

# AMERICAN ACADEMY OF FORENSIC SCIENCES

February 22-27

*Transformation:  
Embracing  
Change*



ADVANCE PROGRAM

*Las Vegas, Nevada*



th Annual Scientific Meeting

# American Academy of Forensic Sciences

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



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# TABLE OF CONTENTS



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



# REGISTRATION INFORMATION



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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](http://www.aafs.org) through the AAFA Account Portal.
- Scan & email your registration form (both pages) to [tmccray@aafs.org](mailto: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 AAFA.)
- 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 AAFA, 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 AAFA Office at (719) 636-1100 or email Tracie McCray ([tmccray@aafs.org](mailto: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*	Pre-Registration Discount Rate	On-Site Registration
1. AAFS Members & Trainee Affiliates, Applicants**	\$295	\$420
2. AAFS Student Affiliates	\$100	\$125
3. AAFS Retired Fellows	\$ 0	\$ 0
4. Non-Members	\$450	\$520
5. Non-Member Trainees** (Must provide letter from employer verifying trainee status.)	\$295	\$420
6. Non-Member Full-Time Students**	\$100	\$125
7. IAI Members** and AFTE Members**	\$295	\$420
8. Daily Registrants (Wednesday, Thursday, Friday, and/or Saturday admission to scientific sessions only)	\$145/day	\$160/day

\*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](mailto:tmccray@aafs.org).

**Full-Time Students** must provide a copy of spring 2016 class schedule verifying full-time status to [tmccray@aafs.org](mailto: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](mailto: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](mailto: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

## 68<sup>th</sup> 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](http://www.aafs.org)

**Scan & email** your registration form (both pages) to [tmccray@aafs.org](mailto:tmccray@aafs.org)

**Mail your form** with check, money order, or purchase order to:

**AAFS**

410 North 21<sup>st</sup> Street

Colorado Springs, CO 80904

Registration forms must be received by **Wednesday, January 27**, to be eligible to register for the 2016 Special Functions and to qualify for the discounted registration rate.

**On January 28, 2016, the on-site rates become effective and registration for 2016 Special Functions will be voided.**

Registration questions may be directed to Tracie McCray ([tmccray@aafs.org](mailto:tmccray@aafs.org) or 719.636.1100).

**Faxed registration forms are not accepted.**

#### REGISTRANT INFORMATION

Salutation (*Dr/Mr/Ms*): \_\_\_\_\_ First Name: \_\_\_\_\_ Last Name: \_\_\_\_\_ Highest Degree: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

City: \_\_\_\_\_ State/Province: \_\_\_\_\_ ZIP/Postal Code: \_\_\_\_\_ Country: \_\_\_\_\_

#### BADGE INFORMATION

Full Badge Name: \_\_\_\_\_ Badge Agency/School: \_\_\_\_\_

Badge City: \_\_\_\_\_ Badge State/Province: \_\_\_\_\_ Badge Country: \_\_\_\_\_

#### ADDITIONAL INFORMATION

Email: \_\_\_\_\_ Cell Phone: \_\_\_\_\_

Hotel: \_\_\_\_\_ First AAFS Meeting? ☐ Yes ☐ No

Vocational Status: ☐ Professional ☐ Student ☐ Academic ☐ Decision Maker ☐ Purchasing Agent ☐ Other

Attendee Gender: ☐ Male ☐ Female

Would you like to receive pre-meeting exhibitor mailings? ☐ Yes ☐ No

Emergency Contact Name: \_\_\_\_\_ Emergency Contact Phone: \_\_\_\_\_

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.)

Attending Guest: ☐ Yes ☐ No Guest Name: \_\_\_\_\_

#### ADA ACCOMMODATIONS



Please list any special dietary needs: \_\_\_\_\_

Please list ADA accommodation requests: \_\_\_\_\_

*Please note: This ADA Accommodations request refers to meeting/session accommodations (e.g., wheelchair access, assisted listening devices, etc.). ADA accommodations related to hotel room reservations should be directed to the hotel when making reservations. ADA Accommodations are required by the Pre-Registration deadline (January 27, 2016). Requests received after this date may not be processed or fulfilled in time.*

#### 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 (AACC). 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.

Category	Pre-Registration (through January 27)	On-Site Registration (effective January 28)
<input type="checkbox"/> AAFS Members, Trainee Affiliates, Applicants*	\$295	\$420
<input type="checkbox"/> AAFS Student Affiliates	\$100	\$125
<input type="checkbox"/> AAFS Retired Fellows	\$0	\$0
<input type="checkbox"/> Non-Members	\$450	\$520
<input type="checkbox"/> Non-Member Trainees*	\$295	\$420
<input type="checkbox"/> Non-Member Full-Time Students*	\$100	\$125
<input type="checkbox"/> IAI Members* <input type="checkbox"/> AFTE Members*	\$295	\$420
<input type="checkbox"/> Daily: <input type="checkbox"/> Wed <input type="checkbox"/> Thurs <input type="checkbox"/> Fri <input type="checkbox"/> Sat	\$145/DAY	\$160/DAY
<input type="checkbox"/> Workshop Only	See Special Functions (next page)	Not Available

\*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 Full-Time Students** – Proof of full-time status.

♦ **Non-Member Trainees** – Letter from employer verifying trainee status.

♦ **IAI & AFTE Members** – Proof of current membership.

**Refund Policy:** All requests for refunds must be submitted via mail or email ([tmccray@aafs.org](mailto: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.)

Breakfast Seminars					Fee	Qty	Total
<input type="checkbox"/>	Mon	7:00-8:30	B1	Death in a Bathtub: The Defense of Drew Peterson	\$50		\$
<input type="checkbox"/>	Tues	7:00-8:30	B2	Death From a Distance: The Etiology of Serial Sniper Homicides	\$50		\$
<input type="checkbox"/>	Wed	7:00-8:30	B3	A Primer on the Structure and Activity of the NIST's Organization of Scientific Area Committees (OSAC)	\$50		\$
<input type="checkbox"/>	Thurs	7:00-8:30	B4	One Night in August: The I-35W Bridge Collapse in Minneapolis	\$50		\$
<input type="checkbox"/>	Fri	7:00-8:30	B5	Back to the Future – A Journey Across Timelines and Possible Realities for the Future of Forensic Sciences	\$50		\$
<input type="checkbox"/>	Fri	7:00-8:30	B6	Thomas Krauss Memorial Bitemark Breakfast – Forensic Anthropology: Science Into Fiction	\$50		\$

Luncheon Seminars					Fee	Qty	Total
<input type="checkbox"/>	Thurs	12:00-1:30	L1	<i>Working Stiff</i> : Forensic Training & Public Relations in a Digital Age	\$55		\$
<input type="checkbox"/>	Fri	12:00-1:30	L2	Operation Lima Sea – Unidentified Remains of a Human Torso in Queensland, Australia	\$55		\$

Section Luncheons (Section Business Meetings begin following the Luncheon – see <i>Advance Program</i> for times)					Fee	Qty	Total
<input type="checkbox"/>	Wed	12:00-1:00	L3	Criminalistics Section Luncheon ( <i>section members only</i> )	\$10		\$
<input type="checkbox"/>	Wed	12:00-1:45	L4	Digital & Multimedia Sciences Section Luncheon	\$55		\$
<input type="checkbox"/>	Wed	12:00-1:15	L5	General Section Luncheon	\$55		\$
<input type="checkbox"/>	Wed	12:00-1:45	L6	Jurisprudence Section Luncheon	\$55		\$
<input type="checkbox"/>	Wed	12:00-1:30	L7	Pathology/Biology Section Luncheon	\$55		\$
<input type="checkbox"/>	Wed	12:00-1:45	L8	Psychiatry & Behavioral Science Section Luncheon ( <i>section members only</i> )	\$10		\$
<input type="checkbox"/>	Wed	12:00-1:45	L9	Toxicology Section Luncheon	\$55		\$

Special Sessions					Fee	Total
<input type="checkbox"/>	Tues	8:30-12:45	S1	Interdisciplinary Symposium: Innovative Science – How Advances in Technology Transform Forensic Science	\$75	\$
<input type="checkbox"/>	Tues	8:30-5:00	S2	Young Forensic Scientists Forum – Viva La Forensics	\$100	\$

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

**Special Functions Sub-Total: \$**

## 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

☐ Check Enclosed ☐ Purchase Order (Attach Copy)

☐ Visa/MasterCard/Discover/American Express

Card No.: \_\_\_\_\_

Name on Card: \_\_\_\_\_

Expiration Date (MM/YYYY): \_\_\_\_\_

Security Code: \_\_\_\_\_ Billing ZIP Code: \_\_\_\_\_

Signature: \_\_\_\_\_

*Signature Required for Credit Card Purchases*

Cardholder authorizes this payment and agrees to comply with the obligations set forth in the Cardholder Agreement with the card issuer.

# 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

### 2019 AAFS Annual Meeting

February 18-23, 2019  
The Baltimore Convention Center  
Baltimore, MD

### 2018 AAFS Annual Meeting

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

### 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](mailto:membership@aafs.org)  
Website: [www.aafs.org](http://www.aafs.org)

Anne Warren, Executive Director



## OFFICERS & OFFICIALS

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### Officers

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

### Directors

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

### 2016 Annual Scientific Meeting Program Committee

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

# OFFICERS & OFFICIALS



## Past Presidents

*R.B.H. Gradwohl, MD . . . . .	1949-51	*George E. Gantner, MD . . . . .	1983-84
*S.A. Levinson, MD, PhD . . . . .	1951-52	Maureen Casey Owens, AB . . . . .	1984-85
*R.N. Harger, PhD . . . . .	1952-53	*Arthur D. Goldman, DMD . . . . .	1985-86
*Louis P. Regan, MD, LLB . . . . .	1953-54	*Don Harper Mills, JD, MD . . . . .	1986-87
*A.W. Freireich, MD . . . . .	1954-55	Yale H. Caplan, PhD . . . . .	1987-88
*Fred E. Inbau, BS, LLB, LLM . . . . .	1955-56	Richard S. Frank, BS . . . . .	1988-89
*Alan R. Moritz, MD . . . . .	1956-57	*Richard C. Froede, MD . . . . .	1989-90
*Val B. Satterfield, MD . . . . .	1957-58	*Ellis R. Kerley, PhD . . . . .	1990-91
*John F. Williams, BS . . . . .	1958-59	*Homer R. Campbell, Jr., DDS . . . . .	1991-92
*Ordway Hilton, MA . . . . .	1959-60	Marina Stajić, PhD . . . . .	1992-93
*Russel S. Fisher, MD . . . . .	1960-61	*Enrico N. Togneri, BA . . . . .	1993-94
*S.R. Gerber, MD, LLB . . . . .	1961-62	Steven C. Batterman, PhD . . . . .	1994-95
*Milton Helpern, MD . . . . .	1962-63	Haskell M. Pitluck, JD . . . . .	1995-96
*Oliver C. Schroeder, Jr., JD . . . . .	1963-64	Richard Rosner, MD . . . . .	1996-97
*Dwight M. Palmer, MD . . . . .	1964-65	Michael A. Peat, PhD . . . . .	1997-98
*Robert B. Forney, PhD . . . . .	1965-66	Barry A.J. Fisher, MS, MBA . . . . .	1998-99
*Jack L. Sachs, JD . . . . .	1966-67	Patricia J. McFeeley, MD . . . . .	1999-00
*Charles S. Petty, MD . . . . .	1967-68	John D. McDowell, DDS, MS . . . . .	2000-01
*Maier I. Tuchler, MD . . . . .	1968-69	Mary Fran Ernst, BLS . . . . .	2001-02
*James W. Osterburg, MPA . . . . .	1969-70	Graham R. Jones, PhD . . . . .	2002-03
*Edwin C. Conrad, JD, PhD . . . . .	1970-71	Kenneth E. Melson, JD . . . . .	2003-04
Cyril H. Wecht, MD, JD . . . . .	1971-72	Ronald L. Singer, MS . . . . .	2004-05
Douglas M. Lucas, MSc, DSc . . . . .	1972-73	Edmund R. Donoghue, MD . . . . .	2005-06
*Morton F. Mason, PhD . . . . .	1973-74	James G. Young, MD . . . . .	2006-07
David A. Crown, DCrim . . . . .	1974-75	Bruce A. Goldberger, PhD . . . . .	2007-08
*Robert J. Joling, JD . . . . .	1975-76	Carol E. Henderson, JD . . . . .	2008-09
*James T. Weston, MD . . . . .	1976-77	Thomas L. Bohan, PhD, JD . . . . .	2009-10
*B. Edward Whittaker, BS . . . . .	1977-78	Joseph P. Bono, MA . . . . .	2010-11
Kurt M. Dubowski, PhD . . . . .	1978-79	Douglas H. Ubelaker, PhD . . . . .	2011-12
*June K. Jones, MS . . . . .	1979-80	Robert E. Barsley, DDS, JD . . . . .	2012-13
Lowell J. Levine, DDS . . . . .	1980-81	Barry K. Logan, PhD . . . . .	2013-14
*Joseph H. Davis, MD . . . . .	1981-82	Daniel A. Martell, PhD . . . . .	2014-15
*Anthony Longhetti, BA . . . . .	1982-83		

\* Deceased



# OFFICERS & OFFICIALS

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## 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

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## R.B.H. Gradwohl Laureates

*Milton Helpert, 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, LL.M.	2012
Thomas T. Noguchi, MD	2015

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## 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

Abel M. Dominguez, PhD . . . . .	1990	Robert B. J. Dorion, DDS . . . . .	2002
Kenneth S. Field, MBA . . . . .	1990	Richard S. Frank, BS . . . . .	2002
*Ordway Hilton, MA . . . . .	1990	Carla M. Noziglia, MS . . . . .	2003
Douglas M. Lucas, MSc, DSc . . . . .	1990	James L. Frost, MD . . . . .	2004
Irwin N. Perr, MD, JD . . . . .	1990	*Gerald L. Vale, DDS, JD . . . . .	2004
Kurt M. Dubowski, PhD . . . . .	1991	Michael Finnegan, PhD . . . . .	2005
*June K. Jones, MS . . . . .	1991	Andre A. Moenssens, JD, LLM . . . . .	2005
*Oliver C. Schroeder, Jr., JD . . . . .	1991	Michael A. Peat, PhD . . . . .	2006
*Clyde C. Snow, PhD . . . . .	1991	Thomas T. Noguchi, MD . . . . .	2007
*Robert H. Cravey, BS . . . . .	1992	Kenneth E. Melson, JD . . . . .	2008
*Richard C. Froede, MD . . . . .	1992	Joseph L. Peterson, DCrim . . . . .	2008
*Emanuel Tanay, MD . . . . .	1992	Randy L. Hanzlick, MD . . . . .	2009
*Joseph H. Davis, MD . . . . .	1993	Jay A. Siegel, PhD . . . . .	2009
*Anthony Longhetti, BA . . . . .	1993	Ronald L. Singer, MS . . . . .	2010
*Don Harper Mills, JD, MD . . . . .	1993	*Robert Thibault, MFS . . . . .	2010
William M. Bass III, PhD . . . . .	1994	Mary Fran Ernst, BLS . . . . .	2011
Henry C. Lee, PhD . . . . .	1994	Patricia J. McFeeley, MD . . . . .	2011
*David J. Purtell, PhD . . . . .	1994	Richard Rosner, MD . . . . .	2011
Charles J. Stahl III, MD . . . . .	1995	*James W. Osterburg, MPA . . . . .	2012
*Irving Sunshine, PhD . . . . .	1995	Haskell M. Pitluck, JD . . . . .	2012
Yale H. Caplan, PhD . . . . .	1996	John D. McDowell, DDS, MS . . . . .	2013
James E. Starrs, LLM . . . . .	1996	Marina Stajić, PhD . . . . .	2013
*Homer R. Campbell, Jr., DDS . . . . .	1998	Edmund R. Donoghue, MD . . . . .	2014
John J. Harris, BS . . . . .	1998	Graham R. Jones, PhD . . . . .	2014
Norman D. Sperber, DDS . . . . .	1998	Marilyn A. Huestis, PhD . . . . .	2015
*James V.P. Conway . . . . .	2000	Douglas H. Ubelaker, PhD . . . . .	2016
Robert E. Gaensslen, PhD . . . . .	2000		
Steven C. Batterman, PhD . . . . .	2001		
*B.G. Brogdon, MD . . . . .	2001		
Barry A.J. Fisher, MS, MBA . . . . .	2001		

\*Deceased



## GENERAL INFORMATION

### Registration Desk Hours

*Rio All-Suite Hotel & Casino*

Sunday	February 21	1:00 p.m.	-	5:00 p.m.
Monday	February 22	6:45 a.m.	-	5:00 p.m.
Tuesday	February 23	6:45 a.m.	-	6:00 p.m.
Wednesday	February 24	6:45 a.m.	-	5:00 p.m.
Thursday	February 25	6:45 a.m.	-	5:00 p.m.
Friday	February 26	6:45 a.m.	-	4:00 p.m.
Saturday	February 27	7:30 a.m.	-	9:30 a.m.

### Exhibit Hall Hours

*Rio All-Suite Hotel & Casino*

Wednesday	February 24	11:30 a.m.	-	4:00 p.m.
Thursday	February 25	9:00 a.m.	-	2:00 p.m.
AAFS Reception	(Exhibits Open)	6:00 p.m.	-	8:00 p.m.
Friday	February 26	9:00 a.m.	-	1:00 p.m.

### 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](mailto: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

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

### Criminalistics Section's

Paul L. Kirk Award  
Mary E. Cowan Outstanding Service Award  
Meritorious Service Award

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

### Digital & Multimedia Sciences Section's

Outstanding Research Award  
Outstanding Case Study Award

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

Carrie Morgan Whitcomb Service Award

### Engineering Sciences Section's

Founders Award

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

Andrew H. Payne, Jr., Special Achievement Award

### General Section's

Robert Gaffney Achievement Award  
John R. Hunt Award  
Paul W. Kehres Meritorious Service Award

*Catherine G. Rushton, MSFS*  
*Virginia A. Lynch, MSN*  
*Richard D. Walter, MA*





## AWARDS & RECEPTIONS

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### **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

Milton Helpen Award

*Melissa M. Blessing, DO*

*Gregory G. Davis, MD*

*Thomas T. Noguchi, MD*

### **Psychiatry & Behavioral Science Section's**

Maier I. Tuchler Award

*Christopher R. Thompson, MD*

### **Toxicology Section's**

Alexander O. Gettler Award

Rolla N. Harger Award

Ray Abernethy Award

Irving Sunshine Award

*Mahmoud A. ElSohly, PhD*

*J. Rod McCutcheon, BS*

*Robert Kronstrand, PhD*

*Erin A. Spargo, PhD*

### **2016 AAFS Regional Award Winners**

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**Midwestern Association of Forensic Scientists**

*Mark Goff, BA*

**Southwestern Association of Toxicologists**

*Heidi Christensen, BS*

### **2015-16 FSF Emerging Forensic Scientist Award Honorees**

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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**

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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**

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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.**

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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.**

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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)!

# SECTION BUSINESS MEETINGS



## 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:

Section	Luncheon	Business Meeting
Anthropology		2:00 p.m. - 3:45 p.m.
Criminalistics <sup>1</sup>	12:00 p.m. - 1:00 p.m.	1:05 p.m. - 3:45 p.m.
Digital & Multimedia Sciences <sup>1</sup>	12:00 p.m. - 1:45 p.m.	2:00 p.m. - 3:45 p.m.
Engineering Sciences		1:30 p.m. - 3:45 p.m.
General <sup>1</sup>	12:00 p.m. - 1:15 p.m.	1:30 p.m. - 3:45 p.m.
Jurisprudence <sup>1</sup>	12:00 p.m. - 1:45 p.m.	2:00 p.m. - 3:45 p.m.
Odontology		2:00 p.m. - 3:45 p.m.
Pathology/Biology <sup>1</sup>	12:00 p.m. - 1:30 p.m.	1:45 p.m. - 3:45 p.m.
Psychiatry & Behavioral Science <sup>2</sup>	12:00 p.m. - 1:45 p.m.	2:00 p.m. - 3:45 p.m.
Questioned Documents		2:00 p.m. - 3:45 p.m.
Toxicology <sup>1</sup>	12:00 p.m. - 1:45 p.m.	2:00 p.m. - 3:45 p.m.

<sup>1</sup> These luncheons require pre-registration.

<sup>2</sup> 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.



# LAS VEGAS, NV



## 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

# LAS VEGAS, NV



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.

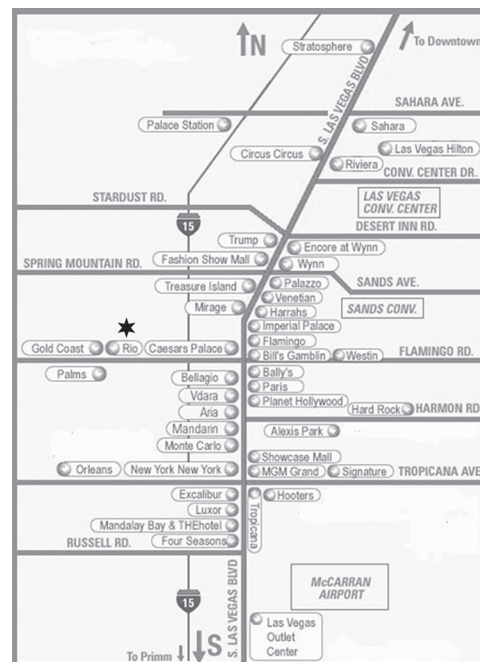
## Suggested Routes

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/](http://www.frommers.com/destinations/las-vegas/)

Travel Nevada: <http://travelnevada.com/>

WikiTravel: [http://wikitravel.org/en/Las\\_Vegas](http://wikitravel.org/en/Las_Vegas)



# ACCOMMODATIONS

## 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



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## General Information

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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

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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

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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

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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.



# CONTINUING EDUCATION

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## American Board of Criminalists Approval

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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.

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### Overall Purpose and Objective Statements for Major Aspects of AAFS Programs

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#### *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](mailto: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.





## **FINANCIAL CONTRIBUTORS**

**The American Academy of Forensic Sciences  
would like to thank the following supporters  
for their contributions to the  
2016 AAFS 68th Annual Scientific Meeting:**

A large, faint watermark of the American Academy of Forensic Sciences seal is centered in the background. The seal is circular with the text "AMERICAN ACADEMY OF FORENSIC SCIENCES" around the perimeter. In the center is a caduceus (a staff with two snakes and wings) superimposed on a pair of scales of justice.

