourages authors to submit previously unpublished reports and papers presented at the annual meeting.

Consult “Editorial Communications” which appears in each edition of the Journal for full instructions on manuscript preparation. Authors are encouraged to submit their manuscripts electronically via Manuscript Central: http://mc.manuscriptcentral.com/jofs. Alternately, manuscripts may be sent to:

Michael A. Peat, PhD
Editor, Journal of Forensic Sciences
6700 Woodlands Parkway, Suite 230-308
The Woodlands, TX 77381
Fax: (281) 419-6236
jfs.editor@att.net

Video and/or audio recording of any session(s) or parts thereof is not permitted without prior approval from the American Academy of Forensic Sciences.

English is the official language of the AAFS and its meetings; neither oral nor written translations will be provided.

Although precautions are taken to prevent schedule changes, speakers and program schedules may change due to unforeseen circumstances.

As a courtesy to others, meeting attendees are asked to turn off their cell phones when attending the sessions. If a phone conversation must be held, please step outside of the meeting room.
AWARDS & RECEPTIONS

The Distinguished Fellow Award will be presented on Wednesday, February 24, during the AAFS Annual Business Meeting. Join us in acknowledging your most distinguished colleague as he is presented with this prestigious award.

Distinguished Fellow Honoree

Douglas H. Ubelaker, PhD

AAFS Outstanding Early Career Achievement in Forensic Science Award

The AAFS Outstanding Early Career Achievement in Forensic Science Award will be presented on Wednesday, February 24, during the AAFS Annual Business Meeting. You’ll want to be present to congratulate recipient:

Cliff Akiyama, MPH, MA

Section Awards will be presented during Section Business Meetings, also on Wednesday, February 24 (see Section Business Meeting start times on page 15). The Section Award recipients will be acknowledged again before the entire membership during the AAFS Annual Business Meeting along with the presentation of the Distinguished Fellow and the AAFS Outstanding Early Career Achievement in Forensic Science Awards.

2016 Section Award Honorees

Anthropology Section’s
T. Dale Stewart Award
J. Lawrence Angel Award
Ellis R. Kerley Foundation Best Paper Award
Service Award

Criminalistics Section’s
Paul L. Kirk Award
Mary E. Cowan Outstanding Service Award
Meritorious Service Award

Digital & Multimedia Sciences Section’s
Outstanding Research Award
Outstanding Case Study Award

Carrie Morgan Whitcomb Service Award

Engineering Sciences Section’s
Founders Award
Andrew H. Payne, Jr., Special Achievement Award

General Section’s
Robert Gaffney Achievement Award
John R. Hunt Award
Paul W. Kehres Meritorious Service Award

Bruce E. Anderson, PhD
Valda Black, MA
Derek Congram, PhD
William M. Bass III, PhD
William R. Belcher, PhD
Ann H. Ross, PhD

Christopher R. Bommarito, MS
Marie Samples, MS
Thomas A. Brettell, PhD

Kathryn C. Seigfried-Spellar, PhD
Thomas L. Murray, MS
Joseph Levi White, MS
Zeno J. Geradts, PhD

Peter Alexander, PhD
Kurt D. Weiss, MS
Mark C. Pozzi, MS

Catherine G. Rushton, MSFS
Virginia A. Lynch, MSN
Richard D. Walter, MA
Odontology Section’s
Reidar F. Sognnaes Award of Excellence in Forensic Odontology
Duane E. Spencer, DDS

Pathology/Biology Section’s
2015 Best Resident Paper Award Honorable Mention
Melissa M. Blessing, DO
2015 Best Resident Paper Award
Gregory G. Davis, MD
Milton Helpern Award
Thomas T. Noguchi, MD

Psychiatry & Behavioral Science Section’s
Maier I. Tuchler Award
Christopher R. Thompson, MD

Toxicology Section’s
Alexander O. Gettler Award
Mahmoud A. ElSohly, PhD
Rolla N. Harger Award
J. Rod McCutcheon, BS
Ray Abernethy Award
Robert Kronstrand, PhD
Irving Sunshine Award
Erin A. Spargo, PhD

2016 AAFS Regional Award Winners
Midwestern Association of Forensic Scientists
Mark Goff, BA
Southwestern Association of Toxicologists
Heidi Christensen, BS

2015-16 FSF Emerging Forensic Scientist Award Honorees
The FSF Emerging Forensic Scientist Award will be presented on Wednesday, February 24, 2016, during the AAFS Annual Business Meeting. You’ll want to be present to congratulate recipients:

Whitney A. Simpson, BS and Federica Collini, MD

2015-16 FSF Henry C. Lee Scholarship Recipient
The FSF Henry C. Lee Scholarship will be presented on Wednesday, February 24, 2016, during the AAFS Annual Business Meeting. You’ll want to be present to congratulate recipient:

Mithun Rajshekar, MFSc

2015-16 FSF Jan S. Bashinski Criminalistics Graduate Thesis Assistance Grant
The FSF Jan S. Bashinski Criminalistics Graduate Thesis Assistance Grant will be presented on Wednesday, February 24, 2016, during the Criminalistics Section Business Meeting. You’ll want to be present to congratulate recipient:

Sarah Riman, PhD

Reception Information
Welcoming Reception — Tuesday, February 23 — 6:00 p.m. - 8:00 p.m.
This opening event is your opportunity to meet old friends and to make new acquaintances. Snacks and cash bars will be available.

AAFS 68th Annual Wine & Cheese Reception — Thursday, February 25 — 6:00 p.m. - 8:00 p.m.
The AAFS Wine & Cheese Reception will be held to celebrate what promises to be an excellent 2016 program and to toast your return to the Academy’s 69th Annual Scientific Meeting in 2017 (New Orleans, LA)!
The Sections

The Sections of the American Academy of Forensic Sciences will hold their annual business meetings on Wednesday, February 24. Some of the sections will hold a luncheon prior to the start of the business meeting. This is your opportunity to participate! Please attend and contribute to your section’s future plans. Specific times are noted below:

<table>
<thead>
<tr>
<th>Section</th>
<th>Luncheon</th>
<th>Business Meeting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anthropology</td>
<td>2:00 p.m. - 3:45 p.m.</td>
<td></td>
</tr>
<tr>
<td>Criminalistics¹</td>
<td>12:00 p.m. - 1:00 p.m.</td>
<td>1:05 p.m. - 3:45 p.m.</td>
</tr>
<tr>
<td>Digital &amp; Multimedia Sciences²</td>
<td>12:00 p.m. - 1:45 p.m.</td>
<td>2:00 p.m. - 3:45 p.m.</td>
</tr>
<tr>
<td>Engineering Sciences</td>
<td></td>
<td>1:30 p.m. - 3:45 p.m.</td>
</tr>
<tr>
<td>General¹</td>
<td>12:00 p.m. - 1:15 p.m.</td>
<td>1:30 p.m. - 3:45 p.m.</td>
</tr>
<tr>
<td>Jurisprudence¹</td>
<td>12:00 p.m. - 1:45 p.m.</td>
<td>2:00 p.m. - 3:45 p.m.</td>
</tr>
<tr>
<td>Odontology</td>
<td></td>
<td>2:00 p.m. - 3:45 p.m.</td>
</tr>
<tr>
<td>Pathology/Biology¹</td>
<td>12:00 p.m. - 1:30 p.m.</td>
<td>1:45 p.m. - 3:45 p.m.</td>
</tr>
<tr>
<td>Psychiatry &amp; Behavioral Science²</td>
<td>12:00 p.m. - 1:45 p.m.</td>
<td>2:00 p.m. - 3:45 p.m.</td>
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<tr>
<td>Questioned Documents</td>
<td></td>
<td>2:00 p.m. - 3:45 p.m.</td>
</tr>
<tr>
<td>Toxicology¹</td>
<td>12:00 p.m. - 1:45 p.m.</td>
<td>2:00 p.m. - 3:45 p.m.</td>
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</tbody>
</table>

¹ These luncheons require pre-registration.
² This luncheon requires pre-registration and is open only to members of the Psychiatry & Behavioral Science Section.

The Annual Business Meeting of Fellows and Members — Attend to Win a Complimentary Meeting Registration!

The Annual Business Meeting of the Fellows and Members of AAFS will be held Wednesday, February 24, at 4:15 p.m., at the Rio All-Suite Hotel & Casino in Las Vegas, NV. It is essential that all Fellows and Members attend this very important meeting in order to reach a quorum for the voting process. Agenda items include the election of 2016-17 Officers, consideration of bylaws amendments, presentation of the Distinguished Fellow Award, and recognition of all Members being promoted to Fellow status. You also will be briefed on AAFS activities during the past year and plans for the future.

As an incentive to attend, all Fellows and Members present will automatically be entered in a drawing for a complimentary meeting registration to attend the 2017 AAFS Annual Scientific Meeting in New Orleans, LA.
WELCOME TO LAS VEGAS, NEVADA

One thing is for sure - Las Vegas is a city that needs no introduction. With its five-star resorts, world-class restaurants and boutiques, and spectacular entertainment and nightlife, Nevada’s largest city has long outgrown its adult playground reputation. It has truly earned its spot as one of the world’s premier destinations. Nicknamed the “Entertainment Capital of the World,” it is situated in the Mojave Desert of Southern Nevada. The city features many mega-hotel/casino complexes decorated with lavish care and attention to detail creating a fantasy-like environment.

Climate

Las Vegas has an arid climate with sunny, dry, and extremely hot summers. Winter is much cooler with daytime highs averaging around 60°F and nighttime lows averaging about 40°F. During winter, a cold spell may set in for several days. Snowfall is quite rare in the metropolitan area itself, but the mountains surrounding the valley are topped with snow during the winter.

Transportation

By Plane
McCarran International Airport (LAS) is the main airport serving the Las Vegas area. It is the 24th busiest airport in the world in terms of passengers and 8th in terms of takeoffs and landings. There are two passenger terminals, Terminal 1 and Terminal 3. Terminal 1 services Allegiant, American, Delta, Omni, Southwest, Spirit Airlines, and Vision. Terminal 3 services domestic carriers Alaska, Frontier, Hawaiian, JetBlue, Sun Country, United, and Virgin America, as well as international carriers such as Aeromexico, Air Canada, British Airways, Condor, Copa, Edelweiss, Interjet, Korean Air, MagniCharters, Sunwing, Thomas Cook, Virgin Atlantic, VivaAerobus, Volaris, and WestJet.

By Train
There are no direct rail services into Las Vegas per se. Below are the nearest train routes with an Amtrak Thruway Motorcoach shuttling passengers between Las Vegas and the nearest Amtrak station:

- Amtrak’s Southwest Chief operates daily service from Los Angeles, CA and Albuquerque, NM to Kingman, AZ located 112 miles south of Las Vegas. From Kingman, you may purchase Amtrak Thruway Motorcoach service to Las Vegas.
- Amtrak’s San Joaquin Route operates between Stockton, CA and Bakersfield, CA. From Bakersfield, Amtrak operates two daily Thruway Motorcoaches to Las Vegas.

By Car
The main highway connecting Las Vegas with the rest of the country is I-15; it links Montana, Idaho, and Utah with Southern California. The drive from Los Angeles is quite popular and can get very crowded on weekends as hopeful gamblers make their way to and from Las Vegas.

From the east, take I-70 or I-80 west to Kingman, Arizona, and then U.S. 93 north to Downtown Las Vegas. From the south, take I-10 west to Phoenix, and then U.S. 93 north to Las Vegas. From San Francisco, take I-80 east to Reno, and then U.S. 95 south to Las Vegas. Vegas is 286 miles from Phoenix, 759 miles from Denver, 421 miles from Salt Lake City, 269 miles from Los Angeles, and 586 miles from San Francisco.

International visitors should note that insurance and taxes are almost never included in quoted rental-car rates in the U.S. Be sure to ask your rental agency about these. They can add a significant cost to your car rental.

Getting Around Las Vegas

By Car
Though you can get around central Las Vegas adequately without a car, the best way to experience the city can be to drive it. A car gives you easy access to all the casinos and attractions; lets you make excursions to Lake Mead, Hoover Dam, and elsewhere at your leisure; and gives you the chance to cruise the Strip and bask
in its neon glow. If you plan to spend most of your time on the
Strip, a car may not be worth the trouble, but if you plan on seeing
the sights in and around Las Vegas, renting or bringing a car is a
good idea.

Parking on and around the Strip, although free, can require a
bit of work. You’ll have to brave some rather immense parking
structures. Parking at the Rio All-Suite Hotel & Casino is
complimentary for hotel guests! Valet parking is available but
can take a while at busy times and requires that you tip the valets
($2 to $3). Still, it’s usually less expensive to rent a car and drive
around Vegas, or to use the monorail (or even—gasp!—to walk),
than to cab it everywhere.

By Taxi
One of the easiest ways to get around is by taxi. It is relatively
cheap to go from hotel to hotel, but be aware that since traffic
is often so congested on the strip, taking a taxi often isn’t much
faster than walking. The taxi driver is required to use the meter
and to take the shortest route to your destination. There is a
surcharge for rides originating at the airport, but not for extra
passengers. Taxi lines (queues) are typically found at the front of
hotels. Cabs aren’t allowed to pick up passengers on the street, so
you can’t hail a cab New York–style. You have to wait in a hotel
taxi line or call a cab company. If you dine at a restaurant off the
Strip, the restaurant will call a cab to take you home.

Fares
The fare is $3.30 on the meter when you get in and 20¢ for
every 1/13th mile (there’s also a $30 per-hour charge for
waiting). Taxis are limited by law to carrying a maximum of
four passengers, and there’s no additional charge per person.
No fees are assessed for luggage, but taxis leaving the airport
are allowed to add an airport surcharge of $2. The trip from the
airport to most hotels on the south end of the Strip should cost
about $13 to $16, to the north end of the Strip about $16 to $27,
and to Downtown about $22 to $26.

Tipping
Drivers should be tipped around 15% to 18% for good service.
Some drivers can’t accept credit cards (and those that do
usually add a surcharge); all drivers carry only nominal change
with them.

Suggested Routes
Be sure to specify to your driver that you don’t want to take
Interstate 15 or the airport tunnel on your way to or from the
airport. This is always the longer route distance-wise, which
means it’s the most expensive, but it can sometimes save you 5
to 10 minutes on the trip if traffic is heavy on the Strip. Drivers
who take passengers through the airport tunnel without asking
are committing an illegal practice known as “long-hauling.”

When you get in the taxi, tell the driver you want to be taken
to your hotel via Swenson Avenue, NOT, the airport tunnel.
The airport tunnel may seem faster because it connects to the
freeway and has fewer lights, but the route is several miles
longer resulting in cab fares that are $5 to $10 more. Besides, if
you hit the airport tunnel route during rush hour (8:00 a.m.-
10:00 a.m. and 4:00 p.m.-7:00 p.m.), any time savings you gain
using the freeway will disappear in the exhaust of the morning
or evening commute. So say NO to the airport tunnel (the only
tunnel in Vegas) and use the extra cash for an extra cocktail
instead.

By Shuttle Van
Shuttle service is often shared with other riders, and costs $6 to $8
per person to the Strip, $9 to $15 to Downtown, and $12 to $33
to outlying casinos (excluding tips). The vans wait for passengers
outside the terminal in marked areas. Because the vans often
make numerous stops at different hotels, it’s not the best means
of transportation if you’re in a hurry. For round-trip service, save
time and money by booking online and printing out your vouchers
beforehand.

Sources:
AARP: http://travel.aarp.org/destinations/united-states/las-
vegas/travel-tips/air-travel/
Frommers: www.frommers.com/destinations/las-vegas/
Travel Nevada: http://travelnevada.com/
WikiTravel: http://wikitravel.org/en/Las_Vegas
68th Annual Scientific Meeting Accommodations Information

AAFS 68th Annual Scientific Meeting
February 22-27, 2016
Rio All-Suite Hotel & Casino
Las Vegas, NV, U.S.A.

The American Academy of Forensic Sciences has selected the Rio All-Suite Hotel & Casino for your stay during the 68th Annual Scientific Meeting in Las Vegas, NV. The Rio All-Suite Hotel & Casino offers great amenities to help you through your stay.

For hotel availability during the American Academy of Forensic Sciences' 68th Annual Scientific Meeting, please go to the AAFS Annual Meeting “Accommodations” webpage to make your hotel reservation under the AAFS room block. By using this link on the AAFS Accommodations page, you will be taken to the hotel’s AAFS specific meetings page where you may secure your reservation at the group-contracted rate of $170 for either single or double rooms.

While early reservations are recommended to take advantage of discounted rates, please be sure to cancel your reservations prior to the Monday, January 18, 2016, deadline if you are unable to attend or you cannot use the reservations. This will make the rooms available for other attendees and will help AAFS avoid the financial penalties associated with cancellations made after the room block closes.

Rio All-Suite Hotel & Casino
3700 West Flamingo Road
Las Vegas, NV 89103
Telephone: (866) 746-7671
Reservations: (888) 746-6955
Single/Double: $170

If there’s one place that captures the rhythm of Las Vegas, it’s the Rio All-Suite Hotel & Casino. Like its namesake, the Rio draws its style and passion from Carnival, the biggest celebration on earth. With vibrant colors and a pulsing samba beat, the Rio is exotic, festive and fun. The Rio is about enjoying every moment and that spirit is just as evident in the meetings and events that happen here.

Standard Amenities:
- High-speed internet access (When Booked Through AAFS Room Block)
- Phone with voicemail
- On-demand movies, music and games
- Alarm clock radio
- In-room safe
- Refreshment center
- Iron and ironing board
- Hair dryer
- 24-hour room service
- Available dry cleaning and laundry service
- Free parking for hotel guests
- In-room coffeemaker (coffee available through mini-bar purchase)

To book within the AAFS room block, use the online reservation link or call (888) 746-6955 and request “the American Academy of Forensic Sciences group rate” or use the code “SRAFS6.” Attendees booking within the room block will not be charged the $25 daily Resort Fee and will receive complimentary in-room internet for one device. Use of the fitness center and local/1-800 number phone calls in the guest room will be billed to each guest individually based on usage. Any attendees not booked inside the AAFS room block will be charged the mandatory $25 daily resort fee per room. Attendees not booked within the AAFS block will not be able to request rate or resort fee remediation.

Booking a room in the AAFS room block is an important way to support our organization and to keep overall meeting costs as low as possible. AAFS commits to a block of rooms at the Headquarter hotel(s) on behalf of meeting attendees and has a financial obligation to fill those blocks. Please help us to avoid penalties and to control costs for future events by staying at the official hotel. Staying within the block is also more convenient and helps you stay connected with the informal activities and networking opportunities that occur at the hotels during the meeting. If you are required to reserve a room through your company’s travel department, please forward the booking link to them so that you can reserve a room in the AAFS room block.
CONTINUING EDUCATION

General Information

All meeting sessions are lectures with one or more speakers. Continuing professional education credits are offered for physicians, dentists, attorneys, and chemists. Continuing education credit applications have been submitted for physicians, dentists, attorneys, and chemists. Nurses may use the AAFS CME Credit Reporting Forms for filing CERP hours with their state accreditation agency. Please check with your state agency for details. In addition, AAFS offers a generic CE certificate which may be used for purposes not outlined above.

To register for continuing education credit, please complete the appropriate section on the meeting Registration Form. An individual must be a registrant to obtain continuing education credits. Fees charged for continuing education credits are based on projected costs of supplies and other materials needed to comply with requirements of the various continuing education accreditation agencies. The AAFS has adopted a user-pay approach so that those individuals who benefit from the specific continuing education program are responsible for the costs incurred.

In order to be in compliance with the various accrediting organizations, introductions, breaks, and lunches have been deducted from the total hours. Please note that continuing education credit is not available for all sessions. All continuing education credit recipients will receive documentation regarding the number of continuing education hours awarded. Attendance reports are filed with the appropriate state or national agency, as required.

Objectives of the AAFS Continuing Education Program

To provide for multidisciplinary presentation, instruction, and discussion of relevant forensic science issues related to science, evidence and the law, and to research descriptive studies, technology and methods, diagnostics, interpretations, testimony, and administrative functions performed by forensic scientists in the disciplines of pathology, biology, odontology, anthropology, psychiatry & behavioral science, psychology, engineering sciences, toxicology, questioned document examination, criminalistics, jurisprudence, digital & multimedia sciences, and general forensic investigation.

Expected Outcome of Participation

A participant in the AAFS Continuing Education Program should: a) understand the perspectives and roles of the various forensic science disciplines; b) increase awareness of current forensic science issues; c) learn new technologies and methods; d) broaden diagnostic acumen; e) gain practical knowledge to modify current practices; f) affirm current concepts and practices; g) improve interpretative skills regarding evidence, observations, and information; h) interact with colleagues; and, i) expand one’s historical perspective on the forensic sciences.

Faculty Disclosure Policy

As a sponsor of continuing education, the American Academy of Forensic Sciences must insure balance, independence, objectivity, and scientific rigor in all its educational activities. All faculty participating in a sponsoring activity are expected to disclose any significant financial interest or other relationship: (1) with the manufacturer(s) of any commercial product(s) and/or provider(s) of commercial services discussed in an educational presentation; and, (2) with any commercial supporters of the activity. (Significant financial interest or other relationship can include such things as grants or research support, employee, consultant, major stockholder, member of speaker’s bureaus, etc.) AAFS has an established policy regarding conflicts of interest that includes decisions the Program Committee members may make in selecting content for the Annual Scientific Meeting Program. By serving on the committee, regardless of role, each member has agreed to comply with Section 1.4.7 of the AAFS Policy and Procedure Manual.

To serve on the 2015-16 Program Committees, it is required that relevant AAFS staff members, program committee members, and/or reviewers complete a Financial Disclosure form before they were provided access to review submissions for the program. For continuing education accreditation purposes, the disclosed relationships are published below so that learners are aware of the nature of any relationships that may impact the selection of presentations for the program. If a committee member failed to provide complete disclosure of a relevant financial interest or relationship, the committee member or reviewer was not allowed to serve. The executed Faculty Disclosure Forms are on file in the AAFS Office.
American Board of Criminalists Approval

The American Academy of Forensic Sciences (AAFS) is approved by the American Board of Criminalistics (ABC) to offer continuing education points for approved workshops for criminalists and forensic scientists. The ABC maintains responsibility for the program, and credit may be awarded to ABC Fellows, Diplomates, and Affiliates.

Overall Purpose and Objective Statements for Major Aspects of AAFS Programs

Workshops and Special Sessions

**Purpose:** To provide an opportunity for experts to present material and to lead discussion and practical exercises related to forensic science methods, procedures, diagnosis, investigation, professional relations and practices, communication, administration, and professional development.

**Educational Objectives:** Detailed individually in each workshop and special session announcement and description.

**CE Credit:** Varies from 1.5 credit hours to 16 credit hours depending on sessions.

Breakfast/Luncheon Seminars

**Purpose:** To provide an opportunity for presentation and discussion of relevant historical and current topics of forensic science interest related to specific case investigations, or general or specific investigative needs and procedures, methodologies, and testimony.

**Educational Objectives:** Detailed individually in each breakfast/luncheon seminar announcement and description.

**CE Credit:** Designated for a maximum of .75 credit hour for Breakfast Seminars and 1.0 credit hour for Luncheon Seminars.

Plenary Session

**Purpose:** To provide a multidisciplinary presentation and discussion of issues related to the forensic science profession.

**Educational Objectives:** Attendees will be able to: a) identify the challenges the forensic science profession has faced and will continue to face in terms of ensuring quality; b) identify ways to deal with the variances each challenge presents; and, c) identify the entities which have influence over setting the quality standards in the field of forensic science.

**CE Credit:** Designated for a maximum of 2.0 credit hours.

Bring Your Own Slides

**Purpose:** To enable guided but spontaneous discussion and instruction related primarily to challenging death investigation cases involving forensic pathology and other related forensic science issues. Presented cases are used as a focal point for improving diagnostic methods and interpretation of pathologic findings and related evidence, and for presenting case-related information on previously unreported or rarely occurring cases which may alert forensic pathologists and scientists to information useful in future death investigations.

**Educational Objectives:** Attendees will be able to: a) discuss issues of importance regarding interpretation of selected wounds, diseases and evidence; b) provide arguments for and against opinions raised during specific case discussions; and, c) recognize when consultation with other experts may be indicated.

**CE Credit:** Designated for a maximum of 2.0 credit hours.

Oral and Poster Section Scientific Sessions

**Purpose:** To provide an opportunity for presentation and discussion of case reports, descriptive studies, review presentations, research, administrative issues, and investigative/diagnostic methods regarding topics and issues of importance to a primary discipline among the forensic sciences.

**Educational Objectives:** To meet the educational objectives stated by each presenter for his/her presentation.

**CE Credit:** Varies according to the individual’s session attendance. Designated for a maximum of 25.0 credit hours.

Last Word Society

**Purpose:** To provide a retrospective forensic analysis of historical events and to provide education about the history and evolution of forensic sciences as well as the modern methods and technologies used to re-examine past events of forensic science interest. Emphasis is
CONTINUING EDUCATION

placed on the evaluation of the original opinions and case outcome and on the development of newer hypotheses based on the re-analysis.

Educational Objectives: To meet the educational objectives stated by each presenter for his/her presentation.

CE Credit: Designated for a maximum of 2.0 credit hours.

Guidelines For Claiming Credit

As the sponsor of Continuing Education Credit, the AAFS recognizes that the forensic science disciplines are inextricably linked and that inter-disciplinary knowledge is critical to promote competence in forensic practice. As a result, the claiming of credit for various continuing education activities related to medicine, dentistry, law, chemistry, and other forensic disciplines need not be limited to one’s primary professional specialty. For example, a forensic pathologist from the Pathology/Biology Section may gain very useful and relevant information by attending a presentation in the Anthropology Section scientific session. It is appropriate to claim continuing medical education credit for that session. Many other examples exist where the claiming of continuing education credit is appropriate for attending sessions that cover material related to, but which lay outside of, one’s primary professional area of expertise.

It is the conference attendee’s responsibility to document which program sessions were attended and to determine those sessions for which continuing education credit may be claimed. The AAFS operates under the assumption that meeting attendees will, in general, be unlikely to attend sessions that will not be beneficial to their professional practice and that the claim for continuing education credit is justified if a session contains scientific or practice-related information that may bring new knowledge, may affirm current knowledge, or may provide information that could possibly modify one’s professional practices.

Those who wish to receive continuing education credit must register and pay for this service on the meeting Registration Form. CE Credit Request Forms will be available at the registration desk. The completed forms must be returned to AAFS by the designated deadline.

Chemistry

Application will be made to the American Association for Clinical Chemistry, Inc., in order for AAFS to offer ACCENT® credit. Credit will be awarded on an hour-for-hour basis.

Dental

The American Academy of Forensic Sciences is designated as an Approved PACE Program Provider by the Academy of General Dentistry. The formal continuing education programs of this program provider are accepted by AGD for Fellowship/Mastership and membership maintenance credit. Approval does not imply acceptance by a state or provincial board of dentistry or AGD endorsement. The current term of approval extends from 1/1/13 to 12/31/16. Provider ID: 218044

Legal

Continuing legal education credit will be awarded on an hour-for-hour basis. Attorneys may file the AAFS-issued CLE certificate with their respective state bars.

Please contact Continuing Education Coordinator Kimberly Wrasse, kwrasse@aafs.org, no later than January 7 if your state bar will not allow you to self-report. AAFS will apply for accreditation/approval from your state in this circumstance.

Medical

The American Academy of Forensic Sciences (AAFS) is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians. The American Academy of Forensic Sciences designates this live activity for a maximum of 60 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.
The American Academy of Forensic Sciences would like to thank the following supporters for their contributions to the 2016 AAFS 68th Annual Scientific Meeting:

A2LA
Agilent Technologies, Inc.
Anthropology Section
Cerilliant Corporation
Clark County Coroner’s Office
Criminalistics Section
Engineering Sciences Section
Foster & Freeman USA, Inc.
General Section
Immunalysis Corporation
Jurisprudence Section
Lipomed, Inc.
New York City OCME
NMS Labs
Pathology/Biology Section
Randox Toxicology Ltd.
The Fredric Rieders Family Renaissance Foundation
VTO Inc.
Waters Corporation
## CALENDAR OF EVENTS

### AAFS 68th Annual Scientific Meeting

#### Calendar of Events

**Saturday, February 20, 2016**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00 a.m. - 5:00 p.m.</td>
<td>American Board of Criminalistics (ABC) Board of Directors</td>
</tr>
<tr>
<td>8:00 a.m. - 5:00 p.m.</td>
<td>ABC Examination Committee</td>
</tr>
<tr>
<td>8:00 a.m. - 5:00 p.m.</td>
<td>American Board of Forensic Odontology (ABFO) Board Examination</td>
</tr>
<tr>
<td>8:00 a.m. - 5:00 p.m.</td>
<td>ABFO Dental Identification Workshop</td>
</tr>
<tr>
<td>8:30 a.m. - 5:00 p.m.</td>
<td>ASTM E30 Forensic Sciences</td>
</tr>
<tr>
<td>9:00 a.m. - 5:00 p.m.</td>
<td>Forensic Specialties Accreditation Board (FSAB) Annual Meeting</td>
</tr>
<tr>
<td>11:00 a.m. - 5:00 p.m.</td>
<td>Forensic Science Education Programs Accreditation Commission (FEPAC) Business Meeting</td>
</tr>
<tr>
<td>1:00 p.m. - 5:00 p.m.</td>
<td>ASTM E30.12 Digital and Multimedia Evidence</td>
</tr>
</tbody>
</table>

**Sunday, February 21, 2016**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00 a.m. - 5:00 p.m.</td>
<td>Forensic Science Education Programs Accreditation Commission (FEPAC) Business Meeting</td>
</tr>
<tr>
<td>8:00 a.m. - 5:00 p.m.</td>
<td>ABC Board of Directors</td>
</tr>
<tr>
<td>8:00 a.m. - 5:00 p.m.</td>
<td>ABC Examination Committee</td>
</tr>
<tr>
<td>8:00 a.m. - 5:00 p.m.</td>
<td>ABFO Expert Witness Testimony Workshop</td>
</tr>
<tr>
<td>8:00 a.m. - 5:00 p.m.</td>
<td>American National Standards Institute (ANSI) U.S. TAG ISO TC/272 Forensic Science</td>
</tr>
<tr>
<td>8:00 a.m. - 5:00 p.m.</td>
<td>ASTM E30 Forensic Sciences</td>
</tr>
<tr>
<td>9:00 a.m. - 12:00 p.m.</td>
<td>National Safety Council (NSC) Executive Board</td>
</tr>
<tr>
<td>9:00 a.m. - 5:00 p.m.</td>
<td>Forensic Specialties Accreditation Board</td>
</tr>
<tr>
<td>9:00 a.m. - 5:00 p.m.</td>
<td>International Association of Coroners &amp; Medical Examiners (IAC&amp;ME) Executive Board</td>
</tr>
<tr>
<td>1:00 p.m. - 5:00 p.m.</td>
<td>AAFS REGISTRATION OPEN</td>
</tr>
<tr>
<td>1:00 p.m. - 5:00 p.m.</td>
<td>NSC Alcohol, Drugs and Impairment Division (ADID) Annual Meeting</td>
</tr>
<tr>
<td>1:00 p.m. - 6:00 p.m.</td>
<td>AAFS Cyber Cafe</td>
</tr>
<tr>
<td>1:00 p.m. - 6:00 p.m.</td>
<td>AAFS Speaker Ready Room</td>
</tr>
<tr>
<td>6:30 p.m. - 9:30 p.m.</td>
<td>NSC Alcohol, Drugs and Impairment Division (ADID) Borkenstein Award Dinner</td>
</tr>
</tbody>
</table>

**Monday, February 22, 2016**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>6:00 a.m. - 6:00 p.m.</td>
<td>AAFS Speaker Ready Room</td>
</tr>
<tr>
<td>6:45 a.m. - 5:00 p.m.</td>
<td>AAFS REGISTRATION OPEN</td>
</tr>
<tr>
<td>7:00 a.m. - 8:30 a.m.</td>
<td>Breakfast #1: <em>Death in a Bathtub: The Defense of Drew Peterson</em> (Pre-Registration Required)</td>
</tr>
<tr>
<td>7:00 a.m. - 6:00 p.m.</td>
<td>AAFS Cyber Cafe</td>
</tr>
<tr>
<td>7:00 a.m. - 11:00 p.m.</td>
<td>Press Room</td>
</tr>
<tr>
<td>8:00 a.m. - 10:00 a.m.</td>
<td>National Institute of Standards and Technology (NIST) Organization of Scientific Area Committees (OSAC) – Digital/Multimedia Scientific Area Committee Public Status Reports &amp; Open Discussion</td>
</tr>
<tr>
<td>8:00 a.m. - 1:00 p.m.</td>
<td>ABC Educator FSAT Training</td>
</tr>
<tr>
<td>8:00 a.m. - 5:00 p.m.</td>
<td>AAFS Board of Directors</td>
</tr>
<tr>
<td>8:30 a.m. - 12:00 p.m.</td>
<td>Workshop #1: <em>Information Does Exist Beyond the First Page of Your Google Search! Tools and Strategies for Forensic Science Literature Searching and Use</em> (Pre-Registration Required)</td>
</tr>
<tr>
<td>8:30 a.m. - 12:00 p.m.</td>
<td>Workshop #2: <em>Advanced Mass Spectrometry (MS) Techniques for Forensic Analysis: What Does the Future Hold?</em> (Pre-Registration Required)</td>
</tr>
</tbody>
</table>
Las Vegas 2016

8:30 a.m. - 12:30 p.m. Workshop #3: How and Why You Can and Should Integrate Advanced Imaging Techniques Into Your Daily Autopsy Practice (Pre-Registration Required)
8:30 a.m. - 12:30 p.m. Workshop #4: A Cloud Descends on the Courtroom: The Impact of Cloud Computing on Evidence in the Courtroom (Pre-Registration Required)
8:30 a.m. - 12:30 p.m. Workshop #5: UVIS Dental Identification Module (UDIM) — A Hands-On Workshop (Pre-Registration Required)
8:30 a.m. - 4:30 p.m. Workshop #6: Frequency Occurrence in Handwriting and Hand Printing Characteristics (Pre-Registration Required)
8:30 a.m. - 4:45 p.m. Workshop #7: Extreme Violence — Military vs. Civilian Crime Scene Investigation (CSI) Cases — Forensic Analysis and Disciplines in Practice (Pre-Registration Required)
8:30 a.m. - 5:00 p.m. Workshop #8: From the Ashes — Transforming the Response to Mass Disasters (Pre-Registration Required)
8:30 a.m. - 5:00 p.m. Workshop #9: Strategies for Scientific Problem-Solving With Physical Evidence (Pre-Registration Required)
8:30 a.m. - 5:00 p.m. Workshop #10: Practical Homicide Investigation®: An Evaluation of Homicides Involving Child Victims, Child Offenders, and Equivocal Death Investigations (Pre-Registration Required)
9:00 a.m. - 5:00 p.m. IAC&ME Executive Board
9:00 a.m. - 6:00 p.m. American Board of Forensic Toxicology (ABFT) Examination Committee
10:00 a.m. - 12:00 p.m. ABFO Bitemark Committee
10:15 a.m. - 12:00 p.m. NIST OSAC – Biology/DNA Scientific Area Committee Public Status Reports & Open Discussion
1:00 p.m. - 5:00 p.m. Workshop #11: Child Homicides: The Critical Role of Interdisciplinary Expert Collaboration (Pre-Registration Required)
1:00 p.m. - 5:00 p.m. Workshop #12: Development of a Reasonable Minimum Documentation Standard for Latent Prints (Pre-Registration Required)
1:00 p.m. - 5:00 p.m. NIST OSAC – Crime Scene/Death Investigation Scientific Area Committee Public Status Reports & Open Discussion
1:30 p.m. - 5:00 p.m. Workshop #14: Vaping: What You Didn’t Know About Electronic Cigarette — And Why You Should Care (Pre-Registration Required)
1:30 p.m. - 5:00 p.m. Workshop #15: Addressing Damaged Mobile Devices for Data Acquisition (Pre-Registration Required)
3:00 p.m. - 5:00 p.m. National Association of Medical Examiners (NAME) Journal Editorial Board
4:00 p.m. - 6:00 p.m. NAME Organ and Tissue Procurement Committee
5:00 p.m. - 6:00 p.m. Consortium of Forensic Science Organizations (CFSO) Legislative Update Presentation (Open to All Meeting Attendees)
5:00 p.m. - 8:00 p.m. ABFO Combined Executive Committee and Board of Directors
6:00 p.m. - 10:00 p.m. NAME Inspection and Accreditation Training
6:00 p.m. - 11:00 p.m. NAME Executive Committee
8:00 p.m. - 10:00 p.m. ABFO Diplomates Annual Meeting

Tuesday, February 23, 2016

6:00 a.m. - 6:00 p.m. AAFS Speaker Ready Room
6:45 a.m. - 6:00 p.m. AAFS REGISTRATION OPEN
7:00 a.m. - 8:00 a.m. NAME Foundation Board of Trustee
7:00 a.m. - 8:30 a.m. Breakfast #2: Death From a Distance: The Etiology of Serial Sniper Homicides (Pre-Registration Required)
7:00 a.m. - 9:00 a.m. Toxicology Section Steering Committee
7:00 a.m. - 5:30 p.m. 46th Annual Scientific Session of the American Society of Forensic Odontology (ASFO)
CALANDER OF EVENTS

7:00 a.m. - 6:00 p.m. AAFS Cyber Cafe
7:00 a.m. - 11:00 p.m. Press Room
7:30 a.m. - 9:30 a.m. Forensic Sciences Foundation (FSF) Board of Trustees
7:30 a.m. - 9:45 p.m. International Board of Forensic Engineering Sciences (IBFES) Oral Examinations and Directors Meeting
8:00 a.m. - 12:00 p.m. ABFT Certification Examination
8:00 a.m. - 12:00 p.m. ABFT Laboratory Accreditation Committee
8:00 a.m. - 12:00 p.m. NAME Board of Directors
8:00 a.m. - 5:00 p.m. CFSO Board (Not Open to the Public)
8:00 a.m. - 5:15 p.m. National Institute of Justice (NIJ) Forensic Science Research & Development Symposium
8:30 a.m. - 12:00 p.m. Workshop #16: The American Academy of Forensic Sciences (AAFS) Humanitarian and Human Rights Resource Center (Pre-Registration Required)
8:30 a.m. - 12:00 p.m. Workshop #17: Postmortem Monocular Indirect Ophthalmoscopy (PMIO) (Pre-Registration Required)
8:30 a.m. - 12:00 p.m. NIST OSAC – Physics/Pattern Interpretation Scientific Area Committee Public Status Reports & Open Discussion
8:30 a.m. - 12:15 p.m. Workshop #18: Improving Your Image: How to Get the Best Out of Your Expensive X-Ray Equipment (Pre-Registration Required)
8:30 a.m. - 12:30 p.m. Workshop #19: Diversity and Inclusion at the Forensic Science Workplace (Pre-Registration Required)
8:30 a.m. - 12:45 p.m. FEPAC: Accreditation of Forensic Science Academic Programs Through the AAFS
8:30 a.m. - 12:45 p.m. Special Session #1: Interdisciplinary Symposium - Innovative Science — How Advances in Technology Transform Forensic Science (Pre-Registration Required)
8:30 a.m. - 1:00 p.m. Workshop #20: On the Leading Edge of Forensic Science (Pre-Registration Required)
8:30 a.m. - 5:00 p.m. Special Session #2: Young Forensic Scientists Forum (YFSF) - Viva La Forensics (Pre-Registration Required)
8:30 a.m. - 5:00 p.m. Workshop #21: Crime Assessment: Solving Crime Beyond Profiling (Pre-Registration Required)
8:30 a.m. - 5:00 p.m. Workshop #22: Developing a Professional Code of Ethics in Digital Forensics (Pre-Registration Required)
8:30 a.m. - 5:00 p.m. Workshop #23: Considerations for Implementing Next Generation Sequencing (NGS) Technologies Into a Forensic Laboratory (Pre-Registration Required)
9:00 a.m. - 10:30 a.m. AAFS 2016 Annual Meeting Program Committee Review and Breakfast
9:00 a.m. - 2:00 p.m. AAFS Student Academy
9:00 a.m. - 4:00 p.m. NAME 2016 Interim Scientific Program Registration
12:00 p.m. - 2:00 p.m. AAFS 2015 Section Officers Luncheon and Meeting
12:00 p.m. - 2:00 p.m. 46th Annual Business Meeting and Luncheon of the ASFO
12:00 p.m. - 2:30 p.m. AAFS Long Term Planning Committee (LTPC)
12:00 p.m. - 6:00 p.m. ABFT Board of Directors
12:55 p.m. - 5:15 p.m. NAME 2016 Interim Scientific Program
1:00 p.m. - 4:30 p.m. Workshop #24: Elder Abuse and Neglect: What’s Happening to Grandma? (Pre-Registration Required)
1:00 p.m. - 5:00 p.m. NIST OSAC – Chemistry/Instrumental Analysis Scientific Area Committee Public Status Reports & Open Discussion
1:30 p.m. - 3:00 p.m. FEPAC Program Directors
2:00 p.m. - 4:00 p.m. International Affairs Committee
4:00 p.m. - 6:00 p.m. FSF Theoretical Forensic Sciences “Think Tank” Committee
4:00 p.m. - 11:00 p.m. American Board of Forensic Anthropology (ABFA) Board of Directors
5:30 p.m. - 7:30 p.m. Society of Forensic Anthropologists (SOFA) Board
6:00 p.m. - 8:00 p.m. Employment Forum
6:00 p.m. - 8:00 p.m. AAFS Welcoming Reception
7:00 p.m. - 8:00 p.m. YFSF Bring Your Own Posters
7:00 p.m. - 9:00 p.m. Evening Session: The American Academy of Forensic Sciences (AAFS) Standards Development Process (Open to all Meeting Attendees)
8:00 p.m. - 10:00 p.m. Diversity and Inclusion in Forensic Sciences Reception (Open to all Meeting Attendees)
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<tr>
<th>Time</th>
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<tr>
<td>6:00 a.m.</td>
<td>AAFS Speaker Ready Room</td>
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<td>AAFS REGISTRATION OPEN</td>
<td>AAFS REGISTRATION OPEN</td>
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<td>7:00 a.m.</td>
<td>Breakfast #3: A Primer on the Structure and Activity of the National Institute of Standards and Technology’s (NIST’s) Organization of Scientific Area Committees (OSAC) (Pre-Registration Required)</td>
<td>AAFS Speaker Ready Room</td>
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<td>7:00 a.m.</td>
<td>ABC Certification Examination</td>
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<td>7:00 a.m.</td>
<td>Society of Forensic Toxicologists (SOFT) Board of Directors Interim Meeting</td>
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<td>7:00 a.m.</td>
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<td>AAFS Government Relations Committee</td>
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<td>8:00 a.m.</td>
<td>AAFS ACADEMY CUP</td>
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<td>AAFS Continuing Education Committee</td>
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<td>8:30 a.m.</td>
<td>American Dental Association (ADA) OSAC Forensic Odontology Taskforce</td>
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<td>9:00 a.m.</td>
<td>Odontology Section Science and Legal Committee (by Invitation Only)</td>
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<td>9:00 a.m.</td>
<td>AAFS PLENARY SESSION</td>
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<td>11:00 a.m.</td>
<td>AAFS Membership Application “How To” Session</td>
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<td>11:30 a.m.</td>
<td>Poster Sessions - Anthropology, Criminalistics, General, Jurisprudence, Odontology, Pathology/Biology, Psychiatry &amp; Behavioral Science</td>
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<td>11:30 a.m.</td>
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<td>12:00 p.m.</td>
<td>Criminalistics Section Luncheon (Pre-Registration Required)</td>
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<td>General Section Luncheon (Pre-Registration Required)</td>
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<td>12:00 p.m.</td>
<td>Pathology/Biology Section Luncheon (Pre-Registration Required)</td>
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<td>12:00 p.m.</td>
<td>Digital &amp; Multimedia Sciences Section Luncheon (Pre-Registration Required)</td>
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<td>12:00 p.m.</td>
<td>Toxicology Section Luncheon (Pre-Registration Required)</td>
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<td>12:00 p.m.</td>
<td>Odontology Section Executive Committee Luncheon</td>
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<td>12:30 p.m.</td>
<td>ABFA Diplomates</td>
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<td>1:00 p.m.</td>
<td>AAFS Abstract Submission “How To” Session</td>
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<td>1:00 p.m.</td>
<td>SOFT Drug Facilitated Crimes (DFC) Committee</td>
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<td>1:05 p.m.</td>
<td>Criminalistics Section Business Meeting</td>
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<td>1:30 p.m.</td>
<td>Engineering Sciences Section Business Meeting</td>
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<td>1:30 p.m.</td>
<td>General Section Business Meeting</td>
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<td>Pathology/Biology Section Business Meeting</td>
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<td>Anthropology Section Business Meeting</td>
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<td>Digital &amp; Multimedia Sciences Section Business Meeting</td>
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<td>Psychiatry &amp; Behavioral Science Section Business Meeting</td>
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<td>2:00 p.m.</td>
<td>Questioned Documents Section Business Meeting</td>
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<td>2:00 p.m.</td>
<td>Toxicology Section Business Meeting</td>
<td>Toxicology Section Business Meeting</td>
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<td>4:15 p.m.</td>
<td>AAFS ANNUAL BUSINESS MEETING &amp; AWARDS CEREMONY</td>
<td>AAFS ANNUAL BUSINESS MEETING &amp; AWARDS CEREMONY</td>
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<td>5:30 p.m.</td>
<td>SOFA General Membership Meeting</td>
<td>SOFA General Membership Meeting</td>
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<td>6:00 p.m.</td>
<td>YFSF Bring Your Own Slides (BYOS)</td>
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<td>6:30 p.m.</td>
<td>Boston University School of Medicine Alumni and Student Reception</td>
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<td>Promega Genetic Identity Reception</td>
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<td>7:00 p.m.</td>
<td>CRC Press Authors’ Reception</td>
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<td>Duquesne University MS-FSL Reception</td>
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CALENDAR OF EVENTS

Thursday, February 25, 2016

6:00 a.m. - 6:00 p.m. AAFS Speaker Ready Room
6:45 a.m. - 5:00 p.m. AAFS REGISTRATION OPEN
7:00 a.m. - 8:30 a.m. Breakfast #4: One Night in August: The I-35W Bridge Collapse in Minneapolis
(Pre-Registration Required)
7:00 a.m. - 10:00 a.m. YFSF Annual Breakfast (Pre-Registration Required)
7:00 a.m. - 6:00 p.m. AAFS Cyber Cafe
7:00 a.m. - 11:00 p.m. Press Room
7:30 a.m. - 8:00 a.m. AAFS Moderator’s “How To” Preview
7:30 a.m. - 9:00 a.m. AAFS Policy and Procedure Committee
9:00 a.m. - 11:30 a.m. Council of Federal Forensic Laboratory Directors (CFFLD)
9:00 a.m. - 2:00 p.m. EXHIBITS OPEN
11:30 a.m. - 1:00 p.m. Poster Sessions - Anthropology, Criminalistics, Engineering Sciences, General, Jurisprudence, Odontology, Pathology/Biology, Psychiatry & Behavioral Science, Questioned Documents
Posters will be available for viewing from 10:00 a.m. – 4:00 p.m. Presenting authors will be available for discussion from 11:30 a.m. – 1:00 p.m.

Scientific Sessions – Morning
8:25 a.m. - 12:15 p.m. Criminalistics Session I
8:30 a.m. - 11:30 a.m. Questioned Documents
8:30 a.m. - 11:40 a.m. Digital & Multimedia Sciences
8:30 a.m. - 11:45 a.m. Anthropology
8:30 a.m. - 11:45 a.m. Engineering Sciences
8:30 a.m. - 11:50 a.m. Psychiatry & Behavioral Science
8:30 a.m. - 12:00 p.m. General
8:30 a.m. - 12:00 p.m. Jurisprudence Session I
8:30 a.m. - 12:00 p.m. Toxicology
8:30 a.m. - 12:15 p.m. Odontology
8:30 a.m. - 12:15 p.m. Pathology/Biology Session I
8:40 a.m. - 12:00 p.m. Criminalistics Session II
9:00 a.m. - 12:00 p.m. Pathology/Biology Session II

Scientific Sessions – Afternoon
1:00 p.m. - 4:30 p.m. Digital & Multimedia Sciences
1:00 p.m. - 5:00 p.m. Multidisciplinary Session: Engineering Sciences Session/Jurisprudence Session II — The Judge as Gatekeeper
1:00 p.m. - 5:00 p.m. General
1:00 p.m. - 5:00 p.m. Psychiatry & Behavioral Science
1:00 p.m. - 5:00 p.m. Toxicology
CALENDAR OF EVENTS

Friday, February 26, 2016

6:00 a.m. - 6:00 p.m. AAFS Speaker Ready Room
6:45 a.m. - 5:00 p.m. AAFS REGISTRATION OPEN
7:00 a.m. - 8:30 a.m. Breakfast #5: Back to the Future – A Journey Across the Timelines and Possible Realities for the Future of Forensic Sciences (Pre-Registration Required)
7:00 a.m. - 8:30 a.m. Breakfast #6: Forensic Anthropology: Science Into Fiction (Pre-Registration Required)
7:00 a.m. - 4:00 p.m. AAFS Cyber Cafe
7:00 a.m. - 11:00 p.m. Press Room
8:00 a.m. - 9:15 a.m. AAFS 2016-17 Nominating Committee
9:00 a.m. - 11:00 a.m. Breakfast #6 Author Book Signing: Kathleen J. Reichs, PhD – Speaking in Bones
Books available for sale at the AAFS Sales Desk
9:00 a.m. - 1:00 p.m. EXHIBITS OPEN
9:30 a.m. - 10:30 a.m. AAFS 2016-17 Section Officers
10:30 a.m. - 11:30 a.m. AAFS 2016-17 Program Committee
11:30 a.m. - 1:00 p.m. Poster Sessions - Anthropology, Criminalistics, Digital & Multimedia Sciences, Engineering Sciences, General, Jurisprudence, Odontology, Pathology/Biology, Psychiatry & Behavioral Science, Questioned Documents
Posters will be available for viewing from 10:00 a.m. – 4:00 p.m. Presenting authors will be available for discussion from 11:30 a.m. – 1:00 p.m.

Scientific Sessions – Morning
8:25 a.m. - 12:10 p.m. Criminalistics Session II
8:25 a.m. - 12:15 p.m. Criminalistics Session I
8:30 a.m. - 11:30 a.m. Questioned Documents
8:30 a.m. - 11:40 a.m. Digital & Multimedia Sciences
8:30 a.m. - 11:50 a.m. Pathology/Biology Session II
8:30 a.m. - 12:00 p.m. General
8:30 a.m. - 12:00 p.m. Multidisciplinary Session: Pathology/Biology Session I/Toxicology
8:30 a.m. - 12:00 p.m. Psychiatry & Behavioral Science
8:30 a.m. - 12:45 p.m. Engineering Sciences
8:40 a.m. - 12:00 p.m. Jurisprudence
8:45 a.m. - 11:30 a.m. Anthropology
9:00 a.m. - 11:45 a.m. Odontology

Scientific Sessions – Afternoon
1:00 p.m. - 2:45 p.m. Digital & Multimedia Sciences
1:00 p.m. - 5:00 p.m. General
1:00 p.m. - 5:00 p.m. Psychiatry & Behavioral Science
1:00 p.m. - 5:00 p.m. Toxicology
1:00 p.m. - 5:15 p.m. Criminalistics Session II
1:00 p.m. - 5:30 p.m. Criminalistics Session I
1:15 p.m. - 4:30 p.m. Odontology
1:15 p.m. - 5:00 p.m. Jurisprudence
1:30 p.m. - 3:10 p.m. Questioned Documents
1:30 p.m. - 4:20 p.m. Pathology/Biology Session II
1:30 p.m. - 4:30 p.m. Anthropology
1:30 p.m. - 5:00 p.m. Pathology/Biology Session I
1:45 p.m. - 2:55 p.m. Engineering Sciences

12:00 p.m. - 1:30 p.m. AAFS Past Presidents Council Luncheon
12:00 p.m. - 1:30 p.m. Luncheon #2: Operation Lima Sea — Unidentified Remains of a Human Torso in Queensland, Australia: Case Report on the Collaborative Investigative and Novel Anthropological (Forensic) Responses in the Establishment of Identification (Pre-Registration Required)
5:30 p.m. - 7:30 p.m. Illumina 3rd Annual User Symposium
7:00 p.m. - 9:00 p.m. Criminalistics Evening Session: Criminalistics Believe It or Not!

Saturday, February 27, 2016

6:00 a.m. - 12:00 p.m. AAFS Speaker Ready Room
7:00 a.m. - 9:30 a.m. AAFS 2016-2017 Board of Directors
7:30 a.m. - 9:30 a.m. AAFS REGISTRATION OPEN

Scientific Sessions – Morning
8:00 a.m. - 12:00 p.m. Criminalistics Session I
8:00 a.m. - 12:00 p.m. Criminalistics Session II
8:30 a.m. - 12:00 p.m. Pathology/Biology
8:30 a.m. - 12:00 p.m. Psychiatry & Behavioral Science
9:00 a.m. - 11:40 a.m. Jurisprudence
10:00 a.m. - 11:30 a.m. Anthropology
Pre-Registration Required — $15

Tuesday
February 23, 2016 — 9:00 a.m. - 2:00 p.m.

The purpose of the Student Academy of Forensic Sciences is to bring to the attention of local area high school and college students the vital importance of the application of scientific principles to the administration of justice. It acquaints the participants with the role of the forensic science disciplines in the legal system as well as the education and training required for the career in each discipline. All high school and college age students are welcome to attend.

Chair:
Julie A. Howe, MBA
Saint Louis University
St. Louis, MO

Co-Chair:
Marilyn T. Miller, EdD
VA Commonwealth University
Richmond, VA

Faculty:
Anthropology:
Elizabeth A. Murray, PhD
College of Mount St. Joseph
Cincinnati, OH

Criminalistics:
Lynn A. Schneeweis, MS
Massachusetts State Police Crime Laboratory
Maynard, MA

Digital & Multimedia Sciences:
Richard W. Vorder Bruegge, PhD
Federal Bureau of Investigation
Quantico, VA

Engineering Sciences:
Roy Crawford, BSME
RR Crawford Engineering, Inc.
Whitesburg, KY

General:
Claire E. Shepard, MS
La Delta Community College
Monroe, LA

Chair Emeritus:
James L. Frost, MD
Morgantown, WV

Jurisprudence:
Pamela King, JD
Minnesota State Public Defender Office
Rochester, MN

Odontology:
Robin A. Scheper, DDS
Wildwood, NJ

Pathology/Biology:
J.C. Upshaw Downs, MD
GBI Medical Examiner’s Office
Savannah, GA

Psychiatry & Behavioral Science:
Lauren Reba-Harrelson, PhD
Decatur, GA

Questioned Documents:
Sandra L. Miller, BS
Pennsylvania State Police
Harrisburg, PA

Toxicology:
Philip M. Kemp, PhD
Bioaeronaautical Research Laboratory
Pre-Registration Required — $75

S1 Innovative Science — How Advances in Technology Transform Forensic Science

Tuesday, February 23, 2016 — 8:30 a.m. - 12:45 p.m.  4.0 CE Hours

Chair:
Jeri D. Ropero-Miller, PhD
RTI International
Research Triangle Park, NC

Faculty:
John Collins, Jr., MA
The Forensic Foundations Group
Dewitt, MI

Kenneth G. Furton, PhD
Florida International University
International Forensic Research Institute
University Park
Miami, FL

Zeno J. Geradts, PhD
Netherlands Forensic Institute
Ministry of Justice
Den Haag, NETHERLANDS

Richard A. Guerrieri, MS
Stafford, VA

Co-Chair:
Marla E. Carroll, BS
Forensic Video & Audio Assoc
Plantation, FL

Christina G. Hayes, BS
St. Louis Metropolitan Police Department
St. Louis, MO

Kurt B. Nolte, MD
Office of Medical Investigator
Albuquerque, NM

Jed S. Rakoff, JD
U.S. District Court, Southern District NY
New York, NY

Nancy Rodriguez, PhD
National Institute of Justice
Dept of Justice/Office of Justice Programs
Washington, DC

Amanda R. Hale, MA
North Carolina State University
Raleigh, NC

Educational Objective(s): After attending this presentation, attendees will better understand some best practices for technology adoption and implementation that have improved efficiency, quality, accuracy, reliability, and operational excellence in forensic sciences and beyond. Furthermore, the Interdisciplinary Symposium will help attendees understand the benefits and risks of emerging technologies to enable consideration and implementation.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by highlighting how technology and its adoption can advance teaching and learning experiences, improve operational and legal standards, and embrace scientific innovation.

Program Description: Whether at the scene of a death or a crime, in the forensic laboratory, or in the courtroom, technologies are used every day by practitioners to impart evidentiary proof and thereby solve cases. Forensic science has always been held to a high standard in order to uphold justice and for this to continue, forensic science must evolve and innovate.

As science progresses, answering a research question utilizing evidence-based science and technology typically leads to more questions. In fact, scientific knowledge begets new technologies, which beget new observations and scientific knowledge, which begets the next technological advancement. Keeping up with these advances in a forensic environment requires change, both operationally and culturally. Understanding, embracing, communicating, and when necessary, enforcing these changes requires the involvement of all stakeholders — the government, the criminal justice system, medical and forensic communities, and the public.
S1 Innovative Science — How Advances in Technology Transform Forensic Science (continued)

The 2016 American Academy of Forensic Sciences Interdisciplinary Symposium program will help forensic scientists keep pace with technology-enabled opportunities by highlighting advances in forensic science that have improved efficiency, quality, accuracy, reliability, and operational excellence. From forensic science disciplines including pattern comparison and forensic medicine to newer ones such as digital and multimedia sciences and next generation sequencing, innovation in science and technology is all about understanding what the technology brings to the science and how the science can harness new knowledge and information to improve impact and confidence.

This Interdisciplinary Symposium program will include prominent speakers who support technology adoption in academia, the government and private sectors, management, and the legal system. This program will continue with innovative and emerging technology “stars” among us and “integrators” of technology who will share how they have experienced and continue to transform their practice based on the latest technology.

Nancy Rodriguez, PhD
Keynote Presentation
As the federal government’s lead agency for forensic science research and development, as well as the administration of programs to facilitate technical assistance, the National Institute of Justice (NIJ) has a prominent role in directing efforts to address the needs of the forensic science community. Using various sources such as the Report issued by the National Academy of Sciences (NAS) in 2009 — Strengthening Forensic Science in the United States: A Path Forward — NIJ has made an unprecedented investment to help strengthen forensic science in the United States. The NIJ remains committed to a strategy that couples rigorous research and development with technical assistance to serve the forensic science community. This approach provides the forensic science field with evidence-based research to create long-term success and ultimately improve public safety.

Kenneth G. Furton, PhD
Historically, higher education has been focused on disseminating knowledge and creating new knowledge, but increasingly, universities are becoming hubs for innovation and entrepreneurship and helping to drive the economic development of the communities they serve. This trend can be transformative for forensic science as the translational research occurring in major academic forensic programs is spurring advances in many fields of forensic science that will impact the courtroom as well as the corporate boardroom. This presentation will highlight how academic forensic scientists have and will transform the field of forensic science in a variety of areas with a focus on detection science where trace detection of evidence and odors left from removed evidence is having a major impact on forensic science.

Jed S. Rakoff, JD
In the Anglo-American legal system, change tends to be incremental, with judges attempting to fit new situations and advances into the framework of previously developed legal principles; however, when it comes to technological advances, judges who rarely have much technological training or knowledge often find this difficult to do. This presentation will examine some of the difficulties judges have faced in dealing with technological advances in the forensic sciences and will suggest ways some of the problems of translating these advances into useable legal form might be better approached.

John M. Collins, Jr., MA
When forensic science professionals think of technology, their attention understandably gravitates toward innovations that relate directly to casework and the testing of evidence. But technology is not only about scientific practice. Managerial technology and innovations dealing with the administration of forensic science organizations are equally important. In this session, attendees will be introduced to the concept of administrative technologies and the way innovation can improve how forensic science organizations are managed. By examining some best-in-class practices from both inside and outside the forensic sciences, attendees will come to appreciate how technology can be leveraged in forensic science, not just for the testing of evidence, but in the management of people, customers, and organizational cultures.
S1  Innovative Science — How Advances in Technology Transform Forensic (continued) Science

Richard A. Guerrieri, MS
Forensic DNA analysis through Capillary Electrophoresis (CE) -based typing of Short Tandem Repeats (STR) is a well-established and successful technology with widespread technical acceptance. The emergence of Next Generation Sequencing (NGS) introduces opportunities for enhanced discrimination within mixtures and human remains, as well as identity, physical appearance, and ancestry relationships. NGS also introduces levels of change which are disruptive to present forensic laboratory approaches and will require modifications of established quality assurance practices and the development of new measures. NGS experiences in this area will be shared and implementation strategies for consideration by the forensic DNA community will also be discussed.

Kurt B. Nolte, MD
Advanced radiologic imaging modalities such as Computed Tomography (CT) scanners are transforming the practice of forensic pathology. CT allows for the rapid acquisition of a full volume of morphologic data that can be reconstructed in multiple planes as well as 3D perspectives. These images are detailed and can cover the full body. Research performed at the New Mexico Office of the Medical Investigator (OMI) has demonstrated that while both CT and autopsy have limitations in recognizing disease and injuries, they can be complementary in achieving the fullest diagnostic data set. This research has also demonstrated that in certain decedent cohorts, CT can supplant autopsy by developing an adequate diagnostic data set for accurately determining the cause of death. The OMI CT scanner is used daily by forensic pathologists to triage cases and to supplement and supplant autopsy.

Christina G. Hayes, BS
In the world of chemistry, there is a vast array of instrumentation that is available for use, yet in forensic drug chemistry, generally only a few instruments are utilized. By exploring the new technology available and comparing it to the standard instrumentation used with specific groups of drugs, it is possible to expand the drug chemists’ repertoire for drug analysis.

Amanda R. Hale, MA
Digital imaging innovation is integral to advancing methods in forensic anthropology. The application of imaging techniques such as Computed Tomography (CT), 3D laser scanning, and digitization has already increased accuracy when performing putative identifications, ancestry estimation, and juvenile aging. In addition, digital imaging has increased database reference material used for both research and application. In combination with advanced statistical techniques, these provide a powerful new avenue for developing more precise methods in skeletal biology.

Zeno J. Gerdts, PhD
The development of digital and multimedia sciences is rapid due to the growth of data and the wide range of devices where digital evidence can be found; smartphones and most electronic devices now have digital storage that communicates with networks. Several sources state that 90% of the digital data has been produced during the last two years. Due to these rapid developments of big data, new techniques can be used and validation is crucial. Several developments in facial and image recognition based on deep learning algorithms have seen good progress and can be used in practice to assist forensic casework. New techniques on weak signal analysis will cause more possibilities for predictive methods. Also, if data is not accessible due to encryption, techniques for analyzing data streams can also help in cyber forensics cases.
Pre-Registration Required — $75

S1 Innovative Science — How Advances in Technology Transform Forensic Science (continued)

Program:

8:30 a.m. - 8:35 a.m.  Opening Remarks
Jeri D. Ropero-Miller, PhD

8:35 a.m. - 9:05 a.m.  Strengthening Forensic Science at the National Institute of Justice
Nancy Rodriguez, PhD

9:05 a.m. - 9:30 a.m.  Transformation of Academic Forensic Science From Knowledge Creators and Disseminators to Catalysts of Innovation, Entrepreneurship, and Economic Development
Kenneth G. Furton, PhD

9:30 a.m. - 9:55 a.m.  Why Judges Fear Technology
Jed S. Rakoff, JD

9:55 a.m. - 10:20 a.m.  Digital and Multimedia Services
Zeno J. Geradts, PhD

10:20 a.m. - 10:35 a.m.  Panel Discussion
Jeri D. Ropero-Miller, PhD; Nancy Rodriguez, PhD; Kenneth G. Furton, PhD; Jed S. Rakoff, JD; Zeno J. Geradts, PhD

10:35 a.m. - 11:05 a.m.  Break

11:05 a.m. - 11:25 a.m.  A Forensic Laboratory Management Perspective
John M. Collins, Jr., MA

11:25 a.m. - 11:45 a.m.  Quality Assurance Considerations for Next Generation Sequencing
Richard A. Guerrieri, MS

11:45 a.m. - 12:05 p.m.  Transforming the Practice of Forensic Pathology: Advanced Radiologic Imaging Technology
Kurt B. Nolte, MD

12:05 p.m. - 12:15 p.m.  YFSF Young Forensic Scientists — Exploring the Technology That Can Be Used in Drug Chemistry
Christina G. Hayes, BS

12:15 p.m. - 12:25 p.m.  YFSF Young Forensic Scientists — Digital Imaging in Forensic Anthropology: Exploration of Existing Techniques
Amanda R. Hale, MA

12:25 p.m. - 12:45 p.m.  Panel Discussion
Jeri D. Ropero-Miller, PhD; John M. Collins, Jr., MA; Richard A. Guerrieri, MS; Kurt B. Nolte, MD; Christina G. Hayes, BS; Amanda R. Hale, MA
**Young Forensic Scientists Forum**

**Pre-Registration Required — $100**

**S2  Viva La Forensics**

Tuesday, February 23, 2016 — 8:30 a.m. - 8:00 p.m.  
6.25 CE Hours

**President:**  
Lara Frame-Newell, MA  
Richmond, VA

**Secretary:**  
Brianna B. Bermudez, BS  
Okemos, MI

**Program Committee**

*Program Chair:*  
Sarah J. Ellis, MS  
North Carolina State Crime Laboratory  
Raleigh, NC

*YFSF Poster Session Chair:*  
Alicja K. Lanfear, PhD  
Middle Tennessee State University  
Murfreesboro, TN

*Program Co-Chair:*  
Amanda R. Hale, MA  
North Carolina State University  
Raleigh, NC

*BYOS Chair:*  
Betzaida L. Maldonado, BS  
Atlanta, GA

*Breakfast Chair:*  
Christina G. Hayes, BS  
St. Louis Metropolitan Police Department  
St. Louis, MO

*Financial Support Liaison Chair:*  
Lindsay Saylors  
Chicago, IL

**Long Term Planning Committee Representative:**  
Lindsey E. Saunders, BS  
Washington, DC

**Educational Objective(s):** After attending this presentation, attendees will have a better understanding of casework and solving cold cases within the fields of forensic science. Additionally, attendees will better understand how to create a resume and how to apply and interview for a job.

**Impact on the Forensic Science Community:** This presentation will impact the forensic science community by demonstrating cases where forensic science was key to case resolution. This will show attendees what real casework is and how real-life cases are solved. Cases will be presented from beginning to end.

Each year at the American Academy of Forensic Sciences (AAFS) Annual Scientific Meeting, the Young Forensic Scientists Forum (YFSF) provides a program for students and forensic scientists with less than five years of professional experience. The session allows attendees to interact with peers as well as with the professional speakers and to build professional relationships that foster growth and mentorship opportunities. Special session topics provide attendees with a broad overview of the many opportunities in the field of forensic science. In addition to the special session, the YFSF session offers two opportunities for young forensic scientists to present their own work or research: the YFSF Bring Your Own Posters (BYOP) Session and the YFSF Bring Your Own Slides (BYOS) Session. The Forensic Sciences Foundation (FSF) Emerging Forensic Scientists Award winner is also invited to present her award-winning paper during this special session.

For the AAFS 68th Annual Scientific Meeting in Las Vegas, NV, the YFSF Special Session will present *Viva La Forensics!* The special session will be held on Tuesday, February 23, 2016, and will include speakers from many of the AAFS sections who will discuss cases where forensic science was key to solving the case. Through the presentations, attendees will learn how forensic science can be used to change the outcome of a case. Attendees will be exposed to the real life of a forensic scientist and to actual witness testimony.

Following the Tuesday session, the YFSF BYOP Session will be presented in the evening, giving young professionals the opportunity to showcase current cases and research being worked on in a poster format.
Pre-Registration Required — $100

S2  Viva La Forensics (continued)

Speakers

Joseph Almog, PhD
Hebrew University
Casali Inst of Applied Chem
Jerusalem, ISRAEL

Gary M. Berman, DDS
Belleville, MI

Helmut G. Brosz, BASc, P.Eng
Brosz Forensic Services
Markham, ON CANADA

Joan A. Bytheway, PhD
Sam Houston State University
College of Criminal Justice
Huntsville, TX

Kelsey A. Carpenter, BS
Howell, MI

Federica Collini, MD
Milan, ITALY

J.C. Upshaw Downs, MD
GBI ME
Savannah, GA

Cheryl D. Hunter
AAFS Staff
Colorado Springs, CO

Ja’Neisha Hutley, MS
Philadelphia, PA

Nikolas P. Lemos, PhD
OCME, Forensic Lab Division
Hall of Justice, North Terrace
San Francisco, CA

Raymond G. Miller, DDS
Buffalo, NY

Linton Mohammed, PhD
Forensic Science Consultants, Inc
Burlingame, CA

John Nixon, CEng, MBA
ARC
Bippus, IN

Alan A. Price, MA
University of Northern Colorado
Greeley, CO

Claire E. Shepard, MS
La Delta Community College
Monroe, LA

Noelle J. Umback, PhD
OCME
Dept of Forensic Biology
New York, NY

John A. Williams, PhD
Western Carolina University
Anthropology and Sociology
Cullowhee, NC

The annual YFSF BYOS Session takes place the evening of Wednesday, February 24, 2016, and will include presentations from students and young professionals. YFSF does not require presenters of YFSF BYOS and BYOP Sessions to be members of AAFS and does not require they attend the special session, but it is encouraged that they do so. The program will conclude on Thursday, February 25, 2016, with the annual YFSF Breakfast Session which includes a résumé review panel. Attendees of the breakfast session must be registered for the YFSF Special Session.

Program:

8:30 a.m. - 8:45 a.m.  2016 YFSF Introduction and Speaker Welcome
Lara Frame-Newell, MA

8:45 a.m. - 9:00 a.m.  AAFS Membership
Cheryl D. Hunter

9:00 a.m. - 9:15 a.m.  Dental Identification Seals the Case
Raymond G. Miller, DDS
### Program cont.

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>9:15 a.m.</td>
<td>Human Bitemark Document and Analysis in a Child Abuse Case</td>
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<td>Gary M. Berman, DDS</td>
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<td>9:30 a.m.</td>
<td>Markers of Occupational Stress and Skeletal Identification: A Missing Person Case Study</td>
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<td>John A. Williams, PhD</td>
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<td>10:00 a.m.</td>
<td>Developments in Detecting Recent Holding of Firearms</td>
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<td>Joseph Almog, PhD</td>
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<td>10:20 a.m.</td>
<td>Break</td>
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<td>10:35 a.m.</td>
<td>The Contribution of Taphonomic Research to Forensic Casework</td>
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<td>Joan A. Bytheway, PhD</td>
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<td>11:00 a.m.</td>
<td>David Tarloff: A Case Study at the Intersection of Criminalistics, Psychiatry, and the Legal System</td>
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<td>Noelle J. Umback, PhD</td>
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<td>11:30 a.m.</td>
<td>Electrical Homicide or…?</td>
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<td>Helmut G. Brosz, BASc, PEng</td>
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<td>11:45 a.m.</td>
<td>Accident or Lovers’ Quarrel?</td>
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<td>John Nixon, CEng, MBA</td>
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<td>12:00 p.m.</td>
<td>Lunch</td>
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<td>1:30 p.m.</td>
<td>Document Examination — Not Just Handwriting</td>
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<td>Linton Mohammed, PhD</td>
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<td>2:00 p.m.</td>
<td>Prosecutorial Evidence</td>
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<td>Alan A. Price, MA</td>
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<td>2:30 p.m.</td>
<td>Terror on Kensington Avenue</td>
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<td>Ja’ Neisha Hutley, MS</td>
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<td>3:00 p.m.</td>
<td>Paternal Filicide for Spousal Revenge: The Male Side of Medea’s Syndrome in the Italian Population Over the Last Ten Years</td>
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<td>Federica Collini, MD</td>
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<td>3:15 p.m.</td>
<td>Break</td>
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<td>3:30 p.m.</td>
<td>Nail Them With Good Forensics: The Use of Alternative Biological Specimens in Forensic Toxicology</td>
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<td>Nikolas P. Lemos, PhD</td>
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<td>4:00 p.m.</td>
<td>Forensic Pathology — The Medicine of Forensic Science and the Science of Forensic Medicine</td>
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<td>J.C. Upshaw Downs, MD</td>
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<td>4:30 p.m.</td>
<td>Police Officer Retaliation, or Not?</td>
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<td>Claire E. Shepard, MS</td>
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S2 Viva La Forensics (continued)

Program cont.

4:55 p.m. - 5:00 p.m.  Closing Remarks
   Sarah J. Ellis, MS; Amanda R. Hale, MA

7:00 p.m. - 8:00 p.m.  YFSF Poster Session

Wednesday

February 24, 2016 — 6:00 p.m. – 7:00 p.m.

YFSF Bring Your Own Slides

Thursday

Young Forensic Scientists Forum Annual Breakfast
(Registration for the Tuesday Session Is Required to Attend the YFSF Breakfast Session)

February 25 — 7:00 a.m. – 10:00 a.m.

Ask the Expert

As is the tradition, the YFSF Breakfast Session focuses on developing professional skills for the next generation; however, this year will be a little different. Instead of planned speakers, members of various AAFS sections have been asked to participate in a Q&A Panel to help facilitate conversation between young professionals and professionals already established in their field. After the panel, attendees will have the opportunity to receive résumé assistance and feedback from AAFS members.

The special session provides students, young professionals, and AAFS members with a way to foster career-long relationships. The main goal of the YFSF is to encourage mentorship between young and veteran forensic scientists. Attendees are encouraged to apply for membership in the AAFS and are given guidance on the many opportunities available to aid in career enrichment.

Program:

7:00 a.m. - 7:45 a.m.  YFSF Breakfast and Introductions
   Christina G. Hayes, BS; Kelsey A. Carpenter, BS

7:45 a.m. - 9:00 a.m.  Panel Discussion: Q&A

9:00 a.m. - 10:00 a.m.  Résumé Review Panel
FEPAC SESSION

Pre-Registration Not Required — Open to all Meeting Attendees

Accreditation of Forensic Science Academic Programs Through the AAFS Forensic Science Education Programs Commission

Tuesday
February 23, 2016 — 8:30 a.m. - 12:45 p.m.

Educational Objectives: Upon completion of this session, the participant should be able to understand the process of accreditation through the AAFS FEPAC mechanism and be able to participate in the process as a reviewer of academic programs. Attendees from academic programs will also learn about the process of accreditation from different perspectives.

Chair: Matthew R. Wood, MS
Ocean County Sheriff’s Department
Forensic Science Laboratory
Toms River, NJ

Commissioner: Tracey Dawson Cruz, PhD
Virginia Commonwealth University
Richmond, VA

Commissioner: Daniel E. Katz, MFS
Maryland State Police
Forensic Science Division
Pikesville, MD

Program Description: This session has been developed to assist academic institutions offering undergraduate and graduate degree programs in forensic science and forensic digital evidence to prepare for the accreditation process through the Forensic Science Education Programs Accreditation Commission (FEPAC). The session will also assist future on-site evaluators (academic and practitioners) to prepare for on-site evaluations of academic programs. Successful completion of this one-day session will qualify participants for consideration to serve as on-site evaluators for FEPAC in the future (please note that participants must still meet other FEPAC requirements such as membership in the AAFS and designation as either a practitioner or academician).

The FEPAC is a standing committee of the AAFS with a membership that includes five educators, five forensic laboratory directors, and a public member as voting members. The mission of the FEPAC is to maintain and enhance the quality of forensic science education through a formal evaluation and recognition of college-level academic programs. The primary function of the committee is to develop and maintain standards and administer an accreditation program that recognizes and distinguishes high-quality undergraduate and graduate forensic science programs. Forty academic programs have successfully completed the accreditation process since 2003. Additional information on FEPAC can be found on the FEPAC website: http://fepac-edu.org.

Program:

8:30 a.m. - 9:00 a.m. Introduction and Welcoming Remarks
Module 1: Accreditation, Mission, and History of FEPAC
Matthew R. Wood, MS

9:00 a.m. - 9:30 a.m. Module 2: Overview of FEPAC Process, Policies, and Procedures
Daniel E. Katz, MFS

9:30 a.m. - 10:00 a.m. Module 3: Review of Undergraduate Standards
Tracey Dawson Cruz, PhD

10:00 a.m. - 10:15 a.m. Break

10:15 a.m. - 10:45 a.m. Module 4: Review of Graduate Standards
Tracey Dawson Cruz, PhD
FEPAC SESSION

Pre-Registration Not Required — Open to all Meeting Attendees
Accreditation of Forensic Science Academic Programs Through the AAFS Forensic Science Education Programs Commission (continued)

Program cont.