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# CALENDAR OF EVENTS



## AAFS 68th Annual Scientific Meeting

### Calendar of Events

#### Saturday, February 20, 2016

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

#### Sunday, February 21, 2016

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

#### Monday, February 22, 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 #1: <i>Death in a Bathtub: The Defense of Drew Peterson</i> (Pre-Registration Required)
7:00 a.m.	-	6:00 p.m.	AAFS Cyber Cafe
7:00 a.m.	-	11:00 p.m.	Press Room
8:00 a.m.	-	10:00 a.m.	National Institute of Standards and Technology (NIST) Organization of Scientific Area Committees (OSAC) – Digital/Multimedia Scientific Area Committee Public Status Reports & Open Discussion
8:00 a.m.	-	1:00 p.m.	ABC Educator FSAT Training
8:00 a.m.	-	5:00 p.m.	AAFS Board of Directors
8:30 a.m.	-	12:00 p.m.	Workshop #1: <i>Information Does Exist Beyond the First Page of Your Google Search! Tools and Strategies for Forensic Science Literature Searching and Use</i> (Pre-Registration Required)
8:30 a.m.	-	12:00 p.m.	Workshop #2: <i>Advanced Mass Spectrometry (MS) Techniques for Forensic Analysis: What Does the Future Hold?</i> (Pre-Registration Required)



# CALENDAR OF EVENTS

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8:30 a.m.	- 12:30 p.m.	Workshop #3: <i>How and Why You Can and Should Integrate Advanced Imaging Techniques Into Your Daily Autopsy Practice (Pre-Registration Required)</i>
8:30 a.m.	- 12:30 p.m.	Workshop #4: <i>A Cloud Descends on the Courtroom: The Impact of Cloud Computing on Evidence in the Courtroom (Pre-Registration Required)</i>
8:30 a.m.	- 12:30 p.m.	Workshop #5: <i>UVIS Dental Identification Module (UDIM) — A Hands-On Workshop (Pre-Registration Required)</i>
8:30 a.m.	- 4:30 p.m.	Workshop #6: <i>Frequency Occurrence in Handwriting and Hand Printing Characteristics (Pre-Registration Required)</i>
8:30 a.m.	- 4:45 p.m.	Workshop #7: <i>Extreme Violence — Military vs. Civilian Crime Scene Investigation (CSI) Cases — Forensic Analysis and Disciplines in Practice (Pre-Registration Required)</i>
8:30 a.m.	- 5:00 p.m.	Workshop #8: <i>From the Ashes — Transforming the Response to Mass Disasters (Pre-Registration Required)</i>
8:30 a.m.	- 5:00 p.m.	Workshop #9: <i>Strategies for Scientific Problem-Solving With Physical Evidence (Pre-Registration Required)</i>
8:30 a.m.	- 5:00 p.m.	Workshop #10: <i>Practical Homicide Investigation®: An Evaluation of Homicides Involving Child Victims, Child Offenders, and Equivocal Death Investigations (Pre-Registration Required)</i>
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: <i>Child Homicides: The Critical Role of Interdisciplinary Expert Collaboration (Pre-Registration Required)</i>
1:00 p.m.	- 5:00 p.m.	Workshop #12: <i>Development of a Reasonable Minimum Documentation Standard for Latent Prints (Pre-Registration Required)</i>
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: <i>Vaping: What You Didn't Know About Electronic Cigarette — And Why You Should Care (Pre-Registration Required)</i>
1:30 p.m.	- 5:00 p.m.	Workshop #15: <i>Addressing Damaged Mobile Devices for Data Acquisition (Pre-Registration Required)</i>
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 <i>(Open to All Meeting Attendees)</i>
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 Trustees
7:00 a.m.	- 8:30 a.m.	Breakfast #2: <i>Death From a Distance: The Etiology of Serial Sniper Homicides (Pre-Registration Required)</i>
7:00 a.m.	- 9:00 a.m.	Toxicology Section Steering Committee
7:00 a.m.	- 5:30 p.m.	46 <sup>th</sup> Annual Scientific Session of the American Society of Forensic Odontology (ASFO)

# CALENDAR 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.	- 9:45 p.m.	International Board of Forensic Engineering Sciences (IBFES) Oral Examinations and Directors Meeting
8:00 a.m.	- 10:00 a.m.	Forensic Sciences Foundation (FSF) Board of Trustees
8:00 a.m.	- 12:00 p.m.	ABFT Accreditation Committee
8:00 a.m.	- 12:00 p.m.	ABFT Examination for Certification
8:00 a.m.	- 12:00 p.m.	NAME Board of Directors
8:00 a.m.	- 5:00 p.m.	CFSO Board <i>(Not Open to the Public)</i>
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: <i>The American Academy of Forensic Sciences (AAFS) Humanitarian and Human Rights Resource Center (Pre-Registration Required)</i>
8:30 a.m.	- 12:00 p.m.	Workshop #17: <i>Postmortem Monocular Indirect Ophthalmoscopy (PMIO) (Pre-Registration Required)</i>
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: <i>Improving Your Image: How to Get the Best Out of Your Expensive X-Ray Equipment (Pre-Registration Required)</i>
8:30 a.m.	- 12:30 p.m.	Workshop #19: <i>Diversity and Inclusion at the Forensic Science Workplace (Pre-Registration Required)</i>
8:30 a.m.	- 12:45 p.m.	FEPAC: <i>Accreditation of Forensic Science Academic Programs Through the AAFS</i>
8:30 a.m.	- 12:45 p.m.	Special Session #1: <i>Interdisciplinary Symposium - Innovative Science — How Advances in Technology Transform Forensic Science (Pre-Registration Required)</i>
8:30 a.m.	- 1:00 p.m.	Workshop #20: <i>On the Leading Edge of Forensic Science (Pre-Registration Required)</i>
8:30 a.m.	- 5:00 p.m.	Special Session #2: <i>Young Forensic Scientists Forum (YFSF) - Viva La Forensics (Pre-Registration Required)</i>
8:30 a.m.	- 5:00 p.m.	Workshop #21: <i>Crime Assessment: Solving Crime Beyond Profiling (Pre-Registration Required)</i>
8:30 a.m.	- 5:00 p.m.	Workshop #22: <i>Developing a Professional Code of Ethics in Digital Forensics (Pre-Registration Required)</i>
8:30 a.m.	- 5:00 p.m.	Workshop #23: <i>Considerations for Implementing Next Generation Sequencing (NGS) Technologies Into a Forensic Laboratory (Pre-Registration Required)</i>
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.	46 <sup>th</sup> 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 2015 Interim Scientific Program
1:00 p.m.	- 4:30 p.m.	Workshop #24: <i>Elder Abuse and Neglect: What's Happening to Grandma? (Pre-Registration Required)</i>
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: <i>The American Academy of Forensic Sciences (AAFS) Standards Development Process (Open to all Meeting Attendees)</i>
8:00 p.m.	- 10:00 p.m.	Diversity and Inclusion in Forensic Sciences Reception <i>(Open to all Meeting Attendees)</i>



# CALENDAR OF EVENTS

## Wednesday, February 24, 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 #3: <i>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)</i>
7:00 a.m.	-	12:00 p.m.	ABC Certification Examination
7:00 a.m.	-	12:00 p.m.	Society of Forensic Toxicologists (SOFT) Board of Directors Interim Meeting
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.	-	9:00 a.m.	AAFS Government Relations Committee
8:00 a.m.	-	8:45 a.m.	AAFS ACADEMY CUP
8:00 a.m.	-	9:00 a.m.	AAFS Continuing Education Committee
8:30 a.m.	-	11:30 a.m.	American Dental Association (ADA) OSAC Forensic Odontology Taskforce
9:00 a.m.	-	10:00 a.m.	Odontology Section Science and Legal Committee <i>(by Invitation Only)</i>
9:00 a.m.	-	11:00 a.m.	AAFS PLENARY SESSION
11:00 a.m.	-	12:00 p.m.	AAFS Membership Application "How To" Session
11:30 a.m.	-	1:00 p.m.	Poster Sessions - Anthropology, Criminalistics, General, Jurisprudence, Odontology, Pathology/Biology, Psychiatry & Behavioral Science <i>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.</i>
11:30 a.m.	-	4:00 p.m.	EXHIBITS OPEN
12:00 p.m.	-	1:00 p.m.	Criminalistics Section Luncheon <i>(Pre-Registration Required)</i>
12:00 p.m.	-	1:15 p.m.	General Section Luncheon <i>(Pre-Registration Required)</i>
12:00 p.m.	-	1:30 p.m.	Pathology/Biology Section Luncheon <i>(Pre-Registration Required)</i>
12:00 p.m.	-	1:45 p.m.	Digital & Multimedia Sciences Section Luncheon <i>(Pre-Registration Required)</i>
12:00 p.m.	-	1:45 p.m.	Jurisprudence Section Luncheon <i>(Pre-Registration Required)</i>
12:00 p.m.	-	1:45 p.m.	Psychiatry & Behavioral Science Section Luncheon <i>(Pre-Registration Required)</i>
12:00 p.m.	-	1:45 p.m.	Toxicology Section Luncheon <i>(Pre-Registration Required)</i>
12:00 p.m.	-	1:45 p.m.	Odontology Section Executive Committee Luncheon
12:30 p.m.	-	1:30 p.m.	ABFA Diplomates
1:00 p.m.	-	2:00 p.m.	AAFS Abstract Submission "How To" Session
1:00 p.m.	-	2:00 p.m.	SOFT Drug Facilitated Crimes (DFC) Committee
1:05 p.m.	-	3:45 p.m.	Criminalistics Section Business Meeting
1:30 p.m.	-	3:45 p.m.	Engineering Sciences Section Business Meeting
1:30 p.m.	-	3:45 p.m.	General Section Business Meeting
1:45 p.m.	-	3:45 p.m.	Pathology/Biology Section Business Meeting
2:00 p.m.	-	3:45 p.m.	Anthropology Section Business Meeting
2:00 p.m.	-	3:45 p.m.	Digital & Multimedia Sciences Section Business Meeting
2:00 p.m.	-	3:45 p.m.	Jurisprudence Section Business Meeting
2:00 p.m.	-	3:45 p.m.	Odontology Section Business Meeting
2:00 p.m.	-	3:45 p.m.	Psychiatry & Behavioral Science Section Business Meeting
2:00 p.m.	-	3:45 p.m.	Questioned Documents Section Business Meeting
2:00 p.m.	-	3:45 p.m.	Toxicology Section Business Meeting
4:15 p.m.	-	5:30 p.m.	AAFS ANNUAL BUSINESS MEETING & AWARDS CEREMONY
5:30 p.m.	-	7:30 p.m.	SOFA General Membership Meeting
6:00 p.m.	-	7:00 p.m.	YFSF Bring Your Own Slides (BYOS)
6:30 p.m.	-	8:00 p.m.	Boston University School of Medicine Alumni and Student Reception
6:30 p.m.	-	8:30 p.m.	Promega Genetic Identity Reception
7:00 p.m.	-	9:00 p.m.	CRC Press Authors' Reception
7:00 p.m.	-	9:00 p.m.	Duquesne University MS-FSL Reception



# CALENDAR OF EVENTS




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7:00 p.m.	-	9:00 p.m.	The George Washington University Forensic Sciences Alumni Reception
7:00 p.m.	-	9:00 p.m.	John Jay College on the Road — AAFS Alumni Reception
7:00 p.m.	-	9:00 p.m.	Marshall University Forensic Science Alumni Reception
7:30 p.m.	-	9:00 p.m.	Toxicology Section Poster Session
8:00 p.m.	-	10:00 p.m.	Bring Your Own Slides (BYOS)
8:00 p.m.	-	10:00 p.m.	ABC Ice Cream Social
8:00 p.m.	-	10:00 p.m.	Sam Houston State University Alumni and Student Reception
8:00 p.m.	-	10:00 p.m.	University of New Haven Student and Alumni Reception
8:00 p.m.	-	10:00 p.m.	Virginia Commonwealth University Alumni and Student Reception

## 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: <i>One Night in August: The I-35W Bridge Collapse in Minneapolis</i> (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 <i>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.</i>

### 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

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1:00 p.m.	-	5:15 p.m.	Criminalistics Session II
1:00 p.m.	-	5:30 p.m.	Criminalistics Session I
1:30 p.m.	-	5:00 p.m.	Anthropology
1:30 p.m.	-	5:00 p.m.	Jurisprudence Session I
1:30 p.m.	-	5:00 p.m.	Questioned Documents
1:30 p.m.	-	5:05 p.m.	Pathology/Biology Session I
1:45 p.m.	-	5:35 p.m.	Odontology
2:00 p.m.	-	4:00 p.m.	Pathology/Biology Session II
12:00 p.m.	-	1:30 p.m.	<i>Journal of Forensic Sciences</i> Editors' Wine & Cheese Luncheon
12:00 p.m.	-	1:30 p.m.	Luncheon #1: <i>Working Stiff: Forensic Training &amp; Public Relations in a Digital Age</i> (Pre-Registration Required)
12:00 p.m.	-	2:00 p.m.	ABFO Combined Executive Committee and Board of Directors
1:00 p.m.	-	2:00 p.m.	AAFS International Educational Outreach Program (IEOP) 2016 – New Zealand
2:00 p.m.	-	3:00 p.m.	AAFS Finance Committee
2:00 p.m.	-	4:00 p.m.	Luncheon #1 Author Book Signing: Judy Melinek, MD – <i>Working Stiff</i> <i>Books available for sale at the AAFS Sales Desk</i>
3:30 p.m.	-	5:30 p.m.	AAFS Exhibitor Liaison Committee & Reception
5:00 p.m.	-	6:00 p.m.	SOFT/AAFS Drugs & Driving Committee
6:00 p.m.	-	8:00 p.m.	AAFS 68 <sup>th</sup> Annual Wine & Cheese Reception
6:00 p.m.	-	8:00 p.m.	University Fair
7:00 p.m.	-	9:00 p.m.	Fire Debris Discussion Group
7:00 p.m.	-	9:00 p.m.	Toxicology Open Forum
8:00 p.m.	-	10:00 p.m.	Last Word Society
8:15 p.m.	-	10:15 p.m.	Council of Forensic Science Educators (COFSE)

## 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: <i>Back to the Future – A Journey Across the Timelines and Possible Realities for the Future of Forensic Sciences</i> (Pre-Registration Required)
7:00 a.m.	-	8:30 a.m.	Breakfast #6: <i>Forensic Anthropology: Science Into Fiction</i> (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 2016-2017 Nominating Committee
9:00 a.m.	-	11:00 a.m.	Breakfast #6 Author Book Signing: Kathleen J. Reichs, PhD – <i>Speaking in Bones</i> <i>Books available for sale at the AAFS Sales Desk</i>
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 <i>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.</i>

### 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

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# CALENDAR OF EVENTS




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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: <i>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)</i>
5:30 p.m.	-	7:30 p.m.	Illumina 3 <sup>rd</sup> Annual User Symposium
7:00 p.m.	-	9:00 p.m.	Criminalistics Evening Session: <i>Criminalistics Believe It or Not!</i>

## 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





# STUDENT ACADEMY

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*Pre-Registration Required — \$15*

## Tuesday

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

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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

*Chair Emeritus:*

**James L. Frost, MD**  
Morgantown, WV

*Co-Chair:*

**Marilyn T. Miller, EdD**  
VA Commonwealth University  
Richmond, VA

*Faculty:*

*Anthropology:*

**Elizabeth A. Murray, PhD**  
College of Mount St. Joseph  
Cincinnati, OH

*Jurisprudence:*

**Christine Funk, JD**  
Washington, DC

*Criminalistics:*

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

*Odontology:*

**Robin A. Scheper, DDS**  
Wildwood, NJ

*Digital & Multimedia Sciences:*

**Richard W. Vorder Bruegge, PhD**  
Federal Bureau of Investigation  
Quantico, VA

*Pathology/Biology:*

**J.C. Upshaw Downs, MD**  
GBI Medical Examiner's Office  
Savannah, GA

*Engineering Sciences:*

**Roy Crawford, BSME**  
RR Crawford Engineering, Inc.  
Whitesburg, KY

*Psychiatry & Behavioral Science:*

**Christopher R. Thompson, MD**  
Los Angeles, CA

*General:*

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

*Questioned Documents:*

**Sandra L. Miller, BS**  
Pennsylvania State Police  
Harrisburg, PA

*Toxicology:*

**Philip M. Kemp, PhD**  
Bioaeronautical Research Laboratory  
Oklahoma City, OK

# INTERDISCIPLINARY SYMPOSIUM



*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. Roper-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

**Amanda R. Hale, MA**

North Carolina State University  
Raleigh, NC

*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

**Howard A. Schmidt, MS**

SAFECode  
Washington, DC

**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.



# INTERDISCIPLINARY SYMPOSIUM

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*Pre-Registration Required — \$75*

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

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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.

### **Howard A. Schmidt, MS**

#### *Keynote Presentation*

Dr. Howard Schmidt maintains a phenomenal career that spans many first-hand experiences of how technological advances can be transformational. He has been the Chief Information Security Officer for not one but two Fortune 500 companies — Microsoft® and eBay®, as well as serving as a Cyber Advisor to the White House (George W. Bush and Obama administrations) for 31 years of public service in local and federal governments before his retirement in 2012. He presently is a partner of a prestigious cybersecurity consulting firm, Ridge Schmidt Cyber LLC. Dr. Schmidt will lead a “fireside chat” with Interdisciplinary Symposium attendees to share his unique experiences of commercial research and development in the 1990s and early 2000s; governmental issues and policies for cyber security, including noteworthy happenings less known to the public; winning strategies for technology adoption and implementation; and technology of the future based on his four decades of leadership in technology and cyber security advancement.

### **Nancy Rodriguez, PhD**

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.

# INTERDISCIPLINARY SYMPOSIUM



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*Pre-Registration Required — \$75*

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

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### **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.

### **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.



# INTERDISCIPLINARY SYMPOSIUM

*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 <i>Jeri D. Roper-Miller, PhD</i>
8:35 a.m.	-	9:05 a.m.	Keynote Presentation <i>Howard A. Schmidt, MS</i>
9:05 a.m.	-	9:25 a.m.	Strengthening Forensic Science at the National Institute of Justice <i>Nancy Rodriguez, PhD</i>
9:25 a.m.	-	9:45 a.m.	Transformation of Academic Forensic Science From Knowledge Creators and Disseminators to Catalysts of Innovation, Entrepreneurship, and Economic Development <i>Kenneth G. Furton, PhD</i>
9:45 a.m.	-	10:05 a.m.	Why Judges Fear Technology <i>Jed S. Rakoff, JD</i>
10:05 a.m.	-	10:15 a.m.	Panel Discussion <i>Jeri D. Roper-Miller, PhD; Howard A. Schmidt, MS; Nancy Rodriguez, PhD; Kenneth G. Furton, PhD; Jed S. Rakoff, JD</i>
10:15 a.m.	-	10:45 a.m.	Break
10:45 a.m.	-	11:05 a.m.	A Forensic Laboratory Management Perspective <i>John M. Collins, Jr., MA</i>
11:05 a.m.	-	11:25 a.m.	Quality Assurance Considerations for Next Generation Sequencing <i>Richard A. Guerrieri, MS</i>
11:25 a.m.	-	11:45 a.m.	Transforming the Practice of Forensic Pathology: Advanced Radiologic Imaging Technology <i>Kurt B. Nolte, MD</i>
11:45 a.m.	-	11:55 a.m.	YFSF Young Forensic Scientists — Exploring the Technology That Can Be Used in Drug Chemistry <i>Christina G. Hayes, BS</i>
11:55 a.m.	-	12:05 p.m.	YFSF Young Forensic Scientists — Digital Imaging in Forensic Anthropology: Exploration of Existing Techniques <i>Amanda R. Hale, MA</i>
12:05 p.m.	-	12:25 p.m.	Digital and Multimedia Services <i>Zeno J. Geradts, PhD</i>
12:25 p.m.	-	12:45 p.m.	Panel Discussion <i>Jeri D. Roper-Miller, PhD; John M. Collins, Jr., MA; Richard A. Guerrieri, MS; Kurt B. Nolte, MD; Christina G. Hayes, BS; Amanda R. Hale, MA; Zeno J. Geradts, PhD</i>

# 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

*Program Co-Chair:*

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

*BYOS Chair:*

**Betzaida L. Maldonado, BS**  
Atlanta, GA

*YFSF Poster Session Chair:*

**Alicja K. Lanfear, PhD**  
Middle Tennessee State University  
Murfreesboro, TN

*Breakfast Chair:*

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

*Long Term Planning Committee Representative:*

**Lindsey E. Saunders, BS**  
Washington, DC

*Financial Support Liaison Chair:*

**Lindsay Saylor**  
Chicago, IL

**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.





# YOUNG FORENSIC SCIENTISTS FORUM

*Pre-Registration Required — \$100*

## S2 Viva La Forensics (continued)

### *Speakers*

<b>Joseph Almog, PhD</b> Hebrew University Casali Inst of Applied Chem Jerusalem, ISRAEL	<b>Gary M. Berman, DDS</b> Belleville, MI
<b>Helmut G. Brosz, BASc, PEng</b> Brosz Forensic Services Markham, ON CANADA	<b>Joan A. Bytheway, PhD</b> Sam Houston State University College of Criminal Justice Huntsville, TX
<b>Federica Collini, MD</b> Milan, ITALY	<b>Kelsey A. Carpenter, BS</b> Howell, MI
<b>Cheryl D. Hunter</b> AAFS Staff Colorado Springs, CO	<b>J.C. Upshaw Downs, MD</b> GBI ME Savannah, GA
<b>Raymond G. Miller, DDS</b> Buffalo, NY	<b>Nikolas P. Lemos, PhD</b> OCME, Forensic Lab Division Hall of Justice, North Terrace San Francisco, CA
<b>John Nixon, CEng, MBA</b> ARC Bippus, IN	<b>Linton Mohammed, PhD</b> Forensic Science Consultants, Inc Burlingame, CA
<b>Noelle J. Umback, PhD</b> OCME Dept of Forensic Biology New York, NY	<b>Claire E. Shepard, MS</b> La Delta Community College Monroe, LA
	<b>John A. Williams, PhD</b> 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 <i>Lara Frame-Newell, MA</i>
8:45 a.m.	-	9:00 a.m.	AAFS Membership <i>Cheryl D. Hunter</i>
9:00 a.m.	-	9:15 a.m.	Dental Identification Seals the Case <i>Raymond G. Miller, DDS</i>

# YOUNG FORENSIC SCIENTISTS FORUM



*Pre-Registration Required — \$100*

## S2 Viva La Forensics (continued)

### Program cont.

9:15 a.m. - 9:30 a.m.	Human Bitemark Document and Analysis in a Child Abuse Case <i>Gary M. Berman, DDS</i>
9:30 a.m. - 10:00 a.m.	Markers of Occupational Stress and Skeletal Identification: A Missing Person Case Study <i>John A. Williams, PhD</i>
10:00 a.m. - 10:20 a.m.	Developments in Detecting Recent Holding of Firearms <i>Joseph Almog, PhD</i>
10:20 a.m. - 10:35 a.m.	Break
10:35 a.m. - 11:00 a.m.	The Contribution of Taphonomic Research to Forensic Casework <i>Joan A. Bytheway, PhD</i>
11:00 a.m. - 11:30 a.m.	David Tarloff: A Case Study at the Intersection of Criminalistics, Psychiatry, and the Legal System <i>Noelle J. Umback, PhD</i>
11:30 a.m. - 11:45 a.m.	Electrical Homicide or...? <i>Helmut G. Brosz, BASc, PEng</i>
11:45 a.m. - 12:00 p.m.	Accident or Lovers' Quarrel? <i>John Nixon, CEng, MBA</i>
12:00 p.m. - 1:30 p.m.	Lunch
1:30 p.m. - 2:00 p.m.	Document Examination — Not Just Handwriting <i>Linton Mohammed, PhD</i>
2:00 p.m. - 2:30 p.m.	Prosecutorial Evidence <i>Alan A. Price, MA</i>
2:30 p.m. - 3:00 p.m.	Terror on Kensington Avenue <i>Ja'Neisha Hutley, MS</i>
3:00 p.m. - 3:15 p.m.	Paternal Filicide for Spousal Revenge: The Male Side of Medea's Syndrome in the Italian Population Over the Last Ten Years <i>Federica Collini, MD</i>
3:15 p.m. - 3:30 p.m.	Break
3:30 p.m. - 4:00 p.m.	Nail Them With Good Forensics: The Use of Alternative Biological Specimens in Forensic Toxicology <i>Nikolas P. Lemos, PhD</i>
4:00 p.m. - 4:30 p.m.	Forensic Pathology — The Medicine of Forensic Science and the Science of Forensic Medicine <i>J.C. Upshaw Downs, MD</i>
4:30 p.m. - 4:55 p.m.	Police Officer Retaliation, or Not? <i>Claire E. Shepard, MS</i>





# YOUNG FORENSIC SCIENTISTS FORUM

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*Pre-Registration Required — \$100*

## S2 Viva La Forensics (continued)

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### Program cont.

4:55 p.m. - 5:00 p.m.	Closing Remarks <i>Sarah J. Ellis, MS; Amanda R. Hale, MA</i>
7:00 p.m. - 8:00 p.m.	YFSF Poster Session

## Wednesday

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

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### 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.

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### *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 <i>Christina G. Hayes, BS; Kelsey A. Carpenter, BS</i>
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 <i>Matthew R. Wood, MS</i>
9:00 a.m. - 9:30 a.m.	Module 2: Overview of FEPAC Process, Policies, and Procedures <i>Daniel E. Katz, MFS</i>
9:30 a.m. - 10:00 a.m.	Module 3: Review of Undergraduate Standards <i>Tracey Dawson Cruz, PhD</i>
10:00 a.m. - 10:15 a.m.	Break
10:15 a.m. - 10:45 a.m.	Module 4: Review of Graduate Standards <i>Tracey Dawson Cruz, PhD</i>



## FEPAC SESSION

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*Pre-Registration Not Required — Open to all Meeting Attendees*

### **Accreditation of Forensic Science Academic Programs Through the AAFS Forensic Science Education Programs Commission (continued)**

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**Program cont.**

10:45 a.m. - 11:15 p.m.	Module 5: Questions and Answers <i>Matthew R. Wood, MS; Daniel E. Katz, MFS; Tracey Dawson Cruz, PhD</i>
11:15 p.m. - 11:45 a.m.	Module 6: The Role of the On-Site Evaluator <i>Daniel E. Katz, MFS</i>
11:45 a.m. - 12:15 p.m.	Module 7: Scenario and Evaluation <i>Matthew R. Wood, MS; Daniel E. Katz, MFS; Tracey Dawson Cruz, PhD</i>
12:15 p.m. - 12:45 p.m.	Questions and Answers <i>FEPAC Commissioners and Director of Accreditation</i>

# EVENING SESSION



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*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.**

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### *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



## EVENING SESSION

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*Pre-Registration Not Required — Open to all Meeting Attendees*

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

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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-PLENARY — OPEN FORUM



*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

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*Pre-Registration Not Required — Open to all Meeting Attendees*

**Wednesday**

February 24 — 9:00 a.m. - 11:00 a.m.

2.0 CE Hours

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### *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

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*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

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# PLENARY SESSION



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*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)**

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### *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



## PLENARY SESSION

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*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)**

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#### **Overview:**

In 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 <i>AAFS President Victor W. Weedn, MD, JD</i>
9:05 a.m.	-	9:25 a.m.	The Department of Justice's (DOJ's) Role in Strengthening Forensic Science <i>Sally Quillian Yates, JD</i>
9:25 a.m.	-	9:45 a.m.	Reconnecting Forensic Science in the Netherlands <i>Reinout Woittiez, PhD</i>
9:45 a.m.	-	10:05 a.m.	Moving Forward in Forensic Science: The Role of Quality Standards <i>Gillian Tully, PhD</i>
10:05 a.m.	-	10:25 a.m.	Forensic Science: Specialization vs. Generalization <i>Alastair Ross, AM</i>
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 <i>Willie E. May, PhD</i>
10:45 a.m.	-	11:00 a.m.	Panel Discussion <i>Victor W. Weedn, MD, JD; Willie E. May, PhD; Alastair Ross, AM; Gillian Tully, PhD; Reinout Woittiez, PhD; Sally Quillian Yates, JD</i>

# BREAKFAST SEMINARS



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*Pre-Registration Required — \$50*

## Monday

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

February 22 — 7:00 a.m. - 8:30 a.m.

.75 CE Hour

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*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



## BREAKFAST SEMINARS

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*Pre-Registration Required — \$50*

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

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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 trail 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



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*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



## BREAKFAST SEMINARS

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*Pre-Registration Required — \$50*

### **#2    Death From a Distance: The Etiology of Serial Sniper Homicides (continued)**

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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.

# BREAKFAST SEMINARS



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*Pre-Registration Required — \$50*

**Wednesday**

## **#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**

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*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:*

**Mark D. Stolorow, MS, MBA**  
NIST Special Programs Office  
Organization of Scientific Area Committees  
Gaithersburg, MD

*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





## BREAKFAST SEMINARS

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*Pre-Registration Required — \$50*

### **#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)**

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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.

# BREAKFAST SEMINARS



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*Pre-Registration Required — \$50*

**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**

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*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. 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.



## BREAKFAST SEMINARS

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*Pre-Registration Required — \$50*

### 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

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*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.

# BREAKFAST SEMINARS



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*Pre-Registration Required — \$50*

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

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“...[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...”<sup>1</sup>

**Reference:**

<sup>1</sup>. (*Back to the Future, Part III*) <http://www.imdb.com/title/tt0099088/quotes>



## BREAKFAST SEMINARS

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*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

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*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



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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

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*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.<sup>1</sup> The virtual measurements were collected from various bones within the torso including the humerii, 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.

# LUNCHEON SEMINARS



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*Pre-Registration Required — \$55*

## **#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)**

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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:**

<sup>1</sup> Reynolds, Mikaela S. (2014) *Stature estimation of a contemporary Australian sub-population: an evaluation of the Trotter and Gleser method using computed tomography of the femur*. Masters by Research thesis, Queensland University of Technology.



## WORKSHOPS

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*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**

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**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? <i>John M. Butler, PhD</i>
9:15 a.m. - 9:45 a.m.	Free Forensic Science Information Resources for the Practitioner <i>Jeff Teitelbaum, MS</i>
9:45 a.m. - 10:15 a.m.	Tools for Searching and Analyzing Forensic Science Literature <i>Susan Makar, MA; Amanda Malanowski, BS</i>
10:15 a.m. - 10:30 a.m.	Break

# WORKSHOPS



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*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)

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### Program cont.:

10:30 a.m. - 11:10 a.m.	Case Examples <i>Jeff Teitelbaum, MS; Susan Makar, MA</i>
11:10 a.m. - 11:40 a.m.	ForSciPub: A Vision for the Future of Forensic Science Literature <i>Melissa K. Taylor, BA</i>
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) <i>John M. Butler, PhD</i>
11:50 a.m. - 12:00 p.m.	Discussion <i>John M. Butler, PhD; Jeff Teitelbaum, MS; Susan Makar, MA; Amanda Malanowski, BS; Melissa K. Taylor, BA</i>

**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

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*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**

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**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. Schwoppe, 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 <i>Sherri L. Kacinko, PhD</i>
8:35 a.m.	-	9:10 a.m.	Options for Screening by MS <i>Jason E. Schaff, PhD</i>
9:10 a.m.	-	9:45 a.m.	Use of Multiplexing and Alternative Sample Preparation Techniques for High Throughput Toxicological Screening <i>Jillian K. Yeakel, MS</i>

# WORKSHOPS



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*Pre-Registration Required — \$100*

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

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### **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 <i>David M. Schwoppe, PhD</i>
10:20 a.m. - 10:50 a.m.	Break
10:50 a.m. - 11:25 a.m.	Fieldable MS in Forensic Chemistry and Toxicology <i>Kenyon M. Evans-Nguyen, PhD</i>
11:25 a.m. - 12:00 p.m.	Beyond Quadrupole Time-of-Flight (Q-TOF) and Tandem Mass Spectrometry (MS/MS): Next Generation MS Techniques for Forensic Analysis <i>Adam B. Hall, PhD</i>

**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





## WORKSHOPS

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*Pre-Registration Required — \$100*

### #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**

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**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:*

**Keith Pinckard, MD, PhD**

Travis County Medical Examiner’s Office  
Austin, TX

*Co-Chair:*

**Sam W. Andrews, MD**

Travis County Medical Examiner’s Office  
Austin, TX

*Faculty:*

**Evan Matshes, MD**

Academic Forensic Pathology, Inc  
Calgary, AB, CANADA

**Vivian Snyder, DO**

Evanston, IL

**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” <i>Keith Pinckard, MD, PhD</i>
9:00 a.m.	-	9:30 a.m.	Fundamental Imaging Techniques: Radiography, PMCT, and PMMR <i>Evan Matshes, MD; Sam W. Andrews, MD; Vivian Snyder, DO</i>
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) <i>Evan Matshes, MD; Sam W. Andrews, MD; Vivian Snyder, DO</i>
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 <i>Evan Matshes, MD</i>

# WORKSHOPS



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*Pre-Registration Required — \$100*

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

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### **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



## WORKSHOPS

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*Pre-Registration Required — \$100*

### #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

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**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:*

**Abigail 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 <i>Christopher J. Plourd, JD</i>
8:35 a.m.	-	9:20 a.m.	What is Cloud Computing and How Does it Work? <i>Mary F. Horvath, MFS; Josiah Dykstra, PhD</i>
9:20 a.m.	-	10:05 a.m.	Forensic Collection of Cloud-Based Evidence <i>Mary F. Horvath, MFS; Andrew Neal, MS</i>
10:05 a.m.	-	10:25 a.m.	Break

# WORKSHOPS



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*Pre-Registration Required — \$100*

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

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### Program cont.:

10:25 a.m. - 11:10 a.m.	Legal Process, Foundations, and Admission of Cloud-Based Evidence <i>Henry R. Reeve, JD; Abigail Abraham, JD</i>
11:10 a.m. - 11:45 a.m.	Forensic Science as a Consumer of Cloud Services — Security and Privacy Issues <i>Mark Pollitt, PhD</i>
11:45 a.m. - 12:30 p.m.	Panel Discussion <i>Mark Pollitt, PhD; Christopher J. Plourd, JD; Abigail Abraham, JD; Josiah Dykstra, PhD; Mary F. Horvath, MFS; Andrew Neal, MS; Henry R. Reeve, JD</i>

**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



## WORKSHOPS

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*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

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**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

**John Fudenberg, MBA**  
Las Vegas, NV

**Frank DePaolo, BS**  
New York City OCME  
New York, NY

**Edward E. Herschaft, DDS**  
UNLV School of Dental Medicine  
Las Vegas, NV

**Davin Faulkner, DMD**  
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 functionality 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 <i>Frank DePaolo, BS</i>
8:45 a.m.	-	9:00 a.m.	Multi-State Deployment <i>John Fudenberg, MBA</i>
9:00 a.m.	-	9:30 a.m.	UVIS/UDIM Theory and Features <i>Kenneth W. Aschheim, DDS</i>

# WORKSHOPS



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*Pre-Registration Required — \$150*

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

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### Program cont.:

9:30 a.m. - 10:30 a.m.	Hands-On Computer Workshop <i>Kenneth W. Aschheim, DDS; Naeem Ullah, BS; Lawrence A. Dobrin, DMD; Edward E. Herschaft, DDS; John P. Demas, DDS; Davin Faulkner, DMD</i>
10:30 a.m. - 10:45 a.m.	Break
10:45 a.m. - 12:00 p.m.	Hands-On Computer Workshop <i>Kenneth W. Aschheim, DDS; Naeem Ullah, BS; Lawrence A. Dobrin, DMD; Edward E. Herschaft, DDS; John P. Demas, DDS; Davin Faulkner, DMD</i>
12:00 p.m. - 12:30 p.m.	Panel Questions and Answers <i>Lawrence A. Dobrin, DMD</i>

**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

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***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**

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**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:*

**Thomas W. Vastrick, BS**  
Apopka, FL

*Co-Chair:*

**Ellen M. Schuetzner, BA**  
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 <i>Ellen M. Schuetzner, BA</i>
9:30 a.m. - 10:30 a.m.	Population Sampling and Quantitative Analyses of Factors That Affect Handwriting <i>Thomas W. Vastrick, BS; Mark E. Johnson, PhD</i>
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 <i>Thomas W. Vastrick, BS; Mark E. Johnson, PhD</i>
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 <i>Thomas W. Vastrick, BS; Mark E. Johnson, PhD</i>
2:00 p.m. - 3:00 p.m.	Case Use and Query Reporting Casework Exercises: Part I <i>Thomas W. Vastrick, BS; Ellen M. Schuetzner, BA</i>
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 <i>Thomas W. Vastrick, BS; Ellen M. Schuetzner, BA</i>



# WORKSHOPS



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*Pre-Registration Required — \$250*

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

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### 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.*



## WORKSHOPS

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*Pre-Registration Required — \$200*

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

**Monday, February 22, 2016**

**8:30 a.m. - 4:45 p.m.**

**6.0 CE Hours**

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**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:**

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

# WORKSHOPS



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*Pre-Registration Required — \$200*

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

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### Program cont.:

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

**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. Umbach, 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 <i>Anjali A. Ranadive, JD</i>
8:45 a.m.	-	9:15 a.m.	Crime Scene <i>Mary B. Collins-Morton, MS</i>
9:15 a.m.	-	10:15 a.m.	Forensic Pathology <i>Edward Mazuchowski II, MD, PhD</i>
10:15 a.m.	-	10:30 a.m.	Break

# WORKSHOPS



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*Pre-Registration Required — \$200*

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

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### Program cont.:

10:30 a.m. - 11:00 a.m.	Identification Odontology <i>Robert E. Barsley, DDS, JD</i>
11:00 a.m. - 12:00 p.m.	Identification DNA <i>Noelle J. Umbach, PhD</i>
12:00 p.m. - 1:30 p.m.	Lunch
1:30 p.m. - 2:00 p.m.	Management/Policy Preparedness <i>Dean M. Gialamas, MS</i>
2:00 p.m. - 3:30 p.m.	Panel Discussion <i>Anjali A. Ranadive, JD; Robert E. Barsley, DDS, JD; Noelle J. Umbach, PhD; Dean M. Gialamas, MS; Edward Mazuchowski II, MD, PhD; Mary B. Collins-Morton, MS</i>
3:30 p.m. - 3:45 p.m.	Break
3:45 p.m. - 4:45 p.m.	Panel Discussion Continued <i>Anjali A. Ranadive, JD; Robert E. Barsley, DDS, JD; Noelle J. Umbach, PhD; Dean M. Gialamas, MS; Edward Mazuchowski II, MD, PhD; Mary B. Collins-Morton, MS</i>
4:45 p.m. - 5:00 p.m.	Closing Remarks <i>Anjali A. Ranadive, JD</i>

**Targeted Audience:** All Disciplines

**Knowledge Level Required:** Intermediate (some knowledge)

**Expected Handout Length:** 100 Pages

*Proceeds from this workshop will benefit the Forensic Sciences Foundation, Inc.*





## WORKSHOPS

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*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

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**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, DCrim**  
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 <i>Rebecca E. Bucht, PhD; Patrick Buzzini, PhD</i>
8:45 a.m.	-	9:45 a.m.	The Evolution of Forensic Science — The First Ten Thousand Years <i>Douglas M. Lucas, DSc</i>
9:45 a.m.	-	10:45 a.m.	The Unfettered Criminalist <i>Peter R. De Forest, DCrim</i>
10:45 a.m.	-	11:00 a.m.	Break

# WORKSHOPS



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*Pre-Registration Required — \$200*

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

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### Program cont.:

11:00 a.m. - 12:00 p.m.	Rewarding “A” While Hoping for “B” <i>Sheila Willis, PhD</i>
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 <i>Alastair M. Ross, AM</i>
2:30 p.m. - 2:45 p.m.	Break
2:45 p.m. - 3:45 p.m.	Forensic Science: Where From, Where To? <i>Pierre A. J-L. Margot, PhD</i>
3:45 p.m. - 4:45 p.m.	Practical Exercise
4:45 p.m. - 5:00 p.m.	Closing Remarks <i>Rebecca E. Bucht, PhD; Patrick Buzzini, PhD</i>

**Targeted Audience:** Criminalistics, General, Jurisprudence

**Knowledge Level Required:** Intermediate (some knowledge)

**Expected Handout Length:** 75 Pages

**Restricted Audience Size:** 80





## WORKSHOPS

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*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**

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**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**  
Practical Homicide Investigation  
Marco Island, FL

*Co-Chair:*

**Barbara C. Wolf, MD**  
District 5 MEO  
Leesburg, FL

*Faculty:*

**Thomas C. McAndrew, BA**  
Pennsylvania State Police  
Orefield, PA

**Andrea Zaferes, BA**  
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 <i>Vernon J. Geberth, MS, MPS</i>
10:00 a.m. - 10:30 a.m.	Break
10:30 a.m. - 12:00 p.m.	Medicolegal Evaluation of Child Abuse and Homicides <i>Barbara C. Wolf, MD</i>
12:00 p.m. - 1:15 p.m.	Lunch
1:15 p.m. - 3:00 p.m.	Case Histories of Juveniles Who Commit Murder <i>Thomas C. McAndrew, BA</i>
3:00 p.m. - 3:30 p.m.	Break

# WORKSHOPS



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*Pre-Registration Required — \$200*

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

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**Program cont.:**

3:30 p.m. - 4:45 p.m.	Aquatic Death Investigation — Child Abuse and Homicide <i>Andrea Zaferes, BA</i>
4:45 p.m. - 5:00 p.m.	Discussion <i>Vernon J. Geberth, MS, MPS; Barbara C. Wolf, MD; Thomas C. McAndrew, BA; Andrea Zaferes, BA</i>

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

**Knowledge Level Required:** Intermediate (some knowledge)

**Expected Handout Length:** 150 Pages

**Restricted Audience Size:** 125



## WORKSHOPS

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**Pre-Registration Required — \$100**

### **#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**

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**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:*

**Chris Milroy, MD, LLB**  
Ottawa Hospital  
Ottawa, ON, CANADA

*Co-Chair:*

**Jacqueline L. Parai, MD**  
Ottawa Hospital  
Division of Anatomical Pathology  
Ottawa, ON, CANADA

*Faculty:*

**Michael Cavilla, BA**  
Calgary Police Service  
Major Crimes Section  
Calgary, AB, CANADA

**Evan Matshes, MD**  
Academic Forensic Pathology, Inc.  
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 <i>Evan Matshes, MD</i>
2:30 p.m.	-	2:45 p.m.	Open Discussion <i>Evan Matshes, MD; Michael Cavilla, BA; Chris Milroy, MD, LLB; Jacqueline L. Parai, MD</i>
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 <i>Michael Cavilla, BA; Chris Milroy, MD, LLB</i>
4:45 p.m.	-	5:00 p.m.	Open Discussion <i>Evan Matshes, MD; Michael Cavilla, BA; Chris Milroy, MD, LLB; Jacqueline L. Parai, MD</i>

# WORKSHOPS



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*Pre-Registration Required — \$100*

**#11 Child Homicides: The Critical Role of Interdisciplinary Expert Collaboration  
(continued)**

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

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

**Expected Handout Length:** 70 Pages



## WORKSHOPS

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*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

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**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**

RTI International

Research Triangle Park, NC

*Co-Chair:*

**Jeri D. Roper-Miller, PhD**

RTI International

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 <i>Jeri D. Roper-Miller, PhD</i>
1:10 p.m.	-	1:40 p.m.	Discussion of Documentation Philosophy <i>Heidi Eldridge, MS</i>
1:40 p.m.	-	2:30 p.m.	Exercise One — Gut-Reaction Categorizations of Latent Difficulty <i>Heidi Eldridge, MS</i>
2:30 p.m.	-	3:00 p.m.	Visual Training on Attribute Terminology <i>Heidi Eldridge, MS</i>
3:00 p.m.	-	3:15 p.m.	Break
3:15 p.m.	-	4:15 p.m.	Exercise Two — Scoring Latents Based on Attributes <i>Heidi Eldridge, MS</i>
4:15 p.m.	-	4:45 p.m.	Round-Table Discussion <i>Heidi Eldridge, MS</i>

# WORKSHOPS



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*Pre-Registration Required — \$125*

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

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### **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



## WORKSHOPS

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*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**

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**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:*

**Michelle R. Peace, PhD**

Virginia Commonwealth University  
Richmond, VA

*Co-Chair:*

**Justin L. Poklis, BS**

Virginia Commonwealth University  
Dept of Pharmacology & Toxicology  
Richmond, VA