10:45 a.m. - 11:15 p.m.  Module 5: Questions and Answers
  Matthew R. Wood, MS; Daniel E. Katz, MFS; Tracey Dawson Cruz, PhD

11:15 p.m. - 11:45 a.m.  Module 6: The Role of the On-Site Evaluator
  Daniel E. Katz, MFS

11:45 a.m. - 12:15 p.m.  Module 7: Scenario and Evaluation
  Matthew R. Wood, MS; Daniel E. Katz, MFS; Tracey Dawson Cruz, PhD

12:15 p.m. - 12:45 p.m.  Questions and Answers
  FEPAC Commissioners and Director of Accreditation
Pre-Registration Not Required — Open to all Meeting Attendees

The American Academy of Forensic Sciences (AAFS) Standards Development Process

Tuesday, February 23 — 7:00 p.m. - 9:00 p.m.

Speakers

Chair: Jennifer F. Limoges, MS
New York State Police
Forensic Investigation Center
Albany, NY

Co-Chair: Mary C. McKiel, PhD
The McKiel Group, LLC
Arnold, MD

Co-Chair: Lucy A. Davis, BHS
LDH Consultants
Pikeville, KY

Bradford J. Wing
Secretariat
AAFS Standards Board
Washington, DC

Educational Objective(s): After attending this presentation, attendees will understand the standards development process and how the AAFS Standards Development Organization (SDO) process will work.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by educating attendees on how the AAFS will be involved in generating American National Standards for the forensic sciences.

The development of standards and guidelines for forensic science has become a priority within the criminal justice community. The National Commission of Forensic Sciences (NCFS) and the National Institute of Standards and Technology (NIST) Organization of Scientific Area Committees (OSAC) are actively pursuing this goal. Many AAFS members are leaders in the development of these documents. As one of the largest and most diverse forensic science organizations in the world, it is appropriate that AAFS share its members’ expertise to ensure that standards are set by the forensic science community itself. AAFS has completed its application to the American National Standards Institute (ANSI) to become an accredited SDO. A wholly owned subsidiary corporation entitled the AAFS Standards Board, LLC has been developed to provide the mechanics of the Academy’s SDO activities. As an accredited SDO, AAFS will be able to coordinate the approval of proposed standards to become American National Standards (ANS).

Numerous industries, government agencies, and consumers outside of forensic science rely on voluntary consensus standards to direct them in their processes. The National Technology Transfer and Advancement Act (NTTAA) of 1995 and the Office of Management and Budget Circular A119 requires federal agencies to adopt private sector standards, particularly those developed by SDOs, wherever possible in lieu of creating proprietary, non-consensus standards. While there are many accredited SDOs supplying forensic-specific standards, the overall process of standard development is not always clearly understood. All ANSI-accredited SDOs must follow the “ANSI Essential Requirements: Due Process Requirement for American National Standards.” These requirements focus on ensuring the standards development follow a procedure that is open to all interested parties, is balanced to allow parties equal participation, no individual or group can dominate the procedure, and that due process including mandatory public review and comments is allowed. All comments received concerning a proposed standard must be addressed prior to final vote of the standard. The Essential Requirements also demand that final consensus must be achieved before a standard is allowed to go forth.

The AAFS SDO process will be run by the Academy Standards Board (ASB). The ASB will conduct their work in a manner that is open to public scrutiny and provide every stakeholder an opportunity to be heard, without dominance by any party, in compliance with national and international standard development procedures. The ASB will appoint a Consensus Body technical committee for each proposed standard. The Consensus Bodies will be comprised of volunteers from relevant and interested parties both within the
Academy and the forensic science community as a whole. These Consensus Bodies will be responsible for creating and approving consensus standards to be submitted to ANSI via the ASB for approval as an American National Standard. The ASB will conduct this standards development in accordance with the requirements of ANSI’s Essential Requirements for balance, lack of dominance, due process, and consensus. The Consensus Bodies will consider all public comments, views and objections to ballots, and resolve all negative comments prior to approving the proposed standard. The ASB process will be open and balanced and will encourage public comment.

This presentation will provide an overview of how the standards development process works and detail the specifics of the Academy Standard Board’s process including a specific outline of each step in the ASB standard development procedures. Issues such as how balance is achieved within a Consensus Body, how interested parties are defined, and resolution of public comments will be discussed. Information will also be provided on how AAFS members and the forensic science community can participate in the ASB process and the Consensus Bodies. Time for questions and discussion will allow participants to fully understand the standard development process and the Academy’s commitment to ensuring the quality of the standards development.
Pre-Registration Not Required — Open to all Meeting Attendees

Wednesday
February 24, 2016 — 8:00 a.m. - 8:45 a.m.

The Academy Cup
A Quiz Game to Test Your Knowledge of AAFS

The AAFS 2016 Academy Cup will take place on Wednesday, February 24, 2016, before the Plenary Session. Teams meet at 8:00 a.m., an hour before the Plenary Session, for instructions and team strategy. The game will start at 8:15 a.m. and consists of multiple-choice and true-or-false questions projected onto a screen to test each section’s knowledge.

Each section’s team is comprised of up to 11 members, including Past President/Past Vice President, Board Member and/or Officer, Chair, Secretary, YFSF volunteers, and the section leader’s other strategic choices. The YFSF volunteers will be assigned to sections on Tuesday at the YFSF Special Session. Teams will have 15 minutes to answer questions. Once all sections have their answers turned in, the answers to the questions will be presented.

The winning team will be announced and the trophy presented at the AAFS Annual Business Meeting at 4:15 p.m. Teams should be present at the Annual Business Meeting to find out who won and be available at the conclusion to have a group photo taken.

If you just want to test your knowledge, the room is open for everyone. Feel free to join your section behind your flag to help cheer them on!

Points of Contact:
Chair: Laura L. Liptai, PhD, liptai@biomedicalforensics.com
Co-Chair: Carla M. Noziglia, MS
Co-Chair: Carol E. Henderson, JD
Co-Program Chair: Andrew M. Baker, MD
Co-Plenary Chair: Matthew R. Wood, MS
YFSF & Teams: Lara Frame-Newell, MA

Academy Cup Team Leaders:
Anthropology: Phoebe R. Stubblefield, PhD
Criminalistics: John J. Lentini, BA
Digital & Multimedia Sciences: Rhesa G. Gilliland, MS
Engineering Sciences: John Nixon, MBA
General: Claire E. Shepard, MS
Jurisprudence: Christine Funk, JD
Odontology: Iain A. Pretty, DDS, PhD
Pathology/Biology: Kathryn H. Haden-Pinneri, MD
Psychiatry & Behavioral Science: Karen B. Rosenbaum, MD
Questioned Documents: Thomas W. Vastrick, BS
Toxicology: Sarah Kerrigan, PhD

Program:
8:00 a.m. - 8:15 a.m. Instructions, Introductions of Team Leaders and Teams Strategize
8:15 a.m. - 8:30 a.m. PowerPoint® Questions and Team Answer Sheet Turned In
8:30 a.m. - 8:45 a.m. PowerPoint® Answers
PLENARY SESSION

Pre-Registration Not Required — Open to all Meeting Attendees

Wednesday
February 24 — 9:00 a.m. - 11:00 a.m.          2.0 CE Hours

Welcoming Remarks

Transformation: Embracing Change
An International Panel Discussion on the Impact of Recent Forensic Science Initiatives and the Response of the Global Community

Victor W. Weedn, MD, JD
President
American Academy of Forensic Sciences
George Washington University
Department of Forensic Sciences
Washington, DC

Plenary Session Chair:
Matthew R. Wood, MS
Ocean County Sheriff’s Department
Forensic Science Laboratory
Toms River, NJ

Plenary Session Co-Chair:
Joanna L. Collins, MFS
Linus Consulting Group, LLC
San Antonio, TX

Moderator:
John M. Butler, PhD
National Institute of Standards and Technology
Gaithersburg, MD
PLENARY SESSION

Pre-Registration Not Required — Open to all Meeting Attendees

Transformation: Embracing Change
An International Panel Discussion on the Impact of Recent Forensic Science Initiatives and the Response of the Global Community (continued)

Speakers

Willie E. May, PhD
National Institute of Standards and Technology
Gaithersburg, MD

Gillian Tully, PhD
United Kingdom Home Office
London, UNITED KINGDOM

Alastair Ross, AM
National Institute of Forensic Science, Retired
Docklands, Victoria, AUSTRALIA

Reinout Woittiez, PhD
Netherlands Forensic Institute
The Hague, NETHERLANDS

Sally Quillian Yates, JD
U.S. Department of Justice
Washington, DC
Overview:
The 2009 National Academy of Sciences (NAS) Report, Strengthening Forensic Science in the United States: A Path Forward, the National Research Council (NRC) outlined a dozen recommendations and called for major reforms of forensic science meant to increase the reliability and validity of scientific evidence, analysis, and testimony. Two initiatives, the National Commission on Forensic Science (NCFS) and the Organization for Scientific Area Committees (OSAC) were established jointly by the United States Department of Justice (DOJ) and the National Institute of Standards and Technology (NIST) to address the recommendations of the National Science and Technology Council’s Subcommittee on Forensic Science and to generate guidance for professional forensic practitioners. Recently, the American Academy of Forensic Sciences (AAFS) applied to the American National Standards Institute (ANSI) to become an accredited Standards Developing Organization (SDO) in order to assist the OSAC subcommittees in the development of forensic science standards.

The field of forensic science is at a transformative time. Great efforts are being made to promote universal laboratory accreditation, to encourage analyst certification, to develop standards, and to reduce and eliminate sources of bias in evidence examination. The time has come for forensic practitioners to embrace change for the greater good of the field.

The 2016 AAFS Plenary Session will present an international panel of distinguished speakers who will discuss the impact of the NAS Report, the initiatives within the United States, and the global response to strengthening the field of forensic science. The forensic science community will hear from these policy leaders regarding the transformation taking place within their respective countries and forensic service providers.

Program:

9:00 a.m. - 9:05 a.m.  Welcoming Remarks  
AAFS President Victor W. Weedn, MD, JD

9:05 a.m. - 9:25 a.m.  The Department of Justice’s (DOJ’s) Role in Strengthening Forensic Science  
Sally Quillian Yates, JD

9:25 a.m. - 9:45 a.m.  Reconnecting Forensic Science in the Netherlands  
Reinout Woittiez, PhD

9:45 a.m. - 10:05 a.m.  Moving Forward in Forensic Science: The Role of Quality Standards  
Gillian Tully, PhD

10:05 a.m. - 10:25 a.m.  Forensic Science: Specialization vs. Generalization  
Alastair Ross, AM

10:25 a.m. - 10:45 a.m.  National Institute of Standards and Technology’s (NIST’s) Program in Forensic Science: What We Do and Why You Should Care  
Willie E. May, PhD

10:45 a.m. - 11:00 a.m.  Panel Discussion  
Victor W. Weedn, MD, JD; Willie E. May, PhD; Alastair Ross, AM; Gillian Tully, PhD; Reinout Woittiez, PhD; Sally Quillian Yates, JD
**Monday**

**#1  Death in a Bathtub: The Defense of Drew Peterson**

February 22 — 7:00 a.m. - 8:30 a.m.  

.75 CE Hour

**Chair:**  
Jeffrey M. Jentzen, MD  
University of Michigan  
Ann Arbor, MI

**Co-Chair:**  
Mary E.S. Case, MD  
St. Louis, MO

**Educational Objective(s):** After attending this presentation, participants will better understand the courtroom procedures for admission of evidence and expert witness testimony. In addition, attendees will learn the factors involved in injury identification and analysis with an emphasis on the investigation of drowning.

**Impact on the Forensic Science Community:** This presentation will impact the forensic science community through the multidisciplinary reconstruction of one of the most riveting cases in recent American trial history. The presenters will detail the factors and evidence that influenced their decision process and assist future prosecutors, judges, and death investigators in the courtroom procedures.

In 2004, the body of Kathleen Savio, the third wife of policeman Drew Peterson, was found dead in the bathroom of her suburban Chicago home. Her body was found lying in an empty bathtub with a small laceration to the left back of the scalp. Froth oozed from her nostrils. There were some bruises to her left side. Toxicology analysis was negative for intoxicating drugs and alcohol. The initial investigation concluded that the death was the result of drowning and the coroner certified the death accidental. In 2007, Peterson’s fourth wife, Stacey Peterson, disappeared — her body was never recovered. In light of Stacey Peterson’s disappearance, authorities re-opened the investigation into Savio’s death. Savio’s body was disinterred in 2007 and re-examined in two separate autopsies performed by a group of forensic pathologists. The pathologist identified areas of hemorrhage over the left hip region, not appreciated at the initial examination. In light of the additional evidence, the experts concluded that Savio’s death was a homicide.

In criminal cases, there is a constitutional dimension to hearsay. The Sixth Amendment gives criminal defendants the right to confront witnesses; since a hearsay statement is made out of court, there is no opportunity for the defendant’s criminal defense attorney to cross-examine the witness, and thus no confrontation. This means hearsay statements are harder to get into evidence even via the traditional hearsay exceptions when they are used against a criminal defendant.

Prosecutors collecting evidence identified the fact that Stacey Peterson had confided with family and friends implicating her husband, Drew Peterson, as her murderer. Unable to question the dead witness, Stacey, prosecutors petitioned the Illinois legislature to create a new exemption to the hearsay rule, which became known as “Drew’s Law.” The law allowed for the admission of evidence in cases where the witness was not available to testify due to the actions of the defendant. Meanwhile, defense experts unsuccessfully attempted to exclude testimony related to Stacy Peterson’s disappearance in a 2010 evidentiary trial.

The trial into the death of Kathleen Savio began in August of 2012. For more than six weeks of grueling testimony, the media provided the day-to-day revelations of the case. Five forensic pathologists testified in the case that called into question the cause and manner of death. All the pathologists agreed that Savio died of drowning. The pathology testimony rested on questions of the pathological findings of concussion, postmortem artifacts, orientation of injuries, and causes of accidental drowning.

In light of new legislation, the prosecution was allowed to present incriminating verbal testimony against Drew Peterson. Peterson was eventually convicted and sentenced to 38 years in prison for his role in death of Kathleen Savio. The jurors said that the most
convincing testimony was the hearsay statements allowed into evidence under the new “Drew’s Law.” Prosecutors successfully fought to have statements made by Stacy Peterson and Savio to acquaintances admitted into evidence. In February 2013, the defense was denied a new trial. The trial left numerous questions unanswered and created a precedent of allowing indefensible hearsay testimony.

This presentation will provide courtroom presentation of evidence, expert testimony, the role of the medical witnesses, and criminalistic’s evaluation in the trial of Drew Peterson. Participation of attendees is encouraged and will bring to life the tension of the courtroom in this precedent-setting prosecution.
BREAKFAST SEMINARS

Las Vegas
2016

Pre-Registration Required — $50

Tuesday

#2  Death From a Distance: The Etiology of Serial Sniper Homicides

February 23 — 7:00 a.m. - 8:30 a.m.            .75 CE Hour

Chair:  
Robert J. Morton, MS  
Fauquier County Sheriff’s Office  
Warrenton, VA

Co-Chair:  
Mary B. Collins-Morton, MS  
FBI Academy  
Quantico, VA

Educational Objective(s): After attending this presentation, attendees will better understand the unusual nature of serial sniper homicides and the difficulties faced by law enforcement, forensic specialists, and prosecutors in dealing with these cases.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by highlighting the etiology of serial sniper homicides, the problems involved in determining case linkage between the different shootings, the circumstantial nature of the forensic evidence, and the difficulties involved in the prosecution of these infrequent crimes.

This presentation is designed to provide a historic overview of serial sniper homicides within the context of murder in general and serial murder, specifically. This presentation will also provide the statistical instances of serial sniper homicides compared to other types of murders as well as outline the investigative and forensic difficulties faced by law enforcement and the forensic community when dealing with one of these rare cases. Additionally, an extensive case study will be presented regarding a serial sniper case that took more than ten years to successfully convict the offender.

The Federal Bureau of Investigation’s (FBI’s) National Center for the Analysis of Violent Crime (NCAVC) is routinely consulted by federal, state, and local authorities in a variety of bizarre and repetitive violent crimes, especially homicides. NCAVC assistance was requested by local authorities regarding the case of a serial sniper. The four shooting incidents occurred during a highly contested divorce proceeding involving the offender. The first and second shootings were directed at the lawyer representing the offender’s wife and the judge presiding over the divorce hearing, both of whom were shot at while inside their residences. Both were uninjured. The lawyer representing the offender’s wife was shot at a second time while in his law office. The bullet struck him in the left eye, causing the loss of the eye; however, he survived the attack. The last attack occurred seven years later and targeted the male coworker with whom the offender’s wife had previously had an affair. The victim, who was now a married father of three, was shot and killed in the yard of his residence. The laboratory determined the recovered bullet fragments from the shootings were consistent with a .22 caliber centerfire bullet and were fired through a similar rifle.

The investigation quickly focused on the offender; however, a series of search warrants failed to locate the specific rifle or similar ammunition involved in the attacks. The lack of evidence emboldened the offender and he began a public campaign professing his innocence and crusading against the “corrupt” criminal justice system. After one of the search warrants had been served, the offender placed a written response on the front porch of the judge who had signed the warrant, even though he lived in a different jurisdiction located more than an hour away. Additionally, the offender became active in the local political party and attempted to exert pressure on the local authorities to stifle the investigation.

Based upon the highly charged nature of this case, the “fear factor” generated by the shootings, the defiant demeanor displayed by the offender, and the lack of direct evidence, the police department requested assistance from the FBI. Both the local FBI office and the NCAVC provided assistance. During the joint consultation with the NCAVC, it was decided to convene a grand jury to address the four shootings. The strategy involved calling the offender as the first witness and outlining the legal ramifications for contacting and/or intimidating other witnesses testifying before the grand jury. The offender subsequently interfered with several witnesses, was
charged and convicted of four counts of witness tampering, and was given a 21-year sentence. He was also indicted on numerous charges for the four sniper shootings, including murder and attempted murder.

The complex trial lasted more than two months. While there was no direct forensic evidence linking the offender, a variety of circumstantial evidence was presented outlining the unusual nature of the series of shootings, the relationship of the victims who were targeted, the offender’s skill with weapons, and the various statements made by the offender. During the trial, numerous witnesses were called including forensic experts, investigators, the shooting victims, the offender’s ex-wife, a member of the NCAVC, and a police department Special Weapons And Tactics (SWAT) sniper. The jury found the offender guilty of 31 separate counts and sentenced him to a life sentence plus 288 years.

This case highlights the complex nature of sniper murders, the value of circumstantial evidence, and the benefit of forensic experts, investigators, subject-matter experts, and prosecutors working cooperatively.
#3  A Primer on the Structure and Activity of the National Institute of Standards and Technology’s (NIST’s) Organization of Scientific Area Committees (OSAC)

February 24 — 7:00 a.m. - 8:30 a.m.  .75 CE Hour

Chair:
Barry K. Logan, PhD
NMS Labs/CFSRE
Willow Grove, PA

Co-Chair:
Marc A. LeBeau, PhD
FBI Laboratory
Quantico, VA

Co-Chair:
Sally S. Aiken, MD
Spokane, WA

Co-Chair:
Gregory G. Davis, MD
Jefferson County MEO
Birmingham, AL

Co-Chair:
Christian G. Westring, PhD
Willow Grove, PA

Educational Objective(s): After attending this presentation, participants will be able to discuss the structure and activities of the various committees and subcommittees that comply with the new NIST OSAC process established to develop standards and guidelines for the professional practice of forensic science.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by introducing the OSAC process, its accomplishments, and its plans to the forensic science community, AAFS members, and meeting attendees. Information will be presented to assist attendees in becoming involved with and contributing to the process.

This presentation is designed to provide a brief introduction to the new and important structure created and driven by the forensic science community in partnership with NIST to develop standards and guidelines for professional practice of forensic science. If you have heard about this new organization and its assignment but want to better understand how it works, its potential to create systemic change in the forensic sciences, and opportunities for everyone to be involved; this is the session for you.

In 2013, NIST, in consultation with the Department of Justice (DOJ), began the process of seeking input from the forensic science community to create a registry of standards that represented the priorities and consensus of the practitioners of forensic science, but that was also subject to review, scrutiny, and input from other stakeholders including the criminal justice community (lawyers and judges), researchers, statisticians, and the general public. The intent was to create an open, transparent, and accountable process that would reduce the risk of bad science being used in the courtroom and create a means for more consistent practice and continuous improvement in the application of scientific methods and practice to criminal investigations.

In 2014, NIST created the OSAC to take on this task and began recruiting members. The organization is structured with a governing board, the Forensic Science Standards Board (FSSB), and served by three resource committees (Human Factors, Legal Resources, and Quality Infrastructure) and five scientific area committees (Biology/DNA, Chemistry/Instrumental Analysis, Crime Scene/Death Investigation, Digital/Multimedia, and Physics/Pattern Interpretation) to manage and support the work of the subcommittees, and the subcommittees themselves. The OSAC currently has 24 subcommittees (enumerated on NIST’s web site) which either replaced or
#3 A Primer on the Structure and Activity of the National Institute of Standards and Technology’s (NIST’s) Organization of Scientific Area Committees (OSAC) (continued)

augmented the previous Scientific Working Group’s (SWG’s) standards development activities. The subcommittees and their derivative task groups work on the creation of new or adoption of existing United States or international standards, developed in a manner consistent with the widely recognized ANSI standards development process, subject to public comment, and publication in OSAC’s approved standards and guidelines registries.

The process has been enthusiastically adopted by the forensic science community and, as of August 2015, standards were already in development for submission to the review and adoption procedure. In July 2015, the AAFS announced its intent to become an ANSI-approved Standards Development Organization (SDO) and to take a leadership role in support of this new process.

Although there are many OSAC events which take place during the AAFS meeting, this presentation is designed to act as a primer to AAFS members and meeting attendees wanting to quickly get up to speed with the new process and the organization. The presentation will feature brief discussions from members of the various levels of the OSAC organization who will describe their roles and their progress to date and answer questions about how to become involved in this critical new process in support of the future and continued professionalization of forensic science.
Thursday

#4 One Night in August: The I-35W Bridge Collapse in Minneapolis

February 25 — 7:00 a.m. - 8:30 a.m. .75 CE Hour

Chair: Andrew M. Baker, MD
Hennepin County ME
Minneapolis, MN

Co-Chair: Owen L. Middleton, MD
Hennepin County ME
Minneapolis, MN

Educational Objective(s): After attending this presentation, attendees will understand the role of, the challenges posed to, and the lessons learned by the medical examiner in a high-profile, multi-fatality mass disaster.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by providing deeper insights into the role of the medical examiner and forensic pathologist in managing a mass fatality incident. Special attention will be paid to techniques for identifying remains, communicating with families, informing the public, and working with other agencies and elected leaders.

On August 1, 2007, during the height of rush hour, the eight-lane I-35W Bridge in Minneapolis collapsed, sending scores of vehicles into the Mississippi River.

Bridge construction started in 1964 at a cost of ~ $5.2 million and the bridge opened in 1967. Originally striped for four lanes with an expected use of 66,000 vehicles per day, the bridge was restriped to eight lanes in 1988. At the time of the collapse, the 14-span, 1,907 feet long bridge carried an estimated 141,000 vehicles per day.

The medical examiner’s office was one of some 75 city, county, state, federal, and private organizations that were eventually involved in the recovery of bodies and investigation of the collapse. Water visibility, current speed, biohazards, and steel and concrete in the river made the recoveries of the victims difficult. Water visibility, current speed, biohazards, and steel and concrete in the river made the recoveries of the victims difficult. The medical examiner’s office worked with law enforcement agencies and dive teams to develop a protocol for handling victims’ remains with as much dignity and privacy as possible, given the challenges of the recoveries and the intense media scrutiny. Medical examiner investigators proactively contacted the families of the missing to obtain as much antemortem identifying material as possible to facilitate victim identification when bodies were found. In all but one case, identifications and autopsies were completed, and remains released to the families, in less than one day following recovery.

The challenges of the disaster site led to an operation spanning approximately three weeks before the last victim was found. This presentation focuses on the role of the medical examiner in the days and weeks following the bridge collapse, with an emphasis on identification techniques; communications with families, the media, and elected leaders; a review of what did (and did not) go well; and a summary of lessons learned.
Friday

#5 Back to the Future — A Journey Across the Timelines and Possible Realities for the Future of Forensic Sciences
February 26 — 7:00 a.m. - 8:30 a.m. .75 CE Hour

Chair: J.C. Upshaw Downs, MD
GBI ME
Savannah, GA

Co-Chair: Carla Miller Noziglia, MS
Engility
Aiken, SC

Educational Objective(s): After attending this presentation, attendees will have a better understanding of the history of the forensic sciences, including important dates and events. Additionally, attendees will learn how different sequences of events may have led to vastly alternate realities — allowing for an informed discussion about how to best guide the future course of forensic sciences.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by discussing important past dates and events and detailing how these events helped shape the present state of the forensic sciences. This knowledge will allow attendees to positively steer the future course of forensic science practice toward the best possible outcome.

Thirty years ago, a film about a time-traveling teenager and mad scientist explored the concept of parallel realities based on skewing past, present, and future timelines dependent on actions in the “then” present. In one journey to our present day (October 21, 2015), a radically different yet oddly familiar and plausible future greets the two partners in time. Unfortunately, the law of unintended consequences has led to a projected future with disastrous results, necessitating intervention in the past. Attempts to change events then lead to further future problems, requiring actions in the past to “correct” the altered future and… the rest, as they say, is history.

The history of forensic science dates to antiquity but a few key dates and events include 1194 (Articles of Eyre re-establishing the office of Coroner in the United Kingdom); 1248 (The Washing Away of Wrongs — medical investigation of death); 1609 (document examination); 1784 (physical matching); 1840 (arsenic poisoning); and 1888 (Jack the Ripper). The modern forensic era extends through Galton’s Fingerprints in 1892. Academic forensic science can be traced to 1902 at the University of Lausanne, Switzerland. Fingerprint evidence arrived in the United States by way of the 1904 World’s Fair, courtesy of Scotland Yard. Chief August Vollmer, credited by many as “the father of modern law enforcement” soon after (1907) created the first crime laboratories as part of the Berkley, California Police Department, an idea which expanded with his move to Los Angeles in 1923. The Bureau of Investigation (later FBI) created the first national forensic lab in 1926. State crime labs began to be developed in the early 1930s. The same decade saw criminalistics established as an academic discipline. Other developments ensued with the eventual creation of the American Academy of Forensic Sciences in 1948 and the National Association of Medical Examiners in 1966. Advances continued with the passage of time, including the creation of the Federal Rules of Evidence (1975), DNA application to forensics (1980s), National DNA Database (1994), National Commission on the Future of DNA Evidence (1998), Paul Coverdell National Forensic Science Improvement Act (1999), National Academy of Forensic Sciences Report — Strengthening Forensic Science in the United States: A Path Forward (2009), and National Commission on Forensic Science (2013).

Utilizing the time vehicle to consider past actions and consequent future timelines, attendees will be led through several key points: past, present, and future - in the forensic timeline, in order to illustrate where then-current thoughts and/or actions skew the chain of events leading the community astray to an undesired future. Recognizing that certain future consequences can be traced to intersections of significant persons and actions at critical points in time leads to the conclusion that strategy may allow a directed and desired future result. The ultimate goal is to stimulate consideration of alternatives and discussion about the most prudent course for present-day actions to assure the best possible future.
Pre-Registration Required — $50

#5  Back to the Future — A Journey Across the Timelines and Possible Realities for the Future of Forensic Sciences (continued)

“…[Y]our future hasn’t been written yet. No one’s has. Your future is whatever you make it. So make it a good one….”

Reference:

1 (Back to the Future, Part III) http://www.imdb.com/title/tt0099088/quotes
Pre-Registration Required — $50

Friday

#6 Thomas Krauss Memorial Bitemark Breakfast — Forensic Anthropology: Science Into Fiction

February 26 — 7:00 a.m. - 8:30 a.m. .75 CE Hour

Chair: Kathleen J. Reichs, PhD
UNC - Charlotte
Dept of Anthropology
Charlotte, NC

Co-Chair: Laura C. Fulginiti, PhD
Forensic Science Center
Phoenix, AZ

Educational Objective(s): After attending this presentation, attendees will have a better understanding of the field of forensic anthropology and of the processes involved in creating fiction based on science. Emphasis will be on the writing of novels and screenplays.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by providing an overview of the field of forensic anthropology and will describe techniques used in creating plausible fiction based on scientific procedures and principles.

Forensic anthropology is a sub-specialty within physical anthropology that combines knowledge of the human skeleton with skills in various areas of forensic protocol, including the recovery and analysis of modern human remains. A fully accredited forensic anthropologist will be certified by the American Board of Forensic Anthropology (ABFA). This requires achievement of a PhD, successful completion of a certification exam, adherence to a set of ethical standards, and regular reporting on continuing education requirements.

The forensic anthropologist analyzes compromised human remains — the decomposed, mummified, mutilated, burned, dismembered, and skeletal. She addresses questions of identity, manner of death, time since death, and, in some cases, postmortem body treatment.

The forensic anthropologist may function in any of a variety of contexts, including, but not limited to, medical examiner and coroner offices, government laboratories, disaster recovery teams, human rights efforts, law enforcement agencies, and the military. The forensic anthropologist does not operate in a vacuum but works with specialists in many other areas, including forensic odontology.

Over the past two decades, the analysis of crime scenes and crime victims has caught the attention of the general public. Forensic science has exploded onto the stage of pop culture, and practitioners have been portrayed in books and on the large and small screens. Dr. Temperance Brennan is the protagonist in 18 novels and the main character in the longest-running scripted drama in the history of the Fox network. Each of the Temperance Brennan books and the Young Adult (YA) Virals books and each episode of the television series Bones takes the reader or viewer into a context in which forensic investigators work. Each highlights a different area of expertise within the forensic sciences.

This presentation will discuss the process of fictionalizing forensic science by drawing upon the speaker’s experience as a forensic anthropologist, a writer, and a television producer. The writing of a novel will be compared to the writing of a screenplay.
**LUNCHEON SEMINARS**

*Las Vegas 2016*

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**Pre-Registration Required — $55**

**Thursday**

#1  *Working Stiff: Forensic Training & Public Relations in a Digital Age*

February 25 — 12:00 p.m. - 1:30 p.m.  
1.0 CE Hour

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**Judy Melinek, MD**  
PathologyExpert, Inc.  
San Francisco, CA

**T.J. Mitchell, BA**  
PathologyExpert, Inc.  
San Francisco, CA

**Educational Objective(s):** After attending this presentation, attendees will understand: (1) how to write clearly and effectively about forensic science; and, (2) how to use public relations and social media to respond to breaking news.

**Impact on the Forensic Science Community:** This presentation will impact the forensic science community by helping forensic professionals understand how to effectively communicate difficult forensic cases to a lay public.

Just two months before the September 11th terrorist attacks, Dr. Judy Melinek began her training as a New York City forensic pathologist. With her husband, T.J., and their toddler, Daniel, holding down the home front, Dr. Melinek threw herself into the fascinating world of death investigation — performing autopsies, investigating death scenes, and counseling grieving relatives. *Working Stiff* chronicles Dr. Melinek’s two years of training, taking readers behind the police tape of some of the most harrowing deaths in the “Big Apple,” including a firsthand account of the events of September 11th, the subsequent anthrax bio-terrorism attack, and the disastrous crash of American Airlines Flight 587.

Lively, action-packed, and loaded with mordant wit, *Working Stiff* offers a firsthand account of daily life into one of America’s most arduous professions and the unexpected challenges of shuttling between the domains of the living and the dead. The body never lies — and through the murders, accidents, and suicides that land on her table, Dr. Melinek lays bare the truth behind the glamorized depictions of autopsy work on shows like *CSI* and *Law & Order* to reveal the secret story of the real morgue.

Dr. Melinek will discuss how she and her writer husband collaboratively turned her daily journal about her forensic fellowship training at the New York City Office of the Chief Medical Examiner into a *New York Times* bestselling book. Writing clearly and effectively about forensic science draws candidates to professional training programs, increases the credibility and public profile of forensic scientists, and has the potential to increase both local and federal funding. Dr. Melinek will emphasize that in the digital age, where Twitter®, Facebook®, Instagram™, TV news, and bloggers set the tone and control the narrative around breaking cases, forensic scientists cannot continue to hide from the press behind an autopsy table or lab bench. Offices need to develop a public relations profile and utilize media relations to respond independently to press and public inquiries consistently — not just when there is a scandal or a high-profile case.


**LUNCHEON SEMINARS**

*Pre-Registration Required — $55*

**Friday**

**#2 Operation Lima Sea — Unidentified Remains of a Human Torso in Queensland, Australia: Case Report on the Collaborative Investigative and Novel Anthropological (Forensic) Responses in the Establishment of Identification**

February 26 — 12:00 p.m. - 1:30 p.m.  
1.0 CE Hour

Chair:  
Donna M. MacGregor, MSc  
Queensland University of Technology  
School of Biomedical Sciences  
Faculty of Health, Gardens Point Campus  
Brisbane, AUSTRALIA

Co-Chair:  
Jon E. Birt, BA  
Queensland Police Service  
Homicide Investigation Unit  
Brisbane, AUSTRALIA

**Educational Objective(s):** After attending this presentation, attendees will better understand: (1) the extensive contemporary investigative processes involved in the establishment of identification employed by the Queensland Police Service; and, (2) how the integration of novel anthropological and forensic processes assisted the investigation process.

**Impact on the Forensic Science Community:** This presentation will impact the forensic science community by demonstrating the tenacity of investigators from the Homicide Investigation Unit, Queensland Police Service to pursue all potential fields of inquiry to establish victim identification or victimology.

In October 2013 at a regional center in Southeast Queensland, Australia, Queensland Fire and Rescue (QFRS) were called to a grass fire. Once extinguished, QFRS located the remains of a human torso. The head and hands had been severed, and the lower body from the mid lumbar region had also been removed. The head, hands, and lower body have never been located. Due to the limited nature of the remains, standard confirmatory identification techniques of fingerprints and dental records could not be utilized in this matter. DNA was collected; however, it did not match any national database. Familial DNA was investigated; this too presented no matches. Toxicology was also conducted for a full drug screening and a number of prescription medications were identified. Investigators conducted exhaustive searches of mobile phone tower activity, Medicare files, immigration files, and interstate missing person searches in an attempt to identify the remains.

The investigators then engaged the services of their police anthropologist to assist in the identification process. Using Multi-Slice Computed Tomography (MSCT) Digital Imaging and Communications in Medicine (DICOM) data (0.5/0.3mm) of the torso collected during the standard pre-postmortem scanning procedure at the Brisbane Mortuary, 3D virtual reconstructions of the bone surfaces, also called isosurfaces, were created. The virtual isosurface models were uploaded into a specialized 3D software program, Geomagic® Design™ X, where virtual measurements were conducted to determine sex and stature. The measurements were conducted using a new and novel protocol developed by the Skeletal Biology and Forensic Anthropology Research Laboratory (SBFAR) at the Queensland University of Technology, Brisbane. The virtual measurements were collected from various bones within the torso including the humeri, scapula, and clavicle. An attempt was made to determine age of the individual using the sternal end of the fourth rib; however, the CT resolution and small surface area presented difficulties in age determination other than determining the individual was an adult. Subsequently, discussions between the anthropologist and investigators resulted in an application to the State Coroner of Queensland that was supported to have the sternal rib end of the fourth rib excised from the torso, then macerated (i.e., soft tissue removed from the bone) using dermestid beetles. A final age range, sex, and stature were provided to investigators.

Ultimately in July 2014, the prescription medication information collected from the toxicology report matched with the anthropological information obtained from the CT data and rib maceration and assisted in the identification.
#2  Operation Lima Sea — Unidentified Remains of a Human Torso in Queensland, Australia: Case Report on the Collaborative Investigative and Novel Anthropological (Forensic) Responses in the Establishment of Identification (continued)

The contributions of the “virtual” anthropological input into this matter were a first for Queensland. The utility of CT data proved extremely useful in providing a timely anthropological profile to the investigation team and in reducing the need to macerate the entire torso as would be warranted by traditional anthropological techniques to develop an anthropological profile. This matter also exemplifies the importance of collaboration between the various agencies and specialists involved in homicide investigations to achieve a successful outcome.

Reference:

Pre-Registration Required — $100

#1  Information Does Exist Beyond the First Page of Your Google® Search!
Tools and Strategies for Forensic Science Literature Searching and Use

Monday, February 22, 2016   8:30 a.m. - 12:00 p.m.  3.25 CE Hours

Educational Objective(s): After attending this presentation, attendees will understand the value of forensic science literature and how to search and use the literature to research topics of work-related interest, such as, developing appropriate training materials and preparing for admissibility hearings.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by serving as a venue for understanding the importance and value of forensic science literature and tools for finding information of interest to practitioners, researchers, and students.

Chair: John M. Butler, PhD
NIST
Gaithersburg, MD

Co-Chair: Matthew R. Wood, MS
Ocean County Sheriff’s Dept
Forensic Science Laboratory
Toms River, NJ

Faculty:
Susan Makar, MA
NIST
Gaithersburg, MD

Melissa K. Taylor, BA
NIST
Gaithersburg, MD

Amanda Malanowski, BS
NIST
Gaithersburg, MD

Jeff Teitelbaum, MS
Seattle, WA

Program Description: This session will present current practices and tools for discovering, using, and analyzing forensics literature. It will include training on both free resources available to any practitioner and specialized literature databases for the researcher and student. Case examples will demonstrate the challenges of searching forensics literature with relevance to practitioners, researchers, and students. A vision of potential future information resources to address current limitations of accessibility of forensic science literature will be shared.

Program:

8:30 a.m. - 9:15 a.m.  Why Search and Read Forensic Science Literature?
John M. Butler, PhD

9:15 a.m. - 9:45 a.m.  Free Forensic Science Information Resources for the Practitioner
Jeff Teitelbaum, MS

9:45 a.m. - 10:15 a.m.  Tools for Searching and Analyzing Forensic Science Literature
Susan Makar, MA; Amanda Malanowski, BS

10:15 a.m. - 10:30 a.m.  Break
WORKSHOPS

Pre-Registration Required — $100

#1 Information Does Exist Beyond the First Page of Your Google® Search! Tools and Strategies for Forensic Science Literature Searching and Use (continued)

Program cont.:

10:30 a.m. - 11:10 a.m. Case Examples  
Jeff Teitelbaum, MS; Susan Makar, MA

11:10 a.m. - 11:40 a.m. ForSciPub: A Vision for the Future of Forensic Science Literature  
Melissa K. Taylor, BA

11:40 a.m. - 11:50 a.m. Other Forensic Activities Regarding Forensic Literature: American Association for the Advancement of Science (AAAS), National Commission on Forensic Science (NCFS), and the Organization of Scientific Area Committees (OSAC)  
John M. Butler, PhD

11:50 a.m. - 12:00 p.m. Discussion  
John M. Butler, PhD; Jeff Teitelbaum, MS; Susan Makar, MA; Amanda Malanowski, BS; Melissa K. Taylor, BA

Targeted Audience: Anthropology, Criminalistics, Digital & Multimedia Sciences, Engineering Sciences, General, Pathology/Biology, Questioned Documents, Toxicology

Knowledge Level Required: Basic (little to no knowledge of subject presented)

Expected Handout Length: 100 Pages
**WORKSHOPS**

*Pre-Registration Required — $100*

#2  **Advanced Mass Spectrometry (MS) Techniques for Forensic Analysis: What Does the Future Hold?**

Monday, February 22, 2016  
8:30 a.m. - 12:00 p.m.  
3.0 CE Hours

**Educational Objective(s):** After attending this presentation, attendees will be better able to evaluate and select advanced mass spectrometric techniques for solving various analytical problems in forensic science including identification of unknowns, rapid throughput approaches to forensic sample preparation, novel ionization, and fragmentation approaches in hyphenated mass spectrometric techniques.

**Impact on the Forensic Science Community:** This presentation will impact the forensic science community by introducing attendees to some of the most recent advances in mass spectrometry technology and their potential application to solve challenges in forensic investigations. This workshop has a strong interdisciplinary focus.

**Chair:** Sherri L. Kacinko, PhD  
Willow Grove, PA

**Co-Chair:** Kenyon M. Evans-Nguyen, PhD  
Tampa, FL

**Faculty:**

- **Adam B. Hall, PhD**
  Northeastern University  
  Boston, MA

- **David M. Schwope, PhD**
  Aegis Sciences Corporation  
  Nashville, TN

- **Jason E. Schaff, PhD**
  Quantico, VA

- **Jillian K. Yeakel, MS**
  Bethlehem, PA

**Program Description:** This session is a collaboration between two of the largest sections of the Academy and represents the first time in eight years that the sections have come together to discuss technology used in a wide range of forensic disciplines. Using various forensic science applications as examples, this session will focus on the use of MS for general unknown screening and new mass spectral analytical approaches in various forensic disciplines. These novel approaches include high resolution mass spectrometry, ultra high resolution mass spectrometry, isotope ratio mass spectrometry (IRMS), mass spectrometry multiplexing, and innovative uses of existing time-of-flight and tandem mass spectrometric (MS/MS) approaches. The session will include examples in forensic toxicology and forensic chemistry. The session also features a glimpse of the future regarding what to expect from mass spectrometry technology in the years ahead as the techniques move from the research laboratory to the forensic laboratory.

**Program:**

- **8:30 a.m. - 8:35 a.m.** Introductions and Overview  
  Sherri L. Kacinko, PhD

- **8:35 a.m. - 9:10 a.m.** Options for Screening by MS  
  Jason E. Schaff, PhD

- **9:10 a.m. - 9:45 a.m.** Use of Multiplexing and Alternative Sample Preparation Techniques for High Throughput Toxicological Screening  
  Jillian K. Yeakel, MS
#2 Advanced Mass Spectrometry (MS) Techniques for Forensic Analysis: What Does the Future Hold? (continued)

Program cont.:

9:45 a.m. - 10:20 a.m.  What’s the Origin? Isotope Ratio Mass Spectrometry (IRMS) in Sports Doping and Other Forensic Casework  
David M. Schwope, PhD

10:20 a.m. - 10:50 a.m.  Break

10:50 a.m. - 11:25 a.m.  Fieldable MS in Forensic Chemistry and Toxicology  
Kenyon M. Evans-Nguyen, PhD

11:25 a.m. - 12:00 p.m.  Beyond Quadropole Time-of-Flight (Q-TOF) and Tandem Mass Spectrometry (MS/MS): Next Generation MS Techniques for Forensic Analysis  
Adam B. Hall, PhD

Targeted Audience: Criminalistics, Toxicology

Knowledge Level Required: Intermediate (some knowledge)

Expected Handout Length: 125 Pages

Supported by: NMS Labs, The Center for Forensic Science Research and Education
#3  How and Why You Can and Should Integrate Advanced Imaging Techniques Into Your Daily Autopsy Practice

Monday, February 22, 2016  8:30 a.m. ‑ 12:30 p.m.    3.5 CE Hours

Educational Objective(s): After attending this presentation, attendees will: (1) understand the concept of “disciplinary cross-over” within medicine; (2) understand the “toolbox” approach to modern forensic pathology; (3) review the core science behind plain film radiography, Postmortem Computed Tomography (PMCT), and Postmortem Magnetic Resonance (PMMR); (4) understand practical applications of imaging techniques as they apply to natural and non-natural deaths; (5) understand the concept of “Targeted Tissue Assessments” (TTA) in the context of whole body PMCT and why TTA is not a partial autopsy; and, (6) review administrative considerations as they pertain to the installation and routine utilization of advanced imaging techniques.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by exploring how forensic pathologists can and should take ownership of advanced imaging techniques in their daily practices.

Chair:     Co-Chair:
Keith Pinckard, MD, PhD    Sam W. Andrews, MD
Travis County Medical Examiner’s Office    Travis County Medical Examiner’s Office
Austin, TX      Austin, TX

Faculty:
Evan Matshes, MD     Vivian Snyder, DO
Academic Forensic Pathology, Inc    Evanston, IL
Calgary, AB, CANADA

Program Description: This session will cover practical aspects of the installation, introduction, training, and utilization of advanced imaging technology into a system of death investigation. The focus will be on PMCT; PMMR and plain film radiography will also be reviewed as relevant.

Program:

8:30 a.m. - 9:00 a.m.  Modern Death Investigation and the “Toolbox Approach to Forensic Pathology”
Keith Pinckard, MD, PhD

9:00 a.m. - 9:30 a.m.  Fundamental Imaging Techniques: Radiography, PMCT, and PMMR
Evan Matshes, MD; Sam W. Andrews, MD; Vivian Snyder, DO

9:30 a.m. - 9:45 a.m.  Break

9:45 a.m. - 11:15 a.m.  Practical Applications of Imaging Techniques (Categorical Reviews of Imaging Within Modalities of Death)
Evan Matshes, MD; Sam W. Andrews, MD; Vivian Snyder, DO

11:15 a.m. - 11:30 a.m.  Break

11:30 a.m. - 12:00 p.m. “Targeted Tissue Assessments” Are Not “Partial Autopsies” in the Context of PMCT
Evan Matshes, MD
WORKSHOPS

Pre-Registration Required — $100

#3 How and Why You Can and Should Integrate Advanced Imaging Techniques Into Your Daily Autopsy Practice (continued)

Program cont.:

12:00 p.m. - 12:30 p.m. Administrative Considerations and Conclusions
Keith Pinckard, MD, PhD; Evan Matshes, MD

Targeted Audience: Anthropology, General, Jurisprudence, Pathology/Biology

Knowledge Level Required: Intermediate (some knowledge)

Expected Handout Length: 30 Pages
#4  A Cloud Descends on the Courtroom: The Impact of Cloud Computing on Evidence in the Courtroom

Monday, February 22, 2016  
8:30 a.m. - 12:30 p.m.  
3.5 CE Hours

Educational Objective(s): After attending this presentation, attendees will have a better understanding of how the rapidly expanding technologies surrounding the storage and distribution of information and applications using what are commonly called “cloud computing” are impacting investigators, forensic examiners, and lawyers from the crime scene to the courtroom.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by providing a brief tutorial on these technologies, giving attendees an appreciation for the difficulties in acquiring, analyzing, introducing, authenticating, and evaluating information stored “in the cloud.” After attending this presentation, participants will be able to evaluate how these technologies are changing the practice of both law and forensic science.

Chair:  
Mark Pollitt, PhD  
Digital Evidence Professional Services, Inc.  
Ellicott City, MD

Co-Chair:  
Christopher J. Plourd, JD  
Superior Court  
El Centro, CA

Faculty:  
Abagail Abraham, JD  
AOL  
Dulles, VA

Andrew Neal, MS  
TransPerfect Legal Solutions  
Dallas, TX

Josiah Dykstra, PhD  
Severn, MD

Henry R. Reeve, JD  
Denver District Attorney’s Office  
Denver, CO

Mary F. Horvath, MFS  
King George, VA

Program Description: This session will bring together computer scientists, forensic practitioners, information security practitioners, lawyers, and judges to discuss many of the emerging issues in this rapidly evolving field. Topics include: what is the cloud; legal and practical issues in evidence collection; foundation and admissibility of cloud-based evidence; and, security and privacy in the cloud.

Program:

8:30 a.m. - 8:35 a.m.  
Welcome and Introductions  
Christopher J. Plourd, JD

8:35 a.m. - 9:20 a.m.  
What is Cloud Computing and How Does it Work?  
Mary F. Horvath, MFS; Josiah Dykstra, PhD

9:20 a.m. - 10:05 a.m.  
Forensic Collection of Cloud-Based Evidence  
Mary F. Horvath, MFS; Andrew Neal, MS

10:05 a.m. - 10:25 a.m.  
Break
WORKSHOPS

Las Vegas 2016

Pre-Registration Required — $100

#4  A Cloud Descends on the Courtroom: The Impact of Cloud Computing on Evidence in the Courtroom (continued)

Program cont.:

10:25 a.m. - 11:10 a.m.  Legal Process, Foundations, and Admission of Cloud-Based Evidence
Henry R. Reeve, JD; Abagail Abraham, JD

11:10 a.m. - 11:45 a.m.  Forensic Science as a Consumer of Cloud Services — Security and Privacy Issues
Mark Pollitt, PhD

11:45 a.m. - 12:30 p.m.  Panel Discussion
Mark Pollitt, PhD; Christopher J. Plourd, JD; Abagail Abraham, JD; Josiah Dykstra, PhD; Mary F. Horvath, MFS; Andrew Neal, MS; Henry R. Reeve, JD

Targeted Audience:  Digital & Multimedia Sciences, Engineering Sciences, General, Jurisprudence

Knowledge Level Required:  Basic (little to no knowledge of subject presented)

Expected Handout Length:  25 Pages
Pre-Registration Required — $150

#5 UVIS Dental Identification Module (UDIM) — A Hands-On Workshop

Monday, February 22, 2016 8:30 a.m. - 12:30 p.m.  3.75 CE Hours

Educational Objective(s): After attending this presentation, attendees will: (1) become familiar with the functionality and features of the Unified Victim Identification System (UVIS), the UVIS Case Management System (UVIS-CMS), and the UDIM Stand Alone (UDIM-SA) software systems; and, (2) gain experience in order to enter, search, and compare antemortem and postmortem dental data utilizing the UDIM-SA software to identify a decedent.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by providing attendees with a working knowledge of the UVIS Dental Identification Module, a component of a complete forensic case management system.

Chair: Kenneth W. Aschheim, DDS  New York, NY

Co-Chair: Lawrence A. Dobrin, DMD  New York City OCME  Roselle Park, NJ

Faculty:
John P. Demas, DDS  Brooklyn, NY
Frank DePaolo, BS  New York City OCME  New York, NY
Davin Faulkner, DMD  Las Vegas, NV

Edward E. Herschaft, DDS  UNLV School of Dental Medicine  Las Vegas, NV
Naeem Ullah, BS  New York, NY

Program Description: The UVIS is a browser-based fatality management system developed for the Office of Chief Medical Examiner of the City of New York (OCME) following the World Trade Center and American Airlines Flight 587 disasters. A key module to the system is the UDIM, which can serve as a stand-alone dental identification software program. Currently, it is used by multiple municipalities, including the OCME of the City of New York and the Clark County Office of the Coroner/Medical Examiner, Las Vegas, NV.

This session will be an introduction to the functions of the current version of the UVIS, the UVIS-CMS, and how the Dental Identification Module integrates into daily operations as well as Multiple Fatality Incidents (MFI). Participants will continue with an in-depth look at the features and functionally of the dental modules as well as hands-on training utilizing the UDIM-SA program.

Program:

8:30 a.m. - 8:45 a.m.  History and Funding of the UVIS/UDIM Project
Frank DePaolo, BS

8:45 a.m. - 9:00 a.m.  Multi-State Deployment
John Fudenberg, MBA

9:00 a.m. - 9:30 a.m.  UVIS/UDIM Theory and Features
Kenneth W. Aschheim, DDS
WORKSHOPS

Pre-Registration Required — $150

#5 UVIS Dental Identification Module (UDIM) — A Hands-On Workshop (continued)

Program cont.:

9:30 a.m. - 10:30 a.m. Hands-On Computer Workshop
Kenneth W. Aschheim, DDS; Naeem Ullah, BS; Lawrence A. Dobrin, DMD;
Edward E. Herschaft, DDS; John P. Demas, DDS; Davin Faulkner, DMD

10:30 a.m. - 10:45 a.m. Break

10:45 a.m. - 12:00 p.m. Hands-On Computer Workshop
Kenneth W. Aschheim, DDS; Naeem Ullah, BS; Lawrence A. Dobrin, DMD;
Edward E. Herschaft, DDS; John P. Demas, DDS; Davin Faulkner, DMD

12:00 p.m. - 12:30 p.m. Panel Questions and Answers
Lawrence A. Dobrin, DMD

Targeted Audience: Anthropology, General, Odontology, Pathology/Biology

Knowledge Level Required: Basic (little to no knowledge of subject presented)

Expected Handout Length: 10 Pages

Restricted Audience Size: 40

Supported by: Clark County Office of the Coroner/Medical Examiner, Office of the Chief Medical Examiners City of New York
WORKSHOPS

Pre-Registration Required — $250

#6 Frequency Occurrence in Handwriting and Hand Printing Characteristics
Monday, February 22, 2016  8:30 a.m. ‑ 4:30 p.m.  6.25 CE Hours

Educational Objective(s): After attending this presentation, attendees will have a significant understanding and appreciation of the statistical bases for handwriting comparisons and how to present such information in court.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by providing information that can be used in court cases in which statistical foundation and probability become weight or admissibility issues.

Chair:     Co-Chair:
Thomas W. Vastrick, BS     Ellen M. Schuetzner, BA
Apopka, FL      Chicago, IL

Faculty:
Mark E. Johnson, PhD
University of Central Florida
Orlando, FL

Program Description: This session will provide a detailed education of the methodologies and results of a four-year study into frequency occurrences of numerous handwriting and hand printing characteristics. Attendees will study population sampling, development of characteristics for the study, quality control pilot studies, confidence levels, quantitative statistics for factors that affect handwriting, interdependence of characteristics, data entry, and use in casework and court.

Program:

8:30 a.m. - 9:30 a.m.  History of Statistics and History of Frequency of Occurrence Project
Ellen M. Schuetzner, BA

9:30 a.m. - 10:30 a.m.  Population Sampling and Quantitative Analyses of Factors That Affect Handwriting
Thomas W. Vastrick, BS; Mark E. Johnson, PhD

10:30 a.m. - 10:45 a.m.  Break

10:45 a.m. - 11:45 a.m.  Pilot Studies and Quality Control Selection of Characteristics Database Development
Thomas W. Vastrick, BS; Mark E. Johnson, PhD

11:45 a.m. - 1:00 p.m.  Lunch

1:00 p.m. - 2:00 p.m.  Product Rule in Handwriting and Hand Printing Confidence Limits
Thomas W. Vastrick, BS; Mark E. Johnson, PhD

2:00 p.m. - 3:00 p.m.  Case Use and Query Reporting Casework Exercises: Part I
Thomas W. Vastrick, BS; Ellen M. Schuetzner, BA

3:00 p.m. - 3:10 p.m.  Break

3:10 p.m. - 4:00 p.m.  Casework and Query Reporting Casework Exercises: Part II
Thomas W. Vastrick, BS; Ellen M. Schuetzner, BA
Pre-Registration Required — $250

#6 Frequency Occurrence in Handwriting and Hand Printing Characteristics (continued)

Program cont.:

4:00 p.m. - 4:30 p.m. Roundtable Discussion: Uses and Potential Misuses of Results of Research, Uses in Casework, and Uses in Court

*Thomas W. Vastrick, BS; Ellen M. Schuetzner, BA; Mark E. Johnson, PhD*

Targeted Audience: Questioned Documents

Knowledge Level Required: Advanced (highly technical)

Expected Handout Length: 50 Pages

Restricted Audience Size: 40

Workshop Requirements: Attendees will need to bring a laptop computer with the ability to run Microsoft Excel and Access as well as a calculator or app with a square root function.

*Registration is limited to the first 40 registrants. Registration is limited to AAFS members until January 15, 2016.*
#7 Extreme Violence — Military vs. Civilian Crime Scene Investigation (CSI) Cases — Forensic Analysis and Disciplines in Practice

**Educational Objective(s):** After attending this presentation, attendees will understand multiple crime scene investigation methods including injury pattern analysis, post-blast analysis, mass murder crime scene processing, and methods to solving an array of violent crimes.

**Impact on the Forensic Science Community:** This presentation will impact the forensic science community by identifying detailed and relevant aspects into the dynamics of multiple violent crime scenes observed around the world. The crimes were investigated by the military criminal investigative organizations. The investigations will present multimodal approaches elaborating on crime scene processing, evidence collection, interrogation methodology, post-blast reconstruction, medicolegal death determinations, and judicial hurdles and findings.

**Chair:**
Brian L. Janysek, MFS  
Oakton, VA

**Co-Chair:**
Ryan P. Brokaw, MFS  
U.S. Army CID  
Fort Benning, GA

**Faculty:**
Steven Geniuk, MS  
Fort Huachuca, AZ

Curtis E. Sparling, MA  
U.S. Army CID  
Joint Base Lewis-McChord, WA

Donald Hayden, MFS  
Richmond Hill, GA

Jessica Ann Veltri, MS  
U.S. Army CID  
Joint Base Lewis-McChord, WA

Scott Roeske, MFS  
Belton, TX

**Program Description:** The session will focus on various case discussions of crimes investigated in a military and civilian environment, using various processing techniques.

**Program:***

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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| 8:30 a.m. - 8:45 a.m. | Introduction  
Brian L. Janysek, MFS; Ryan P. Brokaw, MFS |
| 8:45 a.m. - 10:00 a.m. | Massacre in Afghanistan  
Ryan P. Brokaw, MFS; Scott Roeske, MFS |
| 10:00 a.m. - 10:15 a.m. | Break |
| 10:15 a.m. - 11:30 a.m. | Robbery/Homicide at Fort Leonard Wood, Missouri  
Scott Roeske, MFS; Donald Hayden, MFS |
WORKSHOPS

Las Vegas
2016

Pre-Registration Required — $200

#7 Extreme Violence — Military vs. Civilian Crime Scene Investigation (CSI) Cases — Forensic Analysis and Disciplines in Practice (continued)

Program cont.:

11:30 a.m. - 1:00 p.m.  Lunch
1:00 p.m. - 2:15 p.m.  Crime Scene Investigation
Jessica Ann Veltri, MS; Steven Geniuk, MS; Curtis E. Sparling, MA;
2:15 p.m. - 3:15 p.m.  Suicide Bomber
Brian L. Janysek, MFS; Jessica Ann Veltri, MS
3:15 p.m. - 3:30 p.m.  Break
3:30 p.m. - 4:45 p.m.  Murder Suicide at Fort Hood, Texas
Ryan P. Brokaw, MFS; Scott Roeske, MFS

Targeted Audience: Criminalistics, General, Jurisprudence, Odontology, Pathology/Biology, Psychiatry & Behavioral Science

Knowledge Level Required: Intermediate (some knowledge)

Expected Handout Length: 150 Pages
WORKSHOPS

Pre-Registration Required — $200

This program is presented by the Forensic Sciences Foundation, Inc.

#8 From the Ashes — Transforming the Response to Mass Disasters

Monday, February 22, 2016 8:30 a.m. - 5:00 p.m. 6.25 CE Hours

Educational Objective(s): After attending this presentation, attendees will understand how different agencies integrate various areas of forensic science in mass fatality incidents and how various forensic service providers can collaborate within and with these agencies to prepare for mass disaster events. In addition, attendees will better understand how emerging technologies are being leveraged.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by highlighting what has been learned from numerous natural and unnatural disasters, and how the forensic science community working together can prepare to respond to future incidents by teaching how to process and investigate mass disaster scenes and evidence.

Chair: Anjali A. Ranadive, JD
SciLawForensics, Ltd.
Brookings, SD

Co-Chair: Joanna L. Collins, MFS
San Antonio, TX

Faculty:

Robert E. Barsley, DDS, JD
LSU School of Dentistry
New Orleans, LA

Edward Mazuchowski II, MD, PhD
Dover AFB, DE

Mary B. Collins-Morton, MS
FBI Academy
Quantico, VA

Noelle J. Umback, PhD
OCME
Dept of Forensic Biology
New York, NY

Dean M. Gialamas, MS
Los Angeles County Sheriff’s Department
Norwalk, CA

Program Description: This session will discuss how various agencies collaborate to respond to mass disasters of all types.

Program:

8:30 a.m. - 8:45 a.m.  Introduction
Anjali A. Ranadive, JD

8:45 a.m. - 9:15 a.m.  Crime Scene
Mary B. Collins-Morton, MS

9:15 a.m. - 10:15 a.m.  Forensic Pathology
Edward Mazuchowski II, MD, PhD

10:15 a.m. - 10:30 a.m.  Break
PRE-REGISTRATION REQUIRED — $200

#8 From the Ashes — Transforming the Response to Mass Disasters (continued)

Program cont.:

10:30 a.m. - 11:00 a.m. Identification Odontology
   Robert E. Barsley, DDS, JD

11:00 a.m. - 12:00 p.m. Identification DNA
   Noelle J. Umback, PhD

12:00 p.m. - 1:30 p.m. Lunch

1:30 p.m. - 2:00 p.m. Management/Policy Preparedness
   Dean M. Gialamas, MS

2:00 p.m. - 3:30 p.m. Panel Discussion
   Anjali A. Ranadive, JD; Robert E. Barsley, DDS, JD; Noelle J. Umback, PhD;
   Dean M. Gialamas, MS; Edward Mazuchowski II, MD, PhD;
   Mary B. Collins-Morton, MS

3:30 p.m. - 3:45 p.m. Break

3:45 p.m. - 4:45 p.m. Panel Discussion Continued
   Anjali A. Ranadive, JD; Robert E. Barsley, DDS, JD; Noelle J. Umback, PhD;
   Dean M. Gialamas, MS; Edward Mazuchowski II, MD, PhD;
   Mary B. Collins-Morton, MS

4:45 p.m. - 5:00 p.m. Closing Remarks
   Anjali A. Ranadive, JD

TARGETED AUDIENCE: All Disciplines

KNOWLEDGE LEVEL REQUIRED: Intermediate (some knowledge)

EXPECTED HANDBOOK LENGTH: 100 Pages

Proceeds from this workshop will benefit the Forensic Sciences Foundation, Inc.
Pre-Registration Required — $200

#9 Strategies for Scientific Problem-Solving With Physical Evidence

Monday, February 22, 2016  
8:30 a.m. - 5:00 p.m.  
7.0 CE Hours

Educational Objective(s): After attending this presentation, participants will have better knowledge of and more insight into the development, underpinnings, and potential value of criminalistics from the perspective of experienced and knowledgeable forensic scientists.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by addressing the often-overlooked but crucial question of which examinations to perform for a given case, how that decision-making is currently organized, and how it might be improved.

Chair:  
Rebecca E. Bucht, PhD  
Helsinki, FINLAND

Co-Chair:  
Patrick Buzzini, PhD  
Sam Houston State University  
Huntsville, TX

Faculty:  
Peter R. De Forest, D.Crim  
Forensic Consultants  
Ardsley, NY

Alastair M. Ross, AM  
National Institute of Forensic Science, Retired  
Docklands, Victoria, AUSTRALIA

Douglas M. Lucas, DSc  
Burlington, ON, CANADA

Sheila Willis, PhD  
Forensic Science Ireland  
Dublin, IRELAND

Pierre A. J-L. Margot, PhD  
University of Lausanne  
Lausanne, SWITZERLAND

Program Description: This session will provide a wealth of knowledge and experience concerning the evolution of the forensic science industry in several countries. Along with a summary of how forensic science has evolved in their own jurisdictions, the presentations will introduce views on the key elements required for the optimization of the contribution of forensic science to criminal justice questions, particularly with regard to complex and non-routine cases and volume crime, providing guidance to criminal justice policymakers.

Program:

8:30 a.m. - 8:45 a.m.  
Welcome and Introduction  
Rebecca E. Bucht, PhD; Patrick Buzzini, PhD

8:45 a.m. - 9:45 a.m.  
The Evolution of Forensic Science — The First Ten Thousand Years  
Douglas M. Lucas, DSc

9:45 a.m. - 10:45 a.m.  
The Unfettered Criminalist  
Peter R. De Forest, D.Crim

10:45 a.m. - 11:00 a.m.  
Break
Pre-Registration Required — $200

#9 Strategies for Scientific Problem-Solving With Physical Evidence (continued)

Program cont.:

11:00 a.m. - 12:00 p.m.  Rewarding “A” While Hoping for “B”
Sheila Willis, PhD

12:00 p.m. - 12:30 p.m.  Practical Exercise

12:30 p.m. - 1:30 p.m.  Lunch

1:30 p.m. - 2:30 p.m.  Managing Inevitable Change
Alastair M. Ross, AM

2:30 p.m. - 2:45 p.m.  Break

2:45 p.m. - 3:45 p.m.  Forensic Science: Where From, Where To?
Pierre A. J-L. Margot, PhD

3:45 p.m. - 4:45 p.m.  Practical Exercise

4:45 p.m. - 5:00 p.m.  Closing Remarks
Rebecca E. Bucht, PhD; Patrick Buzzini, PhD

Targeted Audience: Criminalistics, General, Jurisprudence

Knowledge Level Required: Intermediate (some knowledge)

Expected Handout Length: 75 Pages

Restricted Audience Size: 80
Pre-Registration Required — $200

#10 Practical Homicide Investigation®: An Evaluation of Homicides Involving Child Victims, Child Offenders, and Equivocal Death Investigations

Monday, February 22, 2016 8:30 a.m. - 5:00 p.m.  6.25 CE Hours

Educational Objective(s): After attending this presentation, attendees will better understand the unique aspects of child homicides and the dynamics involved in cases where children are offenders. In addition, equivocal deaths and aquatic death investigations will be discussed as well as the application of professional homicide investigation and medicolegal analysis to these events.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by providing and familiarizing forensic scientists and investigators with the art and science involved in the professional investigation and medicolegal analysis in homicide investigations specifically as it relates to child homicides and equivocal death inquiries.

Chair: Vernon J. Geberth, MS, MPS  
Co-Chair: Barbara C. Wolf, MD
Practical Homicide Investigation  
District 5 MEO
Marco Island, FL  
Leesburg, FL

Faculty:  
Thomas C. McAndrew, BA  
Andrea Zaferes, BA
Pennsylvania State Police  
District 5 MEO
Orefield, PA  
Shokan, NY

Program Description: This session will familiarize forensic scientists and investigators with the art and science involved in death investigation. The participants will benefit from more than 130 years of combined homicide and forensic pathology experience of the four presenters. This session will focus on the elements of homicide investigation, medicolegal analysis, and how follow-up procedures require close communication between prosecutors, criminalists, pathologists, and other forensic specialists. The session learning points are supported by detailed accounts of actual murder cases.

Program:

8:30 a.m. - 10:00 a.m.  Introduction to Practical Homicide Investigation®: Preliminary Investigation at the Scene and Equivocal Deaths  
Vernon J. Geberth, MS, MPS

10:00 a.m. - 10:30 a.m.  Break

10:30 a.m. - 12:00 p.m.  Medicolegal Evaluation of Child Abuse and Homicides  
Barbara C. Wolf, MD

12:00 p.m. - 1:15 p.m.  Lunch

1:15 p.m. - 3:00 p.m.  Case Histories of Juveniles Who Commit Murder  
Thomas C. McAndrew, BA

3:00 p.m. - 3:30 p.m.  Break
Pre-Registration Required — $200

#10 Practical Homicide Investigation®: An Evaluation of Homicides Involving Child Victims, Child Offenders, and Equivocal Death Investigations (continued)

Program cont.:

3:30 p.m. - 4:45 p.m. Aquatic Death Investigation — Child Abuse and Homicide Andrea Zaferes, BA

4:45 p.m. - 5:00 p.m. Discussion Vernon J. Geberth, MS, MPS; Barbara C. Wolf, MD; Thomas C. McAndrew, BA; Andrea Zaferes, BA

Targeted Audience: General, Pathology/Biology

Knowledge Level Required: Intermediate (some knowledge)

Expected Handout Length: 150 Pages

Restricted Audience Size: 125
#11 Child Homicides: The Critical Role of Interdisciplinary Expert Collaboration

Monday, February 22, 2016   1:00 p.m. – 5:00 p.m.    3.5 CE Hours

Educational Objective(s): After attending this presentation, attendees will better understand the main types of pathology observed in child abuse cases, the problems of identifying time sequences and how injuries are inflicted based upon the pathology present, and how law enforcement agencies can use medical and scientific evidence to investigate allegations of child homicide. Attendees will also learn how evidence is presented and challenged in homicide trials in the Canadian criminal justice system and how the Canadian legal system has dealt with undercover police operations and its admissibility as evidence.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by providing information on different law enforcement techniques and how forensic medical evidence can be integrated into a complex investigation of a difficult and often contested area of the criminal justice system.

Chair:       Co-Chair:
Chris Milroy, MD, LLB     Jacqueline L. Parai, MD
Ottawa Hospital     Ottawa Hospital
Ottawa, ON, CANADA     Division of Anatomical Pathology
                      Ottawa, ON, CANADA

Faculty:
Michael Cavilla, BA     Evan Matshes, MD
Calgary Police Service     Academic Forensic Pathology, Inc.
Major Crimes Section     Calgary, AB, CANADA
Calgary, AB, CANADA

Program Description: This session will discuss the integration of child homicide analyzing the different roles of law enforcement and medical/scientific experts and the importance of the integration of these different roles in investigation while maintaining professional independence. The session will involve an examination of the general medical aspects of child homicides, including the typical pathology, and will then look at a major case using the Canadian “Mr. Big” technique used by law enforcement, a technique which has been the subject of examination by the Supreme Court of Canada.

Program:

1:00 p.m. - 2:30 p.m.     Pathology of Child Homicide
                           Evn Matshes, MD

2:30 p.m. - 2:45 p.m.     Open Discussion
                           Evn Matshes, MD; Michael Cavilla, BA; Chris Milroy, MD, LLB; Jacqueline L. Parai, MD

2:45 p.m. - 3:15 p.m.     Break

3:15 p.m. - 4:45 p.m.     Integration of Expert Evidence With Law Enforcement Exercise
                           Michael Cavilla, BA; Chris Milroy, MD, LLB

4:45 p.m. - 5:00 p.m.     Open Discussion
                           Evn Matshes, MD; Michael Cavilla, BA; Chris Milroy, MD, LLB; Jacqueline L. Parai, MD
#11 Child Homicides: The Critical Role of Interdisciplinary Expert Collaboration (continued)

**Targeted Audience:** General, Jurisprudence, Pathology/Biology

**Knowledge Level Required:** Basic (little or no knowledge of subject presented)

**Expected Handout Length:** 70 Pages
Pre-Registration Required — $125

#12 Development of a Reasonable Minimum Documentation Standard for Latent Prints

Monday, February 22, 2016  1:00 p.m. - 5:00 p.m.  3.5 CE Hours

Educational Objective(s): After attending this presentation, attendees will have: (1) hands-on experience in the difficulties of creating a one-size-fits-all policy for assigning documentation requirements to latent print evidence based upon the difficulty of the image; (2) experiential first-hand knowledge of some of the key attributes that factor into latent difficulty classifications; and, (3) a better understanding of the arguments for enhanced documentation, as well as some practical suggestions on how to implement such a policy and the tools to design a policy that conforms to their own agency’s operational needs.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by furthering the dialogue surrounding the need for and implementation of realistic documentation policies while providing attendees with the practical tools and advice necessary to successfully craft and implement needed minimum documentation standard for latent print comparison work policies in their own laboratories.

Chair: Heidi Eldridge, MS  Co-Chair: Jeri D. Ropero-Miller, PhD
RTI International  RTI International
Research Triangle Park, NC  Research Triangle Park, NC

Program Description: This session will review the arguments for implementing a minimum documentation standard for latent print comparison work, then will continue on to two hands-on exercises designed to help identify complexity, including visual training on complexity attributes and terminology. The session will include round-table discussions and culminate in practical suggestions for developing and implementing a policy at each participant’s home laboratory.

Program:

1:00 p.m. - 1:10 p.m.  Welcome and Opening Remarks
Jeri D. Ropero-Miller, PhD

1:10 p.m. - 1:40 p.m.  Discussion of Documentation Philosophy
Heidi Eldridge, MS

1:40 p.m. - 2:30 p.m.  Exercise One — Gut-Reaction Categorizations of Latent Difficulty
Heidi Eldridge, MS

2:30 p.m. - 3:00 p.m.  Visual Training on Attribute Terminology
Heidi Eldridge, MS

3:00 p.m. - 3:15 p.m.  Break

3:15 p.m. - 4:15 p.m.  Exercise Two — Scoring Latents Based on Attributes
Heidi Eldridge, MS

4:15 p.m. - 4:45 p.m.  Round-Table Discussion
Heidi Eldridge, MS
Pre-Registration Required — $125

#12 Development of a Reasonable Minimum Documentation Standard for Latent Prints (continued)

Program cont.:

4:45 p.m. - 5:00 p.m.  Closing Comments and Suggestions for Implementation of Documentation Policy

*Heidi Eldridge, MS*

**Targeted Audience:** Criminalistics, General

**Knowledge Level Required:** Basic (little to no knowledge of subject presented)

**Expected Handout Length:** 15 Pages

**Restricted Audience Size:** 30
Pre-Registration Required — $125

#14 Vaping: What You Didn’t Know About Electronic Cigarettes — And Why You Should Care

Monday, February 22, 2016  1:30 p.m. ‑ 5:00 p.m.   2.75 CE Hours

Educational Objective(s): After attending this presentation, attendees will be able to: (1) understand the mechanism and advantage of aerosols as a drug delivery system; (2) articulate the history of electronic cigarette development, their operation, and components; (3) understand how electronic cigarettes are manipulated for abuse; and, (4) describe an analytical approach for e-cigarette components and e-liquid formulations to include real casework involving electronic cigarettes.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by providing an awareness of electronic cigarette use as an emerging and popular drug of choice and the abuse trend leading to an international criminal justice concern. This presentation will also provide a foundation for which controlled substances units, forensic toxicologists, death investigators, and medical examiners can develop analytical methodologies and refine interpretative opinions when electronic cigarettes are used as a Route of Administration (ROA).

Chair:       Co-Chair:
Michelle R. Peace, PhD     Justin L. Poklis, BS
Virginia Commonwealth University    Virginia Commonwealth University
Richmond, VA        Dept of Pharmacology & Toxicology
Richmond, VA

Faculty:
Richard N. Dalby, PhD     Matthew R. Wood, MS
University of Maryland     Ocean County Sheriff’s Dept
School of Pharmacy    Forensic Science Laboratory
Baltimore, MD        Toms River, NJ

Adam Polhemus, BA
New Jersey State Police
West Trenton, NJ

Program Description: This session will describe how electronic cigarettes work and their efficacy in drug delivery. This session will support analytical efforts in controlled substances units and support the findings and opinions of scientists, medical examiners, death investigators, and forensic toxicologists as they present analytical results. This session will also provide greater understanding in the court systems nationwide as to the nature of drug usage, abuse, and overdose cases in which electronic cigarettes were used to deliver an illicit drug.

Program:

1:30 p.m. - 1:45 p.m.   Introduction
Michelle R. Peace, PhD

1:45 p.m. - 2:30 p.m.   Basic Mechanism and Efficacy of Aerosols in Drug Delivery
Richard N. Dalby, PhD

2:30 p.m. - 3:15 p.m.   The E-Cig Evolution, Use, and Operation
Michelle R. Peace, PhD
Pre-Registration Required — $125

#14 Vaping: What You Didn’t Know About Electronic Cigarettes — And Why You Should Care (continued)

Program cont.:

3:15 p.m. - 3:45 p.m.  Break

3:45 p.m. - 4:30 p.m.  Manipulation and Analysis of the E-Cigs and E-Liquids
  Justin L. Poklis, BS

4:30 p.m. - 5:00 p.m.  Case Examples
  Matthew R. Wood, MS, Adam Polhemus, BA

Targeted Audience: Criminalistics, General, Pathology/Biology, Toxicology

Knowledge Level Required: Basic (little to no knowledge of subject presented)

Expected Handout Length: 60 Pages
#15 Addressing Damaged Mobile Devices for Data Acquisition

**Monday, February 22, 2016**

**1:30 p.m. - 5:00 p.m.**

**3.0 CE Hours**

**Pre-Registration Required — $150**

**Educational Objective(s):** After attending this presentation, attendees will have explored the topic of damaged mobile devices and reviewed the existing literature in this and peripheral research areas. Attendees will also complete hands-on activities including the examination of a ballistics-damaged mobile phone, documented the damage to the device in a written report and with photo documentation, disassembled a ballistics-damaged mobile phone, and employed a donor device via the “fraternal clone” method to repair the device for power on and data acquisition. Attendees will affect future direction of the damaged devices research by providing input into the damaged devices program.

**Impact on the Forensic Science Community:** This presentation will impact the forensic science community by establishing that simply because the device is damaged does not mean the data is gone. Successful data acquisition is possible from damaged mobile devices. While each of the damaged device focus areas has the potential for catastrophic damage to the intact electronic device, the potential of data residing on the embedded flash memory of these devices still exists and presents a new research area with limited scientific research in the field of digital forensics.

**Chair:**
Samuel I. Brothers, BBA  
U.S. Customs and Border Protection  
Springfield, VA

**Co-Chair:**
Richard Ayers, MS  
Gaithersburg, MD

**Faculty:**
Steven B. Watson, BA  
Westminster, CO

**Program Description:** This session will review a series of research projects where mobile devices were damaged with scientific precision, and document the damage and remediation with the intent of publishing the results for the digital forensics community. The scope of the research projects includes liquid damage, thermal damage, impact damage, and ballistics damage. The goal of this damage devices session is to ask the questions, explore the answers, and provide real-time guidance to the field on addressing damaged mobile and embedded devices.