*Faculty:*

**Richard N. Dalby, PhD**

University of Maryland  
School of Pharmacy  
Baltimore, MD

**Matthew R. Wood, MS**

Ocean County Sheriff's Dept  
Forensic Science Laboratory  
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 <i>Michelle R. Peace, PhD</i>
1:45 p.m.	-	2:30 p.m.	Basic Mechanism and Efficacy of Aerosols in Drug Delivery <i>Richard N. Dalby, PhD</i>
2:30 p.m.	-	3:15 p.m.	The E-Cig Evolution, Use, and Operation <i>Michelle R. Peace, PhD</i>



# WORKSHOPS



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*Pre-Registration Required — \$125*

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

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### **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 <i>Justin L. Poklis, BS</i>
4:30 p.m.	-	5:00 p.m.	Case Examples <i>Matthew R. Wood, MS, Adam Polhemus, BA</i>

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

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

**Expected Handout Length:** 60 Pages



## WORKSHOPS

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***Pre-Registration Required — \$150***

### **#15 Addressing Damaged Mobile Devices for Data Acquisition**

**Monday, February 22, 2016**

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

**3.0 CE Hours**

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**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:**

1:30 p.m. - 1:50 p.m.	Introduce the Damaged Devices Program <i>Steven B. Watson, BA</i>
1:50 p.m. - 2:10 p.m.	Damage Areas Covered by Research <i>Steven B. Watson, BA</i>
2:10 p.m. - 2:30 p.m.	Damage Factors Affecting the Ability to Retrieve Data <i>Steven B. Watson, BA</i>
2:30 p.m. - 2:50 p.m.	Outline the Planned Hands-On Workshop Activity <i>Steven B. Watson, BA</i>
2:50 p.m. - 3:20 p.m.	Break

# WORKSHOPS



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*Pre-Registration Required — \$150*

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

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### Program cont.:

3:20 p.m. - 3:40 p.m.	Device Assessment <i>Steven B. Watson, BA; Samuel I. Brothers, BBA</i>
3:40 p.m. - 4:00 p.m.	Documentation and Chain of Custody <i>Steven B. Watson, BA; Samuel I. Brothers, BBA</i>
4:00 PM - 4:20 p.m.	Device Disassembly <i>Steven B. Watson, BA; Samuel I. Brothers, BBA</i>
4:20 p.m. - 4:40 p.m.	Device Assembly Using Donor Phone <i>Steven B. Watson, BA; Samuel I. Brothers, BBA</i>
4:40 p.m. - 5:00 p.m.	Prepping Phone for Connection to Acquisition Tools <i>Steven B. Watson, BA; Samuel I. Brothers, BBA</i>

**Targeted Audience:** Digital & Multimedia Sciences

**Knowledge Level Required:** Intermediate (some knowledge)

**Expected Handout Length:** 80 pages

**Restricted Audience Size:** 40

**Supported by:** VTO, Inc.



## WORKSHOPS

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*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

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**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*

# WORKSHOPS



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*Pre-Registration Required — \$100*

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

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### Program cont.:

9:05 a.m.	-	9:25 a.m.	Publications and Documents Relating to Humanitarian and Human Rights Forensic Science <i>Marilyn A. Huestis, PhD</i>
9:25 a.m.	-	9:45 a.m.	Laboratory and Analysis Protocols (LAP) Subcommittee: Scope and Resources <i>Sabra R. Botch-Jones, MS, MA</i>
9:45 a.m.	-	10:05 a.m.	Integrating Humanitarian and Human Rights Into Forensic Science Education <i>Dawn M. Mulhern, PhD</i>
10:05 a.m.	-	10:20 a.m.	Break
10:20 a.m.	-	10:40 a.m.	Issues and Applications in Latin America <i>Luis Fondebrider, PhD</i>
10:40 a.m.	-	11:00 a.m.	Capacity Development in Forensic Medicine in Low- and Middle-Income Countries <i>Michael S. Pollanen, MD</i>
11:00 a.m.	-	11:20 a.m.	The Istanbul Protocol and the Forensic Investigation and Documentation of Torture and Ill-Treatment <i>Duarte Nuno Vieira, MSc, PhD, MD</i>
11:20 a.m.	-	11:40 a.m.	Humanitarian Forensic Science in the Asia Pacific — Recent Developments and Challenges <i>S. Cordner, MB</i>
11:40 a.m.	-	12:00 p.m.	Summary and Discussion <i>Douglas H. Ubelaker, PhD</i>

**Targeted Audience:** All Disciplines

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

**Expected Handout Length:** 80 Pages



## WORKSHOPS

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*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

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**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 <i>Patrick E. Lantz, MD</i>
8:50 a.m. - 9:10 a.m.	Introductory PMIO <i>Candace H. Schoppe, MD</i>
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 <i>Patrick E. Lantz, MD; Candace H. Schoppe, MD</i>
11:20 a.m. - 11:30 a.m.	Break
11:30 a.m. - 12:00 p.m.	Assessment of Skills and Evaluation <i>Patrick E. Lantz, MD; Candace H. Schoppe, MD</i>

**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:*

**Gerald J. Conlogue, MHS**  
Quinnipiac University  
Diagnostic Imaging Program  
Hamden, CT

*Co-Chair:*

**Mark D. Viner, MSc**  
Cranfield Forensic Institute  
Defence Academy of the UK  
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 <i>Gerald J. Conlogue, MHS</i>
9:00 a.m.	-	9:30 a.m.	Organization and Resourcing <i>Mark D. Viner, MSc</i>
9:30 a.m.	-	10:30 a.m.	Image Optimization — Film <i>Gerald J. Conlogue, MHS</i>
10:30 a.m.	-	10:45 a.m.	Break
10:45 a.m.	-	11:30 a.m.	Image Optimization — Digital Recording Media <i>Mark D. Viner, MSc</i>
11:30 a.m.	-	11:45 a.m.	Image Projections — Routine Cases <i>Gerald J. Conlogue, MHS</i>
11:45 a.m.	-	12:00 p.m.	Image Projections — Non-Routine Cases <i>Mark D. Viner, MSc</i>
12:00 p.m.	-	12:15 p.m.	Employing Ancillary Equipment <i>Gerald J. Conlogue, MHS</i>





## WORKSHOPS

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*Pre-Registration Required — \$100*

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

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

**Knowledge Level Required:** Intermediate (some knowledge)

**Expected Handout Length:** 40 Pages

# WORKSHOPS



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***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**

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**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**  
Cathy Tobin, PHR  
Seattle, WA

**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 <i>Nikolas P. Lemos, PhD</i>
8:45 a.m. - 9:15 a.m.	Historical Review of Diversity and Inclusion <i>Chinyere M. Williams, BS</i>
9:15 a.m. - 10:15 a.m.	Maximizing Diversity and Inclusion — Are You Inclusive? <i>Cathy Tobin</i>
10:15 a.m. - 10:30 a.m.	Break
10:30 a.m. - 11:15 a.m.	Overcoming Invisible Bias <i>Cathy Tobin</i>
11:15 a.m. - 12:15 p.m.	Diversifying Your Mind <i>Cathy Tobin</i>
12:15 p.m. - 12:30 p.m.	Questions and Answers <i>Nikolas P. Lemos, PhD; Daniel S. Isenschmid, PhD; Chinyere M. Williams, BS; Cathy Tobin</i>



## WORKSHOPS

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*Pre-Registration Required — \$100*

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

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**Targeted Audience:** All Disciplines

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

**Expected Handout Length:** 50 Pages

# WORKSHOPS



*Pre-Registration Required — \$100*

## #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*



## WORKSHOPS

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*Pre-Registration Required — \$100*

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

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**Program cont.:**

9:30 a.m. - 10:00 a.m.	Cyber Investigation of Malware <i>Katrin Franke, PhD</i>
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 <i>Gwyn Winfield, MA</i>
10:30 a.m. - 11:00 a.m.	Break
11:00 a.m. - 11:30 a.m.	Portable Field Instruments <i>Victor W. Weedn, MD, JD; Edward G. Bartick, PhD; Mehdi Moini, PhD</i>
11:30 a.m. - 12:00 p.m.	Integrated Forensic Platforms <i>Arian C. van Asten, PhD</i>
12:00 p.m. - 12:30 p.m.	Panel Drone Forensics <i>Zeno J. Geradts, PhD; Katrin Franke, PhD; Arian C. van Asten, PhD; Matthew Henshon, AB, JD</i>
12:30 p.m. - 1:00 p.m.	Closing Remarks and Discussion <i>Zeno J. Geradts, PhD</i>

**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

# WORKSHOPS



*Pre-Registration Required — \$200*

## #21 Crime Assessment: Solving Crime Beyond Profiling

Tuesday, February 23, 2016

8:30 a.m. - 5:00 p.m.

6.25 CE Hours

**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-Retaliatory 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*



## WORKSHOPS

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*Pre-Registration Required — \$200*

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

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**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? <i>Richard D. Walter, MA</i>
11:15 a.m. - 12:15 p.m.	The Sub-Types: A Brief Overview <i>Patrick Zirpoli; Amanda L. Farrell, PhD</i>
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 <i>Richard D. Walter, MA; Patrick Zirpoli</i>
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 <i>Richard D. Walter, MA; Patrick Zirpoli</i>
4:30 p.m. - 5:00 p.m.	Moderated Discussion & Questions and Answers <i>Lurena A. Huffman, BS</i>

**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



*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 <i>Kathryn C. Seigfried-Spellar, PhD</i>
8:45 a.m. - 10:00 a.m.	Do We Need a Code of Ethics? <i>James R. Dibble, BS; Michael M. Losavio, JD; Keith W. Miller, PhD; Marcus Rogers, PhD; Anthony Skjellum, PhD</i>
10:00 a.m. - 10:15 a.m.	Break
10:15 a.m. - 11:30 a.m.	Models of Professional Codes of Ethics <i>James R. Dibble, BS; Michael M. Losavio, JD; Keith W. Miller, PhD; Marcus Rogers, PhD; Anthony Skjellum, PhD</i>



## WORKSHOPS

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*Pre-Registration Required — \$200*

### #22 Developing a Professional Code of Ethics in Digital Forensics (continued)

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**Program cont.:**

11:30 a.m. - 12:00 p.m.	Morning Wrap-Up & Questions and Answers <i>Kathryn C. Seigfried-Spellar, PhD; Rhesa G. Gilliland, MS</i>
12:00 p.m. - 1:15 p.m.	Lunch
1:15 p.m. - 2:15 p.m.	Challenges to Developing a Code of Ethics <i>James R. Dibble, BS; Michael M. Losavio, JD; Keith W. Miller, PhD; Marcus Rogers, PhD; Anthony Skjellum, PhD</i>
2:15 p.m. - 3:30 p.m.	Identify Core Items/Language <i>James R. Dibble, BS; Michael M. Losavio, JD; Keith W. Miller, PhD; Marcus Rogers, PhD; Anthony Skjellum, PhD</i>
3:30 p.m. - 3:45 p.m.	Break
3:45 p.m. - 4:30 p.m.	Next Steps to Implementing a Code of Ethics? <i>James R. Dibble, BS; Michael M. Losavio, JD; Keith W. Miller, PhD; Marcus Rogers, PhD; Anthony Skjellum, PhD</i>
4:30 p.m. - 5:00 p.m.	Afternoon Wrap-Up & Questions and Answers <i>Kathryn C. Seigfried-Spellar, PhD; Rhesa G. Gilliland, MS</i>

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

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

**Expected Handout Length:** 20 Pages

# WORKSHOPS



*Pre-Registration Required — \$250*

## #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

**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



## WORKSHOPS

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*Pre-Registration Required — \$250*

### **#23 Considerations for Implementing Next Generation Sequencing (NGS) Technologies Into a Forensic Laboratory (continued)**

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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 <i>Kimberly S. Andreaggi, MFS</i>
8:35 a.m.	-	8:55 a.m.	Historical Perspective of Forensic DNA Typing <i>Peter M. Vallone, PhD</i>
8:55 a.m.	-	9:25 a.m.	Overview of NGS Technologies <i>Kimberly S. Andreaggi, MFS</i>
9:25 a.m.	-	9:35 a.m.	Quantitation Methods Used for NGS <i>Joseph D. Ring, MS</i>
9:35 a.m.	-	10:05 a.m.	Laboratory Considerations Before Implementing NGS <i>Timothy P. McMahon, PhD</i>
10:05 a.m.	-	10:20 a.m.	Break
10:20 a.m.	-	10:50 a.m.	Single Nucleotide Polymorphism (SNP) and STR Multiplexes for NGS <i>Katherine B. Gettings, PhD</i>
10:50 a.m.	-	11:20 a.m.	Preparation of Low-Quality Samples for NGS <i>Erin M. Gorden, MFS</i>
11:20 a.m.	-	11:50 a.m.	Development of a Custom Tool and Interpretation Thresholds for Mitochondrial DNA (mtDNA) NGS Data Analysis <i>Michelle A. Peck, BS</i>
11:50 a.m.	-	12:15 p.m.	Optimization of NGS Workflows in the Laboratory <i>Joseph D. Ring, MS</i>
12:15 p.m.	-	1:15 p.m.	Lunch
1:15 p.m.	-	1:35 p.m.	Characterization of Candidate Reference Materials by NGS <i>Peter M. Vallone, PhD</i>
1:35 p.m.	-	2:05 p.m.	Application of the Forensic Guidelines to NGS <i>Charla Marshall, PhD</i>

# WORKSHOPS



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*Pre-Registration Required — \$250*

## **#23 Considerations for Implementing Next Generation Sequencing (NGS) Technologies Into a Forensic Laboratory (continued)**

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### **Program cont.:**

2:05 p.m.	-	2:35 p.m.	A Developmental Validation of mtDNA Capture and Illumina® Sequencing for Severely Compromised Human DNA Samples <i>Jennifer L. Higginbotham, MFS</i>
2:35 p.m.	-	3:00 p.m.	Final Hurdles for Implementing NGS in a Forensic Laboratory <i>Christina M. Neal, MS</i>
3:00 p.m.	-	3:15 p.m.	Break
3:15 p.m.	-	3:45 p.m.	NGS: Battelle's Implementation Initiatives for Forensic DNA Analysis <i>Richard A. Guerrieri, MS</i>
3:45 p.m.	-	4:15 p.m.	NGS in Forensics: Why, When, and Where? <i>Walther Parson, PhD</i>
4:15 p.m.	-	4:45 p.m.	Application of NGS to the Medical Examiner's Mission <i>Alice Briones, DO</i>
4:45 p.m.	-	5:00 p.m.	Panel Discussion and Closing Remarks <i>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</i>

**Targeted Audience:** Criminalistics

**Knowledge Level Required:** Intermediate (some knowledge)

**Expected Handout Length:** 100 Pages



## WORKSHOPS

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**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**

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**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:*

**Amy Y. Carney, PhD**  
San Marcos, CA

*Co-Chair:*

**Stewart D. Ryckman, MD**  
Mansfield, OH

*Faculty:*

**Mark Carroll, BA**  
Summit County Sheriff's Office  
Akron, OH

**Debi Spencer, MFS**  
APO, AE

**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 <i>Amy Y. Carney, PhD</i>
1:30 p.m.	-	2:00 p.m.	Examples of EA <i>Debi Spencer, MFS; Stewart D. Ryckman, MD</i>
2:00 p.m.	-	2:30 p.m.	Skin Trauma: Mr. Bruise Meet Miss Contusion <i>Amy Y. Carney, PhD</i>
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 <i>Stewart D. Ryckman, MD</i>
3:15 p.m.	-	3:45 p.m.	Elder Abuse vs. Elder Neglect: How Do You Know? <i>Debi Spencer, MFS; Stewart D. Ryckman, MD</i>

# WORKSHOPS



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*Pre-Registration Required — \$100*

## **#24 Elder Abuse and Neglect: What's Happening to Grandma? (continued)**

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**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





**A.S.F.O**

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## **American Society of Forensic Odontology**

### **46<sup>th</sup> Annual Scientific Session**

Registration can be accomplished on the ASFO website at [www.asfo.org](http://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.**

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#### **Program:**

7:00 a.m.	-	8:00 a.m.	Registration and Breakfast
8:00 a.m.	-	8:20 a.m.	Welcome <i>Roger D. Metcalf, DDS, JD</i> President, American Society of Forensic Odontology
8:20 a.m.	-	8:30 a.m.	Program Introduction <i>David R. Senn, DDS</i> 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 <i>Mark Noah</i>
10:00 a.m.	-	10:15 a.m.	Break
10:15 a.m.	-	11:30 a.m.	Locating the Missing Servicemen <i>Mark Noah; Chester P. Walker, PhD</i>
11:30 a.m.	-	12:00 p.m.	Buster the Cadaver Dog <i>Paul Dostie</i>
12:00 p.m.	-	1:45 p.m.	Luncheon and Annual Business Meeting
1:45 p.m.	-	2:30 p.m.	Recovery of the Missing Servicemen <i>Kristen Baker, MA, RPA</i>
2:30 p.m.	-	3:15 p.m.	Anthropological Analysis Procedures and Summary <i>Kristen Baker, MA, RPA; Hillary R. Parsons, MA</i>
3:15 p.m.	-	3:30 p.m.	Break
3:30 p.m.	-	4:15 p.m.	Odontological Analysis Procedures and Summary <i>Corinne D'Anjou, DMD; James F. Goodrich, BDS</i>



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## Research, Recovery, Identification, and Repatriation: The Lost Graves of Tarawa

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### Program cont.:

4:15 p.m. - 5:00 p.m.	DNA Testing Procedures and Summary <i>Edwin F. Huffine, PhD</i>
5:00 p.m. - 5:30 p.m.	Family Perspective <i>Clay Bonnyman Evans</i>

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.



**N.A.M.E.**

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## **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](mailto:name@thename.org).

## **UUUggh! The Unexpected, Unexplained, and Often Undetermined**

### **Tuesday**

**February 23 — 12:55 p.m. – 5:15 p.m.**

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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 <i>David R. Fowler, MD</i>
1:00 p.m.	-	1:05 p.m.	Opening Remarks <i>Laura Crandall, MA</i>
1:05 p.m.	-	1:35 p.m.	Redefining SCD: Insights From the San Francisco POstmortem Systematic InvesTigation (POST) SCD Study <i>Zian Tseng, MD; Ellen Moffatt, MD</i>
1:35 p.m.	-	2:05 p.m.	The State of the Molecular Autopsy for Sudden Death in the Young <i>Michael Ackerman, MD, PhD</i>
2:05 p.m.	-	2:25 p.m.	SUDEP and SUDC: An Overview <i>Orrin Devinsky, MD</i>
2:25 p.m.	-	2:55 p.m.	When Life Support Fails — Insights Into the Mechanisms of Cardiorespiratory Collapse After Seizures <i>George Richerson, MD</i>
2:55 p.m.	-	3:20 p.m.	Cardiac Pathology (CP) and Neuropathology (NP) Investigations of Unexpected Death — The 2016 SDY Perspective <i>Jennifer L. Hammers, DO</i>
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 <i>Carrie Shapiro-Mendoza, PhD, MPH</i>
4:00 p.m. - 4:15 p.m.	CDC Vital Statistics: Review of ICD Codes on Sudden Deaths and the R99 Code — What Is the R99 Code Today? R99 Trends Among Age Groups Over Time <i>Robert Anderson, PhD</i>
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 <i>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</i>
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](mailto:name@thename.org) to receive a registration form.



**N.I.J.**

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## National Institute of Justice

### Forensic Science Research and Development Symposium

#### American Academy of Forensic Sciences 68<sup>th</sup> 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](http://www.forensicCOE.org).

### Tuesday

February 23 — 8:30 a.m. – 5:15 p.m.

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#### Program:

8:30 a.m. - 8:40 a.m.	Welcome and Opening Remarks <i>Gerald M. LaPorte, MSFS</i> Office of Investigative and Forensic Sciences
<b>Morning Session I — Impression, Pattern, and Trace Evidence</b>	
8:40 a.m. - 9:05 a.m.	Mobile, Automated Tool Mark Characterization/Comparison System <i>Scott Chumbley</i>
9:05 a.m. - 9:30 a.m.	ACEware™ Latent Fingerprint Identification Research and Software Development <i>Austin Hicklin</i>
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 <i>Brett J. Tipple, PhD</i>
9:55 a.m. - 10:10 a.m.	Break
<b>Morning Session II — Forensic Biology/DNA</b>	
10:10 a.m. - 10:35 a.m.	A Hybrid Machine-Learning Approach for DNA Mixture Interpretation <i>Michael Marciano, MS</i>
10:35 a.m. - 11:00 a.m.	Delivery of a Microfluidic Acoustic Sperm Cell Trapping Prototype for Rapid Processing of Sexual Assault Evidence <i>James P. Landers, PhD</i>
11:00 a.m. - 11:25 a.m.	Isolation of Sperm DNA Through Protamine Capture <i>Michael Gerdes</i>
11:25 a.m. - 11:35 a.m.	Break

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## Forensic Science Research and Development Symposium

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**Program cont.:**

11:35 a.m. - 12:00 p.m.	Robust Short Tandem Repeat (STR) Calling From High-Throughput Sequencing Technologies <i>Yaniv Erlich</i>
12:00 p.m. - 12:25 p.m.	Measuring Rates of Mitochondrial DNA (mtDNA) Heteroplasmy and Assessing Transmission of Variants <i>Mitchell M. Holland, PhD</i>
12:25 p.m. - 1:45 p.m.	Lunch
<b>Afternoon Session I — Anthropology and Microbial Forensics</b>	
1:45 p.m. - 2:10 p.m.	The Transformation of Data Collection Procedures for Forensic Skeletal Material: Evaluating Osteometric Data in Forensic Anthropology <i>Natalie R. Langley, PhD</i>
2:10 p.m. - 2:35 p.m.	A Multidisciplinary Validation Study of Non-Human Animal Models for Human Decomposition Research <i>Dawnie W. Steadman, PhD</i>
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 <i>Joan A. Bytheway, PhD</i>
3:00 p.m. - 3:25 p.m.	Postmortem Changes and Translocation of Bacterial Community Structure and Function for Use in Criminal Investigations <i>Heather R. Jordan, PhD</i>
3:25 p.m. - 3:35 p.m.	Break
<b>Afternoon Session II — Controlled Substances and Toxicology</b>	
3:35 p.m. - 4:00 p.m.	Dried Blood Spot Analysis as an Emerging Technology for Application in Forensic Toxicology <i>Nichole Bynum</i>
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 <i>Tyson R. Baird, MSFS</i>
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? <i>Ira S. Lurie, PhD</i>
4:50 p.m. - 5:15 p.m.	A New Approach to Drug Screening in Forensic Toxicology: Paper Spray Mass Spectrometry <i>Nicholas E. Manicke</i>





# AMERICAN ACADEMY OF FORENSIC SCIENCES

February 22-27

*Transformation:  
Embracing  
Change*

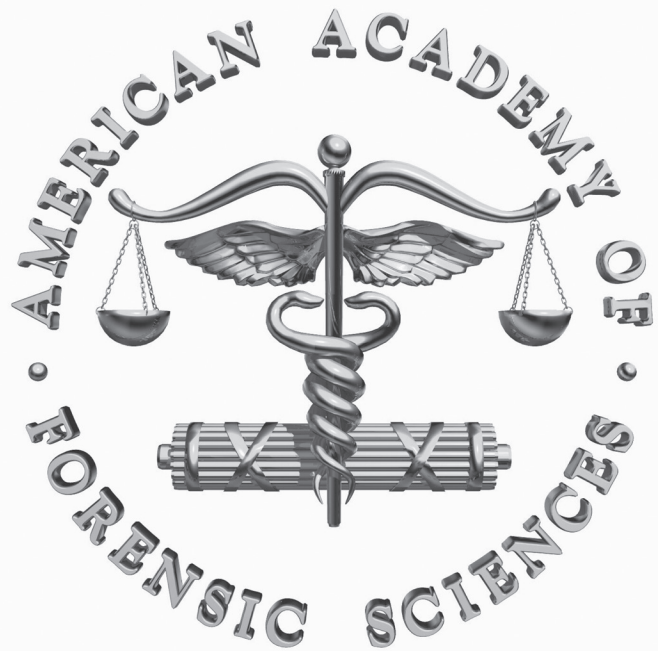
ADVANCE PROGRAM

*Las Vegas, Nevada*



th 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](http://www.aafs.org).