**Program:**

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:30 p.m.</td>
<td>Introduce the Damaged Devices Program</td>
</tr>
<tr>
<td></td>
<td>* Steven B. Watson, BA</td>
</tr>
<tr>
<td>1:50 p.m.</td>
<td>Damage Areas Covered by Research</td>
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<tr>
<td></td>
<td>* Steven B. Watson, BA</td>
</tr>
<tr>
<td>2:10 p.m.</td>
<td>Damage Factors Affecting the Ability to Retrieve Data</td>
</tr>
<tr>
<td></td>
<td>* Steven B. Watson, BA</td>
</tr>
<tr>
<td>2:30 p.m.</td>
<td>Outline the Planned Hands-On Workshop Activity</td>
</tr>
<tr>
<td></td>
<td>* Steven B. Watson, BA</td>
</tr>
<tr>
<td>2:50 p.m.</td>
<td>Break</td>
</tr>
</tbody>
</table>

88
Pre-Registration Required — $150

#15 Addressing Damaged Mobile Devices for Data Acquisition (continued)

Program cont.:

3:20 p.m. - 3:40 p.m.  Device Assessment
  *Steven B. Watson, BA; Samuel I. Brothers, BBA*

3:40 p.m. - 4:00 p.m.  Documentation and Chain of Custody
  *Steven B. Watson, BA; Samuel I. Brothers, BBA*

4:00 PM - 4:20 p.m.  Device Disassembly
  *Steven B. Watson, BA; Samuel I. Brothers, BBA*

4:20 p.m. - 4:40 p.m.  Device Assembly Using Donor Phone
  *Steven B. Watson, BA; Samuel I. Brothers, BBA*

4:40 p.m. - 5:00 p.m.  Prepping Phone for Connection to Acquisition Tools
  *Steven B. Watson, BA; Samuel I. Brothers, BBA*

Targeted Audience: Digital & Multimedia Sciences

Knowledge Level Required: Intermediate (some knowledge)

Expected Handout Length: 80 pages

Restricted Audience Size: 40

Supported by: VTO, Inc.
Pre-Registration Required — $100

#16 The American Academy of Forensic Sciences (AAFS) Humanitarian and Human Rights Resource Center

Tuesday, February 23, 2016 8:30 a.m. - 12:00 p.m.  3.0 CE Hours

Educational Objective(s): After attending this presentation, participants will understand the structure of the new AAFS Center and current developments. Attendees will also be informed about key issues and applications within different global regions.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by raising awareness of the new AAFS Center and important developments in global applications of humanitarian and human rights forensic science.

Chair: Douglas H. Ubelaker, PhD
Smithsonian Institution
Dept of Anthropology
Washington, DC

Co-Chair: Morris V. Tidball-Binz, MD
Ferney Voltaire, FRANCE

Faculty:
Sabra R. Botch-Jones, MS, MA
Boston University School of Medicine
Biomedical Forensic Sciences
Boston, MA

Dawn M. Mulhern, PhD
Fort Lewis College
Dept of Anthropology
Durango, CO

S. Cordner, MB
Victorian Institute of Forensic Medicine
Southbank, AUSTRALIA

Michael S. Pollanen, MD
Ontario Forensic Pathology Service
Toronto, ON, CANADA

Luis Fondebrider, PhD
Buenos Aires, ARGENTINA

Duarte Nuno Vieira, MSc, PhD, MD
Coimbra, PORTUGAL

Marilyn A. Huestis, PhD
Chemistry & Drug Metabolism
Intramural Research, NIDA, NIH
Baltimore, MD

Program Description: This session will provide current information on the development, structure, and progress sustained with the AAFS Humanitarian and Human Rights Resource Center. It will also provide perspective from key practitioners regarding global developments and issues relating to humanitarian and human rights forensic science.

Program:

8:30 a.m. - 8:45 a.m.  Introduction
Douglas H. Ubelaker, PhD

8:45 a.m. - 9:05 a.m.  An Overview of Humanitarian and Human Rights Forensic Science
Morris V. Tidball-Binz, MD
Pre-Registration Required — $100

#16 The American Academy of Forensic Sciences (AAFS) Humanitarian and Human Rights Resource Center (continued)

Program cont.:

9:05 a.m. - 9:25 a.m. Publications and Documents Relating to Humanitarian and Human Rights Forensic Science
Marilyn A. Huestis, PhD

9:25 a.m. - 9:45 a.m. Laboratory and Analysis Protocols (LAP) Subcommittee: Scope and Resources
Sabra R. Botch-Jones, MS, MA

9:45 a.m. - 10:05 a.m. Integrating Humanitarian and Human Rights Into Forensic Science Education
Dawn M. Mulhern, PhD

10:05 a.m. - 10:20 a.m. Break

10:20 a.m. - 10:40 a.m. Issues and Applications in Latin America
Luis Fondebrider, PhD

10:40 a.m. - 11:00 a.m. Capacity Development in Forensic Medicine in Low- and Middle-Income Countries
Michael S. Pollanen, MD

11:00 a.m. - 11:20 a.m. The Istanbul Protocol and the Forensic Investigation and Documentation of Torture and Ill-Treatment
Duarte Nuno Vieira, MSc, PhD, MD

11:20 a.m. - 11:40 a.m. Humanitarian Forensic Science in the Asia Pacific — Recent Developments and Challenges
S. Cordner, MB

11:40 a.m. - 12:00 p.m. Summary and Discussion
Douglas H. Ubelaker, PhD

Targeted Audience: All Disciplines

Knowledge Level Required: Basic (little to no knowledge of subject presented)

Expected Handout Length: 80 Pages
WORKSHOPS

Pre-Registration Required — $150

#17 Postmortem Monocular Indirect Ophthalmoscopy (PMIO)

Tuesday, February 23, 2016

8:30 a.m. - 12:00 p.m.

3.25 CE Hours

Educational Objective(s): After attending this presentation, attendees will be able to: (1) differentiate between direct and indirect ophthalmoscopy, noting advantages and limitations of each technique for the postmortem detection of fundal hemorrhages; (2) discuss the fundal location of retinal hemorrhages relative to their projected aerial image during monocular indirect ophthalmoscopy; and, (3) accurately draw retinal abnormalities observed during monocular indirect ophthalmoscopy with a simple ocular model on a fundal diagram.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by providing an overview of PMIO, facilitating skill acquisition, and evaluating practical training and image acquisition with a smartphone.

Chair: Patrick E. Lantz, MD
WFU School of Medicine
Dept of Pathology
Winston-Salem, NC

Co-Chair: Candace H. Schoppe, MD
Southwestern Institute of Forensic Sciences
Dallas, TX

Program Description: This session will review the technique of PMIO. Attendees will have a realistic learning experience by practical hands-on training with a procedural headlamp, an aspheric indirect lens, and a simple ocular model containing a variety of retinal abnormalities observed at autopsy. Attendees with smartphones can practice still-image acquisition and video recording of the projected aerial produced during PMIO.

Program:

8:30 a.m. - 8:50 a.m. Introduction to PMIO
Patrick E. Lantz, MD

8:50 a.m. - 9:10 a.m. Introductory PMIO
Candace H. Schoppe, MD

9:10 a.m. - 9:20 a.m. Break and Setup for Practicum

9:20 a.m. - 11:20 a.m. Hands-On PMIO and Image Documentation
Patrick E. Lantz, MD; Candace H. Schoppe, MD

11:20 a.m. - 11:30 a.m. Break

11:30 a.m. - 12:00 p.m. Assessment of Skills and Evaluation
Patrick E. Lantz, MD; Candace H. Schoppe, MD

Targeted Audience: Pathology/Biology

Knowledge Level Required: Intermediate (some knowledge)

Expected Handout Length: 15

Restricted Audience Size: 30
WORKSHOPS

Pre-Registration Required — $100

#18  Improving Your Image: How to Get the Best Out of Your Expensive X-Ray Equipment

Tuesday, February 23, 2016  8:30 a.m. - 12:15 p.m.  3.5 CE Hours

Educational Objective(s): After attending this presentation, attendees will: (1) have a better understanding of basic imaging principles using either film or a digital recording media; and, (2) incorporate these fundamentals into image optimization.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by providing attendees with a better understanding of the association of basic radiographic principles, image acquisition, and optimization of image quality. The target audience for this presentation would include any individual involved in acquiring radiographs in a forensic setting. This would include, but is not limited to, medical examiners, forensic pathologists, dentists, anthropologists, autopsy technicians, and radiographers.

Chair:       Co-Chair:
Gerald J. Conlogue, MHS    Mark D. Viner, MSc
Quinnipiac University    Cranfield Forensic Institute
Diagnostic Imaging Program    Defence Academy of the UK
Hamden, CT    Inforce Foundation
Shrivenham, UNITED KINGDOM

Program Description: Medical imaging equipment and practices have advanced dramatically in the past decade; however, due to the rapidly developing technology, many of the practices have not been adapted into forensics. The faculty has had extensive experience in integrating technical advances with image optimization in a variety of settings including medical, anthropological, and forensics areas.

Program:

8:30 a.m. -  9:00 a.m.   Forensic Imaging Protocols
                       Gerald J. Conlogue, MHS

9:00 a.m. -  9:30 a.m.   Organization and Resourcing
                       Mark D. Viner, MSc

9:30 a.m. - 10:30 a.m.  Image Optimization — Film
                       Gerald J. Conlogue, MHS

10:30 a.m. - 10:45 a.m.  Break

10:45 a.m. - 11:30 a.m.  Image Optimization — Digital Recording Media
                       Mark D. Viner, MSc

11:30 a.m. - 11:45 a.m.  Image Projections — Routine Cases
                       Gerald J. Conlogue, MHS

11:45 a.m. - 12:00 p.m.  Image Projections — Non-Routine Cases
                       Mark D. Viner, MSc

12:00 p.m. - 12:15 p.m.  Employing Ancillary Equipment
                       Gerald J. Conlogue, MHS
Pre-Registration Required — $100

#18 Improving Your Image: How to Get the Best Out of Your Expensive X-Ray Equipment (continued)

Targeted Audience: Anthropology, General, Odontology, Pathology/Biology

Knowledge Level Required: Intermediate (some knowledge)

Expected Handout Length: 40 Pages
WORKSHOPS

Pre-Registration Required — $100

#19 Diversity and Inclusion at the Forensic Science Workplace

Tuesday, February 23, 2016  8:30 a.m. - 12:30 p.m.  3.5 CE Hours

Educational Objective(s): After attending this presentation, attendees will be equipped with the necessary knowledge and tools to reflect on the past, put it into the context of the present, and create the conditions for an inclusive and diverse work environment.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by helping attendees and their organizations better prepare to meet the evolving needs of a diverse and inclusion-focused workplace through the use of emerging trends, data, and practical application methodologies.

Chair: Nikolas P. Lemos, PhD
OCME, Forensic Lab Division
San Francisco, CA

Co-Chair: Daniel S. Isenschmid, PhD
NMS Labs
Willow Grove, PA

Faculty:
Cathy Tobin, PHR
Oakland, CA

Chinyere M. Williams, BS
Oakland, CA

Program Description: This session will draw on the expertise and experience of forensic scientists and human resources professionals to provide a workplace diversity and inclusion framework that may be applied to the forensic science workplace.

Program:

8:30 a.m. - 8:45 a.m.  Welcome and Introduction
Nikolas P. Lemos, PhD

8:45 a.m. - 9:15 a.m.  Historical Review of Diversity and Inclusion
Chinyere M. Williams, BS

9:15 a.m. - 10:15 a.m.  Maximizing Diversity and Inclusion — Are You Inclusive?
Cathy Tobin

10:15 a.m. - 10:30 a.m.  Break

10:30 a.m. - 11:15 a.m.  Overcoming Invisible Bias
Cathy Tobin

11:15 a.m. - 12:15 p.m.  Diversifying Your Mind
Cathy Tobin

12:15 p.m. - 12:30 p.m.  Questions and Answers
Nikolas P. Lemos, PhD; Daniel S. Isenschmid, PhD; Chinyere M. Williams, BS; Cathy Tobin
Pre-Registration Required — $100

#19  Diversity and Inclusion at the Forensic Science Workplace (continued)

Targeted Audience:  All Disciplines

Knowledge Level Required:  Basic (little to no knowledge of subject presented)

Expected Handout Length:  50 Pages
#20  On the Leading Edge of Forensic Science

Tuesday, February 23, 2016  8:30 a.m. - 1:00 p.m.  3.5 CE Hours

**Educational Objective(s):** After attending this presentation attendees will better understand new developments in forensic science that may have an impact on their work.

**Impact on the Forensic Science Community:** This presentation will impact the forensic science community by providing an overview of some of the new developments in forensic science and by opening a forum for the discussion of issues that arise regarding such developments. A wide variety of developments that will soon impact forensic science have been identified within the Think Tank Committee of the Forensic Sciences Foundation, Inc. and will be discussed in this session.

**Chair:**
Zeno J. Geradts, PhD  
Netherlands Forensic Institute  
Den Haag, NETHERLANDS

**Co-Chair:**
Laura L. Liptai, PhD  
BioMedical Forensics  
Moraga, CA

**Faculty:**

**Edward G. Bartick, PhD**
George Washington University  
Dept of Forensic Sciences  
Washington, DC

**Robert M. Thompson, BS**
NIST  
Special Programs Office-Forensic Sciences  
Gaithersburg, MD

**Katrin Franke, PhD**
Gjovik University  
Gjovik, NORWAY

**Arian C. van Asten, PhD**
Netherlands Forensic Institute  
The Hague, NETHERLANDS

**Matthew Henshon, AB, JD**
Henshon Klein LLP  
Boston, MA

**Victor W. Weedn, MD, JD**
George Washington University  
Washington, DC

**Mehdi Moini, PhD**
George Washington University  
Dept of Forensic Sciences  
Washington, DC

**Gwyn Winfield, MA**
CBRNE World  
Falcon Communications  
Winchester, UNITED KINGDOM

**Program Description:** The goal of this session is to describe how new developments might impact forensic scientists in their work. Practical examples will be presented on lab automation, drones, robotics, instrumental mass spectrometry, 3D measurement techniques for firearm identification, bias in forensic science, nuclear forensics, cyber forensics, and integrated forensic platforms to portable field instruments.

**Program:**

8:30 a.m. - 9:00 a.m.  Welcome and Introduction  
*Zeno J. Geradts, PhD; Laura L. Liptai, PhD*

9:00 a.m. - 9:30 a.m.  3D Measurement Techniques for Firearm Identification  
*Robert M. Thompson, BS*
Pre-Registration Required — $100

#20 On the Leading Edge of Forensic Science (continued)

Program cont.:

9:30 a.m. - 10:00 a.m. Cyber Investigation of Malware
Katrin Franke, PhD

10:00 a.m. - 10:30 a.m. Twenty Minutes in a Space Suit: Prioritizing Evidence Collection in a Chemical, Biological, Radiological, and Nuclear (CBRN) Crime Scene
Gwyn Winfield, MA

10:30 a.m. - 11:00 a.m. Break

11:00 a.m. - 11:30 a.m. Portable Field Instruments
Victor W. Weedn, MD, JD; Edward G. Bartick, PhD; Mehdi Moini, PhD

11:30 a.m. - 12:00 p.m. Integrated Forensic Platforms
Arian C. van Asten, PhD

12:00 p.m. - 12:30 p.m. Panel Drone Forensics
Zeno J. Geradts, PhD; Katrin Franke, PhD; Arian C. van Asten, PhD; Matthew Henshon, AB, JD

12:30 p.m. - 1:00 p.m. Closing Remarks and Discussion
Zeno J. Geradts, PhD

Targeted Audience: Criminalistics, Digital & Multimedia Sciences, Engineering Sciences, General, Jurisprudence, Pathology/Biology, Questioned Documents, Toxicology

Knowledge Level Required: Intermediate (some knowledge)

Expected Handout Length: 80 Pages
Educational Objective(s): After attending this presentation, attendees will understand that crime assessment is a method of crime investigation that utilizes key structures within the criminological continuum to examine the presence and/or absence of evidence found at the crime scene. Within this framework, there are four major classifications, referred to as the sub-types hereafter, which will be introduced and explained. These sub-types span the criminal spectrum and manifest in the expression of pathological constellations behaviors that can be recognized. Predicated upon these primary factors and coupled with additional principles, attendees will be able to grasp that understanding the crime scene through the crime continuum provides a critical understanding for the motives, methods, and opportunities of the crime.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by providing attendees with the understanding that, although the human experience is variable, crime patterns can be coded to reveal interlocking and separate vectors. By doing so, recurrent elements and themes are developed to group common factors for various desires, intentions, and plans. Ergo, dependent upon the intended outcome, the crimes can reveal differentiated power and anger issues, levels of intimacy, and necessary idiosyncrasies that must be avoided. Accordingly, while acting out crime, the criminal many times inadvertently leaves these pre-crime, crime, and post-crime clues for investigators to find and analyze.

Chair: Richard D. Walter, MA
Montrose, PA

Co-Chair: Klaus C. Neudecker, MD
Landshut, GERMANY

Faculty:
Amanda L. Farrell, PhD
Marymount University
School of Education and Human Services
Arlington, VA

Patrick Zirpoli
Milanville, PA

Lurena A. Huffman, BS
Suffolk Police Department
Hampton, VA

Program Description: In contrast to the risks associated with traditional profiling efforts, crime assessment measures the crime by known major sub-type crime patterns (Power-Assertive type; Power-Reassurance type; Anger-Retalialatory type; and Anger-Excitation type). These sub-types provide a structural foundation from which to analyze crimes, in effect becoming the DNA of crime. That is, the crime research has identified key elements of the crime which can shape the investigation and provide critical knowledge regarding the various elements of the crime, to include, but certainly not limited to, providing recommended methods of apprehension, interviewing strategies, and prosecutorial considerations. Most importantly, inasmuch as crime assessment is reflective in process, the investigators and experts can explain the process of the investigation without the perils of projection.

Program:

8:30 a.m. - 9:00 a.m. Introduction
Lurena A. Huffman, BS

9:00 a.m. - 10:00 a.m. Historical Overview and Context
Klaus C. Neudecker, MD; Amanda L. Farrell, PhD
Pre-Registration Required — $200

#21  Crime Assessment: Solving Crime Beyond Profiling (continued)

Program cont.:

10:00 a.m. - 10:15 a.m.  Break

10:15 a.m. - 11:15 a.m.  What Is Crime Assessment and How Does It Differ From Profiling?
Richard D. Walter, MA

11:15 a.m. - 12:15 p.m.  The Sub-Types: A Brief Overview
Patrick Zirpoli; Amanda L. Farrell, PhD

12:15 p.m. - 1:30 p.m.  Lunch

1:30 p.m. - 3:00 p.m.  Sexual Manifestations of the Sub-Types and Case Applications
Richard D. Walter, MA; Patrick Zirpoli

3:00 p.m. - 3:15 p.m.  Break

3:15 p.m. - 4:30 p.m.  Non-Sexual Manifestations of the Sub-Types and Case Applications
Richard D. Walter, MA; Patrick Zirpoli

4:30 p.m. - 5:00 p.m.  Moderated Discussion & Questions and Answers
Lurena A. Huffman, BS

Targeted Audience: General, Psychiatry & Behavioral Science

Knowledge Level Required: Basic (little to no knowledge of subject presented)

Expected Handout Length: 80 Pages

This workshop will use many cases, videos, and discussions points to illustrate the conceptual and applied understanding of crime assessment. Given the nature of the material, it is not recommended for those persons who are sensitive and/or in some form of crisis.
WORKSHOPS

Las Vegas 2016

Pre-Registration Required — $200

#22 Developing a Professional Code of Ethics in Digital Forensics

Tuesday, February 23, 2016  8:30 a.m. - 5:00 p.m.  6.0 CE Hours

Educational Objective(s): After attending this presentation, attendees will become aware of issues that constitute a need to generate support for a unified professional code of ethics in digital forensics and to identify the steps necessary to establish such a code.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by bringing together key stakeholders and representatives in the area of digital forensics, including academics, practitioners, and vendors to discuss the need for a professional code of ethics.

Chair: Kathryn C. Seigfried-Spellar, PhD
Purdue University
Computer and Information Technology
West Lafayette, IN

Co-Chair: Rhesa G. Gilliland, MS
U.S. Postal Inspection Service
Forensic Laboratory Services
Dulles, VA

Faculty:
James R. Dibble, BS
International Association of Computer Investigative Specialists
Spokane, WA

Marcus Rogers, PhD
Purdue University
West Lafayette, IN

Michael M. Losavio, JD
University of Louisville
Louisville, KY

Anthony Skjellum, PhD
Auburn University
Auburn, AL

Keith W. Miller, PhD
University of Missouri – St. Louis
St. Louis, MO

Program Description: Almost every criminal and civil investigation now involves some form of digital evidence, yet we are a profession that lacks a clearly articulated, consensus-based, code of ethics.

Program:

8:30 a.m. - 8:45 a.m.  Introduction
Kathryn C. Seigfried-Spellar, PhD

8:45 a.m. - 10:00 a.m.  Do We Need a Code of Ethics?
James R. Dibble, BS; Michael M. Losavio, JD; Keith W. Miller, PhD; Marcus Rogers, PhD; Anthony Skjellum, PhD

10:00 a.m. - 10:15 a.m.  Break

10:15 a.m. - 11:30 a.m.  Models of Professional Codes of Ethics
James R. Dibble, BS; Michael M. Losavio, JD; Keith W. Miller, PhD; Marcus Rogers, PhD; Anthony Skjellum, PhD
Pre-Registration Required — $200  

#22 Developing a Professional Code of Ethics in Digital Forensics (continued)

Program cont.:

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Presenters</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:30 a.m. - 12:00 p.m.</td>
<td>Morning Wrap-Up &amp; Questions and Answers</td>
<td>Kathryn C. Seigfried-Spellar, PhD; Rhesa G. Gilliland, MS</td>
</tr>
<tr>
<td>12:00 p.m. - 1:15 p.m.</td>
<td>Lunch</td>
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<tr>
<td>1:15 p.m. - 2:15 p.m.</td>
<td>Challenges to Developing a Code of Ethics</td>
<td>James R. Dibble, BS; Michael M. Losavio, JD; Keith W. Miller, PhD; Marcus Rogers, PhD; Anthony Skjellum, PhD</td>
</tr>
<tr>
<td>2:15 p.m. - 3:30 p.m.</td>
<td>Identify Core Items/Language</td>
<td>James R. Dibble, BS; Michael M. Losavio, JD; Keith W. Miller, PhD; Marcus Rogers, PhD; Anthony Skjellum, PhD</td>
</tr>
<tr>
<td>3:30 p.m. - 3:45 p.m.</td>
<td>Break</td>
<td></td>
</tr>
<tr>
<td>3:45 p.m. - 4:30 p.m.</td>
<td>Next Steps to Implementing a Code of Ethics?</td>
<td>James R. Dibble, BS; Michael M. Losavio, JD; Keith W. Miller, PhD; Marcus Rogers, PhD; Anthony Skjellum, PhD</td>
</tr>
<tr>
<td>4:30 p.m. - 5:00 p.m.</td>
<td>Afternoon Wrap-Up &amp; Questions and Answers</td>
<td>Kathryn C. Seigfried-Spellar, PhD; Rhesa G. Gilliland, MS</td>
</tr>
</tbody>
</table>

Targeted Audience: Digital & Multimedia Sciences, General, Jurisprudence

Knowledge Level Required: Basic (little to no knowledge of subject presented)

Expected Handout Length: 20 Pages
#23 Considerations for Implementing Next Generation Sequencing (NGS) Technologies Into a Forensic Laboratory

Tuesday, February 23, 2016 8:30 a.m. - 5:00 p.m. 7.0 CE Hours

**Pre-Registration Required — $250**

**Educational Objective(s):** After attending this presentation, attendees will understand NGS methodologies that can be applied to typical forensic specimens as well as appreciate the considerations specific to the validation of NGS technologies.

**Impact on the Forensic Science Community:** This presentation will impact the forensic science community by discussing the benefits and challenges of implementing NGS into a forensic laboratory.

**Chair:**
Timothy P. McMahon, PhD
Armed Forces DNA Identification Laboratory
Dover Air Force Base
Dover, DE

**Co-Chair:**
Charla Marshall, PhD
Armed Forces DNA Identification Laboratory
Dover Air Force Base
Dover AFB, DE

**Faculty:**
Kimberly S. Andreaggi, MFS
ARP/AFDIL
Dover AFB, DE

Christina M. Neal, MS
Armed Forces DNA Identification Laboratory
Dover Air Force Base
Dover, DE

Alice Briones, DO
Magnolia, DE

Walther Parson, PhD
Innsbruck, AUSTRIA

Katherine B. Gettings, PhD
NIST
Gaithersburg, MD

Michelle A. Peck, MFS
Armed Forces DNA Identification Laboratory
Dover Air Force Base
Dover, DE

Erin M. Gorden, MFS
Armed Forces DNA Identification Laboratory
Dover Air Force Base
Dover, DE

Joseph D. Ring, MS
Dover AFB, DE

Richard A. Guerrieri, MS
Stafford, VA

Peter M. Vallone, PhD
Gaithersburg, MD

Jennifer L. Higginbotham, MFS
Dover AFB, DE

**Program Description:** This session will provide a snapshot of the current progress of forensic DNA laboratories in the implementation of NGS technologies. First, a historical perspective on DNA typing technologies will be presented to position NGS within the context of methodological advancement. The session will follow with an overview of NGS methods available to the forensic community and a discussion of laboratory infrastructure as it transitions to meet NGS requirements. Several presentations will focus on data generated from NGS workflows, including an evaluation of quantification systems as well as Short Tandem Repeat (STR) sequencing kits. The session will then turn to mitochondrial DNA sequencing, data analysis, and interpretation. Considerations surrounding the selection of
#23  Considerations for Implementing Next Generation Sequencing (NGS) Technologies Into a Forensic Laboratory (continued)

NGS workflows and the challenges to the validation of NGS technology will be discussed. The final portion of this session will take the pulse of the broader forensic DNA community as it works to adopt NGS technologies in the laboratory.

Program:

8:30 a.m. - 8:35 a.m.  Opening Remarks  
Kimberly S. Andreaggi, MFS

8:35 a.m. - 8:55 a.m.  Historical Perspective of Forensic DNA Typing  
Timothy P. McMahon, PhD

8:55 a.m. - 9:20 a.m.  NGS in Forensics: Why, When, and Where?  
Walther Parson, PhD

9:20 a.m. - 9:50 a.m.  Overview of NGS Technologies  
Kimberly S. Andreaggi, MFS

9:50 a.m. - 10:05 a.m.  Quantitation Methods Used for NGS  
Joseph D. Ring, MS

10:05 a.m. - 10:20 a.m.  Break

10:20 a.m. - 10:35 a.m.  Introduction to NGS Analysis Software  
Michelle A. Peck, BS

10:35 a.m. - 11:05 a.m.  Single Nucleotide Polymorphism (SNP) and STR Multiplexes for NGS  
Katherine B. Gettings, PhD

11:05 a.m. - 11:35 a.m.  Preparation of Low-Quality Samples for NGS  
Erin M. Gorden, MFS

11:35 a.m. - 11:55 a.m.  Optimization of NGS Workflows in the Laboratory  
Joseph D. Ring, MS

11:55 a.m. - 12:15 p.m.  Development of a Custom Tool and Interpretation Thresholds for Mitochondrial DNA (mtDNA) NGS Data Analysis  
Michelle A. Peck, BS

12:15 p.m. - 1:15 p.m.  Lunch

1:15 p.m. - 1:40 p.m.  Characterization of Candidate Reference Materials by NGS  
Peter M. Vallone, PhD
#23 Considerations for Implementing Next Generation Sequencing (NGS) Technologies Into a Forensic Laboratory (continued)

Program cont.:

1:40 p.m. - 2:10 p.m.  A Developmental Validation of mtDNA Capture and Illumina® Sequencing for Severely Compromised Human DNA Samples  
Jennifer L. Higginbotham, MFS

2:10 p.m. - 2:40 p.m. Lessons Learned From Validating an NGS Protocol for Forensic Casework  
Charla Marshall, PhD

2:40 p.m. - 3:05 p.m. Final Hurdles for Implementing NGS in a Forensic Laboratory  
Christina M. Neal, MS

3:05 p.m. - 3:20 p.m. Break

3:20 p.m. - 3:50 p.m. Application of NGS to the Medical Examiner’s Mission  
Alice Briones, DO

3:50 p.m. - 4:20 p.m. NGS: Battelle’s Implementation Initiatives for Forensic DNA Analysis  
Richard A. Guerrieri, MS

4:20 p.m. - 4:45 p.m. Laboratory Considerations for Implementing NGS  
Kimberly S. Andreaggi, MFS

4:45 p.m. - 5:00 p.m. Panel Discussion and Closing Remarks  
Kimberly S. Andreaggi, MFS; Alice Briones, DO; Katherine B. Gettings, PhD; Erin M. Gorden, MFS; Richard A. Guerrieri, MS; Jennifer L. Higginbotham, MFS; Christina M. Neal, MS; Walther Parson, PhD; Michelle A. Peck, BS; Joseph D. Ring, MS; Peter M. Vallone, PhD; Charla Marshall, PhD; Timothy P. McMahon, PhD

Targeted Audience: Criminalistics

Knowledge Level Required: Intermediate (some knowledge)

Expected Handout Length: 100 Pages
Pre-Registration Required — $100

#24 Elder Abuse and Neglect: What’s Happening to Grandma?

Tuesday, February 23, 2016
1:00 p.m. - 4:30 p.m.
3.25 CE Hours

Educational Objective(s): After attending this presentation, attendees will: (1) recognize the different forms of Elder Abuse (EA); (2) understand the motivation behind EA; (3) identify specific types of trauma found in EA; (4) recognize the injuries that may mimic trauma in the elderly; (5) understand the process of law enforcement response and death investigation in EA; and, (6) distinguish the similarities and differences between intentional neglect and self-neglect.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by increasing the ability to detect the different forms of EA, to distinguish abuse from neglect, and to increase the awareness of the law enforcement response in cases of criminal abuse and death investigation.

Chair:       Co-Chair:
Amy Y. Carney, PhD     Stewart D. Ryckman, MD
San Marcos, CA      Mansfield, OH

Faculty:
Mark Carroll, BA     Debi Spencer, MFS
Summit County Sheriff’s Office    APO, AE
Akron, OH

Program Description: This session will assist attendees in recognizing the different types of elder abuse, understanding the motivation behind elder maltreatment, and provide specific case examples of abuse and neglect which will assist the forensic professional in identifying and intervening in elder maltreatment. It will also provide tips and techniques for documentation, assists the forensic professional in distinguishing between accident and criminal acts, and discusses the difficulties in prosecution in cases of EA.

Program:

1:00 p.m. - 1:30 p.m.  Introduction to EA: Scope and Breadth
Amy Y. Carney, PhD

1:30 p.m. - 2:00 p.m.  Examples of EA
Debi Spencer, MFS; Stewart D. Ryckman, MD

2:00 p.m. - 2:30 p.m.  Skin Trauma: Mr. Bruise Meet Miss Contusion
Amy Y. Carney, PhD

2:30 p.m. - 2:45 p.m.  Break

2:45 p.m. - 3:15 p.m.  The Medical Response to EA: The View From the ER
Stewart D. Ryckman, MD

3:15 p.m. - 3:45 p.m.  Elder Abuse vs. Elder Neglect: How Do You Know?
Debi Spencer, MFS; Stewart D. Ryckman, MD
#24  Elder Abuse and Neglect: What’s Happening to Grandma? (continued)

Program cont.:

3:45 p.m. - 4:15 p.m.  Law Enforcement Perspective: Summit, Ohio
Mark Carroll, BA

4:15 p.m. - 4:30 p.m.  Conclusions and Implications: What Have We Learned?
Amy Y. Carney, PhD; Stewart D. Ryckman, MD; Mark Carroll, BA;
Debi Spencer, MFS;

Targeted Audience: Criminalistics, General, Jurisprudence, Psychiatry & Behavioral Science

Knowledge Level Required: Intermediate (some knowledge)

Expected Handout Length: 150 Pages
American Society of Forensic Odontology

46th Annual Scientific Session

Registration can be accomplished on the ASFO website at www.asfo.org beginning in November.

Research, Recovery, Identification, and Repatriation: The Lost Graves of Tarawa

Tuesday

February 23 — 7:00 a.m. – 5:30 p.m.

Program:

7:00 a.m. - 8:00 a.m.  Registration and Breakfast

8:00 a.m. - 8:20 a.m.  Welcome  
Roger D. Metcalf, DDS, JD  
President, American Society of Forensic Odontology

8:20 a.m. - 8:30 a.m.  Program Introduction  
David R. Senn, DDS  
President-Elect, American Society of Forensic Odontology

8:30 a.m. - 10:00 a.m.  Battle of Tarawa and the Role of History Flight, Inc: History of the Burials, Document, and Archive Research  
Mark Noah

10:00 a.m. - 10:15 a.m.  Break

10:15 a.m. - 11:30 a.m.  Locating the Missing Servicemen  
Mark Noah; Chester P. Walker, PhD

11:30 a.m. - 12:00 p.m.  Luncheon and Annual Business Meeting

12:00 p.m. - 1:45 p.m.  Recovery of the Missing Servicemen  
Kristen Baker, MA, RPA

1:45 p.m. - 2:30 p.m.  Anthropological Analysis Procedures and Summary  
Kristen Baker, MA, RPA; Hillary R. Parsons, MA

2:30 p.m. - 3:15 p.m.  Odontological Analysis Procedures and Summary  
Corinne D’Anjou, DMD; James F. Goodrich, BDS
Research, Recovery, Identification, and Repatriation: The Lost Graves of Tarawa

Program cont.:

4:15 p.m. - 5:00 p.m.  DNA Testing Procedures and Summary  
   Edwin F. Huffine, PhD

5:00 p.m. - 5:30 p.m.  Family Perspective  
   Clay Bonnyman Evans

ASFO is designated as an Approved PACE Program Provider. FAGD/MAGD Credit Approval does not imply acceptance by a state or provincial board of dentistry or AGD endorsement. ASFO offers 7.0 hours FAGD/MAGD Credit Subject Code #145.
National Association of Medical Examiners
2016 Interim Scientific Program
Rio All-Suite Hotel & Casino Las Vegas

A separate registration fee payable to the National Association of Medical Examiners (NAME) is required to attend this Scientific Program. To join or attend, contact Denise McNally, NAME Executive Director at 660-734-1891 or at name@thename.org.

UUUggh! The Unexpected, Unexplained, and Often Undetermined

Tuesday
February 23 — 12:55 p.m. – 5:15 p.m.

This program will include the discussion of: (1) current research trends related to Sudden Cardiac Death (SCD), Sudden Unexpected Death in Epilepsy (SUDEP), Sudden Unexplained Death in Childhood (SUDC), and sudden unexpected death in infancy; (2) current issues related to genetic testing of cardiac channelopathies in postmortem cases; (3) mechanisms of cardiorespiratory collapse after seizures; (4) Centers for Disease Control and Prevention (CDC) efforts and updates from the Sudden Unexpected Infant Death (SUID) Case Registry and the Sudden Death in the Young (SDY) Registry; (5) International Classification of Diseases (ICD) codes relevant to cases of sudden unexplained deaths; (6) needs of the research community, public health, and Next of Kin (NOK) from the Medicolegal Death Investigation (MDI) process; and, (7) resources available to medical examiners when investigating unexpected natural deaths. The program will be constructed to allow for CME and SAMs credits.

Program:

12:55 p.m. - 1:00 p.m. Welcome
David R. Fowler, MD

1:00 p.m. - 1:05 p.m. Opening Remarks
Laura Crandall, MA

1:05 p.m. - 1:35 p.m. Redefining SCD: Insights From the San Francisco Postrmormem Systematic InvesTigation (POST) SCD Study
Zian Tseng, MD; Ellen Moffatt, MD

1:35 p.m. - 2:05 p.m. The State of the Molecular Autopsy for Sudden Death in the Young
Orrin Devinsky, MD

2:05 p.m. - 2:25 p.m. SUDEP and SUDC: An Overview
Michael Ackerman, MD, PhD

2:25 p.m. - 2:55 p.m. When Life Support Fails — Insights Into the Mechanisms of Cardiorespiratory Collapse After Seizures
George Richerson, MD

2:55 p.m. - 3:20 p.m. Cardiac Pathology (CP) and Neuropathology (NP) Investigations of Unexpected Death — The 2016 SDY Perspective
Jennifer L. Hammers, DO

3:20 p.m. - 3:40 p.m. Break
UUUggh! The Unexpected, Unexplained, and Often Undetermined

Program cont.:

3:40 p.m. - 4:00 p.m.  CDC Efforts in SUID Case Registry and SDY Registry
Carrie Shapiro-Mendoza, PhD, MPH

Robert Anderson, PhD

4:15 p.m. - 5:00 p.m.  Death Certification and Death Stratification Panel Discussion — Panel to Address the Following: (1) Specific Needs of Research, Public Health vs. Families From the MDI Process and Death Certification (DC); (2) After DC Ramifications for NOK and Clinicians Caring for Them; (3) Resources Available to MEs for Unexpected Natural Deaths; and, (4) Moving Forward for a Better Understanding and Identification of the Cases That Elude Forensic Science
Keith Pinckard, MD, PhD; Margaret Warner, PhD; Laura Crandall, MA; David R. Fowler, MD; Zian Tseng, MD; Ellen Moffatt, MD; Michael Ackerman, MD, PhD; Orrin Devinsky, MD; George Richerson, MD; Jennifer L. Hammers, DO; Carrie Shapiro-Mendoza, PhD, MPH; Robert Anderson, PhD

5:00 p.m. - 5:15 p.m. Questions & Answers

CME STATEMENTS FOR JOINTLY SPONSORED ACTIVITIES

This activity has been planned and implemented in accordance with the Essential Areas and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint sponsorship of MedChi, The Maryland State Medical Society, and the National Association of Medical Examiners. MedChi is accredited by the ACCME to provide continuing medical education for physicians.

MedChi designates this live activity for a maximum of 3.5 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Continuing Education Administration Fee
There is an administrative charge ($75 pre-registration, $100 on-site registration) for persons wishing to receive this credit. It will be necessary for you to complete a program evaluation as well as pay the administrative fee to receive CME credit for this meeting.

Self-Assessment Module
The American Board of Pathology has deemed the National Association of Medical Examiners to be an approved provider of Self-Assessment Modules (SAMs) for the Life-Long Learning and Self-Assessment Requirement (Part II) for Maintenance of Certification in Forensic Pathology. This activity has been planned and implemented in accordance with those guidelines and qualify for a maximum of 3.5 hours of SAMs. There is an administrative charge of $35 for Members and $105 for Non-Members.

Registration Fee
There is a registration fee of $100 pre-registration and $150 on-site registration. Registration for this event is separate from the AAFS registration process. Contact Denise McNally at 660-734-1891 or email name@thename.org to receive a registration form.
National Institute of Justice
Forensic Science Research and Development Symposium
American Academy of Forensic Sciences 68th Annual Scientific Meeting

The NIJ Forensic Science Research and Development Symposium is a free and open meeting where attendees can learn about NIJ-funded research across a variety of forensic science areas. Feel free to stop by and listen to specific presentations or stay all day and learn about the diverse NIJ forensic science R&D portfolio.

Registration information will be available at www.forensicCOE.org.

Tuesday
February 23 — 8:30 a.m. – 5:15 p.m.

Program:

8:30 a.m. - 8:40 a.m.  Welcome and Opening Remarks  
Gerald M. LaPorte, MSFS  
Office of Investigative and Forensic Sciences

Morning Session I — Impression, Pattern, and Trace Evidence

8:40 a.m. - 9:05 a.m.  Mobile, Automated Tool Mark Characterization/Comparison System  
Scott Chumbley

9:05 a.m. - 9:30 a.m.  ACEware™ Latent Fingerprint Identification Research and Software Development  
Austin Hicklin

9:30 a.m. - 9:55 a.m.  Isotope Analyses of Hair as a Trace Evidence Tool to Reconstruct Human Movements: Establishing the Effects of the “Human Ecosystem” on Strontium and Oxygen Isotope Ratios  
Brett J. Tipple, PhD

9:55 a.m. - 10:10 a.m.  Break

Morning Session II — Forensic Biology/DNA

10:10 a.m. - 10:35 a.m.  A Hybrid Machine-Learning Approach for DNA Mixture Interpretation  
Michael Marciano, MS

10:35 a.m. - 11:00 a.m.  Delivery of a Microfluidic Acoustic Sperm Cell Trapping Prototype for Rapid Processing of Sexual Assault Evidence  
James P. Landers, PhD

11:00 a.m. - 11:25 a.m.  Isolation of Sperm DNA Through Protamine Capture  
Michael Gerdes

11:25 a.m. - 11:35 a.m.  Break
Forensic Science Research and Development Symposium

Program cont.:

11:35 a.m. - 12:00 p.m. Robust Short Tandem Repeat (STR) Calling From High-Throughput Sequencing Technologies
Yaniv Erlich

12:00 p.m. - 12:25 p.m. Measuring Rates of Mitochondrial DNA (mtDNA) Heteroplasmy and Assessing Transmission of Variants
Mitchell M. Holland, PhD

12:25 p.m. - 1:45 p.m. Lunch

Afternoon Session I — Anthropology and Microbial Forensics

1:45 p.m. - 2:10 p.m. The Transformation of Data Collection Procedures for Forensic Skeletal Material: Evaluating Osteometric Data in Forensic Anthropology
Natalie R. Langley, PhD

2:10 p.m. - 2:35 p.m. A Multidisciplinary Validation Study of Non-Human Animal Models for Human Decomposition Research
Dawnie W. Steadman, PhD

2:35 p.m. - 3:00 p.m. Transforming Techniques: A Validation Study of Assessing the Postmortem Interval of Humans Using a Statistical Model — Replacing the Observation Approach
Joan A. Bytheway, PhD

3:00 p.m. - 3:25 p.m. Postmortem Changes and Translocation of Bacterial Community Structure and Function for Use in Criminal Investigations
Heather R. Jordan, PhD

3:25 p.m. - 3:35 p.m. Break

Afternoon Session II — Controlled Substances and Toxicology

3:35 p.m. - 4:00 p.m. Dried Blood Spot Analysis as an Emerging Technology for Application in Forensic Toxicology
Nichole Bynum

4:00 p.m. - 4:25 p.m. Characterization and Abuse of Electronic Cigarettes: The Efficacy of “Personal Vaporizers” as an Illicit Drug Delivery System
Tyson R. Baird, MSFS

4:25 p.m. - 4:50 p.m. Should Forensic Laboratories Embrace Ultra High-Performance Supercritical Fluid Chromatography as a Separation Technique for the Analysis of Seized Drugs?
Ira S. Lurie, PhD

4:50 p.m. - 5:15 p.m. A New Approach to Drug Screening in Forensic Toxicology: Paper Spray Mass Spectrometry
Nicholas E. Manicke
AMERICAN ACADEMY OF FORENSIC SCIENCES

Transformation: Embracing Change

February 22-27

ADVANCE PROGRAM

Las Vegas, Nevada

6th Annual Scientific Meeting
Due to potential changes in the program, the AAFS encourages you to access the most up-to-date schedule on the AAFS website at www.aafs.org.
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Presentation Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:30 a.m.</td>
<td>A1</td>
<td>Quantification of Radiologic Identification: Development of a Population Frequency Data Repository</td>
<td>Angi M. Christensen, PhD*; Gary M. Hatch, MD*</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>A2</td>
<td>Systematic Bias in Estimating Body Mass of Korean Samples With the Morphometric Method of Ruff et al. (2005)</td>
<td>Yangseung Jeong, PhD*; Eun Jin Woo, PhD</td>
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<tr>
<td>11:30 a.m.</td>
<td>A3</td>
<td>A Two-Pronged Approach to the Identification of Deceased Unidentified Border Crossers in North Carolina: 3D-ID and Geochemical Analysis</td>
<td>Chelsey A. Juarez, PhD*; Ann H. Ross, PhD*</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>A4</td>
<td>Commingling Among Disinterred Remains of Unknown United States Service Members From the Korean War</td>
<td>Mary S. Megyesi, PhD*; Nicholas V. Passalacqua, PhD; Popi Chrysostomou, MSc; Michael R. Dolski, PhD</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>A5</td>
<td>Death Along the United States-Mexico Border: A Comparative View of Policy and Practice in Arizona and Texas</td>
<td>Kate Spradley, PhD*; Robin C. Reineke, PhD; Mercedes Doretti; Bruce E. Anderson, PhD</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>A6</td>
<td>Sex Determination Using Discriminant Analysis of Upper and Lower Extremity Bones: A New Approach Using the Volume and Surface Area of Digital Models</td>
<td>Dong-Ho Eddie Kim, BSc*; U-Young Lee, MD; In-Beom Kim, PhD; Dai-Soon Kwak, PhD</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>A7</td>
<td>3D Analysis of Computed Tomography (CT)-Derived Lumbar Spine Models for the Estimation of Sex</td>
<td>Robert Foley, MS; Joshua M. Hazelton, BS; Summer J. Decker, PhD*; Jonathan M. Ford, PhD*</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>A8</td>
<td>Estimation of Stature From Footprints in a North Indian Population</td>
<td>Kewal Krishan, PhD*; Tamj Kanchan, MD</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>A9</td>
<td>Sexual Dimorphism in Mandibular Morphology Between Dentate and Edentate Individuals — Implications for Sex Estimation</td>
<td>Heli Maijanen, PhD*; Beatrix Dudzik, PhD; Kathleen Hauther</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>A10</td>
<td>Evaluating Elongated Pubic Bones as a Potential Sexing Method for Juveniles</td>
<td>Cassie E. Skipper, BS*</td>
</tr>
</tbody>
</table>
11:30 a.m. - 1:00 p.m.  A11  Age Estimation Using the Sternal End of the Clavicle: A Test of the Falys and Prangle Archaeological Method for Forensic Application  
Meghan Price*; James Pokines, PhD; Jonathan D. Bethard, PhD

11:30 a.m. - 1:00 p.m.  A12  Accuracy of Dental Age in Non-Adults: A Comparison of Two Methods for Age Estimation Using Radiographs of Developing Teeth  
Sierra Santana, BA*; Jonathan D. Bethard, PhD; Tara L. Moore, PhD

11:30 a.m. - 1:00 p.m.  A13  A Test of Cervical Vertebral Ring Union for Age-at-Death Estimation Using the Albert-Sherwood Method  
A. Midori Albert, PhD*; Kate D. Sherwood

11:30 a.m. - 1:00 p.m.  A14  Age Estimation Using Osteophytic Activity on the Lumbar Vertebrae and Partial Least Squares Regression  
Jacob Griffin, BS*; Stephen D. Ousley, PhD

11:30 a.m. - 1:00 p.m.  A15  The First Thoracic Vertebral Centrum as an Adult Age Estimation Site  
Kristina B. Altes, MA*

11:30 a.m. - 1:00 p.m.  A16  Improved Adult Age Estimation Using New Skeletal Traits and Transition Analysis  
George R. Müler, PhD; Jesper L. Boldsen, PhD; Stephen D. Ousley, PhD*; Svenja Weise, PhD; Sara M. Getz, MS; Peter Tarp, MS

11:30 a.m. - 1:00 p.m.  A17  Effects of Scavenging Birds and Insects on Decomposition Time of Pig Carcasses at the Rice Creek Field Station  
Brianna L. Robinson*; Kathleen A.S. Blake, PhD*

11:30 a.m. - 1:00 p.m.  A18  The Mummy in the Microwave: The Efficacy of the Microwave Method for the Maceration of Desiccated Tissue  
Christiane Baigent, MSc*; Gary T. Scott, MA*

11:30 a.m. - 1:00 p.m.  A19  The Effect of Plastic Tarps on the Rate of Human Decomposition During the Spring/Summer in Central Texas  
Chloe P. McDaneld*; Daniel J. Wescott, PhD

11:30 a.m. - 1:00 p.m.  A20  Effect of Body Size on the Rate of Outdoor Human Soft Tissue Decomposition  
Lindsey G. Roberts, MA*; Jessica R. Spencer, MA

11:30 a.m. - 1:00 p.m.  A21  A Methodology in Differentiating Between Knives From Cut Marks on Bone  
Melodi Ghul*; Constantine Eliopoulos, PhD; Matteo Borrini, PhD

11:30 a.m. - 1:00 p.m.  A22  Traumatic and Congenital Anomalies of the Atlas: A Forensic Identification Case Report  
Yann Delannoy, MD*; Thomas Colard, DDS, PhD; Tania Delabarde, PhD; Jocelyn Pollard, MD; Valéry C. Hedouin, MD, PhD; Didier Gosset, MD, PhD

11:30 a.m. - 1:00 p.m.  A23  Comparison Between Peri-Mortem Blunt Force Trauma Identified in Bone During an Autopsy and During an Anthropological Examination of 21 Skeletonized Remains Several Years After Death  
Luisa Marinho, MSc*; Hugo Cardoso, PhD
ANTHROPOLOGY
Las Vegas
2016

11:30 a.m. - 1:00 p.m.  A24  Reassessing Blunt Force Trauma to True Rib Heads Utilizing Tension-Compression Theory
Kelsey A. Carpenter, BS*; Kena Ihle, BA*; Steven A. Symes, PhD

11:30 a.m. - 1:00 p.m.  A25  Comparability of Macroscopic, Microscopic, and Radiologically Defined Pediatric Antemortem Healing Stages
Cliff Boyd, PhD*; Donna C. Boyd, PhD; Sharon Roller; David Foley, BS

Thursday

New Perspectives and Techniques in Sex and Ancestry Estimation

Moderator: Alexandra R. Klares, PhD
Mercyhurst University
Dept of Applied Forensic Sciences
Erie, PA

Co-Moderator: Alexis C. Goots, BS
North Olmsted, OH

8:30 a.m. - 8:45 a.m.  A26  A New Statistical Approach to Morphological Sexing of South African Remains
Samuel R. Rennie, BSc*; Margaret Clegg, PhD; Silvia Gonzalez, PhD

8:45 a.m. - 9:00 a.m.  A27  Estimating Ancestry in South Africa: A Comparison of Geometric Morphometrics and Traditional Cranioarchaeometry
Rebecca King, MS*; Jonathan D. Bethard, PhD; Donald F. Siwek, PhD

9:00 a.m. - 9:15 a.m.  A28  Spatial Analysis on a Global Scale: Cranial Non-Metric Trait Variability
Joseph T. Hefner, PhD*; Caitlin C.M. Vogelsberg, MS

9:15 a.m. - 9:30 a.m.  A29  Examining Inter-Observer Reliability of Metric and Morphoscopic Characteristics of the Mandible
Jennifer F. Byrnes, PhD*; Michael W. Kenyhercz, PhD; Samantha C. Torres, BA; Gregory E. Berg, PhD

9:30 a.m. - 9:45 a.m.  A30  Decision Trees and Non-Metric Traits: A More Accurate Approach for Sex Estimation of the Skull
Natalie R. Langley, PhD; Alesia Cloutier, MS; Cade Lampley, MS; Beatrix Dudzik, PhD*

9:45 a.m. - 10:00 a.m.  A31  Sex Assessment — The Utility of Endocranial Landmark Data
Sean Y. Carlson-Greer, BA*; Stephen D. Ousley, PhD

10:00 a.m. - 10:15 a.m.  A32  Femoral Neck Axis Length (FNAL): Use in Sex and Ancestry Estimation of Hispanic Populations
Audrey Murchland, BS*; Lori E. Baker, PhD; Rebecca Meeusen, MS

10:15 a.m. - 10:30 a.m.  A33  A Multiple Classifier System Approach to Determining Ancestry of Fragmentary Remains: A Preliminary Study
Amber M. Plemons, BS*; Nicholas P. Herrmann, PhD; Edward F. Harris, PhD

10:30 a.m. - 10:45 a.m.  Break

*Presenting Author
The Importance of Sociocultural Anthropology Within Forensic Anthropological Investigations

Moderator: Erin H. Kimmerle, PhD
University of South Florida
Dept of Anthropology
Tampa, FL

Co-Moderator: Hailey A. Duecker, MA
Gainesville, FL

10:45 a.m. - 11:00 a.m. A34 Widening the Scope and Expanding the Field: An Argument for Sociocultural Anthropology's Seat at the Table
Sarah Wagner*

11:00 a.m. - 11:15 a.m. A35 The Social Process of a Forensic Identification
Hugh H. Tuller, MA*

11:15 a.m. - 11:30 a.m. A36 The Social Side of Human Identification
Robin C. Reineke, PhD*

11:30 a.m. - 11:45 a.m. A37 Family Opposition to Human Rights Exhumations: The Need for Interdisciplinary Research on a Question of Science, Politics, and Consent
Adam R. Rosenblatt, PhD*

11:45 a.m. - 1:30 p.m. Lunch

Poster Session

11:30 a.m. - 1:00 p.m. A38 Morphological and Metric Study of the Nose and Ear in a North Indian Population: Forensic Anthropological Context
Kewal Krishan, PhD*; Tanuj Kanchan, MD; Manojit Chakraborty, MSc

11:30 a.m. - 1:00 p.m. A39 Morphologic Analysis of the Location of the Lens on the Orbit Using 3D Reconstructed Models
Dong-Ho Eddie Kim, BSc*; Yi-Suk Kim, MD, PhD; Dae-Kyoon Park, MD, PhD; In-Beom Kim, PhD; U-Young Lee, MD

11:30 a.m. - 1:00 p.m. A40 A Challenging Case of Facial Reconstruction of a Suicide by Jumping From a Height
Luigi Cipolloni, MD, PhD; Alessandro di Luca, MD; Laura Donato*

11:30 a.m. - 1:00 p.m. A41 The Perceived Accuracy of 3D Facial Reconstructions
Eileen M. Schilling, MSc*

11:30 a.m. - 1:00 p.m. A42 Application of Enhanced Point Estimators on a Sample of In Vivo Computed Tomography (CT)-Derived Facial Soft Tissue Thicknesses
Kelsey Kyllonen, MA*; Connie L. Parks, MA; Keith L. Monson, PhD

11:30 a.m. - 1:00 p.m. A43 Evaluation of the Facial Soft Tissue Thickness in the Living in a Brazilian Population: Pilot Study
Antonio A. Antunes, PhD*; Hugo L. Albuquerque; Evelyne P. Soriano, PhD; Marcus Vitor D. Carvalho, PhD; Reginaldo I.C. Campello, PhD; Gabriela G. Porto, PhD

*Presenting Author
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<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Authors</th>
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<tbody>
<tr>
<td>11:30 a.m.</td>
<td>A44</td>
<td>Applications of 3D Technology in Forensic Anthropology</td>
<td>Helen Cho, PhD*; Eun Jin Woo, PhD*; Hae Joung Cho*; Yu Ryang Jang, PhD*; Nahyok Im, PhD*</td>
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<td>11:30 a.m.</td>
<td>A45</td>
<td>Automated Anthropometric Measurements of Long Bones Using Point Cloud Data</td>
<td>Lisa M.M. Van Den Broek*; Thera McAvoy, MSc; Roland Wessling, MSc; Jessica Bolton, MSc; Jelana Belvalac, MSc; Anja Leipner; Michael Thali, MD</td>
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<td>11:30 a.m.</td>
<td>A46</td>
<td>Introducing Standardized Anthropological Measurement Protocols for Postcranial Bones Using 3D Surface Reconstructions in Computed Assisted Design (CAD) Software</td>
<td>Mikaela S. Reynolds, MSc*; Donna M. MacGregor, MSc; Mark D. Barry, MS; Nicolene Lottering, BS; Laura S. Gregory, PhD</td>
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<td>11:30 a.m.</td>
<td>A47</td>
<td>Virtual Skeletal Analysis (ViSA) — One Possible Future for Osteometrics</td>
<td>Roland Wessling, MSc*; Sophie Beckett, PhD; Jessica Bolton, MSc; Alice Jenny Butler, BSc; Lisa M.M. Van Den Broek; Thera McAvoy, MSc</td>
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<td>11:30 a.m.</td>
<td>A48</td>
<td>Incorporating the “Black Bone” Magnetic Resonance Imaging (MRI) Technique: A Radiation-Free Alternative to Computed Tomography (CT) for Biological Profiling in the Living</td>
<td>Janamarie Truesdell, MSc*; Karen A. Eley, DPhil; Anthony McIntyre, BS; Nicholas Márquez-Grant, PhD</td>
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<td>11:30 a.m.</td>
<td>A49</td>
<td>DCP 2.0: Changes in Data Collection Procedures for Forensic Skeletal Material</td>
<td>Natalie R. Langley, PhD*; Lee Meadows Jantz, PhD; Shauna McNulty, MA; Heli Maijanen, PhD; Stephen D. Ousley, PhD; Richard Jantz, PhD</td>
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<td>11:30 a.m.</td>
<td>A50</td>
<td>Scanning Electron Microscopy/Energy Dispersive X-Ray (SEM/EDX): A Rapid Diagnostic Tool to Aid the Identification of Burnt Bone and Contested Cremains</td>
<td>Sarah Ellingham, MSc*</td>
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<td>11:30 a.m.</td>
<td>A51</td>
<td>Reconstructing the Biological Profile of Cremated Human Remains</td>
<td>Anthony W. Hudson, BS*</td>
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<td>11:30 a.m.</td>
<td>A52</td>
<td>Experimental Analysis of Burned Human Remains</td>
<td>Amanda Williams, MA*; Elayne J. Pope, PhD; Marin A. Pilloud, PhD</td>
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<td>11:30 a.m.</td>
<td>A53</td>
<td>Patterns of Ossification in Macerated Thyroid Cartilages: Implications for Age and Sex Determination</td>
<td>Katelyn L. Bolhofner, MA*; Laura C. Fulginiti, PhD</td>
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<td>11:30 a.m.</td>
<td>A54</td>
<td>Age Estimation of Adolescent and Post-Adolescent Children Via Radiographs of the Shoulder</td>
<td>Maureen Schaefer, PhD*; Gerald Aben, MD</td>
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<td>11:30 a.m. - 1:00 p.m.</td>
<td>A55</td>
<td>A Grading System to Assess the Sex and Parity Status for the Preauricular Sulcus</td>
<td>Sarah E. Canty, PhD*; Matteo Borrini, PhD*; Constantine Eliopoulos, PhD; Silvia Gonzalez, PhD</td>
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<td>11:30 a.m. - 1:00 p.m.</td>
<td>A56</td>
<td>Bioarchaeological Investigations Discovered Intraindividual Bilateral Ossification Differences of the Medial Clavicle — Implications for Age Estimation of the Living</td>
<td>Fabian Kanz, PhD*; Philipp Konermann, MD; Sandra Lösch, PhD</td>
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<td>11:30 a.m. - 1:00 p.m.</td>
<td>A57</td>
<td>The Use of the Sustentaculum Tali in Estimating Sex</td>
<td>Christine Bailey, BA*; Kristen A. Broehl, BA*; Amy Z. Mundorff, PhD; Renee C. Kosalka, MA</td>
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<td>11:30 a.m. - 1:00 p.m.</td>
<td>A58</td>
<td>The Roaming Arm: A Literal Outlier</td>
<td>Shana Oett*; Gary T. Scott, MA*</td>
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<td>11:30 a.m. - 1:00 p.m.</td>
<td>A59</td>
<td>No Fly Zone: Decomposition in the Absence of Insects</td>
<td>Michael S. Woolf, BS*; Tal Simmons, PhD*; Baneshwar Singh, PhD</td>
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<td>11:30 a.m. - 1:00 p.m.</td>
<td>A60</td>
<td>White-Tailed Deer as a Taphonomic Agent: Photographic Documentation of White-Tailed Deer Gnawing on Human Bone</td>
<td>Daniel J. Wescott, PhD*; Lauren Alyssa Meckel, BS*; Chloe P. McDaneld; Michelle D. Hamilton, PhD; Sophia Mavroudas, MA; Kate Spradley, PhD</td>
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<td>11:30 a.m. - 1:00 p.m.</td>
<td>A61</td>
<td>Examining the Persistence of Human DNA in Soil During Cadaver Decomposition</td>
<td>Alexandra L. Emmons, MA*; Jennifer DeBruyn, PhD; Amy Z. Mundorff, PhD; Kelly L. Cobaugh, MS; Graciela S. Cabana, PhD</td>
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<td>11:30 a.m. - 1:00 p.m.</td>
<td>A62</td>
<td>Using the Geographic Information System (GIS) to Distinguish Between Human and Non-Human Cranial Bone Fragments</td>
<td>Brigida Corrieri, MSc*; Nicholas Marquez-Grant, PhD*; Jessica Bolton, MSc; Roland Wessling, MSc</td>
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**Geolocation, Novel Techniques, and Virtual Technologies**

**Moderator:** Cate E. Bird, PhD  
Pima County Office of the Medical Examiner  
Tucson, AZ

**Co-Moderator:** Sean D. Tallman, MA  
Knoxville, TN

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<th>Time</th>
<th>Session</th>
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<tr>
<td>1:30 p.m. - 1:45 p.m.</td>
<td>A63</td>
<td>Application of Stable Isotope Forensics for Predicting Region-of-Origin of Unidentified Border Crossers Found Deceased in the United States</td>
<td>Eric J. Bartelink, PhD*; Heather L. MacInnes, BS; Julia R. Prince, BA; Amy T. Mackinnon, BA; Lesley A. Chesson, MS; Brett J. Tipple, PhD; Krista E. Latham, PhD; Gregory E. Berg, PhD</td>
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<td>1:45 p.m.</td>
<td>A64</td>
<td>What Level of Biogeographical Information Is Available From 18O and 13C Signatures in Late-Erupting Molars of Modern Humans?</td>
<td>Anastasia Holobinko, MS*; Wolfram Meier-Augenstein, PhD; Helen F. Kemp, PhD; Susan M. Ford; Philip Turk, PhD</td>
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<td>2:00 p.m.</td>
<td>A65</td>
<td>Dental Non-Metric Analysis as an Aid to Undocumented Border Crossers (UBCs) Region-of-Origin Estimation</td>
<td>Rebecca L. George, MA*; Jorge Gómez-Valdés, PhD</td>
</tr>
<tr>
<td>2:15 p.m.</td>
<td>A66</td>
<td>Comparative Study of Human and Non-Human Long Bones by Anatomical and Radiological Methods</td>
<td>Piyush Sharma, MD*; Tabin Millo, MD</td>
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<tr>
<td>2:30 p.m.</td>
<td>A67</td>
<td>Manipulation and Analysis of Virtual Bones: A Novel Method of Sex Estimation From the Mandible</td>
<td>Alice J. Butcher, BSc*; Roland Wessling, MSc; Jessica Bolton, MSc; Jelana Bekvalac, MSc</td>
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<td>2:45 p.m.</td>
<td>A68</td>
<td>Calcium and Phosphorus Detection Using Benchtop vs. Hand-Held X-Ray Fluorescence (XRF) Spectrometers</td>
<td>Aaron R. Kuzel, BS*; Angi M. Christensen, PhD; Susan M. Marvin, PhD</td>
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<td>3:00 p.m.</td>
<td>A69</td>
<td>Osteometric Reassociation Through Quantifying Long Bone Size and Shape and Prediction Using Bayesian Regression Via Hamiltonian Markov Chain Monte Carlo (MCMC)</td>
<td>Kyle A. McCormick, MA*</td>
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<tr>
<td>3:15 p.m.</td>
<td>A70</td>
<td>A Simple Method for Estimating Subject-to-Camera Distance for Legitimate Craniofacial Superimpositions</td>
<td>Carl N. Stephan, PhD*</td>
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<td>3:30 p.m.</td>
<td>A71</td>
<td>Texture Mapped Average Skulls Created From Standardized Photographs Using the Perception Lab’s Psychomorph</td>
<td>Jodi M. Caple, BS*; Carl N. Stephan, PhD</td>
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<td>3:45 p.m.</td>
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<td>Break</td>
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Remote Sensing, Archaeological Techniques for Vehicle Fires, and Burned Human Remains Analysis

**Moderator:** Krista E. Latham, PhD
University of Indianapolis
Biology Dept
Indianapolis, IN

**Co-Moderator:** Justin R. Maiers, BS
Indianapolis, IN

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<th>Time</th>
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<th>Title</th>
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<tr>
<td>4:00 p.m.</td>
<td>A72</td>
<td>New Forensic Archaeological Recovery Protocols for Fatal Vehicle Fires</td>
<td>Alexandra R. Klales, PhD*; Dennis C. Dirkmaat, PhD; Luis L. Cabo, MS</td>
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</table>

*Presenting Author
ANTHROPOLOGY

Las Vegas
2016

4:15 p.m. - 4:30 p.m.  A73  Forensic Examination of Burned Human Skeletal Remains: Shifting the Paradigm
David Gonçalves, PhD; João Pedro Valente de Oliveira Coelho, MSc; Calil Makhoul, MSc; Inês Santos, MSc; Ana Vassalo, MSc; Maria Teresa Ferreira, PhD; Luis A.E. Batista de Carvalho, PhD; Eugénia Cunha, PhD*

4:30 p.m. - 4:45 p.m.  A74  Remote Sensing of Human Burials
Katie Corcoran, BS*; Amy Z. Mundorff, PhD; Devin White, PhD; Whitney Emch, PhD

4:45 p.m. - 5:00 p.m.  A75  The Use of Near-Infrared Remote Sensing in the Detection of Clandestine Human Remains
Marilyn Isaacks, BA*; Daniel J. Wescott, PhD

Friday

Trauma Etiology and Modeling

Moderator:  Ginesse A. Listi, PhD
LSU Geography & Anthropology
Baton Rouge, LA

Co-Moderator:  Caitlin C.M. Vogelsberg, MS
Michigan State University
Dept of Anthropology
East Lansing, MI

8:45 a.m. - 9:00 a.m.  A76  The Interpretation of Human Pediatric Cranial Fracture Patterns Using Experimentally Generated Porcine Ground-Truth Data
Jennifer M. Vollner, MS*; Caitlin C.M. Vogelsberg, MS; Patrick E. Vaughan, BS; Todd W. Fenton, PhD; Steven C. Clark, PhD; Roger C. Haut, PhD

9:00 a.m. - 9:15 a.m.  A77  Pediatric Antemortem Healing Standards Based on Microscopic Analysis of Fractures in Known Forensic Child Abuse Cases
Donna C. Boyd, PhD*; Sharon Roller; Cliff Boyd, PhD

9:15 a.m. - 9:30 a.m.  A78  Understanding the Role of Contact Area in Adult Cranial Fracture Variation
Mariyam I. Isa, BS*; Todd W. Fenton, PhD; Patrick E. Vaughan, BS; Roger C. Haut, PhD

9:30 a.m. - 9:45 a.m.  A79  Dismemberment Injuries: The Contribution of Bone and Soft Tissue Histology
Tania Delabarde, PhD*; Catherine Cannat; Annie Geraut, MD; Marc Taccoen, MD; Bertrand P. Ludes, MD, PhD; Jean-Sébastien Raul

9:45 a.m. - 10:00 a.m.  A80  Evaluating Timing of Injury in Central Florida: Examining the Transition of Fracture Characteristics From Wet to Dry in Long Bones
Ashley Green, MA*; John J. Schultz, PhD*

10:00 a.m. - 10:15 a.m.  Break

*Presenting Author
New Methods to Increase Accuracy and Precision in Age Estimation

Moderator: Debra Prince Zinni, PhD
JPAC
Central Identification Lab
Joint Base Pearl Harbor-Hickam, HI

Co-Moderator: Vincent H. Stefan, PhD
Lehman College, CUNY
Bronx, NY

10:15 a.m. - 10:30 a.m. A81 A Test of the Transition Analysis Method for Estimating Adult Age-at-Death
Jessica L. Campbell, MS*; Stephen P. Nawrocki, PhD

10:30 a.m. - 10:45 a.m. A82 Examining the Accuracy of Age Estimates From New Histological Sampling Strategies at the Femoral Midshaft
Timothy P. Gocha, PhD*; Sam D. Stout, PhD; Amanda M. Agnew, PhD

10:45 a.m. - 11:00 a.m. A83 Increasing Precision in Age Estimation From the Female Os Pubis: A Composite Technique With >80% Accuracy to Within Ten Years of Actual Age
Janamarie Truesdell, MSc*; Andreas Durberg, MA, MS; Nicholas Márquez-Grant, PhD

11:00 a.m. - 11:15 a.m. A84 Apophyseal Ossification of the Iliac Crest in Forensic Age Estimation: New Standards for Modern Australian Subadults Using Computed Tomography
Nicole Lottering, BS*; Mikaela S. Reynolds, MSc; Donna M. MacGregor, MSc; Maree T. Izatt; Caroline Grant, PhD; Clayton Adam, PhD; Laura S. Gregory, PhD

11:15 a.m. - 11:30 a.m. A85 DNA Methylation Markers as a Novel Tool for Age-at-Death Estimation in Teeth
Sara C. Zapico, PhD*; Bram Bekaert, PhD; Aubeline Kamalandua, MS; Wim Van de Voorde, MD; Ronny Decorte, PhD

11:30 a.m. - 1:30 p.m. Lunch

Poster Session

11:30 a.m. - 1:00 p.m. A86 A Novel Method for Recording Palate Shape in the Estimation of Ancestry
Christopher A. Maier, MA*

11:30 a.m. - 1:00 p.m. A87 Ancestral Variation in Orbital Rim Shape: A 3D Pilot Study
Katie M. Rubin, MS*; Valerie DeLeon, PhD

11:30 a.m. - 1:00 p.m. A88 Missing Data Imputation Methods Using Morphoscopic Traits and Their Performance in the Estimation of Ancestry
Michael W. Kenyherecz, PhD*; Nicholas V. Passalacqua, PhD; Joseph T. Hefner, PhD

11:30 a.m. - 1:00 p.m. A89 Skeletal Sex Estimation in a Modern Cuban Sample
Meredith L. Tise, PhD*

*Presenting Author
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<th>Time</th>
<th>Session</th>
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<th>Presenters</th>
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<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>A90</td>
<td>Sexual Dimorphism of the Radial Tuberosity: Geometric Morphometric Approach With a Structured-Light 3D Scanning System</td>
<td>Go-Un Jung, BS*; Byoung-Ha Kim, BS; U-Young Lee, MD; Deog-Im Kim, PhD; Dae-Kyoon Park, MD, PhD; Yi-Suk Kim, MD, PhD</td>
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<td>11:30 a.m. - 1:00 p.m.</td>
<td>A91</td>
<td>Cranial Morphological Sexing Trait Patterns Differ Across Populations</td>
<td>Monica M. Thompson*; Kaitlyn A. Lopez*; Kanya Godde, PhD*</td>
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<td>11:30 a.m. - 1:00 p.m.</td>
<td>A92</td>
<td>An Analysis of Sexual Dimorphism Using Geometric Morphometrics (GM) of the Femur and Tibia: The Use of GM in Assessing Sex of Fragmented Remains</td>
<td>Amanda K. Costello, MS*</td>
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<td>11:30 a.m. - 1:00 p.m.</td>
<td>A93</td>
<td>Metric Assessment of the Pubic Bone to Determine the Accuracy of Known Novel Data Points for Sex Estimation</td>
<td>Kathleen A.S. Blake, PhD*; Hallie Gaffney*; Kristen Hartnett-McCann, PhD*</td>
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<td>11:30 a.m. - 1:00 p.m.</td>
<td>A94</td>
<td>An Assessment of Sexual Dimorphism in the Sternal Fourth Rib: A 2D Morphometric Approach</td>
<td>Andrew C. Seidel, MA*; Laura C. Fulginiti, PhD</td>
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<td>11:30 a.m. - 1:00 p.m.</td>
<td>A95</td>
<td>A Geometric Morphometric Comparison of Pelvic and Cranial Sexual Dimorphism</td>
<td>Kaleigh C. Best, MS*; Luis L. Cabo, MS; Heather M. Garvin, PhD</td>
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<td>11:30 a.m. - 1:00 p.m.</td>
<td>A96</td>
<td>A Reassessment of Walker Cranial Non-Metric Traits on Undocumented Border Crossers Along the South Texas Border</td>
<td>Brittany S. McClain, BA*; Cassie E. Skipper, BS; Marilyn Isaacks, BA</td>
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<td>11:30 a.m. - 1:00 p.m.</td>
<td>A97</td>
<td>Stable Isotope Investigation of Mother-Infant Pairs and the Implication for Forensic Casework</td>
<td>Inga Siebke*, Fabian Kanz, PhD; Carsten Witzel, PhD; Sandra Lösch, PhD</td>
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<td>11:30 a.m. - 1:00 p.m.</td>
<td>A98</td>
<td>Bone Histology Sampling Sites for the Identification of Undocumented Border Crossers Along the United States-Mexico Border</td>
<td>Lauren Alyssa Meckel, BS*; Sophia Mavroudas, MA; Victoria M. Domínguez, MA; Kate Spradley, PhD</td>
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<td>11:30 a.m. - 1:00 p.m.</td>
<td>A99</td>
<td>Estimation of Age-at-Death Using Femoral Cortical Thickness, Biomechanical, and Histological Variables</td>
<td>Megan E. Ingvoldstad, PhD*; Christine M. Pink, PhD</td>
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<td>11:30 a.m. - 1:00 p.m.</td>
<td>A100</td>
<td>Transformation of the Department of Defense’s (DoD’s) Central Identification Laboratory (CIL): A Historical Review of Its Scientific Personnel and Primary Architects as It Embraces the Tides of Change</td>
<td>MariaTeresa A. Tersigni-Tarrant, PhD*; Denise To, PhD</td>
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<td>11:30 a.m. - 1:00 p.m.</td>
<td>A101</td>
<td>Thirty Years of the Forensic Data Bank and Data Collection Procedures (DCP) 2.0: Continuity and Transformation</td>
<td>Stephen D. Ousley, PhD*; Richard Jantz, PhD; Natalie R. Langley, PhD; Kate Spradley, PhD; Beatrix Dudzik, PhD</td>
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</table>
11:30 a.m. - 1:00 p.m.  A102  Multidisciplinary Approach of Forensic Science in Historical Study: St. Fortunato of Serracapriola (Italy)
Francesco Sessa, MS*; Gabriela Perilli, MD; Christian Zammit, MD; Santina Cantatore; Fabrice F. Dedouit; Giuseppe Guglielmi, PhD; Cristoforo Pomara, MD, PhD

11:30 a.m. - 1:00 p.m.  A103  Infant Bone Health: An Evaluation of Quantitative Ultrasound
Miriam E. Soto Martinez, MA*; Jennifer C. Love, PhD*; Weilu Han, MPH

11:30 a.m. - 1:00 p.m.  A104  Reliability of Biomechanical Descriptors to Assess Blunt Force Injuries in the Cranium
Ericka N. L’Abbe, PhD*; Steven A. Symes, PhD; Michael W. Kenyhercz, PhD; Kyra E. Stull, PhD; Gabriele C. Kruger, MSc; Marie Christine Dussault, PhD; Leandi Liebenberg, MS; Erin Chapman, MS, MA; Jolandie Myburgh, MSc

11:30 a.m. - 1:00 p.m.  A105  Semi-Automated Volumetric Quantification of the Frontal Sinuses: Sexual Dimorphism in a Contemporary Australian Subadult Population
Reanna J. Morris*; Nicoline Lottering, BS; Mikaela S. Reynolds, MSc; Laura S. Gregory, PhD; Donna M. MacGregor, MSc

11:30 a.m. - 1:00 p.m.  A106  Estimating Age in Juvenile Crania Using Cranial Vault Thickness (CVT)
Kelly R. Kamnikar, BS*; Nicholas P. Herrmann, PhD; Pierre M.M. Guyomarc’h, PhD; Molly K. Zuckerman, PhD

11:30 a.m. - 1:00 p.m.  A107  Correlation Between Body Size and Intracranial Capacity in Korean Youth
Jae gul Suh, MD; Yesel Kim, MD; Dasom Kim, BA; In Sung Park, PhD; Nam Joon Lee, MD, PhD; Im Joo Rhyu, PhD*

11:30 a.m. - 1:00 p.m.  A108  Estimating Body Composition From Stature and Bi-Iliac Breadth in Modern Young Adult United States Populations (NHANES III)
William C. Schaffer, MA*

11:30 a.m. - 1:00 p.m.  A109  Estimation of Stature From the Foramen Magnum Region in an American Population: A Validation Study
Margarita M. Villarreal, BS*

11:30 a.m. - 1:00 p.m.  A110  Examining Four Potential Proxies for Standard Craniometrics: A Statistical Analysis for Significance and Demographic Correlations
Jacob L. Cheramie*; Maranda A. Kles, PhD

11:30 a.m. - 1:00 p.m.  A111  The Effects of Household Corrosive Chemicals on Pig Bones and Human Tissue
Gina E. Baglieri*

11:30 a.m. - 1:00 p.m.  A112  Direct and Indirect Blunt Force Trauma on the Cranium: Any Visible Differences
Kathryn Sloper, BS*; Constantine Eliopoulos, PhD; Matteo Borrini, PhD

11:30 a.m. - 1:00 p.m.  A113  A Method of Sex Determination From the Scapula in Modern American Forensics
Melissa K. Kuhn*; Ismail M. Sebetan, MD, PhD*; Amy Zimmer, MS

*Presenting Author
11:30 a.m. - 1:00 p.m. A114 Sex Classification in a Sample of American Whites Using Interlandmark Distances of the Zygomatic Bone and Standard Cranial Measurements
Sarah M. Furnier*; Stephen D. Ousley, PhD

11:30 a.m. - 1:00 p.m. A115 Differential Taphonomy Based on Microenvironment: The Case of Botanical Boy
Kevin M. Lougee, DO*; James Louis Caruso, MD; Meredith A. Lann, MD; Laura A. Regan, PhD

11:30 a.m. - 1:00 p.m. A116 Students in the Forensic Laboratory: Fostering Education While Maintaining Quality
Christiane Baigent, MSc; Catherine M. Gaither, PhD*

Decomposition, Accumulated Degree Days, and Seasonality

Moderator: Franklin E. Damann, PhD
Co-Moderator: Derek C. Benedix, PhD
DPAA CIL
Offutt AFB, NE

1:30 p.m. - 1:45 p.m. A117 Not All Degree Days are Equal in the Rate of Decomposition: The Effect of Season of Death on the Relationship Between Gross Postmortem Decomposition and Accumulated Degree Days
Lennon N. Bates, MA; Daniel J. Wescott, PhD*

1:45 p.m. - 2:00 p.m. A118 A Comparison of Seasonal Decomposition Patterns Between Human and Non-Human Animal Models
Angela M. Dautartas, MA*; Dawnie W. Steadman, PhD; Amy Z. Mundorff, PhD; Lee Meadows Jantz, PhD; Giovanna M. Vidoli, PhD

2:00 p.m. - 2:15 p.m. A119 Around the World in Accumulated Degree Days
Tal Simmons, PhD*; Colin Moffatt, PhD; Ozgur Bulut, PhD; Natnipoon Rattanarungruang, BA; Amanda L. Roe, PhD; Donald F. Siwek, PhD

2:15 p.m. - 2:30 p.m. A120 Comparing Decomposition Assessments From Digital Images to In Situ Observations
Gretchen R. Dabbs, PhD*; Joan A. Bytheway, PhD; Melissa A. Connor, PhD

2:30 p.m. - 2:45 p.m. A121 Volatile Organic Sulphur Compounds (VOSCs) and Accumulated Degree Days (ADD): Timing the Switch From Anaerobic to Aerobic Putrefaction
Philip E. Houldsworth, MSc*; Tal Simmons, PhD

2:45 p.m. - 3:00 p.m. A122 An External Validation of the Citrate Content Postmortem Interval (PMI) Method
Michael A. Brown, PhD*; Charles Froome, BS; Shawn Hennessy; Rebecca Gerling; Jeffrey Ellison, BS; Ann W. Bunch, PhD
ANTHROPOLOGY

3:00 p.m. - 3:15 p.m.  A123  Differentiating Between Sharp Force Trauma (SFT) Defects and Insect Invasion of Skin of Human Cadavers Throughout the Decomposition Process
Joan A. Bytheway, PhD*; Kevin R. Derr; Zachary Lueck, BS; Lyndi S. Turner, BS; Kandace D. Schakelford, BA; Erica N. Fisher, BS; Luis Dominguez, BS

3:15 p.m. - 3:30 p.m.  Break

Scientific Bias, Cold Case Resolution, and Accreditation

Moderator:  Jennifer C. Love, PhD
OCME
Washington, DC

Co-Moderator:  Katie M. Rubin, MS
CA Pound Human ID Laboratory
Gainesville, FL

3:30 p.m. - 3:45 p.m.  A124  The “Science of Science”: Examining Bias in Forensic Anthropology
Alexandra R. Klales, PhD*; Kate M. Lesciotto, JD, MS

3:45 p.m. - 4:00 p.m.  A125  A Reanalysis of Korean War Anthropological Records to Support the Resolution of Cold Cases
Emily K. Wilson*

4:00 p.m. - 4:15 p.m.  A126  The Status of Unidentified Decedent Cold Cases at the Harris County Institute of Forensic Sciences (HCIFS) From 1957 to 2015
Cate E. Bird, PhD*; Sharon M. Derrick, PhD; Deborrah C. Pinto, PhD; Jason M. Wiersema, PhD; Jennifer C. Love, PhD

4:15 p.m. - 4:30 p.m.  A127  The ANSI-ASQ National Accreditation Board (ANAB) Accreditation of the Harris County Institute of Forensic Sciences’ Forensic Anthropology Division
Christian Crowder, PhD*; Michal L. Pierce, MS; Luis A. Sanchez, MD

Saturday

Taphonomic Signatures of Marine and Terrestrial Agents

Moderator:  Timothy P. Gocha, PhD
The Ohio State University
Columbus, OH

Co-Moderator:  Shauna McNulty, MA
University of Tennessee
Knoxville, TN

10:00 a.m. - 10:15 a.m.  A128  Differential Raccoon Scavenging Among Pig, Rabbit, and Human Subjects
Dawnie W. Steadman, PhD*; Angela M. Dautartas, MA; Amy Z. Mundorff, PhD; Giovanna M. Vidoli, PhD; Lee Meadows Jantz, PhD

10:15 a.m. - 10:30 a.m.  A129  Analysis of Taphonomic Changes to Juvenile Pig Bone Exposed to a Marine Environment Using Non-Destructive Raman Spectroscopy
Jennifer L. McDowell, MSe*; Lynne S. Bell, PhD; Keith C. Gordon

*Presenting Author
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<th>Time</th>
<th>Session</th>
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<th>Presenters</th>
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<tr>
<td>10:30 a.m. - 10:45 a.m.</td>
<td>A130</td>
<td>The Skeletal Histo-Taphonomy of Deep Coastal Marine Submersion and Exposure</td>
<td>Lynne S. Bell, PhD*, Gail S. Anderson, PhD</td>
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<tr>
<td>10:45 a.m. - 11:00 a.m.</td>
<td>A131</td>
<td>Taphonomy of the Perinate Skeleton: Redefining Structural Norms and Building Analytical Models</td>
<td>Christiane Baigent, MSc*</td>
</tr>
<tr>
<td>11:00 a.m. - 11:15 a.m.</td>
<td>A132</td>
<td>Using Satellite Telemetry to Study Vultures and Other Scavengers in Taphonomic Research</td>
<td>Lauren R. Pharr, PhD*</td>
</tr>
<tr>
<td>11:15 a.m. - 11:30 a.m.</td>
<td>A133</td>
<td>Postmortem Intervals in Mice Submerged in Aqueous Environments at 20°C</td>
<td>Elizabeth N. Celata, MS*</td>
</tr>
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Wednesday

Poster Session

11:30 a.m. - 1:00 p.m.  B1  Investigating the Use of MicroRNAs (miRNAs) for the Identification of Forensically Relevant Body Fluids
Kelsie R. Weir, BA*; Claire Glynn, PhD

11:30 a.m. - 1:00 p.m.  B2  The Effectiveness of Various Strategies to Improve DNA Analysis of Formaldehyde-Damaged Tissues From Embalmed Cadavers for Human Identification (HID) Purposes
Natalia Czado, MS*; Bobby L. LaRue, Jr., PhD; Amanda Wheeler, BS; Rachel M. Houston, BS; Amy E. Sorensen, MSFS; David A. Gangitano, PhD; Sheree R. Hughes-Stamm, PhD

11:30 a.m. - 1:00 p.m.  B3  Tertiary Transfer of DNA by Examination Gloves Between Evidentiary Items at Crime Scenes
Marisa Teal Ketchum, BS*; Erin L. Vollmer, BA*; Jenna Carnes; Krista E. Latham, PhD; Cynthia Cale, BS; Gay L. Bush, PhD

11:30 a.m. - 1:00 p.m.  B4  Optimization and Validation of the ForensicGEM™ Rapid Extraction Method for High-Throughput Processing of Cotton Buccal Swabs
Kyleen Elizabeth Elwick, BS*; Sheree R. Hughes-Stamm, PhD; Kimberly S. Andreaggi, MFS; Michelle A. Peck, MFS

11:30 a.m. - 1:00 p.m.  B5  Investigating Simultaneous Extraction of RNA and DNA From Forensically Relevant Body Fluids
Sarah L. Markland; Kelsie R. Weir, BA; Claire Glynn, PhD*

11:30 a.m. - 1:00 p.m.  B6  Investigating the Use of Raman Spectroscopy for the Differentiation of Mixed Body Fluid Samples
Tyler J. Schlagetter*; Brooke W. Kammrath, PhD; Claire Glynn, PhD

11:30 a.m. - 1:00 p.m.  B7  The Identification of Biological Fluids Based on DNA Methylation Differences Using High Resolution Melt Curve Analysis
Susan Cheng, BS*; K. Joy Karnas, PhD

11:30 a.m. - 1:00 p.m.  B8  Analysis of Attenuated Total Reflectance/Fourier Transform Infrared (ATR/FTIR) Spectra to Differentiate Menstrual and Venous Blood on Various Substrates
Alicia Quinn, BS*; Kelly M. Elkins, PhD*

11:30 a.m. - 1:00 p.m.  B9  Touch DNA Recovered From Fired and Unfired Shotgun Shells
Anthony J. Saitta*; Peter R. Valentin, MSFS

11:30 a.m. - 1:00 p.m.  B10 Use of Massively Parallel Sequencing to Assist With Deconvolution of Short Tandem Repeat (STR) Mixture Profiles
Kelly Grisedale, PhD*; Jessica Bradley, BS; Brittania J. Bintz, MSc; Mark R. Wilson, PhD

*Presenting Author
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<tr>
<td>11:30 a.m.</td>
<td>B11</td>
<td>Absolute Quantitation of Semen-Specific Biomarkers From Post-Coital Samples</td>
<td>Catherine O. Brown, BA*; Masha Signaevsky, BS; Heather E. McKiernan, MSFS; Kevin M. Legg; Phillip Danielson, PhD</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>B12</td>
<td>Rapid Direct Polymerase Chain Reaction (PCR) of a Y-Chromosomal Short Tandem Repeat (Y-STR) Multiplex as a Screening Tool for the Presence of Male DNA</td>
<td>Bruce R. McCord, PhD; Georgiana C. Gibson-Daw, MS*</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>B13</td>
<td>Determining the Most Efficient Location for Collecting DNA Samples From Hand Guns</td>
<td>Kaitlyn M. Redman, BS*; Kathryn E. Hoodenpyle, MS; Jill Therriault, BS; Arielle Van Deusen, BS; Jessica Best, MSFS; Michael S. Adamowicz, PhD</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>B14</td>
<td>Secondary or Tertiary Transfer Semen DNA Stains?</td>
<td>Ka-Man Pun*; Giuliana Grimoldi, MSc; Gianfranco Foglia; Ilaria Monico, MS; Emilio Scossa Baggi</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>B15</td>
<td>Differentiation of Commercial Ammunition Sources of Unburned and Corresponding Burned Smokeless Powders Based on Chemical Composition Using Mass Spectrometry (MS) and Principal Component Analysis (PCA)</td>
<td>Kristen L. Reese, BA*; A. Daniel Jones, PhD; Ruth Waddell Smith, PhD</td>
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<tr>
<td>11:30 a.m.</td>
<td>B16</td>
<td>In Vitro Experiments Using Human Cadaver Head Hairs to Investigate the Formation Mechanism of Postmortem Hair Root Bands (PMRBs)</td>
<td>Jamie N. Fleming, BS*; Hilda S. Castillo, PhD; Ernest J. Drummond, MS; Rabih Jabbour; Samir Deshpande; Dawnie W. Steadman, PhD; Lee Meadows Jantz, PhD; Kathleen Hauther; Jack Hietpas, PhD; Stephen D. Shaw, MS; JoAnn Buscaglia, PhD; Brian Eckenrode, PhD; Joseph Donfack, PhD</td>
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<tr>
<td>11:30 a.m.</td>
<td>B17</td>
<td>Forensic Soil Analysis by Morphologically Directed Raman Spectroscopy (MDRS)</td>
<td>Andrew C. Koutrakos, MS*; Brooke W. Kammrath, PhD*</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>B18</td>
<td>Postmortem Identification From Physiological Biometrics: A Study of Fingerprints, Irises, and Facial Images</td>
<td>Tiffany B. Saul, MS*; Kelly Sauerwein, MA*; Dawnie W. Steadman, PhD; Chris Boehnen, PhD</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>B19</td>
<td>Stability Study of Heroin in Four Common Solvents</td>
<td>Melanie A. Schade*; Thomas A. Brettell, PhD</td>
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<tr>
<td>11:30 a.m.</td>
<td>B20</td>
<td>The Utility of Ultra High-Performance Supercritical Fluid Chromatography (UHPSFC) for the Chiral Analysis of Seized Drugs</td>
<td>Stephanie R. Breitenbach, BS*; Ira S. Lurie, PhD</td>
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<tr>
<td>11:30 a.m.</td>
<td>B21</td>
<td>Analysis of Black Electrical Tapes by Direct Thermal Extraction-Gas Chromatography/Mass Spectrometry (TE-GC/MS)</td>
<td>Emily Prisaznik, BS*; Thomas A. Brettell, PhD</td>
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<td>11:30 a.m.</td>
<td>B22</td>
<td>Think Outside the Box: External Human Factors on the Analysis, Comparison, Evaluation-Verification (ACE-V) Methodology</td>
<td>Francisco Valente Gonçalves, MSc*; Lisa L. Smith, PhD; Doug Barrett, PhD</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>B23</td>
<td>Liquid Chromatography/Mass Spectrometry (LC/MS) Method Development for the Identification of Route-Specific 3,4-Methylenedioxyamphetamine (MDMA) Impurities</td>
<td>Rebecca F. Dunn*; Heather L. Harris, MFS, JD</td>
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<tr>
<td>11:30 a.m.</td>
<td>B24</td>
<td>Forensic Analysis of Human Autopsy Tissue for the Presence of Polydimethylsiloxane (Silicone) and Volatile Cyclic Siloxanes Using Macro Fourier Transform Infrared (FTIR) Spectroscopy, Micro-FTIR Spectroscopic Imaging, and Headspace/Gas Chromatography With Mass Spectrometric Detection (HS/GC/MS)</td>
<td>Caroline Machal Kelley, BS*; Adam C. Lanzarotta, PhD</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>B25</td>
<td>Breaking Forensic Boundaries: Developing International Standards</td>
<td>Soraya McClung*; Kermit B. Channell II, BS*</td>
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<tr>
<td>11:30 a.m.</td>
<td>B26</td>
<td>Human Scent Evidence — Volatile Organic Compounds (VOCs): A Unique Trace From Science to Criminal Investigation</td>
<td>Marcello Rendine*; Cristofero Pomara, MD, PhD; Alessandro Bellifemina; Dania De Carlo, MD; Carmela Fiore, MD; Palmira Fortarezza, MS; Margherita Neri, MD, PhD; Irene Riezzo, MD, PhD</td>
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<td>11:30 a.m.</td>
<td>B27</td>
<td>Chemical and Canine Analysis as Complementary Techniques for the Identification of Active Odors in a Biothreat Agent</td>
<td>Alison Simon, BS*; Julian L. Mendel, MSc; Kenneth G. Furton, PhD; DeEtta Mills, PhD</td>
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<td>11:30 a.m.</td>
<td>B28</td>
<td>Investigating the Use of New Psychoactive Substances (NPS) Using Sewage-Based Epidemiology (SBE): Detection and Identification of Transformation Products (TPs) of Methylene and Methylenedioxyprovalerone in Sewage Using Accurate-Mass Mass Spectrometry (MS)</td>
<td>Juliet Kinyua, MSc*; Noelia Negreira, PhD; Ann-Kathrin McCall, MSc; Christoph Ort, PhD; Adrian Covaci, PhD; Alexander van Nuijs, PhD</td>
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<td>11:30 a.m.</td>
<td>B29</td>
<td>Updates From the Drug Enforcement Administration National Forensic Laboratory Information System (NFLIS): Opiates and Related Drugs Reported in NFLIS — 2009-2014</td>
<td>DeMia P. Pressley, MS; Artisha Polk, MS; Liqun Wong, MS; Kevin Strom, PhD; Katherine N. Moore, MS*; David Heller, BS; Jeffrey M. Ancheta, BS; BeLinda J. Weimer, MA; Hope Smiley-McDonald, PhD; Jeri D. Ropero-Miller, PhD</td>
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<td>11:30 a.m.</td>
<td>B30</td>
<td>Statistical Analysis of Firearms: A Comparison Between the 2D and 3D Integrated Ballistic Identification System (IBIS®)</td>
<td>Keith B. Morris, PhD*; Roger Jefferys, BS*; Eric F. Law, BS*</td>
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<tr>
<td>11:30 a.m.</td>
<td>B31</td>
<td>“I Dropped Acid.” “No, You Didn’t.” A Retrospective Study of NBOMe Emergence in Harris County, Texas</td>
<td>Warren C. Samms, PhD*; Donna E. Williams, BS; Kay McClain, BS</td>
</tr>
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</table>
### 11:30 a.m. - 1:00 p.m. B32 A Study of Microcrystal Tests for Emerging Psychoactive Substances
*Sean Brady*; Monica Joshi, PhD  

### 11:30 a.m. - 1:00 p.m. B33 Sample Introduction Studies for Direct Analysis in Real-Time (DART®) Systems
*Rachel Masek, BS; Amelia Hartman; David Cunningham, PhD*

### 11:30 a.m. - 1:00 p.m. B34 The Detection of Bleach (Sodium Hypochlorite) in Dialysis Blood Lines and Syringes in a Serial Murder Investigation
*S. Frank Platek, MS; John B. Crowe, BS; David S. Jackson, BS*

### 11:30 a.m. - 1:00 p.m. B35 Comparison of the Restek Rtx®, Rxi®-1ms, and Rxi®-1HT Gas Chromatography (GC) Columns for the Qualitative Analysis of Synthetic Cannabinoids
*Laurel A. Hardy, BS*; *Carrie J. Kirkpatrick, BS; Pamela J. Staton, PhD; Lauren L. Richards-Waugh, PhD*

### 11:30 a.m. - 1:00 p.m. B36 Colorimetric-Based Paper Microfluidic Devices for the Presumptive Determination of Seized Drugs
*Ling Wang, MS*; *Bruce R. McCord, PhD; Giacomo Musile, PhD; Jashaun Bottoms; Franco Tagliaro, PhD, MD*

### 11:30 a.m. - 1:00 p.m. B37 Evaluation of Microscopy and Vibrational Spectroscopy for the Discrimination of Purple and Blue Nail Polishes
*Brianna Kroon*; *Elaine M. Pagliaro, JD; Brooke W. Kammrath, PhD*

### 11:30 a.m. - 1:00 p.m. B38 Characterization by Scanning Electron Microscopy With Energy-Dispersive X-Ray Spectroscopy (SEM/EDX) of Nail and Gel Polishes and Its Real-World Applications
*Audriana M. Wagner*; *R. Christopher O’Brien, PhD; Elaine M. Pagliaro, JD; Brooke W. Kammrath, PhD*

### 11:30 a.m. - 1:00 p.m. B39 The Analysis and Classification of Tire Rubber Deposits Using Pyrolysis-Gas Chromatography/Mass Spectrometry (Py-GC/MS)
*Rebecca Thielen, BS*

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**Thursday — Session I**

### Current Events in Forensic Policy

**Moderator:** Vincent J. Desiderio, MS  
United States Postal Inspection Service  
Dulles, VA  

**Co-Moderator:** John J. Lentini, BA  
Scientific Fire Analysis, LLC  
Islamorada, FL  

### 8:25 a.m. - 8:40 a.m. Opening Remarks
*Vincent J. Desiderio, MS; John J. Lentini, BA*
## CRIMINALISTICS

### Las Vegas 2016

8:40 a.m. - 9:10 a.m. **B40** Organization of Scientific Area Committees (OSAC) Activities Impacting Laboratory Operations  
*John P. Jones II, MBA*

9:10 a.m. - 9:40 a.m. **B41** Organization of Scientific Area Committees (OSAC) — Increasing Visibility of Standards in Forensic Science and the Potential Impact in the Laboratory and the Courtroom  
*Mark D. Stolorow, MS, MBA*

9:40 a.m. - 10:00 a.m. **Break**

### Fire Debris and Explosives

**Moderator:** Katherine D. Hutches, PhD  
**Co-Moderator:** Laurel V. Mason, BS  
ATF  
Analytical Forensic Associates  
Walnut Creek, CA  
Lilburn, GA

10:00 a.m. - 10:30 a.m. **B42** Chemometric Analysis of Gasoline Samples Utilizing Direct Analysis in Real-Time Mass Spectrometry (DART*-MS)  
*Ashley Davis, MS; Matthew Pavlovich, PhD; Joseph H. LaPointe, BSc; Brian Musselman, PhD; Adam B. Hall, PhD*

10:30 a.m. - 10:45 a.m. **B43** Using Atmospheric Pressure Chemical Ionization/Mass Spectrometry (APCI/MS) and Flow Injection for the Screening of Arson Accelerants  
*Clare M. Fried, BS*; *Thomas H. Pritchett, MS*; *Michelle Shortell, MS*

10:45 a.m. - 11:00 a.m. **B44** Practical Methods for Prohibiting Microbial Degradation of Ignitable Liquids in Soil Samples  
*James Hoult, BS*; *Katherine D. Hutches, PhD*

11:00 a.m. - 11:15 a.m. **B45** The Surprising Effect of Temperature on the Weathering of Gasoline  
*Heather Birks, BS*; *Ashley Cochran, BS*; *Tyler Williams; Glen P. Jackson, PhD*

11:15 a.m. - 11:30 a.m. **B46** Mathematically Modeling Chromatograms of Evaporated Ignitable Liquids for Fire Debris Applications  
*Rebecca J. Brehe, BS; John W. McIlroy, PhD; Ruth Waddell Smith, PhD*; *Victoria L. McGuffin, PhD*

11:30 a.m. - 11:45 a.m. **B47** Characterization of Aluminum (Al) Powders in Explosives Utilizing Particle Micromorphometry  
*JenaMarie Baldaino, BS*; *Danica Ommen, MS*; *Joshua Dettman, PhD*; *Raleigh Parrott II; Jack Hietpas, PhD*; *JoAnn Buscaglia, PhD*

11:45 a.m. - 12:00 p.m. **B48** Identification and Separation of Nitrate Esters Using Both Liquid Injection Gas Chromatography/Mass Spectrometry (GC/MS) and Total Vaporization Solid Phase Microextraction (TV-SPME) GC/MS  
*Jordan Ash, BA*; *John V. Goodpaster, PhD*

*Presenting Author*
12:00 p.m. - 12:15 p.m.  B49  High-Sensitivity Detection and Separation of High Explosives in Environmental Samples  
Christopher M. Rollman, BS*; Karen A. Brensinger, MFS; Christine Copper, PhD; Ashton Genzman, BS; Jacqueline Rine, BS; Ira S. Lurie, PhD; Mehdi Moini, PhD

12:15 p.m. - 1:00 p.m.  Lunch

Poster Session

11:30 a.m. - 1:00 p.m.  B50  Application of a Linear-Targeted Approach in Multiplex Amplification of the Mitochondrial Genome  
Maureen Hickman, MS*; Kelly Grisedale, PhD

11:30 a.m. - 1:00 p.m.  B51  Assessment of Low-Level Error in Massively Parallel Sequencing (MPS) Data Sets Generated Using the Illumina® MiSeq® Platform and Synthesized Human Mitochondrial DNA Oligonucleotides  
Brittania J. Bintz, MSc*; Timothy Driscoll, PhD; Mark R. Wilson, PhD

11:30 a.m. - 1:00 p.m.  B52  Evaluation of Collection Protocols for the Recovery of Biological Samples From Crime Scenes  
Dina Al Oraer, BS*

11:30 a.m. - 1:00 p.m.  B53  Single Molecule Forensic DNA Characterization With Laser-Induced Nanopore Heating  
Sarah J. Seashols Williams, PhD*; Christopher Angevine, BS; Nicole Auka; Joseph E. Reiner, PhD

11:30 a.m. - 1:00 p.m.  B54  Forensic Application of Massively Parallel Sequencing (MPS) With the Ion Torrent™ Multiplex Mitochondrial Genome Panel and Hi-Q™ Sequencing Chemistry  
Jennifer D. Churchill, PhD*; Jonathan King, MS; Joseph P. Chang, BS; Sharon C. Wootton, PhD; Chien-Wei Chang, PhD; Robert Lagacé, BS; Bruce Budowle, PhD

11:30 a.m. - 1:00 p.m.  B55  From Fragment Isolation to DNA Amplification: A Detailed Protocol for Using Plant and Insect Material in Forensics  
Megan L. Jackson, BS*; Kelly A. Meiklejohn, PhD; Jack Hietpas, PhD; Libby A. Stern, PhD; James M. Robertson, PhD

11:30 a.m. - 1:00 p.m.  B56  Investigation of the Genomics of Cannabinoid Biosynthesis in Cannabis Sativa  
Robert W. Allen, PhD*; Lindsey N. Allen, BS; Jane Ketner Pritchard, BS; Jun Fu, PhD; Rachel Wellendorf, BS; Lindsey Yoder, MSFS

11:30 a.m. - 1:00 p.m.  B57  Current Efforts on Developmental Aspects of Forensic Botany in Brazil  
Renato T. Ferreira de Paranaiba, BA*; Carlos B. Carvalho, PhD; Jorge Freitas, PhD; Gustavo Chemale, PhD; Kattia Michelin, MSc

*Presenting Author
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<tr>
<th>Time</th>
<th>Session</th>
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<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>B58</td>
<td>Inferring Geographical Origin of Forensic Evidence Via DNA Barcodes</td>
<td>Jack N. Lane, MS; Michael N. Parsons, MS*; Donia Slack, MS</td>
</tr>
<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>B59</td>
<td>Botanical DNA Evidence in a Case of Robbery and Property Crime: Application of High Resolution Melting Analysis of <em>Triticum Aestivum</em> L. Grains</td>
<td>Alejandra Figueroa, BSc*; Jaime H. Solano, PhD; Leonardo I. Anabalon; David A. Gangitano, PhD</td>
</tr>
<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>B60</td>
<td>Using DNA Barcoding to Detect Fish Substitutions in Brazil</td>
<td>Carlos B. Carvalho, PhD*</td>
</tr>
<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>B61</td>
<td>Effects of Bacterial DNA on Human Profiles</td>
<td>Kevin G. Smolar, MS; Gina Dembinski, MS*; Christine J. Picard, PhD</td>
</tr>
<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>B62</td>
<td>Optimal Time for Forensic Screening of Evidence Based on Fluorescent Variation of Seminal Fluid</td>
<td>Jack N. Lane, MS*; Donia Slack, MS</td>
</tr>
<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>B63</td>
<td>The Identification and Analysis of Burnt Bloodstains</td>
<td>Rebecca Nelson, BS; Maranda M. Hirst; Peter Bilous, PhD*</td>
</tr>
<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>B64</td>
<td>Migration of Seminal Fluid Components and Spermatozoa in Semen Stains Exposed to Moisture</td>
<td>Lyndsey T. Brown, BS*; Robin W. Cotton, PhD; Amy N. Brodeur, MFS</td>
</tr>
<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>B65</td>
<td>“Who Is My Father?” The Role of Forensic Genetics in the Resolution of a Paternity Case</td>
<td>Ciro Di Nunzio, MFS, PhD*; Isabella Aquila, MD*; Michele Di Nunzio, BS; Matteo Borrini, PhD; Maurizio Saliva, MD; Flavio Saia, BS; Pietrantonio Ricci</td>
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<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>B66</td>
<td>Human Remains in Southern Italian Cemeteries: When the Type of Burial Influences the Results of DNA Extraction</td>
<td>Ciro Di Nunzio, MFS, PhD*; Isabella Aquila, MD*; Maurizio Saliva, MD; Michele Di Nunzio, BS; Francesco P. Busardo, MD; Vittorio Fineschi, MD, PhD; Pietrantonio Ricci</td>
</tr>
<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>B67</td>
<td>Development of a Portable Detection and Image-Processing System for Latent Fingerprints Using Time-Resolved Spectroscopy</td>
<td>Hidetoshi Kakuda*; Norimitsu Akiba, PhD; Daisuke Imoto, MS; Ken’ichi Tsuchiya, PhD; Kenji Kurosawa; Kenro Kuroki, PhD; Shigeki Takeuchi, PhD; Osamu Shimoda, BS</td>
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<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>B68</td>
<td>Fingerprint Ridge Drift: An Undescribed Phenomenon</td>
<td>Josep De Alcaraz-Fossoul, PhD*; Carme Barrot, PhD; Luke McGarr, BSc; Karen Stow, MSc; Katherine A. Roberts, PhD; Gregory G. Hogrebe, BS; Manel Gené, PhD</td>
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<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>B69</td>
<td>Fingerprint Detection by Two-Photon Excitation With a Femtosecond Fiber Laser</td>
<td>Norimitsu Akiba, PhD*; Ryoya Takahashi, MS; Fumihiko Ichikawa; Akira Torao; Naohiro Ishizawa, BS; Atsushi Nakamura; Takayuki Sota; Hidetoshi Kakuda; Daisuke Imoto, MS; Ken’ichi Tsuchiya, PhD; Kenji Kurosawa; Kenro Kuroki, PhD</td>
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<td>11:30</td>
<td>B70</td>
<td>Method Validation Parameters for Drugs and Explosives in Ion Mobility Spectrometry (IMS)</td>
<td>A. Bakarr Kanu, PhD*</td>
</tr>
<tr>
<td>11:30</td>
<td>B71</td>
<td>Quantitation of Major Cannabinoids Found in Seized Marijuana Using Automated Headspace/Solid-Phase Microextraction Coupled With Gas Chromatography/Mass Spectrometry (HS/SPME-GC/MS)</td>
<td>Anastasia M. Brown, BS*; James D. Sweet, PhD; Jorn Chi-Chung Yu, PhD</td>
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<tr>
<td>11:30</td>
<td>B72</td>
<td>Analysis of Seized Hypodermic Syringes for Drug Content</td>
<td>Thomas A. Brettell, PhD*; Robyn Pyle, MS; Linda Burdick, BS</td>
</tr>
<tr>
<td>11:30</td>
<td>B73</td>
<td>The Development of a Novel Color Test for Improved Detection of Synthetic Cathinones</td>
<td>Charles R. Cornett, PhD*; Nicole Kloepfer; Brooke Tashner, BS; Tsunghsueh Wu, PhD</td>
</tr>
<tr>
<td>11:30</td>
<td>B74</td>
<td>Further Characterization of Opiates in Poppy Pod Tea Preparations</td>
<td>Angela S. Mohrhaus, BS*; Heather A. McCauley, BS; Jill M. Robinson, MFS; Samuel R. Gratz, PhD</td>
</tr>
<tr>
<td>11:30</td>
<td>B75</td>
<td>Rapid Screening of Seized Drugs Using Direct Analysis in Real-Time Mass Spectrometry (DART*-MS)</td>
<td>Yuriy Uvaydov, MS*</td>
</tr>
<tr>
<td>11:30</td>
<td>B76</td>
<td>Evaluation of a Direct Analysis Portable Mass Spectrometer (MS) for the Detection of Drugs and Related Substances</td>
<td>Nichole D. Bynum, MS*; Katherine N. Moore, MS; Zachary E. Lawton, BS; Christopher C. Mulligan, PhD; Megan Grabenauer, PhD; Jeri D. Ropero-Miller, PhD</td>
</tr>
<tr>
<td>11:30</td>
<td>B77</td>
<td>Analysis of Cannabis for the Presence of Pesticides and Adulterants With High Resolution Tandem Mass Spectrometry</td>
<td>Werner Bernhard, DSc*; Stefan Koenig, PhD; Susanne Nussbaumer, PhD; Wolfgang Weinmann, PhD</td>
</tr>
<tr>
<td>11:30</td>
<td>B78</td>
<td>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)</td>
<td>Jessica Winborn, BS*; James D. Sweet, PhD; Jorn Chi-Chung Yu, PhD</td>
</tr>
<tr>
<td>11:30</td>
<td>B79</td>
<td>The Effects of Ultraviolet (UV) Radiation on Time-Dependent Changes in the Composition of Latent Fingerprints</td>
<td>Allyson K Digmann, BS*; James W. McGill, PhD</td>
</tr>
<tr>
<td>11:30</td>
<td>B80</td>
<td>Effects of Donor Age and Water Exposure on the Quality of Oil Red O-Stained, Water-Exposed Latent Prints</td>
<td>Kitrina D. Skaggs, BA*; James W. McGill, PhD; Madalyn R. Robinson, BA</td>
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### CRIMINALISTICS

**Las Vegas 2016**

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<tr>
<th>Time</th>
<th>Session</th>
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<tr>
<td>11:30 a.m.</td>
<td>B81</td>
<td><strong>Fingerprint Loss in a Cancer Patient With No Side Effects</strong></td>
<td>Luciano Garofano, PhD*; Francesca Negri, MD, PhD; Annamaria De Giorgi, MD; Luigi Bisogno</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>B82</td>
<td><strong>Pyrolysis Products of BK-2C-B and BK-2C-I, Beta-Keto Analogs of 2,5-Dimethoxy-4-Bromophenethylamine</strong></td>
<td>Pierce V. Kavanagh, PhD; Kelly B. Texter, BS; Rachel Waymack; Elizabeth A. Gardner, PhD*</td>
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**Materials**

**Moderator:** Shirly Berends-Montero, PhD  
University of Colorado  
Dept of Computer Science  
Boulder, CO  

**Co-Moderator:** Tiffany Eckert Lumsdon, MS  
United States Army Crime Lab  
Forest Park, GA

- B83  
  **Assessing the Utility of Detrital Quartz Surface Textures and Feldspar Mineral Chemistry for Forensic and Intelligence Applications**  
  Jack Hietpas, PhD*; JenaMarie Baldaino, BS; JoAnn Buscaglia, PhD; Garrett McMahon, BS; Libby A. Stern, PhD

- B84  
  **Chemical Pattern Recognition: What Can Be Extracted From Geo-Located Spectroscopic Data Sets?**  
  Sergey Mamedov, PhD*

- B85  
  **Differential Sampling of Footwear to Separate Alternative Particle Signals**  
  David A. Stoney, PhD*; Paul L. Stoney, MBA

- B86  
  **Total Imaging Analysis of Paint**  
  Roger Kahn, PhD; William M. Davis, PhD*

- B87  
  **When Are Variations in Duct Tape the Result of True Differences? A Cautionary Tale**  
  Diana M. Wright, PhD*

- B88  
  **Intra-Roll and Intra-Product Variations in Duct Tapes**  
  Andria H. Mehlretter, MSFS*; Diana M. Wright, PhD; Michael A. Smith, PhD

- B89  
  **Hair Analysis: Learning From the Past and Moving Toward the Future**  
  Sandra Koch, MS*

- 3:05 p.m. - 3:20 p.m.  
  **Break**
### The Trials and Troubles of Transitioning New Technology Into the Forensic Laboratory

**Moderator:** Christopher S. Palenik, PhD  
**Co-Moderator:** Gerald M. LaPorte, MSFS  
**Microtrace**  
**Elgin, IL**  

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<th>Time</th>
<th>Session</th>
<th>Title</th>
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<tr>
<td>3:20 p.m. - 3:40 p.m.</td>
<td>B90</td>
<td>Introducing New Instrumental Technologies in the Forensic Drug Laboratory — Learning From Past Experiences</td>
<td>Sandra E. Rodriguez-Cruz, PhD*</td>
</tr>
<tr>
<td>3:40 p.m. - 4:00 p.m.</td>
<td>B91</td>
<td>Embracing Change: Transitioning Pattern Evidence Research Into Forensic Science Operations</td>
<td>JoAnn Buscaglia, PhD*</td>
</tr>
<tr>
<td>4:00 p.m. - 4:20 p.m.</td>
<td>B92</td>
<td>Implementing 3D Technology Into a 2D Philosophy</td>
<td>Heather J. Seubert, MS*</td>
</tr>
<tr>
<td>4:20 p.m. - 4:40 p.m.</td>
<td>B93</td>
<td>The Transition From Research to Routine Use in the Forensic Chemistry Laboratory</td>
<td>Jose R. Almirall, PhD*</td>
</tr>
<tr>
<td>4:40 p.m. - 5:00 p.m.</td>
<td>B94</td>
<td>The Future of Forensic Instrumental Methods of Analysis</td>
<td>Glen P. Jackson, PhD*</td>
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<td>5:00 p.m. - 5:30 p.m.</td>
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<td>Discussion</td>
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**Thursday — Session II**

### DNA Mixtures: Part I

**Moderator:** Jamie Daughetee, MS  
**Co-Moderator:** Matthew J. Gamette, MS  
**Los Angeles, CA**  

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<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Presenters</th>
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<tbody>
<tr>
<td>8:40 a.m. - 9:10 a.m.</td>
<td>B95</td>
<td>Multi-Software Interpretation of Complex Mixture DNA Profiles: A Comprehensive Approach to Explaining DNA Interpretation Results in Courtrooms</td>
<td>Eugenio Alladio, MS*; Paolo Garofano, MD, PhD*; Roberto Testi, MD, PhD; Marco Vincenti, MS; Denise Caneparo, MS; Giuseppina D’amico</td>
</tr>
<tr>
<td>9:10 a.m. - 9:30 a.m.</td>
<td>B96</td>
<td>Threshold to Probabilistic DNA Profile Interpretation: Why Change?</td>
<td>Stuart Cooper, MSc*; Catherine E. McGovern, MSc; Jo-Anne Bright; Duncan Taylor, PhD; Damien Abarino, PhD; John S. Buckleton, PhD</td>
</tr>
<tr>
<td>9:30 a.m. - 9:50 a.m.</td>
<td>B97</td>
<td>Questioning the Unquestioned — Rethinking and Rejecting Traditional Mixture Concepts and Assumptions</td>
<td>Charles H. Brenner, PhD*</td>
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</tbody>
</table>
CRIMINALISTICS

Las Vegas
2016

9:50 a.m. - 10:10 a.m.  B98  Demystifying Mixture Interpretation Software Tools (MIST) — Practical Applications and Implementation Strategies for DNA MIST
Patricia A. Foley-Melton, PhD*; Jeri D. Ropero-Miller, PhD; Lyndsie N. Ferrara, MS

10:10 a.m. - 10:30 a.m.

Break

DNA Mixtures: Part II

Moderator: Tuan K. Nguyen, BS
Walnut Creek, CA

Co-Moderator: Joana Antunes, MS
Florida International University
Miami, FL

10:30 a.m. - 10:55 a.m.  B99  A Hybrid Machine Learning Approach (MLA) for DNA Mixture Interpretation
Michael Marciano, MS*; Jonathan Adelman, MS*

10:55 a.m. - 11:15 a.m.  B100  Separating DNA Mixtures by Computer to Identify and Convict a Serial Rapist
Mark W. Perlin, PhD, MD*; Garett Sugimoto, MS*

11:15 a.m. - 11:30 a.m.  B101  Conceptual and Cultural Limitations Delaying the Transition to Probabilistic Genotyping in Forensic DNA Analysis
Mark R. Wilson, PhD*

11:30 a.m. - 11:45 a.m.  B102  Massively Parallel Sequencing — A Revolution for Complex Mixture Interpretation?
David Ballard, PhD*; Laurence A.E. Devesse, MA; Athina Vidaki, PhD; Gabriella Mason-Buck, MSc; Denise Syndercombe Court, PhD

11:45 a.m. - 12:00 p.m.  B103  The Power of Massively Parallel Sequencing for Complex Mixture Deconvolution and Other Forensic Applications
Sarah Cavanaugh; Katie Kennedy, BS; Michael N. Parsons, MS; Andrew B. Feldman, PhD; Jeffrey Lin, MS; Jeffrey Becker, MS; Jon Davoren, MS; Domia Slack, MS*

12:00 p.m. - 1:00 p.m.

Lunch

No More Mixtures

Moderator: Steven O’Dell, MSFS, MBA
Baltimore Police Department
Crime Laboratory
Baltimore, MD

Co-Moderator: Sarah E. Hardy, BS
Colorado Springs PD Metro Lab
Colorado Springs, CO

1:00 p.m. - 1:30 p.m.  B104  Differentiation of Individual Contributors in Contact Epidermal Cell Mixtures Using Fluorescently Labeled Antibody Probes, High Resolution Microscopy, and Flow Cytometry
Cristina E. Stanciu, BS; Kate Philpott, JD; Ye Jin Kwon, MS; Eduardo E. Bustamante, BS; Tracey Dawson Cruz, PhD; Christopher J. Ehrhardt, PhD*

*Presenting Author
1:30 p.m. - 1:45 p.m.  B105  Cell Separation of Multiple Contributor Samples to Facilitate DNA Mixture Analysis  
Nancy A. Stokes, MS*; Cristina E. Stanciu, BS; Christopher J. Ehrhardt, PhD; Susan Greenspoon, PhD

1:45 p.m. - 2:00 p.m.  B106  Separation of Compromised Blood Mixtures Using Fluorescence-Activated Cell Sorting (FACS) for Single-Source Short Tandem Repeat (STR) Profiling  
Cristina E. Stanciu, BS*; Ye Jin Kwon, MS; Sarah R. Ingram, BS; Christopher J. Ehrhardt, PhD

2:00 p.m. - 2:15 p.m.  B107  Development of a New DNA Screening System of Criminal Samples Using ForensicGEM™ and Adhesive Sheets  
Shinichiro Akase, PhD*; Gregory S. Hummel, MS; Yasuhide Iwata; Yuki Kariya, MS; Takeshi Yoshikawa; Kazumasa Sekiguchi, PhD

2:15 p.m. - 2:30 p.m.  B108  Optimized Methods for Collection and Extraction of DNA From Archived Latent Fingerprints  
April D. Solomon, BS*; Madison Hytinen; Aryn M. McClain, BS; Marilyn T. Miller, EdD; Tracey Dawson Cruz, PhD

2:30 p.m. - 2:45 p.m.  B109  Comparison of DNA Yield and Short Tandem Repeat (STR) Success Rates From Various Tissues in Embalmed Bodies  
Amanda Wheeler, BS*; Natalia Czado, MS; David A. Gangitano, PhD; Sheree R. Hughes-Stamm, PhD

2:45 p.m. - 3:00 p.m.  B110  Standardized Kinship Data Test Set for Rapid DNA Validation  
Stephanie DeDore, BS*; Yvette Crandall, MS; Daniele S. Podini, PhD; Amanda C. Sozer, PhD

3:00 p.m. - 3:20 p.m.  Break

New Advances in DNA Processing

Moderator: Christie T. Davis, PhD  
Helix Analytical, Inc  
San Francisco, CA  
Co-Moderator: Rhonda R. Carter, BS  
Illinois State Police  
Springfield, IL

3:20 p.m. - 3:45 p.m.  B111  Development of a Microfluidic Differential Extraction Module and Refinement of Infrared (IR) -Mediated Short Tandem Repeat (STR) Amplification for a Rotation-Driven Microdevice  
Kemper Gibson*; Jordan Cox, MS; Kimberly Jackson; James P. Landers, PhD; Tracey Dawson Cruz, PhD

3:45 p.m. - 4:00 p.m.  B112  Direct Amplification and Commonly Encountered Crime Scene Substrates  
Katelyn M. Gigl, BS*; Reena Ray, PhD

*Presenting Author
### CRIMINALISTICS

Las Vegas 2016

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<thead>
<tr>
<th>Time</th>
<th>Segment</th>
<th>Title</th>
<th>Authors</th>
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<tr>
<td>4:00 p.m.</td>
<td>4:15 p.m.</td>
<td>B113 Tissue Preservation With Direct-to-Polymerase Chain Reaction (PCR) for DNA Profiling: An Alternative Disaster Victim Identification (DVI) Approach</td>
<td>Amy E. Sorensen, MSFS*; Clare Berry, BAS; David Bruce, PhD; Michelle Gahan, PhD; Sheree R. Hughes-Stamm, PhD; Dennis McNevin, PhD</td>
</tr>
<tr>
<td>4:15 p.m.</td>
<td>4:30 p.m.</td>
<td>B114 Enhanced DNA Extraction Via the Reduction and Alkylation of Disulfide Bonds by Iodoacetamide (IAM) and Tris(2-carboxyethyl)phosphine (TCEP)</td>
<td>Megan E. Grimes, MFS*; Leah E. Willis, PhD; Jodi A. Irwin, PhD; Tamyra Moretti, PhD; Mark F. Kavlick, BS</td>
</tr>
<tr>
<td>4:30 p.m.</td>
<td>4:45 p.m.</td>
<td>B115 The New Kit on the Block: Optimization of the QIAGEN® Investigator® 24plex GO! Kit for Direct Amplification</td>
<td>Daniel Watsula, MS*; Jon Davoren, MS; Jangbir Sangha, MA</td>
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<td>4:45 p.m.</td>
<td>5:00 p.m.</td>
<td>B116 Increasing DNA Mixture Analysis Quality and Efficiency</td>
<td>George R. Riley, PhD*; Robert M. Goor, PhD; Douglas Hoffman, MS; Stephen Sherry, PhD</td>
</tr>
<tr>
<td>5:00 p.m.</td>
<td>5:15 p.m.</td>
<td>B117 Using Bayesian Networks for the Interpretation of Low-Template DNA Profiles at the Activity Level</td>
<td>Ka-Man Pun*; Christophe Champod, PhD</td>
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### Friday — Session I

**Drug Chemistry: Part I**

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<th>Time</th>
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<tr>
<td>8:25 a.m.</td>
<td>8:40 a.m.</td>
<td>B118 2016 Update From the Scientific Working Group for the Analysis of Seized Drugs (SWGDRUG)</td>
<td>Sandra E. Rodriguez-Cruz, PhD*</td>
</tr>
<tr>
<td>8:40 a.m.</td>
<td>8:55 a.m.</td>
<td>B119 Analysis and Extraction of Fentanyl in Seized Heroin Samples</td>
<td>Charles A. Richardson-Gongora*; Michael M. Healy, MBA; Gerald Mattson, PhD</td>
</tr>
<tr>
<td>8:55 a.m.</td>
<td>9:10 a.m.</td>
<td>B120 Analysis of Prescription Drugs With Abuse-Deterrent Properties</td>
<td>Robert P. Bianchi, BS*</td>
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<td>9:10 a.m.</td>
<td>9:25 a.m.</td>
<td>B121 The Prevalence of Promethazine Dimerization in Forensic Samples of “Purple Drank”</td>
<td>Tyler Williams*; James T. Miller, BS; Glen P. Jackson, PhD</td>
</tr>
<tr>
<td>9:25 a.m.</td>
<td>9:40 a.m.</td>
<td>B122 Adulteration of Psychoactive Herbal Supplements Revealed by Direct Analysis in Real-Time Mass Spectrometry (DART®-MS)</td>
<td>Ashton D. Lesiak*; Robert B. Cody, PhD; Masaaki Ubukata, PhD; Rabi A. Musah, PhD</td>
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*Presenting Author*
9:40 a.m. - 9:55 a.m.  B123  Toward On-Site, Real-Time, Confirmatory Analysis of Drugs and Their Optical Isomers Using a Battery-Operated, Portable, Ultra-Fast Capillary Electrophoresis/Mass Spectrometry (UFCE/MS)
Mehdi Moini, PhD*; Christopher M. Rollman, BS

9:55 a.m. - 10:10 a.m.  B124  Single Crystal X-Ray Diffraction in Forensic Drug Analysis
Matthew R. Wood, MS*; Thomas A. Brettell, PhD; Ivan Bernal, PhD; Hugh W. Thompson, PhD; Roger A. Lalancette, PhD

10:10 a.m. - 10:25 a.m.  B125  Microcrystalline Tests in Conjunction With Vibrational Spectroscopy for the Analysis of Illicit Drugs and Their Metabolites
Brooke W. Kammrath, PhD*; Shannon Tilly; Kara Kovacev; Natasha L. Kuegler, BS; Pauline E. Leary, PhD; John A. Reffner, PhD

10:25 a.m. - 10:40 a.m.  Break

Drug Chemistry: Part II

Moderator:  Theresa B. Browning, MFS
Miami, FL

Co-Moderator:  Thomas M. Blackwell, BS
DEA
New York, NY

10:40 a.m. - 11:00 a.m.  B126  Using Climate Modeling to Predict the Origin of Seized Cannabis
Jurian A. Hoogewerff, PhD*; Shaerii Sarker, MSc; Alan Hayman, PhD; Russell Frew, PhD

11:00 a.m. - 11:15 a.m.  B127  Applicability of Ultra-High Performance Supercritical Fluid Chromatography (UHPSFC) as a Separation Technique for Synthetic Cannabinoids and Synthetic Cathinones
Ira S. Lurie, PhD*; Stephanie R. Breitenbach, BS; Walter F. Rowe, PhD; Mike Hitchcock, MS; Ioan Marginean, PhD; Stacey L. Obrien, BS; Bruce R. McCord, PhD

11:15 a.m. - 11:30 a.m.  B128  Identification of Regioisomers Via Gas Chromatography Coupled With Vapor-Phase Infrared Detection (GC-IRD)
Janice L. Aleman, BS*; Jesse M. Zavala, MS; Kyle E. Vircs, MS; Warren C. Samms, PhD

11:30 a.m. - 11:45 a.m.  B129  Capillary Electrophoresis/Mass Spectrometry (CE/MS) as an Effective Tool for Identification of Illicit Drugs and Their Optical Isomers
Mehdi Moini, PhD*; Christopher M. Rollman, BS; Mike Hitchcock, MS; Ioan Marginean, PhD

11:45 a.m. - 12:00 p.m.  B130  Characterization of Synthetic Phenethylamines Using High Resolution Mass Spectrometry (HRMS)
Alexandria Anstett, BS*; Fanny Chu, BS; Ruth Waddell Smith, PhD

*Presenting Author
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<td>12:00 p.m.</td>
<td>B131 Differentiation of Cathinone Isomers Using High Resolution Collision-Induced Dissociation Mass Spectrometry (CID/MS)</td>
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<td><em>Cynthia Kaeser, MS</em>; A. Daniel Jones, PhD; Ruth Waddell Smith, PhD</td>
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<tr>
<td>12:15 p.m.</td>
<td>Lunch</td>
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<td>11:30 a.m.</td>
<td>B132 The Effects of Water Immersion on the Recovery of DNA From Human Remains</td>
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<td><em>Ema H. Graham</em>; Shanae J. Armstrong, MS; Michael S. Adamowicz, PhD</td>
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<td>11:30 a.m.</td>
<td>B133 Comparison of Three Filtration Devices for Recovery of Low Level and Degraded DNA</td>
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<td><em>Nichole M. Tuscher, MFS</em>; Ismail M. Sebetan, MD, PhD*; Paul Stein, PhD*</td>
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<tr>
<td>11:30 a.m.</td>
<td>B134 Selective Degradation Using the Erase™ Sperm Isolation Kit and PrepFiler® Purification</td>
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<td><em>Melissa D. Moore, BS</em>; Richard A. Gustilo; Mary M. Hong, BS; Ruth H. Ikeda, PhD; Stacy Vallercamp; Ismail M. Sebetan, MD, PhD*; Paul Stein, PhD*</td>
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<tr>
<td>11:30 a.m.</td>
<td>B135 Evaluation of the QIAGEN® Investigator 24Plex Polymerase Chain Reaction (PCR) Kit for Amplification of Forensic Samples</td>
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<td><em>Clinton D. Buchanan, PhD</em>; Joel D. Sutton, MSFS</td>
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<tr>
<td>11:30 a.m.</td>
<td>B136 Working With Challenging Samples: An Independent Assessment of the Relative Performance of the Promega® Fusion™ and InnoGenomics® InnoTyper™ Kit With Probative Samples</td>
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<td><em>James Anstead, PhD</em>; Erica Reynaga, MS; Kelsy Lowther, MS; Brandt G. Cassidy, PhD</td>
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<td>11:30 a.m.</td>
<td>B137 Faux-Dis: An Online, Searchable DNA Database Available for Educational Purposes</td>
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<td><em>Ashley Hall, PhD</em></td>
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<tr>
<td>11:30 a.m.</td>
<td>B138 WITHDRAWN</td>
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<td>11:30 a.m.</td>
<td>B139 Examining the Contribution of Sampling to Peak Height Imbalance in Low Template DNA Samples Using a Single-Tube Extraction Protocol</td>
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<td><em>Thu Trang Nguyen, BA</em>; Robin W. Cotton, PhD</td>
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<td>11:30 a.m.</td>
<td>B140 Working to Solve Compatibility Issues Between Impression Enhancement and DNA Analysis</td>
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<td><em>Jessica Zarate, MS; Jodi Lynn Barta, PhD</em></td>
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<tr>
<td>11:30 a.m.</td>
<td>B141 Updates to the Forensic Research/Reference on Genetics Knowledge Base (FROG-kb) Database</td>
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<td><em>Kenneth Kidd, PhD; Haseena Rajeevan, PhD; Katherine N. Moore, MS</em>; Richard Satcher, MS; Patricia A. Foley-Melton, PhD; Jeri D. Ropero-Miller, PhD</td>
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<th>Time</th>
<th>Session</th>
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<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>B142</td>
<td>Examination of 20 Retrotransposable Polymorphic Insertion/Null (INNUL) Markers for Their Utility in Kinship Testing Using the Commercial Software Program LSAM</td>
<td>AnniLauri Villeme, BS*; Gretchen E. Bartizal; Becky Hill, MS; Michael D. Coble, PhD</td>
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<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>B143</td>
<td>Complex Mixtures and the Minimum Number of Contributors: A Case Study</td>
<td>Nathaniel D. Adams, BS; Ranajit Chakraborty, PhD; Carrie Rowland, MSc; Dan Krane, PhD*</td>
</tr>
<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>B144</td>
<td>A Single Multiplex Polymerase Chain Reaction (PCR) Assay of Rapidly Mutating (RM) Y-Chromosomal Short Tandem Repeat (Y-STR) Loci to Complement Current Sets of Markers Used in Forensic Y-Chromosome Analysis</td>
<td>Daniela Lacerenza, PhD; Giancarlo Di Vella, MD, PhD*; Carlo Robino</td>
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<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>B145</td>
<td>Utility of InnoTyper™ 21 in Analysis of Degraded Human DNA Recovered From Maggot Crop Contents</td>
<td>Sharon E. Zeller, BS*; Kyle S. Williams; Sudhir K. Sinha, PhD; Gina M. Murphy, MS; Hiromi Brown, PhD; Daniel J. Wescott, PhD; Tracey Dawson Cruz, PhD; Baneshwar Singh, PhD*</td>
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<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>B146</td>
<td>Differentiation of Sand Grains From Different Locations Using Image Analysis and Multivariate Statistics</td>
<td>Jacob Hock*; Walter F. Rowe, PhD</td>
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<td>11:30 a.m. - 1:00 p.m.</td>
<td>B147</td>
<td>Development of Paper Microfluidic Devices for the Detection of Low-Explosives Residue</td>
<td>Kathryn R. Chabaud, BS*; Bruce R. McCord, PhD</td>
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<td>11:30 a.m. - 1:00 p.m.</td>
<td>B148</td>
<td>Crude Oil Characteristics for Identifying Petroleum Distillates in Fire Debris</td>
<td>Jeanet Hendrikse, MSc*</td>
</tr>
<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>B149</td>
<td>Forensic Analysis of Textile Fibers Exposed to Laundry Detergents Using Fluorescence Excitation-Emission Spectroscopy</td>
<td>Nirvani Mujumdar, MS*</td>
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<td>11:30 a.m. - 1:00 p.m.</td>
<td>B150</td>
<td>Investigative Predictions of Smokeless Powder Manufacturers</td>
<td>Dana-Marie K. Dennis, PhD; Mary R. Williams, MS*; Michael E. Sigman, PhD</td>
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<td>11:30 a.m. - 1:00 p.m.</td>
<td>B151</td>
<td>Modern Methodology for Explosives Tagging and Encoding Based on Luminescent Metal Organic Frameworks</td>
<td>Filipe Gabriel B. Mauricio, MSc*; Ingrid T. Weber, PhD; Adauto Z. Pralon, MSc; Marcio Talhavini, PhD</td>
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<td>11:30 a.m. - 1:00 p.m.</td>
<td>B152</td>
<td>Do the Bulk Area and the Exterior Surface of Modern Container Glass Exhibit Differences in Refractive Index (RI) Measurements?</td>
<td>Joseph Insana*; Patrick Buzzini, PhD</td>
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<td>11:30 a.m. - 1:00 p.m.</td>
<td>B153</td>
<td>Comparison of Cosmetic Foundations by Analysis of Preservative Content Using Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS)</td>
<td>Thomas A. Brettell, PhD*; Emily A. Myers, BS</td>
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11:30 a.m. - 1:00 p.m.  B154  Development of a Sample Clean-Up Procedure for the Recovery of Trace Quantities of Organic Explosives in Soil and Sand  
Erin Waddell, PhD*; Jennifer Thomas, PhD; Christopher C. Donnelly; Mark L. Miller, PhD

11:30 a.m. - 1:00 p.m.  B155  Analysis of Inks Via a Microfluidics Extraction Device With a Quadrupole Time-of-Flight Mass Spectrometer (qTOF/MS)  
Emily Lichtenberger, BS*; Nelson R. Vinueza, PhD

11:30 a.m. - 1:00 p.m.  B156  Gas Chromatography/Mass Spectrometry (GC/MS) Measurement of Gasoline Vapor Absorption on Clothing in a Confined Space  
Charles R. Cornett, PhD*; Sara C. Karp, BS; Ruth M. Henk, BS; Kristy Stowe, BS; Raymond G. Lenz, BS

11:30 a.m. - 1:00 p.m.  B157  Observations on the Incidence of Transfer of Fibers to Knives During Penetration Cuts  
Barbara Doupe, MSc*; Vanessa Londero, BSc; Cecilia Hageman, PhD

11:30 a.m. - 1:00 p.m.  B158  Low-Cost Lanthanide-Organic Framework Markers for Gunshot Residue (GSR) Identification  
Isabela Bastos Servy*; Kaline Wanderley, PhD; Marcella Auxiliadora de Melo Lucena, MS*; Marcio Talhavini, PhD; Marcelo O. Roderigues, PhD; Ingrid T. Weber, PhD*

11:30 a.m. - 1:00 p.m.  B159  Characterization of Hair Dyes Using Ultra High-Performance Liquid Chromatography Electrospray Ionization Time-of-Flight Mass Spectrometry (UHPLC-ESI-TOF/MS) for the Forensic Analysis of Dyed Hair  
Diana I. Camacho; Ira S. Lurie, PhD; Ioan Marginean, PhD*

11:30 a.m. - 1:00 p.m.  B160  Analysis of Change in Nitrite-to-Nitrate Ratios in Gunshot Residue Over Time Using Ion Pairing High-Performance Liquid Chromatography (HPLC)  
Anusha Rankoth*; Marianne E. Staretz, PhD; Peter J. Diaczuk, BS; Thomas H. Pritchett, MS; Elana Conant, MS

Patterns and Impressions

*Presenting Author
<table>
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<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Presenters</th>
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<tr>
<td>1:35 p.m.</td>
<td>B163</td>
<td><strong>A Bibliometric Review of the Impact of the National Academy of Sciences (NAS)</strong></td>
<td>Maria A. Roberts; Kathryn B. Knorr; Kyle Tom, MS*</td>
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<td><strong>Report on the Friction Ridge Discipline</strong></td>
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<td>1:50 p.m.</td>
<td>B164</td>
<td><strong>Fingerprint Aging Mechanism Determination Through Electrochemistry</strong></td>
<td>Roberto Rosa, PhD*; Roberto Giovanardi, PhD; Andrea Bozza, MSc; Paolo Veronesi, PhD; Cristina Leonelli, PhD</td>
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<tr>
<td>2:05 p.m.</td>
<td>B165</td>
<td><strong>Performance and Ricochet Characteristics of Frangible Ammunition</strong></td>
<td>Peter J. Diaczuk, BS*; Jack Hietpas, PhD; Xiao Shan Law, BS</td>
</tr>
<tr>
<td>2:20 p.m.</td>
<td>B166</td>
<td><strong>Development of a New Standard Bullet for Ballistic Quality Control</strong></td>
<td>Thomas B. Renegar, BS*; Xiaoyu A. Zheng, MS; Robert M. Thompson, BS; Theodore V. Vorburger, PhD; Junfeng J. Song, MS; Johannes A. Soons, PhD; James H. Yen, PhD</td>
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<tr>
<td>2:35 p.m.</td>
<td>B167</td>
<td><strong>Analyzing a Firearms Proficiency Test Using the Congruent Matching Cells (CMC)</strong></td>
<td>Daniel Ott, PhD*; Robert M. Thompson, BS; Junfeng J. Song, MS</td>
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<tr>
<td>2:50 p.m.</td>
<td>B168</td>
<td><strong>Modeling Firearm Tool Mark Persistence Through Objective Surface Metrology and Analysis</strong></td>
<td>Xiaoyu A. Zheng, MS*; Johannes A. Soons, PhD; Robert M. Thompson, BS; Wei Chu</td>
</tr>
<tr>
<td>3:05 p.m.</td>
<td>B169</td>
<td><strong>Proposed Congruent Match Cross-Section (CMX) Method for Ballistics Identification of Firing Pin Impressions</strong></td>
<td>Junfeng J. Song, MS*; Mingsi Tong, PhD; Hao M. Zhang, PhD; Wei Chu; Robert M. Thompson, BS*</td>
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<td>3:20 p.m.</td>
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<td><strong>Break</strong></td>
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**Interpretation Challenges in the Non-Biological Criminalistics Disciplines: Assessing the Path**

**Moderator:** Jose R. Almirall, PhD  
*Florida International University*  
Dept of Chemistry  
Miami, FL  

**Co-Moderator:** Glen P. Jackson, PhD  
*West Virginia University*  
Dept of Forensic and Investigative Science  
Morgantown, WV

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<tr>
<td>3:35 p.m.</td>
<td>B170</td>
<td><strong>Imparting a Meaningful Application of Statistics to Forensic Scientists</strong></td>
<td>Stephen L. Morgan, PhD*</td>
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<tr>
<td>3:55 p.m.</td>
<td>B171</td>
<td><strong>Challenges for Implementing a New Paradigm in Fire Debris Analysis and Reporting</strong></td>
<td>Mary R. Williams, MS; Michael E. Sigman, PhD*</td>
</tr>
<tr>
<td>4:15 p.m.</td>
<td>B172</td>
<td><strong>An Overview of Different Approaches to Expressing Significance in Associative Forensic Reports</strong></td>
<td>Christopher R. Bommarito, MS*</td>
</tr>
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</table>
4:35 p.m. - 4:55 p.m.  B173  Challenges in Developing Objective Interpretation Methods for Firearm and Tool Mark Examination  
Robert M. Thompson, BS*

4:55 p.m. - 5:30 p.m.  Discussion

Criminalistics Believe It or Not!

Moderator: Dennis C. Hilliard, MS  
RI State Crime Laboratory  
Kingston, RI

Co-Moderator: Kristy Kadash, PhD  
Jefferson County Regional Crime Lab  
Golden, CO

7:00 p.m. - 9:00 p.m.  Open Presentations in a Bring Your Own Slides Format

Friday — Session II

Mixture Interpretation and Statistics Town Hall Meeting

Moderator: Kristy Kadash, PhD  
Jefferson County Regional Crime Lab  
Golden, CO

Co-Moderator:  
Jefferson County Regional Crime Lab  
Golden, CO

8:25 a.m. - 10:20 a.m.  B174  Mixture Interpretation and Statistics Town Hall Meeting  
Kristy Kadash, PhD; Todd W. Bille, MS*; Charles H. Brenner, PhD*; Michael D. Coble, PhD*; Norah Rudin, PhD*; Joel D. Sutton, MSFS*; Brad Jenkins, MS*

10:20 a.m. - 10:35 a.m.  Break

Mito and Other Things MPS

Moderator: Sara E. Bitter, MSF  
Pittsburgh, PA

Co-Moderator: Kimberly S. Kobojec, MS  
ASU New College  
Arizona State University-W Campus  
Phoenix, AZ

10:35 a.m. - 10:55 a.m.  B175  Optimization and Validation of Mitochondrial DNA (mtDNA) D-Loop Sequencing on the MiSeq*  
Laura A. Wilson, BS*; Sarah Copeland, BS; Gloria Dimick, MS; Charity A. Holland, MPH; Robert Bever; Mitchell M. Holland, PhD

*Presenting Author
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10:55 a.m. - 11:10 a.m.  B176  Massively Parallel Sequencing (MPS) of Microhaplotypes for Forensics  
Sharon C. Wootton, PhD*; Kenneth Kidd, PhD; William C. Speed, PhD;  
Joseph P. Chang, BS; Sheri J. Olson, MS; Reina Langit, MS; Chien-Wei Chang, PhD;  
Robert Lagace, BS

11:10 a.m. - 11:25 a.m.  B177  Optimization of a Next Generation Sequencing (NGS) Protocol for Processing  
High-Quality Mitochondrial DNA (mtDNA) Samples  
Joseph D. Ring, MS*; Michelle A. Peck, MFS*; Erin M. Gorden, MFS*;  
Charla Marshall, PhD; Kimberly S. Andreaggi, MFS*

11:25 a.m. - 11:40 a.m.  B178  Assessing the Impact of DNA Damage on the Interpretation of Low-Level  
Mitochondrial DNA (mtDNA) Heteroplasmy  
Molly M. Rathbun, BS*; Jennifer A. McElhoe, DPhil; Mitchell M. Holland, PhD

11:40 a.m. - 11:55 a.m.  B179  Comparison of DNA Repair Methods for Improved Success With Next Generation  
Sequencing (NGS) of Compromised Skeletal Remains  
Erin M. Gorden, MFS*; Charla Marshall, PhD*; Kimberly S. Andreaggi, MFS*

11:55 a.m. - 12:10 p.m.  B180  Sequence-Based Analysis of Stutter at Short Tandem Repeat (STR) Loci:  
Implementation and Utilization  
Rachel Aponte*; Katherine B. Gettings, PhD; David L. Duewer, PhD; Becky Hill, MS;  
Michael D. Coble, PhD; Peter M. Vallone, PhD

12:10 p.m. - 1:00 p.m.  Lunch

Advances in Biological Screening

Moderator:  Jenna L. Oakes-Smith, MFS  
St. Louis Metro Police Department  
St. Louis, MO

Co-Moderator:  Matthew G. Seabert, BS  
Phoenix, AZ

1:00 p.m. - 1:30 p.m.  B181  Light It Up: Fluorescent Biosensors for the Detection of Biological Fluids  
and Fingerprints  
James Gooch*; Barbara Daniel, PhD; Vincenzo Abbate, PhD; Nunzianda Frascione, PhD

1:30 p.m. - 1:45 p.m.  B182  Streamlining Sperm Cell Detection Via Proximity Ligation Real-Time Polymerase  
Chain Reaction (PLiRT-PCR) With Forensic DNA Analysis  
Sarah Riman, PhD*; Daniele S. Podini, PhD*

1:45 p.m. - 2:00 p.m.  B183  Developmental Validation of MicroRNAs (miRNAs) for Body Fluid Identification  
Carolyn Lewis, BS*; Jamie Gentry, BS; Chelsea F. Calloway, BS; Nerissa Peace, BS;  
Ariana Albornoz, MS; Samantha R. Fleming, MS; Christina Hayes Nash, MS;  
Zendra E. Zehner; PhD; Sarah J. Seashols Williams, PhD

2:00 p.m. - 2:15 p.m.  B184  Recent Progress in the Development of a Surface-Enhanced Raman  
Spectroscopy (SERS) Platform for Rapid Identification of Trace Amounts of  
Human Body Fluids  
Jennifer Fore, PhD; Ranjith Premasiri, PhD; Kathryn A. Zegarelli, BS;  
Brandon Scott, PhD; Jessica Irvine, BS; Amy N. Brodeur, MFS;  
Lawrence Ziegler, PhD*

*Presenting Author
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2:15 p.m. - 2:30 p.m.  B185  Optimum Case Detection Limit of the Forensic Luminol Test for Bloodstains
Stephen L. Morgan, PhD*; Brianna M. Cassidy, BS; Zhenyu Lu, BS;
Jennifer P. Martin, BS; Shawna K. Tazik, BS; Katherine A. Witherspoon, BS;
Katherine E. Kilgore; Stephanie A. DeJong, BS; Raymond G. Belliveau, BS;
Michael L. Myrick, PhD

2:30 p.m. - 2:45 p.m.  B186  Time-Dependent Loss of Messenger RNA (mRNA) Transcripts From Forensic
Samples Analyzed Using Next Generation Sequencing
Katelyn D. Weinbrecht, MS; Robert W. Allen, PhD*

2:45 p.m. - 3:00 p.m.  B187  An Evaluation of the Differential Stability of Nucleic Acids in Biological Fluids
Compromised by Environmental Exposure
Tiffany R. Layne, BS*; Zendra E. Zehner; PhD; Sarah J. Seashols Williams, PhD

3:00 p.m. - 3:20 p.m.  Break

New Sources of Forensic Biological Evidence

Moderator: Katerina Doneva, MS
OCSD, Orange County Crime Laboratory
Santa Ana, CA

Co-Moderator: Gary J. Molina, BA
Texas DPS Crime Laboratory
CODIS Laboratory
Austin, TX

3:20 p.m. - 3:45 p.m.  B188  Obtaining Significant Powers of Individual Discrimination From Hair
Shaft Proteins
Glendon Parker, PhD*; Deon Anex, PhD; Katelyn Mason, PhD; Bradley Hart, PhD

3:45 p.m. - 4:00 p.m.  B189  Using DNA Barcoding to Assess DNA Viability in Plant and Insect Fragments
Isolated From Forensic Soil Samples
Kelly A. Meiklejohn, PhD*; Megan L. Jackson, BS; Jack Hietpas, PhD;
Libby A. Stern, PhD; James M. Robertson, PhD

4:00 p.m. - 4:15 p.m.  B190  Evaluation of a 13-Loci Short Tandem Repeat (STR) Multiplex System for
Cannabis Sativa Genetic Identification
Rachel M. Houston, BS*; Sheree R. Hughes-Stamm, PhD; David A. Gangitano, PhD

4:15 p.m. - 4:30 p.m.  B191  Development of a High Resolution Real-Time Polymerase Chain Reaction (PCR)
Melt Assay for Identifying “Legal High” Plant Material
Alicia Quinn, BS*; Kelly M. Elkins, PhD

4:30 p.m. - 4:45 p.m.  B192  Epigenetic-Aging-Signature — The Future?
Athina Vidaki, PhD*; Anastasia Aliferi; David Ballard, PhD; Leon Barron, PhD;
Denise Syndercombe Court, PhD

4:45 p.m. - 5:00 p.m.  B193  A Raman “Spectroscopic Clock” for Bloodstain Age Determination: The First
Week After Deposition
Kyle C. Doty, BS*; Gregory McLaughlin, MS; Igor K. Lednev, PhD*

*Presenting Author
CRIMINALISTICS
Las Vegas
2016

5:00 p.m. - 5:15 p.m.  B194  Investigations on the Use of Tissue MicroRNA Markers to Correlate Bloodstains With Wounds for Bloodstain Pattern Analysis
Donald J. Johnson, MS*; David Raymond, PhD; Ray de Leon, PhD

Saturday — Session I
Instrumental Analysis

Moderator: Tammi Jacobs Shulman, BS
Westchester County
Forensic Lab
Valhalla, NY

Co-Moderator: Tracey M. Ray, BS
Douglas County Sheriff Office
Forensic Services Division
Omaha, NE

8:00 a.m. - 8:15 a.m.  B195  Examination of Plastic Shopping Bags Using Attenuated Total Reflectance/Fourier Transform Infrared Spectrometry (ATR/FTIR)
Walter F. Rowe, PhD*

8:15 a.m. - 8:30 a.m.  B196  X-Ray Powder Diffraction (XRPD) Method Development and Validation for the Identification of Counterfeit Pharmaceuticals
Mark R. Witkowski, PhD; Nicola Ranieri, BS; JaCinta Batson, MS;
Lauren L. Richards-Waugh, PhD; Kelsey M. DeWitt, BS*

8:30 a.m. - 8:45 a.m.  B197  Microextraction Capsules (MEC): A New Direction in Green Analytical and Forensic Sample Preparation
Abuzar Kabir, PhD*

8:45 a.m. - 9:00 a.m.  B198  WITHDRAWN

9:00 a.m. - 9:15 a.m.  B199  Characterization of Performance-Enhancing Peptides Via Ambient Ionization Time-of-Flight/Mass Spectrometry (TOF/MS)
Kyle E. Vircks, MS*; Jesse M. Zavala, MS; Robert B. Cody, PhD; Warren C. Samms, PhD;
Roger Kahn, PhD

9:15 a.m. - 9:30 a.m.  B200  The Effect of Skin Debris on Gunshot Residue (GSR) Detection
Bryan R. Burnett, MS*

9:30 a.m. - 10:00 a.m.  B201  Modeling of Elemental and Isotopic Data for Reference Populations Distribution Functions to Be Used in Comparison Evidence and Provenance Intelligence
Jurian A. Hoogewerff, PhD*

10:00 a.m. - 10:20 a.m.  Break
CRIMINALISTICS

Criminalistics Management and Philosophy

Moderator: Linda C. Rourke, MS
Bayside, NY

Co-Moderator: Catherine R. Dunn, BS
WA State Patrol Crime Lab
Vancouver, WA

10:20 a.m. - 10:40 a.m.  B202  Forensic Pathology as a Forensic Science: What Is “Bias” and Why Does It Matter?
Andrew M. Baker, MD*

10:40 a.m. - 11:00 a.m.  B203  Analyzing Linear Sequential Unmasking
Roger G. Koppl, PhD*

11:00 a.m. - 11:15 a.m.  B204  Three Roads Converge: The Formation of the Houston Forensic Science Center
Daniel D. Garner, PhD; Michael Grojean, PhD; Amy L. Popejoy, MS*

11:15 a.m. - 11:30 a.m.  B205  Embracing Change: The Challenges and Rewards of Transitioning From the Bench to Management
Julia A. Dolan, MS*

11:30 a.m. - 11:45 a.m.  B206  Using Results-Based Data to Make Informed Management Decisions
Jenna L. Oakes-Smith, MFS*

11:45 a.m. - 12:00 p.m.  B207  Applying the Queuing Theory in Forensic Cases Management
Khudooma S. Al Na’imi, MSc*

Saturday — Session II

The Big Picture

Moderator: Pamela Jarman, MSc
Phoenix, AZ

Co-Moderator: Brittany N. Beyer, MS
Houston Forensic Science Center
Houston, TX

8:00 a.m. - 8:30 a.m.  B208  Quality Assurance of the Biostatistical Workflow in Forensic Genetic Casework
Andreas Tillmar, PhD*; Gunilla Holmlund, PhD

8:30 a.m. - 9:00 a.m.  B209  Success Rates From Touch DNA in Property Crimes
Tammy Taylor, MS*; Michael A. Donley, MS; Diana Gonzalez, MS; Nikia S. Redmond, MSFS; Katherine Welch, MSFS; Roger Kahn, PhD

9:00 a.m. - 9:20 a.m.  B210  Forensic Genetics in Brazil: A (Still) Brief History
Ana Paula S. Doval*; Meiga A.M. Menezes, MSc; Guilherme Silveira Jacques, MSc; Helio Buchmuller, PhD*

9:20 a.m. - 9:40 a.m.  B211  From Cold Case to Solved Crime
Lisa Mertz, MS*; Krista Currie, MSc*

*Presenting Author
9:40 a.m. - 10:00 a.m.  Break

DNA Policy

**Moderator:** Carol J. Retamozo, BS  
LVMPD Forensic Laboratory  
Biology/DNA  
Las Vegas, NV  

**Co-Moderator:** Season E. Seferyn, MSFS  
Marshall University Forensic Science Center  
Huntington, WV

10:00 a.m. - 10:25 a.m.  **B212**  
National Institute of Justice’s (NIJ’s) “Using DNA Technology to Identify the Missing” Program: An Update  
Charles M. Heurich, MFS*

10:25 a.m. - 10:50 a.m.  **B213**  
The Testing of Unsubmitted Sexual Assault Kits: An Update on the National Institute of Justice-Federal Bureau of Investigation (NIJ-FBI) Sexual Assault Kit Partnership  
Gerald M. LaPorte, MSFS; Heather E. Waltke, MS*

10:50 a.m. - 11:20 a.m.  **B214**  
What Errors Are We Looking for and How Can We Look for More?  
Charlotte J. Word, PhD*

11:20 a.m. - 11:40 a.m.  **B215**  
The Proper Use of Standard Reference Material 2372 (SRM 2372) Human DNA Quantitation Standard for the Calibration of Commercial Quantitative Polymerase Chain Reaction (qPCR) Kit DNA Standards  
Erica L. Romsos, MFS*; Margaret C. Kline, MS; David L. Duewer, PhD; Peter M. Vallone, PhD

11:40 a.m. - 12:00 p.m.  **B216**  
Is the Factor of 10 Still Applicable Today?  
Simone Gittelson, PhD*; John S. Buckleton, PhD*
Thursday

Moderator: Richard Vorder Bruegge, PhD
FBI – OTD
Quantico, VA

8:30 a.m. - 8:55 a.m. C1 Differential Forensic Analysis of Periodic Mobile Forensics Images
Mark D. Guido, MS*

8:55 a.m. - 9:00 a.m. Discussion

9:00 a.m. - 9:25 a.m. C2 Using Deep Learning Methods for Forensic Image and Video Investigation
Zeno J. Geradts, PhD*; Arnout C. Ruifrok, PhD

9:25 a.m. - 9:30 a.m. Discussion

9:30 a.m. - 9:55 a.m. C3 Discriminating Hacker Techniques by Individual Differences and Techniques of Neutralization
Gregory Bowen*; Kathryn C. Seigfried-Spellar, PhD*