# ANTHROPOLOGY



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## Wednesday

### Poster Session

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|------------------------|------------|--|
| 11:30 a.m. - 1:00 p.m. | <b>A1</b>  | <b>Quantification of Radiologic Identification: Development of a Population Frequency Data Repository</b><br><i>Angi M. Christensen, PhD*</i> ; <i>Gary M. Hatch, MD*</i>  |
| 11:30 a.m. - 1:00 p.m. | <b>A2</b>  | <b>Systematic Bias in Estimating Body Mass of Korean Samples With the Morphometric Method of Ruff et al. (2005)</b><br><i>Yangseung Jeong, PhD*</i> ; <i>Eun Jin Woo, PhD</i>  |
| 11:30 a.m. - 1:00 p.m. | <b>A3</b>  | <b>A Two-Pronged Approach to the Identification of Deceased Unidentified Border Crossers in North Carolina: 3D-ID and Geochemical Analysis</b><br><i>Chelsey A. Juarez, PhD*</i> ; <i>Ann H. Ross, PhD*</i>  |
| 11:30 a.m. - 1:00 p.m. | <b>A4</b>  | <b>Commingle Among Disinterred Remains of Unknown United States Service Members From the Korean War</b><br><i>Mary S. Megyesi, PhD*</i> ; <i>Nicholas V. Passalacqua, PhD</i> ; <i>Popi Chrysostomou, MSc</i> ; <i>Michael R. Dolski, PhD</i>                                |
| 11:30 a.m. - 1:00 p.m. | <b>A5</b>  | <b>Death Along the United States/Mexico Border: A Comparative View of Policy and Practice in Arizona and Texas</b><br><i>Kate Spradley, PhD*</i> ; <i>Robin C. Reineke, PhD</i> ; <i>Mercedes Doretti</i> ; <i>Bruce E. Anderson, PhD</i>                                    |
| 11:30 a.m. - 1:00 p.m. | <b>A6</b>  | <b>Sex Determination Using Discriminant Analysis of Upper and Lower Extremity Bones: A New Approach Using the Volume and Surface Area of Digital Models</b><br><i>Dong-Ho Eddie Kim, BSc*</i> ; <i>U-Young Lee, MD</i> ; <i>In-Beom Kim, PhD</i> ; <i>Dai-Soon Kwak, PhD</i> |
| 11:30 a.m. - 1:00 p.m. | <b>A7</b>  | <b>3D Analysis of Computed Tomography (CT)-Derived Lumbar Spine Models for the Estimation of Sex</b><br><i>Robert Foley, MS</i> ; <i>Joshua M. Hazelton, BS</i> ; <i>Summer J. Decker, PhD*</i> ; <i>Jonathan M. Ford, PhD*</i>  |
| 11:30 a.m. - 1:00 p.m. | <b>A8</b>  | <b>Estimation of Stature From Footprints in a North Indian Population</b><br><i>Kewal Krishan, PhD*</i> ; <i>Tanuj Kanchan, MD</i>   |
| 11:30 a.m. - 1:00 p.m. | <b>A9</b>  | <b>Sexual Dimorphism in Mandibular Morphology Between Dentate and Edentate Individuals — Implications for Sex Estimation</b><br><i>Heli Maijanen, PhD*</i> ; <i>Beatrix Dudzik, PhD</i> ; <i>Kathleen Hauther</i>  |
| 11:30 a.m. - 1:00 p.m. | <b>A10</b> | <b>Evaluating Elongated Pubic Bones as a Potential Sexing Method for Juveniles</b><br><i>Cassie E. Skipper, BS*</i>  |



# ANTHROPOLOGY

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11:30 a.m.	-	1:00 p.m.	<b>A11</b>	<b>Age Estimation Using the Sternal End of the Clavicle: A Test of the Falys and Prangle Archaeological Method for Forensic Application</b> <i>Meghan Price*</i> ; <i>James Pokines, PhD</i> ; <i>Jonathan D. Bethard, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>A12</b>	<b>Accuracy of Dental Age in Non-Adults: A Comparison of Two Methods for Age Estimation Using Radiographs of Developing Teeth</b> <i>Sierra Santana, BA*</i> ; <i>Jonathan D. Bethard, PhD</i> ; <i>Tara L. Moore, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>A13</b>	<b>A Test of Cervical Vertebral Ring Union for Age-at-Death Estimation Using the Albert-Sherwood Method</b> <i>A. Midori Albert, PhD*</i> ; <i>Kate D. Sherwood</i>
11:30 a.m.	-	1:00 p.m.	<b>A14</b>	<b>Age Estimation Using Osteophytic Activity on the Lumbar Vertebrae and Partial Least Squares Regression</b> <i>Jacob Griffin, BS*</i> ; <i>Stephen D. Ousley, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>A15</b>	<b>The First Thoracic Vertebral Centrum as an Adult Age Estimation Site</b> <i>Kristina B. Altes, MA*</i>
11:30 a.m.	-	1:00 p.m.	<b>A16</b>	<b>Improved Adult Age Estimation Using New Skeletal Traits and Transition Analysis</b> <i>George R. Milner, PhD</i> ; <i>Jesper L. Boldsen, PhD</i> ; <i>Stephen D. Ousley, PhD*</i> ; <i>Svenja Weise, PhD</i> ; <i>Sara M. Getz, MS</i> ; <i>Peter Tarp, MS</i>
11:30 a.m.	-	1:00 p.m.	<b>A17</b>	<b>Effects of Scavenging Birds and Insects on Decomposition Time of Pig Carcasses at the Rice Creek Field Station</b> <i>Brianna L. Robinson*</i> ; <i>Kathleen A.S. Blake, PhD*</i>
11:30 a.m.	-	1:00 p.m.	<b>A18</b>	<b>The Mummy in the Microwave: The Efficacy of the Microwave Method for the Maceration of Desiccated Tissue</b> <i>Christiane Baigent, MSc*</i> ; <i>Gary T. Scott, MA*</i>
11:30 a.m.	-	1:00 p.m.	<b>A19</b>	<b>The Effect of Plastic Tarps on the Rate of Human Decomposition During the Spring/Summer in Central Texas</b> <i>Chloe P. McDanel*</i> ; <i>Daniel J. Wescott, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>A20</b>	<b>Effect of Body Size on the Rate of Outdoor Human Soft Tissue Decomposition</b> <i>Lindsey G. Roberts, MA*</i> ; <i>Jessica R. Spencer, MA</i>
11:30 a.m.	-	1:00 p.m.	<b>A21</b>	<b>A Methodology in Differentiating Between Knives From Cut Marks on Bone</b> <i>Melodi Ghui*</i> ; <i>Constantine Eliopoulos, PhD</i> ; <i>Matteo Borrini, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>A22</b>	<b>Traumatic and Congenital Anomalies of the Atlas: A Forensic Identification Case Report</b> <i>Yann Delannoy, MD*</i> ; <i>Thomas Colard, DDS, PhD</i> ; <i>Tania Delabarde, PhD</i> ; <i>Jocelyn Pollard, MD</i> ; <i>Valéry C. Hedouin, MD, PhD</i> ; <i>Didier Gosset, MD, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>A23</b>	<b>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</b> <i>Luisa Marinho, MSc*</i> ; <i>Hugo Cardoso, PhD</i>

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# ANTHROPOLOGY



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| 11:30 a.m. | - | 1:00 p.m. | <b>A24</b> | <b>Reassessing Blunt Force Trauma to True Rib Heads Utilizing Tension-Compression Theory</b><br><i>Kelsey A. Carpenter, BS*; Kena Ihle, BA*; Steven A. Symes, PhD</i>                           |
| 11:30 a.m. | - | 1:00 p.m. | <b>A25</b> | <b>Comparability of Macroscopic, Microscopic, and Radiologically Defined Pediatric Antemortem Healing Stages</b><br><i>Cliff Boyd, PhD*; Donna C. Boyd, PhD; Sharon Roller; David Foley, BS</i> |

## Thursday

### New Perspectives and Techniques in Sex and Ancestry Estimation

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*Moderator: Alexandra R. Klaes, PhD  
Mercyhurst University  
Dept of Applied Forensic Sciences  
Erie, PA*

*Co-Moderator: Alexis C. Goots, BS  
North Olmsted, OH*

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| 8:30 a.m.  | - | 8:45 a.m.  | <b>A26</b> | <b>A New Statistical Approach to Morphological Sexing of South African Remains</b><br><i>Samuel R. Rennie, BSc*; Margaret Clegg, PhD; Silvia Gonzalez, PhD</i>   |
| 8:45 a.m.  | - | 9:00 a.m.  | <b>A27</b> | <b>Estimating Ancestry in South Africa: A Comparison of Geometric Morphometrics and Traditional Craniometrics</b><br><i>Rebecca King, MS*; Jonathan D. Bethard, PhD; Donald F. Siwek, PhD</i>                      |
| 9:00 a.m.  | - | 9:15 a.m.  | <b>A28</b> | <b>Spatial Analysis on a Global Scale: Cranial Non-Metric Trait Variability</b><br><i>Joseph T. Hefner, PhD*; Caitlin C.M. Vogelsberg, MS</i>  |
| 9:15 a.m.  | - | 9:30 a.m.  | <b>A29</b> | <b>Examining Inter-Observer Reliability of Metric and Morphoscopic Characteristics of the Mandible</b><br><i>Jennifer F. Byrnes, PhD*; Michael W. Kenyhercz, PhD; Samantha C. Torres, BA; Gregory E. Berg, PhD</i> |
| 9:30 a.m.  | - | 9:45 a.m.  | <b>A30</b> | <b>Decision Trees and Non-Metric Traits: A More Accurate Approach for Sex Estimation of the Skull</b><br><i>Natalie R. Langley, PhD; Alesia Cloutier, MS; Cade Lampley, MS; Beatrix Dudzik, PhD*</i>               |
| 9:45 a.m.  | - | 10:00 a.m. | <b>A31</b> | <b>Sex Assessment — The Utility of Endocranial Landmark Data</b><br><i>Sean Y. Carlson-Greer, BA*; Stephen D. Ousley, PhD</i>  |
| 10:00 a.m. | - | 10:15 a.m. | <b>A32</b> | <b>Femoral Neck Axis Length (FNAL): Use in Sex and Ancestry Estimation of Hispanic Populations</b><br><i>Audrey Murchland, BS*; Lori E. Baker, PhD; Rebecca Meeusen, MS</i>  |
| 10:15 a.m. | - | 10:30 a.m. | <b>A33</b> | <b>A Multiple Classifier System Approach to Determining Ancestry of Fragmentary Remains: A Preliminary Study</b><br><i>Amber M. Plemons, BS*; Nicholas P. Herrmann, PhD; Edward F. Harris, PhD</i>                 |
| 10:30 a.m. | - | 10:45 a.m. |            | <b>Break</b>   |



# ANTHROPOLOGY

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## The Importance of Sociocultural Anthropology Within Forensic Anthropological Investigations

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*Moderator: Erin H. Kimmerle, PhD  
University of South Florida  
Dept of Anthropology  
Tampa, FL*

*Co-Moderator: Hailey A. Duecker, MA  
Gainesville, FL*

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| 10:45 a.m. | - | 11:00 a.m. | <b>A34</b> | <b>Widening the Scope and Expanding the Field: An Argument for Sociocultural Anthropology's Seat at the Table</b><br><i>Sarah Wagner*</i>  |
| 11:00 a.m. | - | 11:15 a.m. | <b>A35</b> | <b>The Social Process of a Forensic Identification</b><br><i>Hugh H. Tuller, MA*</i>   |
| 11:15 a.m. | - | 11:30 a.m. | <b>A36</b> | <b>The Social Side of Human Identification</b><br><i>Robin C. Reineke, PhD*</i>  |
| 11:30 a.m. | - | 11:45 a.m. | <b>A37</b> | <b>Family Opposition to Human Rights Exhumations: The Need for Interdisciplinary Research on a Question of Science, Politics, and Consent</b><br><i>Adam R. Rosenblatt, PhD*</i> |
| 11:45 a.m. | - | 1:30 p.m.  |            | <b>Lunch</b>   |

## Poster Session

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| 11:30 a.m. | - | 1:00 p.m. | <b>A38</b> | <b>Morphological and Metric Study of the Nose and Ear in a North Indian Population: Forensic Anthropological Context</b><br><i>Kewal Krishan, PhD*; Tanuj Kanchan, MD; Manojit Chakraborty, MSc</i>  |
| 11:30 a.m. | - | 1:00 p.m. | <b>A39</b> | <b>Morphologic Analysis of the Location of the Lens on the Orbit Using 3D Reconstructed Models</b><br><i>Dong-Ho Eddie Kim, BSc*; Yi-Suk Kim, MD, PhD; Dae-Kyoon Park, MD, PhD; In-Beom Kim, PhD; U-Young Lee, MD</i>  |
| 11:30 a.m. | - | 1:00 p.m. | <b>A40</b> | <b>A Challenging Case of Facial Reconstruction of a Suicide by Jumping From a Height</b><br><i>Luigi Cipolloni, MD, PhD; Alessandro di Luca, MD; Laura Donato*</i>   |
| 11:30 a.m. | - | 1:00 p.m. | <b>A41</b> | <b>The Perceived Accuracy of 3D Facial Reconstructions</b><br><i>Eileen M. Schilling, MSc*</i>   |
| 11:30 a.m. | - | 1:00 p.m. | <b>A42</b> | <b>Application of Enhanced Point Estimators on a Sample of <i>In Vivo</i> Computed Tomography (CT)-Derived Facial Soft Tissue Thicknesses</b><br><i>Kelsey Kyllonen, MA*; Connie L. Parks, MA; Keith L. Monson, PhD</i>  |
| 11:30 a.m. | - | 1:00 p.m. | <b>A43</b> | <b>Evaluation of the Facial Soft Tissue Thickness in the Living in a Brazilian Population: Pilot Study</b><br><i>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</i> |



# ANTHROPOLOGY




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11:30 a.m.	-	1:00 p.m.	<b>A44</b>	<b>Applications of 3D Technology in Forensic Anthropology</b> <i>Helen Cho, PhD*</i> ; <i>Eun Jin Woo, PhD*</i> ; <i>Hae Joung Cho*</i> ; <i>Yu Ryang Jang, PhD*</i> ; <i>Nahyok Im, PhD*</i>
11:30 a.m.	-	1:00 p.m.	<b>A45</b>	<b>Automated Anthropometric Measurements of Long Bones Using Point Cloud Data</b> <i>Lisa M.M. Van Den Broek*</i> ; <i>Thera McAvoy, MSc</i> ; <i>Roland Wessling, MSc</i> ; <i>Jessica Bolton, MSc</i> ; <i>Jelana Bekvalac, MSc</i> ; <i>Anja Leipner</i> ; <i>Michael Thali, MD</i>
11:30 a.m.	-	1:00 p.m.	<b>A46</b>	<b>Introducing Standardized Anthropological Measurement Protocols for Postcranial Bones Using 3D Surface Reconstructions in Computed Assisted Design (CAD) Software</b> <i>Mikaela S. Reynolds, MSc*</i> ; <i>Donna M. MacGregor, MSc</i> ; <i>Mark D. Barry, MS</i> ; <i>Nicolene Lottering, BS</i> ; <i>Laura S. Gregory, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>A47</b>	<b>Virtual Skeletal Analysis (ViSA) — One Possible Future for Osteometrics</b> <i>Roland Wessling, MSc*</i> ; <i>Sophie Beckett, PhD</i> ; <i>Jessica Bolton, MSc</i> ; <i>Alice Jenny Butcher, BSc</i> ; <i>Lisa M.M. Van Den Broek</i> ; <i>Thera McAvoy, MSc</i>
11:30 a.m.	-	1:00 p.m.	<b>A48</b>	<b>Incorporating the “Black Bone” Magnetic Resonance Imaging (MRI) Technique: A Radiation-Free Alternative to Computed Tomography (CT) for Biological Profiling in the Living</b> <i>Janamarie Truesdell, MSc*</i> ; <i>Karen A. Eley, DPhil</i> ; <i>Anthony McIntyre, BS</i> ; <i>Nicholas Márquez-Grant, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>A49</b>	<b>DCP 2.0: Changes in Data Collection Procedures for Forensic Skeletal Material</b> <i>Natalie R. Langley, PhD*</i> ; <i>Lee Meadows Jantz, PhD</i> ; <i>Shauna McNulty, MA</i> ; <i>Heli Maijanen, PhD</i> ; <i>Stephen D. Ousley, PhD</i> ; <i>Richard Jantz, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>A50</b>	<b>Scanning Electron Microscopy/Energy Dispersive X-Ray (SEM/EDX): A Rapid Diagnostic Tool to Aid the Identification of Burnt Bone and Contested Cremains</b> <i>Sarah Ellingham, MSc*</i>
11:30 a.m.	-	1:00 p.m.	<b>A51</b>	<b>Reconstructing the Biological Profile of Cremated Human Remains</b> <i>Anthony W. Hudson, BS*</i>
11:30 a.m.	-	1:00 p.m.	<b>A52</b>	<b>Experimental Analysis of Burned Human Remains</b> <i>Amanda Williams, MA*</i> ; <i>Elayne J. Pope, PhD</i> ; <i>Marin A. Pilloud, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>A53</b>	<b>Patterns of Ossification in Macerated Thyroid Cartilages: Implications for Age and Sex Determination</b> <i>Katelyn L. Bolhofner, MA*</i> ; <i>Laura C. Fulginiti, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>A54</b>	<b>Age Estimation of Adolescent and Post-Adolescent Children Via Radiographs of the Shoulder</b> <i>Maureen Schaefer, PhD*</i> ; <i>Gerald Aben, MD</i>





# ANTHROPOLOGY

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11:30 a.m.	-	1:00 p.m.	<b>A55</b>	<b>A Grading System to Assess the Sex and Parity Status for the Preauricular Sulcus</b> <i>Sarah E. Canty, PhD*</i> ; <i>Matteo Borrini, PhD*</i> ; <i>Constantine Eliopoulos, PhD</i> ; <i>Silvia Gonzalez, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>A56</b>	<b>Bioarchaeological Investigations Discovered Intraindividual Bilateral Ossification Differences of the Medial Clavicle — Implications for Age Estimation of the Living</b> <i>Fabian Kanz, PhD*</i> ; <i>Philipp Konermann, MD</i> ; <i>Sandra Lösch, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>A57</b>	<b>The Use of the Sustentaculum Tali in Estimating Sex</b> <i>Christine Bailey, BA*</i> ; <i>Kristen A. Broehl, BA*</i> ; <i>Amy Z. Mundorff, PhD</i> ; <i>Renee C. Kosalka, MA</i>
11:30 a.m.	-	1:00 p.m.	<b>A58</b>	<b>The Roaming Arm: A Literal Outlier</b> <i>Shana Ott*</i> ; <i>Gary T. Scott, MA*</i>
11:30 a.m.	-	1:00 p.m.	<b>A59</b>	<b>No Fly Zone: Decomposition in the Absence of Insects</b> <i>Michael S. Woolf, BS*</i> ; <i>Tal Simmons, PhD*</i> ; <i>Baneshwar Singh, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>A60</b>	<b>White-Tailed Deer as a Taphonomic Agent: Photographic Documentation of White-Tailed Deer Gnawing on Human Bone</b> <i>Daniel J. Wescott, PhD*</i> ; <i>Lauren Alyssa Meckel, BS*</i> ; <i>Chloe P. McDanel</i> ; <i>Michelle D. Hamilton, PhD</i> ; <i>Sophia Mavroudas, MA</i> ; <i>Kate Spradley, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>A61</b>	<b>Examining the Persistence of Human DNA in Soil During Cadaver Decomposition</b> <i>Alexandra L. Emmons, MA*</i> ; <i>Jennifer DeBruyn, PhD</i> ; <i>Amy Z. Mundorff, PhD</i> ; <i>Kelly L. Cobaugh, MS</i> ; <i>Graciela S. Cabana, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>A62</b>	<b>Using the Geographic Information System (GIS) to Distinguish Between Human and Non-Human Cranial Bone Fragments</b> <i>Brigida Corrieri, MSc*</i> ; <i>Nicholas Márquez-Grant, PhD*</i> ; <i>Jessica Bolton, MSc</i> ; <i>Roland Wessling, MSc</i>

## Geolocation, Novel Techniques, and Virtual Technologies

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*Moderator:* Cate E. Bird, PhD  
Pima County Office of the Medical Examiner  
Tucson, AZ

*Co-Moderator:* Sean D. Tallman, MA  
Knoxville, TN

1:30 p.m.	-	1:45 p.m.	<b>A63</b>	<b>Application of Stable Isotope Forensics for Predicting Region-of-Origin of Unidentified Border Crossers Found Deceased in the United States</b> <i>Eric J. Bartelink, PhD*</i> ; <i>Heather L. MacInnes, BS</i> ; <i>Julia R. Prince, BA</i> ; <i>Amy T. MacKinnon, BA</i> ; <i>Lesley A. Chesson, MS</i> ; <i>Brett J. Tipple, PhD</i> ; <i>Krista E. Latham, PhD</i> ; <i>Gregory E. Berg, PhD</i>
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# ANTHROPOLOGY




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1:45 p.m.	-	2:00 p.m.	<b>A64</b>	<b>What Level of Biogeographical Information Is Available From 18O and 13C Signatures in Late-Erupting Molars of Modern Humans?</b> <i>Anastasia Holobinko, MS*</i> ; <i>Wolfram Meier-Augenstein, PhD</i> ; <i>Helen F. Kemp, PhD</i> ; <i>Susan M. Ford</i> ; <i>Philip Turk, PhD</i>
2:00 p.m.	-	2:15 p.m.	<b>A65</b>	<b>Dental Non-Metric Analysis as an Aid to Undocumented Border Crossers (UBCs) Region-of-Origin Estimation</b> <i>Rebecca L. George, MA*</i> ; <i>Jorge Gómez-Valdés, PhD</i>
2:15 p.m.	-	2:30 p.m.	<b>A66</b>	<b>Comparative Study of Human and Non-Human Long Bones by Anatomical and Radiological Methods</b> <i>Piyush Sharma, MD*</i> ; <i>Tabin Millo, MD</i>
2:30 p.m.	-	2:45 p.m.	<b>A67</b>	<b>Manipulation and Analysis of Virtual Bones: A Novel Method of Sex Estimation From the Mandible</b> <i>Alice J. Butcher, BSc*</i> ; <i>Roland Wessling, MSc</i> ; <i>Jessica Bolton, MSc</i> ; <i>Jelana Bekvalac, MSc</i>
2:45 p.m.	-	3:00 p.m.	<b>A68</b>	<b>Calcium and Phosphorus Detection Using Benchtop vs. Hand-Held X-Ray Fluorescence (XRF) Spectrometers</b> <i>Aaron R. Kuzel, BS*</i> ; <i>Angi M. Christensen, PhD</i> ; <i>Susan M. Marvin, PhD</i>
3:00 p.m.	-	3:15 p.m.	<b>A69</b>	<b>Osteometric Reassociation Through Quantifying Long Bone Size and Shape and Prediction Using Bayesian Regression Via Hamiltonian Markov Chain Monte Carlo (MCMC)</b> <i>Kyle A. McCormick, MA*</i>
3:15 p.m.	-	3:30 p.m.	<b>A70</b>	<b>A Simple Method for Estimating Subject-to-Camera Distance for Legitimate Craniofacial Superimpositions</b> <i>Carl N. Stephan, PhD*</i>
3:30 p.m.	-	3:45 p.m.	<b>A71</b>	<b>Texture Mapped Average Skulls Created From Standardized Photographs Using the Perception Lab's Psychomorph</b> <i>Jodi M. Caple, BS*</i> ; <i>Carl N. Stephan, PhD</i>
3:45 p.m.	-	4:00 p.m.		<b>Break</b>

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## Remote Sensing, Archaeological Techniques for Vehicle Fires, and Burned Human Remains Analysis

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*Moderator:* *Krista E. Latham, PhD*  
*University of Indianapolis*  
*Biology Dept*  
*Indianapolis, IN*

*Co-Moderator:* *Justin R. Maiers, BS*  
*Indianapolis, IN*

4:00 p.m.	-	4:15 p.m.	<b>A72</b>	<b>New Forensic Archaeological Recovery Protocols for Fatal Vehicle Fires</b> <i>Alexandra R. Klaes, PhD*</i> ; <i>Dennis C. Dirkmaat, PhD</i> ; <i>Luis L. Cabo, MS</i>
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# ANTHROPOLOGY

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4:15 p.m.	-	4:30 p.m.	<b>A73</b>	<b>Forensic Examination of Burned Human Skeletal Remains: Shifting the Paradigm</b> <i>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; Eugenia Cunha, PhD*</i>
4:30 p.m.	-	4:45 p.m.	<b>A74</b>	<b>Remote Sensing of Human Burials</b> <i>Katie Corcoran, BS*; Amy Z. Mundorff, PhD; Devin White, PhD; Whitney Emch, PhD</i>
4:45 p.m.	-	5:00 p.m.	<b>A75</b>	<b>The Use of Near-Infrared Remote Sensing in the Detection of Clandestine Human Remains</b> <i>Marilyn Isaacks, BA*; Daniel J. Wescott, PhD</i>

## Friday

### Trauma Etiology and Modeling

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*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.	<b>A76</b>	<b>The Interpretation of Human Pediatric Cranial Fracture Patterns Using Experimentally Generated Porcine Ground-Truth Data</b> <i>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</i>
9:00 a.m.	-	9:15 a.m.	<b>A77</b>	<b>Pediatric Antemortem Healing Standards Based on Microscopic Analysis of Fractures in Known Forensic Child Abuse Cases</b> <i>Donna C. Boyd, PhD*; Sharon Roller; Cliff Boyd, PhD</i>
9:15 a.m.	-	9:30 a.m.	<b>A78</b>	<b>Understanding the Role of Contact Area in Adult Cranial Fracture Variation</b> <i>Mariyam I. Isa, BS*; Todd W. Fenton, PhD; Patrick E. Vaughan, BS; Roger C. Haut, PhD</i>
9:30 a.m.	-	9:45 a.m.	<b>A79</b>	<b>Dismemberment Injuries: The Contribution of Bone and Soft Tissue Histology</b> <i>Tania Delabarde, PhD*; Catherine Cannet; Annie Geraut, MD; Marc Tacoen, MD; Bertrand P. Ludes, MD, PhD; Jean-Sébastien Raul</i>
9:45 a.m.	-	10:00 a.m.	<b>A80</b>	<b>Evaluating Timing of Injury in Central Florida: Examining the Transition of Fracture Characteristics From Wet to Dry in Long Bones</b> <i>Ashley Green, MA*; John J. Schultz, PhD*</i>
10:00 a.m.	-	10:15 a.m.		<b>Break</b>

# ANTHROPOLOGY



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## New Methods to Increase Accuracy and Precision in Age Estimation

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*Moderator: Debra Prince Zinni, PhD  
JPAC*

*Central Identification Lab  
Joint Base Pearl Harbor-Hickam, HI*

*Co-Moderator: Jieun Kim, MA  
Knoxville, TN*

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| 10:15 a.m. | - | 10:30 a.m. | <b>A81</b> | <b>A Test of the Transition Analysis Method for Estimating Adult Age-at-Death</b><br><i>Jessica L. Campbell, MS*; Stephen P. Nawrocki, PhD</i>  |
| 10:30 a.m. | - | 10:45 a.m. | <b>A82</b> | <b>Examining the Accuracy of Age Estimates From New Histological Sampling Strategies at the Femoral Midshaft</b><br><i>Timothy P. Gocha, PhD*; Sam D. Stout, PhD; Amanda M. Agnew, PhD</i>  |
| 10:45 a.m. | - | 11:00 a.m. | <b>A83</b> | <b>Increasing Precision in Age Estimation From the Female Os Pubis: A Composite Technique With &gt;80% Accuracy to Within Ten Years of Actual Age</b><br><i>Janamarie Truesdell, MSc*; Andreas Duerling, MA, MS; Nicholas Márquez-Grant, PhD</i>  |
| 11:00 a.m. | - | 11:15 a.m. | <b>A84</b> | <b>Apophyseal Ossification of the Iliac Crest in Forensic Age Estimation: New Standards for Modern Australian Subadults Using Computed Tomography</b><br><i>Nicolene Lottering, BS*; Mikaela S. Reynolds, MSc; Donna M. MacGregor, MSc; Maree T. Izatt; Caroline Grant, PhD; Clayton Adam, PhD; Laura S. Gregory, PhD</i> |
| 11:15 a.m. | - | 11:30 a.m. | <b>A85</b> | <b>DNA Methylation Markers as a Novel Tool for Age-at-Death Estimation in Teeth</b><br><i>Sara C. Zapico, PhD*; Bram Bekaert, PhD; Aubeline Kamalandua, MS; Wim Van de Voorde, MD; Ronny Decorte, PhD</i>   |
| 11:30 a.m. | - | 1:30 p.m.  |            | <b>Lunch</b>  |

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## Poster Session

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| 11:30 a.m. | - | 1:00 p.m. | <b>A86</b> | <b>A Novel Method for Recording Palate Shape in the Estimation of Ancestry</b><br><i>Christopher A. Maier, MA*</i>   |
| 11:30 a.m. | - | 1:00 p.m. | <b>A87</b> | <b>Ancestral Variation in Orbital Rim Shape: A 3D Pilot Study</b><br><i>Katie M. Rubin, MS*; Valerie DeLeon, PhD</i>   |
| 11:30 a.m. | - | 1:00 p.m. | <b>A88</b> | <b>Missing Data Imputation Methods Using Morphoscopic Traits and Their Performance in the Estimation of Ancestry</b><br><i>Michael W. Kenyhercz, PhD*; Nicholas V. Passalacqua, PhD; Joseph T. Hefner, PhD</i> |
| 11:30 a.m. | - | 1:00 p.m. | <b>A89</b> | <b>Skeletal Sex Estimation in a Modern Cuban Sample</b><br><i>Meredith L. Tise, PhD*</i>   |



# ANTHROPOLOGY

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11:30 a.m.	-	1:00 p.m.	<b>A90</b>	<b>Sexual Dimorphism of the Radial Tuberosity: Geometric Morphometric Approach With a Structured-Light 3D Scanning System</b> <i>Go-Un Jung, BS*</i> ; <i>Byoung-Ha Kim, BS</i> ; <i>U-Young Lee, MD</i> ; <i>Deog-Im Kim, PhD</i> ; <i>Dae-Kyoon Park, MD, PhD</i> ; <i>Yi-Suk Kim, MD, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>A91</b>	<b>Cranial Morphological Sexing Trait Patterns Differ Across Populations</b> <i>Monica M. Thompson*</i> ; <i>Kaitlyn A. Lopez*</i> ; <i>Kanya Godde, PhD*</i>
11:30 a.m.	-	1:00 p.m.	<b>A92</b>	<b>An Analysis of Sexual Dimorphism Using Geometric Morphometrics (GM) of the Femur and Tibia: The Use of GM in Assessing Sex of Fragmented Remains</b> <i>Amanda K. Costello, MS*</i>
11:30 a.m.	-	1:00 p.m.	<b>A93</b>	<b>Metric Assessment of the Pubic Bone to Determine the Accuracy of Known and Novel Data Points for Sex Estimation</b> <i>Kathleen A.S. Blake, PhD*</i> ; <i>Hallie Gaffney*</i> ; <i>Kristen Hartnett-McCann, PhD*</i>
11:30 a.m.	-	1:00 p.m.	<b>A94</b>	<b>An Assessment of Sexual Dimorphism in the Sternal Fourth Rib: A 2D Morphometric Approach</b> <i>Andrew C. Seidel, MA*</i> ; <i>Laura C. Fulginiti, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>A95</b>	<b>A Geometric Morphometric Comparison of Pelvic and Cranial Sexual Dimorphism</b> <i>Kaleigh C. Best, MS*</i> ; <i>Luis L. Cabo, MS</i> ; <i>Heather M. Garvin, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>A96</b>	<b>A Reassessment of Walker Cranial Non-Metric Traits on Undocumented Border Crossers Along the South Texas Border</b> <i>Brittany S. McClain, BA*</i> ; <i>Cassie E. Skipper, BS</i> ; <i>Marilyn Isaacks, BA</i>
11:30 a.m.	-	1:00 p.m.	<b>A97</b>	<b>Stable Isotope Investigation of Mother-Infant Pairs and the Implication for Forensic Casework</b> <i>Inga Siebke*</i> ; <i>Fabian Kanz, PhD</i> ; <i>Carsten Witzel, PhD</i> ; <i>Sandra Lösch, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>A98</b>	<b>Bone Histology Sampling Sites for the Identification of Undocumented Border Crossers Along the United States/Mexico Border</b> <i>Lauren Alyssa Meckel, BS*</i> ; <i>Sophia Mavroudas, MA</i> ; <i>Victoria M. Dominguez, MA</i> ; <i>Kate Spradley, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>A99</b>	<b>Estimation of Age-at-Death Using Femoral Cortical Thickness, Biomechanical, and Histological Variables</b> <i>Megan E. Ingvaldstad, PhD*</i> ; <i>Christine M. Pink, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>A100</b>	<b>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</b> <i>MariaTeresa A. Tersigni-Tarrant, PhD*</i> ; <i>Denise To, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>A101</b>	<b>Thirty Years of the Forensic Data Bank and Data Collection Procedures (DCP) 2.0: Continuity and Transformation</b> <i>Stephen D. Ousley, PhD*</i> ; <i>Richard Jantz, PhD</i> ; <i>Natalie R. Langley, PhD</i> ; <i>Kate Spradley, PhD</i> ; <i>Beatrix Dudzik, PhD</i>

# ANTHROPOLOGY




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11:30 a.m.	-	1:00 p.m.	<b>A102</b>	<b>Multidisciplinary Approach of Forensic Science in Historical Study: St. Fortunato of Serracapriola (Italy)</b> <i>Francesco Sessa, MS*; Gabriela Perilli, MD; Christian Zammit, MD; Santina Cantatore; Fabrice F. Dedout; Giuseppe Guglielmi, PhD; Cristoforo Pomara, MD, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>A103</b>	<b>Infant Bone Health: An Evaluation of Quantitative Ultrasound</b> <i>Miriam E. Soto Martinez, MA*; Jennifer C. Love, PhD*; Weilu Han, MPH</i>
11:30 a.m.	-	1:00 p.m.	<b>A104</b>	<b>Reliability of Biomechanical Descriptors to Assess Blunt Force Injuries in the Cranium</b> <i>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</i>
11:30 a.m.	-	1:00 p.m.	<b>A105</b>	<b>Semi-Automated Volumetric Quantification of the Frontal Sinuses: Sexual Dimorphism in a Contemporary Australian Subadult Population</b> <i>Reanna J. Morris*; Nicolene Lottering, BS; Mikaela S. Reynolds, MSc; Laura S. Gregory, PhD; Donna M. MacGregor, MSc</i>
11:30 a.m.	-	1:00 p.m.	<b>A106</b>	<b>Estimating Age in Juvenile Crania Using Cranial Vault Thickness (CVT)</b> <i>Kelly R. Kamnikar, BS*; Nicholas P. Herrmann, PhD; Pierre M.M. Guyomarc'h, PhD; Molly K. Zuckerman, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>A107</b>	<b>Correlation Between Body Size and Intracranial Capacity in Korean Youth</b> <i>Jae gul Suh, MD; Yesel Kim, MD; Dasom Kim, BA; In Sung Park, PhD; Nam Joon Lee, MD, PhD; Im Joo Rhyu, PhD*</i>
11:30 a.m.	-	1:00 p.m.	<b>A108</b>	<b>Estimating Body Composition From Stature and Bi-Iliac Breadth in Modern Young Adult United States Populations (NHANES III)</b> <i>William C. Schaffer, MA*</i>
11:30 a.m.	-	1:00 p.m.	<b>A109</b>	<b>Estimation of Stature From the Foramen Magnum Region in an American Population: A Validation Study</b> <i>Margarita M. Villarreal, BS*</i>
11:30 a.m.	-	1:00 p.m.	<b>A110</b>	<b>Examining Four Potential Proxies for Standard Craniometrics: A Statistical Analysis for Significance and Demographic Correlations</b> <i>Jacob L. Cheramie*; Maranda A. Kles, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>A111</b>	<b>The Effects of Household Corrosive Chemicals on Pig Bones and Human Tissue</b> <i>Gina E. Baglieri*</i>
11:30 a.m.	-	1:00 p.m.	<b>A112</b>	<b>Direct and Indirect Blunt Force Trauma on the Cranium: Any Visible Differences</b> <i>Kathryn Sloper, BS*; Constantine Eliopoulos, PhD; Matteo Borrini, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>A113</b>	<b>A Method of Sex Determination From the Scapula in Modern American Forensics</b> <i>Melissa K. Kuhn*; Ismail M. Sebetan, MD, PhD*; Amy Zimmer, MS</i>



# ANTHROPOLOGY

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|------------------------|-------------|--|
| 11:30 a.m. - 1:00 p.m. | <b>A114</b> | <b>Sex Classification in a Sample of American Whites Using Interlandmark Distances of the Zygomatic Bone and Standard Cranial Measurements</b><br><i>Sarah M. Furnier*</i> ; <i>Stephen D. Ousley, PhD</i>   |
| 11:30 a.m. - 1:00 p.m. | <b>A115</b> | <b>Differential Taphonomy Based on Microenvironment: The Case of Botanical Boy</b><br><i>Kevin M. Lougee, DO*</i> ; <i>James Louis Caruso, MD</i> ; <i>Meredith A. Lann, MD</i> ; <i>Laura A. Regan, PhD</i> |
| 11:30 a.m. - 1:00 p.m. | <b>A116</b> | <b>Students in the Forensic Laboratory: Fostering Education While Maintaining Quality</b><br><i>Christiane Baigent, MSc</i> ; <i>Catherine M. Gaither, PhD*</i>  |

## Decomposition, Accumulated Degree Days, and Seasonality

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*Moderator: Franklin E. Damann, PhD*  
*DPAA CIL*  
*Offutt AFB, NE*

*Co-Moderator: Derek C. Benedix, PhD*  
*Nicosia, CYPRUS*

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|-----------------------|-------------|---|
| 1:30 p.m. - 1:45 p.m. | <b>A117</b> | <b>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</b><br><i>Lennon N. Bates, MA</i> ; <i>Daniel J. Wescott, PhD*</i>              |
| 1:45 p.m. - 2:00 p.m. | <b>A118</b> | <b>A Comparison of Seasonal Decomposition Patterns Between Human and Non-Human Animal Models</b><br><i>Angela M. Dautartas, MA*</i> ; <i>Dawnie W. Steadman, PhD</i> ; <i>Amy Z. Mundorff, PhD</i> ; <i>Lee Meadows Jantz, PhD</i> ; <i>Giovanna M. Vidoli, PhD</i> |
| 2:00 p.m. - 2:15 p.m. | <b>A119</b> | <b>Around the World in Accumulated Degree Days</b><br><i>Tal Simmons, PhD*</i> ; <i>Colin Moffatt, PhD</i> ; <i>Ozgur Bulut, PhD</i> ; <i>Natnipoon Rattananarungruang, BA</i> ; <i>Amanda L. Roe, PhD</i> ; <i>Donald F. Siwek, PhD</i>                            |
| 2:15 p.m. - 2:30 p.m. | <b>A120</b> | <b>Comparing Decomposition Assessments From Digital Images to <i>In Situ</i> Observations</b><br><i>Gretchen R. Dabbs, PhD*</i> ; <i>Joan A. Bytheway, PhD</i> ; <i>Melissa A. Connor, PhD</i>  |
| 2:30 p.m. - 2:45 p.m. | <b>A121</b> | <b>Volatile Organic Sulphur Compounds (VOSCs) and Accumulated Degree Days (ADD): Timing the Switch From Anaerobic to Aerobic Putrefaction</b><br><i>Philip E. Houldsworth, MSc*</i> ; <i>Tal Simmons, PhD</i>   |
| 2:45 p.m. - 3:00 p.m. | <b>A122</b> | <b>An External Validation of the Citrate Content Postmortem Interval (PMI) Method</b><br><i>Michael A. Brown, PhD*</i> ; <i>Charles Froome, BS</i> ; <i>Shawn Hennessy</i> ; <i>Rebecca Gerling</i> ; <i>Jeffrey Ellison, BS</i> ; <i>Ann W. Bunch, PhD</i>         |



# ANTHROPOLOGY



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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

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*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. Klaes, 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*; *Deborah 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

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*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, MSc\**; *Lynne S. Bell, PhD*; *Keith C. Gordon*





# ANTHROPOLOGY

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|------------|---|------------|-------------|---|
| 10:30 a.m. | - | 10:45 a.m. | <b>A130</b> | <b>The Skeletal Histo-Taphonomy of Deep Coastal Marine Submersion and Exposure</b><br><i>Lynne S. Bell, PhD*</i> ; <i>Gail S. Anderson, PhD</i> |
| 10:45 a.m. | - | 11:00 a.m. | <b>A131</b> | <b>Taphonomy of the Perinate Skeleton: Redefining Structural Norms and Building Analytical Models</b><br><i>Christiane Baigent, MSc*</i>        |
| 11:00 a.m. | - | 11:15 a.m. | <b>A132</b> | <b>Using Satellite Telemetry to Study Vultures and Other Scavengers in Taphonomic Research</b><br><i>Lauren R. Pharr, PhD*</i>                  |
| 11:15 a.m. | - | 11:30 a.m. | <b>A133</b> | <b>Postmortem Intervals in Mice Submerged in Aqueous Environments at 20°C</b><br><i>Elizabeth N. Celata, MS*</i>                                |