9:55 a.m. - 10:15 a.m. Break

Co-Moderator: Catalin Grigoras, PhD
Denver, CO

Moderator: Julie J.C.H. Ryan, DSc
Washington, DC

10:15 a.m. - 10:40 a.m. C4 Joint Test Action Group (JTAG) Tool Testing
Jenise Reyes-Rodriguez, BS*; Richard Ayers, MS

10:40 a.m. - 10:45 a.m. Discussion

10:45 a.m. - 11:10 a.m. C5 Mobile Device Data Population for Tool Testing
Jenise Reyes-Rodriguez, BS; Richard Ayers, MS*

11:10 a.m. - 11:15 a.m. Discussion

11:15 a.m. - 11:40 a.m. C6 Defining, Measuring, and Mitigating Errors for Digital Forensic Tools
James R. Lyle, PhD*

11:40 a.m. - 1:00 p.m. Lunch

*Presenting Author
<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Authors</th>
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<tbody>
<tr>
<td>1:00 p.m.</td>
<td>C7 Google® Chromebook™: Evaluation of Forensic Methods for Data Extraction</td>
<td>Marcus Rogers, PhD*; Yoshitaka Takase, MS*</td>
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<td>1:25 p.m.</td>
<td>Discussion</td>
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<td>1:30 p.m.</td>
<td>C8 Case Study: Snapchat™ Picture Recovery From Mobile Device Unallocated Space</td>
<td>Joseph L. White, MS*</td>
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<td>1:55 p.m.</td>
<td>Discussion</td>
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<td>2:00 p.m.</td>
<td>C9 Development of a Portable Mobile Phone Forensic Acquisition and Analysis Toolkit</td>
<td>Kelsey L. Wilkinson, BS*; Robert J. Boggs; Joshua L. Brunty, MS*; Terry Fenger, PhD</td>
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<td>2:25 p.m.</td>
<td>Break</td>
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<tr>
<td>2:45 p.m.</td>
<td>C10 Forensic Analysis of Digital Audio File Structures and Formats</td>
<td>Catalin Grigoras, PhD*; Jeff M. Smith, MS</td>
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<td>3:10 p.m.</td>
<td>Discussion</td>
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<td>3:15 p.m.</td>
<td>C11 Proposed Analytical Framework for Electronically Frequency/Pitch-Modified Voices</td>
<td>Eliud Bonilla, BS*; Catalin Grigoras, PhD; Jeff M. Smith, MS</td>
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<td>3:40 p.m.</td>
<td>Discussion</td>
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<td>3:45 p.m.</td>
<td>C12 Age Estimation of Adolescents Using Eye Measurements From Various Angles in Videos</td>
<td>Neeka M. Parker*; Joshua L. Brunty, MS; Robert J. Boggs; Terry Fenger, PhD</td>
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<tr>
<td>4:10 p.m.</td>
<td>Questions &amp; Answers</td>
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Friday

Moderator: Christina A. Malone, MFS  
Defense Forensic Science Center  
Forest Park, GA  
Co-Moderator: Amy L. Popejoy, MS  
Houston Forensic Science Center  
Houston, TX

8:30 a.m. - 8:55 a.m.  C13 The Use of Photo Response Non-Uniformity (PRNU) Patterns for the Comparison of Online Videos on Social Media  
Zeno J. Geradts, PhD*; Rick Cents, BS

8:55 a.m. - 9:00 a.m.  Discussion

9:00 a.m. - 9:25 a.m.  C14 Source Identification of High-Definition Videos — A Forensic Analysis of Downloaders and YouTube® Video Compression Using a Group of Action Cameras  
Zac P. Giammarrusco, MS*; Catalin Grigoras, PhD*; Jeff M. Smith, MS*

9:25 a.m. - 9:30 a.m.  Discussion

9:30 a.m. - 9:55 a.m.  C15 The Authentication of MP4 Video Using File Structure and Metadata  
Jacob R. Hall*

9:55 a.m. - 10:15 a.m. Break

Moderator: Jacob R. Hall  
Patterson, NY  
Co-Moderator: Fabiola Mejia, BS  
U.S. Customs and Border Protection  
Chicago, IL

10:15 a.m. - 10:40 a.m.  C16 Challenges in Recovering Deleted Data in the Cloud  
Robert Jackson, MS; Richard Austin, MS; Martin Herman, PhD*; P.W. Carey, MS; Otto S. Reemelin, MS

10:40 a.m. - 10:45 a.m.  Discussion

10:45 a.m. - 11:10 a.m.  C17 Counterfeiting and Counterfeit Deterrence Applications for Imaging Technologies  
Joel A. Zlotnick, MSFS*

11:10 a.m. - 11:15 a.m.  Discussion

11:15 a.m. - 11:40 a.m.  C18 H.Y.D.R.A. (Hyper Yield Data-Driven Real-Time Analysis)  
Anthony Skjellum, PhD*; Austin Hancock, BS*; Janice Canedo*; Erby Fischer

11:40 a.m. - 1:00 p.m. Lunch

*Presenting Author
## Poster Session

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
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| 11:30 a.m. - 1:00 p.m. | C19       | A Comparison of Computer Forensic Tools: An Open-Source Evaluation  
*Adam Cervellone, BS*; Robert Price, MS; Joshua L. Brunty, MS; Terry Fenger, PhD |
| 11:30 a.m. - 1:00 p.m. | C20       | Integrating a Profile of Frontal Face With Its Mirror Image for Facial Reconstruction  
*Paramjit Kaur, MSc*; *Kewal Krishan, PhD*; *Tanuj Kanchan, MD*; *Suresh K. Sharma, PhD* |
| 1:00 p.m. - 1:25 p.m.  | C21       | Performance of Matching Algorithms in Non-Standard Expression-Variant Faces  
*Petra Urbanová, PhD*; *Igor Chalás* |
| 1:25 p.m. - 1:30 p.m.  | Discussion |                                                                  |
| 1:30 p.m. - 1:55 p.m.  | C22       | On the Need for Social Contract Theory in the Ethics of Digital Forensics  
*Martin S. Olivier, PhD* |
| 1:55 p.m. - 2:00 p.m.  | Discussion |                                                                  |
| 2:00 p.m. - 2:25 p.m.  | C23       | An Efficient and Effective Forensic Analysis Approach for the Internet of Things (IoT)  
*Anthony Skjellum, PhD*; *Ankit Kumar Singh*; *Janice Canedo* |
| 2:25 p.m. - 2:45 p.m.  | Questions & Answers |                                                                  |

**Moderator:** Douglas R. White, MS  
Gaithersburg, MD

**Co-Moderator:** Kathryn C. Seigfried-Spellar, PhD  
Purdue University  
Computer and Information Technology  
West Lafayette, IN

*Presenting Author*
Thursday

New Discoveries Enabled by Engineering Analyses

**Moderator:** David Pienkowski, PhD  
University of Kentucky  
AB Chandler Hospital  
Lexington, KY  

**Co-Moderator:**  
Michelle R. Hoffman, MS  
Forensic Injury Analysis, LLC  
Tempe, AZ

- **8:30 a.m. - 9:10 a.m.**  
  **D1** Richard III Discovered: The King’s Remains  
  Sarah V. Hainsworth, PhD*; Guy N. Rutty, MD; Jo Appleby, PhD; Alison L. Brough, BS

- **9:10 a.m. - 9:30 a.m.**  
  **D2** Measurement of High Temperature and High Humidity Moisture Effects in Football Helmet Elastomeric Energy-Absorbing Padding Performance and Implications for Head Injury Danger  
  Kenneth J. Saczalski, PhD*; Mark N. West, BS; Todd Saczalski, BSMET; Joseph L. Burton, MD; Paul Renfroe Lewis, Jr., MS; Mark C. Pozzi, MS

- **9:30 a.m. - 9:45 a.m.**  
  **D3** Specimen Age Affects the Fracture Pattern of Immature Porcine Femurs Under Torsional Loading  
  Patrick E. Vaughan, BS*; Feng Wei, PhD; Roger C. Haut, PhD

- **9:45 a.m. - 10:00 a.m.**  
  **D4** Non-Destructive Test Method for Forensic Evaluation of Motorcycle Helmet Shell Failure Mechanism and Resulting Safety Deficiency Causing Fatal Head Injury  
  Kenneth J. Saczalski, PhD*; Mark N. West, BS; Todd Saczalski, BSMET; Joseph L. Burton, MD; Paul Renfroe Lewis, Jr., MS; Mark C. Pozzi, MS

- **10:00 a.m. - 10:15 a.m.**  
  Break

New Analytical Methods in Forensic Engineering

**Moderator:** John Nixon, CEng, MBA  
ARC  
Bippus, IN

**Co-Moderator:**  
David Pienkowski, PhD  
University of Kentucky  
AB Chandler Hospital  
Lexington, KY

- **10:15 a.m. - 10:35 a.m.**  
  **D5** Fire Dynamic Simulation — Assessing Structural Damage and Suppression Potential of a Church Fire  
  Darren Franck, MSME*; Harold Franck, MSEE

- **10:35 a.m. - 11:00 a.m.**  
  **D6** Application of Reverse Engineering in Forensic Investigation  
  Wego Wang, SciD*

*Presenting Author
ENGINEERING SCIENCES

11:00 a.m. - 11:15 a.m. D7 Evaluating the Structural Failure of Wood Bowstring Trusses Under Heavy Snow Loading
Daniel M. Honig, PE*

11:15 a.m. - 11:30 a.m. D8 Comparison of Measurement Error Between 3D Laser Scanning, Total Station Survey, and Photogrammetry Using PhotoModeler®
Shannon Wilson*; James E. Flynn, BS; Stephen Harper, BS; Jace Priester, BS

11:30 a.m. - 11:45 a.m. D9 Natural Language Engineering for Multilingual Forensic Author Identification
Carole E. Chaski, PhD*; Nan Decker, PhD; Ali M. Alshehri, MA; Seung-Man Kang, PhD; Angela Almela, PhD

11:45 a.m. - 1:00 p.m. Lunch

Poster Session

11:30 a.m. - 1:00 p.m. D10 Analysis of Citrate Distribution in Bone for the Estimation of Postmortem Interval
Matthew Pysh*; Katherine E. Weisensee, PhD; Mark A. Schlautman, PhD; Melinda Harman, PhD

11:30 a.m. - 1:00 p.m. D11 Crime Scene Imaging Using a Highly Affordable, User-Friendly, Portable, Open-Source 3D Imaging System
Nikolaj Kjaer Nielsen*; Kim Juul Henriksen, BS; Samuel Alber Trysoee, PhD; Henrik Pedersen, PhD; Iana Lesnikova, MD, PhD

Multidisciplinary Session: Engineering Sciences Session/Jurisprudence Session II — The Judge as Gatekeeper

Moderator: Stephanie Domitrovich, JD, PhD
Sixth Judicial District of PA
Erie County Court House
Erie, PA

Co-Moderator: Peter Alexander, PhD
Aurora, CO

1:00 p.m. - 1:10 p.m. Introduction
Peter Alexander, PhD

1:10 p.m. - 1:40 p.m. F20 Better Ways to Manage Poorly Validated Scientific Evidence
Michael J. Saks*

1:40 p.m. - 2:10 p.m. F21 Upstream Remedies to Prevent Wrongful Convictions: Beating Daubert to the “Gate”
Peter Neufeld, JD*

2:10 p.m. - 2:40 p.m. F22 Holding the Gate Open or Closing It: Evolving Frye and Daubert Approaches?
Donald E. Shelton, JD, PhD*; Stephanie Domitrovich, JD, PhD*
2:40 p.m. - 3:00 p.m. Break
3:00 p.m. - 3:30 p.m. D12 Is the Gatekeeper Concept Failing the Justice System? Is There a Viable Alternative?
John Nixon, CEng, MBA*
3:30 p.m. - 4:00 p.m. D13 The Federal Bureau of Investigation’s (FBI’s) Misrepresentation of Hair Evidence: History, Response, and Remedy
Peter D. Barnett, BS*
4:00 p.m. - 4:30 p.m. F23 How the Trial Judge’s Gatekeeping Function Can Be Better Utilized to Bar the Admission of Unreliable and Exaggerated Opinion Testimony From Traditional Forensic Science Disciplines
Andrew Sulner, MSFS, JD*
4:30 p.m. - 5:00 p.m. Discussion

Friday

Application of Scientific Methods to Forensic Engineering

Moderator: David Pienkowski, PhD
University of Kentucky
AB Chandler Hospital
Lexington, KY

Co-Moderator: Kurt D. Weiss, MS
Automotive Safety Research
Santa Barbara, CA

8:30 a.m. - 9:00 a.m. D14 Quantification of Forces Generated by Volunteers in Stabbing Trials
Gary Nolan, BS; Sarah V. Hainsworth, PhD*; Guy N. Rutty, MD

9:00 a.m. - 9:15 a.m. D15 Identification of Building Insulation and Soundproofing Products by Light and Electron Microscopy
Richard S. Brown, MS*

9:15 a.m. - 9:30 a.m. D16 Forensic Microscopy in a Case of Asbestos-Containing Cigarettes
James Millette, PhD*

9:30 a.m. - 9:45 a.m. D17 The Potential of Comprehensive Gas Chromatography (GC) in Forensic Fire Investigations
Martin Lopatka, MSc; Gabriel Vivó-Truyols; Marjan J. Sjerps; Peter J. Schoenmakers; Arian C. van Asten, PhD*; Andjoe A.S. Sampat, MSc

9:45 a.m. - 10:00 a.m. D18 Physical Evidence Used in Rollover Crash Reconstruction
Kurt D. Weiss, MS*

10:00 a.m. - 10:15 a.m. Break
Case Studies in Forensic Engineering & Science

Moderator: David Pienkowski, PhD
University of Kentucky
AB Chandler Hospital
Lexington, KY

Co-Moderator: Darren Franck, MSME
Advanced Engineering Associates, Inc.
Charleston, WV

10:15 a.m. - 10:45 a.m.
D19 Biomedical Engineering Contributions in the Analysis of Head and Brain Impact With Legal Perspectives by Counsel for the Department of Transportation Bicycle vs. Auto, Seatbelts, and Motorcycle Accidents
Laura L. Liptai, PhD*; Landa S. Low, JD

10:45 a.m. - 11:00 a.m.
D20 Non-Collision Moving Vehicle Fire Caused by Escape of Exhaust Heat and Combustion Gases Due to Muffler Design and Materials Defects
Mark C. Pozzi, MS*; Dean L. Jacobson, PhD; David Bosch, PhD; Scott Anderson, BS

11:00 a.m. - 11:15 a.m.
D21 Refueling Fire Caused by Defective Fuel Pump Nozzle, Electrostatic Discharge Ignition, and Violations of Safety Practices
Mark C. Pozzi, MS*

11:15 a.m. - 11:30 a.m.
D22 Friction Tire Testing of a Run-Flat Condition Sport Utility Vehicle (SUV) Tire
Kurt D. Weiss, MS*; Jacqueline Paver

11:30 a.m. - 11:45 a.m.
D23 Witness Identification Under Low Light-Level Conditions: A Case Study
James B. Hyzer, PhD*

11:45 a.m. - 12:00 p.m.
Break

12:00 p.m. - 12:15 p.m.
D24 Forensic Engineering Investigation of a Dual Fatality Auto-Pedestrian Collision by an Impaired-Vision Driver
Adam Aleksander, PhD*

12:15 p.m. - 12:30 p.m.
D25 A Case Against “Inattentive Driving” as a Cause for Some Nighttime Vehicle Pedestrian Accidents
James B. Hyzer, PhD*

12:30 p.m. - 12:45 p.m.
D26 An Engineering Perspective on Case Studies Where Performance Does Not Match Scientific Predictions — The Expansive Nature of Collapsible Soils and Other Engineering Oddities
Michael D. McDowell, MS*

12:45 p.m. - 1:45 p.m.
Lunch

Poster Session

11:30 a.m. - 1:00 p.m.
D27 A Structural Analysis of a Gymnasium Collapse Using the MIDAS Program
Chan-Seong Park, PhD*; Jong-Heon Shim, MS; Jin-Pyo Kim, PhD; Nam-Kyu Park, PhD

*Presenting Author
11:30 a.m. - 1:00 p.m.  **D28**  Forces Transmission to the Skull in a Case of Mandibular Impact
Lucile Tuchtan, MD*, Marie-Dominique Piercecchi-Marti, PhD; Christophe Bartoli, MD; Pascal Adalian; Georges Leonetti, PhD; Lionel Thollon

**Tribometry, Stucco, & Gas**

**Moderator:** David Pienkowski, PhD
*University of Kentucky
AB Chandler Hospital
Lexington, KY*

**Co-Moderator:** Harold Franck, MSEE
*Advanced Engineering Associates, Inc.
Charleston, WV*

1:45 p.m. - 2:05 p.m.  **D29**  Forensic Engineering Examination of Stucco on a Concrete Masonry Unit (CMU) Wall, Paint Layer Evidence, and Crack Propagation
Adam Aleksander, PhD*

2:05 p.m. - 2:35 p.m.  **D30**  Fuel Gas Odorization: History, Requirements, Application, and Challenges for Natural Gas and Propane
Tim G. Dunn, MS*

2:35 p.m. - 2:55 p.m.  **D31**  Redesign of a StepMeter for Direct In Vivo Measurement of Barefoot Skin Friction
Marcus P. Besser, PhD*; Mark I. Marpet, PhD, PE

*Presenting Author
Wednesday

Poster Session

11:30 a.m. - 1:00 p.m. E1 Difficulties in the Interpretation of Postmortem Concentrations of Synthetic Cannabinoids
   Anders Rietz*; Gunilla Thelander, BSc; Robert Kronstrand, PhD

11:30 a.m. - 1:00 p.m. E2 Technical Considerations for a Drone-Mounted GoPro® Camera for Crime Scene Measurements
   Jacob Martin; Annalie Martin; Gary H. Naisbitt, PhD*

11:30 a.m. - 1:00 p.m. E3 Homicide Injury Quantification: Correlations and Reliability of Injury Severity Scores Applied to Homicide Victims
   Fredrik Tamsen, MD, MSc*; Fia Klötz-Logan, PhD; Ingemar Thiblin, PhD

11:30 a.m. - 1:00 p.m. E4 A Case for Using Mixed Method Research to Investigate the Relationship Between Art and Science in Forensic Facial Reconstruction
   Daniel Marion, Jr., PhD*

11:30 a.m. - 1:00 p.m. E5 A Unique Case of Death by Misadventure Due to Electrocution Involving a Man and a Cat: The Utility of Electron Microscopy
   Elvira Ventura Spagnolo*; Cristina Mondello, BS; Stefania Zerbo, MD; Antonina Argo; Luigi Cardia; Francesca Giuffrida; Giulio Cardia

11:30 a.m. - 1:00 p.m. E6 The Value of Outourcing Selected Cases in a Medical Examiner Population: A Ten-Year Experience
   Brandi C. McCleskey*; Stephanie Reilly, MD; Daniel Atherton

11:30 a.m. - 1:00 p.m. E7 The Birth of a National Department for Legal Medicine in the Grand Duchy of Luxembourg
   Ulrich S. Preiß, MD*; Patricia Lambert, MS; Sarah Toussaint; Andreas Schuff, PhD

11:30 a.m. - 1:00 p.m. E8 The Value in Integrating Emergency Management and Forensic Death Investigation at the Harris County Institute of Forensic Sciences
   Allison Woody; Jason M. Wiersema, PhD*; Phong Nguyen; Roxanne Phatak, MS

11:30 a.m. - 1:00 p.m. E9 Stress Responses of Crime Scene Investigators When Responding to Traumatic Death Events
   Jalika Rivera Waugh, PhD*

11:30 a.m. - 1:00 p.m. E10 Deaths in Silence: The Role of Prison Surveillance in Suicides
   Isabella Aquila, MD*; Silvia Boca*; Ciro Di Nunzio, MFS, PhD; Salvatore Savastano; Francesca Pepe, MD; Santo Gratteri, MD; Pietranionio Ricci*
11:30 a.m. - 1:00 p.m.  E11  Survivability of Explosive Residue on Improvised Explosive Device (IED) Components Subjected to an Underwater Detonation  
David J. Prasek, MFS*; Ronald L. Kelly, BS; Ismail M. Sebetan, MD, PhD*; Paul Stein, PhD*  

11:30 a.m. - 1:00 p.m.  E12  The Lip Prints Morphological Profile in a Brazilian Population: A Prospective Study  
Antonio A. Antunes, PhD*; Raylane F. Albuquerque; Patricia S. Trigueiro, MSc; Evelyne P. Soriano, PhD; Marcus Vitor D. Carvalho, PhD; Reginaldo I.C. Campello, PhD; Gabriela G. Porto, PhD  

11:30 a.m. - 1:00 p.m.  E13  Applications of Plant Sciences to Forensic Science  
Jane H. Bock, PhD*; David O. Norris, PhD*  

11:30 a.m. - 1:00 p.m.  E14  Evaluation of Drug Intoxication Cases and Medicolegal Reports  
Kenan Kaya; Mete K. Gulmen, PhD, MD*; Derya Kaya; Ahmet Hilal, MD; Necmi Cekin, MD  

11:30 a.m. - 1:00 p.m.  E15  Investigation of Human Skeletal Tissue Using Raman Spectroscopy (RS) and Surface-Enhanced Raman Spectroscopy (SERS) for Forensic Applications  
Kristin K. Cooke, BS*; David D. Evanoff, Jr., PhD  

**Thursday**

**Moderator:** Steven C. Clark, PhD  
**Occupational Research and Assessment**  
**Big Rapids, MI**  
**Co-Moderator:** Todd M. Howell, MFS  
**Magnolia, DE**  

8:30 a.m. - 8:45 a.m.  E16  John David Brown Brought to Justice 20 Years Later — A Multidisciplinary Approach to a Cold Case Homicide Investigation  
Donald Hayden, MFS*; Steven Geniuk, MS*  

8:45 a.m. - 9:00 a.m.  E17  A Continuing Need — Certification of Medicolegal Death Investigation Personnel  
Julie A. Howe, MBA*; Steven C. Clark, PhD*  

9:00 a.m. - 9:15 a.m.  E18  Testing the Use of Pigs as Human Proxies in Decomposition Studies  
Melissa A. Connor, PhD*  

9:15 a.m. - 9:30 a.m.  E19  An Unusual Case of Complex Suicide by Nail Gun, Carbon Monoxide, and Ethanol  
Erick P. Bryant, MFS*  

9:30 a.m. - 9:45 a.m.  E20  Method Development and Optimization of Detection of Decomposition Products in Soil Using Headspace/Gas Chromatography/Mass Spectrometry (HS/GC/MS)  
Amanda L. Haggerty, BS*; Kimberlee S. Moran, MSc; Heather L. Harris, MFS, JD  

*Presenting Author
9:45 a.m. - 10:00 a.m.  **E21**  A Follow-Up Study: Recovery of “Touch” DNA From Cleaned Pistol and Ammunition Surfaces  
*Maher Noureddine, PhD*; *James A. Bailey, PhD*

10:00 a.m. - 10:15 a.m.  **Break**

**Moderator:**  Gulnaz T. Javan, PhD  
*Alabama State University*  
*Forensic Science Program*  
*Montgomery, AL*

**Co-Moderator:**  Patricia C. Smith, BA  
*Harris County District Attorney’s Office*  
*Houston, TX*

10:15 a.m. - 10:30 a.m.  **E22**  Bloodstain Evidence of Trophy Taking in a Homicide  
*Bryan R. Burnett, MS* *

10:30 a.m. - 10:45 a.m.  **E23**  Multidisciplinary Approach to the Identification of Military Remains — An Australian Perspective  
*Donna M. MacGregor, MSc*; *Marc Oxenham, PhD*; *Henry Y.H. Wu*; *Brian Manns*

10:45 a.m. - 11:00 a.m.  **E24**  “We Didn’t Start This Fire” — Understanding What Caused the Fire That Killed Twin Boys  
*Matthew C. Wietbrock, BS* *

11:00 a.m. - 11:15 a.m.  **E25**  Perceptions of the “CSI Effect” by New York State Prosecutors and Forensic Science Requests at Trial  
*Elizabeth A. Erickson, MS* *

11:15 a.m. - 11:30 a.m.  **E26**  How Abductive Reasoning Impacts Criminal Investigations  
*Lyndsie N. Ferrara, MS*; *James B. Schreiber, PhD*

11:30 a.m. - 11:45 a.m.  **E27**  A Barrel-Bullet Comparison of Rifling Lines: A Transformation for a Quantifiable Examination Approach  
*John Z. Wang, PhD* *

11:45 a.m. - 12:00 p.m.  **E28**  Forensic Podiatry — How Gait, Footwear, and Footprints Convict Criminals  
*Michael S. Nirenberg, DPM* *

12:00 p.m. - 1:00 p.m.  **Lunch**

**Poster Session**

11:30 a.m. - 1:00 p.m.  **E29**  Use of Unmanned Aerial Vehicles (UAVs) for Documenting the Forensic Scene and Body Retrieval in a Case of Mid-Air Collision Between Aircraft  
*Angelina I. Phillips, MD*; *Lee M. Tormos, MD*
11:30 a.m. - 1:00 p.m.  **E30**  Suicidal Hanging: A Prospective Autopsy-Based Study of 650 Cases<br>
*Mantaran Singh Bakshi, MBBS*; *Sudhir Kumar Gupta, MD*; *Deepak Prakash, MD*; *Piyush Sharma, MD*; *Shivani Dhaka, MBBS*

11:30 a.m. - 1:00 p.m.  **E31**  Suicide or Homicide: A Case of Multiple Stab Wounds and Poisoning<br>
*Kelly Kraus, BS*

11:30 a.m. - 1:00 p.m.  **E32**  A Case Review of a Suicide by Homemade Miniature Cannon<br>
*Meryle A. Dotson, MA*; *Kyle Shaw, MBBS*; *Brett E. Harding, MBA*

11:30 a.m. - 1:00 p.m.  **E33**  Cases of Forensic Human Identification Using Hair<br>
*Songhie An*; *Myung-duck Kim, PhD*; *Kiwook Kim, MS*; *Jin Hee Lee*; *Byung-Ryul Song, PhD*; *Gyemmun Nam, PhD*; *Jisook Min*

11:30 a.m. - 1:00 p.m.  **E34**  Smartphone Uses in Medicolegal Death Investigation<br>
*Kathryn H. Haden-Pinneri, MD*; *Bethany L. Bless, MS*

11:30 a.m. - 1:00 p.m.  **E35**  A Multidisciplinary Approach to Exhuming a Body Buried Under a Newly Built House<br>
*Dae-Kyoon Park, MD, PhD*; *Nak-Eun Chung, PhD*; *Yi-Suk Kim, MD, PhD*; *U-Young Lee, MD*; *Deog-Im Kim, PhD*; *Yong-Woo Ahn, DDS, PhD*; *Taeyeong Kim*; *Eungmyeong Kang*

11:30 a.m. - 1:00 p.m.  **E36**  Recognition of Skin Damage Caused by the Presence of Different Insects on Dead Bodies<br>
*Carolina Nuñez Vázquez, PhD*; *Lorena Valencia Caballero, PhD*

11:30 a.m. - 1:00 p.m.  **E37**  Elemental Composition of Tattoo Inks as an Identification Tool<br>
*Trevor E. Curtis, BS*; *John P. Buchweitz, PhD*; *Ruth Waddell Smith, PhD*

11:30 a.m. - 1:00 p.m.  **E38**  Identification of Bullets Fired From Consecutively Manufactured Double-Broached Ruger® SR9c® Barrels Utilizing Comparison Microscopy and Confocal Microscopy<br>
*Jennifer L. Stephenson, MSFS*; *Erich D. Smith, MS*

11:30 a.m. - 1:00 p.m.  **E39**  Surface-Enhanced Raman Spectroscopy (SERS) for the Forensic Analysis of Vaginal Fluid<br>
*Kathryn A. Zegarelli, BS*; *Jennifer Fore, PhD*; *Ranjith Premasiri, PhD*; *Brandon Scott, PhD*; *Amy N. Brodeur, MFS*; *Lawrence Ziegler, PhD*

11:30 a.m. - 1:00 p.m.  **E40**  Novel Azo Dye Presumptive Test for the Detection of Nitrites in Gunshot Residue (GSR): An Expansion of the Modified Griess Test<br>
*Erin M. Noval, BS*; *Jeanne Berk*

11:30 a.m. - 1:00 p.m.  **E41**  Multidisciplinary Study of a 17th-Century French Natural Mummy<br>
*Dédouit Fabrice, MD*; *Fatima-Zohra Mokrane, MD*; *Rozenn Colleter*; *Frederic Savall*; *Sylvie Duchesne*; *Patrice Gerard*; *Eric Crubezy, PhD*; *Hervé Rousseau, PhD*; *Daniel Rouge, MD*; *Norbert Telmon, PhD, MD*
11:30 a.m. - 1:00 p.m.  **E42**  K9 Water Searches and Volatile Organic Compounds (VOCs): A Method to Aid in Determining the Location of Submerged Human Bodies
Marcello Rendine*; Cristoforo Pomara, MD, PhD; Carmela Fiore, MD; Palmira Fortarezza, MS; Francesco Sessa, MS; Irene Riezzo, MD, PhD

11:30 a.m. - 1:00 p.m.  **E43**  Death From Hypothermia During a Training Course Under “Extreme Conditions”: Two Related Cases
Lucile Tuchtan, MD*; Pierre Perich, MD; Georges Leonetti, PhD; Marie-Dominique Pierrecchi-Marti, PhD; Christophe Bartoli, MD

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**Moderator:** Sherronda Appleberry, MS  
**Brighton, CO**

**Co-Moderator:** Chad W. Hutchins, MFS  
**Waverly, GA**

1:00 p.m. - 1:15 p.m.  **E44**  Use of Infrared Photography to Document Bloodstains in Fire Scenes
William K. Perdue, MP A*; Elizabeth Richards, PhD; Maria C. Castellanos, MFS*

1:15 p.m. - 1:30 p.m.  **E45**  The Relevance of a Multidisciplinary Approach to the Crime Scene Investigation: A Case Report of a Homicide Victim Who Was Hidden
Natascha Pascale, MD*; Marcello Rendine; Francesco Sessa, MS; Dania De Carlo, MD; Irene Riezzo, MD, PhD

1:30 p.m. - 1:45 p.m.  **E46**  Sudden Unexpected Infant Deaths (SUlD) in North Central Indiana — A Comprehensive Look at Infant Deaths in Indiana
Matthew C. Wietbrock, BS*

1:45 p.m. - 2:00 p.m.  **E47**  The Impact of Fentanyl Use and Abuse
Breanna M. Cuchara*; Thomas A. Andrew, MD

2:00 p.m. - 2:15 p.m.  **E48**  “All the Things You Ask of Me”: Law Enforcement Experiences of Infant Death Investigation
Jennifer R. Schindell, MA*

2:15 p.m. - 2:30 p.m.  **Break**

---

**Moderator:** Cliff Akiyama, MPH, MA  
**Akiyama and Associates, LLC**  
**Philadelphia, PA**

**Co-Moderator:** Bethany L. Bless, MS  
**Houston, TX**

2:30 p.m. - 2:45 p.m.  **E49**  Case Study: Perfect Crime? The Forensic Sciences at the Service of the Crime
Eric R. Ruiz Hernandez, MD*

2:45 p.m. - 3:00 p.m.  **E50**  Retrospective Analysis of 93 Male Victims of Unnatural Sexual Offenses From 2011 to 2014 in a Tertiary Care Center in India
Shashank Pooniya, MD*; Rajanikanta Swain, MD; Sanjeev Lalwani, MD
3:00 p.m. - 3:15 p.m.  E51  Shaken Baby Syndrome/Abusive Head Trauma (SBS/AHT) Mortality in Sweden  
Jacob Andersson, MS*; Ingemar Thiblin, PhD

3:15 p.m. - 3:30 p.m.  E52  Case Study: From Maternal Instinct to Staged Domestic Homicide  
Eric R. Ruiz Hernandez, MD*

3:30 p.m. - 3:45 p.m.  Break

3:45 p.m. - 4:00 p.m.  E53  Child Abduction Murder: Regional Differences in Time to Death and Offender Motivation  
Katherine M. Brown, PhD*

4:00 p.m. - 4:15 p.m.  E54  An Application of Gunshot Residue (GSR) as Trace Evidence  
Jason L. Schroeder, MS, MBA*; William M. Davis, PhD; Roger Kahn, PhD

4:15 p.m. - 4:45 p.m.  E55  Forensic Science as an Indispensable Tool in the International Cooperation in Fighting Terrorism  
Elazar Zadok*

4:45 p.m. - 5:00 p.m.  E56  University Groper: How One Suspect Was Identified Using Touch DNA Findings — A Successful Case Study  
Julie L. Valentine, MS*; Suzanne Miles, BS*

Friday

Moderator: Colleen M. Fitzpatrick, PhD  
Fountain Valley, CA  
Co-Moderator: Peter R. Valentin, MSFS  
University of New Haven  
Forensic Science Dept  
West Haven, CT

8:30 a.m. - 8:45 a.m.  E57  Analysis of Smokeless Powder Components by Ion Mobility Spectrometry (IMS)  
Marcela Najarro, MFS*; Rose M. Garcia, BS

8:45 a.m. - 9:00 a.m.  E58  Examining the Factors Affecting Forensic Scientists’ Job Stress and Satisfaction  
Thomas J. Holt, PhD*; Kristie Blevins, PhD; Ruth Waddell Smith, PhD; David R. Foran, PhD

9:00 a.m. - 9:15 a.m.  E59  Neanderthals, Werewolves, and a Pig Man: A Novel and Collaborative Method for Differentiating Human and Animal Skeletal Remains  
Brett E. Harding, MBA*; Barbara C. Wolf, MD; Lindsey A. Bayer, MS; Meryle A. Dotson, MA

9:15 a.m. - 9:30 a.m.  E60  The Utility of Forensic Evidence in Homicide Cases Tried in London Courts Between 2010 and 2014  
Dagmar Heinrich, PhD*; Ruth Morgan, PhD; Nick Tilley, PhD

*Presenting Author
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<th>Time</th>
<th>Session</th>
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<tr>
<td>9:30 a.m.</td>
<td>E61</td>
<td>Identification of Decomposition Odors That Elicit a Response From Trained Cadaver Dogs</td>
<td>Lorna C. Irish, BSc*; Gareth Parkes, PhD; Anna Williams, PhD</td>
</tr>
<tr>
<td>9:45 a.m.</td>
<td>E62</td>
<td>Houston’s Approach: A Final Outcome to the National Problem of Untested Sexual Assault Kits</td>
<td>Irma Rios, MBA*</td>
</tr>
<tr>
<td>10:00 a.m.</td>
<td>E63</td>
<td>Validation! Validation! Validation!…With a Touch of Reality</td>
<td>Daniele S. Podini, PhD*</td>
</tr>
<tr>
<td>10:15 a.m.</td>
<td>Break</td>
<td></td>
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<tr>
<td>10:30 a.m.</td>
<td>E64</td>
<td>Standard Protocols: Forensic Archaeology Integration With Standard Archaeological and Anthropological Methodologies Following Natural Disasters</td>
<td>Christine L. Halling, MS*; Arbie Goings; Ginesse A. Listi, PhD; Ryan M. Seidemann, MA; Mary H. Manhein, MA</td>
</tr>
<tr>
<td>10:45 a.m.</td>
<td>E65</td>
<td>A Novel Method for Ninhydrin Development of Fingerprints on Absorbent Surfaces</td>
<td>Howard A. Harris, JD, PhD*</td>
</tr>
<tr>
<td>11:00 a.m.</td>
<td>E66</td>
<td>Forensic Archaeology and Surface Scatter Body Recovery: A Contested Missing Person Case</td>
<td>Sharon K. Moses, PhD*</td>
</tr>
<tr>
<td>11:15 a.m.</td>
<td>E67</td>
<td>The “CSI Effect”: The Barristers and the Bench</td>
<td>Janne A. Holmgren, PhD*</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>E68</td>
<td>Implementation of the National Institute of Justice’s (NIJ’s) Online Firearms Examiner Training Course in Marshall University’s Graduate Curriculum and Its Potential to Reduce Time to Competency</td>
<td>Season E. Seferyn, MSFS*; Pamela J. Staton, PhD</td>
</tr>
<tr>
<td>11:45 a.m.</td>
<td>E69</td>
<td>Teaching Today’s Students: Hybrid Learning</td>
<td>Crystal L. Wagoner, MFS*; Christina A. Leija, MS*</td>
</tr>
<tr>
<td>12:00 p.m.</td>
<td>Lunch</td>
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Moderator: Donald Hayden, MFS
Richmond Hill, GA

Co-Moderator: Gina Londino, MS
IUPUI
Indianapolis, IN
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<tr>
<th>Time</th>
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<th>Title</th>
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<tbody>
<tr>
<td>11:30 a.m.</td>
<td>E70</td>
<td>Multi-Phase Postmortem Computed Tomography Angiography (MPMCTA): Is an Interventional Radiological Approach Possible Instead of the Classical One? A Preliminary Study</td>
<td>Fatima-Zohra Mokrane, MD; Frederic Savall; Silke Grabherr, PhD; Daniel Rouge, MD; Eric Crubezy, PhD; Hervé Rousseau, PhD; Norbert Telmon, PhD; Fabrice F. Dedouit*</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>E71</td>
<td>Italian Emergency Medical Team (EMT) Experience Regarding Crime Scene Access: A Proposal for a Specific Training Program</td>
<td>Luciano Garofano, PhD*; Cristina Enrica Brondoni, MS*</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>E72</td>
<td>Autopsy Rate in Suicide by Poisoning Is Low in Denmark Compared to Finland</td>
<td>Sæija Ylijoki-Sorensen, MD, DDS, PhD*; Jesper L. Boldsen, PhD; Lene W. Boel, PhD; Henrik Bøggild, PhD; Kaisa Lalu, PhD; Antti Sajantila, MD, PhD</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>E73</td>
<td>A Survey of Abuse of Illicit Drugs in Punjab, Pakistan</td>
<td>Sardar Ali Wattoo, MPhil; Muhammad Taimoor Chaudhary, MPhil*; Mohammad A. Tahir, PhD</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>E74</td>
<td>Brazilian Federal Police (BFP) Forensic Activities in the Paleontological Area</td>
<td>Guilherme H.B. de Miranda*; Camilla Vasconcelos Kafino, MS</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>E75</td>
<td>Time-Dependent Changes in Human and Chicken Bones in Soil Examined by Infrared (IR), Raman, Inductively Coupled Plasma/Optical Emission Spectroscopy (ICP/OES), and Organic Elemental Analysis</td>
<td>Matthew J. Danker, BS*; Donovan C. Haines, PhD; Joan A. Bytheway, PhD</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>E76</td>
<td>Human Bias in the Case of JonBenet Ramsey</td>
<td>Claudia M. Bonilla*; Ashraf Mozayani, PharmD, PhD</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>E77</td>
<td>Discrimination of Ginseng Cultivation Regions With Stable Isotope Ratio and Multi-Element Analyses</td>
<td>Jisook Min*; Dae-jun Ahn, PhD; Hye-jin Choi, PhD; Joo-Hyun Song, MS; Jae-Hoon Yu, MS; Jungseok Seo, PhD; Dae-Hong Hong, BS</td>
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<tr>
<td>11:30 a.m.</td>
<td>E78</td>
<td>Association Between Volatile Organic Compounds and Microbes Present During the Decomposition of a Cadaver</td>
<td>Todd A. Deyne, Bsc*; Donovan C. Haines, PhD; Aaron M. Lynne, PhD; Sibyl R. Bucheli, PhD</td>
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<tr>
<td>11:30 a.m.</td>
<td>E79</td>
<td>The Use of Lean Principles in a Forensic Environment to Facilitate Transformation</td>
<td>Zo-dee Ledger*</td>
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<tr>
<td>11:30 a.m.</td>
<td>E80</td>
<td>Motor Vehicle Crash or Auto-Pedestrian: Are Stranded Motorists (SM) Left “Stranded”?</td>
<td>Stacy A. Drake, MPH, PhD*; Dwayne A. Wolf, MD, PhD</td>
</tr>
</tbody>
</table>
11:30 a.m. - 1:00 p.m.  E81  Forensic Podiatry and Human Identification — The State of This Art in European Countries
Pablo Martinez-Escauriaza*; Sara C. Zapico, PhD; Joe Adserias, DDS, PhD

11:30 a.m. - 1:00 p.m.  E82  Craniofacial Analysis of 3D Computed Tomography (CT) Models and a New Method for Dense Facial Tissue Depth Mapping: A Collaboration Between Forensic Science Researchers and Forensic Art Practitioners
Terrie Simmons-Ehrhardt, MA*; Catyana R. Skory Falsetti, MFS; Christopher J. Ehrhardt, PhD

11:30 a.m. - 1:00 p.m.  E83  Perception of Elder Abuse by Primary Health Care Professionals
Mafalda Ferreira, MSc; César Santos; Duarte Nuno Vieira, MSc, PhD, MD*

11:30 a.m. - 1:00 p.m.  E84  A Comprehensive Comparison of Various Postmortem (PM) Fingerprint Recovery Techniques
Marzena H. Mulawka, MFS*; Gary W. Reinecke, MA*

Moderator: David G. Lord, PhD
CA State Poly University
Dept of Geography & Anthropology
Pomona, CA

Co-Moderator: Phillip M. Curran, MFS
Fort Hood, TX

1:00 p.m. - 1:30 p.m.  E85  Missing Persons: A Comparative Statistical Framework of the Phenomenon in Italy and the United States — To Identify Particular Characteristics and to Propose Improvements in Investigative Techniques
Patrizia Trapella, JD, MA*; Luca Massaro, MA*; Matteo Borrini, PhD*

1:30 p.m. - 1:45 p.m.  E86  Determining Donor Gender Based on Blood Stains Using Raman Spectroscopy
Igor K. Lednev, PhD*; Aliaksandra Sikirzytyskaya, MS; Vitali Sikirzytski, MS; Ewelina Mistek, BS; Lenka Halamkova, PhD

1:45 p.m. - 2:05 p.m.  E87  Evaluation of Decomposition and Insect Colonization of Pig (Sus Scrofa) Cadavers Inside a Vehicle
Helene N. LeBlanc, PhD*; Shari Forbes, PhD; Kelly Robinson, MSc; Alicia Bueter, BSc

2:05 p.m. - 2:15 p.m.  E88  Serial Killers in Colombia: A Comparative Study
Edwin O. Olaya Molina, BA*

2:15 p.m. - 2:30 p.m.  Break
Moderator: Scott Roeske, MFS  
Belton, TX  
Co-Moderator: Amber D. Riley, MS  
San Diego, CA

2:30 p.m. - 2:45 p.m.  E89  Understanding Familial DNA Searching: Policies and Practices in the United States  
Sara A. Debus-Sherrill*; Michael B. Field, MS; Saniya Seera, BA

2:45 p.m. - 3:00 p.m.  E90  Statistical Analysis of Key Components of Alcohol-Related Sexual Assault in the Military  
Michael J. Bosse, MFS*; Unsil Lee, MS*

3:00 p.m. - 3:30 p.m.  E91  Case Study of Postmortem Dismemberment Using a Coping Saw and a Related Analysis of the Cutting Plane Curvature  
Eunah Joo, MS*; Youngsil Seo, MS; Sangyoon Lee, MS; Donghwan Kim, PhD; Jin-Pyo Kim, PhD; Nam-Kyu Park, PhD

3:30 p.m. - 4:00 p.m.  E92  A Proposal for a Universal Classification of Paraphilias  
Anil Aggrawal, MD*

4:00 p.m. - 4:30 p.m.  E93  An Interdisciplinary Approach to Forensic Science Education  
John Mabry, JD*; Wayne D. Lord, PhD; Mark R. McCoy, EdD; Thomas H. Jourdan, PhD; Dwight E. Adams, PhD

4:30 p.m. - 5:00 p.m.  E94  Movement and Perception in Shooting Incidents: Neuroscience of Reaction and Reflex  
Alexander Jason, BA*
Wednesday

Poster Session

11:30 a.m. - 1:00 p.m. **F1** The Principle of Guilt (Beyond All Reasonable Doubt) and the Presumption of Innocence in Italy: Juridical, Forensic, and Investigative Reflections on the Gallo Case
Patrizia Trapella, JD, MA*; Luca Massaro, MA*; Matteo Borrini, PhD*

11:30 a.m. - 1:00 p.m. **F2** An Analysis of Data on Wrongful Convictions on Grounds of False or Misleading Forensic Evidence (FMLFE)
Jude L. Jokwi, MA*; Ashraf Mozayani, PharmD, PhD*

Thursday — Session I

**Moderator:** Winona J. Agbabiaka, JD
Crete, IL

**Co-Moderator:** Kenneth E. Melson, JD
GWU Law School
Montclair, VA

8:30 a.m. - 9:45 a.m. **F3** Ethical Responsibilities for Strengthening the Court System by Requiring a Basic Understanding of an Individual Forensic Science Discipline — The Judge, the Lawyers, and the Expert Witness
Joseph P. Bono, MA*; Linda L. Chezem, JD*; Ted R. Hunt, JD*;
Betty Layne DesPortes, JD, MS*

9:45 a.m. - 10:05 a.m. **F4** Scientific Evidence and the Law School Curriculum
Robert M. Sanger, JD*

10:05 a.m. - 10:20 a.m. Break

**Moderator:** Danielle D. Ruttman, JD
Brooklyn, NY

**Co-Moderator:** Frances L. Watson, JD
IU Robert H. McKinney School of Law
Law Clinic
Indianapolis, IN

10:20 a.m. - 10:40 a.m. **F5** Building Bridges Between Science and Law
Cynthia Blackwell, JD*

10:40 a.m. - 11:00 a.m. **F6** The Value of a Customer Working Group: A Customer’s Perspective
Kristine Hamann, JD*
### JURISPRUDENCE

**Las Vegas 2016**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Presenter(s)</th>
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<tbody>
<tr>
<td>11:00 a.m. - 11:20 a.m.</td>
<td>F7</td>
<td>Asymmetric Politics and Forensic Science: “Forget It, Jake — It’s Chinatown”</td>
<td>Max M. Houck, PhD*</td>
</tr>
<tr>
<td>11:20 a.m. - 11:40 a.m.</td>
<td>F8</td>
<td>Post-Conviction in the Wake of a Crime Lab Scandal: Lessons Learned From the St. Paul Police Department Crime Lab</td>
<td>Katie Conners*</td>
</tr>
<tr>
<td>11:40 a.m. - 12:00 p.m.</td>
<td>F9</td>
<td>Transferring Management of Forensic Operations From Police Department to Independent Non-Profit Corporation: Houston’s Experience</td>
<td>Tom P. Allen, JD*</td>
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<td>12:00 p.m. - 1:30 p.m.</td>
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<td>Lunch</td>
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### Poster Session

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<tbody>
<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>F10</td>
<td>Arc Burn: Not a Cause of Necrosis From Stun Gun Shock Wounds</td>
<td>James F. McNulty, Jr., JD*; Ismail M. Sebetan, MD, PhD*; Paul Stein, PhD*</td>
</tr>
<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>F11</td>
<td>Forensic Science and Justice Integration — The Brazilian Experience: People and Systems Working Together for a Better Criminal Prosecution</td>
<td>Marcia Aiko Tsunoda, Msc*; Jairo G. Schafer, MSc*</td>
</tr>
</tbody>
</table>

**Moderator:** Kerry J. O’Connell, JD  
**Co-Moderator:** Daniel G. Martin  
**New York, NY**  
**Superior Court of Arizona**  
**Old Courthouse**  
**Phoenix, AZ**

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<tr>
<th>Time</th>
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<tbody>
<tr>
<td>1:30 p.m. - 1:45 p.m.</td>
<td>F12</td>
<td>The Role of the English Coroner in Preventing Future Deaths in Similar Circumstances</td>
<td>A.R.W. Forrest, LLM*</td>
</tr>
<tr>
<td>1:45 p.m. - 2:30 p.m.</td>
<td>F13</td>
<td>Good Cop, Bad Cop — Forensic Pathology of Law Enforcement-Associated Deaths and Case Review</td>
<td>J.C. Upshaw Downs, MD*; Michael M. Baden, MD*</td>
</tr>
<tr>
<td>2:30 p.m. - 3:00 p.m.</td>
<td>F14</td>
<td>The Baby Tyler Case: Should Medical Examiners Have Access to Statements Obtained by Law Enforcement to Determine Cause and Manner of Death?</td>
<td>Stephanie Domitrovich, JD, PhD*; Donald E. Shelton, JD, PhD*; Jeffrey M. Jentzen, MD*</td>
</tr>
<tr>
<td>3:00 p.m. - 3:15 p.m.</td>
<td>F15</td>
<td>The Role of the Forensic Pathologist in the Judge’s Decision in Italy: A Presentation of a Peculiar Case</td>
<td>Anna Gitto, JD*; Giovanni Serinelli, JD; Gabriella Fimiani, JD; Serenella Serinelli, MD; Lorenzo Gitto, MD; Giorgio Bolino, MBBS</td>
</tr>
</tbody>
</table>

*Presenting Author*
3:15 p.m. - 3:30 p.m. Break

Moderator: Joseph I. Cassilly, JD
State Attorney's Office
Bel Air, MD

Co-Moderator: Garett M. Berman, JD
Florida Traffic Safety Resource
Prosecutor Program
Dania Beach, FL

3:30 p.m. - 3:50 p.m. F16 Reporting and Presenting the Probative Value of Forensic Evidence in the Courtroom
Cedric Neumann, PhD; Anjali A. Ranadive, JD*; Valerie Reyna, PhD; Graham Jackson

3:50 p.m. - 4:20 p.m. F17 A New Paradigm for Fingerprint Reporting … Without Individualization
Henry J. Swofford, MSFS*

4:20 p.m. - 4:40 p.m. F18 Progressive Forensic Exhibit Techniques for Court
Catyana R. Skory Falsetti, MFS*; Gary Hodges, BA; Dwayne Petray, BA

4:40 p.m. - 5:00 p.m. F19 Forensic Metrology: An Important Branch of Forensic Science Toward Fair Justice
Veronica Scotti, JD*; Alessandro M. Ferrero, MSc

Thursday — Session II

Multidisciplinary Session: Engineering Sciences Session/Jurisprudence Session II — The Judge as Gatekeeper

Moderator: Stephanie Domitrovich, JD, PhD
Sixth Judicial District of PA
Erie County Court House
Erie, PA

Co-Moderator: Peter Alexander, PhD
Aurora, CO

1:00 p.m. - 1:10 p.m. D11 Introduction
Peter Alexander, PhD

1:10 p.m. - 1:40 p.m. F20 Better Ways to Manage Poorly Validated Scientific Evidence
Michael J. Saks*

1:40 p.m. - 2:10 p.m. F21 Upstream Remedies to Prevent Wrongful Convictions: Beating Daubert to the “Gate”
Peter Neufeld, JD*

2:10 p.m. - 2:40 p.m. F22 Holding the Gate Open or Closing It: Evolving Frye and Daubert Approaches?
Donald E. Shelton, JD, PhD*; Stephanie Domitrovich, JD, PhD*  

*Presenting Author
2:40 p.m. - 3:00 p.m.  
Break

3:00 p.m. - 3:30 p.m.  
D12  Is the Gatekeeper Concept Failing the Justice System? Is There a Viable Alternative?  
John Nixon, CEng, MBA*

3:30 p.m. - 4:00 p.m.  
D13  The Federal Bureau of Investigation’s (FBI’s) Misrepresentation of Hair Evidence: History, Response, and Remedy  
Peter D. Barnett, BS*

4:00 p.m. - 4:30 p.m.  
F23  How the Trial Judge’s Gatekeeping Function Can Be Better Utilized to Bar the Admission of Unreliable and Exaggerated Opinion Testimony From Traditional Forensic Science Disciplines  
Andrew Sulner, MSFS, JD*

4:30 p.m. - 5:00 p.m.  
Discussion

Friday

Moderator:  Paula H. Wulff, JD  
Alexandria, VA  
Co-Moderator:  Jeremy C. Brehmer, JD  
Brehmer Law Corporation  
Bakersfield, CA

8:40 a.m. - 9:00 a.m.  
F24  An Examination of Scientific Expert Testimony: Transforming Evidence Presentation in the Courtroom  
Shirley Marshall*; Hannah Fawcett, PhD

9:00 a.m. - 9:20 a.m.  
F25  From Crime Scene to Hipster Haven: Solving a Rape on Manhattan’s Lower East Side  
Melissa Mourges, JD*; Martha Bashford, JD*

9:20 a.m. - 9:40 a.m.  
F26  We Don’t Catch the Smart Ones — How a Rubber Glove Left Genetic Fingerprints at the Crime Scene  
Rachel S. Singer, JD*; Diana Ho*

9:40 a.m. - 10:00 a.m.  
F27  Naked DNA: Mounting an Inadvertent Transfer Defense in Cases With Little or No Corroboration  
Kelley Kulick, JD*

10:00 a.m. - 10:20 a.m.  
Break

*Presenting Author
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<tr>
<th>Time</th>
<th>Session</th>
<th>Topic</th>
<th>Presenters</th>
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<tbody>
<tr>
<td>10:20 a.m.</td>
<td>F28</td>
<td>Disputed DNA Stats for a Low-Level Sample: A Case Study</td>
<td>Dan Krane, PhD*; Carrie Rowland, MSc; Nathaniel D. Adams, BS</td>
</tr>
<tr>
<td>10:40 a.m.</td>
<td>F29</td>
<td>Overcoming Bias in DNA Mixture Interpretation</td>
<td>Mark W. Perlin, PhD, MD*</td>
</tr>
<tr>
<td>11:00 a.m.</td>
<td>F30</td>
<td>Limitations of Current DNA Testing: Information That May Not Be in Reports</td>
<td>Charlotte J. Word, PhD*</td>
</tr>
<tr>
<td>11:20 a.m.</td>
<td>F31</td>
<td>Two Worlds Collide: The Perspective of the Forensic DNA Lab vs. the District Attorney’s Office and the Impact of the Errors Reported in the Federal Bureau of Investigation (FBI) Population Data</td>
<td>Courtney Head, MS*; Inger H. Chandler, JD</td>
</tr>
<tr>
<td>11:40 a.m.</td>
<td>F32</td>
<td>Justice for All, Oversight for Some? The Independent External Investigation Requirement of the Department of Justice’s Paul Coverdell Forensic Science Improvement Grants Recipients</td>
<td>Jeffrey A. Benson, JD*</td>
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<tr>
<td>12:00 p.m.</td>
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<td>Lunch</td>
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**Poster Session**

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<th>Time</th>
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<tr>
<td>11:30 a.m.</td>
<td>F33</td>
<td>Geographic Variability of Active Ingredients in Spice Within Alaska as an Indicator of Mechanisms of Distribution and Manufacture</td>
<td>Dakota W. Emery*; Christopher R. Iceman, PhD; Sarah Hayes, PhD</td>
</tr>
<tr>
<td>1:15 p.m.</td>
<td>F34</td>
<td>Debating Death: Examining Capital Punishment Legislation More Than 40 Years After Furman</td>
<td>Christiana Burgess, BS, BA*</td>
</tr>
<tr>
<td>1:30 p.m.</td>
<td>F35</td>
<td>Innocent, Yet Still Incarcerated in Minnesota</td>
<td>Cynthia L. Evenson, JD*</td>
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### JURISPRUDENCE

**Las Vegas 2016**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<th>Authors</th>
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<tbody>
<tr>
<td>1:50 p.m.</td>
<td>F36</td>
<td>The Shifted Paradigm: The Unprecedented Year in Bitemark Analysis and Hair Microscopy Litigation</td>
<td>Maxwell Christopher Fabricant, JD*; Dana Delger, JD*</td>
</tr>
<tr>
<td>2:50 p.m.</td>
<td>F37</td>
<td>The Stingray® Revolution: How the Widespread Use of Cell Site Simulators Is Changing Law Enforcement Tactics and Criminal Prosecutions in Maryland</td>
<td>Jason D. Ricke, JD, LLM*</td>
</tr>
<tr>
<td>3:10 p.m.</td>
<td>F38</td>
<td>Loss of the Fingerprint Exemption: Implications of Changes in Professional Practice</td>
<td>David A. Stoney, PhD*; Paul L. Stoney, MBA</td>
</tr>
<tr>
<td>3:30 p.m.</td>
<td></td>
<td>Break</td>
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**Moderator:** Linda L. Chezem, JD  
Purdue University  
Mooresville, IN  

**Co-Moderator:** Anne C. Petty, JD  
Chicago, IL

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<th>Time</th>
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<tbody>
<tr>
<td>3:45 p.m.</td>
<td>F39</td>
<td>Black Boxes and Due Process: Transparency in Expert Software Systems</td>
<td>Dan Krane, PhD*; Nathaniel D. Adams, BS</td>
</tr>
<tr>
<td>4:05 p.m.</td>
<td>F40</td>
<td>The Legal and Scientific Landscape of a Federal Analogue Prosecution Post-McFadden</td>
<td>Heather L. Harris, MFS, JD*; T. Douglas Clifford, JD*</td>
</tr>
<tr>
<td>4:30 p.m.</td>
<td>F41</td>
<td>New and Better Ways to Challenge Fire Investigators in Court Using National Research Council/National Academy of Sciences (NRC/NAS) Report Initiatives</td>
<td>Terry-Dawn Hewitt, LLM*; Wayne J. McKenna, LLB</td>
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**Saturday**

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<tr>
<th>Time</th>
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<tbody>
<tr>
<td>9:00 a.m.</td>
<td>F42</td>
<td>Dealing With Daubert: The Change to and Application of a New Evidential Standard in Alcohol- and Drug-Impaired Driving Cases</td>
<td>Garett M. Berman, JD*</td>
</tr>
<tr>
<td>9:20 a.m.</td>
<td>F43</td>
<td>“Maybe I’m Amazed…” Maxwell Smart and Siegfried Couldn’t Have Done It Better: Crime Scene Investigation in an Argentine Prosecutor’s Death — Do We Really Want to Catch the Bad Guys?</td>
<td>Maria Susana Ciruzzi, PhD*</td>
</tr>
</tbody>
</table>

*Presenting Author*
9:40 a.m. - 10:00 a.m.  F44  Battlefield Forensics: A Precursor to Counterterrorism, Peace, and Security
Abdullah Usman, LLM, MSc*

10:00 a.m. - 10:20 a.m.  F45  Hospital Emergency Rooms: Please Stop the Blunders and Save the Evidence
Jayne J. Batts, MD*

10:20 a.m. - 10:40 a.m.  Break

Moderator: Maria Susana Ciruzzi, PhD
Co-Moderator: Michele Vaira, JD
Hospital Nacional de Pediatria Prof. Dr. Garrahan
Foggia, ITALY

Buenos Aires, ARGENTINA

10:40 a.m. - 11:00 a.m.  F46  Risk Factors in Adjudicative Incompetency: A Case Study
Lauren Traveller, DNP*; Joyce P. Williams, DNP

11:00 a.m. - 11:20 a.m.  F47  Due Process Necessities for Developing National Forensic Standards: Underscoring the Need to Prevent Domination of the Process by a Given Stakeholder Interest
Andrew Sulner, MSFS, JD*

11:20 a.m. - 11:40 a.m.  F48  “De-NIST-ing”: The Evidence and Science Behind the Term
Douglas R. White, MS*; Mary T. Laamanen, MS
### Wednesday

**Poster Session**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Authors/Details</th>
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<tbody>
<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>G1 Does Multimedia Facilitate Training in Dental Hygiene Mass Fatality Preparedness?</td>
<td>Tara L. Newcomb, MS*</td>
</tr>
<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>G2 Dental Maturation and Age Estimation in Children With Down Syndrome</td>
<td>Laura C. Farese, MD*; Giulia Vitale; Viola Bartolini; Claudio Baldinotti, DDS; Stefano Vanin, PhD; Martina Focardi; Vilma Pinchi, PhD</td>
</tr>
<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>G3 Selection of Analytical Techniques for Teeth According to Conservation and Conditions After Being Exposed at Different Temperatures</td>
<td>Nancy Vargas Becerril, PhD*; Marco A. Alvarez-Perez, PhD; Lorena Valencia Caballero, PhD; Ivet Gil, PhD</td>
</tr>
</tbody>
</table>

### Thursday

**Age Estimation I**

**Moderator:** Richard M. Weledniger, DDS  
**Co-Moderator:** John B. Nase, DDS  
**Location:** Dental Forensic Services of Indian Valley  
**Harleysville, PA**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>8:30 a.m. - 8:45 a.m.</td>
<td>G4 Dental Age Estimation: Root Canal Widths (RCW) of Mandibular Permanent Molars at the 18-Year Threshold</td>
<td>Graham J. Roberts, MDS*; Fraser McDonald, PhD; Victoria S. Lucas, PhD</td>
</tr>
<tr>
<td>8:45 a.m. - 9:00 a.m.</td>
<td>G5 Dental Age Estimation: Root Pulp Visibility (RPV) and Periodontal Ligament Visibility (PLV) at the 18-Year Threshold</td>
<td>Victoria S. Lucas, PhD*; Fraser McDonald, PhD; Graham J. Roberts, MDS</td>
</tr>
<tr>
<td>9:00 a.m. - 9:15 a.m.</td>
<td>G6 A Comparison of Dental Age Estimation Using Cameriere et al. to Other Osteological Methods in a Deceased, Undocumented Border Crosser (UBC) Population</td>
<td>Melinda Hacker, DDS*; James P. Fancher, DDS, PhD; David R. Senn, DDS</td>
</tr>
<tr>
<td>9:15 a.m. - 9:30 a.m.</td>
<td>G7 Validating Tooth Development Staging Techniques Based on the Prediction of the Mature Root Lengths</td>
<td>Patrick W. Thevissen, PhD*; Baraa Khalaf, MSc; Steffen Fieuws, PhD; Guy Willems, PhD</td>
</tr>
<tr>
<td>9:30 a.m. - 9:45 a.m.</td>
<td>G8 Combining Radiographically Observed Craniofacial and Tooth Developmental Age Predictors</td>
<td>Parul Khare, MSc*; Guy Willems, PhD; Steffen Fieuws, PhD; Patrick W. Thevissen, PhD</td>
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<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Presenters</th>
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<tbody>
<tr>
<td>9:45 a.m.</td>
<td>G9</td>
<td>Third Molar Age Estimation: Appropriately Censoring Stage “H” Using the Data From Two Previously Published Studies — Blankenship et al. and Kasper et al.</td>
<td>Jennifer A. Moore, DMD*</td>
</tr>
<tr>
<td>10:00 a.m.</td>
<td>Break</td>
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<tr>
<td>10:00 a.m.</td>
<td>G10</td>
<td>Dental Age Estimation in Children With Juvenile Rheumatoid Arthritis (JRA)</td>
<td>Giulia Vitale*; Claudio Baldinotti, DDS; Viola Bartolini; Stefano Vanin, PhD; Francesco Pradella, MSc; Gian A. Norelli; Vilma Pinchi, PhD</td>
</tr>
<tr>
<td>10:15 a.m.</td>
<td>G11</td>
<td>An Age Estimation Procedure Based on the 3D Cone Beam Computed Tomography (CBCT) Study of the Dental Pulp Volume in Adults</td>
<td>Vilma Pinchi, PhD*; Francesco Pradella, MSc; Claudio Baldinotti, DDS; Cosimo Nardi, MD; Martina Focardi; Giulia Vitale; Gian A. Norelli; Stefano Vanin, PhD</td>
</tr>
<tr>
<td>10:30 a.m.</td>
<td>G12</td>
<td>A Biometric Identification System and Border Control: A Proposal for the Integration of Digital Orthpantomograms (OPGs) and Odontogram Data of Migrants</td>
<td>Emilio Nuzzolese, PhD*; Sakher J. AlQahtani, PhD, DDS*; Joe Adserias, DDS, PhD*</td>
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<tr>
<td>10:45 a.m.</td>
<td>G13</td>
<td>Utilizing Custom Spreadsheets for Age Estimation Cases</td>
<td>Derek M. Draft, DDS*</td>
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<tr>
<td>11:00 a.m.</td>
<td>G14</td>
<td>WITHDRAWN</td>
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<tr>
<td>11:15 a.m.</td>
<td>G15</td>
<td>Accuracy of the Third Molar Index for Assessing the Legal Majority of 18 Years of Age in the Turkish Population</td>
<td>Roberto Cameriere; Stefano De Luca, PhD; Ayse Gulsahi, PhD*; Burcak Cehreli, PhD; Ebru Tirali, PhD</td>
</tr>
<tr>
<td>11:40 a.m.</td>
<td>G16</td>
<td>Standards of Dental Developmental Stages</td>
<td>Sakher J. AlQahtani, PhD, DDS*; Mary A. Cimirrancic, DDS</td>
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</table>

*Presenting Author
12:00 p.m. - 12:15 p.m.  G17 Third Molar Maturity Index (I3M) for Assessing Age of Majority in a Black African Population in Botswana
Jelena Cavric, DDS; Marin Vodanovic, PhD; Serena Viva, PhD; Laura Paula Reu, PhD; Roberto Cameriere*; Ivan Galic

12:15 p.m. - 1:45 p.m.  Lunch

Poster Session

11:30 a.m. - 1:00 p.m.  G18 Domestic Predation of an Elder: A Fatal Dog Attack Case
Erwan Le Garff, MD*; Yann Delannoy, MD; Vadim Mesli, MD; Valéry C. Hedouin, MD, PhD; Anne A. Becart, DDS, PhD; Didier Gosset, MD, PhD

11:30 a.m. - 1:00 p.m.  G19 Dental Cone Beam vs. Microfocus Computed Tomography (CT) in Dental Pulp Volume Calculation for Estimating Age in Adults for Forensic Purposes
Claudio Baldinotti, DDS*; Vilma Pinchi, PhD; Lucia Mancini, PhD; Francesco Pradella, MSc; Giulia Vitale

11:30 a.m. - 1:00 p.m.  G20 Development of Preliminary Field Morgue Hazardous Materials (HAZMAT) Entry/Triage Flow Protocols Initiated on a Coordinated Field Training Exercise (FTX) Between the Suffolk County, New York, Medical Examiner’s Office and the Disaster Mortuary Operational Response Team (DMORT) 2 (10/2/14, Revisited)
Richard Boguslaw, DMD*

Bitemarks I

Moderator: Laura Paige Moses Smalley, DMD  Co-Moderator: Thomas A. Gromling, DDS
Rome, GA  Stephens City, VA

1:45 p.m. - 2:00 p.m.  G21 Bitemarks — Maybe It Is Rocket Science
Ken F. Cohrn, DDS*

2:00 p.m. - 2:15 p.m.  G22 Scorched Earth Forensics — Why The Move to “Eradicate” Disciplines From the Courtroom Is Bad for Science and Bad for the Law
Melissa Mourges, JD*; Roger D. Metcalf, JD*

2:15 p.m. - 2:30 p.m.  G23 Doyle — The Bitemark Case That Started It All
Roger D. Metcalf, JD*; Janice W. Klim-Lemann, DDS

2:30 p.m. - 2:45 p.m.  G24 The Near-Tragic Results of a Misdiagnosed Bitemark by an Untrained Professional
Thomas V. Brady, DMD*
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<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Authors</th>
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<tr>
<td>2:45 p.m.</td>
<td>G25</td>
<td>The Rise and Fall of Bitemark Matching and Bitemark Recognition:</td>
<td>Charles Michael Bowers, DDS, JD*</td>
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<td>Blame It on DNA … or, What's Next?</td>
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<td>3:00 p.m.</td>
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<td>Bitemarks II</td>
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<tr>
<td>Moderator:</td>
<td>Alistair Soon, MFM</td>
<td>Forensic and Scientific Services</td>
<td>Co-Moderator: Julie Ann Smith, DDS, MD</td>
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<td>Forensic Odontology/Pathology Unit</td>
<td>Happy Valley, OR</td>
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<td>3:15 p.m.</td>
<td>G26</td>
<td>Bitemark Analysis and Comparison: Science, Observation, and Opinion</td>
<td>Thomas J. David, DDS*; Holland Maness, DMD*</td>
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<td>3:35 p.m.</td>
<td>G27</td>
<td>The Anatomy of an Aborted Retrial Involving Bitemark Evidence</td>
<td>Robert B.J. Dorion, DDS*</td>
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<td>3:55 p.m.</td>
<td>G28</td>
<td>Bitemark Evidence — Part 2: Antemortem vs. Postmortem Bitemarks as</td>
<td>Robert B.J. Dorion, DDS*</td>
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<td>Experimental Models</td>
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<td>4:15 p.m.</td>
<td>G29</td>
<td>Unusual Bitemark Cases Demonstrate the Value of Bitemark Analysis</td>
<td>Richard H. Fixott, DDS*</td>
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<td>4:30 p.m.</td>
<td>G30</td>
<td>Assessing the Reliability of Measurements of Human Dental Casts Using an</td>
<td>Mithun Rajshekar, MFSc*</td>
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<td>Intraoral 3D Scanner</td>
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<tr>
<td>4:45 p.m.</td>
<td>G31</td>
<td>Morphoanalysis of Bitemarks</td>
<td>Charles E. Georget, PhD*; Aime Conigliaro, MA</td>
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<td>5:00 p.m.</td>
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<td></td>
<td>Dental Identifications From World War II</td>
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<tr>
<td>Moderator:</td>
<td>Judy Y. Marshall, DMD</td>
<td>Marshall Family Dentistry</td>
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<td>Port Charlotte, FL</td>
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<tr>
<td>5:05 p.m.</td>
<td>G32</td>
<td>Dental Identification Challenges Using World War II Military Dental</td>
<td>Corinne D’Anjou, DMD*; David R. Senn, DDS*; James F. Goodrich, BDS*</td>
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<td>Records: Tarawa, 2015</td>
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Friday

Dental Identification I

Moderator: Charles E. Berner, DDS
DMORT, FEMORS, OMORT, Summit Co. MEO
Cleveland, OH

Co-Moderator: Derek M. Draft, DDS
Grandville, MI

9:00 a.m. - 9:15 a.m. G33 The Trabecular Bone in Identification — Algorithms and Fractal Analysis
Sylvain Desranleau, DMD*; Robert B.J. Dorion, DDS

9:15 a.m. - 9:30 a.m. G34 Paradise Ablaze 6-2-6: Dental Identification of Charred Human Remains
Judy Y. Marshall, DMD*

9:30 a.m. - 9:45 a.m. G35 You Mean You Made an Identification Using What?
Mary Shields, DMD*; Mark L. Bernstein, DDS

9:45 a.m. - 10:00 a.m. G36 Accuracy of the Cameriere’s Method on Age Estimation on the Libyan Population
Ashref A.K. Dardouri, MSc; Roberto Cameriere; Stefano Vanin, PhD*

10:00 a.m. - 10:15 a.m. Break

Dental Identification II

Moderator: Marnie L. Sperling, DMD
Somerset, NJ

10:15 a.m. - 10:30 a.m. G37 Restorative-Era Identification of a Severed, Embalmed Head
Raymond G. Miller, DDS*; Mary A. Bush, DDS; Peter J. Bush, BS

10:30 a.m. - 10:45 a.m. G38 Annapolis Mansion Fire — January 2015: Utilizing Dental Identifications
Patrick A. Murray, DDS*; Ali Behnia, DMD; Pete N. Nickolas, DDS; Warren D. Tewes, DDS

10:45 a.m. - 11:00 a.m. G39 Identification of Decomposed Human Remains Found in a Septic Tank
Donna J. Hellwinkel, DDS*

11:00 a.m. - 11:15 a.m. G40 Dental Morphoanalysis and Identification of Monozygotic Twins
Aime Conigliaro, MA*; Charles E. Georgei, PhD

11:15 a.m. - 11:30 a.m. G41 Photographically and Radiographically Observed Dental Evidences Validated for Human Identification Purposes
Nikolaos Angelakopoulos*; Guy Willems, PhD; Ademir Franco, MSc; Steffen Fieuws, PhD; Patrick W. Thevissen, PhD

*Presenting Author
11:30 a.m. - 11:45 a.m.  **G42**  Teeth and Fire: Forensic Analysis of Teeth and Dental Material Exposed to Fire  
Joe Adserias, DDS, PhD*; Sara C. Zapico, PhD; Luis L. Cabo, MS; Steven A. Symes, PhD; Douglas H. Ubelaker, PhD; Dennis C. Dirkmaat, PhD

11:45 a.m. - 1:15 p.m.  **Lunch**

### Poster Session

11:30 a.m. - 1:00 p.m.  **G43**  The Forensic Impact of the Humanitarian Work of the Vicente Ferrer Foundation’s Rural Development Trust in India  
Joe Adserias, DDS, PhD*; Aida Dieguez, DDS; Sergio Irazusta, DDS; MD Y. Ballasubbaiah, MD; Vicente Lozano, PhD

11:30 a.m. - 1:00 p.m.  **G44**  Imaging Techniques for Intraoral Postmortem Dental Radiographs  
Ann M. Bruhn, MS*; Tara L. Newcomb, MS*; Bridget Giles, PhD

11:30 a.m. - 1:00 p.m.  **G45**  Morphological Changes in Palatal Rugae After Maxillary Surgical Procedure: Is It Possible?  
Antonio A. Antunes, PhD*; Augusto P. Oliveira; Evelyne P. Soriano, PhD; Marcus Vitor D. Carvalho, PhD; Reginaldo I.C. Campello, PhD; Gabriela G. Porto, PhD

### Software and Statistics to Assist in Identification/MFI

**Moderator:** Marnie L. Sperling, DMD  
Somerset, NJ

1:15 p.m. - 1:30 p.m.  **G46**  The Computer Program for Identification of the International Criminal Police Organization (INTERPOL) Disaster Victim Identification (DVI) System International (Plass Data System) — The New Web-Based Version 5: Changes and Discussion  
Tore T. Solheim*

1:30 p.m. - 1:45 p.m.  **G47**  New Mexico Office of the Medical Investigator: Overview, Dental Identification Statistical Data, and Mass Fatality Incident Plan  
Cristina M. Dalle Grave, DDS*; Peter W. Loomis, DDS

1:45 p.m. - 2:00 p.m.  **G48**  The Use of Dental Patterns in Decedent Identification: The Role of the New and Improved OdontoSearch 3.0 Program  
Kenneth W. Aschheim, DDS*; Bradley J. Adams, PhD*

2:00 p.m. - 2:15 p.m.  **G49**  Dental Encoding Translator Applications Suite (DEnTAS) — “Universal Dental Code Translator”  
Kenneth W. Aschheim, DDS*; Bruce Bandini, MS*

2:15 p.m. - 2:30 p.m.  **Break**
Standards of Care

Moderator: Donna J. Hellwinkel, DDS
Reno, NV

2:30 p.m. - 2:50 p.m. G50 The Odontologist's Role in Death Investigation in Cases of Deaths After Dentistry
Yolanda Nerkowski, BA; Taylor L. Gardner, BFSc; Jeff Chadwick, DDS; Kris Cunningham, MD; Robert E. Wood, DDS, PhD*

2:50 p.m. - 3:05 p.m. G51 How to Deliver Sub-Optimal Dental Care Effectively
Taylor L. Gardner, BFSc; Yolanda Nerkowski, BA; Jeff Chadwick, DDS; Kris Cunningham, MD; Robert E. Wood, DDS, PhD*

3:05 p.m. - 3:20 p.m. G52 Dental Litigation Epidemiology
Francesco Pradella, MSc*; Vilma Pinchi, PhD; Stefano Garatti, MSc; Viola Bartolini; Martina Focardi; Gian A. Norelli

3:20 p.m. - 3:35 p.m. G53 The Evaluation of 73 Dental Malpractice Cases From the Counsel of Forensic Medicine
Huseyin Afsin, PhD*; Ahmet Sadi Cagdir, MD; Abdi Ozaslan, MD; Muhammet Nabi Kantarci; Umit Naci Gundogmus; Gulnaz T. Javan, PhD

3:35 p.m. - 3:50 p.m. Break

Potpourri

Moderator: Corinne D'Anjou, DMD
Saint-Lambert, PQ, CANADA
Co-Moderator: Leigh-Ann Schuerman, DMD
Cave Creek, AZ

3:50 p.m. - 4:05 p.m. G54 Partial Faceoff Dissection in Dental Autopsy
William E. Silver, DDS*; Richard R. Souviron, DDS

4:05 p.m. - 4:20 p.m. G55 3D Analysis of Dental Crown Morphology in Laser-Scanned Dentitions: A Comparison of Three Software Packages
Ademir Franco, MSc*; Guy Willems, PhD; Sėrgio Ignácio, PhD; Paulo Souza, PhD; Patrick W. Thevissen, PhD

4:20 p.m. - 4:30 p.m. G56 Manipulation of Forensic Experts — Altering the Course of Criminal Justice in Hungary
Armin F. Farid, DDS*

*Presenting Author
**Wednesday**

**Poster Session**

<table>
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<tr>
<th>Time</th>
<th>Duration</th>
<th>Poster</th>
<th>Title</th>
<th>Authors</th>
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<tbody>
<tr>
<td>11:30 a.m.</td>
<td>- 1:00 p.m.</td>
<td>H1</td>
<td>From 3 Years to 3,000 Years: Forensic Taphonomy of Human Remains From the Irish Peatlands</td>
<td>Esther Jack, MB BCh BAO*; Niamh A. McCullagh, MSc; Linda M. Mulligan, MBBCCH</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>- 1:00 p.m.</td>
<td>H2</td>
<td>Assessment of Infrared (IR) Thermography for the Estimation of Postmortem Interval in Rats</td>
<td>Jason W. Brooks, VMD, PhD*; Stephen Lynch, PhD</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>- 1:00 p.m.</td>
<td>H3</td>
<td>Blood-Derived Biomarkers for Estimation of Postmortem Interval (PMI)</td>
<td>Isabel Costa, MS; Teresa Magalhães, PhD*; Paula Pinho, PhD; Félix Carvalho, PhD; Ricardo Silvestre, PhD; Ricardo Jorge Dinis-Oliveira*</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>- 1:00 p.m.</td>
<td>H4</td>
<td>Decomposition of Mouse Carcasses Infected With Fluorescently Labeled Bacteria Provide Insight on Postmortem Microbial Translocation</td>
<td>Zachary M. Burcham, BS*; Jennifer L. Pechal, PhD; Jeffrey L. Base, PhD; M. Eric Benbow, PhD; Carl J. Schmidt, MD; Heather R. Jordan, PhD</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>- 1:00 p.m.</td>
<td>H5</td>
<td>A Meta-Analysis of Carcass Decomposition on O‘ahu, Hawaii</td>
<td>Alexis J.L. Peterson*; Whitney A. Kodama, BA; David O. Carter, PhD</td>
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<tr>
<td>11:30 a.m.</td>
<td>- 1:00 p.m.</td>
<td>H6</td>
<td>Analysis of Possible Impact Factors on the Regeneration Process of Hematomas in the Subcutaneous Fatty Tissue</td>
<td>Kathrin Ogris, MA*; Thomas Widek; Eva M. Hassler; Patrick P. Torreiter; Andreas Petrovic, MSc; Eva Scheurer, MD</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>- 1:00 p.m.</td>
<td>H7</td>
<td>A New Approach to Collecting, Fixing, and Preparing Samples for Sperm Cells in Cases of Alleged Rape</td>
<td>Helga Haahr-Lilleveng, MD; Maria Pihlmann, MD; Anette M. D. Funder; Marianne S. Martiny, MA; Tine H. Meyer, MA; Iana Lesnikova, MD, PhD*</td>
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<tr>
<td>11:30 a.m.</td>
<td>- 1:00 p.m.</td>
<td>H8</td>
<td>A Preliminary Study of Shifting Bacterial Communities of the Face During Human Cadaver Decomposition in Southeast Texas</td>
<td>Lauren R. Smith, BS*; Joseph F. Petrosino, PhD; Sibyl R. Bucheli, PhD; Aaron M. Lynne, PhD</td>
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<tr>
<td>11:30 a.m.</td>
<td>- 1:00 p.m.</td>
<td>H9</td>
<td>Bacteria Triggering a Preference in Flesh Flies (Diptera: Sarcophagidae) Associated With Human Cadavers</td>
<td>Keli L. King*; Aaron M. Lynne, PhD; Sibyl R. Bucheli, PhD; Joseph F. Petrosino, PhD</td>
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<tr>
<td>11:30 a.m.</td>
<td>- 1:00 p.m.</td>
<td>H10</td>
<td>The Six Little Pigs: Estimation of Long-Term Postmortem Interval (PMI) Based on Bacterial Community Succession in Porcine Remains</td>
<td>Michael S. Woolf, BS*; Vanessa Sufrin, MS; Baneshwar Singh, PhD; Tal Simmons, PhD</td>
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<th>Time</th>
<th>Session</th>
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<tr>
<td>11:30 a.m.</td>
<td>H11</td>
<td>Investigation of the Utility of Five Messenger RNA (mRNA) Markers</td>
<td>Ayse Serin, PhD*, Vugar K. Huseynov, PhD; Husniye Canan, PhD; Ayca Ulubay; Mete K. Gulmen, PhD, MD</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>H12</td>
<td>Blow Flies and Nicotine: An Entomotoxicology Study</td>
<td>Paola A. Magni, PhD*, Marco Pazzi, PhD; Eugenio Alladio, MS; Marco Vincenti, MS; Marco Brandimarte, MSc; Ian Dadour, PhD</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>H13</td>
<td>Internal Validation of the Promega® PowerPlex® Y23 Amplification Kit</td>
<td>Jordan L. Clarke, BS*; Jody West; Kristin Meyer, MFS; Pamela J. Staton, PhD</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>H14</td>
<td>Study on Forensically Important Insects Collected From Medicolegal Autopsies in South Korea</td>
<td>Sang Eon Shin*; Im Joo Rhyu, PhD*; Seong Ho Yoo, PhD*; Hyung Seok Kim, PhD; Seong Hwan Park, PhD*</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>H15</td>
<td>Analysis of an Additional Nine Short Tandem Repeat (STR) Loci to 15 STR Loci and the Detection of Allele Frequencies in a Cukurova Population of Turkey</td>
<td>Ayca Ulubay*; Husniye Canan, PhD; Ayse Serin, PhD*; Necmi Cekin, MD; Mete K. Gulmen, PhD</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>H16</td>
<td>Interactions Between Microbes and Larvae on a Human Corpse</td>
<td>Vadim Mesli, MD*; Damien Charabidze, PhD; Valéry C. Hedouin, MD, PhD; Christel Neut, PhD; Didier Gosset, MD, PhD</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>H17</td>
<td>Can DNA Data Be Used to Establish a Cut-Off Time for Juvenile Sexual Assault Exams?</td>
<td>Daniela Anane-Bediakoh, BS*; Martin Lopez, MS; Holly Whillock, BS; Sheree R. Hughes-Stamm, PhD; Amy Castillo, PhD</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>H18</td>
<td>Application of a 6-Plex Microsatellite Kit in the Analysis of Aged Fecal DNA Samples: Prospective Use in Equine Slaughter Forensic Cases</td>
<td>Ketaki Deshpande, MS*; Melissa V. Oswald, MSFS; DeEtta Mills, PhD</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>H19</td>
<td>The Assessment of GeoChip™ Functional Gene Microarray as an Aid for Soil Provenance</td>
<td>Priyanka Kushwahe, MS*; DeEtta Mills, PhD</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>H20</td>
<td>Comparison of Extraction Methods From Cotton Swabs in Reference to Background DNA From Commonly Touched Surfaces</td>
<td>Meghan Roig, BS*; Thais Simoes; Bruce R. McCord, PhD; Kerry Lynn Opel, MA, PhD</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>H21</td>
<td>Wildlife Forensic Investigation: Identifying an Unidentified Specimen Using NADH Subunit 2 (ND2) and Cytochrome B (cytb) Genes</td>
<td>Hailey Mecklenon*; Ashraf Mozayani, PharmD, PhD; Hector Miranda, PhD</td>
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</table>

*Presenting Author
PATHOLOGY/BIOLOGY

11:30 a.m. - 1:00 p.m.  
**H22** Forensic Taphonomy: Investigating the Relationship Between Gross Postmortem Change and Mass Loss  
*Adam Orimoto, MS; Kanani N. Thompson; Emily Junkins, BS; Christopher G. Inoue, BS; David O. Carter, PhD*

11:30 a.m. - 1:00 p.m.  
**H23** Dynamics of Decomposition in Tropical Environments: A Multidisciplinary Approach  
*Ashley A. Matchett; Jariangely Rivera*

**Thursday — Session I**

**Pediatrics I**

**Moderator:** Carl J. Schmidt, MD  
Wayne County MEO  
Detroit, MI

8:30 a.m. - 8:45 a.m.  
**H24** Severe Retinal Hemorrhages With Retinoschisis Are Not Pathognomonic for Abusive Head Trauma  
*Kenneth D. Hutchins, MD; Mark J. Shuman, MD*

8:45 a.m. - 9:00 a.m.  
**H25** Evaluation of the Presence and Distribution of Leptomeningeal Inflammation in Cases of Sudden Death in Infancy  
*Esther Jack, MB BCh BAO*; Elisabeth Haas, MPH; Terri L. Haddix, MD

9:00 a.m. - 9:15 a.m.  
**H26** Nerve Root and Dorsal Root Ganglia (NR/DRG) Hemorrhage as an Indicator of Pediatric Traumatic Head Injury (THI)  
*Marianne E. Beynon, MD*; *Miriam E. Soto Martinez, MA*; *Jo Elle G. Peterson*; *Jennifer C. Love, PhD*; *Dwayne A. Wolf, MD, PhD*; *Glenn D. Sandberg, MD*

9:15 a.m. - 9:30 a.m.  
**H27** Accidental Injuries in Children: A Clinical Study for Improving the Forensic Interpretation of Child Physical Abuse  
*Federica Collini, MD*; *Enrico A. Muccino, MD*; *Annalisa Cappella, BS*; *Lorenza Grappeja, MD*; *Pasquale Poppa, BS*; *Alessandra Kustermann, MD*; *Cristina Cattaneo, PhD*

9:30 a.m. - 9:45 a.m.  
**H28** A Unique Type of Birth Trauma Mistaken for Abuse  
*Carolyn V. Isaac, PhD*; *Jered B. Cornelison, PhD*; *Joyce L. deJong, DO*

9:45 a.m. - 10:00 a.m.  
**H29** Histological Abnormalities of the Costochondral Growth Plate in Infants and Young Children  
*Sandacan Waduge, MD*; *Micheline Lubin, MD*; *Richard C. Harruff, MD, PhD*

10:00 a.m. - 10:30 a.m.  
**Discussion and Break**

*Presenting Author*
Presenting Author

PATHOLOGY/BIOLOGY
Las Vegas
2016

Pediatrics II

Moderator: Jeffrey M. Jentzen, MD
University of Michigan
Ann Arbor, MI

10:30 a.m. - 10:45 a.m.  H30  Risk Assessment for Asphyxia Without Doll Reenactments in Infant Deaths
Christopher Kiefer, MD*; Kent E. Harshbarger, MD, JD

10:45 a.m. - 11:00 a.m.  H31  Comparison of Safe vs. Unsafe Sleep Environments in Sudden, Unexpected Death in Infants
Michael D. Eckhardt, MD*; Steven M. White, MD, PhD; Jon Gates, MD; Eric August Eason, MD

11:00 a.m. - 11:15 a.m.  H32  Unusual Blunt Force Trauma to the Cranial Vault: Investigation of an Atypical Infant Abuse/Homicide
Jered B. Cornelison, PhD*; Carolyn V. Isaac, PhD; Brandy Shattuck, MD; Joyce L. deJong, DO

11:15 a.m. - 11:30 a.m.  H33  Infant and Child Deaths Associated With Drug Intoxication: A Series of Six Cases Over 15 Years in Eastern Virginia
Babatunde L. Stokes, MD*; Wendy M. Gunther, MD

11:30 a.m. - 11:45 a.m.  H34  Undiagnosed Metabolic Cardiomyopathy as a Cause of Pediatric Sudden, Unexpected Death: Case Report and Review of the Literature
Lauren M. Woertz; Steven M. White, MD, PhD; Audrey Deeken-Draisey, MD*

11:45 a.m. - 12:00 p.m.  H35  Use of an Automated, Nested, Multiplex, Respiratory Pathogen Polymerase Chain Reaction (PCR) Panel Postmortem in the Pediatric Forensic Setting
Tiffany Baker*; Cynthia A. Schandl, MD, PhD; S. Erin Presnell, MD; James Madory, DO; Nicholas I. Batalis, MD

12:00 p.m. - 12:15 p.m.  Discussion

12:15 p.m. - 1:30 p.m.  Lunch

Poster Session

11:30 a.m. - 1:00 p.m.  H36  A Retrospective Study of Natural Causes of Sudden Unexpected Infant Deaths in Hubei, China
Xiang Zhang, MD*; Ling Li, MD*; Guoqiang Qian, MD*; Zhiyong Yang, MD*; Tiantong Yang*; Zhaoming Guo, MD*

11:30 a.m. - 1:00 p.m.  H37  Female Suicides in Southern Marmara: A Retrospective Analysis of 8,048 Cases Between 2009 and 2014
Nursel Turkmen Inanir; Murat S. Gürses, MD*; Selçuk Çetin, MD; Mustafa N. Ural; Eser Bayraktar, MD*; Bulent Eren; Reccep Fedakar

*Presenting Author
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<th>Time</th>
<th>Session</th>
<th>Title</th>
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<tr>
<td>11:30 a.m.</td>
<td>H38</td>
<td>Early Ischemic Heart Injury: An Immunohistochemical Study of a Paradigmatic Case</td>
<td>Silvia D. Visonà, MD*; David Forni, MD; Giovanni Pierucci, MD; Luisa Andrello, MD; Antonio M.M. Osculati, MD</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>H39</td>
<td>Saddle Pulmonary Embolism With Paradoxical Coronary Artery Embolism Through a Patent Foramen Ovale: A Case Study</td>
<td>Amber L. Achesinski, BS*; Catherine B. Pearman, MPAS; Wendy M. Gunther, MD</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>H40</td>
<td>Massive Fetomaternal Transfusion (FMT): Case Reports and Review of the Literature</td>
<td>Silvana Temi, MD*; Giovanni Botta, MD; Giancarlo Di Vella, MD, PhD*</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>H41</td>
<td>The Prevalence of Paraphernalia Found at the Scene of Drug-Related Deaths</td>
<td>Jason Gene Lozano, MD*; Kimberley Molina, MD; Nicole L. Healy, BS</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>H42</td>
<td>Sudden Cardiac Death (SCD) Visualized by Postmortem Magnetic Resonance Imaging (PMMRI) — How to Make the Invisible Visible</td>
<td>Christian Jackowski, MD, EMBA*; Nicole Schwendener, HF; Anders Persson, MD, PhD; Wolf-Dieter Zech, MD</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>H43</td>
<td>Liver Laceration as a Complication of Cardiopulmonary Resuscitation (CPR)</td>
<td>Selcuk Cetin, MD*; Hasan Din, MD*; Murat S. Gürses, MD*; Filiz Eren; Bülent Eren; Eser Bayraktar, MD*</td>
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<tr>
<td>11:30 a.m.</td>
<td>H44</td>
<td>A Nine-Year Review of All-Terrain Vehicle-Related Fatalities at the West Tennessee Regional Forensic Center: 2006–2014</td>
<td>Travis M. Sullivan, BS*; Zachary O’Neill, DO</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>H45</td>
<td>Mechanisms of Death Due to Inadvertent Administration of Ionic Hypertonic Contrast Media Into the Subarachnoid Space</td>
<td>Kazuhiko Kibayashi, MD*; Ryo Shimada, PhD; Jiro Ezaki, MD</td>
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<tr>
<td>11:30 a.m.</td>
<td>H46</td>
<td>An Autopsy Case of Suspected Anti-N-Methyl-D-Aspartate Receptor (NMDAR) Encephalitis</td>
<td>Kino Hayashi, MD*; Kumiko Asakura, MD; Wakako Hikiji, MD; Tatsushige Fukunaga, MD; Yohsuke Makino, MD; Hisaomi Suzuki, MD; Motsumoto Onaya, MD; Takahiro Iizuka, MD</td>
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<td>11:30 a.m.</td>
<td>H47</td>
<td>Medical Doctor Specialized in Legal Inspections (MDSLI): A Professional Interface Between State Prosecutors and Medical Examiners — The Swiss Model</td>
<td>Emilio Scossa Baggi; Ilaria Monico, MS*; Ario Conti, BD; Franco Ghiggia, MHME; Roberto Cianella, MHME; Jhon Noseda, LLID; Luisa Andrello, MD; Tony Fracasso, MD, PhD; Patrice Mangin, MD, PhD</td>
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<tr>
<td>11:30 a.m.</td>
<td>H48</td>
<td>Expression of Heat Shock Protein 70 (HSP70) After Human Brain Injury in Different Post-Traumatic Intervals</td>
<td>Martina Focardi*; Vilma Pinchi, PhD; Defraia Beatrice; Laura Pieri; Francesca Castiglione; Gian A. Norelli</td>
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<tr>
<td>11:30 a.m.</td>
<td>H49</td>
<td><strong>Computed Tomography (CT) Findings of Unsuspected Aortic Dissection and Adult Polycystic Kidney Disease (APKD)</strong></td>
<td>Christopher J. Gordon, MD*; Edward Mazuchowski II, MD, PhD; Wendy S. Warren, DO*; Howard T. Harcke, Jr., MD</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>H50</td>
<td><strong>Pack Mentality: Fatal Mauling in the African Painted Dogs’ Zoo Exhibit</strong></td>
<td>Farshaad Bilimoria, MD*; Stacey L. Reed, DO; Jessica B. Dwyer, MD; Joseph A. DelTondo, DO; Todd M. Luckasevic, DO; Karl E. Williams, MD</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>H51</td>
<td><strong>A Fatal Moose Attack</strong></td>
<td>Petur G. Gudmannsson, MD*; Anders Eriksson, MD, PhD*; Johan Berge, MD; Henrik Druid, MD, PhD; Göran Ericsson</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>H52</td>
<td><strong>Fatality During Servicing of a Fire Extinguisher: A Case Study</strong></td>
<td>Nilesh K. Tumram, MD*</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>H53</td>
<td><strong>Getting It Right: How Seemingly Obvious Manners of Death Can Change Through Historical and Autopsy Investigations</strong></td>
<td>Phoutthasone Thirakul, MD*; Daniel L. Schultz, MD*; Kelly G. Devers, MD</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>H54</td>
<td><strong>Diagnostic Accuracy of Postmortem Imaging vs. Autopsy: A Systematic Literature Review</strong></td>
<td>Anders Eriksson, MD, PhD*; Torfinn Gustafsson, BM; Monica Hultcrantz, PhD; Malin Höistad, PhD; Stella Jacobson, PhD; Anders Persson, MD, PhD</td>
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<tr>
<td>11:30 a.m.</td>
<td>H55</td>
<td><strong>Prevalence and Etiology of Intervention-Related Deaths — A Swedish Perspective</strong></td>
<td>Torfinn Gustafsson, BM*; Peter Carlsson, MD; Fredrik Tamsen, MD, MSc; Anders Eriksson, MD, PhD</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>H56</td>
<td><strong>Treatment for Injury Predicts the Risk of Child Homicide — A Case-Control Study</strong></td>
<td>Björn Bäckström*; Jonatan Hedlund, MD; Anna Jinghede, DDS; Joakim Sturup, PhD</td>
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<tr>
<td>11:30 a.m.</td>
<td>H57</td>
<td><strong>Deaths Associated With Choking: An Istanbul Experience</strong></td>
<td>Erdinc Ozdemir*; Muhammet Nabi Kantarci; Timucin Yildirim; Sermet Koc</td>
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**Trauma**

**Moderator:** Jan M. Gorniak, DO  
*Office of the Chief Medical Examiner*  
Washington, DC

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<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Presenters</th>
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<tr>
<td>1:30 p.m.</td>
<td>H58</td>
<td><strong>A Mercury “Bullet” at Autopsy</strong></td>
<td>Sarah Long, BS*; Richard Wiggins, BS; Jennifer T. Akin, MS; Amy C. Gruszecki, DO</td>
</tr>
<tr>
<td>1:45 p.m.</td>
<td>H59</td>
<td><strong>Chain Saw-Related Fatalities: What Is All the Buzz About?</strong></td>
<td>Abigail J. Grande, BS*; Shawn A. Silver, BS; Joseph A. Prahlow, MD; Joyce L. deJong, DO</td>
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<tr>
<td>2:00 p.m. - 2:15 p.m.</td>
<td>H60</td>
<td>Intrepretation of Pedestrian Injuries: A Collaborative Research Approach</td>
<td>Jeffrey M. Jentzen, MD*; Joel B. MacWilliams, BA; Diana I. French, BA; Stewart C. Wang, MD</td>
</tr>
<tr>
<td>2:15 p.m. - 2:30 p.m.</td>
<td>H61</td>
<td>Characteristics of Traffic Crash-Related Blunt Traumatic Aortic Injury (BTAI)</td>
<td>Michael Freeman, MD, PhD*; Todd M. Luckasevic, DO; Karl E. Williams, MD; Anders Eriksson, MD</td>
</tr>
<tr>
<td>2:30 p.m. - 2:45 p.m.</td>
<td>H62</td>
<td>If at First You Don’t Succeed ...</td>
<td>Richard C. Fries, DO; Tasha Z. Greenberg, MD; Nizam Peerwani, MD; Allison Mautone, MD*</td>
</tr>
<tr>
<td>2:45 p.m. - 3:05 p.m.</td>
<td>H63</td>
<td>Pathologist Consensus in the Interpretation of Patterned Injuries From Photographs: Reasons for Lack of Consensus</td>
<td>William R. Oliver, MD*</td>
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<tr>
<td>3:05 p.m. - 3:30 p.m.</td>
<td></td>
<td>Discussion and Break</td>
<td></td>
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<tr>
<td>3:30 p.m. - 3:45 p.m.</td>
<td>H64</td>
<td>Effect of Angled Impact on Bone Fracture Pattern</td>
<td>Jacob E. Hoerter*; David J. Porta, PhD; Tyler A. Kress, PhD</td>
</tr>
<tr>
<td>3:45 p.m. - 4:00 p.m.</td>
<td>H65</td>
<td>Sudden Unexpected Deaths Due to Sarcoidosis: A Forensic Autopsy Study</td>
<td>Tiantong Yang*; Xiang Zhang, MD*; Zhaoming Guo, MD*; Allen Burke, MD; Mary G. Ripple, MD; David R. Fowler, MD; Ling Li, MD</td>
</tr>
<tr>
<td>4:00 p.m. - 4:15 p.m.</td>
<td>H66</td>
<td>Sudden Unexpected Deaths Due to Intracranial Meningioma: A Presentation of Six Fatal Cases and a Discussion of the Mechanisms of Death</td>
<td>Lorenzo Gatto, MD*; Stephen J. Cina, MD; James A. Filkins, MD, JD, PhD; Serenella Serinelli, MD</td>
</tr>
<tr>
<td>4:15 p.m. - 4:30 p.m.</td>
<td>H67</td>
<td>Non-Rheumatoid Fibrinous Pericarditis: A Medical Examiner Quest With an Update on Myocarditis and Use of Molecular Diagnostic Techniques</td>
<td>Avneesh Gupta, MD*; Kilak Kesha, MD; Francisco J. Diaz, MD; Carl J. Schmidt, MD</td>
</tr>
<tr>
<td>4:30 p.m. - 4:45 p.m.</td>
<td>H68</td>
<td>Liver Pathology at Autopsy in First Presentation of Diabetic Ketoacidosis (DKA)</td>
<td>Anita Lal, MD*; Jacqueline L. Parai, MD; Chris Milroy, MD, LLB</td>
</tr>
<tr>
<td>4:45 p.m. - 5:05 p.m.</td>
<td>H69</td>
<td>DNA Testing in Homicide Investigations</td>
<td>Joseph A. Prahlow, MD*; Thomas J. Cameron; Alexander Arendt, BS; Kenneth Cornelis; Anthony Bontrager; BA; Michael Suth, BS; Lisa B. Black, BS; Rebecca Tobey, BS; Sharon M. Pollock, BS; Shawn Stur, BS; Kenneth Cotter, JD; Joel Gabrielse, JD</td>
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</table>
### Thursday — Session II

#### Jay Dix Memorial Bonus Day

*Moderator:* Michael A. Graham, MD  
*Saint Louis University School of Medicine*  
*Division of Forensic Pathology*  
*St. Louis, MO*

<table>
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<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Presenters</th>
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<tbody>
<tr>
<td>9:00 a.m.</td>
<td>H70</td>
<td><strong>Jay Dix Memorial Lecture Series</strong></td>
<td>Michael A. Graham, MD*; Randy L. Hanzlick, MD*; Joseph A. Prahlow, MD*;</td>
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<td>Jonathan Hayes, MD*; Keith Pinckard, MD, PhD*; Rudy J. Castellani, MD*</td>
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<tr>
<td>9:10 a.m.</td>
<td>H70</td>
<td><strong>Electricity and Death</strong></td>
<td>Michael A. Graham, MD*</td>
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<tr>
<td>10:00 a.m.</td>
<td>H70</td>
<td><strong>Blunt Force Injuries</strong></td>
<td>Joseph A. Prahlow, MD*</td>
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<tr>
<td>10:50 a.m.</td>
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<td><strong>Break</strong></td>
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<tr>
<td>11:10 a.m.</td>
<td>H70</td>
<td><strong>Postmortem Changes</strong></td>
<td>Jonathan Hayes, MD*</td>
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<tr>
<td>12:00 p.m.</td>
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<td><strong>Lunch</strong></td>
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<tr>
<td>2:00 p.m.</td>
<td>H70</td>
<td><strong>Infant Deaths</strong></td>
<td>Keith Pinckard, MD, PhD*</td>
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<tr>
<td>2:50 p.m.</td>
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<td><strong>Break</strong></td>
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<tr>
<td>3:00 p.m.</td>
<td>H70</td>
<td><strong>Pediatric Head Trauma</strong></td>
<td>Rudy J. Castellani, MD*</td>
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<tr>
<td>3:50 p.m.</td>
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<td><strong>Discussion</strong></td>
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*Presenting Author*
PATHOLOGY/BIOLOGY

Friday — Session I

Multidisciplinary Session: Pathology/Biology Session I/Toxicology

**Moderator:** Karen S. Scott, PhD  
Arcadia University  
Glenside, PA

**Co-Moderator:** Sarah Meyers, MD  
University of North Dakota -  
School of Medicine  
Dept of Pathology  
Grand Forks, ND

8:30 a.m. - 8:45 a.m.  **K65**  
Postmortem Findings in Deaths Related to Synthetic Cannabinoids  
Robert Kronstrand, PhD*

8:45 a.m. - 9:00 a.m.  **H71**  
Insights Into the Postmortem Redistribution (PMR) of Diazepam, Methadone, and Morphine: Sampling Site, Time, and Method Matter  
Eric Lemaire, MD*; Carl J. Schmidt, MD

9:00 a.m. - 9:15 a.m.  **K66**  
Report of Increasing Acetyl Fentanyl Deaths in Allegheny County, Pennsylvania  
Todd M. Luckasevic, DO; Jennifer K. Janssen, MS; Abdulrezak M. Shakir, MD; Karl E. Williams, MD; Jessica B. Dwyer, MD*

9:15 a.m. - 9:30 a.m.  **H72**  
Postmortem Distribution and Detection of Butyryl Fentanyl  
Meghan S. Kessler, DO*; Rebecca Jufer Phipps, PhD; Meghan A. Mulligan, MS; Barry S. Levine, PhD; Russell T. Alexander, MD; Mary G. Ripple, MD; David R. Fowler, MD

9:30 a.m. - 9:45 a.m.  **K67**  
The Real Heroin in South Florida: The Detection of a Fentanyl Analog in Postmortem Specimens Using Liquid Chromatography (LC) - Ion Trap Tandem Mass Spectrometry (MS/MS)  
Elisa N. Shoff, BS*; Diane Boland, PhD

9:45 a.m. - 10:00 a.m.  **H73**  
Buprenorphine Prevalence in the Office of the Chief Medical Examiner (OCME) Cases Positive for Drugs of Abuse: To Screen or Not to Screen?  
Diana Geli*; Rebecca Jufer Phipps, PhD; Meghan A. Mulligan, MS; Mary G. Ripple, MD; David R. Fowler, MD

10:00 a.m. - 10:30 a.m.  Break  
Supported by: Randox Toxicology, Ltd.

*Presenting Author
Multidisciplinary Session: Pathology/Biology Session I/Toxicology

Moderator: Dustin Tate Yeatman, MS
West Palm Beach, FL

Co-Moderator: Sarah Meyers, MD
University of North Dakota - School of Medicine
Dept of Pathology
Grand Forks, ND

10:30 a.m. - 10:45 a.m.  K68  Blood Clonazepam and 7-Aminoclonazepam Trends in Postmortem and Driving Under the Influence of Drugs (DUID) Cases
Lucas Marshall, MS*; Timothy A. Robert, PhD; David L. Black, PhD; Rebecca Heltsley, PhD

10:45 a.m. - 11:00 a.m.  H74  Chi-Squared Automatic Interaction Detection (CHAID) Analysis as a Technique for Discerning Patterns of Drug Use in Postmortem Toxicology
Candace Savonen, BS; Carl J. Schmidt, MD*; Michael Bannon, PhD

11:00 a.m. - 11:15 a.m.  K69  A Case of Death by Diclozepam: Lorazepam in Disguise
Fessessework Guale, DVM*; Warren C. Samms, PhD; Jeffrey Walterscheid, PhD; Dana L. Johnson

11:15 a.m. - 11:30 a.m.  H75  Deaths Associated With Synthetic Cannabinoids in Mississippi
Mark M. LeVaughn, MD*; Brent Davis, MD*; Lisa Funte, MD; Thomas Dobbs, MD

11:30 a.m. - 11:45 a.m.  K70  WITHDRAWN

11:45 a.m. - 12:00 p.m.  H76  Using Enzyme-Multiplied Immunoassay Technique (EMIT) Analysis of Vitreous Humor to Identify Heroin Use at Autopsy
Brandi C. McCleskey*; C. Andrew Robinson, Jr., PhD; Daniel W. Dye, MD

12:00 p.m. - 1:30 p.m.  Lunch

Poster Session

11:30 a.m. - 1:00 p.m.  H77  Post-Traumatic Meningitis in the Setting of an Accidental Fall of a Two-Year-Old Child
Krishna D. Shah, MD*; Sarah A. Higdon, MD; Meredith H. Frame, MD; Gregory J. Davis, MD

11:30 a.m. - 1:00 p.m.  H78  Defining “Mass Fatality Incident” for Medicolegal Jurisdictions in the United States: A Planning Tool
Allison Woody; Jason M. Wiersema, PhD*; Frank DePaolo, BS; Emily Carroll; Adriana M. Fernandez, BS; Rachel Canfield, BA

11:30 a.m. - 1:00 p.m.  H79  Unexpected Pediatric Death Due to Congenital Mesenteric Defect
Hannah C. Jarvis, MRCS*; Carolyn A. Kappen, MD

*Presenting Author
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<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>Entrance or Exit? A Multidisciplinary Approach to Gunshot Wound Interpretation on Fresh Remains</td>
<td>MariaTeresa A. Tersigni-Tarrant, PhD*; Deiter J. Duff, MD*; Jane W. Turner, PhD, MD</td>
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<td>11:30 a.m. - 1:00 p.m.</td>
<td>In-Custody Deaths in Sweden: 1992-2014</td>
<td>Susan Sprogoe-Jakobsen*; Jonn Ekman, BM; Anders Eriksson, MD, PhD</td>
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<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>Case Report of Cerebral Tissue Pulmonary Embolism (CTPE) Following Blunt Force Head Injuries</td>
<td>Paul V. Benson, MD; Cory Bosworth, BS*</td>
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<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>A Retrospective Study of the Histologic Features and Scene Investigation in the Differential of Homicidal and Accidental Childhood Asphyxial Deaths</td>
<td>Theodore T. Brown, MD*; Nicholas I. Batalis, MD; Joni L. McClain, MD; Tracey S. Corey, MD; Kim A. Collins, MD; Jeffrey M. Jentzen, MD; Joseph A. Prahlow, MD</td>
</tr>
<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>Postmortem Iris Recognition and Its Application in Human Identification</td>
<td>Alora Sansola*; Dennis J. Chute, MD; Robert J. Bready, MS; Amy N. Brodeur, MFS</td>
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<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>A Retrospective Review of All-Terrain Vehicle (ATV) -Related Fatalities in Puerto Rico</td>
<td>Javier G. Serrano, MD*; Carlos F. Chavez-Arias, MD</td>
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<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>Heart Fatty Acid Binding Protein (H-FABP): Early Detection of Myocardial Infarction in Postmortem Analysis</td>
<td>Shashi K. Jasra, PhD*; Sean Murphy, BSc; Azin Shirin-Bayan; Janeta Szczepanik, BS; Janelle Hinds, BS; Pardeep K. Jasra, PhD; David Shum, MD</td>
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<td>11:30 a.m. - 1:00 p.m.</td>
<td>Deaths Due to Carbon Monoxide Intoxication Involving Burning Charcoal Briquettes in Enclosed Spaces</td>
<td>Patricia Aronica, MD*; Jack M. Titus, MD; David R. Fowler, MD</td>
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<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>Influence of “Final Exit” on Asphyxial Suicides in New Mexico: A Retrospective Review</td>
<td>Adela S. Magallanes, BS*; Hannah A. Kastenbaum, MD*</td>
</tr>
<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>North Carolina Deaths Involving Acetyl Fentanyl: A Two-Year Retrospective Review</td>
<td>Kimberly E. Janssen*; Justin O. Brower, PhD; Michelle B. Aurelius, MD; Ruth E. Winecker, PhD</td>
</tr>
<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>Human or Non-Human: Identification of a Gastrointestinal Tract</td>
<td>Sarah Schaerli*; Nadja Morf, MS; Michael Thali, MD; Dominic Gascho*</td>
</tr>
<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>Tire Marks: Don’t Tread on Me</td>
<td>Dennis J. Chute, MD*; Robert J. Bready, MS</td>
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<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>Micro-Computed Tomography (CT) Analysis of Deadly Gunshot Wounds</td>
<td>Paolo Fais, MD; Chiara Giraudo, MD; Guido Pelletti, MD; Alessia Viero, MD; Diego Miotto; Massimo Montisci, PhD; Giovanni Cecchetto, MD, PhD*</td>
</tr>
</tbody>
</table>
11:30 a.m. - 1:00 p.m.  H93 When Insect Colonization Starts Before Death: A Case From Central Italy
Stefano Vanin, PhD*; Martina Focardi*; Manuela Bonizzoli, MD; Marialuisa Migliaccio, MD; Laura Tadini Buoninsegni, MD; Marco Mangini, MD; Vilma Pinchi, PhD; Gian A. Norelli

11:30 a.m. - 1:00 p.m.  H94 Medicolegal Issues in Lethal Necrotizing Fasciitis: Presentation of a Case Series
Paolo Fais, MD*; Giovanni Cecchetto, MD, PhD; Renzo Giordano, MD; Massimo Montisci, PhD; Dario Raniero, PhD; Federica Bortolotti, PhD, MD; Franco Tagliaro, PhD, MD

11:30 a.m. - 1:00 p.m.  H95 Recreational Sporting Activity Vehicle-Related Deaths
Samuel Prahlow*; Andrew Renner, MD; Abigail J. Grande, BS; Joyce L. deJong, DO; Joseph A. Prahlow, MD

11:30 a.m. - 1:00 p.m.  H96 Facial Dissection: Two Case Reports Showing the Need for This Special Autopsy Technique
Bruno M. Santos, MSc*; Luisa Eiras, MD; Maria C. Mendonça, PhD

11:30 a.m. - 1:00 p.m.  H97 Forensic Botany: Judicial or Circumstantial Evidence? A Case Report and Review of the Literature
Isabella Aquila, MD*; Ciro Di Nunzio, MFS, PhD*; Silvia Boca; Pietrantonio Ricci*

11:30 a.m. - 1:00 p.m.  H98 The Forensic Applications of 3D Postmortem Multislice Computed Tomography (PMCT): From “Radiopsy” to “Virtopsy”
Isabella Aquila, MD*; Ciro Di Nunzio, MFS, PhD; Carmela Falcone, MD; Oscar Tamburrini, PhD; Silvia Boca; Pietrantonio Ricci*

11:30 a.m. - 1:00 p.m.  H99 Right Atrial Infarction With Rupture
Sait Özsöy, MD*; Sultan Pehlivan; Bahadir Özen; Gulnaz T. Javan, PhD

Toxicology for Pathologists

Moderator: Karen F. Ross, MD
Montgomery County Forensic Services Division
Conroe, TX

1:30 p.m. - 1:45 p.m.  H100 Lung Weights in Deaths Due to Drug Intoxication
Heather I. Chen, BA*; Joyce L. deJong, DO

1:45 p.m. - 2:00 p.m.  H101 Heroin and Asthma Deaths in Cook County, Illinois — A Two-Year Review
Serenella Serinelli, MD*; Matthew F. Fox, MD; Ponni Arunkumar, MD; Lorenzo Gitto, MD

2:00 p.m. - 2:15 p.m.  H102 Utility of Toxicology Screening in Older Adults Based on History and Scene Investigation
Matthew F. Fox, MD*; Steven M. White, MD, PhD

*Presenting Author
PATHOLOGY/BIOLOGY

2:15 p.m. - 2:30 p.m.  H103 A Prospective Double-Blinded Comparison of Autopsy and Postmortem Computerized Tomography (PMCT) for the Evaluation of Potential Drug Poisoning Deaths
Ian Paul, MD*; Sarah Lathrop, DVM, PhD; Gary M. Hatch, MD; Chandra Y. Gerrard, BS; Valerie Poland, BA; Ross E. Zumwalt, MD; Sam W. Andrews, MD; Jan Price, RN, MSA; Gary W. Mlady, MD; Jennifer W. Pohl, MD, PhD; Brad W. Cushnyr, MD; Philip W. Wiest, MD; Kurt B. Nolte, MD

2:30 p.m. - 2:45 p.m.  H104 Heroin-Related Deaths in Denver, Colorado
Meredith A. Frank, MD*

2:45 p.m. - 3:00 p.m.  H105 Case Report: Fatal Use of a Suspected Herbal Medication
Tiffany O’Neill, DO*; Donald R. Jason, MD, JD

3:00 p.m. - 3:30 p.m.  Break

Pathology — Miscellaneous

Moderator: Karen F. Ross, MD
Montgomery County Forensic Services Division
Conroe, TX

3:30 p.m. - 3:45 p.m.  H106 Postpartum Non-Atherosclerotic Spontaneous Coronary Artery Dissection (NA-SCAD) Recurrence in Subsequent Pregnancies: A Case Report
Casey P. Bitting, DO*; Ross E. Zumwalt, MD

3:45 p.m. - 4:00 p.m.  H107 Custodial Suicides: A Review of Suicides of Incarcerated Persons Investigated by the Harris County Institute of Forensic Sciences Over a Ten-Year Period
Sara N. Doyle, MD*; Sharon M. Derrick, PhD

4:00 p.m. - 4:15 p.m.  H108 Deaths Associated With a November 2014 Snowstorm (“Winter Storm Knife”) in Erie County, New York
Katherine F. Maloney, MD*; Nicole A. Yarid, MD; Janinne Blank; Tara J. Mahar; MD

4:15 p.m. - 4:30 p.m.  H109 Effects of Weather and Lunar Phases on Forensic Autopsy Case Load: A Four-Year Review
Matthew D. Cain, MD*; Daniel W. Dye, MD

4:30 p.m. - 4:45 p.m.  H110 Trends in Officer-Involved Firearm Deaths in Oklahoma From 2005 to 2014
Kyla M. Jorgenson, MSc*; Andrea L. Wiens, DO; Eric Pfeifer, MD; Joshua Lanter, MD

4:45 p.m. - 5:00 p.m.  H111 Emergency Management, Death Investigation, and Pathology of a Mass Fatality Industrial Workplace Accident: The La Porte, Texas, Dupont® Plant Incident
Pramod Gumpeni, MD*; Jason M. Wiersema, PhD; Allison Woody

*Presenting Author
Friday — Session II

Insects and DNA

Moderator: M. Eric Benbow, PhD
Michigan State University
Depts of Entomology & Osteopathic Med Specialties
East Lansing, MI

8:30 a.m. - 8:45 a.m.  H112  Cadaver Gravesoil Microbial Profiles During Decomposition
Sheree J. Finley, MS*; Jennifer L. Pechal, PhD; M. Eric Benbow, PhD;
Boakai K. Robertson, PhD; Gulnaz T. Javan, PhD

8:45 a.m. - 9:00 a.m.  H113  The Influence of Predator Presence and Habitat Type on Blow Fly Oviposition
Kristi Bugajski, PhD*

9:00 a.m. - 9:15 a.m.  H114  Dynamics of Necrophagous Insect Species and Bacteria From Swine Carcasses
During the Warm Season in Romania
Lavinia Iancu, PhD*; Cristina Purcarea, PhD

9:15 a.m. - 9:30 a.m.  H115  Postmortem Community Dynamics of the Larval Mass Microbiome
Emily Junkins, BS*; David O. Carter, PhD

9:30 a.m. - 9:45 a.m.  H116  Indoor vs. Outdoor Forensic Entomology: Exploring the Differences, Challenges,
and Opportunities of Indoor Scenes
Michelle R. Sanford, PhD*

9:45 a.m. - 10:15 a.m.  Break

10:15 a.m. - 10:30 a.m.  H117  The Utility of Soil Eukaryotes During Human Decomposition and Their Potential
Forensic Applications
Vanessa Sufrin, MS*; Tawni L. Crippen, PhD; Jeffery K. Tomberlin, PhD;
Aaron M. Tarone, PhD; Jennifer L. Pechal, PhD; M. Eric Benbow, PhD;
Baneshwar Singh, PhD*

10:30 a.m. - 10:45 a.m.  H118  Heat Signatures Produced by Maggot Masses: Using Forward Looking Infrared
Radar (FLIR) Mounted on a Helicopter to Locate Human Remains
Ian Dadour, PhD*; Michael Lee, PhD

10:45 a.m. - 11:00 a.m.  H119  Statistical Confidence Limits for a Prediction of Carrion Insect Age Based on a
Categorical Response Variable
Lynn R. LaMotte, PhD; Amanda L. Roe, PhD; Jeffrey D. Wells, PhD*;
Leon G. Higley, PhD

11:00 a.m. - 11:15 a.m.  H120  Thanatotranscriptome: Gene Expression in Cadaver Livers
Gulnaz T. Javan, PhD; Ismail Can, BS; Sheree J. Finley, MS*; Shivani Soni, PhD

*Presenting Author
### PATHOLOGY/BIOLOGY

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<tr>
<td>11:15 a.m.</td>
<td>H121 An Evaluation of a New Rapid DNA Platform for Field-Forward Applications</td>
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<td>Rachel E. Wiley, MFS; Kelly Sage, BS; Bruce Budowle, PhD; Bobby L. LaRue, Jr., PhD*</td>
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<tr>
<td>11:35 a.m.</td>
<td>Discussion</td>
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<td>11:50 a.m.</td>
<td>Lunch</td>
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#### Skin Trace Evidence and More

**Moderator:** Heather R. Jordan, PhD  
**Co-Moderator:** Rob Knight, PhD

- **1:30 p.m. - 1:45 p.m.**  
  **H122** Thanatophagy in Brain and Heart Tissues  
  Gulnaz T. Javan, PhD*; Insu Kwon; Sheree J. Finley, MS; Youngil Lee, PhD

- **1:45 p.m. - 2:00 p.m.**  
  **H123** Novel Association Between the Thanatome and Postmortem Interval (PMI)  
  Gulnaz T. Javan, PhD*; Ismail Can, BS; Nathalie Lorenzo; Sheree J. Finley, MS; Jennifer G. Mulle, PhD

- **2:00 p.m. - 2:15 p.m.**  
  **H124** Inferring Patterns of Occupancy From Human Microbial Signatures  
  Simon Lax*; Jack Gilbert, PhD

- **2:15 p.m. - 2:30 p.m.**  
  **H125** Evaluating the Skin Microbiome as Trace Evidence on Common Surface Types  
  Jessica L. Metcalf, PhD; Embriette R. Hyde, BS; Se Jin Song, BA; Simon Lax; Jack Gilbert, PhD; David O. Carter, PhD; Rob Knight, PhD

- **2:30 p.m. - 2:45 p.m.**  
  **H126** Drugs and Bugs (Bacteria): Does What You Use Relate to What You Grow?  
  Jennifer L. Pechal, PhD*; Carl J. Schmidt, MD; Heather R. Jordan, PhD; M. Eric Benbow, PhD

- **2:45 p.m. - 3:00 p.m.**  
  Discussion

- **3:00 p.m. - 3:15 p.m.**  
  Break

- **3:15 p.m. - 3:30 p.m.**  
  **H127** A Predictive Knowledgebase Linking Microbial Signatures to Human Lifestyle Characteristics  
  Jack Gilbert, PhD*; Jose Lopez, PhD; Simon Lax; George T. Duncan, PhD; Jessica L. Metcalf, PhD

- **3:30 p.m. - 3:45 p.m.**  
  **H128** Do Postmortem Skin Microbial Communities Change During Morgue Transit and Cooler Storage?  
  Whitney A. Kodama, BA*; David O. Carter, PhD; Jessica L. Metcalf, PhD; Rob Knight, PhD

*Presenting Author
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<tr>
<td>3:45 p.m. -</td>
<td>H129</td>
<td>The Human Postmortem Microbiome and Manner of Death</td>
<td>M. Eric Benbow, PhD*; Jennifer L. Pechal, PhD; Carl J. Schmidt, MD; Heather R. Jordan, PhD</td>
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<td>4:05 p.m. -</td>
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<td><strong>Discussion</strong></td>
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<td>4:05 p.m. -</td>
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<td><strong>Saturday</strong></td>
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**Saturday**

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<tr>
<td>11:00 a.m. - 11:15 a.m.</td>
<td>H138</td>
<td><strong>Anatomical Larynx Variations and Hyoid and Thyroid Fractures</strong></td>
<td>Joao E.S. Pinheiro, MD*; Jose L. Cascalana, PhD; Benito Lopez de Abajo, MD; Xose L. Otero, PhD; Maria Sol Rodriguez-Calvo, PhD</td>
</tr>
<tr>
<td>11:15 a.m. - 11:30 a.m.</td>
<td>H139</td>
<td><strong>Social Media and Medicolegal Death Investigation: Logged in … to the Morgue</strong></td>
<td>Lorenzo Gitto, MD*; Stephen J. Cina, MD; Ponni Arunkumar, MD; Matthew F. Fox, MD; Serenella Serinelli, MD</td>
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<tr>
<td>11:30 a.m. - 11:45 a.m.</td>
<td>H140</td>
<td><strong>What is Sex? Autopsy Documentation and Death Certification in the Transgender Population</strong></td>
<td>Jan M. Gorniak, DO*</td>
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<td>11:45 a.m. - 12:00 p.m.</td>
<td>H141</td>
<td><strong>The Current System of Forensic Science Inspection and Accreditation in China</strong></td>
<td>Zhaoming Guo, MD*; Ling Li, MD*; Tiantong Yang*; Xiang Zhang, MD*</td>
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Wednesday

Poster Session

11:30 a.m. - 1:00 p.m.  I1  Cyberbullying: The Violence Behind Technology and Implications for Adolescents’ Self-Esteem
Ana Rato, MS; Celina Manita, PhD; Ricardo Jorge Dinis-Oliveira; Teresa Magalhães, PhD*

11:30 a.m. - 1:00 p.m.  I2  Fatherhood and Incarceration: Primary Results on Parenthood and Imprisonment
Susanna Pietralunga, PhD; Alessandro Taurino, PsyD; Rosalinda Cassibba, PsyD; Giuliana Lacalandra, PsyD; Elisabetta Preti, PsyD; Maria Pasceri, PhD; Giannmichele Laquale, PhD; Alessio Ostuni, MD; Nicola Petruzelli, PhD; Anna Cassano, PsyD; Roberto Catanesi, MD; Ignazio Grattagliano, PsyD*

11:30 a.m. - 1:00 p.m.  I3  Traumatic Exposure and Competency to Stand Trial: Describing Juvenile Offender Characteristics
Sheresa Christopher, PhD*; Christopher Fields, MD*; Diana Mullis, MD*; Jennifer Steadham, PhD

11:30 a.m. - 1:00 p.m.  I4  WITHDRAWN

11:30 a.m. - 1:00 p.m.  I5  Made Up by Makeup — Pretense of an Offense
Sabrina Mauf*; Rosa M. Martinez, MD; Christine Bartsch, MD

Thursday

Ethical Considerations and Treatment Issues

Moderator: Dean Michael De Crisce, MD
Avenel, NJ

Co-Moderator: John L. Young, MD
New Haven, CT

8:30 a.m. - 10:30 a.m.  I6  Ethical Responsibilities of Physicians: Capital Punishment in the 21st Century
Robert Weinstock, MD*; William C. Darby, MD*; Chinmoy Gulrajani, MD*; Karen B. Rosenbaum, MD*

10:30 a.m. - 10:45 a.m.  Break

10:45 a.m. - 11:00 a.m.  I7  The Forensic Quality Challenges of the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) and Neuroscience
John L. Young, MD*
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:00 a.m. - 11:15 a.m.</td>
<td>I8</td>
<td>Evaluating Access to Substance Abuse Treatment in a Public Hospital Setting for Persons on Probation Under California’s Realignment Program</td>
<td>Eric Chaghouri*; Kimberly Brown, MD*; Kate Taylor, PhD; Kellie Spector, BS</td>
</tr>
<tr>
<td>11:15 a.m. - 11:30 a.m.</td>
<td>I9</td>
<td>Predicting Success: A Study of Demographic Indicators of Success in Prison Career and Technology Education Training Programs</td>
<td>Ronald R. Thrasher, PhD*; Kimberly Litterell, BS*</td>
</tr>
<tr>
<td>11:30 a.m. - 11:50 a.m.</td>
<td>I10</td>
<td>Risk Factors and Legal Implications of Psychiatric Patient Elopement From Hospital Settings</td>
<td>George Elias*</td>
</tr>
<tr>
<td>11:50 a.m. - 1:00 p.m.</td>
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<td>Lunch</td>
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</tr>
</tbody>
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**Poster Session**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>I11</td>
<td>Stopping the Revolving Door: Identifying Factors Associated With Repeated Trial Competency Evaluations</td>
<td>Bipin Subedi, MD; Martin Nau, MD*; Elizabeth P. Moreira, MA</td>
</tr>
<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>I12</td>
<td>The Detection of Feigned Legal Knowledge Deficits in Defendants Undergoing Competency to Stand Trial Evaluations: The Use of the Inventory of Legal Knowledge (ILK)</td>
<td>Emily D. Gottfried, PhD*; Joyce L. Carbonell, PhD; B. Lee Hudson, PhD</td>
</tr>
<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>I13</td>
<td>WITHDRAWN</td>
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<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>I14</td>
<td>Elder Abuse and Violence: Descriptions of the Phenomenon by Health Care Workers From Two Italian Hospitals</td>
<td>Graziamaria Corbi, PhD; Ignazio Grattagliano, PsyD*; Lidia Scarabaggio, RN; Carlo Sabbà, MD; Giorgio Fiore, MD; Nicola Ferrara, MD; Roberto Catanesi, MD; Carlo P. Campobasso, MD, PhD</td>
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**Sexual Behavior**

**Moderator:** Christopher R. Thompson, MD  
Los Angeles, CA

**Co-Moderator:** R. Gregg Dwyer, MD, EdD  
Medical University of South Carolina  
Community & Public Safety Psychiatry Division  
Charleston, SC

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
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</tr>
</thead>
<tbody>
<tr>
<td>1:00 p.m. - 1:20 p.m.</td>
<td>I15</td>
<td>Explorative Study on the Level of Online Sexual Activities and Sexual Paraphilias</td>
<td>Cinzia Gimelli, PsyD, PhD*; Melania Lugli, PhD; Davide Dèttore, PsyD, PhD; Andrea Giannelli, PHD</td>
</tr>
</tbody>
</table>
1:20 p.m. - 3:20 p.m.  I16  The Assessment, Treatment, and Community Management of Sex Offenders
R. Gregg Dwyer, MD, EdD*; J. Paul Fedoroff, MD*; Lisa Murphy, MCA*; Rebekah Ranger, BA*; Natasha M. Knack, BA*

3:20 p.m. - 3:40 p.m.  Break

3:40 p.m. - 4:00 p.m.  I17  Autoeroticism in Autism Spectrum
Denise C. Kellaher*

4:00 p.m. - 4:30 p.m.  I18  A Scientist-Practitioner Model for the Identification and Interpretation of Sadistic Offenders
Julian C.W. Boon, PhD*; Lynsey F. Gozna, PhD

4:30 p.m. - 5:00 p.m.  I19  Interpreting and Assessing Benign and Malign Sexual and Non-Sexual Necrophilous Interests in Criminal Cases
Lynsey F. Gozna, PhD*; Julian C.W. Boon, PhD

Friday

Psychopathy and Violence

Moderator: Raymond H. Hamden, PhD
The Foundation for International Human Relations
Washington, DC

Co-Moderator: Samuel J. Leistedt, MD, PhD
Baudour, BELGIUM

8:30 a.m. - 8:45 a.m.  I20  Effects of a Treatment Program for Combat Veterans Charged With Domestic Violence
Giuseppe Troccoli, MD*; Mary Sullivan, MSN*

8:45 a.m. - 9:05 a.m.  I21  The Psychopathy Checklist-Revised (PCL-R) Use for Psychopath Diagnosis — A Study of a Sample of Italian Female Offenders Deemed a Danger to Society
Felice F. Carabellese, MD*; Andrea Pinotti, MD; Donatella La Tegola, PhD; Ilaria Rossetto, MD; Filippo Franconi, MD; Rosa Taratufolo, MD; Roberto Catanese, MD

9:05 a.m. - 9:25 a.m.  I22  From Forensic Sciences to the Stars: Study for the Implementation of a Protocol to Protect Astronauts Based on an Evaluation of Criminal Trials and Behavioral Genetics
Vincenzo Lusa, JD*; Annarita Franza, PhD*

9:25 a.m. - 9:40 a.m.  Break

9:40 a.m. - 9:55 a.m.  I23  Suicide Note Writers: Are Medicolegal and Forensic Psychiatric Items Linked?
Pasquale Beltempo, MD*; Ilaria De Vitis, MD*; Roberto Catanese, MD

*Presenting Author
9:55 a.m. - 10:40 a.m.  I24  Stalking Charges Among Defendants Referred for Competency to Stand Trial and Criminal Responsibility Evaluations: A 10-Year Case Series  
Christopher Fields, MD*; Sheresa Christopher, PhD*; Diana Mullis, MD*; Adam Bloom, MD*

10:40 a.m. - 11:10 a.m.  I25  The Sound of Music: Effects on Post-Traumatic Stress Disorder (PTSD)  
Sundeep S. Randhawa, MD*; Michael Liepman, MD

11:10 a.m. - 11:30 a.m.  I26  Reducing the Risk of Violence in a Psychiatric Inpatient Setting by Examining External Factors  
Rebecca Najera, DO*

11:30 a.m. - 12:00 p.m.  I27  WITHDRAWN

12:00 p.m. - 1:00 p.m.  Lunch

Poster Session

11:30 a.m. - 1:00 p.m.  I28  The Risk of Assault by Patients in Psychiatry Settings: A Case Report and Review of the Literature  
Giancarlo Di Vella, MD, PhD*; Lucia Tattoli, PhD; Fiammetta Marella; Mary Sullivan, MSN; Roberto Catanesi, MD; Ignazio Grattagliano, PsyD

11:30 a.m. - 1:00 p.m.  I29  Aggression and Harassment: An Underrated Risk in the Health Care Workplace  
Ignazio Grattagliano, PsyD*; Stefano Berardi, MD; Gabriella Martina, MD; Antonio Baladassarre, MD; Luigi Vimercati, MD; Marina Musti, MD

11:30 a.m. - 1:00 p.m.  I30  Genetic Study of Single Nucleotide Polymorphisms (SNPs) in the Oxytocin Receptor (OXTR)  
Elizabeth Chesna, BS*; Gabriella Cansino, MS; Peyton Gandy, MSFS; Jessica Wells, MS; Danielle Boisvert, PhD; Todd Armstrong, PhD; David A. Gangitano, PhD

11:30 a.m. - 1:00 p.m.  I31  Means and Dynamics of Suicide in Human History  
Luca Massaro, MA*; Matteo Borrini, PhD*

Homicide

Moderator: Janet M. Schwartz, PhD  
Forensic Fraud Research, Inc  
Canton, OH

Co-Moderator: Eleanor B. Vo, MD  
OmaDesala Psychiatric Services  
Ewing, NJ

1:00 p.m. - 1:30 p.m.  I32  Neurobiology of Psychopathy: Developments and Directions  
Arin Abnoosian, MD*; Michael Cummings, MD

*Presenting Author
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Presenters</th>
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<tbody>
<tr>
<td>1:30 p.m.</td>
<td>I33</td>
<td>Killer Cult Members and the Insanity Plea: Exploring the Line Between Belief and Delusion</td>
<td>Brian J. Holoyda, MD*; William Newman, MD</td>
</tr>
<tr>
<td>2:00 p.m.</td>
<td>I34</td>
<td>Civil and Criminal Commitment for Homicidal Ideation</td>
<td>Jason Beaman, DO*; Jennifer Piel, MD, JD*; John P. Shand, MD*</td>
</tr>
<tr>
<td>2:30 p.m.</td>
<td>Break</td>
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<tr>
<td>3:30 p.m.</td>
<td>I35</td>
<td>The Massacre of Erba: An Uncommon Homicide by a “Normal Peaceable” Couple</td>
<td>Federica Collini, MD*; Isabella Merzagora Betsos, PhD</td>
</tr>
<tr>
<td>4:00 p.m.</td>
<td>I36</td>
<td>The Pseudocommando and the Terrorist: Casuistic Comparison and Cnalysis</td>
<td>Samuel J. Leistedt, MD, PhD*; Fabienne Fabienne Glowacz, PhD</td>
</tr>
<tr>
<td>4:30 p.m.</td>
<td>I37</td>
<td>Killing a Child: Neuropsychological Profiles of Murderers of Children</td>
<td>Nicole Azores-Gococo*; Robert Hanlon, PhD; Saritha Teralandur, MS; Michael Brook, PhD</td>
</tr>
<tr>
<td>4:50 p.m.</td>
<td>I38</td>
<td>Confirmation Bias and Metalinguistic Awareness</td>
<td>Carole E. Chaski, PhD*; Elizabeth A. Smith, PhD; Cristina Aggazzotti, MS; Ying Liu, BA</td>
</tr>
<tr>
<td>5:10 p.m.</td>
<td>I39</td>
<td>Among a German Sample of Forensic Patients: Previous Animal Abuse Mediates</td>
<td>Stupperich Alexandra*; Micha Strack</td>
</tr>
</tbody>
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**Saturday**

**Child and Adolescent**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Presenters</th>
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<tbody>
<tr>
<td>8:30 a.m.</td>
<td>I40</td>
<td>Resolving Ethical Dilemmas Using Dialectical Principism in End-of-Life Decisions</td>
<td>Robert Weinstock, MD*; William C. Darby, MD*</td>
</tr>
<tr>
<td>9:30 a.m.</td>
<td>I41</td>
<td>Effects of Anger Management and Social Support to Cope With Cyber Bullying of Adolescents</td>
<td>Nursen Turan, MD*; Asligut Metin; Sazimet Geyik; Sitti Hatice Nur Nas; Berfin Aydogdu; Burcu Kilic; Yesim Yenigul, PhD</td>
</tr>
<tr>
<td>9:45 a.m.</td>
<td>Break</td>
<td></td>
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<tr>
<td>10:05 a.m.</td>
<td>I42</td>
<td>Juvenile Sex Trafficking</td>
<td>Sara R. Thomas, MS*</td>
</tr>
</tbody>
</table>

*Presenting Author*
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Presenters</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:05 a.m.</td>
<td>143</td>
<td>Empirical Survey in the Italian Courts</td>
<td>Laura Volpini, PhD*; Roberta Russo, MS; Federica Rossi Berluti, MS; Cristina Mazza</td>
</tr>
<tr>
<td>11:20 a.m.</td>
<td>144</td>
<td>I Need to Be Myself, I Can’t Be Anyone Else — Analyzing the Role of Forensic Sciences in Disorders of Sex Development (DSD), Discussion of Historical Case Studies, and Contemporary Reports Leading to New Perspectives</td>
<td>Annarita Franza, PhD*; Vincenzo Lusa, JD*</td>
</tr>
<tr>
<td>11:40 a.m.</td>
<td>145</td>
<td>Hypnosis in the Courtroom</td>
<td>Sebastien S. Prat, MD*; Joseph Ferencz, MD, PhD*</td>
</tr>
</tbody>
</table>
Thursday

Moderator: Kevin P. Kulbacki, MSFS
South Carolina Law Enforcement Division
Columbia, SC

8:30 a.m. - 8:45 a.m. Opening Remarks
Thomas W. Vastrick, BS

8:45 a.m. - 9:45 a.m. Discussion

9:45 a.m. - 10:00 a.m. J1 Evaluation of the Problems in the Field of Questioned Documents in Turkey
Isil Ocal*, Mete K. Gulmen, PhD, MD

10:00 a.m. - 10:30 a.m. Break

Moderator: Kevin P. Kulbacki, MSFS
South Carolina Law Enforcement Division
Columbia, SC

10:30 a.m. - 11:30 a.m. J2 Electrostatic Detection Apparatus (ESDA®) for Questioned Document Examination — Theory and Application
F.L. Jim Lee, Jr., MS*

11:30 a.m. - 1:30 p.m. Lunch

Poster Session

11:30 a.m. - 1:00 p.m. J3 A Study of Bandings in Printed Black Texts for the Identification of Monochromic Laser Printers
Ning Liu, MA*

11:30 a.m. - 1:00 p.m. J4 Determination of the Sequence of Non-Intersecting Lines From Laser Toner Particles and Pen Ink by Stereomicroscope
Ismail Çakir, PhD*; Gürsel Çetin, MD*; Abdi Ozaslan, MD; Ibrahim E Çaki

*Presenting Author
Moderator: David S. Moore, MEd
Fair Oaks, CA

1:30 p.m. - 2:00 p.m. J5 Oh Brother — Another Paper on Following the Basics
Thomas W. Vastrick, BS*

2:00 p.m. - 3:00 p.m. J6 Counterfeit Detection Training in Distributed Learning Environments
Joel A. Zlotnick, MSFS*; Zhengfan E. Song, MS; Tyra Lundy, MS

3:00 p.m. - 3:30 p.m. Break

Moderator: David S. Moore, MEd
Fair Oaks, CA

3:30 p.m. - 3:45 p.m. J7 A Survey of Usage of Opinion Terminology in Questioned Document
Examination and on Varying Proposed Approaches to the
Standardized Terminology
Carl R. McClary, BA*

3:45 p.m. - 4:30 p.m. J8 The Impact of Daubert on Forensic Document Examinations —
The Paradigm Shift
Jan S. Kelly, BA*

4:30 p.m. - 4:45 p.m. J9 Forensic Document Examination by a Multispectral Mobile Forensic
Imaging System
Halış Doğuş*; Hakan Kar, MS*

4:45 p.m. - 5:00 p.m. J10 Developing an Ink Database for Commonly Used Pens Manufactured
in Pakistan
Zumrad U. Bhutta, MS*; Ayesha Imtiaz, MS*

Friday

Moderator: Linda L. Mitchell, BS
Escondido, CA

8:30 a.m. - 8:45 a.m. J11 Conductive Inks: Implications for Forensic Document Examiners
Kevin P. Kulbacki, MSFS*
## QUESTIONED DOCUMENTS

**Las Vegas 2016**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Presenter(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:45 a.m. - 9:00 a.m.</td>
<td>J12</td>
<td>A Comparative Study of Common Individual Writing Characteristics in Determining Left- and Right-Hand Writings</td>
<td>Vikram Raj Singh Chauhan, PhD*</td>
</tr>
<tr>
<td>9:00 a.m. - 10:00 a.m.</td>
<td>J13</td>
<td>Security Feature Implementation: The Other Side of Document Security</td>
<td>Joel A. Zlotnick, MSFS*</td>
</tr>
<tr>
<td>10:00 a.m. - 10:30 a.m.</td>
<td>Break</td>
<td></td>
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</tr>
<tr>
<td>10:30 a.m. - 11:00 a.m.</td>
<td>J14</td>
<td>The Value of Skill Task Assessments (STA)</td>
<td>Jan S. Kelly, BA*</td>
</tr>
<tr>
<td>11:00 a.m. - 11:30 a.m.</td>
<td>J15</td>
<td>A Triad of Techniques and Instruments for the Examination of Questioned Documents</td>
<td>F.L. Jim Lee, Jr., MS*</td>
</tr>
<tr>
<td>11:30 a.m. - 1:30 p.m.</td>
<td>Lunch</td>
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</tr>
<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>J16</td>
<td>How Well Do People Know Their Signatures?</td>
<td>Zuzanna Kazmierczyk, BS*; Ian J. Turner, PhD</td>
</tr>
<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>J17</td>
<td>Properties of Inkless Pens</td>
<td>Samiah Ibrahim, BSc*; Tobin A. Tanaka, BS*</td>
</tr>
<tr>
<td>1:30 p.m. - 1:55 p.m.</td>
<td>J18</td>
<td>The Leon Savoy Estate</td>
<td>David S. Moore, MEd*</td>
</tr>
<tr>
<td>1:55 p.m. - 2:25 p.m.</td>
<td>J19</td>
<td>Status of the Expert Working Group on Human Factors in Handwriting Examinations</td>
<td>Thomas W. Vastrick, BS*</td>
</tr>
<tr>
<td>2:25 p.m. - 2:55 p.m.</td>
<td>J20</td>
<td>Critics Say the Darndest Things!</td>
<td>Jan S. Kelly, BA*</td>
</tr>
<tr>
<td>2:55 p.m. - 3:10 p.m.</td>
<td></td>
<td>Closing Remarks</td>
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*Presenting Author

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Moderator: Linda L. Mitchell, BS
Escondido, CA

Moderator: Carl R. McClary, BA
Atlanta, GA
Wednesday

Toxicology Section Awardees Recognition (by invitation only)

6:30 p.m. - 7:30 p.m.  Supported by:  Aegis Sciences Foundation & Randox Toxicology, Ltd.

Poster Session

Moderator: Sumandeep Rana, PhD
Redwood Toxicology Laboratory
Santa Rosa, CA

Co-Moderator: Sabra R. Botch-Jones, MS, MA
Boston University School of Medicine
Biomedical Forensic Sciences
Boston, MA

7:30 p.m. - 9:00 p.m.  K1  Driving Under the Influence of 5-MAPB: A Case Report
Brittany Thomas, MFS*; Lisa Noble, BS; Brianna Peterson, PhD;
Fiona J. Couper, PhD

7:30 p.m. - 9:00 p.m.  K2  Incidence and Trends of Driving Under the Influence (DUI) of Zolpidem:
A Retrospective Study of DUI Cases From 2001 to 2014
Monica Jacobs*; Lisa J. Reidy, PhD

7:30 p.m. - 9:00 p.m.  K3  Retrospective of Phencyclidine (PCP) Incidence in Cleveland, Ohio, in Driving
Under the Influence of Drugs (DUID) and Homicide Cases
Katherine Turner*; Eric S. Lavins, BS; Rindi N. Rico, BS; Claire Kaspar-Naso, BS;
Harold E. Schueler, PhD; Paula Wallace, BA; Thomas P. Gilson, MD

7:30 p.m. - 9:00 p.m.  K4  Patterns of Drugs and Poisons on Criminal Cases in Southeastern Korea
(Busan, Ulsan, and Gyeongsangnam-Do) for 2014
Eunmi Kim, PhD*; Hongil Ha; Park Yonghoon; Hee-Sun Chung, PhD

7:30 p.m. - 9:00 p.m.  K5  Case Report: Detection of 25C-NBOMe in Three Related Cases
John J. Kristofic, BS; Jeffrey D. Chmiel, MS; George F. Jackson, PhD*;
Erin Karschner, PhD; Eric T. Shimomura, PhD; Shawn P. Vorce, BS;
Justin Holler, MS; Stephen L. Robinson, MD; Thomas Z. Bosy, PhD

7:30 p.m. - 9:00 p.m.  K6  Determination of Synthetic Hallucinogens: 25I-, 25C-, and 25B-NBOMe by
Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS) Using
D3-25I-NBOMe Internal Standard
Joseph A. Cox, MS*; Naga Venkata Naidu, PhD; Ernest D. Lykissa, PhD

7:30 p.m. - 9:00 p.m.  K7  The Rapid Identification of Synthetic Hallucinogens 25I-NBOMe and 2C-B
Using DART*-MS
Joseph Stone, BS*; Justin L. Poklis, BS; Michelle R. Peace, PhD;
Alphonse Poklis, PhD
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:30 p.m.</td>
<td>K8</td>
<td>Fragmentation Pathways and Structural Characterization of Synthetic Cathinones Using Electrospray Ionization (ESI) and High Resolution Mass Spectrometry</td>
<td>Lindsay Glicksberg*, Kelsie Bryand, MS, Sarah Karrigan, PhD</td>
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<tr>
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<td>K10</td>
<td>The Application of Gold Nanoparticles for the Trace Detection of PINACAs in Urine by Surface Enhanced Raman Spectroscopy (SERS)</td>
<td>Thaddeus Mostowtt, MFS*, Bruce R. McCord, PhD</td>
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<tr>
<td></td>
<td>K11</td>
<td>Forensic Medical Evaluation of Fatalities Resulting From Lighter Gas Inhalation</td>
<td>Erdinc Ozdemir*, Ibrahim Üzün, Muhammad Demir, Huseyin Es</td>
</tr>
<tr>
<td></td>
<td>K12</td>
<td>Domino Effect: A Singular Case of Six Fatal Hydrogen Sulfide (H2S) Poisonings in Quick Succession — Evaluation of the Sulfides Quantification Method</td>
<td>Nuziata Barbera, MD, Angelo Montana, MD, Francesca Indorato, MD*, Nadia Arbouche, SB, Guido Romano, SB</td>
</tr>
<tr>
<td></td>
<td>K13</td>
<td>An Extremely Rare Suicidal Intoxication With Sodium Azide: A Case Report</td>
<td>Francesco Randazzo*, Massimiliano Scida, Alessandro De Gaetano, Marco Motta, Antonella Profumo, Angelo Groppi, Luca Morini</td>
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<tr>
<td></td>
<td>K14</td>
<td>Epidemiological and Toxicological Traits in Methadone-Related Deaths — A Five-Year (2010-2014) Retrospective Study in Vojvodina, Serbia</td>
<td>Isidora Samojlik, MD, PhD*, Vesna Mijatovic, MD, PhD, Vladimir Knezovic, Stojan Petkovic, MD, PhD</td>
</tr>
<tr>
<td></td>
<td>K15</td>
<td>A Remarkable Case of Fatal Monocrotophos Poisoning by Cutaneous Absorption While Sleeping</td>
<td>Jatin Bodwal, MBBS, MD*, Seema Sarohe Sarohe, MeD</td>
</tr>
<tr>
<td></td>
<td>K16</td>
<td>Detection of Metal Phosphide Poisoning by Using Headspace/Gas Chromatography With Flame Ionization Detector (HS/GC/FID)</td>
<td>Sardar Ali Watoo, MPhil; Muhammad Taimoor Chaudhary, MPhil*, Mohammad A. Tahir, PhD</td>
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<tr>
<td></td>
<td>K17</td>
<td>Vitreous Humor Chemistry of Heroin-Related Deaths as Compared With the General Population of Non-Drug-Related Deaths in the City and County of San Francisco From 2010 Through 2013</td>
<td>Glenda M. Easterling, BS*, Pavlos Karamanidis, BS, Eric A. Ingle, BA, Chinyere M. Williams, BS, Jeffery Hackett, PhD, Nikolas P. Lemos, PhD</td>
</tr>
<tr>
<td></td>
<td>K18</td>
<td>A European Rave Drug (Prolintane) Fatality in Phoenix, Arizona</td>
<td>Whitney Brown, BS*, Ian Duffy, BS, Norman A. Wade, MS</td>
</tr>
</tbody>
</table>
7:30 p.m. - 9:00 p.m.  **K19**  Dangers of Carbon Monoxide (CO) Generated From Small Internal Combustion Engines  
Sandra Bishop-Freeman, PhD*; Marc Feaster, BS*; Franklin Pippen, BS; Ruth E. Winecker, PhD

7:30 p.m. - 9:00 p.m.  **K20**  A Retrospective Analysis of Deaths Due to Carbon Monoxide (CO) Poisoning Reported at a Tertiary Care Center in New Delhi, India, From January 2010 to January 2015  
Shivani Dhaka, MBBS*; Sudhir Kumar Gupta, MD; Chittaranjan Behera, MD; Rajanikanta Swain, MD

7:30 p.m. - 9:00 p.m.  **K21**  The Analysis of Benzodiazepines in Dried Blood Spots (DBS) Using Liquid Chromatographic/Tandem Mass Spectrometry (LC/MS/MS)  
Andrea L. Jones, BS*; Thomas A. Brettell, PhD

7:30 p.m. - 9:00 p.m.  **K22**  Detecting Ketamine in the Hair of Buried Decomposed Rats Using Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS)  
Christine Barrett, BS*; Kimberlee S. Moran, MSc; Gail Cooper, PhD; Karen S. Scott, PhD

7:30 p.m. - 9:00 p.m.  **K23**  Detection, Quantification, and Relative Distribution of Ketamine, Norketamine, and Dehydronorketamine in Skeletal Tissue of Dosed and Buried Rat Remains at Different Stages of Decomposition  
Kimberlee S. Moran, MSc; James Watterson, PhD; Karen S. Scott, PhD; Erica N. Johnson, BA*

7:30 p.m. - 9:00 p.m.  **K24**  Comparison of Cocaine Concentrations in Heart Blood, Thigh Muscles, and Thigh Bones  
Ken-ichiro Nakao*; Kazuhiko Kibayashi, MD*

7:30 p.m. - 9:00 p.m.  **K25**  Methamphetamine, Amphetamine, and Norephedrine Levels in Dermestid Beetles From the Consumption of Dosed, Buried Rat Remains  
Meaghan P. Drumm*; M. Lee Goff, PhD; Karen S. Scott, PhD; Kimberlee S. Moran, MSc

7:30 p.m. - 9:00 p.m.  **K26**  Determination of Drug Distribution in Postmortem Tissues and Bones of Pigs Administered Drugs  
Ismail E. Goren, BS; Nebile Gokce Daglioglu, PhD*; Mete K. Gulmen, PhD, MD*; Pinar Ejeoglu, MS

7:30 p.m. - 9:00 p.m.  **K27**  Detection of Ketamine by Analyzing Dermestid Beetles Feeding on Buried, Dosed Rats by Liquid Chromatography With Tandem Mass Spectrometry (LC/MS/MS)  
Thomas J. Nolan, BA*; M. Lee Goff, PhD; Karen S. Scott, PhD; Kimberlee S. Moran, MSc

7:30 p.m. - 9:00 p.m.  **K28**  Determination of Zolpidem and Glyphosate in Blood From Emergency Room (ER) Patients  
Hee-Sun Chung, PhD*
<table>
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<tr>
<th>Time</th>
<th>Title</th>
<th>Authors</th>
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<tbody>
<tr>
<td>7:30 p.m.</td>
<td>Quetiapine Stability as It Relates to the Time Frames of Case Studies</td>
<td>Mariah D. Carson, BS*; Jeffrey Walterscheid, PhD</td>
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<tr>
<td>7:30 p.m.</td>
<td>Mass Spectral Library for Phosphodiesterase Type 5 Inhibitors by Ultra High-Performance Liquid Chromatography/Quadrupole-Time-of-Flight/Mass Spectrometry (UHPLC/Q-TOF/MS)</td>
<td>Marissa J. Finkelstein, MS*; Mathew Hautman, BS; Lucas Marshall, MS; Rebecca Heltshley, PhD; Timothy A. Robert, PhD; David L. Black, PhD</td>
</tr>
<tr>
<td>7:30 p.m.</td>
<td>Effective Extraction Strategies for Buprenorphine and Norbuprenorphine in Urine, Oral Fluid, and Whole Blood Using Cation Exchange Solid Phase Extraction (SPE) and Supported Liquid Extraction (SLE) Prior to High-Performance Liquid Chromatography With Tandem Mass Spectrometry (HPLC/MS/MS) Analysis</td>
<td>Victor Vandell, PhD*; Elena Gairloch, BS; Bruce R. Kempf, BS</td>
</tr>
<tr>
<td>7:30 p.m.</td>
<td>Quantification of Buprenorphine and Norbuprenorphine in Postmortem Blood and Urine by Ultra High-Performance Liquid Chromatography/Tandem Mass Spectrometry (UHPLC/MS/MS)</td>
<td>Chu-An Yang, MS*; Hsiu-Chuan Liu, MS; Ray H. Liu, PhD; Dong-Liang Lin, PhD</td>
</tr>
<tr>
<td>7:30 p.m.</td>
<td>The Analysis of N,N-Dimethyltryptamine (DMT) in Plasma by Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS)</td>
<td>David M. Andrenyak, PhD*; David E. Moody, PhD</td>
</tr>
<tr>
<td>7:30 p.m.</td>
<td>Rapid Screening and Quantitation of Pesticides in Biological Samples Using Gas Chromatography (GC) With Mass Spectrometer (MS)</td>
<td>Muhammad Taimoor Chaudhary, MPhil*; Mohammad A. Tahir, PhD</td>
</tr>
<tr>
<td>7:30 p.m.</td>
<td>Applicability of Biochip Array Technology to the Simultaneous Screening of Drugs Associated With Driving Under the Influence of Drugs (DUID)</td>
<td>Gemma Mullan, PhD; William Snelling, MS; Laura Keery, BSc; Joanne Darragh, PhD; Pankaj Sinha*, Maria Luz Rodriguez, PhD; R. Ivan McConnell, BSc; S. Peter Fitzgerald, PhD</td>
</tr>
<tr>
<td>7:30 p.m.</td>
<td>Fragmentation Pathways and Structural Characterization of Mitragynine and Its Metabolite Using Electrospray Ionization (ESI) and High Resolution Mass Spectrometry</td>
<td>Stephanie Basiliere, BS*; Sarah Kerrigan, PhD; Kelsie Bryand, MS</td>
</tr>
<tr>
<td>7:30 p.m.</td>
<td>In Vitro Metabolism Studies on P-Methoxymphetamines (PMA) Using Human Liver Microsomes and Liquid Chromatography With Tandem Mass Spectrometry (LC/MS/MS) With Chemical Derivatization</td>
<td>Tanasiri Yokchue, MSc*; Robert A. Anderson, PhD</td>
</tr>
<tr>
<td>7:30 p.m.</td>
<td>Analysis of Illicit Substances in Urine by Biocompatible Solid-Phase Microextraction (BioSPME) and Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS)</td>
<td>Kaitlyn E. Hess, BS*; Thomas A. Brettell, PhD</td>
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*Presenting Author
7:30 p.m. - 9:00 p.m.  K39  **Evaluation of the Components Within Electronic Cigarette Liquids and Drugs of Abuse Using Gas Chromatography/Mass Spectrometry (GC/MS) and Ultra-Fast Liquid Chromatography Tandem Mass Spectrometry (LC/MS/MS)**

*Erin Walsh*; Robert D. Johnson, PhD; Peter Tracy, BS; Sabra R. Botch-Jones, MS, MA

7:30 p.m. - 9:00 p.m.  K40  **Extraction of Selected Barbiturates, Primidone, and Phenytoin From Blood Using Supported Liquid Extraction Columns With Gas Chromatography/Mass Spectrometry (GC/MS) Analysis**

*Gregory A. Priebe, MS*; Brent Dawson, PhD; Lister M. Macharia, MBA; Laureen Marinetti, PhD

7:30 p.m. - 9:00 p.m.  K41  **FAST Analysis of 6-Monoacetyl Morphine (6-MAM) and Acetylcodeine (AC) in Urine of Opiate-Positive Drugs and Driving Cases**

*Albert A. Elian, MS*; Jeffery Hackett, PhD

7:30 p.m. - 9:00 p.m.  K42  **Analysis of Opioids in Urine Specimens by Solid Phase Extraction (SPE) and Ultra Performance Liquid Chromatography/Tandem Mass Spectrometry (UPLC/MS/MS)**

*Melissa A. Johnson, BA*; Chinyere M. Williams, BS; Jeffery Hackett, PhD; Nikolas P. Lemos, PhD

7:30 p.m. - 9:00 p.m.  K43  **Comparison of Blood Concentrations for Commonly Encountered Drugs in Postmortem and Human Performance Forensic Toxicology Cases in the City and County of San Francisco**

*Constantine Konstantakis, BA*; Tamy Chan; Jeffery Hackett, PhD; Nikolas P. Lemos, PhD

**Thursday**

**Special Session: Driving Under the Influence of Drugs — Synthetic Cannabinoids**

**Moderator:** Amy Miles, BS  
**Madison, WI**

**Co-Moderator:** David M. Benjamin, PhD  
**Chestnut Hill, MA**

8:30 a.m. - 8:50 a.m.  K44  **Synthetic Cannabinoids in Drivers: Clinical and Psychophysical Indications of Intoxication**

*Kayla M. Neuman, MS*

8:50 a.m. - 9:10 a.m.  K45  **AB-CHMINACA, AB-PINACA, XLR-11, and UR-144 and Driver Behavior in Suspected Impaired Driving Cases in Which a Drug Recognition Expert (DRE) Exam Was Performed**

*Brittany Thomas, MFS*; Brianna Peterson, PhD; Fiona J. Couper, PhD

9:10 a.m. - 9:30 a.m.  K46  **XLR-11 and Impaired Driving — Case Reports**

*Sherri L. Kacinko, PhD*; Barry K. Logan, PhD

*Presenting Author*
9:30 a.m. - 9:50 a.m.  
K47 Confirmation of Synthetic Cannabinoids in Driving Under the Influence (DUI) and Sexual Assault (SA) Cases by Liquid Chromatography With Tandem Mass Spectrometry (LC/MS/MS)  
Joshua Seither, MS*; Lisa J. Reidy, PhD

9:50 a.m. - 10:10 a.m.  
K48 Indazole-Carboxamide (NACA) Series Synthetic Cannabinoids and Driving Impairment  
Sherri L. Kacinko, PhD; Barry K. Logan, PhD*

10:10 a.m. - 10:30 a.m.  
Break  
Supported by: Immunalysis Corporation

Impaired Driving

Moderator: Amy Miles, BS  
Madison, WI

Co-Moderator: Robert D. Johnson, PhD  
Tarrant County MEO  
Fort Worth, TX

10:30 a.m. - 10:45 a.m.  
K49 Aligning With the National Safety Council’s Recommendations: Redesigning the Enzyme-Linked Immuno-Sorbent Assay (ELISA) Screen Testing Scope and Improving Sensitivity for Driving Under the Influence of Drugs (DUID) Investigation Cases  
Ayako Chan-Hosokawa, MS*

10:45 a.m. - 11:00 a.m.  
K50 Statistical Assessment of Toxicology Cases Submitted to the Las Vegas Metropolitan Police Department (LVMPD) From 2000 Through 2014  
Michael P. Stypa, MS*; Denise K. Heineman, BS; Darby A. Lanz, MSFS; Jennifer O. Rattanaprasit, MS

11:00 a.m. - 11:15 a.m.  
K51 Zolpidem Concentrations Found in 644 Blood Samples Submitted for Driving Under the Influence of Drugs (DUID) Analysis  
Lee M. Blum, PhD; Laura M. Labay, PhD*

11:15 a.m. - 11:30 a.m.  
K52 Methamphetamine and Amphetamine in Suspected Driving Under the Influence (DUI) Cases in the City and County of San Francisco: A Six-Year Review  
Mariya Mayevskaya, BA; Justin A. Volk; Jonas E. Knight, MS; Pavlos Karamanidis, BS; Glenda M. Easterling, BS; Chinyere M. Williams, BS; Jeffery Hackett, PhD; Nikolai P. Lemos, PhD; Eric A. Ingle, BA*

11:30 a.m. - 12:00 p.m.  
K53 Blood Cannabinoid Pharmacokinetics in Frequent Cannabis Smokers After Controlled Smoked, Vaporized, and Oral Cannabis Administration: Markers of Recent Cannabis Intake  
Matthew N. Newmeyer, BS*; Karl B. Scheidweiler, PhD; Allan J. Barnes, BS; Agnes O. Coffay, MD; Osama A. Abulseoud, MD; Marilyn A. Huestis, PhD

11:45 a.m. - 12:00 p.m.  
K54 Neurocognitive Performance in Occasional and Frequent Smokers Following Controlled Smoked, Vaporized, and Oral Cannabis Administration  
Madeleine J. Swortwood, PhD; Matthew N. Newmeyer, BS; Agnes O. Coffay, MD; Osama A. Abulseoud, MD; Marilyn A. Huestis, PhD*
Lunch

Annual Lectureship in Toxicology

**Moderator:** Marilyn A. Huestis, PhD  
Chemistry & Drug Metabolism  
Intramural Research, NIDA, NIH  
Baltimore, MD

**Co-Moderator:** Mindy Hair  
Abington, PA

1:00 p.m. - 2:00 p.m.  **Performance-Enhancing Drugs: Not Only a Sports Problem**  
Daniel Eichner, PhD*

2:00 p.m. - 2:15 p.m.  **Break**  
Supported by: Waters® Corporation

Methodology

**Moderator:** Michelle R. Peace, PhD  
VA Commonwealth University  
Richmond, VA

**Co-Moderator:** Christine Barrett, BS  
Wyncote, PA

2:15 p.m. - 2:30 p.m.  **K55**  
Comparison of the Randox® Evidence Drugs of Abuse Custom Array VIII Biochip With Accurate Mass Screening III: Meprobamate (MPB), Methadone (MTD), Tramadol (TRM), and Zolpidem (ZPD)  
Daniel S. Isenschmid, PhD*; Denice M. Teem, BS; Samantha Beauchamp, BA; Geoffrey French, BS; Lindsay Rohrbacher, BS; Mark Vandervest, BA; Jennifer S. Wilson, BS

2:30 p.m. - 2:45 p.m.  **K56**  
Ethylone: Development and Validation of a Quantitative Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS) Method With Analytical Confirmation in Toxicology Casework  
Stephanie Kumor, MA*; Joseph Homan, MS; Annette Ervin, BS; Donna M. Papsun, MS; Barry K. Logan, PhD

2:45 p.m. - 3:00 p.m.  **K57**  
Paper Spray Mass Spectrometry for Rapid Drug Screening From Dried Blood Spots  
Rachel Potter*; Nick Manicke

3:00 p.m. - 3:15 p.m.  **K58**  
Application of Mixed-Mode Ultra High-Performance Liquid Chromatography to the Analysis of Drugs in Urine  
Ira S. Lurie, PhD*; Cassandra Lee Clyde, MFS; Samantha A. Blake, MFS; Stacey L. Obrien, BS; Ihuoma A. Igwilo, MBBS

3:15 p.m. - 3:30 p.m.  **Break**  
Supported by: Agilent® Technologies  
Lipomed, Inc.