# CRIMINALISTICS



## Wednesday

### Poster Session

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|------------------------|------------|--|
| 11:30 a.m. - 1:00 p.m. | <b>B1</b>  | <b>Investigating the Use of MicroRNAs (miRNAs) for the Identification of Forensically Relevant Body Fluids</b><br><i>Kelsie R. Weir, BA*; Claire Glynn, PhD</i>  |
| 11:30 a.m. - 1:00 p.m. | <b>B2</b>  | <b>The Effectiveness of Various Strategies to Improve DNA Analysis of Formaldehyde-Damaged Tissues From Embalmed Cadavers for Human Identification (HID) Purposes</b><br><i>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</i> |
| 11:30 a.m. - 1:00 p.m. | <b>B3</b>  | <b>Tertiary Transfer of DNA by Examination Gloves Between Evidentiary Items at Crime Scenes</b><br><i>Marisa Teal Ketchum, BS*; Erin L. Vollmer, BA*; Jenna Carnes; Krista E. Latham, PhD; Cynthia Cale, BS; Gay L. Bush, PhD</i>  |
| 11:30 a.m. - 1:00 p.m. | <b>B4</b>  | <b>Optimization and Validation of the ForensicGEM™ Rapid Extraction Method for High-Throughput Processing of Cotton Buccal Swabs</b><br><i>Kyleen Elizabeth Elwick, BS*; Sheree R. Hughes-Stamm, PhD; Kimberly S. Andreaggi, MFS; Michelle A. Peck, MFS</i>  |
| 11:30 a.m. - 1:00 p.m. | <b>B5</b>  | <b>Investigating Simultaneous Extraction of RNA and DNA From Forensically Relevant Body Fluids</b><br><i>Sarah L. Markland; Kelsie R. Weir, BA; Claire Glynn, PhD*</i>   |
| 11:30 a.m. - 1:00 p.m. | <b>B6</b>  | <b>Investigating the Use of Raman Spectroscopy for the Differentiation of Mixed Body Fluid Samples</b><br><i>Tyler J. Schlagetter*; Brooke W. Kammrath, PhD; Claire Glynn, PhD</i>   |
| 11:30 a.m. - 1:00 p.m. | <b>B7</b>  | <b>The Identification of Biological Fluids Based on DNA Methylation Differences Using High Resolution Melt Curve Analysis</b><br><i>Susan Cheng, BS*; K. Joy Karnas, PhD</i>   |
| 11:30 a.m. - 1:00 p.m. | <b>B8</b>  | <b>Analysis of Attenuated Total Reflectance/Fourier Transform Infrared (ATR/FTIR) Spectra to Differentiate Menstrual and Venous Blood on Various Substrates</b><br><i>Alicia Quinn, BS*; Kelly M. Elkins, PhD*</i>   |
| 11:30 a.m. - 1:00 p.m. | <b>B9</b>  | <b>Touch DNA Recovered From Fired and Unfired Shotgun Shells</b><br><i>Anthony J. Saitta*; Peter R. Valentin, MSFS</i>   |
| 11:30 a.m. - 1:00 p.m. | <b>B10</b> | <b>Use of Massively Parallel Sequencing to Assist With Deconvolution of Short Tandem Repeat (STR) Mixture Profiles</b><br><i>Kelly Grisedale, PhD*; Jessica Bradley, BS; Brittania J. Bintz, MSc; Mark R. Wilson, PhD</i>  |



# CRIMINALISTICS

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11:30 a.m.	-	1:00 p.m.	<b>B11</b>	<b>Absolute Quantitation of Semen-Specific Biomarkers From Post-Coital Samples</b> <i>Catherine O. Brown, BA*</i> ; <i>Masha Signaevsky, BS</i> ; <i>Heather E. McKiernan, MSFS</i> ; <i>Kevin M. Legg</i> ; <i>Phillip Danielson, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>B12</b>	<b>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</b> <i>Bruce R. McCord, PhD</i> ; <i>Georgiana C. Gibson-Daw, MS*</i>
11:30 a.m.	-	1:00 p.m.	<b>B13</b>	<b>Determining the Most Efficient Location for Collecting DNA Samples From Hand Guns</b> <i>Kaitlyn M. Redman, BS*</i> ; <i>Kathryn E. Hoodenpyle, MS</i> ; <i>Jill Therriault, BS</i> ; <i>Arielle Van Deusen, BS</i> ; <i>Jessica Best, MSFS</i> ; <i>Michael S. Adamowicz, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>B14</b>	<b>Secondary or Tertiary Transfer Semen DNA Stains?</b> <i>Ka-Man Pun*</i> ; <i>Giuliana Grimoldi, MSc</i> ; <i>Gianfranco Foglia</i> ; <i>Ilaria Monico, MS</i> ; <i>Emilio Scossa Baggi</i>
11:30 a.m.	-	1:00 p.m.	<b>B15</b>	<b>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)</b> <i>Kristen L. Reese, BA*</i> ; <i>A. Daniel Jones, PhD</i> ; <i>Ruth Waddell Smith, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>B16</b>	<b><i>In Vitro</i> Experiments Using Human Cadaver Head Hairs to Investigate the Formation Mechanism of Postmortem Hair Root Bands (PMRBs)</b> <i>Jamie N. Fleming, BS*</i> ; <i>Hilda S. Castillo, PhD</i> ; <i>Ernest J. Drummond, MS</i> ; <i>Rabih Jabbour</i> ; <i>Samir Deshpande</i> ; <i>Dawnie W. Steadman, PhD</i> ; <i>Lee Meadows Jantz, PhD</i> ; <i>Kathleen Hauther</i> ; <i>Jack Hietpas, PhD</i> ; <i>Stephen D. Shaw, MS</i> ; <i>JoAnn Buscaglia, PhD</i> ; <i>Brian Eckenrode, PhD</i> ; <i>Joseph Donfack, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>B17</b>	<b>Forensic Soil Analysis by Morphologically Directed Raman Spectroscopy (MDRS)</b> <i>Andrew C. Koutrakos, MS*</i> ; <i>Brooke W. Kammrath, PhD*</i>
11:30 a.m.	-	1:00 p.m.	<b>B18</b>	<b>Postmortem Identification From Physiological Biometrics: A Study of Fingerprints, Irises, and Facial Images</b> <i>Tiffany B. Saul, MS*</i> ; <i>Kelly Sauerwein, MA*</i> ; <i>Dawnie W. Steadman, PhD</i> ; <i>Chris Boehnen, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>B19</b>	<b>Stability Study of Heroin in Four Common Solvents</b> <i>Melanie A. Schade*</i> ; <i>Thomas A. Brettell, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>B20</b>	<b>The Utility of Ultra High-Performance Supercritical Fluid Chromatography (UHPSFC) for the Chiral Analysis of Seized Drugs</b> <i>Stephanie R. Breitenbach, BS*</i> ; <i>Ira S. Lurie, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>B21</b>	<b>Analysis of Black Electrical Tapes by Direct Thermal Extraction-Gas Chromatography/Mass Spectrometry (TE-GC/MS)</b> <i>Emily Prisaznik, BS*</i> ; <i>Thomas A. Brettell, PhD</i>

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# CRIMINALISTICS



11:30 a.m.	-	1:00 p.m.	<b>B22</b>	<b>Think Outside the Box: External Human Factors on the Analysis, Comparison, Evaluation-Verification (ACE-V) Methodology</b> <i>Francisco Valente Gonçalves, MSc*; Lisa L. Smith, PhD; Doug Barrett, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>B23</b>	<b>Liquid Chromatography/Mass Spectrometry (LC/MS) Method Development for the Identification of Route-Specific 3,4-Methylenedioxymethamphetamine (MDMA) Impurities</b> <i>Rebecca F. Dunn*; Heather L. Harris, MFS, JD</i>
11:30 a.m.	-	1:00 p.m.	<b>B24</b>	<b>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)</b> <i>Caroline Machal Kelley, BS*; Adam C. Lanzarotta, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>B25</b>	<b>Breaking Forensic Boundaries: Developing International Standards</b> <i>Soraya McClung*; Kermit B. Channell II, BS*</i>
11:30 a.m.	-	1:00 p.m.	<b>B26</b>	<b>Human Scent Evidence — Volatile Organic Compounds (VOCs): A Unique Trace From Science to Criminal Investigation</b> <i>Marcello Rendine*; Cristoforo Pomara, MD, PhD; Alessandro Bellifemina; Dania De Carlo, MD; Carmela Fiore, MD; Palmira Fortarezza, MS; Margherita Neri, MD, PhD; Irene Riezzo, MD, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>B27</b>	<b>Chemical and Canine Analysis as Complementary Techniques for the Identification of Active Odors in a Biothreat Agent</b> <i>Alison Simon, BS*; Julian L. Mendel, MSc; Kenneth G. Furton, PhD; DeEtta Mills, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>B28</b>	<b>Investigating the Use of New Psychoactive Substances (NPS) Using Sewage-Based Epidemiology (SBE): Detection and Identification of Transformation Products (TPs) of Methylone and Methylenedioxypyrovalerone in Sewage Using Accurate-Mass Mass Spectrometry (MS)</b> <i>Juliet Kinyua, MSc*; Noelia Negreira, PhD; Ann-Kathrin McCall, MSc; Christoph Ort, PhD; Adrian Covaci, PhD; Alexander van Nuijs, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>B29</b>	<b>Updates From the Drug Enforcement Administration National Forensic Laboratory Information System (NFLIS): Opiates and Related Drugs Reported in NFLIS — 2009-2014</b> <i>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. Roper-Miller, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>B30</b>	<b>Statistical Analysis of Firearms: A Comparison Between the 2D and 3D Integrated Ballistic Identification System (IBIS®)</b> <i>Keith B. Morris, PhD*; Roger Jefferys, BS*; Eric F. Law, BS*</i>
11:30 a.m.	-	1:00 p.m.	<b>B31</b>	<b>“I Dropped Acid.” “No, You Didn’t.” A Retrospective Study of NBOMe Emergence in Harris County, Texas</b> <i>Warren C. Samms, PhD*; Donna E. Williams, BS; Kay McClain, BS</i>



# CRIMINALISTICS

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11:30 a.m. - 1:00 p.m.	<b>B32</b>	<b>A Study of Microcrystal Tests for Emerging Psychoactive Substances</b> <i>Sean Brady*</i> ; <i>Monica Joshi, PhD</i>
11:30 a.m. - 1:00 p.m.	<b>B33</b>	<b>Sample Introduction Studies for Direct Analysis in Real-Time (DART®) Systems</b> <i>Rachel Masek, BS</i> ; <i>Amelia Hartman</i> ; <i>David Cunningham, PhD*</i>
11:30 a.m. - 1:00 p.m.	<b>B34</b>	<b>The Detection of Bleach (Sodium Hypochlorite) in Dialysis Blood Lines and Syringes in a Serial Murder Investigation</b> <i>S. Frank Platek, MS</i> ; <i>John B. Crowe, BS</i> ; <i>David S. Jackson, BS*</i>
11:30 a.m. - 1:00 p.m.	<b>B35</b>	<b>Comparison of the Restek Rtx®-5, Rxi®-1ms, and Rxi®-1HT Gas Chromatography (GC) Columns for the Qualitative Analysis of Synthetic Cannabinoids</b> <i>Laurel A. Hardy, BS*</i> ; <i>Carrie J. Kirkpatrick, BS</i> ; <i>Pamela J. Staton, PhD</i> ; <i>Lauren L. Richards-Waugh, PhD</i>
11:30 a.m. - 1:00 p.m.	<b>B36</b>	<b>Colorimetric-Based Paper Microfluidic Devices for the Presumptive Determination of Seized Drugs</b> <i>Ling Wang, MS*</i> ; <i>Bruce R. McCord, PhD</i> ; <i>Giacomo Musile, PhD</i> ; <i>Jashaun Bottoms</i> ; <i>Franco Tagliaro, PhD, MD</i>
11:30 a.m. - 1:00 p.m.	<b>B37</b>	<b>Evaluation of Microscopy and Vibrational Spectroscopy for the Discrimination of Purple and Blue Nail Polishes</b> <i>Brianna Kroon*</i> ; <i>Elaine M. Pagliaro, JD</i> ; <i>Brooke W. Kammrath, PhD</i>
11:30 a.m. - 1:00 p.m.	<b>B38</b>	<b>Characterization by Scanning Electron Microscopy With Energy-Dispersive X-Ray Spectroscopy (SEM/EDX) of Nail and Gel Polishes and Its Real-World Applications</b> <i>Audriana M. Wagner*</i> ; <i>R. Christopher O'Brien, PhD</i> ; <i>Elaine M. Pagliaro, JD</i> ; <i>Brooke W. Kammrath, PhD</i>
11:30 a.m. - 1:00 p.m.	<b>B39</b>	<b>The Analysis and Classification of Tire Rubber Deposits Using Pyrolysis-Gas Chromatography/Mass Spectrometry (Py-GC/MS)</b> <i>Rebecca Thielen, BS*</i>

## Thursday — Session I

### Current Events in Forensic Policy

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*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



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8:40 a.m.	-	9:10 a.m.	<b>B40</b>	<b>Organization of Scientific Area Committees (OSAC) Activities Impacting Laboratory Operations</b> <i>John P. Jones II, MBA*</i>
9:10 a.m.	-	9:40 a.m.	<b>B41</b>	<b>Organization of Scientific Area Committees (OSAC) — Increasing Visibility of Standards in Forensic Science and the Potential Impact in the Laboratory and the Courtroom</b> <i>Mark D. Stolorow, MS, MBA*</i>
9:40 a.m.	-	10:00 a.m.		<b>Break</b>

## Fire Debris and Explosives

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*Moderator: Katherine D. Hutches, PhD*  
*ATF*  
*Walnut Creek, CA*

*Co-Moderator: Laurel V. Mason, BS*  
*Analytical Forensic Associates*  
*Lilburn, GA*

10:00 a.m.	-	10:30 a.m.	<b>B42</b>	<b>Chemometric Analysis of Gasoline Samples Utilizing Direct Analysis in Real-Time Mass Spectrometry (DART®-MS)</b> <i>Ashley Davis, MS; Matthew Pavlovich, PhD; Joseph H. LaPointe, BSc; Brian Musselman, PhD; Adam B. Hall, PhD*</i>
10:30 a.m.	-	10:45 a.m.	<b>B43</b>	<b>Using Atmospheric Pressure Chemical Ionization/Mass Spectrometry (APCI/MS) and Flow Injection for the Screening of Arson Accelerants</b> <i>Clare M. Fried, BS*; Thomas H. Pritchett, MS; Michelle Shortell, MS</i>
10:45 a.m.	-	11:00 a.m.	<b>B44</b>	<b>Practical Methods for Prohibiting Microbial Degradation of Ignitable Liquids in Soil Samples</b> <i>James Hoult, BS*; Katherine D. Hutches, PhD</i>
11:00 a.m.	-	11:15 a.m.	<b>B45</b>	<b>The Surprising Effect of Temperature on the Weathering of Gasoline</b> <i>Heather Birks, BS*; Ashley Cochran, BS*; Tyler Williams; Glen P. Jackson, PhD</i>
11:15 a.m.	-	11:30 a.m.	<b>B46</b>	<b>Mathematically Modeling Chromatograms of Evaporated Ignitable Liquids for Fire Debris Applications</b> <i>Rebecca J. Brehe, BS; John W. McIlroy, PhD; Ruth Waddell Smith, PhD*; Victoria L. McGuffin, PhD</i>
11:30 a.m.	-	11:45 a.m.	<b>B47</b>	<b>Characterization of Aluminum (Al) Powders in Explosives Utilizing Particle Micromorphometry</b> <i>JenaMarie Baldaino, BS*; Danica Ommen, MS; Joshua Dettman, PhD; Raleigh Parrott II; Jack Hietpas, PhD; JoAnn Buscaglia, PhD</i>
11:45 a.m.	-	12:00 p.m.	<b>B48</b>	<b>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</b> <i>Jordan Ash, BA*; John V. Goodpaster, PhD</i>



# CRIMINALISTICS

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12:00 p.m. - 12:15 p.m.	<b>B49</b>	<b>High-Sensitivity Detection and Separation of High Explosives in Environmental Samples</b> <i>Christopher M. Rollman, BS*; Karen A. Brensinger, MFS; Christine Copper, PhD; Ashton Genzman, BS; Jacqueline Rine, BS; Ira S. Lurie, PhD; Mehdi Moini, PhD</i>
12:15 p.m. - 1:00 p.m.	<b>Lunch</b>	

## Poster Session

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11:30 a.m. - 1:00 p.m.	<b>B50</b>	<b>Application of a Linear-Targeted Approach in Multiplex Amplification of the Mitochondrial Genome</b> <i>Maureen Hickman, MS*; Kelly Grisedale, PhD</i>
11:30 a.m. - 1:00 p.m.	<b>B51</b>	<b>Assessment of Low-Level Error in Massively Parallel Sequencing (MPS) Data Sets Generated Using the Illumina® MiSeq® Platform and Synthesized Human Mitochondrial DNA Oligonucleotides</b> <i>Brittania J. Bintz, MSc*; Timothy Driscoll, PhD; Mark R. Wilson, PhD</i>
11:30 a.m. - 1:00 p.m.	<b>B52</b>	<b>Evaluation of Collection Protocols for the Recovery of Biological Samples From Crime Scenes</b> <i>Dina Al Oraer, BS*</i>
11:30 a.m. - 1:00 p.m.	<b>B53</b>	<b>Single Molecule Forensic DNA Characterization With Laser-Induced Nanopore Heating</b> <i>Sarah J. Seashols Williams, PhD*; Christopher Angevine, BS; Nicole Auka; Joseph E. Reiner, PhD</i>
11:30 a.m. - 1:00 p.m.	<b>B54</b>	<b>Forensic Application of Massively Parallel Sequencing (MPS) With the Ion Torrent™ Multiplex Mitochondrial Genome Panel and Hi-Q™ Sequencing Chemistry</b> <i>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</i>
11:30 a.m. - 1:00 p.m.	<b>B55</b>	<b>From Fragment Isolation to DNA Amplification: A Detailed Protocol for Using Plant and Insect Material in Forensics</b> <i>Megan L. Jackson, BS*; Kelly A. Meiklejohn, PhD; Jack Hietpas, PhD; Libby A. Stern, PhD; James M. Robertson, PhD</i>
11:30 a.m. - 1:00 p.m.	<b>B56</b>	<b>Investigation of the Genomics of Cannabinoid Biosynthesis in <i>Cannabis Sativa</i></b> <i>Robert W. Allen, PhD*; Lindsey N. Allen, BS; Jane Ketner Pritchard, BS; Jun Fu, PhD; Rachel Wellendorf, BS; Lindsey Yoder, MSFS</i>
11:30 a.m. - 1:00 p.m.	<b>B57</b>	<b>Current Efforts on Developmental Aspects of Forensic Botany in Brazil</b> <i>Renato T. Ferreira de Paranaíba, BA*; Carlos B. Carvalho, PhD; Jorge Freitas, PhD; Gustavo Chemale, PhD; Katia Michelin, MSc</i>



# CRIMINALISTICS



11:30 a.m.	-	1:00 p.m.	<b>B58</b>	<b>Inferring Geographical Origin of Forensic Evidence Via DNA Barcodes</b> <i>Jack N. Lane, MS; Michael N. Parsons, MS*; Donia Slack, MS</i>
11:30 a.m.	-	1:00 p.m.	<b>B59</b>	<b>Botanical DNA Evidence in a Case of Robbery and Property Crime: Application of High Resolution Melting Analysis of <i>Triticum Aestivum</i> L. Grains</b> <i>Alejandra Figueroa, BSc*; Jaime H. Solano, PhD; Leonardo I. Anabalon; David A. Gangitano, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>B60</b>	<b>Using DNA Barcoding to Detect Fish Substitutions in Brazil</b> <i>Carlos B. Carvalho, PhD*</i>
11:30 a.m.	-	1:00 p.m.	<b>B61</b>	<b>Effects of Bacterial DNA on Human Profiles</b> <i>Kevin G. Smolar, MS; Gina Dembinski, MS*; Christine J. Picard, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>B62</b>	<b>Optimal Time for Forensic Screening of Evidence Based on Fluorescent Variation of Seminal Fluid</b> <i>Jack N. Lane, MS*; Donia Slack, MS</i>
11:30 a.m.	-	1:00 p.m.	<b>B63</b>	<b>The Identification and Analysis of Burnt Bloodstains</b> <i>Rebecca Nelson, BS; Maranda M. Hirst; Peter Bilous, PhD*</i>
11:30 a.m.	-	1:00 p.m.	<b>B64</b>	<b>Migration of Seminal Fluid Components and Spermatozoa in Semen Stains Exposed to Moisture</b> <i>Lyndsey T. Brown, BS*; Robin W. Cotton, PhD; Amy N. Brodeur, MFS</i>
11:30 a.m.	-	1:00 p.m.	<b>B65</b>	<b>“Who Is My Father?” The Role of Forensic Genetics in the Resolution of a Paternity Case</b> <i>Ciro Di Nunzio, MFS, PhD*; Isabella Aquila, MD*; Michele Di Nunzio, BS; Matteo Borrini, PhD; Maurizio Saliva, MD; Flavio Saia, BS; Pietrantonio Ricci</i>
11:30 a.m.	-	1:00 p.m.	<b>B66</b>	<b>Human Remains in Southern Italian Cemeteries: When the Type of Burial Influences the Results of DNA Extraction</b> <i>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</i>
11:30 a.m.	-	1:00 p.m.	<b>B67</b>	<b>Development of a Portable Detection and Image-Processing System for Latent Fingerprints Using Time-Resolved Spectroscopy</b> <i>Hidetoshi Kakuda*; Norimitsu Akiba, PhD; Daisuke Imoto, MS; Ken'ichi Tsuchiya, PhD; Kenji Kurosawa; Kenro Kuroki, PhD; Shigeki Takeuchi, PhD; Osamu Shimoda, BS</i>
11:30 a.m.	-	1:00 p.m.	<b>B68</b>	<b>Fingerprint Ridge Drift: An Undescribed Phenomenon</b> <i>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</i>
11:30 a.m.	-	1:00 p.m.	<b>B69</b>	<b>Fingerprint Detection by Two-Photon Excitation With a Femtosecond Fiber Laser</b> <i>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</i>