*Presenting Author
Designer Drugs

**Moderator:** Gregory A. Priebe, MS  
Redwood Toxicology Laboratory  
Santa Rosa, CA

**Co-Moderator:** David M. Andrenyak, PhD  
University of Utah  
Center for Human Toxicology  
Salt Lake City, UT

3:30 p.m. - 3:45 p.m. **K59**  
Development and Validation of Two Methods for the Analysis of Synthetic Cannabinoids in Whole Blood  
Marykathryn Tynon, MSFS*; Joseph Homan, MS; Sherri L. Kacinko, PhD; Barry K. Logan, PhD

3:45 p.m. - 4:00 p.m. **K60**  
A Two-Year Comparative Analysis of Novel Psychoactive Substances (NPS) Detected in Blood, Urine, and/or Oral Fluid in Attendees at an Electronic Dance Music (EDM) Festival  
Amanda L.A. Mohr, MSFS*, Jillian K. Yeakel, MS; Melissa Friscia, MSFS; Francis X. Diamond, BS; Barry K. Logan, PhD

4:00 p.m. - 4:15 p.m. **K61**  
Metabolic Profile Determination of NBOMe Compounds Using Human Liver Microsomes  
Keith-Dane H. Temporal, BS*; Melissa Friscia, MSFS; Karen S. Scott, PhD; Amanda L.A. Mohr, MSFS; Barry K. Logan, PhD

4:15 p.m. - 4:30 p.m. **K62**  
Case Report of AB-FUBINACA Exposure With Chemical and Toxicological Confirmation  
David Buzby, BS*; Donna M. Papsun, MS; Mark Nyvean, MD; Barry K. Logan, PhD

4:30 p.m. - 4:45 p.m. **K63**  
Cannabinoid Receptor Bioassay: A Characterization of UR-144, XLR-11, and Their Metabolites and Degradants  
Kelsey Longe, BS*; Amy B. Cadwallader, PhD; Darcie Wallace-Duckworth, PhD; Pamela J. Staton, PhD

4:45 p.m. - 5:00 p.m. **K64**  
Analysis for Synthetic Cannabinoids in Oral Fluid Samples Obtained From a Music Festival Cohort  
Marykathryn Tynon, MSFS*; Joseph Homan, MS; Sherri L. Kacinko, PhD; Barry K. Logan, PhD

Toxicology Open Forum

**Moderator:** H. Chip Walls, BS  
Forensic, Analytical & Clinical Toxicology Lab  
Miami, FL

**Co-Moderator:** Nikolas P. Lemos, PhD  
OCME, Forensic Lab Division  
San Francisco, CA

7:00 p.m. - 9:00 p.m. Supported by: Cerilliant® Corporation  
Randox Toxicology, Ltd.
Friday

Multidisciplinary Session: Pathology/Biology Session I/Toxicology

Moderator: Karen S. Scott, PhD  
Arcadia University  
Glenside, PA

Co-Moderator: Sarah Meyers, MD  
University of North Dakota -  
School of Medicine  
Dept of Pathology  
Grand Forks, ND

8:30 a.m. - 8:45 a.m.  K65  Postmortem Findings in Deaths Related to Synthetic Cannabinoids  
Robert Kronstrand, PhD*

8:45 a.m. - 9:00 a.m.  H71  Insights Into the Postmortem Redistribution (PMR) of Diazepam, Methadone, and Morphine: Sampling Site, Time, and Method Matter  
Eric Lemaire, MD*; Carl J. Schmidt, MD

9:00 a.m. - 9:15 a.m.  K66  Report of Increasing Acetyl Fentanyl Deaths in Allegheny County, Pennsylvania  
Todd M. Luckasevic, DO; Jennifer K. Janssen, MS; Abdulrezak M. Shakir, MD; Karl E. Williams, MD; Jessica B. Dwyer, MD*

9:15 a.m. - 9:30 a.m.  H72  Postmortem Distribution and Detection of Butyryl Fentanyl  
Meghan S. Kessler, DO*; Rebecca Jufer Phipps, PhD; Meghan A. Mulligan, MS; Barry S. Levine, PhD; Russell T. Alexander, MD; Mary G. Ripple, MD; David R. Fowler, MD

9:30 a.m. - 9:45 a.m.  K67  The Real Heroin in South Florida: The Detection of a Fentanyl Analog in Postmortem Specimens Using Liquid Chromatography (LC)-Ion Trap Tandem Mass Spectrometry (MS/MS)  
Elisa N. Shoff, BS*; Diane Boland, PhD

9:45 a.m. - 10:00 a.m.  H73  Buprenorphine Prevalence in the Office of the Chief Medical Examiner (OCME) Cases Positive for Drugs of Abuse: To Screen or Not to Screen?  
Diana Geli*; Rebecca Jufer Phipps, PhD; Meghan A. Mulligan, MS; Mary G. Ripple, MD; David R. Fowler, MD

10:00 a.m. - 10:30 a.m.  Break  
Supported by: Randox Toxicology, Ltd.

*Presenting Author
## Multidisciplinary Session: Pathology/Biology Session I/Toxicology

**Moderator:** Dustin Tate Yeatman, MS  
West Palm Beach, FL  

**Co-Moderator:** Sarah Meyers, MD  
University of North Dakota - School of Medicine  
Dept of Pathology  
Grand Forks, ND

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<th>Time</th>
<th>Session</th>
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<th>Authors</th>
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<tr>
<td>10:30 a.m. - 10:45 a.m.</td>
<td>K68</td>
<td>Blood Clonazepam and 7-Aminoclonazepam Trends in Postmortem and Driving Under the Influence of Drugs (DUID) Cases</td>
<td>Lucas Marshall, MS*; Timothy A. Robert, PhD; David L. Black, PhD; Rebecca Heitsley, PhD</td>
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<tr>
<td>10:45 a.m. - 11:00 a.m.</td>
<td>H74</td>
<td>Chi-Squared Automatic Interaction Detection (CHAID) Analysis as a Technique for Discerning Patterns of Drug Use in Postmortem Toxicology</td>
<td>Candace Savonen, BS; Carl J. Schmidt, MD*; Michael Bannon, PhD</td>
</tr>
<tr>
<td>11:00 a.m. - 11:15 a.m.</td>
<td>K69</td>
<td>A Case of Death by Diclozepam: Lorazepam in Disguise</td>
<td>Fessessework Guale, DVM*; Warren C. Samms, PhD; Jeffrey Walterscheid, PhD; Dana L. Johnson</td>
</tr>
<tr>
<td>11:15 a.m. - 11:30 a.m.</td>
<td>H75</td>
<td>Deaths Associated With Synthetic Cannabinoids in Mississippi</td>
<td>Mark M. LeVaughn, MD*; Brent Davis, MD*; Lisa Funte, MD; Thomas Dobbs, MD</td>
</tr>
<tr>
<td>11:30 a.m. - 11:45 a.m.</td>
<td>K70</td>
<td>WITHDRAWN</td>
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<tr>
<td>11:45 a.m. - 12:00 p.m.</td>
<td>H76</td>
<td>Using Enzyme-Multiplied Immunoassay Technique (EMIT) Analysis of Vitreous Humor to Identify Heroin Use at Autopsy</td>
<td>Brandi C. McCleskey*; C. Andrew Robinson, Jr., PhD; Daniel W. Dye, MD</td>
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</tbody>
</table>

**General Toxicology**

**Moderator:** Denice M. Teem, BS  
NMS Labs  
Willow Grove, PA  

**Co-Moderator:** Matthew N. Newmeyer, BS  
Baltimore, MD

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<tr>
<td>1:00 p.m. - 1:15 p.m.</td>
<td>K71</td>
<td>A Crazy Mini Heroin Epidemic in Richmond, Virginia</td>
<td>Carl E. Wolf II, PhD*; Michelle Hieger, DO; Brandon K. Willis, DO; Alphonse Poklis, PhD</td>
</tr>
<tr>
<td>1:15 p.m. - 1:30 p.m.</td>
<td>K72</td>
<td>Rise in Fentanyl Derivatives Acetyl and Butyryl Fentanyl Detection in Blood and Serum Coinciding With Rise in Opiate and Novel Psychoactive Substances (NPS) Use</td>
<td>David Buzby, BS*; Donna M. Papsun, MS; Daniel S. Isenschmid, PhD; Barry K. Logan, PhD</td>
</tr>
</tbody>
</table>

*Presenting Author
### 1:30 p.m. - 1:45 p.m.  **K73**  
**Fatal Methadone Intoxication in an Infant Listed as a Homicide**  
*Alessandro Bonsignore, MD, PhD*;  
*Francesco Ventura, MD, PhD*;  
*Cristian Palmiere, MD*

### 1:45 p.m. - 2:00 p.m.  **K74**  
**Case Report: Two Child Fatalities Due to Heroin/Fentanyl Exposure**  
*Rebecca T. DeRienz, MS*;  
*Daniel Baker*;  
*Rachel M. Barnett, BCJ*;  
*Jennifer M. Hogue, MS*;  
*Nancy E. Kelly*;  
*John A. Daniels, MD*;  
*Anahi Ortiz*

### 2:00 p.m. - 2:15 p.m.
**Break**

**Supported by:**  
*Agilent® Technologies*

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### Postmortem Pediatric Toxicology

**Moderator:**  
*Robert A. Middleberg, PhD*  
*NMS Labs*  
*Willow Grove, PA*

**Co-Moderator:**  
*Nikolas P. Lemos, PhD*  
*OCME, Forensic Lab Division*  
*San Francisco, CA*

### 2:15 p.m. - 5:00 p.m.  **K75**  
**Postmortem Pediatric Forensic Toxicology**  
*R. Middleberg, PhD*;  
*N. Lemos, PhD*;  
*T. Corey, MD*;  
*A. Olson, MD*;  
*K. Cline-Parhamovich, DO*;  
*K. Ferslew, PhD*;  
*R. Kronstrand, PhD*
Thursday

Moderator: Kenneth E. Melson, JD
GWU Law School
Montclair, VA

Co-Moderator: James E. Starrs, LLM
Springfield, VA

8:00 p.m. - 8:20 p.m. LW1 The Best Forensic Scientist You’ve Never Heard of: Wilmer Souder and the Early History of Forensic Science at the National Bureau of Standards
Kristen Frederick-Frost, PhD*; Robert M. Thompson, BS; John M. Butler, PhD*

8:20 p.m. - 8:40 p.m. LW2 Giving Voice to a Serial Killer: Clinical Implications
Katherine Ramsland, PhD*

8:40 p.m. - 9:00 p.m. LW3 Capital Punishment by Lethal Injection
David M. Benjamin, PhD*

9:00 p.m. - 9:20 p.m. LW4 WITHDRAWN

9:20 p.m. - 9:40 p.m. LW5 Small Town Forensics in the Land of Oz
Bryan R. Burnett, MS*

9:40 p.m. - 10:00 p.m. LW6 Houdini on the Crime Scene: Debunking Psychic Sleuthing
Matteo Borrini, PhD*
BRING YOUR OWN SLIDES (PowerPoint) BYOS.ppt

Wednesday Evening: 8:00 p.m. - 10:00 p.m.

In order to keep BYOS.ppt informal, fun, and informative for the large and diverse audience, here are a few things to keep in mind for the BYOS.ppt program at the 2016 AAFS Annual Meeting in Las Vegas, NV:

- To present at BYOS.ppt presentations must be in PowerPoint format. 35mm slides are not accepted.
- Proposals must be submitted on this form accompanied by a “6-slides per page” printout of the presentation and an electronic copy on CD or “flash” drive.
- BYOS is not intended as a forum to present scientific papers. It is designed as a means to present interesting information and/or unusual case(s) that may be educational and blended with humor.
- Speakers should plan on ten minutes in which to present their material.
- Material being presented in other parts of the AAFS scientific program will not be accepted at BYOS.ppt.
- Tables, charts, and graphs should be avoided, making every effort to use slides of scenes, bodily findings, and evidence.

This complete form, a “6-slide per page” printout, and the electronic presentation copy should be delivered to the on-site AAFS Staff Office by 4:00 p.m. on Wednesday, February 24, 2016. Presentations will be selected and scheduled based on perceived interest to the audience and in the order in which the completed submissions are received. This form and required printout are needed to organize the BYOS.ppt program and to allow appropriate allocation of continuing education credit. A BYOS.ppt Program Form also will be placed in each registrant’s meeting packet.

**BYOS PROGRAM FORM**

Name (include academic degree/s) ____________________________________________

Job title ______________________________________________________________________

Place of employment ______________________________________________________________________

AAFS Section Affiliation (if none, write “none”)? ______________________________________________________________________

The presentation is being offered primarily to:

☐ Solicit input/advice on a challenging case
☐ Present interesting information or case(s) for educational purposes
☐ Entertainment

Presentation is:

☐ A single case
☐ A series of cases with a common topic
☐ Multiple cases with unrelated topics
☐ Other (please specify):

Briefly describe the material to be present ____________________________________________

What are the major points to be emphasized? ____________________________________________

How will the attendees benefit from this presentation? ____________________________________________

Is there financial interest in the material being discussed? ☐ No ☐ Yes (If yes, please describe)

How much presentation time is required? ________ minutes How many PowerPoint slides will be shown? ________

Presenter’s local hotel ___________________________ Room # _______ Cell Phone # ___________________________

The BYOS agenda, scheduled presentation times, and continuing education credit hours will be posted near the BYOS meeting room.

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<tr>
<td>JoAnn Buscaglia, PhD</td>
<td>B91</td>
<td>FBI Laboratory (Employee).</td>
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<tr>
<td>Alice J. Butcher, BSc</td>
<td>A67</td>
<td>Discloses no financial relationships with commercial entities.</td>
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<tr>
<td>John M. Butler, PhD</td>
<td></td>
<td>Thomson Reuters (Discussion of Commercial Products or Services).</td>
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<td>John M. Butler, PhD</td>
<td></td>
<td>National Institute of Standards and Technology (Employee).</td>
</tr>
<tr>
<td>David Buzby, BS</td>
<td>K62, K72</td>
<td>NMS Labs (Employee).</td>
</tr>
<tr>
<td>Patrick Buzzini, PhD</td>
<td>W9</td>
<td>Discloses no financial relationships with commercial entities.</td>
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<tr>
<td>Nichole D. Bynum, MS</td>
<td>B76</td>
<td>FLIR Systems, Inc (Discussion of Commercial Products or Services).</td>
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<tr>
<td>National Institute of Justice (Grant Support).</td>
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<tr>
<td>Jennifer F. Byrnes, PhD</td>
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</table>
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Las Vegas
2016

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<thead>
<tr>
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<th>Position/Role</th>
<th>Financial Disclosures</th>
</tr>
</thead>
<tbody>
<tr>
<td>James F. McNulty, Jr., JD</td>
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<td>Kapa Biosystems, Inc</td>
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<td>Tarrant County (Employee). - G23</td>
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<td>Waters Corporation (Discussion of Commercial Products or Services).</td>
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<tr>
<td>National Institute of Justice and The Center for Forensic Science Research and Education (Grant Support).</td>
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<td>National Institute of Justice and The Center for Forensic Science Research and Education (Grant Support).</td>
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<td>Pfizer, Inc, SCIEX, Thermo Fisher Scientific, Inc</td>
<td>(Discussion of Commercial Products or Services). - B123</td>
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<td>National Institute of Justice (Grant Support). - B141</td>
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<td>Stephen L. Morgan, PhD</td>
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<td>Thaddeus Mostowt, MFS</td>
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<td>Nirvani Mujumdar, MS</td>
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<td>Dawn M. Multurn, PhD</td>
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Las Vegas
2016

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 - J6, J13, J17
KEY WORD INDEX

B

8-hydroxythiofentanyl-K67

2

2,5-Dimethoxyphenethylamine-B82
2C-B-K7
2C-B-K7

3

3D Bones-A47
3D Digital Camera-G31
3D Face Recognition-C21
3D Models-A45
3D Printing-A44
3D Scanning-A44, D8, D11, G55
3D Superimposition-G55
3D Topography-E38
3D-ID-A3, A27
3-MeO-PCP-K70

5

5-MAPB-K1

6

6-MAM-K41

7

7-Aminoclonazepam-K68
7-Hydroxymitragynine-K36

18

18-Year Threshold-G4, G5

A

AB-FUBINACA-K62
Abuse Deterrent-B120
Abusive Head Trauma-E51, H24
Accelerants-B43
Accident-H59, H77
Accident Reconstruction-D25
Accidental Death-H95
Accidental Injury-H27
Accidents-E54
Accreditation-A127, B41, H141
Accumulated Degree Days-A117, A119, A121
Accuracy-A41
Accurate Mass Screening-K55
Accustomed-J12
Acetlcodeine-K41
Acetyl-K66
Acetyl Fentanyl-H89, K72
Adhesive Sheet-B107
Administration Route-K54
Administration Routes-K53
Admissibility-F20, F22, F28, F38
Adolescents-I1
Adulterated Supplements-B122
Advanced Techniques-W2
Aerial Drones-A75
African Painted Dogs-H50
Age Dating-B198
Age Estimation-A12, A13, A14, A15, A16, A54, A81, A82, A83, A84, A106, C12, G9, G11, G12, G13, G14, G19, G36, H6
Age Indicators-G8
Age of Majority-G17
Age Prediction-B192
Age-at-Death-A85, A99, A125
Age-at-Death Estimation-A11
Aggravating Circumstances-F34
Aging-A98, B68
Aging Mechanism-B164
Alcohol-E90
Algorithms-G33
Allele Frequency-B141, H15
Allele Probabilities-B216
All-Terrain Vehicle-H44
Alternate Light Sources-B62
Aluminum Powder-B47
Ambient Ionization-B199
Amended Birth Certificate-H140
Amended Data-F31
Analysis-A67, B94, E75, G37, K33
Analytical Morphomics-H60
Ancestry-A27, A33, A86, A87, A110, B89, B176
Ancestry Estimation-A65
Ancient DNA-A102
Android-C18
Anger Management-I41
Angle-H64
Animal-G18
Animal Abuse-G29, I39
Animal Attack-H51, H136
Animal Bones-A66
Animal Forensics-B138
Animal Model-D3
Animal Models-E18
Animation-F18
Annapolis-G38
ANSI-ES1, F47
Antemortem-A25
Antemortem Healing-A77
Anthropological Theory-A35
Anthropology-A29, A71, B86, H80
Antropometry-A44, A66, E12
Anti-Exhumation-A37
Antisocial Personality-I32
Aortic Dissection-H49
APCI-B43
APKD-H49
Appeals-F8
Applicability-B170
Applications-J15
Aquatic Death-W10
Aqueous Decomposition-A133
Archived Fingerprints-B108
Arrestee STR Profiles-H121
Arson-B45
Artifact-H132
Artifacts-H43
Asbestos-D16
Assembly Bill 109-I8
Associative Scale-B172
Asthma-H101
ATR/FTIR-B8
Atrial Infarction-H99
Atrial Rupture-H99
ATV-Related Fatalities-H85
Audio Authentication-C10
Australia-E23
Autism Spectrum-I17
Automated Genotyping-H121
Automated Measurements-A45
Automated PCR-H35
Automated Speaker Recognition-C11
Automated Stage Analysis-B47
Automation-W20
Auto-Pedestrian-E80
Autopsy Rate-E72
KEY WORD INDEX

Autopsy Results-H37
Autopsy Technique-H96
Azo Dye-E40

B

Background Touch DNA-H20
Backscatter Electron Imaging-B200
Bacteria-B61, H10, H125, H128
Ballistics Comparisons-B167
Ballpoint Pen Ink-J4
Banding Frequency-J3
Barbiturates-K40
Barcoding-B57
Barefoot Tribometry-D31
Barristers and Bench-E67
Basic Research-B93
Bath Salts-B73
Bathtub Drowning-Bs1
Battlefield Forensics-F44
Bayesian-B30
Bayesian Modeling-A69
Bayesian Networks-B117, B150
Bayesian Statistics-B171
BDMSM-I18
Behavioral Genetics-I30
Behavioral Science-I22
Benzodiazepines-K14, K21
Bias-A124, B202, B203
Bibliometric Review-B163
Bilateral Ossification-A56
Bioarchaeology-A56
Biochemical Markers-E43
Biochemical Parameters-H3
Biochip Array-K35
Biological Fluids-B7
Biological Profile-A31, A51, A81, A114, A124
Biological Profiles-A108
Biological Profiling-A48
Biological Samples-B52
Biomarker-H86
Biomechanic-A112
Biomechanics-A24, A104, D19, E81
Biometrics-B18, H84
 Biosensors-B181
BioSPME-K38
Biothreat-B27
Birth of Department-E7
Birth Trauma-H28

Bite-G18
Bitemark-G23, G24, G27, G28
Bitemarks-G21, G26, G29, G31
Black Box-F39
Black Text-J3
Blast Injury-H134
Bleach (Sodium Hypochlorite)-B34
Blood-E86
Blood Putrefaction Changes-H3
Bloodstain Age-B193
Bloodstain Pattern Analysis-B194
Bloodstains-B185, E22, E44
Blow Fly-H113
Blunt Force-A24
Blunt Force Trauma-A76, A78, A112, H32, H137
Blunt Traumatic Aortic Injury-H61
Body Composition-A108
Body Fluid Identification-B183, B187, E39, H11
Body Fluids-B1, B6, B181, B184
Body Height-A107
Body Mass-A108
Body Mass Estimation-A2
Body Size-A20
Body Weight-A107
Bog Bodies-H1
Bone-A130, E15, K23, K24
Bone Analysis-K26
Bone Fragments-A62
Bone Modification-A60
Bone Quality-A103
Bone Trauma-A104, E91
Bone Volume-A6
Border Crossers-A3
Boreal Death-H51
Botswana-G17
Bowel Obstruction-H79
Bowstring-D7
Brain-D19, H48
Brazil-B210
Brazilian Federal Police-E74
Breath Testing-F42
Bridge BS4
Buccal Sample-B115
Building Collapse-D27
Bullet-B165, H58
Buprenorphine-H73, K32
Burn Wounds-F10
Burned-A73

Burned Human Remains-A52, G42
Burned Teeth-G42
Burning Rate-D5
Burnt Bloodstains-B63
Burnt Bone-A50
Butyryl Fentanyl-H72, K72

C

Cadaver-H120, H122, H123
Cadaver Dog-E45, E61
Cadaver Soil-H112
Café Coronary-H57
Calcaneus-A57
Calliphora Vomitoria-H12
Camera Identification-C13
Cameriere Method-G36
Canine Detection-B27
Cannibalism-I34
Cannabinoid Binding Receptors-K63
Cannabinoids-B56, K9
Cannabis-B126, K53, K54
Cannabis Sativa-B56, B190
Cannon-E32
Capital Punishment-F34, I6, LW3
Carbon Monoxide-H87, K19, K20
Cardiomyopathy-H34
Career-B205
Career/Technology Education-I9
Cartilage Triticea-H138
Case Arrival-B207
Case Assessment-W9
Casework Examples-B96
Cathinones-B131, K9
CCTV Captured Images-C20
CE/MEKC/MS-B49
CE/MS-B123, B129
Cell Sorting-B105
Cerebral Tissue-H82
Cerebrospinal Fluid-H45
Certification-E17
Cervical Atlas-A22
CHAID-H74
Chain Saw Death-H59
Change-E79
Characteristic-B148
Characteristics-J12
Charcoal-H87
Charred Human Remains-G34
Cheese-G23
### Key Word Index

<table>
<thead>
<tr>
<th>Chemical Analysis-D6</th>
<th>Comparison Microscopy-B165</th>
<th>Crime Laboratory-E58</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemometrics-B42, B193</td>
<td>Competency-E68, I3, I24</td>
<td>Crime Labs-F8</td>
</tr>
<tr>
<td>Chemotherapy-B81</td>
<td>Competency Evaluation-I11</td>
<td>Crime Reporting-I44</td>
</tr>
<tr>
<td>Child Abduction Murder-E53</td>
<td>Competency to Stand Trial-I12</td>
<td>Crime Scene-B112, E9, E71, F45</td>
</tr>
<tr>
<td>Child Custody-I43</td>
<td>Complex Mixture-B143</td>
<td>Crime Scene Measurements-E2</td>
</tr>
<tr>
<td>Child Homicide-H56, W11</td>
<td>Complex Suicide-E19</td>
<td>Criminal Autobiography-LW2</td>
</tr>
<tr>
<td>Child Victims-I37</td>
<td>Computed Radiography-W18</td>
<td>Criminal Behavior-E88</td>
</tr>
<tr>
<td>Childhood Asphyxial Deaths-H83</td>
<td>Computed Tomography-A43, A106, E82, G19, H132, H134</td>
<td>Criminal Behavior Analysis-E49</td>
</tr>
<tr>
<td>Children-E52, G14</td>
<td>Computer Evidence-W4</td>
<td>Criminal Investigation-E26, W21</td>
</tr>
<tr>
<td>Chinese System-H141</td>
<td>Computer Program-C20, G46</td>
<td>Criminalistics-B90, B91, B118</td>
</tr>
<tr>
<td>Chiral-B20</td>
<td>Computer System Integration-F11</td>
<td>Critic-J20</td>
</tr>
<tr>
<td>Choking-H57</td>
<td>Conductive-J11</td>
<td>Crosswalk-D24</td>
</tr>
<tr>
<td>Chromebook™-C7</td>
<td>Cone Beam Computed Tomography-G11</td>
<td>Crow-Glassman Scale-A52</td>
</tr>
<tr>
<td>CIL-A100</td>
<td>Confirmation Bias-I38</td>
<td>Crude Oil-B148</td>
</tr>
<tr>
<td>Citrate-A122, D10</td>
<td>Congenital-A22</td>
<td>Crystallography-B124</td>
</tr>
<tr>
<td>Civil Commitment-I34</td>
<td>Congruent Match Cross-Section-B169</td>
<td>CSI Canines-B26</td>
</tr>
<tr>
<td>Civil Rights-LW4</td>
<td>Contamination-F43</td>
<td>“CSI Effect”-E25, E67</td>
</tr>
<tr>
<td>Clandestine Remains-A75</td>
<td>Continuous-B97</td>
<td>CT-A7</td>
</tr>
<tr>
<td>Clavicle-A11</td>
<td>Continuous Improvement-E79</td>
<td>Cuba-A89</td>
</tr>
<tr>
<td>Cleaning Firearms-E21</td>
<td>Continuous Models-B96</td>
<td>Cukurova Population-H15</td>
</tr>
<tr>
<td>Clenbutreol-K71</td>
<td>Contrast Media-H45</td>
<td>Cult-I33</td>
</tr>
<tr>
<td>Climate Modeling-B126</td>
<td>Controlled Substance-F40</td>
<td>Culture-B204</td>
</tr>
<tr>
<td>Clinical Forensic Medicine-E14</td>
<td>Controlled Substance Analogue-F40</td>
<td>Curvature of the Kerf Wall-E91</td>
</tr>
<tr>
<td>Clonidine-H33</td>
<td>Controlled Substances-B72, W14</td>
<td>Custodial Deaths-H107</td>
</tr>
<tr>
<td>Clothing-B156</td>
<td>Coordinated Response-W8</td>
<td>Customer Working Group-F6</td>
</tr>
<tr>
<td>Cloud Computing-C16</td>
<td>Coronary-H106</td>
<td>Cut Marks-A21</td>
</tr>
<tr>
<td>Cloud Forensics-W4</td>
<td>Coroner-E7, H47</td>
<td>Cyber Bullies-I41</td>
</tr>
<tr>
<td>Club Drugs-E73</td>
<td>Coroner-E7, H47</td>
<td>Cyberbullying-I1, I41</td>
</tr>
<tr>
<td>CMC Method-B167</td>
<td>Coroner-E7, F12</td>
<td>Cybercrime-I15</td>
</tr>
<tr>
<td>CMU-D29</td>
<td>Correctional Education-I9</td>
<td>Cybersex-I15</td>
</tr>
<tr>
<td>Cocaine-H41, K24</td>
<td>Corrosive Chemicals-A111</td>
<td>Cytochrome B (cyt-h)-H21</td>
</tr>
<tr>
<td>Code of Ethics-W22</td>
<td>Cortical Thickness-A99</td>
<td>Cytology-H7</td>
</tr>
<tr>
<td>CODIS-B137, B209, E89</td>
<td>Cosmetic Evidence-B38</td>
<td></td>
</tr>
<tr>
<td>Co-Extraction-B5</td>
<td>Cosmetics-B153</td>
<td></td>
</tr>
<tr>
<td>Cognitive Bias-F14, F29</td>
<td>Council of Forensic Medicine-G53</td>
<td></td>
</tr>
<tr>
<td>Cold Case-A125, E16, F26</td>
<td>Counterfeit-C17, J6, J13</td>
<td></td>
</tr>
<tr>
<td>Cold Case Rape-F25</td>
<td>Counterfeit Pharmaceuticals-B196</td>
<td></td>
</tr>
<tr>
<td>Cold Cases-A126, B211</td>
<td>Counterterrorism-F44</td>
<td></td>
</tr>
<tr>
<td>Collaboration-E56</td>
<td>Courtroom Exhibits-F18</td>
<td></td>
</tr>
<tr>
<td>Collapse-BS4</td>
<td>Coverdell-F32</td>
<td></td>
</tr>
<tr>
<td>Collection-B13</td>
<td>CpG Marker-A85</td>
<td></td>
</tr>
<tr>
<td>Colonization Delay-E87</td>
<td>CPR-H43</td>
<td></td>
</tr>
<tr>
<td>Color Test-B73</td>
<td>Cranial Fracture-A78, A112</td>
<td></td>
</tr>
<tr>
<td>Colorimetric-B147</td>
<td>Cranial Fractures-A76</td>
<td></td>
</tr>
<tr>
<td>Colorimetric Reagents-B36</td>
<td>Cranial Non-Metric Traits-A96</td>
<td></td>
</tr>
<tr>
<td>Combat Troops-E43</td>
<td>Craniofacial-G8</td>
<td></td>
</tr>
<tr>
<td>Combat Veterans-I20</td>
<td>Cranium-A95, A109</td>
<td></td>
</tr>
<tr>
<td>Commensal-H4</td>
<td>Cremation-A51</td>
<td></td>
</tr>
<tr>
<td>Commingling-A4, A69</td>
<td>Crime Assessment-W21</td>
<td></td>
</tr>
<tr>
<td>Comparative Study-E88</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**D**

- D3-251-NBOMe-K6
- Damaged Mobile Devices-W15
- Damaged Mobile Phones-W15
- Dart Firing Stun Gun-F10
- DART*-B33
- DART*-MS-B42, B75, K7
- Data Bank-A113
- Data Recovery-C8
- Data Validation-A120
- Database-B137, B141, B150, G13
- Daubert-F22, F23, F41, F42, J8
- Dead Bodies-E36
- Death-F43, G50, H53, H101, H104, H108
## KEY WORD INDEX

<table>
<thead>
<tr>
<th>Death Certificate-H140</th>
<th>Differential Extraction-B111, B134</th>
</tr>
</thead>
<tbody>
<tr>
<td>Death Investigation-E8, E34, H22, H70, H111, H139, K19</td>
<td>Differential Forensics-C1</td>
</tr>
<tr>
<td>Death Penalty-J6</td>
<td>Differential Taphonomy-A115</td>
</tr>
<tr>
<td>Death Scene Investigation-H129</td>
<td>Digital-C4, C5, F48</td>
</tr>
<tr>
<td>Deaths-F13, H81, K17</td>
<td>Digital Dimensioning-D8</td>
</tr>
<tr>
<td>Decision Trees-A30, G51</td>
<td>Digital Evidence-C6, C8, F37, W4</td>
</tr>
<tr>
<td>Deconvolution-B99</td>
<td>Digital Forensic Artifacts-C22</td>
</tr>
<tr>
<td>Deduplication-F48</td>
<td>Digital Forensics-C7, C16, W22</td>
</tr>
<tr>
<td>Deep Learning-C2</td>
<td>Digital Images-A120</td>
</tr>
<tr>
<td>Defective-D26</td>
<td>Digital Video-C12</td>
</tr>
<tr>
<td>Defendant-F46</td>
<td>Dilemma-I40</td>
</tr>
<tr>
<td>Degradation-B187</td>
<td>Direct Amplification-B112, B115</td>
</tr>
<tr>
<td>Deleted Data Recovery-C16</td>
<td>Direct PCR-B12</td>
</tr>
<tr>
<td>Delivery Modality-E69</td>
<td>Direct Thermal Extraction-B21</td>
</tr>
<tr>
<td>DeNiSTing-F48</td>
<td>Direct-to-PCR-B113</td>
</tr>
<tr>
<td>Dental-G54</td>
<td>Disaster Response-E64</td>
</tr>
<tr>
<td>Dental Age-G16</td>
<td>Disaster Victim Identification-G43, H78</td>
</tr>
<tr>
<td>Dental Age Estimation-G6, G7, G8, G10</td>
<td>Discriminant Analysis-A91</td>
</tr>
<tr>
<td>Dental Codes Translation-G49</td>
<td>Disinterment-A4, A115</td>
</tr>
<tr>
<td>Dental Evidence-G30, G34</td>
<td>Dismemberment-A79</td>
</tr>
<tr>
<td>Dental Hygiene-G1, G44</td>
<td>Dismemberment, Saw Mark-E91</td>
</tr>
<tr>
<td>Dental Identification-G32, G34, G39, G47, G48, W5</td>
<td>Disorders of Sex Development-I44</td>
</tr>
<tr>
<td>Dental Identifiers-G41</td>
<td>Dissection-H106</td>
</tr>
<tr>
<td>Dental IDs-G38</td>
<td>Dissociation-I25</td>
</tr>
<tr>
<td>Dental Malpractice-G53</td>
<td>Distribution Functions-B201</td>
</tr>
<tr>
<td>Dental Non-Metrics-A65</td>
<td>Diversity and Inclusion-W19</td>
</tr>
<tr>
<td>Dental Profile-G37</td>
<td>DNA-B3, B5, B9, B13, B52, B57, B98, B116, B132, B191, B211, B212, E15, E89, F25, F27, F28, F30, F32, H13, H17, H69</td>
</tr>
<tr>
<td>Dental Radiograph-A12</td>
<td>DNA Analysis-B140, W23</td>
</tr>
<tr>
<td>Dental Radiology-G41</td>
<td>DNA Barcoding-B58, B59, B60, B189</td>
</tr>
<tr>
<td>Dentistry-G50, G51</td>
<td>DNA Damage-B109, B178, B179</td>
</tr>
<tr>
<td>Department of Defense-A100</td>
<td>DNA Database-B210</td>
</tr>
<tr>
<td>Dermestid Beetles-K25</td>
<td>DNA Databasing-B4</td>
</tr>
<tr>
<td>Descomposition-H23</td>
<td>DNA Evidence-B117</td>
</tr>
<tr>
<td>Desiccation-A18</td>
<td>DNA Extraction-B55, B114</td>
</tr>
<tr>
<td>Design-J13</td>
<td>DNA Filtration Device-B133</td>
</tr>
<tr>
<td>Designer Drug-F33</td>
<td>DNA Interpretation-B216</td>
</tr>
<tr>
<td>Designer Drugs-B31, B131, K1</td>
<td>DNA Methylation-A85, B7, B192</td>
</tr>
<tr>
<td>Developmental Osteology-A54</td>
<td>DNA Mixture-B99, B100, F29</td>
</tr>
<tr>
<td>Diabetic Ketoacidosis-H68</td>
<td>DNA Mixtures-B101</td>
</tr>
<tr>
<td>Diacetylmorphine-B19</td>
<td>DNA Paternity Testing-B65</td>
</tr>
<tr>
<td>Diagenesis-E75</td>
<td>DNA Preservation-B113, B140</td>
</tr>
<tr>
<td>Diagnostic Accuracy-H54</td>
<td>DNA Repair-B179</td>
</tr>
<tr>
<td>Dialysis-B34</td>
<td>DNA Screening-B107</td>
</tr>
<tr>
<td>Diclozapam-K69</td>
<td>DNA Testing-B66, B213</td>
</tr>
<tr>
<td>Dietary Supplements-K30</td>
<td>DNA Typing-B108, B138, I30</td>
</tr>
<tr>
<td>DNA Typing <em>Triticum Aestivum</em> L-B59</td>
<td>DNA Typing</td>
</tr>
<tr>
<td>Document-C17</td>
<td>Document Examination-J15, J17, J18</td>
</tr>
<tr>
<td>Document-B162, E56, LW4, W12</td>
<td>Documentation-J11</td>
</tr>
<tr>
<td>Doll Reenactment-H30</td>
<td>Domestic Violence-G29, I20</td>
</tr>
<tr>
<td>Donor Age-B80</td>
<td>Down Syndrome-G2</td>
</tr>
<tr>
<td>DRE-K44, K45, K46, K47</td>
<td>Drew Peterson-BS1</td>
</tr>
<tr>
<td>Drew’s Law-BS1</td>
<td>Dried Blood Spots-K21, K57</td>
</tr>
<tr>
<td>Driver-K48</td>
<td>Driving-K46</td>
</tr>
<tr>
<td>Drones-E29</td>
<td>Drug-H100</td>
</tr>
<tr>
<td>Drug Abuse-E47, H74</td>
<td>Drug Analysis-B33, B124, B128</td>
</tr>
<tr>
<td>Drug Chemistry-B121</td>
<td>Drug Concentrations-K43</td>
</tr>
<tr>
<td>Drug Intoxications-E14</td>
<td>Drug Use-H126</td>
</tr>
<tr>
<td>Drug-Impaired Driving-K55</td>
<td>Drugs-B32, B125, K4, K31, K58</td>
</tr>
<tr>
<td>Drugs Analysis-K26</td>
<td>DSM-5-7</td>
</tr>
<tr>
<td>DUS-5</td>
<td>Duet Tape-B87, B88</td>
</tr>
<tr>
<td>Due Process-F39</td>
<td>DUI-K2, K50, K52</td>
</tr>
<tr>
<td>DUID-K1, K3, K35, K45, K51, K68</td>
<td>DUID Drug Screen-K49</td>
</tr>
<tr>
<td>DUID Drug Screen-K49</td>
<td>Dust-D15</td>
</tr>
<tr>
<td>DVI-B113, G46</td>
<td>Dynamic-C18</td>
</tr>
</tbody>
</table>

**E**

- Eagle Syndrome-G35
- Early Ischemia-H38
- EDD-J2
- EDM Festivals-K60
- Education-B137, E26, E63, E69, E93, F5, S2
- Elder Abuse-E83, I14, W24
- Elder Abuse Prevention-I14
- Elder Abuse Protocol-I14
- Elder Mistreatment-E83
- Elderly-H102
- E-Learning-J6
- Electrical Tape-B21
- Electrochemistry-B164
<table>
<thead>
<tr>
<th>KEY WORD INDEX</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Electrocution</strong>-E5, LW4</td>
</tr>
<tr>
<td><strong>Electron Microscopy</strong>-E5</td>
</tr>
<tr>
<td><strong>Electronic Cigarettes</strong>-W14</td>
</tr>
<tr>
<td><strong>Electronic Evidence</strong>-C7</td>
</tr>
<tr>
<td><strong>Electroshock Weapon Wounds</strong>-F10</td>
</tr>
<tr>
<td><strong>Electrostatic Discharge</strong>-D21</td>
</tr>
<tr>
<td><strong>Element Composition</strong>-E37</td>
</tr>
<tr>
<td><strong>Elemental Analysis</strong>-A68</td>
</tr>
<tr>
<td><strong>E-Liquids</strong>-K39</td>
</tr>
<tr>
<td><strong>ELISA</strong>-K49</td>
</tr>
<tr>
<td><strong>Elopement</strong>-I10</td>
</tr>
<tr>
<td><strong>Embalmed</strong>-B109</td>
</tr>
<tr>
<td><strong>Emergency Management</strong>-E8</td>
</tr>
<tr>
<td><strong>Emergency Room</strong>-F45</td>
</tr>
<tr>
<td><strong>EMT</strong>-E71</td>
</tr>
<tr>
<td><strong>EnCase® Forensic</strong>-C19</td>
</tr>
<tr>
<td><strong>Endocranium</strong>-A31</td>
</tr>
<tr>
<td><strong>End-of-Life</strong>-I40</td>
</tr>
<tr>
<td><strong>Entomofauna</strong>-H14</td>
</tr>
<tr>
<td><strong>Entomological Evaluation</strong>-H93</td>
</tr>
<tr>
<td><strong>Entomology</strong>-H115</td>
</tr>
<tr>
<td><strong>Entomotoxicology</strong>-H12, K27</td>
</tr>
<tr>
<td><strong>Environmental Samples</strong>-B49</td>
</tr>
<tr>
<td><strong>Ephedrine</strong>-B122</td>
</tr>
<tr>
<td><strong>Epiphyseal Union</strong>-A13</td>
</tr>
<tr>
<td><strong>Equine</strong>-H18</td>
</tr>
<tr>
<td><strong>Equivocal Death</strong>-W10</td>
</tr>
<tr>
<td><strong>ER Patient</strong>-K28</td>
</tr>
<tr>
<td><strong>Eradication</strong>-G22</td>
</tr>
<tr>
<td><strong>Error</strong>-D8</td>
</tr>
<tr>
<td><strong>Error of Measurement</strong>-A29</td>
</tr>
<tr>
<td><strong>Error Rate</strong>-C6</td>
</tr>
<tr>
<td><strong>Error Tolerance</strong>-B203</td>
</tr>
<tr>
<td><strong>Errors</strong>-B22, B214</td>
</tr>
<tr>
<td><strong>ESDA®</strong>-J2</td>
</tr>
<tr>
<td><strong>ESI-HPIMS</strong>-B70</td>
</tr>
<tr>
<td><strong>Ethical Responsibilities</strong>-F3</td>
</tr>
<tr>
<td><strong>Ethics</strong>-I6, I40</td>
</tr>
<tr>
<td><strong>Ethylene</strong>-K56</td>
</tr>
<tr>
<td><strong>Eukaryotes</strong>-H117</td>
</tr>
<tr>
<td><strong>Evaporation</strong>-B46</td>
</tr>
<tr>
<td><strong>Evidence</strong>-F16, F42, G21, G27, G28, H97, I45</td>
</tr>
<tr>
<td><strong>Evidence Collection</strong>-F45</td>
</tr>
<tr>
<td><strong>Evidential Value</strong>-E60</td>
</tr>
<tr>
<td><strong>Evidentiary Value</strong>-B171</td>
</tr>
<tr>
<td><strong>Examination Gloves</strong>-B3</td>
</tr>
<tr>
<td><strong>Excited Delirium Syndrome</strong>-H55</td>
</tr>
<tr>
<td><strong>Exhumation</strong>-K26</td>
</tr>
<tr>
<td><strong>Exhuming the Body</strong>-E35</td>
</tr>
<tr>
<td><strong>Exoneration</strong>-F2, F8</td>
</tr>
<tr>
<td><strong>Expert Evidence</strong>-W11</td>
</tr>
<tr>
<td><strong>Expert Testimony</strong>-D12, F24</td>
</tr>
<tr>
<td><strong>Expert Verification</strong>-D12</td>
</tr>
<tr>
<td><strong>Expert Witness</strong>-F3</td>
</tr>
<tr>
<td><strong>Explosive</strong>-B151</td>
</tr>
<tr>
<td><strong>Explosive Drugs Optical Isomer</strong>-B123</td>
</tr>
<tr>
<td><strong>Explosives</strong>-B48, B154, E57</td>
</tr>
<tr>
<td><strong>F</strong></td>
</tr>
<tr>
<td><strong>Face Expression</strong>-C21</td>
</tr>
<tr>
<td><strong>Faceoff</strong>-G54</td>
</tr>
<tr>
<td><strong>Facial Approximation</strong>-A42, E82</td>
</tr>
<tr>
<td><strong>Facial Dissection</strong>-H96</td>
</tr>
<tr>
<td><strong>Facial Identification</strong>-A38</td>
</tr>
<tr>
<td><strong>Facial Reconstruction</strong>-A39, A40, A41, A42, A43, C20, E4</td>
</tr>
<tr>
<td><strong>FACS</strong>-B106</td>
</tr>
<tr>
<td><strong>Failure</strong>-D7</td>
</tr>
<tr>
<td><strong>False Positive</strong>-B214</td>
</tr>
<tr>
<td><strong>Familial</strong>-E89</td>
</tr>
<tr>
<td><strong>Families</strong>-A37</td>
</tr>
<tr>
<td><strong>Family Tragedy</strong>-G24</td>
</tr>
<tr>
<td><strong>Fatal Fire</strong>-E24</td>
</tr>
<tr>
<td><strong>Fatalities</strong>-H44</td>
</tr>
<tr>
<td><strong>FBI</strong>-F31</td>
</tr>
<tr>
<td><strong>Fecal Matter</strong>-H18</td>
</tr>
<tr>
<td><strong>Feedback</strong>-F11</td>
</tr>
<tr>
<td><strong>Female Sexual Abusers</strong>-I4</td>
</tr>
<tr>
<td><strong>Femoral Neck Axis Length</strong>-A32</td>
</tr>
<tr>
<td><strong>Fentanyl</strong>-B119, E47, H72, K66, K67, K74</td>
</tr>
<tr>
<td><strong>Fentanyl Analogues</strong>-B119</td>
</tr>
<tr>
<td><strong>Fetomaternal Transfusion</strong>-H40</td>
</tr>
<tr>
<td><strong>Fiber</strong>-B157</td>
</tr>
<tr>
<td><strong>Fibrinous Pericarditis</strong>-H67</td>
</tr>
<tr>
<td><strong>Field Test</strong>-E45</td>
</tr>
<tr>
<td><strong>File Structure Analysis</strong>-C10</td>
</tr>
<tr>
<td><strong>Ficelle</strong>-H56</td>
</tr>
<tr>
<td><strong>Final Exit</strong>-H88</td>
</tr>
<tr>
<td><strong>Fingerprint</strong>-B68, B69, B79, B81</td>
</tr>
<tr>
<td><strong>Fingerprint Quality</strong>-B80</td>
</tr>
<tr>
<td><strong>Fingerprint Recovery Technique</strong>-E84</td>
</tr>
<tr>
<td><strong>Fingerprints</strong>-B22, B161, B164, B181, B198, E65, F17</td>
</tr>
<tr>
<td><strong>Fire</strong>-D17, D20, G38</td>
</tr>
<tr>
<td><strong>Fire Debris</strong>-B42, B43, B44, B171</td>
</tr>
<tr>
<td><strong>Fire Debris Analysis</strong>-B46</td>
</tr>
<tr>
<td><strong>Fire Extinguisher</strong>-H52</td>
</tr>
<tr>
<td><strong>Fire Scene</strong>-E44</td>
</tr>
<tr>
<td><strong>Firearm</strong>-H62</td>
</tr>
<tr>
<td><strong>Firearm and Tool Mark</strong>-B173</td>
</tr>
<tr>
<td><strong>Firearm DNA</strong>-E21</td>
</tr>
<tr>
<td><strong>Firearm Identification</strong>-B169, E38</td>
</tr>
<tr>
<td><strong>Firearm Tool Marks</strong>-B168</td>
</tr>
<tr>
<td><strong>Firearms</strong>-B13, B30, E54, E68</td>
</tr>
<tr>
<td><strong>Firearms Examination</strong>-E27</td>
</tr>
<tr>
<td><strong>First Presentation</strong>-H68</td>
</tr>
<tr>
<td><strong>Fish Substitutions</strong>-B60</td>
</tr>
<tr>
<td><strong>Fitness Restoration</strong>-I11</td>
</tr>
<tr>
<td><strong>Flawed Methods</strong>-LW3</td>
</tr>
<tr>
<td><strong>Flesh Flies</strong>-H9</td>
</tr>
<tr>
<td><strong>FLIR</strong>-H118</td>
</tr>
<tr>
<td><strong>Flow</strong>-G20</td>
</tr>
<tr>
<td><strong>Flow Cytometry</strong>-B104</td>
</tr>
<tr>
<td><strong>Flowchart</strong>-A21</td>
</tr>
<tr>
<td><strong>Fluid</strong>-D5</td>
</tr>
<tr>
<td><strong>Fluorescence</strong>-B69</td>
</tr>
<tr>
<td><strong>Fluorescence Spectroscopy</strong>-B149</td>
</tr>
<tr>
<td><strong>FMVSS302</strong>-D20</td>
</tr>
<tr>
<td><strong>Food</strong>-H57</td>
</tr>
<tr>
<td><strong>Food Fraud</strong>-B60</td>
</tr>
<tr>
<td><strong>Football Helmet Testing</strong>-D2</td>
</tr>
<tr>
<td><strong>Footprint Length</strong>-A8</td>
</tr>
<tr>
<td><strong>Footprints</strong>-E28, E81</td>
</tr>
<tr>
<td><strong>Footwear</strong>-B85</td>
</tr>
<tr>
<td><strong>Foramen Magnum</strong>-A109</td>
</tr>
<tr>
<td><strong>Force</strong>-D14, F13</td>
</tr>
<tr>
<td><strong>FORDISC®</strong>-A27, A49</td>
</tr>
<tr>
<td><strong>ForenScope®</strong>-J9</td>
</tr>
<tr>
<td><strong>Forensic</strong>-A73, B16, B145, D17, E93, G18</td>
</tr>
<tr>
<td><strong>Forensic Analysis</strong>-B120</td>
</tr>
<tr>
<td><strong>Forensic Archaeology</strong>-A72, A74, E64, E66</td>
</tr>
<tr>
<td><strong>Forensic Art</strong>-E82, F18</td>
</tr>
<tr>
<td><strong>Forensic Autopsy</strong>-E72, H36, H109, H130</td>
</tr>
<tr>
<td><strong>Forensic Botany</strong>-B59, B190, H97</td>
</tr>
<tr>
<td><strong>Forensic Data Bank</strong>-A101</td>
</tr>
<tr>
<td><strong>Forensic Death Investigation</strong>-I31</td>
</tr>
<tr>
<td><strong>Forensic DNA</strong>-B53</td>
</tr>
<tr>
<td><strong>Forensic DNA Typing</strong>-B54</td>
</tr>
<tr>
<td><strong>Forensic Document</strong>-J9</td>
</tr>
<tr>
<td><strong>Forensic Document Examiner</strong>-J20</td>
</tr>
<tr>
<td><strong>Forensic Drugs</strong>-B75</td>
</tr>
<tr>
<td><strong>Forensic Emergency Management</strong>-H111</td>
</tr>
<tr>
<td><strong>Forensic Entomology</strong>-E87, H14, H16, H113, H114, H119</td>
</tr>
<tr>
<td><strong>Forensic Evidence</strong>-E60, F24</td>
</tr>
</tbody>
</table>
# KEY WORD INDEX

<table>
<thead>
<tr>
<th>Forensic Examination-H70</th>
<th>Formalin-Fixed-B2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forensic Fiber Analysis-B149</td>
<td>Fossils-E74</td>
</tr>
<tr>
<td>Forensic Genetics-B52, B208</td>
<td>Fourth Rib-A94</td>
</tr>
<tr>
<td>Forensic Geology-B83</td>
<td>Fractal Analysis-G33</td>
</tr>
<tr>
<td>Forensic History-LW1</td>
<td>Fracture-A80, H28, H64</td>
</tr>
<tr>
<td>Forensic Identification-A35</td>
<td>Fracture Biomechanics-A76</td>
</tr>
<tr>
<td>Forensic Image Analysis-H63</td>
<td>Fracture Healing-H32</td>
</tr>
<tr>
<td>Forensic Imaging-D11, H42, H131, H133</td>
<td>Fracture Pattern-D3</td>
</tr>
<tr>
<td>Forensic Intelligence-E55, W9</td>
<td>Fragmentary Remains-A33</td>
</tr>
<tr>
<td>Forensic Interview-LW2</td>
<td>Fragmentation-K8, K36</td>
</tr>
<tr>
<td>Forensic Investigation-D6, H132</td>
<td>Framework-C23</td>
</tr>
<tr>
<td>Forensic Laboratories-J1</td>
<td>Frangible-B165</td>
</tr>
<tr>
<td>Forensic Laboratory-A116</td>
<td>FREQ 702-F23, J20</td>
</tr>
<tr>
<td>Forensic Linguistics-D9</td>
<td>Free-Dive Competition-H135</td>
</tr>
<tr>
<td>Forensic Literature-W1</td>
<td>Frequency Occurrence-W6</td>
</tr>
<tr>
<td>Forensic Metrology-F19</td>
<td>Friction-D22</td>
</tr>
<tr>
<td>Forensic Microbiology-H124</td>
<td>Friction Ridge-B163</td>
</tr>
<tr>
<td>Forensic Pathology-H1, H27, H70, H94, H96, H98, H110, L1</td>
<td>Frontal Sinuses-A105</td>
</tr>
<tr>
<td>Forensic Pathology Diagnosis-H63</td>
<td>Frye-F22</td>
</tr>
<tr>
<td>Forensic Pathologist-F15</td>
<td>FTIR-J10</td>
</tr>
<tr>
<td>Forensic Podiatry-A8, E28, E81</td>
<td>FTIR Imaging-B86</td>
</tr>
<tr>
<td>Forensic Psychiatry-E92, I4, I5</td>
<td>FTK®-C19</td>
</tr>
<tr>
<td>Forensic Psychology-E92</td>
<td>Fuel Gas-D30</td>
</tr>
<tr>
<td>Forensic Radiography-W18</td>
<td>Functional Genes-H19</td>
</tr>
<tr>
<td>Forensic Radiology-A1</td>
<td>Fusion™-B136</td>
</tr>
<tr>
<td>Forensic Samples-B135</td>
<td></td>
</tr>
<tr>
<td>Forensic Science-A133, B7, B11, B38, B65, B66, B169, B205, BS5, E25, E67, E76, E80, G9, G39, H36, H97, H105, W10, W19</td>
<td></td>
</tr>
<tr>
<td>Forensic Science Inspection-H141</td>
<td></td>
</tr>
<tr>
<td>Forensic Science Standards-BS3</td>
<td></td>
</tr>
<tr>
<td>Forensic Sciences-A28, E5, H98</td>
<td></td>
</tr>
<tr>
<td>Forensic Scientists-W8</td>
<td></td>
</tr>
<tr>
<td>Forensic Services-B207</td>
<td></td>
</tr>
<tr>
<td>Forensic Soil Samples-B189</td>
<td></td>
</tr>
<tr>
<td>Forensic Standards-F47</td>
<td></td>
</tr>
<tr>
<td>Forensic Statistical Tool-F26</td>
<td></td>
</tr>
<tr>
<td>Forensic Taphonomy-H1</td>
<td></td>
</tr>
<tr>
<td>Forensic Toxicology-K12, K38, K50, K59, K64</td>
<td></td>
</tr>
<tr>
<td>Forensic Video Analysis-C15</td>
<td></td>
</tr>
<tr>
<td>Forensic Voice Comparison-C11</td>
<td></td>
</tr>
<tr>
<td>Forensic GEM™-B4, B107</td>
<td></td>
</tr>
<tr>
<td>Forensics-A21, A80, C23, H7, H10, H117</td>
<td></td>
</tr>
<tr>
<td>Forgery-J5</td>
<td></td>
</tr>
<tr>
<td>Glass-B84, B152</td>
<td></td>
</tr>
<tr>
<td>Glyphosate-K28</td>
<td></td>
</tr>
<tr>
<td>Golden Crescent-E73</td>
<td></td>
</tr>
<tr>
<td>GoPro®-C14, E2</td>
<td></td>
</tr>
<tr>
<td>GPS Tracking-A132</td>
<td></td>
</tr>
<tr>
<td>Green Analytical Chemistry-B197</td>
<td></td>
</tr>
<tr>
<td>Griess Test-E40</td>
<td></td>
</tr>
<tr>
<td>Grills-H87</td>
<td></td>
</tr>
<tr>
<td>Growth Plate Abnormality-H29</td>
<td></td>
</tr>
<tr>
<td>Guilt-G56</td>
<td></td>
</tr>
<tr>
<td>Gunshot Residue-B158, B160, B200, E54</td>
<td></td>
</tr>
<tr>
<td>Gunshot Residues-H92</td>
<td></td>
</tr>
<tr>
<td>Gunshot Wound Interpretation-H80</td>
<td></td>
</tr>
<tr>
<td>Gunshot Wounds-H92</td>
<td></td>
</tr>
</tbody>
</table>

| H | |
| Hackers-C3 | |
| Hair-B89, B159, B188, D13, E33, K22 | |
| Hair Decomposition-B16 | |
| Hair Microscopy-F36 | |
| Handcrafted Weapon-E32 | |
| Handledness-J12 | |
| Handwriting-J5, J18, J19, W6 | |
| Handwriting Analysis-LW1 | |
| Hanging-E10, H37 | |
| Hangings-H107 | |
| Harassment-I29 | |
| HAZMAT-G20 | |
| Head Injury-D4 | |
| Head Injury Severity-D2 | |
| Head Trauma-H82 | |
| Headspace Chromatography-K16 | |
| Healing-A25 | |
| Health Care Workplace-I29 | |
| Helmet Defects-D4 | |
| Hemastix®-B63 | |
| Hematoma-H6 | |
| Herbal Medicine-H105 | |
| Heroin-B19, B119, H41, H76, H101, H104, K17, K71, K74 | |
| Hexagon-Obti-Test-H90 | |
| H-FABP-H86 | |
| High Explosives-B49 | |
| High Temperature Humidity-D2 | |
| High-Resolution Melt-B191 | |
| Hippocampal Sclerosis-H46 | |
| Hispanic-A32 | |
| Histologic Examination-H83 | |
| Histology-A79, A98 | |
KEY WORD INDEX

Historical Study-A102
History-B202, B210, BS5
Holographic Will-J18
Homicidal Ideation-I34
Homicide-E3, E22, E60, H69, H110, I28, I37
Homicide and Accident-H83
Homicides-K3, K34, LW5
HPLC-B160, D10
HR Tandem Mass Spectrometry-B77
HS/GC/MS-B24, E20
HS/SPME-B78
HSP70-H48
Human-A63
Human Autopsy Tissue-B24
Human Bias-E76
Human Decomposition-A19, A123, B18, H8, H9
Human DNA-A61
Human Errors-J19
Human Fatality-H52, H136
Human Identification-B65, B66, E12, G12, G45, H84
Human Leukocyte Antigen-B106
Human or Non-Human-H90
Human Performance Toxicology-K43
Human Remains-B132, E66
Human Rights-A37, W16
Human Scent Evidence-B26
Human Variation-A101
Humanitarian-W16
Humanitarian Odontology-G43
Hurricane-E64
Hybrid Learning-E69
Hydrogen Sulfide-K12
Hypnosis-I45
Hypothermia Death-E43
Image Analysis-B146
Image Comparison-C1
Imaging-C17
Immunohistochemistry-H38
Impact-D19, H64
Impaired Driving-K51
Impaired Vision-D24
Impairment-K44, K48
Impression Enhancement-B140
Impurity Profiling-B23
Imputation-A88
In Custody-H81
In Situ-B94
In Vitro Metabolism-K37
Inadvertent Transfer-F27
Inattentive Driving-D25
Incarcerated Parents-I2
Incompetency-F46
Incompetent Defendants-I11
Incorporation-B204
INDELs-B2
Indented Writing-J2
Independency-B204, F7
India-K15
Indusces-A131
Indirect Ophthalmoscopy-W17
Indirect Transfer-B14
Individual Biological Fragment-B55
Individual Differences-C3
Individualization-F17
Industrial Accidents-H111
Infant-H25, K73
Infant Death-E48, H31
Infant Drug Deaths-H33
Infants-A103
Inflammation-H25
Information Resources-W1
Infrared Photography-E44
Infrared Spectrometry-B195
Infrared Thermography-H2
Injury-H48, H59
Injury Severity Score-E3
Ink-J11
Ink Analysis-B155
Ink Examinations-J15
Inkless Pen-J17
Innocence-G56
Innocent-F35
InnoTyper™-B136, B142, B145
Innovation-S1
Inpatient Assault-I26
Inquests-F12
Insanity-I33
Insect Behavior-H9
Insects-A59
Insects Bites-E36
Inspire-E63
Instrumentation-B94
Insulation-D15
Integration With Justice-F11
Interdisciplinary-E93, S1
Interlandmark Distances-A114
International-B25
International Cooperation-E55
Internet of Things-C23
INTERPOL-G46
Interpretation-B14, B87, B88, B102, B117, B170
Interventional-E70
Intoxication-H100
Intraoral Radiography-G44
Inventory of Legal Knowledge-I12
Investigation-D17, E6, E46, E48, H52, H136, I18, W7, W24
Investigations-D28
Investigative Process-L2
Iodoacetamide (IAM)-B114
Ion Mobility Spectrometry-E57
Ion Pairing Chromatography-B160
Iris Scanning-H84
IR-PCR-B111
Isotopes-A3, B126

J

Jail-H81
JD-F4
JTAG-C4
Judge-F15
Judges and Lawyers-F3
Judicial-F5
Judicial Gatekeeping-F20, F23
Junk Science-LW5
Jurisprudence-F37
Juror Decision Making-F24
Juvenile-A106, H17, I3, I42
Juvenile Bone-A129
Juvenile Skeletons-A10

Key Word Index
<table>
<thead>
<tr>
<th><strong>KEY WORD INDEX</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>K</strong></td>
</tr>
<tr>
<td>K9 Water Searches-E42</td>
</tr>
<tr>
<td>Kent® Cigarettes-D16</td>
</tr>
<tr>
<td>Ketamine-K22, K23, K27</td>
</tr>
<tr>
<td>Kinship-B110</td>
</tr>
<tr>
<td>Kleihauer-Betke Test-H40</td>
</tr>
<tr>
<td>Knife Cuts-B157</td>
</tr>
<tr>
<td>Korean Skeletal Remains-A2</td>
</tr>
<tr>
<td><strong>L</strong></td>
</tr>
<tr>
<td>Laboratory-F9</td>
</tr>
<tr>
<td>LA-ICP/MS-B93</td>
</tr>
<tr>
<td>Larynx-H137</td>
</tr>
<tr>
<td>Las Vegas-K50</td>
</tr>
<tr>
<td>Laser Printer Identification-J3</td>
</tr>
<tr>
<td>Latent Fingerprint-B67</td>
</tr>
<tr>
<td>Latent Print Evidence-F38</td>
</tr>
<tr>
<td>Latent Prints-W12</td>
</tr>
<tr>
<td>Laundry Detergents-B149</td>
</tr>
<tr>
<td>Law Enforcement-E48</td>
</tr>
<tr>
<td>Law School-F4</td>
</tr>
<tr>
<td>LC/MS-B15, K37</td>
</tr>
<tr>
<td>LC/MS/MS-B153, K21, K23, K27, K31, K33, K38, K39, K41, K47, K71</td>
</tr>
<tr>
<td>LC/MS/TOF-K69</td>
</tr>
<tr>
<td>LCN DNA-F26</td>
</tr>
<tr>
<td>LC/qTOF-K8</td>
</tr>
<tr>
<td>LC/qTOF/MS/MS-K30</td>
</tr>
<tr>
<td>Lean-E79</td>
</tr>
<tr>
<td>Learning Lessons-F12</td>
</tr>
<tr>
<td>Legal Challenges-B92</td>
</tr>
<tr>
<td>Legal High-B82</td>
</tr>
<tr>
<td>Legal Majority-G15</td>
</tr>
<tr>
<td>Legal Medicine-E7</td>
</tr>
<tr>
<td>Legal Psychoactives-B122</td>
</tr>
<tr>
<td>Legislation-F34</td>
</tr>
<tr>
<td>Lens Location-A39</td>
</tr>
<tr>
<td>Leptomeninges-H25</td>
</tr>
<tr>
<td>Lethal Injection-LW3</td>
</tr>
<tr>
<td>Library Preparation-B177</td>
</tr>
<tr>
<td>Ligature-E30</td>
</tr>
<tr>
<td>Light Minerals-B83</td>
</tr>
<tr>
<td>Likelihood-B161</td>
</tr>
<tr>
<td>Likelihood Ratios-B143, B172</td>
</tr>
<tr>
<td>Linearity-E4</td>
</tr>
<tr>
<td>Limit of Detection-B185</td>
</tr>
<tr>
<td>Limitations-F30</td>
</tr>
<tr>
<td>LIMS-B206</td>
</tr>
<tr>
<td>Linear Amplification-B50</td>
</tr>
<tr>
<td>Linear Sequential Unmasking-B203</td>
</tr>
<tr>
<td>Lip Prints-E12</td>
</tr>
<tr>
<td>Liquid Chromatography-B23, B159, K58</td>
</tr>
<tr>
<td>Litigation-F27, F36, G52, I43</td>
</tr>
<tr>
<td>Liver Laceration-H43</td>
</tr>
<tr>
<td>Liver Pathology-H68</td>
</tr>
<tr>
<td>Living Participants-A48</td>
</tr>
<tr>
<td>Loss-B81</td>
</tr>
<tr>
<td>Low Copy DNA-H20</td>
</tr>
<tr>
<td>Low Explosives-B147</td>
</tr>
<tr>
<td>Low Level DNA-B133</td>
</tr>
<tr>
<td>Low Template DNA-B139</td>
</tr>
<tr>
<td>LSAM-B142</td>
</tr>
<tr>
<td>LT DNA Mixture Interpretation-B95</td>
</tr>
<tr>
<td>Lumbar Spine-A7</td>
</tr>
<tr>
<td>Luminous Marker-B158</td>
</tr>
<tr>
<td>Luminol-B185</td>
</tr>
<tr>
<td>Lung Weight-H100</td>
</tr>
<tr>
<td><strong>M</strong></td>
</tr>
<tr>
<td>MAB-CHMINACA-H75</td>
</tr>
<tr>
<td>Machine Learning-B99</td>
</tr>
<tr>
<td>Macromorphoscopics-A86</td>
</tr>
<tr>
<td>Maggot Crop-B145</td>
</tr>
<tr>
<td>Maggot Masses-H118</td>
</tr>
<tr>
<td>Male Rape-E50</td>
</tr>
<tr>
<td>Malingering-H12</td>
</tr>
<tr>
<td>Malware-C18</td>
</tr>
<tr>
<td>Management-B205, B206</td>
</tr>
<tr>
<td>Mandible-D28</td>
</tr>
<tr>
<td>Mandibular Morphology-A9</td>
</tr>
<tr>
<td>Manipulation-G56</td>
</tr>
<tr>
<td>Manner-H53</td>
</tr>
<tr>
<td>Marijuana-B71, B77, B78</td>
</tr>
<tr>
<td>Marine-A130</td>
</tr>
<tr>
<td>Marine Decomposition-A129</td>
</tr>
<tr>
<td>Maritime IED-E11</td>
</tr>
<tr>
<td>Market Failure-F7</td>
</tr>
<tr>
<td>Mass Defect-B130</td>
</tr>
<tr>
<td>Mass Disaster-W8</td>
</tr>
<tr>
<td>Mass Fatality-BS4, G44, H78</td>
</tr>
<tr>
<td>Mass Fatality Incident-G47</td>
</tr>
<tr>
<td>Mass Fatality Training-G1</td>
</tr>
<tr>
<td>Mass Murder-I35</td>
</tr>
<tr>
<td>Mass Murderer-I36</td>
</tr>
<tr>
<td>Mass Spectrometry-B76, B90, B130, B131, B155, B159, B198, B199, W2</td>
</tr>
<tr>
<td>Massacre of Erba-I35</td>
</tr>
<tr>
<td>Massive Parallel Sequencing-B2</td>
</tr>
<tr>
<td>Massively Parallel Sequencing-B10, B51, B54, B102, B176</td>
</tr>
<tr>
<td>Matching Algorithms-C21</td>
</tr>
<tr>
<td>Mathematical Modeling-B46</td>
</tr>
<tr>
<td>Mauling-H50</td>
</tr>
<tr>
<td>MDMA-B23</td>
</tr>
<tr>
<td>Measurement Uncertainty-F19</td>
</tr>
<tr>
<td>Mechanism of Injury-H85</td>
</tr>
<tr>
<td>Mechanisms of Death-H66</td>
</tr>
<tr>
<td>Medial Clavicle-A56</td>
</tr>
<tr>
<td>Medical Examiner-E8, H47</td>
</tr>
<tr>
<td>Medical Examiners-H126, H129</td>
</tr>
<tr>
<td>Medical Experts-F14</td>
</tr>
<tr>
<td>Medical Imaging-A48, A83</td>
</tr>
<tr>
<td>Medical Malpractice-H45, H94</td>
</tr>
<tr>
<td>Medically Compromised-G51</td>
</tr>
<tr>
<td>Medicolegal-H139, I10</td>
</tr>
<tr>
<td>Medicolegal Agencies-E17</td>
</tr>
<tr>
<td>Medicolegal Expertise-E14</td>
</tr>
<tr>
<td>Medicolegal Investigations-E59</td>
</tr>
<tr>
<td>Meningioma-H66</td>
</tr>
<tr>
<td>Meningitis-H77</td>
</tr>
<tr>
<td>Mens Rea-F40</td>
</tr>
<tr>
<td>Menstrual Blood-B8</td>
</tr>
<tr>
<td>Mercury-H58</td>
</tr>
<tr>
<td>Metabolic Disorder-H34</td>
</tr>
<tr>
<td>Metabolism-K61</td>
</tr>
<tr>
<td>Metal Phosphides-K16</td>
</tr>
<tr>
<td>Metalinguistic Awareness-I38</td>
</tr>
<tr>
<td>Metal-Organic Framework (MOF)-B158</td>
</tr>
<tr>
<td>Methadone-K14, K73</td>
</tr>
<tr>
<td>Methadone-Related Deaths-K14</td>
</tr>
<tr>
<td>Methamphetamine-K25</td>
</tr>
<tr>
<td>Methamphetamine &amp; Amphetamine-K52</td>
</tr>
<tr>
<td>Method Validation-B70</td>
</tr>
<tr>
<td>Metric Assessment-A93</td>
</tr>
<tr>
<td>Metrics-A89</td>
</tr>
<tr>
<td>Microbe-E78</td>
</tr>
<tr>
<td>Microbial Community-H19</td>
</tr>
<tr>
<td>Microbial Degradation-B44</td>
</tr>
<tr>
<td>Microbial Diversity-H112</td>
</tr>
<tr>
<td>Microbial Translocation-H4</td>
</tr>
<tr>
<td>Microbiology-H114</td>
</tr>
<tr>
<td>Microbiome-H8, H127, H128</td>
</tr>
<tr>
<td>Microcomputed X-Ray Tomography-D1</td>
</tr>
<tr>
<td>Microcrystal Tests-B32, B124</td>
</tr>
<tr>
<td>Microcrystalline Tests-B125</td>
</tr>
<tr>
<td>Micro-CT-H92</td>
</tr>
<tr>
<td>Microdevice-B111</td>
</tr>
</tbody>
</table>
KEY WORD INDEX

Microenvironment-A115
Microextraction-E78
Microextraction Capsules (MEC)-B197
Microfluiddic Y-STR Analysis-B12
Microfluiddics-B155
Microhaplotypes-B176
MicroRNA-B5, B183, B194
Microscopic-A77
Microscopy-B32, B37, D15, D16
Microwave Maceration-A18
MIDAS Program-D27
Migrants-G12
Migration-A36
Military-E90
Minnesota-F35
MicroRNA-B1
MiSeq®-B178
Misleading Forensic Evidence-F2
Missing Data-A88
Missing Person Investigation-E85
Missing Persons-A34, B212, E85
Mitochondrial D-Loop-B175
Mitochondrial DNA-B54, B177
Mitochondrial Genome-B50
Mitragynine-K36, K69
Mixture-B97, B98, B116
Mixture Deconvolution-B53
Mixture Interpretation-B104, B106, B174
Mixture Samples-B105
Mixtures-B6, B10, B102, B103
MMB-CHMINACA-E1
Mobile Device Forensics-C9
Mobile Devices-C15
Mobile Forensics-C4, C5
Modern Americans-A91
Modifiable Risk Factors-I26
Moisture-B64
Molecular Diagnosis-H67
Molecular Forensics-H124
Molly-K62
Monocrotophos-K15
Moon Phase-H109
Moose-H51
Morphine-B74
Morpho-Analysis-G40
Morphometrically Directed Raman-B17
Morphometric Method-A2
Morphometrics-A87, A94
Mother’s Killer-E52
Motor Vehicle Collisions-H60
Motor Vehicle Crash-E80
Mouse-K24
MRI-H6
MRNA Degradation-B186
MRNA Profiling-H11
MRNA Sequencing-B186
MSCT-A46
MtDNA-B51
MtDNA Heteroplasmy-B178
Multidisciplinary-E24, E62, I23, W7
Multi-Element Analysis-B104, B106, B174
Multi-Element Analysis-G77
Multilingual-D9
Multimedia-C2
Multimedia Forensics-C10
Multiple Classifier Systems-A33
Multiple Gunshot Wounds-H62
Multiple Linear Regression-A99
Multiplex Amplification-B50
Multislice Computed Tomography-E41
Multispectral Mobile Imaging-J9
Mummification-A18
Murder-I33
Music Therapy-I25
Myasitis-H93
Myocardial Infarction-H86
Myocardial Ischemia-H38, H131
Myocarditis-H67
N,N-Dimethyltryptamine-K33
NADH Subunit 2 (ND2)-H21
Nail Gun-E19
Nail Polish-B37
Nanopore-B53
Narcotics-E73
NAS Report-B163
NASA-I22
National Estimates-B29
National Language Engineering-D9
Natural Mummy-E41
NBOMe-B31
NBOMes-K61
NDE Evaluation-D4
Neck-H137
Necrophilous-I19
Necrotizing Fasciitis-H94
Negativity-I19
Neglect-E24, W24
Negligence-G52
Neighbor Murder-I35
Neonatal-A97
Nerve Root-H26
Neurocognitive Impairment-K54
Neuropsychology-I37
Neuroscience-E94, I7, I22
New Developments-W20
New Technologies-B90
Next Generation Sequencing-B58, B103,
B175, B177, B179, B180, B192, H112,
W23
NFPA & ASTM Standards-F41
Nicotine-H12
NIJ-B212
Ninhydrin-E65
NIST-B40, B53, J19, LW1
Nitrate Esters-B48
Nitrites-E40
NMDAR Encephalitis-H46
Non-Adult-A12
Non-Caseating Granulomas-H65
Non-Collision-D20
Non-Conventional DNA Sources-B138
Non-Metric-A30
Non-Metric Data-A88
Non-Metric Traits-A124
Non-Target Strategies-B28
Norquetiapine-K29
North Indians-A38
Nose and Ear-A38
Not Exonerated-F35
Novels-B6
NPS-B28, K9, K60
NRC/NAS Report-F41
Number of Contributors-B143

O

Objective Comparison-B173
Objective Genotyping-F29
Observer-Agreement-A46
Observer Error-A49
Occupational Experiences-E58
Odontology-G23, G50
Odontology Gap Analysis-G25
OdontoSearch-G48
Odorization-D30
Offender Behavior-W21
Officer-Involved Shooting-H110
Oil Red O-B80
KEY WORD INDEX

Online Modules-E68
Open Source-C9, D11
Operation Identification-A98
Opiates-B29, B74
Opinion-G26
Opinion Terminology-J7
Opioid-K72
Opioids-K42
Optic Nerve-D24
Optical Isomers-B129
Oral Fluid-K64
Oral Photography-G41
Orthognathic Surgery-G45
Os Coxae-A95
Ossification Patterns-A53
Osteology-E59
Osteometric Data-A49
Osteometrics-A47
Osteophagia-A60
Osteophytes-A14
O-Tolidine-B63
Overdose-K66, K73
Overlay-G31
Oversight-F32

P

Painkillers-E47
Paint-B86
Paint Layer-D29
Palatal Rugoscopy-G45
Paleontology-E74
Paper-E65
Paper Microfluidic Devices-B36
Paper Microfluidics-B147
Paper Spray Mass Spectrometry-K57
Paradigm Shift-J8
Paradoxical Embolism-H39
Paranormal Investigation-LW6
Paraphernalia-H41
Paraphilia-I16, I17
Paraphilias-E92
Parental Attachment-J2
Parental Skill-I43
Particle Micromorphometry-B47
Particle Signals-B85
Patent Foramen Ovale-H39
Pathology-B202
Pathology of Lung Squeeze-H135
Pathology/Biology-H80
Pattern Evidence-B91, B162
Pattern Impression Analysis-G22
Pattern Misidentification-G25
Patterned Injuries of the Skin-H63
PCA-B15
PCR-B55, B175, B191
PCR Inhibitors-B133
PCR Kit-B135
PDE5 Inhibitors-K30
Peace and Security-F44
Peak Height Ratio-B139
Pedestrian-H91
Pedestrian Injuries-H60
Pediatric-A25, A77, H79, K74, K75
Pediatric Abuse-D3
Pediatric Bone Development-H29
Pediatric Cause of Death-H35
Pediatric Overdose Deaths-H33
Pediatric Sudden Death-H34
Pelvis-A26
Penal Liability-I13
Penetration-D14
Peptides-B199
Perceived Accuracy-A41
Performance-D26
Peri-Mortem Fractures-A23
Perinatal Deaths-H40
Perinate-A131
Periodontal-G5
Prescription Drugs-B120
Persistence-B168
Personal Identification-A126
Personality-C3
Perspective Distortion-A70
Pesticides-B77, K34
Petroleum Distillate-B148
Pharmacokinetics-K53
Phencyclidine-K3, K70
Phoridae-H116
Phosphine-K16
Photography-A71, D23
Physical Evidence-D18
PINACAs-K10
Pitfall-B97
Plant-B57
Plant Anatomy and Taxonomy-E13
Plant Ecology-E13
Plant Science-E13
Plastic Bags-B195
PMA-K37
PMCT-H103, W3
PMI-H23
PMI Estimation-H93
Poisoning-K11, K12, K15, K20
Poisons-K4
Polarized Light Microscopy-B146
Police-F6, F13
Police Intervention-H55
Police Shootings-H55
Policy-F21
Politics-A34
Poly cystic Kidney-H49
Polymer Replication-B166
Poppy Tea-B74
Population Specific-A91
Portability-B67
Portable-B76
Portable CE-B123
Positional Asphyxia-H30
Positive Identification-A22, B18
Post-Blast-B151, E11
Post Event-C1
Postmortem-H89, K5, K18, K20, K32,
K67, K68, K75
Postmortem Angiography-H133
Postmortem CT-H133
Postmortem CT Angiography-E70
Postmortem Decomposition-A17
Postmortem Distribution-K70
Postmortem Fingerprints-E84
Postmortem Hair Root Bands-B16
Postmortem Imaging-H54, W3
Postmortem Interval-A122, D10, H2, H3,
H4, H8, H10, H22, H71, H119, H122,
H123
Postmortem Microbiology-H16
Postmortem Microbiome-H126, H129
Postmortem MRI-H42
Postmortem Redistribution-H71
Postmortem Toxicology-H74, K22, K34,
K43
PowerPlex®16 HS-B61
Pragmatics-I38
Preauricular Sulcus-A55
Predator Presence-H113
Pregnancy-A55, H106, I27
Preparedness-H78
Preservatives-B153
Pressure Cycling Technology-H18, H20
Previous Injuries-H56

270

Key Word Index
## KEY WORD INDEX

| A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S |
| QIAGEN® | QIAGEN® Investigator 24-Plex | QPCR | QTOF | Quantification | Quantitative | Quantitative Methodology | Quantitative Postmortem MRI | Quantitative Ultrasound | Questioned Documents | Quetiapine | Queuing Theory |
| QIAGEN®-B115 | QIAGEN® Investigator 24-Plex-B135 | QPCR-B215 | QTOF-K61 | Qualitative-B35 | Quality-B206 | Quality Assurance-A116 | Quality Control-B166 | Quality-B206 | Question B-17 | Question-12 | Question-08 | Question-01 | Question-02 | Question-03 | Question-04 | Question-05 | Question-06 | Question-07 | Question-08 | Question-09 | Question-10 |
| Q | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S |
| Sarcoidosis | Sarcophagidae | Scapula | Scattered Remains | Scavenger | Scavenging | Scene Documentation | Science | Science Curriculum | Scientific |
| Sadism | Sample Age | Sample Analysis | Sample Prep | Sample Preparation | Sampling Techniques | San Francisco | Sand | Sarcoïdosis | Sarcoïdosis | Scapula | Scattered Remains | Scavenger | Scavenging | Scene Documentation | Science | Science Curriculum | Scientific |

---

Key Word Index
<table>
<thead>
<tr>
<th>Key Word Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scientific Process-A35</td>
</tr>
<tr>
<td>Scientific Proof-F1</td>
</tr>
<tr>
<td>Screen-H73</td>
</tr>
<tr>
<td>Screening-F46, H102</td>
</tr>
<tr>
<td>Screenplays-BS6</td>
</tr>
<tr>
<td>SDO-ES1, F47</td>
</tr>
<tr>
<td>Search Strategies-W1</td>
</tr>
<tr>
<td>Searches-A58</td>
</tr>
<tr>
<td>Searching-C2</td>
</tr>
<tr>
<td>Season-H5</td>
</tr>
<tr>
<td>Season of Death-A117</td>
</tr>
<tr>
<td>Security Feature-J13</td>
</tr>
<tr>
<td>Seized Drugs-B20, B36, B118</td>
</tr>
<tr>
<td>Selective Degradation-B134</td>
</tr>
<tr>
<td>Self-Esteem-I1</td>
</tr>
<tr>
<td>Self-Inflicted Injuries-I5</td>
</tr>
<tr>
<td>SEM/EDX-A50, B38</td>
</tr>
<tr>
<td>Semen-B62</td>
</tr>
<tr>
<td>Semen Detection-B64</td>
</tr>
<tr>
<td>Semen DNA Stains-B14</td>
</tr>
<tr>
<td>Semen Identification-H11</td>
</tr>
<tr>
<td>Seminal Fluid-B11</td>
</tr>
<tr>
<td>Seminal Fluid Fluorescence-B62</td>
</tr>
<tr>
<td>Sensory-I17</td>
</tr>
<tr>
<td>Sequence of Writing/Printing-J4</td>
</tr>
<tr>
<td>Serial Killer-LW2</td>
</tr>
<tr>
<td>Serial Killers-E88</td>
</tr>
<tr>
<td>Serial Murder-B34, BS2</td>
</tr>
<tr>
<td>Serial Rape-B100</td>
</tr>
<tr>
<td>Serial Sniper-B2</td>
</tr>
<tr>
<td>SERS-B184, E15, E39, K10</td>
</tr>
<tr>
<td>Sewage-Based Epidemiology-B28</td>
</tr>
<tr>
<td>Sex-A110</td>
</tr>
<tr>
<td>Sex Assessment-A31</td>
</tr>
<tr>
<td>Sex Crimes Against Children-I15</td>
</tr>
<tr>
<td>Sex Determination-A6, A32, A53, A93, A113</td>
</tr>
<tr>
<td>Sex Estimation-A7, A9, A10, A30, A57, A89, A94, A95, A96</td>
</tr>
<tr>
<td>Sex Offender-I16</td>
</tr>
<tr>
<td>Sex Trafficking-I42</td>
</tr>
<tr>
<td>Sexual Assault-B144, B182, B213, E50, E90, H17</td>
</tr>
<tr>
<td>Sexual Assault Evidence-B134</td>
</tr>
<tr>
<td>Sexual Assault Kit-B213</td>
</tr>
<tr>
<td>Sexual Dimorphism-A55, A90, A92</td>
</tr>
<tr>
<td>Sexual Identity-I44</td>
</tr>
<tr>
<td>Shaken Baby Syndrome-E51</td>
</tr>
<tr>
<td>Sharp Force Trauma-A123</td>
</tr>
<tr>
<td>Shooting Incidents-E94</td>
</tr>
<tr>
<td>Short Tandem Repeats-B10, B190</td>
</tr>
<tr>
<td>Shotgun-B9</td>
</tr>
<tr>
<td>Shoulder Development-A54</td>
</tr>
<tr>
<td>SIDS-E46</td>
</tr>
<tr>
<td>SIDS/SUDI-H31</td>
</tr>
<tr>
<td>SIFT workstation-C19</td>
</tr>
<tr>
<td>Signature-J5</td>
</tr>
<tr>
<td>Signature Forgery-J16</td>
</tr>
<tr>
<td>Significance-B172</td>
</tr>
<tr>
<td>Silicone-B24</td>
</tr>
<tr>
<td>Similarity Measurement-B173</td>
</tr>
<tr>
<td>Simulated Signatures-J16</td>
</tr>
<tr>
<td>Single Nucleotide Polymorphism-I30</td>
</tr>
<tr>
<td>Single-Tube Extraction-B139</td>
</tr>
<tr>
<td>Skeletal-A67</td>
</tr>
<tr>
<td>Skeletal Histology-A82</td>
</tr>
<tr>
<td>Skeletal Remains-A66, A122, E16, E59</td>
</tr>
<tr>
<td>Skeleton-A16, A73</td>
</tr>
<tr>
<td>Skeptic-LW6</td>
</tr>
<tr>
<td>Skill Task Assessment-J14</td>
</tr>
<tr>
<td>Skin Damage-E36</td>
</tr>
<tr>
<td>Skin Debris-B200</td>
</tr>
<tr>
<td>Skin Microbiome-H125</td>
</tr>
<tr>
<td>Skull-H77</td>
</tr>
<tr>
<td>Skull Capacity-A107</td>
</tr>
<tr>
<td>Sleep Environment-H31</td>
</tr>
<tr>
<td>Small Town Justice-LW5</td>
</tr>
<tr>
<td>Smartphone-E34, W17</td>
</tr>
<tr>
<td>Smokeless Powders-B15, B150, E57</td>
</tr>
<tr>
<td>Snapchat™-C8</td>
</tr>
<tr>
<td>Sniper-B2</td>
</tr>
<tr>
<td>Snow-D7</td>
</tr>
<tr>
<td>Snowstorm-H108</td>
</tr>
<tr>
<td>SNPs-B103</td>
</tr>
<tr>
<td>Social Contract Theory-C22</td>
</tr>
<tr>
<td>Social Media-C13, H139</td>
</tr>
<tr>
<td>Sociocultural Anthropology-A34, A36</td>
</tr>
<tr>
<td>Sodium Azide-K13</td>
</tr>
<tr>
<td>Soft Tissue Thickness-A43</td>
</tr>
<tr>
<td>Software-B98</td>
</tr>
<tr>
<td>Software Testing-C6</td>
</tr>
<tr>
<td>Soil-E20, H117</td>
</tr>
<tr>
<td>Soil Analysis-B17</td>
</tr>
<tr>
<td>Soil Taphonomy-A61</td>
</tr>
<tr>
<td>Solid Phase Extraction-B154</td>
</tr>
<tr>
<td>Solid-Phase Microextraction-B71</td>
</tr>
<tr>
<td>Soot-D5</td>
</tr>
<tr>
<td>SOPs-B162, W12</td>
</tr>
<tr>
<td>Southeastern Korea-K4</td>
</tr>
<tr>
<td>SPE-K42</td>
</tr>
<tr>
<td>Species Identification-B189</td>
</tr>
<tr>
<td>Spectroscopy-B37, B125</td>
</tr>
<tr>
<td>Sperm-B64</td>
</tr>
<tr>
<td>Sperm Cells-H7</td>
</tr>
<tr>
<td>Spermatozoa-B182</td>
</tr>
<tr>
<td>Spice-F33, H75, K65</td>
</tr>
<tr>
<td>SPME-B48</td>
</tr>
<tr>
<td>Spreadsheet-G13</td>
</tr>
<tr>
<td>SRM 2372-B215</td>
</tr>
<tr>
<td>Stab-D14</td>
</tr>
<tr>
<td>Stabbing-E31</td>
</tr>
<tr>
<td>Stability-K29</td>
</tr>
<tr>
<td>Stable-A64</td>
</tr>
<tr>
<td>Stable D15N Isotope-A97</td>
</tr>
<tr>
<td>Stable Isotope Ratio-E33, E77</td>
</tr>
<tr>
<td>Staged Domestic Homicide-E52</td>
</tr>
<tr>
<td>Stalking-I24</td>
</tr>
<tr>
<td>Standard-B215</td>
</tr>
<tr>
<td>Standard Bullet-B166</td>
</tr>
<tr>
<td>Standardization-B93</td>
</tr>
<tr>
<td>Standardized Guideline-K49</td>
</tr>
<tr>
<td>Standards-B22, B25, B40, G16</td>
</tr>
<tr>
<td>Standards and Guidelines-B41</td>
</tr>
<tr>
<td>Standards Development-ES1</td>
</tr>
<tr>
<td>Stare Decisis-G25</td>
</tr>
<tr>
<td>Statistical Consensus Profile-B95</td>
</tr>
<tr>
<td>Statistical Methods-A101, H119</td>
</tr>
<tr>
<td>Statistics-B161, B170, B174, B208, F28, F31, W6</td>
</tr>
<tr>
<td>Stature-A125</td>
</tr>
<tr>
<td>Stature Estimation-A8, A109</td>
</tr>
<tr>
<td>StepMeter-D31</td>
</tr>
<tr>
<td>Stingray-F37</td>
</tr>
<tr>
<td>STR-B112, B136</td>
</tr>
<tr>
<td>STR Analysis-H15</td>
</tr>
<tr>
<td>STR Loci-B180</td>
</tr>
<tr>
<td>STR Profiling-B104</td>
</tr>
<tr>
<td>Stress-E58</td>
</tr>
<tr>
<td>Structural-D26</td>
</tr>
<tr>
<td>Structural Analysis-D27</td>
</tr>
<tr>
<td>Stucco-D29</td>
</tr>
<tr>
<td>Student Interns-A116</td>
</tr>
<tr>
<td>Stutter Artifacts-B180</td>
</tr>
<tr>
<td>Styloid Process-G35</td>
</tr>
<tr>
<td>Subadult-A84</td>
</tr>
<tr>
<td>Subadult Sex Estimation-A105</td>
</tr>
<tr>
<td>Subclass Characteristics-E38</td>
</tr>
<tr>
<td>Submerged Human Victims-E42</td>
</tr>
<tr>
<td>Submerged Specimens-A133</td>
</tr>
<tr>
<td>Subpopulations-B216</td>
</tr>
<tr>
<td>Substance Use-I27</td>
</tr>
<tr>
<td>Substance Use Disorder-I8</td>
</tr>
<tr>
<td>Sudden Cardiac Death-H42</td>
</tr>
</tbody>
</table>
## KEY WORD INDEX

<table>
<thead>
<tr>
<th>Term</th>
<th>Page Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sudden Death</td>
<td>H65, H66, K11</td>
</tr>
<tr>
<td>Sudden Infant Death Syndrome</td>
<td>H36</td>
</tr>
<tr>
<td>Suffocation</td>
<td>H88</td>
</tr>
<tr>
<td>Suicidal Hanging</td>
<td>E30</td>
</tr>
<tr>
<td>Suicide</td>
<td>E19, E31, E32, E72, E85, H37, H58, H62, H88, H107, I31, K13</td>
</tr>
<tr>
<td>Suicide Method</td>
<td>I23</td>
</tr>
<tr>
<td>Suicide Note</td>
<td>I23</td>
</tr>
<tr>
<td>SUID Death</td>
<td>E46</td>
</tr>
<tr>
<td>SUIDI</td>
<td>H30</td>
</tr>
<tr>
<td>Supercritical Fluid</td>
<td>B20, B127</td>
</tr>
<tr>
<td>Supported Liquid Extraction</td>
<td>K40</td>
</tr>
<tr>
<td>Surface Area</td>
<td>A6</td>
</tr>
<tr>
<td>Surface Metrology</td>
<td>B168</td>
</tr>
<tr>
<td>Surface Scatter</td>
<td>E66</td>
</tr>
<tr>
<td>Surveillance</td>
<td>E10</td>
</tr>
<tr>
<td>Survival Time</td>
<td>A97</td>
</tr>
<tr>
<td>Sweden</td>
<td>E51</td>
</tr>
<tr>
<td>SWGDRUG</td>
<td>B118</td>
</tr>
<tr>
<td>Swine Carcasses</td>
<td>H114</td>
</tr>
<tr>
<td>Switzerland</td>
<td>H47</td>
</tr>
<tr>
<td>Synthase Enzymes</td>
<td>B56</td>
</tr>
<tr>
<td>Synthetic</td>
<td>K59</td>
</tr>
<tr>
<td>Synthetic Cannabinoid</td>
<td>B35, H75, K44, K48</td>
</tr>
<tr>
<td>Synthetic Cannabinoids</td>
<td>B127, E1, K45, K47, K62, K64, K65</td>
</tr>
<tr>
<td>Synthetic Cathinone</td>
<td>B73</td>
</tr>
<tr>
<td>Synthetic Cathinones</td>
<td>B127, K8</td>
</tr>
<tr>
<td>Synthetic Designer Drugs</td>
<td>B130</td>
</tr>
<tr>
<td>Synthetic LSD</td>
<td>K6</td>
</tr>
<tr>
<td>Syringes</td>
<td>B72</td>
</tr>
<tr>
<td>Testimony</td>
<td>D13, F21</td>
</tr>
<tr>
<td>Text Messages</td>
<td>E34</td>
</tr>
<tr>
<td>Thanatonomicobiome</td>
<td>H123</td>
</tr>
<tr>
<td>Thanatophagy</td>
<td>H122</td>
</tr>
<tr>
<td>Thanatotranscriptome</td>
<td>H120</td>
</tr>
<tr>
<td>The Baby Tyler Case</td>
<td>F14</td>
</tr>
<tr>
<td>Third Molar Index</td>
<td>G15</td>
</tr>
<tr>
<td>Third Molar Maturity Index</td>
<td>G17</td>
</tr>
<tr>
<td>Thyro-Hyoid Lateral Ossificati</td>
<td>H138</td>
</tr>
<tr>
<td>Thyroid Cartilage</td>
<td>A53</td>
</tr>
<tr>
<td>Thyroid Ectopic Horns</td>
<td>H138</td>
</tr>
<tr>
<td>Tier</td>
<td>K35</td>
</tr>
<tr>
<td>Time Since Deposition</td>
<td>B79</td>
</tr>
<tr>
<td>Time To Death</td>
<td>E53</td>
</tr>
<tr>
<td>Timeline</td>
<td>BS5</td>
</tr>
<tr>
<td>Time-Resolved Spectroscopy</td>
<td>B67</td>
</tr>
<tr>
<td>Tire Mark</td>
<td>H91</td>
</tr>
<tr>
<td>Tire Tread</td>
<td>H91</td>
</tr>
<tr>
<td>Tires</td>
<td>B39</td>
</tr>
<tr>
<td>Tissue Depths</td>
<td>A42</td>
</tr>
<tr>
<td>Tissue Distribution</td>
<td>K5</td>
</tr>
<tr>
<td>Tissue Sampling</td>
<td>B109</td>
</tr>
<tr>
<td>Toner Particles</td>
<td>J4</td>
</tr>
<tr>
<td>Tool Marks</td>
<td>D1</td>
</tr>
<tr>
<td>Tool Testing</td>
<td>C5</td>
</tr>
<tr>
<td>Tooth Development</td>
<td>G2, G16</td>
</tr>
<tr>
<td>Tooth Development Staging</td>
<td>G7</td>
</tr>
<tr>
<td>Tooth Loss</td>
<td>A9</td>
</tr>
<tr>
<td>Tooth Maturation</td>
<td>G7</td>
</tr>
<tr>
<td>Total Body Score</td>
<td>H5</td>
</tr>
<tr>
<td>Touch DNA</td>
<td>B9, B108, B209, E21, E56, H69</td>
</tr>
<tr>
<td>Toxicity</td>
<td>E1</td>
</tr>
<tr>
<td>Toxicology</td>
<td>H72, H89, H102, H103, K10, K18, K19, K57, K75, W14</td>
</tr>
<tr>
<td>Trabecular Bone</td>
<td>G33</td>
</tr>
<tr>
<td>Trace Analysis</td>
<td>B154</td>
</tr>
<tr>
<td>Trace Evidence</td>
<td>B85, B152, H124, H125, H127</td>
</tr>
<tr>
<td>Training-E17</td>
<td>E71, J6, L1</td>
</tr>
<tr>
<td>Transaction</td>
<td>H61</td>
</tr>
<tr>
<td>Transfer</td>
<td>B157</td>
</tr>
<tr>
<td>Transfer From Police Control</td>
<td>F9</td>
</tr>
<tr>
<td>Transgender</td>
<td>H140</td>
</tr>
<tr>
<td>Transition Analysis</td>
<td>A16, A81</td>
</tr>
<tr>
<td>Transmesenteric Hernia</td>
<td>H79</td>
</tr>
<tr>
<td>Transparency</td>
<td>F21</td>
</tr>
<tr>
<td>Trauma</td>
<td>A80, I3</td>
</tr>
<tr>
<td>Trauma Biomechanics</td>
<td>A78</td>
</tr>
<tr>
<td>Traumatic Head Injury</td>
<td>H26</td>
</tr>
<tr>
<td>Traumatic Stress</td>
<td>E9</td>
</tr>
<tr>
<td>Treatment</td>
<td>I16</td>
</tr>
<tr>
<td>Treatment Barriers</td>
<td>I18</td>
</tr>
<tr>
<td>Treatment Program</td>
<td>I20</td>
</tr>
<tr>
<td>Treatment Resistant PTSD</td>
<td>I25</td>
</tr>
<tr>
<td>Trends</td>
<td>K60</td>
</tr>
<tr>
<td>Triage</td>
<td>G20</td>
</tr>
<tr>
<td>Trial</td>
<td>I45</td>
</tr>
<tr>
<td>Trial Evidence</td>
<td>F20</td>
</tr>
<tr>
<td>Tris(2-carboxyethyl)phosphine</td>
<td>B114</td>
</tr>
<tr>
<td>Trophy Taking</td>
<td>E22</td>
</tr>
<tr>
<td>Tropical</td>
<td>H23</td>
</tr>
<tr>
<td>Turkey</td>
<td>G53</td>
</tr>
<tr>
<td>Turkish Judicial System</td>
<td>J1</td>
</tr>
<tr>
<td>Turkish Population</td>
<td>G15</td>
</tr>
<tr>
<td>Twins</td>
<td>G40</td>
</tr>
<tr>
<td>Two-Photon Excitation</td>
<td>B69</td>
</tr>
<tr>
<td>Type of Injury</td>
<td>H85</td>
</tr>
<tr>
<td>Typical Suicide</td>
<td>I31</td>
</tr>
</tbody>
</table>

### U

<table>
<thead>
<tr>
<th>Term</th>
<th>Page Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>UBC</td>
<td>A65</td>
</tr>
<tr>
<td>UDIM</td>
<td>G49, W5</td>
</tr>
<tr>
<td>UHPLC/MS/MS</td>
<td>K32</td>
</tr>
<tr>
<td>Ultraviolet Radiation</td>
<td>B79</td>
</tr>
<tr>
<td>Undercover</td>
<td>W11</td>
</tr>
<tr>
<td>Underwater CSI</td>
<td>E11</td>
</tr>
<tr>
<td>Undocumented Border Crossers</td>
<td>A96, G6</td>
</tr>
<tr>
<td>Unidentified Deceased</td>
<td>E84</td>
</tr>
<tr>
<td>Unidentified Decedents</td>
<td>A126</td>
</tr>
<tr>
<td>Unidentified Human Remains</td>
<td>L2</td>
</tr>
<tr>
<td>Uniqueness Human Dentition</td>
<td>G55</td>
</tr>
<tr>
<td>United States/Mexico</td>
<td>A5</td>
</tr>
<tr>
<td>Unmanned Aerial Vehicles</td>
<td>E29</td>
</tr>
<tr>
<td>Unmanned Aircraft</td>
<td>E2</td>
</tr>
<tr>
<td>Unnatural Sexual Offence</td>
<td>E50</td>
</tr>
<tr>
<td>Unsolved</td>
<td>B211</td>
</tr>
<tr>
<td>Untested SAKs</td>
<td>E62</td>
</tr>
<tr>
<td>Untrained Diagnosis</td>
<td>G24</td>
</tr>
<tr>
<td>UPLC/MS/MS</td>
<td>K9</td>
</tr>
<tr>
<td>Uppercut</td>
<td>D28</td>
</tr>
<tr>
<td>UR</td>
<td>I44, K63</td>
</tr>
<tr>
<td>Urban</td>
<td>H104</td>
</tr>
<tr>
<td>Urine</td>
<td>K42, K58</td>
</tr>
</tbody>
</table>

### V

<table>
<thead>
<tr>
<th>Term</th>
<th>Page Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vaginal Fluid</td>
<td>E39</td>
</tr>
</tbody>
</table>
## KEY WORD INDEX

<table>
<thead>
<tr>
<th>W</th>
<th>Willem’s Method-G14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Validation-B92</td>
<td>Witness Identification-D23</td>
</tr>
<tr>
<td>Validation Study-B51</td>
<td>Women Offenders-I4, I21</td>
</tr>
<tr>
<td>Validity-G21</td>
<td>Workplace-W19</td>
</tr>
<tr>
<td>Variation-B87, B88</td>
<td>Workplace Violence-I29</td>
</tr>
<tr>
<td>Vehicle-E87</td>
<td>World War II-G32</td>
</tr>
<tr>
<td>Vehicle Artifacts-D18</td>
<td>Wound-of-Origin-B194</td>
</tr>
<tr>
<td>Vehicle Fires-A72</td>
<td>Writing Instrument-J17</td>
</tr>
<tr>
<td>Vehicle-Related Death-H95</td>
<td>Wrongful Conviction-F2</td>
</tr>
<tr>
<td>Venous Blood-B8</td>
<td>Wrongful Convictions-F7</td>
</tr>
<tr>
<td>Vertebræ-A14, A15</td>
<td>WWII Skeletal Remains-E23</td>
</tr>
<tr>
<td>Vertebral Maturation-A13</td>
<td></td>
</tr>
<tr>
<td>Victim Psychology-I42</td>
<td></td>
</tr>
<tr>
<td>Victim Recovery-A74</td>
<td></td>
</tr>
<tr>
<td>Victim Role Staging-I5</td>
<td></td>
</tr>
<tr>
<td>Victim-Centric-E62</td>
<td></td>
</tr>
<tr>
<td>Victimology-E49</td>
<td></td>
</tr>
<tr>
<td>Video Analysis-C14</td>
<td></td>
</tr>
<tr>
<td>Video Authentication-C15</td>
<td></td>
</tr>
<tr>
<td>Video Superimposition-A70</td>
<td></td>
</tr>
<tr>
<td>Violence-I26, I28, W7</td>
<td></td>
</tr>
<tr>
<td>Virtopsy-H98</td>
<td></td>
</tr>
<tr>
<td>Virtual-A67</td>
<td></td>
</tr>
<tr>
<td>Virtual Anthropology-L2</td>
<td></td>
</tr>
<tr>
<td>Virtual Skeletal Analysis-A45, A47</td>
<td></td>
</tr>
<tr>
<td>Visibility-D23, D25</td>
<td></td>
</tr>
<tr>
<td>Visual Biometrics-C12</td>
<td></td>
</tr>
<tr>
<td>Vitamin D Deficiency-H29</td>
<td></td>
</tr>
<tr>
<td>Vitreous-H76</td>
<td></td>
</tr>
<tr>
<td>Vitreous Humor Chemistry-K17</td>
<td></td>
</tr>
<tr>
<td>VOC-E61</td>
<td></td>
</tr>
<tr>
<td>Voice Modification-C11</td>
<td></td>
</tr>
<tr>
<td>Volatile-E78</td>
<td></td>
</tr>
<tr>
<td>Volatile Organic Compounds-A121, B26, E42</td>
<td></td>
</tr>
<tr>
<td>Volatile Substance-K11</td>
<td></td>
</tr>
<tr>
<td>Volumetric Analysis-A105</td>
<td></td>
</tr>
<tr>
<td>VSC 6000/HS-J10</td>
<td></td>
</tr>
<tr>
<td>Vulture-A132</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>X</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>XLR-11-K46, K63</td>
<td></td>
</tr>
<tr>
<td>X-Ray Diffraction-B196</td>
<td></td>
</tr>
<tr>
<td>X-Ray Mapping-B86</td>
<td></td>
</tr>
<tr>
<td>XRF-A68, B84</td>
<td></td>
</tr>
<tr>
<td>XRPD-B196</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Y</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Y23-H13</td>
<td></td>
</tr>
<tr>
<td>Y Chromosome-B144</td>
<td></td>
</tr>
<tr>
<td>YFSF-S2</td>
<td></td>
</tr>
<tr>
<td>YouTube®-C14</td>
<td></td>
</tr>
<tr>
<td>Y-STRs-H13</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Z</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Zolpidem-K2, K28, K51</td>
<td></td>
</tr>
<tr>
<td>Zoo-H50</td>
<td></td>
</tr>
<tr>
<td>Zygomatic-A114</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>W</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Walkway Safety-D31</td>
<td></td>
</tr>
<tr>
<td>Warning Agent-D30</td>
<td></td>
</tr>
<tr>
<td>Water Damaged Devices-W15</td>
<td></td>
</tr>
<tr>
<td>Water Immersion-B132</td>
<td></td>
</tr>
<tr>
<td>Weather Effect-H109</td>
<td></td>
</tr>
<tr>
<td>Weathering-B45</td>
<td></td>
</tr>
<tr>
<td>West Tennessee-H44</td>
<td></td>
</tr>
<tr>
<td>Wildlife Forensics-H21</td>
<td></td>
</tr>
</tbody>
</table>
The presenting author index can provide a quick reference to find when and in what section presenting authors are scheduled to present at the 2016 Annual Scientific Meeting. The reference table below assists you in finding the section in which the presentation will be given. Letters correspond to the scientific discipline/section in which the presentation is being made while the number corresponds to the numerical sequence of the presentation within the section.

| A | Anthropology       | J | Questioned Documents |
|   |                    | K | Toxicology           |
| B | Criminalistics     | LW| Last Word Society    |
| C | Digital & Multimedia Sciences | BS | Breakfast Seminar |
| D | Engineering Sciences | ES | Evening Session      |
| E | General            | L | Luncheon             |
| F | Jurisprudence      | S | Special Session      |
| G | Odontology         | W | Workshop             |
| H | Pathology/Biology  |    |                      |
| I | Psychiatry & Behavioral Science |    |                      |

A

<table>
<thead>
<tr>
<th>Author Name</th>
<th>Presentation Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abnoosian, Arin-I32</td>
<td>E12, G45</td>
</tr>
<tr>
<td>Abraham, Abagail-W4</td>
<td></td>
</tr>
<tr>
<td>Achesinski, Amber L.-H39</td>
<td></td>
</tr>
<tr>
<td>Adams, Bradley J.-G48</td>
<td></td>
</tr>
<tr>
<td>Adelman, Jonathan-B99</td>
<td></td>
</tr>
<tr>
<td>Adserias, Joe-G12, G42, G43</td>
<td></td>
</tr>
<tr>
<td>Afsin, Huseyin-G53</td>
<td></td>
</tr>
<tr>
<td>Aggrawal, Anil-E92</td>
<td></td>
</tr>
<tr>
<td>Aiken, Sally S.-BS3</td>
<td></td>
</tr>
<tr>
<td>Al Na’imi, Khudooma S.-B207</td>
<td></td>
</tr>
<tr>
<td>Al Oraer, Dina-B52</td>
<td></td>
</tr>
<tr>
<td>Albert, A. Midori-A13</td>
<td></td>
</tr>
<tr>
<td>Aleksander, Adam-D24, D29</td>
<td></td>
</tr>
<tr>
<td>Aleman, Janice L.-B128</td>
<td></td>
</tr>
<tr>
<td>Alexandra, Stupperich-I39</td>
<td></td>
</tr>
<tr>
<td>Alldio, Eugenio-B95</td>
<td></td>
</tr>
<tr>
<td>Allen, Robert W.-B56, B186</td>
<td></td>
</tr>
<tr>
<td>Allen, Tom P.-F9</td>
<td></td>
</tr>
<tr>
<td>Almirall, Jose R.-B93</td>
<td></td>
</tr>
<tr>
<td>Almog, Joseph-S2</td>
<td></td>
</tr>
<tr>
<td>AlQahtani, Sakher J.-G12, G16</td>
<td></td>
</tr>
<tr>
<td>Altes, Kristina B.-A15</td>
<td></td>
</tr>
<tr>
<td>Anane-Bediakoh, Daniela-H17</td>
<td></td>
</tr>
<tr>
<td>Andersson, Jacob-E51</td>
<td></td>
</tr>
<tr>
<td>Andreaggi, Kimberly S.-B177, B179, W23</td>
<td></td>
</tr>
<tr>
<td>Andrenyak, David M.-K33</td>
<td></td>
</tr>
<tr>
<td>Andrews, Sam W.-W3</td>
<td></td>
</tr>
<tr>
<td>Angelakopoulos, Nikolaos-G41</td>
<td></td>
</tr>
<tr>
<td>Angelotta, Cara-I27</td>
<td></td>
</tr>
<tr>
<td>Anstead, James-B136</td>
<td></td>
</tr>
<tr>
<td>Anstett, Alexandria-B130</td>
<td></td>
</tr>
<tr>
<td>Antunes, Antonio A.-A43</td>
<td></td>
</tr>
<tr>
<td>Aponte, Rachel-B180</td>
<td></td>
</tr>
<tr>
<td>Aquila, Isabella-B65, B66, E10, H97, H98</td>
<td></td>
</tr>
<tr>
<td>Aronica, Patricia-H87</td>
<td></td>
</tr>
<tr>
<td>Aschheim, Kenneth W.-G48, G49, G5</td>
<td></td>
</tr>
<tr>
<td>Ash, Jordan-B48</td>
<td></td>
</tr>
<tr>
<td>Ayers, Richard-C5</td>
<td></td>
</tr>
<tr>
<td>Azores-Gococo, Nicole-I37</td>
<td></td>
</tr>
</tbody>
</table>

B

<table>
<thead>
<tr>
<th>Author Name</th>
<th>Presentation Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bäckström, Björn-H56</td>
<td></td>
</tr>
<tr>
<td>Baden, Michael M.-F13</td>
<td></td>
</tr>
<tr>
<td>Baglieri, Gina E.-A111</td>
<td></td>
</tr>
<tr>
<td>Baigent, Christiane-A18, A131</td>
<td></td>
</tr>
<tr>
<td>Bailey, Christine-A57</td>
<td></td>
</tr>
<tr>
<td>Baker, Andrew M.-B202, BS4</td>
<td></td>
</tr>
<tr>
<td>Baker, Daniel-K74</td>
<td></td>
</tr>
<tr>
<td>Baker, Tiffany-H35</td>
<td></td>
</tr>
<tr>
<td>Bakshi, Manturan Singh-E30</td>
<td></td>
</tr>
<tr>
<td>Baldaino, JenaMarie-B47</td>
<td></td>
</tr>
<tr>
<td>Baldinotti, Claudio-G19</td>
<td></td>
</tr>
<tr>
<td>Ballard, David-B102</td>
<td></td>
</tr>
<tr>
<td>Bandini, Bruce-G49</td>
<td></td>
</tr>
<tr>
<td>Barnett, Peter D.-D13</td>
<td></td>
</tr>
<tr>
<td>Barrett, Christine-K22</td>
<td></td>
</tr>
<tr>
<td>Barsley, Robert E.-W8</td>
<td></td>
</tr>
<tr>
<td>Barta, Jodi Lynn-B140</td>
<td></td>
</tr>
<tr>
<td>Bartelink, Eric J.-A63</td>
<td></td>
</tr>
<tr>
<td>Bartick, Edward G.-W20</td>
<td></td>
</tr>
<tr>
<td>Bashford, Martha-F25</td>
<td></td>
</tr>
<tr>
<td>Basiliere, Stephanie-K36</td>
<td></td>
</tr>
<tr>
<td>Bastos Serwy, Isabela-B158</td>
<td></td>
</tr>
<tr>
<td>Batts, Jayne J.-F45</td>
<td></td>
</tr>
<tr>
<td>Bayraktar, Eser-H37, H43</td>
<td></td>
</tr>
<tr>
<td>Beaman, Jason-I34</td>
<td></td>
</tr>
<tr>
<td>Bell, Lynne S.-A130</td>
<td></td>
</tr>
<tr>
<td>Beltempo, Pasquale-I23</td>
<td></td>
</tr>
<tr>
<td>Benbow, M. Eric-H129</td>
<td></td>
</tr>
<tr>
<td>Benjamin, David M.-LW3</td>
<td></td>
</tr>
<tr>
<td>Benson, Jeffrey A.-F32</td>
<td></td>
</tr>
<tr>
<td>Berman, Garett M.-F42</td>
<td></td>
</tr>
<tr>
<td>Berman, Gary M.-S2</td>
<td></td>
</tr>
<tr>
<td>Bernhard, Werner-B77</td>
<td></td>
</tr>
<tr>
<td>Besser, Marcus P.-D31</td>
<td></td>
</tr>
<tr>
<td>Best, Kaleigh C.-A95</td>
<td></td>
</tr>
<tr>
<td>Beynon, Marianne E.-H26</td>
<td></td>
</tr>
<tr>
<td>Bhutta, Zumrad U.-J10</td>
<td></td>
</tr>
<tr>
<td>Bianchi, Robert P.-B120</td>
<td></td>
</tr>
<tr>
<td>Bilimoria, Farshaad-H50</td>
<td></td>
</tr>
<tr>
<td>Bille, Todd W.-B174</td>
<td></td>
</tr>
<tr>
<td>Bilous, Peter-B63</td>
<td></td>
</tr>
<tr>
<td>Binz, Brittania J.-B51</td>
<td></td>
</tr>
<tr>
<td>Bird, Cate E.-A126</td>
<td></td>
</tr>
<tr>
<td>Birks, Heather-B45</td>
<td></td>
</tr>
<tr>
<td>Birt, Jon E.-L2</td>
<td></td>
</tr>
<tr>
<td>Bishop-Freeman, Sandra-K19</td>
<td></td>
</tr>
<tr>
<td>Bitting, Carey P.-H106</td>
<td></td>
</tr>
<tr>
<td>Blackwell, Cynthia-F5</td>
<td></td>
</tr>
<tr>
<td>Blake, Kathleen A.S.-A17, A93</td>
<td></td>
</tr>
<tr>
<td>Bloom, Adam-I24</td>
<td></td>
</tr>
<tr>
<td>Boca, Silvia-E10</td>
<td></td>
</tr>
<tr>
<td>Bock, Jane H.-E13</td>
<td></td>
</tr>
<tr>
<td>Bodwal, Jatin-K15</td>
<td></td>
</tr>
<tr>
<td>Boguslaw, Richard-G20</td>
<td></td>
</tr>
<tr>
<td>Bolhöfner, Katelyn L.-A53</td>
<td></td>
</tr>
<tr>
<td>Bommarito, Christopher R.-B172</td>
<td></td>
</tr>
<tr>
<td>Bonilla, Claudia M.-E76</td>
<td></td>
</tr>
<tr>
<td>Bonilla, Eliud-C11</td>
<td></td>
</tr>
</tbody>
</table>
Presenting Author Index

Las Vegas
2016

Bono, Joseph P.-F3
Bonsignore, Alessandro-K73
Boon, Julian C.-W118
Borlini, Matteo-A55, E85, F1, I31, LW6
Bosse, Michael J.-E90
Bosworth, Cory-H82
Booth-Jones, Sabra R.-W16
Bowen, Gregory-C3
Bowers, Charles Michael-G25
Boyd, Cliff-A25
Boyd, Donna C.-A77
Brady, Cliff-A25
Brady, Donna C.-A77
Brady, Thomas V.-G24
Breitenbach, Stephanie R.-B20
Brenner, Charles H.-B97, B174
Brettell, Thomas A.-B72, B153
Brown, Anastasia M.-B71
Brown, Catherine O.-B11
Brown, Katherine M.-E53
Brown, Kimberly-I8
Brown, Lyndsey T.-B64
Brown, Michael A.-A122
Brown, Richard S.-D15
Brown, Theodore T.-H83
Brown, Whitney-K18
Bruhn, Ann M.-G44
Brunty, Joshua L.-C9
Bryant, Erick P.-E19
Buchanan, Clinton D.-B135
Buchmuller, Helio-B210
Bucht, Rebecca E.-W9
Bugajski, Kristi-H113
Burcham, Zachary M.-H4
Burgess, Christiana-F34
Burnett, Bryan R.-B200, E22, LW5
Buscaglia, JoAnn-B91
Butcher, Alice J.-A67
Butler, John M.-LW1, W1
Buzby, David-K62, K72
Buzzini, Patrick-W9
Bynum, Nicholas D.-B76
Byrnes, Jennifer F.-A29
Bytheway, Joan A.-A123, S2

C

Cain, Matthew D.-H109, H130
Çakir, Ismail-J4
Cameriere, Roberto-G17
Campbell, Jessica L.-A81
Canedo, Janice-C18, C23
Canty, Sarah E.-A55
Caple, Jodi M.-A71
Carabellese, Felice F.-I21
Carlson-Greer, Sean Y.-A31
Carney, Amy Y.-W24
Carpenter, Kelsey A.-A24, S2
Carroll, Mark-W24
Carson, Mariah D.-K29
Carter, David O.-H22
Carvalho, Carlos B.-B60
Case, Mary E.S.-BS1
Castellani, Rudy J.-H70
Castellanos, Maria C.-E44
Cavilla, Michael-W11
Cecchetto, Giovanni-H92
Celata, Elizabeth N.-A133
Cervellone, Adam-C19
Çetin, Gürsel-J4
Çetin, Selen-H43
Chabaud, Kathryn R.-B147
Chaghouri, Eric-I8
Chan-Hosokawa, Ayako-K49
Channell II, Kermit B.-B25
Chaski, Carole E.-D9, I38
Chaudhary, Muhammad Taimoor-E73, K16, K34
Chauhan, Vikram Raj Singh-J12
Chen, Heather I.-H100
Cheng, Susan-B7
Cheramie, Jacob L.-A110
Chesna, Elizabeth-I30
Chezem, Linda L.-F3
Cho, Hae Joung-A44
Cho, Helen-A44
Christensen, Angi M.-A1
Christopher, Sheresa-I3, I24
Chung, Hee-Sun-K28
Churchill, Jennifer D.-B54
Chute, Dennis J.-H91
Ciruzzi, Maria Susana-F43
Clark, Steven C.-E17
Clarke, Jordan L.-H13
Clifford, T. Douglas-F40
Cline-Parhamovich, Karen-K75

Coble, Michael D.-B174
Cochran, Ashley-B45
Cohn, Ken F.-G21
Collini, Federica-H27, I35, S2
Collins, Jr., John-S1
Collins-Morton, Mary B.-BS2, W8
Conigliaro, Aime-G40
Conlogue, Gerald J.-W18
Conners, Katie-F8
Connor, Melissa A.-E18
Cooke, Kristin K.-E15
Cooper, Stuart-B96
Corcoran, Katie-A74
Cordner, S.-W16
Corey, Tracey S.-K75
Cornelson, Jere-B.-H32
Cornett, Charles R.-B73, B156
Corrieri, Brigida-A62
Costello, Amanda K.-A92
Cox, Joseph A.-K6
Crowder, Christian-A127
Cuchara, Breanna M.-E47
Cunha, Eugenia-A73
Cunningham, David-B33
Currie, Krista-B211
Curtis, Trevor E.-E37
Czado, Natalia-B2

D

D’Anjou, Corinne-G32
Dabbs, Gretchen R.-A120
Dadour, Jan-H118
Daglioglu, Nebile Gokce-K26
Dalby, Richard N.-W14
Dalle Grave, Cristina M.-G47
Danker, Matthew J.-E75
Darby, William C.-I6, I40
Dautartas, Angela M.-A118
David, Thomas J.-G26
Davis, Brent-H75
Davis, Gregory G.-BS3
Davis, Lucy A.-ES1
Davis, William M.-B86
De Alcaraz-Fossoul, Josep-B68
De Forest, Peter R.-W9
de Miranda, Guilherme H.B.-E74
De Vitis, Ilaria-I23
Debus-Sherrill, Sara A.-E89
Decker, Summer J.-A7

276 Presenting Author Index
DeDore, Stephanie-B110
DeDore, Fabrice-F-E70
Deeken-Draisey, Audrey-H34
Delabarde, Tania-A79
Delannoy, Yann-A22
Delger, Dana-F36
Demas, John P.-W5
Dembinski, Gina-B61
DePaolo, Frank-W5
DeRienz, Rebecca T.-K74
Deshpande, Ketaki-H18
DesPortes, Betty Layne-F3
Desranleau, Sylvain-G33
DeWitt, Kelsey M.-B196
Deyne, Todd A.-E78
Dhaka, Shivani-K20
Di Nunzio, Ciro-B65, B66, H97
Di Vella, Giancarlo-B144, H40, I28
Diaczuk, Peter J.-B165
Dibble, James R.-W22
Digmann, Allyson K-B79
Din, Hasan-H43
Diniz-Oliveira, Ricardo Jorge-H3
Dobrin, Lawrence A.-W5
Dokgöz, Halis-J9
Dolan, Julia A.-B205
Dotson, Meryle A.-E32
Doty, Kyle C.-B193
Doupe, Barbara-B157
Doval, Ana Paula S.-B210
Downs, J.C. Upshaw-B55, F13, S2
Doyle, Sara N.-H107
Duff, Deiter J.-H80
Drumm, Meaghan P.-K25
Dudzik, Beatrix-A30
Duffy, Lawrence A.-E80
Dyer, Jessica B.-K66
Dwyer, R. Gregg-I16
Dykstra, Josiah-W4
Ehrhardt, Christopher J.-B104
Eldridge, Heidi-B162, W12
Elian, Albert A.-K41
Elias, George-I10
Elkins, Kelly M.-B8
Ellingham, Sarah-A50
Ellis, Sarah J.-S2
Elwick, Kyleen Elizabeth-B4
Emery, Dakota W.-F33
Emmons, Alexandra L.-A61
Eriksson, Elizabeth A.-E25
Eriksson, Anders-H51, H54
Evans-Nguyen, Kenyon M.-W2
Evenson, Cynthia L.-F35

Fabricant, Maxwell Christopher-F36
Fabrice, Dedouit-E41
Fais, Paolo-H94
Farese, Laura C.-G2
Farid, Armin A.-G66
Farrell, Amanda L.-W21
Faulkner, Davin-W5
Feaster, Marc-K19
Fedoroff, J. Paul-I16
Ferencz, Joseph-I45
Ferraro, Alexa-J85
Feichtinger, Dirk-J9
Fennell, Marissa J.-K30
Ferreira de Paraiba, Renato T.-B57
Ferslew, Kenneth E.-K75
Fields, Christopher-I3, I24
Figueiroa, Alejandra-B59
Finkelstein, Marissa J.-K30
Finley, Sheree J.-H112, H120
Fixott, Richard H.-G29
Fleming, Jamie N.-B16
Focardi, Martina-H48, H93
Foley-Melton, Patricia A.-B98
Fondebrider, Luis-W16
Ford, Jonathan M.-A7
Forrest, A.R.W.-F12
Fox, Matthew F.-H102
Frame-Newell, Lara-S2
Franck, Darren-D5
Franco, Ademir-G55
Frank, Meredith A.-H104
Franke, Katrin-W20
Franz, Annarita-I22, I44
Frederick-Frost, Kristen-LW1
Freeman, Michael-H61
Fried, Clare M.-B43
Frisca, Melissa-K9
Fudenberg, John-W5
Furnier, Sarah M.-A114
Furton, Kenneth G.-S1

Gaffney, Hallie-A93
Gaither, Catherine M.-A116
Gardiner, Elizabeth A.-B82
Garofano, Luciano-B81, E71
Garofano, Paolo-B95
Gascho, Dominic-H90
Geberth, Vernon J.-W10
Geli, Diana-H73
Geniuk, Steven-E16, W7
George, Rebecca L.-A65
Georget, Charles E.-G31
Geradis, Zeno J.-C2, C13, S1, W20
Gettings, Katherine B.-W23
Giulini, Melodi-A21
Giammarresu, Zac P.-C14
Gibson, Kemper-B111
Gibson-Daw, Georgiana C.-B12
Giffen, Jr., Mark A.-H132
Gilg, Katelyn M.-B112
Gilbert, Jack-H127
Gilliland, M.G.F.-H135
Gilliland, Rhesa G.-W22
Ginelli, Cinzia-I15
Gittelson, Simone-B216
Gitto, Anna-F15
Gitto, Lorenzo-H66, H139
Glicksberg, Lindsay-K8
Glynn, Claire-B5
Goche, Timothy P.-A82
Godde, Kanya-A91
Gonçalves, Francisco Valente-B22
Gooch, James-B181
Goodrich, James F.-G32
Gorden, Erin M.-B177, B179, W23
Gordon, Christopher J.-H49
Gorniak, Jan M.-H140
Gottfried, Emily D.-H12
Gough, Lynsey F.-I19
Grabherr, Silke-H133
Graham, Ema H.-B132
Graham, Michael A.-H70

Easterling, Glenda M.-K17
Eckhardt, Michael D.-H31

Presenting Author Index
Grande, Abigail J.-H59
Grattaglino, Ignazio-I2, I14, I29
Green, Ashley-A80
Griffin, Jacob-A14
Grigoras, Catalin-C10, C14
Grimes, Megan E.-B114
Grisedale, Kelly-B10
Guale, Fessesssework-K69
Gudmannsson, Petur G.-H51
Guerrieri, Richard A.-S1, W23
Guido, Mark D.-C1
Gulmen, Mete K.-E14, K26
Gulrajani, Chinmoy-I6
Gulsahi, Ayse-G15
Gumpeni, Pramod-H111
Guo, Zhaoming-H36, H65, H141
Gupta, Avneesh-H67
Gürses, Murat Serdar-H37, H43
Gustafsson, Torfinn-H55
Hacker, Melinda-G6
Hackett, Jeffery-K41
Haden-Pinneri, Kathryn H.-E34
Haggerty, Amanda L.-E20
Hainsworth, Sarah V.-D1, D14
Hale, Amanda R.-S1, S2
Hall, Adam B.-B42, W2
Hall, Ashley-B137
Hall, Jacob R.-C15
Halling, Christine L.-E64
Hamann, Kristine-F6
Hancock, Austin-C18
Hanzlick, Randy L.-H70
Harding, Brett E.-E59
Hardy, Laurel A.-B35
Harris, Heather L.-F40
Harris, Howard A.-E65
Hartnett-McCann, Kristen-A93
Hatch, Gary M.-A1
Hayashi, Kino-H46
Hayden, Donald-E16, W7
Hayes, Christina G.-S1, S2
Hayes, Jonathan-H70
Head, Courtney-F31
Hefner, Joseph T.-A28
Heinrich, Dagmar-E60
Hellwinkel, Donna J.-G39
Hendrikse, Jeanet-B148
Henshon, Matthew T.-W20
Herman, Martin-C16
Herscha书法, Edward E.-W5
Hess, Kaitlyn E.-K38
Heurich, Charles M.-B212
Hewitt, Terry-Dawn-F41
Hickman, Maureen-B50
Hietpas, Jack-B83
Higginbotham, Jennifer L.-W23
Ho, Diana-F26
Hock, Jacob-B146
Hoerter, Jacob E.-H64
Holmgren, Jamie A.-E67
Holobinko, Anastasia-A64
Holoyda, Brian J.-I33
Holt, Thomas J.-E58
Honig, Daniel M.-D7
Hoogewerff, Jurian A.-B126, B201
Horvath, Mary F.-W4
Houck, Max M.-F7
Houldsworth, Philip E.-A121
Hoult, James-B44
Houston, Rachel M.-B190
Howe, Julie A.-E17
Hudson, Anthony W.-A51
Hueitis书法, Marilyn A.-K54, W16
Huffman, Lurena A.-W21
Hunt, Ted R.-F3
Hunter, Cheryl D.-S2
Hutley, Ja’Neisha-S2
Hyzer, James B.-D23, D25
Jack, Esther-H1, H25
Jackowski, Christian-H42
Jackson, David S.-B34
Jackson, George F.-K5
Jackson, Glen P.-B94
Jackson, Megan L.-B55
Jacobs, Monica-K2
Jang, Yu Ryang-A44
Janssen, Kimberly E.-H89
Janysek, Brian L.-W7
Jarvis, Hannah C.-H79
Jason, Alexander-E94
Jasra, Shashi K.-H86
Javan, Gulnaz T.-H122, H123
Jefferys, Roger-B30
Jenkins, Brad-B174
Jentzen, Jeffrey M.-BS1, F14, H60
Jeong, Youngseung-A2
Johnson, Donald J.-B194
Johnson, Erica N.-K23
Johnson, Mark E. - W6
Johnson, Melissa A.-K42
Jokwi, Jude L.-F2
Jones, Andrea L.-K21
Jones II, John P.-B40
Joo, Eunah-E91
Jorgenson, Kyla M.-H110
Juarez, Chelsey A.-A3
Jung, Go-Un-A90
Junkins, Emily-H115
Kabir, Abuzar-B197
Kacinisko, Sherri L.-K46, W2
Kaeser, Cynthia-B131
Kakuda, Hidetoshi-B67
Kamnath, Brooke W.-B17, B125
Kamnikar, Kelly R.-A106
Kanu, A. Bakarr-B70
Kanz, Fabian-A56
Kar, Hakan-J9
Kastenbaum, Hannah A.-H88
Kazimierczyk, Zuzanna-J16
Kellaher, Denise C.-I17
Kelley, Caroline Machal-B24
Kelly, Jan S.-J8, J14, J20
Kenyhercz, Michael W.-A88
Kessler, Meghan S.-H72
Ketchum, Marisa Teal-B3
Khare, Parul-G8
Kibayashi, Kazuhiro-H45, K24
Kiefer, Christopher-H30
Kim, Dong-Ho Eddie-A6, A39
Kim, Eunmi-K4
Kim, Hyung Seok-H14
King, Keli L.-H9
King, Rebecca-A27
Kinyua, Juliet-B28
Klales, Alexandra R.-A72, A124
Knack, Natasha M.-I16
Koch, Sandra-B89
Kodama, Whitney A.-H128
Konstantakis, Constantine-K43
Koppl, Roger G.-B203
Koutrakos, Andrew C.-B17
Krane, Dan-B143, F28, F39
Kraus, Kelly-E31
Krishan, Kewal-A8, A38, C20
Kronstrand, Robert-K65, K75
Kroon, Brianna-B37
Kuhn, Melissa K.-A113
Kulbacki, Kevin P.-J11
Kulick, Kelly-F27
Kumor, Stephanie-K56
Kushwaha, Priyanka-H19
Kuzel, Aaron R.-A68
Kyllonen, Kelsey-A42
Leija, Christina A.-E69
Leistedt, Samuel J.-H136
Lemaire, Eric-H71
Lemos, Nikolas P.-S2, W19
Lesia, Ashton D.-B122
Lesnikova, Iana-H7
LeVeagh, Mark M.-H75
Lewis, Carolyn-B183
Li, Ling-H36, H141
Lichtenberger, Emily-B155
Liptai, Laura L.-D19, W20
Litterell, Kimberly-J9
Liu, Jing-J3
Logan, Barry K.-B3, K48
Long, Sarah-H58
Longe, Kelsey-K63
Lopez, Kaitlyn A.-A91
Losavio, Michael M.-W22
Lottering, Nicole-A84
Loungey, Kevin M.-A115
Love, Jennifer C.-A103
Low, Landa S.-D19
Lozano, Jason Gene-H41
Lubin, Michelle-H29
Lucas, Douglas M.-W9
Lucas, Victoria S.-G5
Lucena, Marcella Auxiliadora de Melo-B158
Lurie, Ira S.-B127, K58
Lusa, Vincenzo-I22, I44
Lyle, James R.-C6
Márquez-Grant, Nicholas-A62
Marshall, Charla-B179, W23
Marshall, Judy Y.-G34
Marshall, Lucas-K68
Marshall, Shirley-F24
Martinez-Escariazua, Pablo-E81
Massaro, Luca-E85, F1, I31
Matshes, Evan-W3, W11
Mauf, Sabrina-I5
Mauricio, Filipe Gabriel B.-B151
Mautone, Allison-H62
Mazuchowski II, Edward-H134, W8
McAndrew, Thomas C.-W10
McClay, Brittany S.-A96
McClyr, Carl R.-J7
McClenon, Hailey-H21
McCleskey, Brandi C.-E6, H76
McClug, Soraya-B25
Mc Cormick, Kyle A.-A69
McDanel, Chloé P.-A19
McDowell, Jennifer L.-A129
McDowell, Michael D.-D26
McKiel, Mary C.-E51
McMahon, Timothy P.-W23
McNulty, Jr., James F.-F10
Meckel, Lauren Alyssa-A60, A98
Megyesi, Mary S.-A4
Mehlretter, Andria H.-B88
Meiklejohn, Kelly A.-B189
Melinek, Judy-L1
Mertz, Lisa-B211
Mesli, Vadim-H16
Metcalf, Jessica L.-H125
Metcalf, Roger D.-G22, G23
Miles, Suzanne-E56
Miller, Keith W.-W22
Miller, Raymond G.-G37, S2
Millette, James-D16
Milroy, Chris-W11
Min, Jisook-E33, E77
Mitchell, T.J.-L1
Mohammed, Linton-S2
Mohd Yusof, Mohd Yusmaidil P-G14
Mohr, Amanda L.A.-K60
Mohrhaus, Angela S.-B74
Moini, Mehdi-B123, B129, W20
Monico, Iliaria-H47
Moore, David S.-J18
Moore, Jennifer A.-G9
Moore, Katherine N.-B29, B141
Moore, Melissa D.-B134

Presenting Author Index
Presenting Author Index

Las Vegas
2016

Morgan, Stephen L.-B170, B185
Morris, Keith B.-B30
Morris, Reanna J.-A105
Morton, Robert J.-BS2
Moses, Sharon K.-E66
Mostowt, Thaddeus-K10
Mourges, Melissa-F25, G22
Mozayani, Ashraf-F2
Mujumdar, Nirvani-B149
Mulawka, Marzena H.-E84
Mulhern, Dawn M.-W16
Mullis, Diana-I3, I24
Muramoto, Shin-B198
Murchland, Audrey-A32
Murphy, Lisa-I16
Murray, Patrick A.-G38

Ocal, Isil-J1
Ogris, Kathrin-H6
Olary Molina, Edwin O.-E88
Oliver, William R.-H63
Olivier, Martin S.-C22
Olsen, Alane-K75
Ott, Daniel-B167
Ott, Shana-A58
Ousley, Stephen D.-A16, A101
Ozdemir, Erdine-H57, K11
Özsoy, Sait-H99

P

Parai, Jacqueline L.-W11
Park, Chan-Seong-D27
Park, Dae-Kyoon-E35
Park, Seong Hwan-H14
Parker, Glendon-B188
Parker, Neeka M.-C12
Parson, Walther-W23
Parsons, Michael N.-B58
Pascale, Natascha-E45
Paul, Ian-H103
Peace, Michelle R.-W14
Pechal, Jennifer L.-H126
Peck, Michelle A.-B177, W23
Perdue, William K.-E44
Perlin, Mark W.-B100, F29
Peterson, Alexis J.L.-H5
Pharr, Lauren R.-A132
Phillips, Angelina I.-E29
Piel, Jennifer-I34
Pinchi, Vilma-G11
Pinckard, Keith-H70, W3
Pinheiro, Joao E.S.-H138
Pinto, Deborah C.-B160
Podini, Daniele S.-B182, E63
Poklis, Justin L.-W14
Polhemus, Adam-W14
Pollanen, Michael S.-W16
Pollitt, Mark-W4
Pooniya, Shashank-E50
Popejoy, Amy L.-B204
Potter, Rachel-K57
Powell, Jason-H132
Pozzi, Mark C.-D20, D21
Pradella, Francesco-G52
Prahlow, Joseph A.-H69, H70
Prahlow, Samuel-H95
Prasek, David J.-E11
Prat, Sebastien S.-I45
Preiß, Ulrich S.-E7
Price, Alan A.-S2
Price, Meghan-A11
Priebes, Gregory A.-K40
Prisaznik, Emily-B21
Pun, Ka-Man-B14, B117
Pysh, Matthew-D10

Q

Qian, Guoqiang-H36
Quinn, Alicia-B8, B191

R

Rajshekar, Mithun-G30
Rakoff, Jed S.-S1
Ramsland, Katherine-LW2
Ranadive, Anjali A.-F16, W8
Randazzo, Francesco-K13
Randhawa, Sundee S.-I25
Ranger, Rebekah-I16
Rankoth, Anusha-B160
Rathbun, Molly M.-B178
Redman, Kaitlyn M.-B13
Reese, Kristen L.-B15
Reeve, Henry R.-W4
Reichs, Kathleen J.-B56
Reinecke, Gary W.-E84
Reineke, Robin C.-A36
Rendine, Marcello-B26, E42
Renegar, Thomas B.-B166
Rennie, Samuel R.-A26
Reyes-Rodriguez, Jenise-C4
Reynolds, Mikaela S.-A46
Rhuy, Im Joo-A107, H14
Ricci, Pietrantonio-E10, H97, H98
Richardson-Gongora, Charles A.-B119
Ricke, Jason D.-F37
Rietz, Anders-E1
Riley, George R.-B116
Rimann, Sarah-B182
Ring, Joseph D.-B177, W23
Rios, Irma-E62
PRESENTING AUTHOR INDEX

Las Vegas
2016

Rivera, Jariangely-H23
Roberts, Graham J.-G4
Roberts, Lindsey G.-A20
Robinson, Brianna L.-A17
Rodriguez, Nancy-S1
Rodriguez-Cruz, Sandra E.-B90, B118
Roeske, Scott-W7
Rogers, Marcus-C7, W22
Roig, Meghan-H20
Rowe, Walter F.-B195
Rubin, Katie M.-A87
Rudin, Norah-B174
Ruiz Hernandez, Eric R.-E49, E52
Ryckman, Stewart D.-W24

S

Saczalski, Kenneth J.-D2, D4
Saitta, Anthony J.-B9
Saks, Michael J.-F20
Samms, Warren C.-B31
Samojlik, Isidora-K14
Sanford, Michelle R.-H116
Sanger, Robert M.-F4
Sansola, Alora-H84
Santana, Sierra-A12
Santos, Bruno M.-H96
Sauerwein, Kelly-B18
Saul, Tiffany B.-B18
Schade, Melanie A.-B19
Schaefer, Maureen-A54
Schaffer, Sarah-H90
Schafer, Jairo G.-F11
Schaff, Jason E.-W2
Schaffer, William C.-A108
Schilling, Eileen M.-A41
Schindell, Jennifer R.-E48
Schlagetter, Tyler J.-B6
Schmidt, Carl J.-H74
Schmidt, Howard A.-S1
Schoppe, Candace H.-W17
Schroeder, Jason L.-E54
Schuetzner, Ellen M.-W6
Schultz, Daniel L.-H53
Schultz, John J.-A80
Schwope, David M.-W2
Scott, Gary T.-A18, A58
Scotti, Veronica-F19
Seabets, Williams, Sarah J.-B53
Sebetan, Ismail M.-A113, B133, B134, E11, F10
Seferyn, Season E.-E68
Seidel, Andrew C.-A94
Seigfried-Spellar, Kathryn C.-C3, W22
Seither, Joshua-K47
Senn, David R.-G32
Serin, Ayse-H11, H15
Serinelli, Serenella-H101
Serrano, Javier G.-H85
Sessa, Francesco-A102
Seubert, Heather J.-B92
Shah, Krishna D.-H77
Shand, John P.-I34
Sharma, Piyush-A66
Shelton, Donald E.-F14, F22
Shepard, Claire E.-S2
Shields, Mary-G35
Shin, Sang Eon-H14
Shoff, Elisa N.-K67
Shuman, Mark J.-H24
Siebke, Ingaa-A97
Sigman, Michael E.-B171
Silver, William E.-G54
Simmons, Tal-A59, A119
Simmons-Ehrhardt, Terrie-E82
Simon, Alison-B27
Singer, Rachel S.-F26
Singh, Ankit Kumar-C23
Singh, Baneshwar-B145, H117
Sinha, Pankaj-K35
Skaggs, Kirtina D.-B80
Skipper, Cassie E.-A10
Skjellum, Anthony-C18, C23, W22
Skory Falsetti, Catyana R.-F18
Slack, Donia-B103
Sloper, Kathryn-A112
Smith, Jeff M.-C14
Smith, Lauren R.-H8
Snyder, Vivian-W3
Solheim, Tore T.-G46
Solomon, April D.-B108
Song, Junfeng J.-B169
Sorensen, Amy E.-B113
Soto Martinez, Miriam E.-A103
Sparling, Curtis E.-W7
Spencer, Debi-W24
Spradley, Kate-A5
Sprogue-Jakobsen, Susan-H81
Stanciu, Cristian A.-E80
Steadman, Dawnie W.-A128
Stein, Paul-B133, B134, E11, F10
Stephan, Carl N.-A70
Stephens, Peter J.-I9
Stephenson, Jennifer L.-E38
Stokes, Babatunde L.-H33
Stokes, Nancy A.-B105
Stolorow, Mark D.-B41, BS3
Stone, Joseph-K7
Stoney, David A.-B85, F38
Stypa, Michael P.-K50
Sufin, Vanessa-H117
Sugimoto, Garett-B100
Sullivan, Mary-I20
Sullivan, Travis M.-H44
Sulser, Andrew-F23, F47
Sutton, Joel D.-B174
Swofford, Henry J.-B161, F17

T

Takase, Yoshitaka-C7
Tamsen, Fredrik-E3
Tanaka, Tobin A.-J17
Taylor, Melissa K.-W1
Taylor, Tammy-B209
Teitelbaum, Jeff-W1
Temt, Silvana-H40
Temoral, Keith-Dane H.-K61
Tersigni-Tarrant, Maria-Teresia A.-A100, H80
Thevissen, Patrick W.-G7
Thielien, Rebecca-B39
Thirakul, Phouthisone-H53
Thomas, Brittany-K1, K45
Thomas, Sara R.-I42
Thompson, Monica M.-A91
Thompson, Robert M.-B169, B173, W20
Thrasher, Ronald R.-I9
Tidball-Binza, Morris V.-W16
Tillmar, Andreas-B208
Tise, Meredith L.-A89
Tobin, Cathy-W19

Presenting Author Index
Las Vegas
2016

PRESENTING AUTHOR INDEX

Tom, Kyle-B163
Trapella, Patrizia-E85, F1
Traveller, Lauren-F46
Troccoli, Giuseppe-I20
Truesdell, Janamarie-A48, A83
Tsunoda, Marcia Aiko-F11
Tuchtan, Lucille-D28, E43
Tuller, Hugh H.-A35
Tumram, Nilesh K.-H52, H136
Turan, Nursen-I41
Turner, Katherine-K3
Tuscher, Nichole M.-B133
Tynon, Marykathryn-K59, K64

W

Waddell, Erin-B154
Waddell Smith, Ruth-B46
Wagner, Audriana M.-B38
Wagner, Sarah-A34
Wagner, Crystal L.-E69
Walsh, Erin-K39
Walter, Richard D.-W21
Waltke, Heather E.-B213
Wang, John Z.-E27
Wang, Ling-B36
Wang, Wego-D6
Warren, Wendy S.-H49
Watson, Steven B.-W15
Watsula, Daniel-B115
Waug, Jalika Rivera-E9
Weber, Ingrid T.-B158
Weedn, Victor W.-W20
Weinstock, Robert-J6, I40
Weir, Kelsie R.-B1
Weiss, Kurt D.-D18, D22
Wells, Jeffrey D.-H119
Wescott, Daniel J.-A60, A117
Wessling, Roland-A47
Westring, Christian G.-BS3
Wheeler, Amanda-B109
White, Douglas R.-F48
White, Joseph L.-C8
Wiersema, Jason M.-E8, H78
Wietbrock, Matthew C.-E24, E46
Witkowska, Kelsey L.-C9
Williams, Amanda-A52
Williams, Chinyere M.-W19
Williams, John A.-S2
Williams, Mary R.-B150
Williams, Tyler-B121
Willis, Sheila-W9
Wilson, Emily K.-A125
Wilson, Laura A.-B175
Wilson, Mark R.-B101
Wilson, Shannon-D8
Winborn, Jessica-B78
Winfield, Gwyn-W20
Wolf, Barbara C.-W10
Wolf II, Carl E.-K71
Woo, Eun Jin-A44
Wood, Matthew R.-B124, W14
Wood, Robert E.-G50, G51
Woolf, Michael S.-A59, H10
Wootton, Sharon C.-B176

Word, Charlotte J.-B214, F30
Wright, Diana M.-B87

Y

Yang, Chu-An-K32
Yang, Tiantong-H36, H65, H141
Yang, Zhiyong-H36
Yeakel, Jillian K.-W2
Ylijoki-Sørensen, Seija-E72
Yokchue, Tanasiri-K37
Yoo, Seong Ho-H14
Young, John L.-I17

Z

Zadok, Elazar-E55
Zafres, Andrea-W10
Zapico, Sara C.-A85
Zech, Wolf-Dieter-H131
Zegarelli, Kathryn A.-E39
Zeller, Sharon E.-B145
Zhang, Xiang-H36, H65, H141
Zheng, Xiaoyu A.-B168
Ziegler, Lawrence-B184, E39
Zirpoli, Patrick-W21
Zlotnick, Joel A.-C17, J6, J13