## CRIMINALISTICS

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11:30 a.m.	-	1:00 p.m.	<b>B70</b>	<b>Method Validation Parameters for Drugs and Explosives in Ion Mobility Spectrometry (IMS)</b> <i>A. Bakarr Kanu, PhD*</i>
11:30 a.m.	-	1:00 p.m.	<b>B71</b>	<b>Quantitation of Major Cannabinoids Found in Seized Marijuana Using Automated Headspace/Solid-Phase Microextraction Coupled With Gas Chromatography/Mass Spectrometry (HS/SPME-GC/MS)</b> <i>Anastasia M. Brown, BS*; James D. Sweet, PhD; Jorn Chi-Chung Yu, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>B72</b>	<b>Analysis of Seized Hypodermic Syringes for Drug Content</b> <i>Thomas A. Brettell, PhD*; Robyn Pyle, MS; Linda Burdick, BS</i>
11:30 a.m.	-	1:00 p.m.	<b>B73</b>	<b>The Development of a Novel Color Test for Improved Detection of Synthetic Cathinones</b> <i>Charles R. Cornett, PhD*; Nicole Kloepfer; Brooke Tashner, BS; Tsunghsueh Wu, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>B74</b>	<b>Further Characterization of Opiates in Poppy Pod Tea Preparations</b> <i>Angela S. Mohrhaus, BS*; Heather A. McCauley, BS; Jill M. Robinson, MFS; Samuel R. Gratz, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>B75</b>	<b>Rapid Screening of Seized Drugs Using Direct Analysis in Real-Time Mass Spectrometry (DART®-MS)</b> <i>Yuriy Uvaydov, MS*</i>
11:30 a.m.	-	1:00 p.m.	<b>B76</b>	<b>Evaluation of a Direct Analysis Portable Mass Spectrometer (MS) for the Detection of Drugs and Related Substances</b> <i>Nichole D. Bynum, MS*; Katherine N. Moore, MS; Zachary E. Lawton, BS; Christopher C. Mulligan, PhD; Megan Grabenauer, PhD; Jeri D. Roper-Miller, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>B77</b>	<b>Analysis of Cannabis for the Presence of Pesticides and Adulterants With High Resolution Tandem Mass Spectrometry</b> <i>Werner Bernhard, DSc*; Stefan Koenig, PhD; Susanne Nussbaumer, PhD; Wolfgang Weinmann, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>B78</b>	<b>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)</b> <i>Jessica Winborn, BS*; James D. Sweet, PhD; Jorn Chi-Chung Yu, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>B79</b>	<b>The Effects of Ultraviolet (UV) Radiation on Time-Dependent Changes in the Composition of Latent Fingerprints</b> <i>Allyson K Diggmann, BS*; James W. McGill, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>B80</b>	<b>Effects of Donor Age and Water Exposure on the Quality of Oil Red O-Stained, Water-Exposed Latent Prints</b> <i>Kitrina D. Skaggs, BA*; James W. McGill, PhD; Madalyn R. Robinson, BA</i>

# CRIMINALISTICS



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11:30 a.m.	-	1:00 p.m.	<b>B81</b>	<b>Fingerprint Loss in a Cancer Patient With No Side Effects</b> <i>Luciano Garofano, PhD*</i> ; <i>Francesca Negri, MD, PhD</i> ; <i>Annamaria De Giorgi, MD</i> ; <i>Luigi Bisogno</i>
11:30 a.m.	-	1:00 p.m.	<b>B82</b>	<b>Pyrolysis Products of BK-2C-B and BK-2C-I, Beta-Keto Analogs of 2,5-Dimethoxy-4-Bromophenethylamine</b> <i>Pierce V. Kavanagh, PhD</i> ; <i>Kelly B. Texter, BS</i> ; <i>Rachel Waymack</i> ; <i>Elizabeth A. Gardner, PhD*</i>

## Materials

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*Moderator: Shirley 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*

1:00 p.m.	-	1:30 p.m.	<b>B83</b>	<b>Assessing the Utility of Detrital Quartz Surface Textures and Feldspar Mineral Chemistry for Forensic and Intelligence Applications</b> <i>Jack Hietpas, PhD*</i> ; <i>JenaMarie Baldaino, BS</i> ; <i>JoAnn Buscaglia, PhD</i> ; <i>Garrett McMahon, BS</i> ; <i>Libby A. Stern, PhD</i>
1:30 p.m.	-	1:45 p.m.	<b>B84</b>	<b>Chemical Pattern Recognition: What Can Be Extracted From Geo-Located Spectroscopic Data Sets?</b> <i>Sergey Mamedov, PhD*</i>
1:45 p.m.	-	2:00 p.m.	<b>B85</b>	<b>Differential Sampling of Footwear to Separate Alternative Particle Signals</b> <i>David A. Stoney, PhD*</i> ; <i>Paul L. Stoney, MBA</i>
2:00 p.m.	-	2:15 p.m.	<b>B86</b>	<b>Total Imaging Analysis of Paint</b> <i>Roger Kahn, PhD</i> ; <i>William M. Davis, PhD*</i>
2:15 p.m.	-	2:30 p.m.	<b>B87</b>	<b>When Are Variations in Duct Tape the Result of True Differences? A Cautionary Tale</b> <i>Diana M. Wright, PhD*</i>
2:30 p.m.	-	2:45 p.m.	<b>B88</b>	<b>Intra-Roll and Intra-Product Variations in Duct Tapes</b> <i>Andria H. Mehlretter, MSFS*</i> ; <i>Diana M. Wright, PhD</i> ; <i>Michael A. Smith, PhD</i>
2:45 p.m.	-	3:05 p.m.	<b>B89</b>	<b>Hair Analysis: Learning From the Past and Moving Toward the Future</b> <i>Sandra Koch, MS*</i>
3:05 p.m.	-	3:20 p.m.		<b>Break</b>



# CRIMINALISTICS

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## The Trials and Troubles of Transitioning New Technology Into the Forensic Laboratory

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*Moderator: Christopher S. Palenik, PhD*  
*Microtrace*  
*Elgin, IL*

*Co-Moderator: Gerald M. LaPorte, MSFS*  
*National Institute of Justice*  
*Office of Inv & Forensic Science*  
*Washington, DC*

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|-----------|---|-----------|------------|--|
| 3:20 p.m. | - | 3:40 p.m. | <b>B90</b> | <b>Introducing New Instrumental Technologies in the Forensic Drug Laboratory — Learning From Past Experiences</b><br><i>Sandra E. Rodriguez-Cruz, PhD*</i> |
| 3:40 p.m. | - | 4:00 p.m. | <b>B91</b> | <b>Embracing Change: Transitioning Pattern Evidence Research Into Forensic Science Operations</b><br><i>JoAnn Buscaglia, PhD*</i>                          |
| 4:00 p.m. | - | 4:20 p.m. | <b>B92</b> | <b>Implementing 3D Technology Into a 2D Philosophy</b><br><i>Heather J. Seubert, MS*</i>   |
| 4:20 p.m. | - | 4:40 p.m. | <b>B93</b> | <b>The Transition From Research to Routine Use in the Forensic Chemistry Laboratory</b><br><i>Jose R. Almirall, PhD*</i>                                   |
| 4:40 p.m. | - | 5:00 p.m. | <b>B94</b> | <b>The Future of Forensic Instrumental Methods of Analysis</b><br><i>Glen P. Jackson, PhD*</i>   |
| 5:00 p.m. | - | 5:30 p.m. |            | <b>Discussion</b>  |

## Thursday — Session II

### DNA Mixtures: Part I

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*Moderator: Jamie Daughetee, MS*  
*Los Angeles, CA*

*Co-Moderator: Matthew J. Gamette, MS*  
*Meridian, ID*

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|-----------|---|-----------|------------|---|
| 8:40 a.m. | - | 9:10 a.m. | <b>B95</b> | <b>Multi-Software Interpretation of Complex Mixture DNA Profiles: A Comprehensive Approach to Explaining DNA Interpretation Results in Courtrooms</b><br><i>Eugenio Alladio, MS*; Paolo Garofano, MD, PhD*; Roberto Testi, MD, PhD; Marco Vincenti, MS; Denise Caneparo, MS; Giuseppina D'amico</i> |
| 9:10 a.m. | - | 9:30 a.m. | <b>B96</b> | <b>Threshold to Probabilistic DNA Profile Interpretation: Why Change?</b><br><i>Stuart Cooper, MSc*; Catherine E. McGovern, MSc; Jo-Anne Bright; Duncan Taylor, PhD; Damien Abarno, PhD; John S. Buckleton, PhD</i>   |
| 9:30 a.m. | - | 9:50 a.m. | <b>B97</b> | <b>Questioning the Unquestioned — Rethinking and Rejecting Traditional Mixture Concepts and Assumptions</b><br><i>Charles H. Brenner, PhD*</i>  |

# CRIMINALISTICS



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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. Roper-Miller, PhD*;  
*Lyndsie N. Ferrara, MS*

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

## DNA Mixtures: Part II

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*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*;  
*Donia Slack, MS\**

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

## No More Mixtures

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*Moderator: Uyen N. Henson, MS*  
*Garland, TX*

*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\**



# CRIMINALISTICS

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1:30 p.m.	-	1:45 p.m.	<b>B105</b>	<b>Cell Separation of Multiple Contributor Samples to Facilitate DNA Mixture Analysis</b> <i>Nancy A. Stokes, MS*; Cristina E. Stanciu, BS; Christopher J. Ehrhardt, PhD; Susan Greenspoon, PhD</i>
1:45 p.m.	-	2:00 p.m.	<b>B106</b>	<b>Separation of Compromised Blood Mixtures Using Fluorescence-Activated Cell Sorting (FACS) for Single-Source Short Tandem Repeat (STR) Profiling</b> <i>Cristina E. Stanciu, BS*; Ye Jin Kwon, MS; Sarah R. Ingram, BS; Christopher J. Ehrhardt, PhD</i>
2:00 p.m.	-	2:15 p.m.	<b>B107</b>	<b>Development of a New DNA Screening System of Criminal Samples Using ForensicGEM™ and Adhesive Sheets</b> <i>Shinichiro Akase, PhD*; Gregory S. Hummel, MS; Yasuhide Iwata; Yuki Kariya, MS; Takeshi Yoshikawa; Kazumasa Sekiguchi, PhD</i>
2:15 p.m.	-	2:30 p.m.	<b>B108</b>	<b>Optimized Methods for Collection and Extraction of DNA From Archived Latent Fingerprints</b> <i>April D. Solomon, BS*; Madison Hytinen; Aryn M. McClain, BS; Marilyn T. Miller, EdD; Tracey Dawson Cruz, PhD</i>
2:30 p.m.	-	2:45 p.m.	<b>B109</b>	<b>Comparison of DNA Yield and Short Tandem Repeat (STR) Success Rates From Various Tissues in Embalmed Bodies</b> <i>Amanda Wheeler, BS*; Natalia Czado, MS; David A. Gangitano, PhD; Sheree R. Hughes-Stamm, PhD</i>
2:45 p.m.	-	3:00 p.m.	<b>B110</b>	<b>Standardized Kinship Data Test Set for Rapid DNA Validation</b> <i>Stephanie DeDore, BS*; Yvette Crandall, MS; Daniele S. Podini, PhD; Amanda C. Sozer, PhD</i>
3:00 p.m.	-	3:20 p.m.		<b>Break</b>

## New Advances in DNA Processing

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*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.	<b>B111</b>	<b>Development of a Microfluidic Differential Extraction Module and Refinement of Infrared (IR) -Mediated Short Tandem Repeat (STR) Amplification for a Rotation-Driven Microdevice</b> <i>Kemper Gibson*; Jordan Cox, MS; Kimberly Jackson; James P. Landers, PhD; Tracey Dawson Cruz, PhD</i>
3:45 p.m.	-	4:00 p.m.	<b>B112</b>	<b>Direct Amplification and Commonly Encountered Crime Scene Substrates</b> <i>Katelyn M. Gigl, BS*; Reena Roy, PhD</i>

# CRIMINALISTICS



4:00 p.m. - 4:15 p.m.	<b>B113</b>	<b>Tissue Preservation With Direct-to-Polymerase Chain Reaction (PCR) for DNA Profiling: An Alternative Disaster Victim Identification (DVI) Approach</b> <i>Amy E. Sorensen, MSFS*; Clare Berry, BAS; David Bruce, PhD; Michelle Gahan, PhD; Sheree R. Hughes-Stamm, PhD; Dennis McNevin, PhD</i>
4:15 p.m. - 4:30 p.m.	<b>B114</b>	<b>Enhanced DNA Extraction Via the Reduction and Alkylation of Disulfide Bonds by Iodoacetamide (IAM) and Tris(2-carboxyethyl)phosphine (TCEP)</b> <i>Megan E. Grimes, MFS*; Leah E. Willis, PhD; Jodi A. Irwin, PhD; Tamara Moretti, PhD; Mark F. Kavlick, BS</i>
4:30 p.m. - 4:45 p.m.	<b>B115</b>	<b>The New Kit on the Block: Optimization of the QIAGEN® Investigator® 24plex GO! Kit for Direct Amplification</b> <i>Daniel Watsula, MS*; Jon Davoren, MS; Jangbir Sangha, MA</i>
4:45 p.m. - 5:00 p.m.	<b>B116</b>	<b>Increasing DNA Mixture Analysis Quality and Efficiency</b> <i>George R. Riley, PhD*; Robert M. Goor, PhD; Douglas Hoffman, MS; Stephen Sherry, PhD</i>
5:00 p.m. - 5:15 p.m.	<b>B117</b>	<b>Using Bayesian Networks for the Interpretation of Low-Template DNA Profiles at the Activity Level</b> <i>Ka-Man Pun*; Christophe Champod, PhD</i>

## Friday — Session I

### Drug Chemistry: Part I

*Moderator: Agnes D. Winokur, MS  
Southeast Laboratory  
Miami, FL*

*Co-Moderator: Elizabeth A. Gardner, PhD  
UAB Department of Justice  
Birmingham, AL*

8:25 a.m. - 8:40 a.m.	<b>B118</b>	<b>2016 Update From the Scientific Working Group for the Analysis of Seized Drugs (SWGDRUG)</b> <i>Sandra E. Rodriguez-Cruz, PhD*</i>
8:40 a.m. - 8:55 a.m.	<b>B119</b>	<b>Analysis and Extraction of Fentanyl in Seized Heroin Samples</b> <i>Charles A. Richardson-Gongora*; Michael M. Healy, MBA; Gerald Mattson, PhD</i>
8:55 a.m. - 9:10 a.m.	<b>B120</b>	<b>Analysis of Prescription Drugs With Abuse-Deterrent Properties</b> <i>Robert P. Bianchi, BS*</i>
9:10 a.m. - 9:25 a.m.	<b>B121</b>	<b>The Prevalence of Promethazine Dimerization in Forensic Samples of “Purple Drank”</b> <i>Tyler Williams*; James T. Miller, BS; Glen P. Jackson, PhD</i>
9:25 a.m. - 9:40 a.m.	<b>B122</b>	<b>Adulteration of Psychoactive Herbal Supplements Revealed by Direct Analysis in Real-Time Mass Spectrometry (DART®-MS)</b> <i>Ashton D. Lesiak*; Robert B. Cody, PhD; Masaaki Ubukata, PhD; Rabi A. Musah, PhD</i>



# CRIMINALISTICS

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|------------|---|------------|-------------|--|
| 9:40 a.m.  | - | 9:55 a.m.  | <b>B123</b> | <b>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)</b><br><i>Mehdi Moini, PhD*</i> ; <i>Christopher M. Rollman, BS</i>  |
| 9:55 a.m.  | - | 10:10 a.m. | <b>B124</b> | <b>Single Crystal X-Ray Diffraction in Forensic Drug Analysis</b><br><i>Matthew R. Wood, MS*</i> ; <i>Thomas A. Brettell, PhD</i> ; <i>Ivan Bernal, PhD</i> ;<br><i>Hugh W. Thompson, PhD</i> ; <i>Roger A. Lalancette, PhD</i>  |
| 10:10 a.m. | - | 10:25 a.m. | <b>B125</b> | <b>Microcrystalline Tests in Conjunction With Vibrational Spectroscopy for the Analysis of Illicit Drugs and Their Metabolites</b><br><i>Brooke W. Kammrath, PhD*</i> ; <i>Shannon Tilly</i> ; <i>Kara Kovacev</i> ; <i>Natasha L. Kuegler, BS</i> ;<br><i>Pauline E. Leary, PhD</i> ; <i>John A. Reffner, PhD</i> |
| 10:25 a.m. | - | 10:40 a.m. |             | <b>Break</b>   |

## Drug Chemistry: Part II

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*Moderator: Theresa B. Browning, MFS*  
*Miami, FL*

*Co-Moderator: Thomas M. Blackwell, BS*  
*DEA*  
*New York, NY*

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|------------|---|------------|-------------|---|
| 10:40 a.m. | - | 11:00 a.m. | <b>B126</b> | <b>Using Climate Modeling to Predict the Origin of Seized Cannabis</b><br><i>Jurian A. Hoogewerff, PhD*</i> ; <i>Shaerii Sarker, MSc</i> ; <i>Alan Hayman, PhD</i> ;<br><i>Russell Frew, PhD</i>  |
| 11:00 a.m. | - | 11:15 a.m. | <b>B127</b> | <b>Applicability of Ultra High-Performance Supercritical Fluid Chromatography (UHPSFC) as a Separation Technique for Synthetic Cannabinoids and Synthetic Cathinones</b><br><i>Ira S. Lurie, PhD*</i> ; <i>Stephanie R. Breitenbach, BS</i> ; <i>Walter F. Rowe, PhD</i> ;<br><i>Mike Hitchcock, MS</i> ; <i>Ioan Marginean, PhD</i> ; <i>Stacey L. Obrien, BS</i> ;<br><i>Bruce R. McCord, PhD</i> |
| 11:15 a.m. | - | 11:30 a.m. | <b>B128</b> | <b>Identification of Regioisomers Via Gas Chromatography Coupled With Vapor-Phase Infrared Detection (GC-IRD)</b><br><i>Janice L. Aleman, BS*</i> ; <i>Jesse M. Zavala, MS</i> ; <i>Kyle E. Vircks, MS</i> ;<br><i>Warren C. Samms, PhD</i>   |
| 11:30 a.m. | - | 11:45 a.m. | <b>B129</b> | <b>Capillary Electrophoresis/Mass Spectrometry (CE/MS) as an Effective Tool for Identification of Illicit Drugs and Their Optical Isomers</b><br><i>Mehdi Moini, PhD*</i> ; <i>Christopher M. Rollman, BS</i> ; <i>Mike Hitchcock, MS</i> ;<br><i>Ioan Marginean, PhD</i>   |
| 11:45 a.m. | - | 12:00 p.m. | <b>B130</b> | <b>Characterization of Synthetic Phenethylamines Using High Resolution Mass Spectrometry (HRMS)</b><br><i>Alexandria Anstett, BS*</i> ; <i>Fanny Chu, BS</i> ; <i>Ruth Waddell Smith, PhD</i>   |



# CRIMINALISTICS




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12:00 p.m. - 12:15 p.m.    **B131**    **Differentiation of Cathinone Isomers Using High Resolution Collision-Induced Dissociation Mass Spectrometry (CID/MS)**  
*Cynthia Kaeser, MS\*; A. Daniel Jones, PhD; Ruth Waddell Smith, PhD*

12:15 p.m. - 1:00 p.m.    **Lunch**

## Poster Session

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11:30 a.m. - 1:00 p.m.    **B132**    **The Effects of Water Immersion on the Recovery of DNA From Human Remains**  
*Ema H. Graham\*; Shanae J. Armstrong, MS; Michael S. Adamowicz, PhD*

11:30 a.m. - 1:00 p.m.    **B133**    **Comparison of Three Filtration Devices for Recovery of Low Level and Degraded DNA**  
*Nichole M. Tuscher, MFS\*; Ismail M. Sebetan, MD, PhD\*; Paul Stein, PhD\**

11:30 a.m. - 1:00 p.m.    **B134**    **Selective Degradation Using the Erase™ Sperm Isolation Kit and PrepFiler® Purification**  
*Melissa D. Moore, BS\*; Richard A. Gustilo; Mary M. Hong, BS; Ruth H. Ikeda, PhD; Stacy Vallercamp; Ismail M. Sebetan, MD, PhD\*; Paul Stein, PhD\**

11:30 a.m. - 1:00 p.m.    **B135**    **Evaluation of the QIAGEN® Investigator 24Plex Polymerase Chain Reaction (PCR) Kit for Amplification of Forensic Samples**  
*Clinton D. Buchanan, PhD\*; Joel D. Sutton, MSFS*

11:30 a.m. - 1:00 p.m.    **B136**    **Working With Challenging Samples: An Independent Assessment of the Relative Performance of the Promega® Fusion™ and InnoGenomics® InnoTyper™ Kit With Probative Samples**  
*James Anstead, PhD\*; Erica Reynaga, MS; Kelsy Lowther, MS; Brandt G. Cassidy, PhD*

11:30 a.m. - 1:00 p.m.    **B137**    **Faux-Dis: An Online, Searchable DNA Database Available for Educational Purposes**  
*Ashley Hall, PhD\**

11:30 a.m. - 1:00 p.m.    **B138**    **Human Short Tandem Repeat (STR) Profiles From Blood-Fed Mosquitos**  
*Jared Latiolais, MSc; Dane T. Plaza, BS\*; Andrew B. Feldman, PhD; Mobolaje Okulate, PhD; Nirbhay Kumar; Robert A. Bever, PhD*

11:30 a.m. - 1:00 p.m.    **B139**    **Examining the Contribution of Sampling to Peak Height Imbalance in Low Template DNA Samples Using a Single-Tube Extraction Protocol**  
*Thutrang Nguyen, BA\*; Robin W. Cotton, PhD*

11:30 a.m. - 1:00 p.m.    **B140**    **Working to Solve Compatibility Issues Between Impression Enhancement and DNA Analysis**  
*Jessica Zarate, MS; Jodi Lynn Barta, PhD\**

11:30 a.m. - 1:00 p.m.    **B141**    **Updates to the Forensic Research/Reference on Genetics Knowledge Base (FROG-kb) Database**  
*Kenneth Kidd, PhD; Haseena Rajeevan, PhD; Katherine N. Moore, MS\*; Richard Satcher, MS; Patricia A. Foley-Melton, PhD; Jeri D. Roper-Miller, PhD*



# CRIMINALISTICS

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11:30 a.m.	-	1:00 p.m.	<b>B142</b>	<b>Examination of 20 Retrotransposable Polymorphic Insertion/Null (INNUL) Markers for Their Utility in Kinship Testing Using the Commercial Software Program LSAM</b> <i>AnniLauri Villeme, BS*; Gretchen E. Bartizal; Becky Hill, MS; Michael D. Coble, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>B143</b>	<b>Complex Mixtures and the Minimum Number of Contributors: A Case Study</b> <i>Nathaniel D. Adams, BS; Ranajit Chakraborty, PhD; Carrie Rowland, MSc; Dan Krane, PhD*</i>
11:30 a.m.	-	1:00 p.m.	<b>B144</b>	<b>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</b> <i>Daniela Lacerenza, PhD; Giancarlo Di Vella, MD, PhD*; Carlo Robino</i>
11:30 a.m.	-	1:00 p.m.	<b>B145</b>	<b>Utility of InnoTyper™ 21 in Analysis of Degraded Human DNA Recovered From Maggot Crop Contents</b> <i>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*</i>
11:30 a.m.	-	1:00 p.m.	<b>B146</b>	<b>Differentiation of Sand Grains From Different Locations Using Image Analysis and Multivariate Statistics</b> <i>Jacob Hock*; Walter F. Rowe, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>B147</b>	<b>Development of Paper Microfluidic Devices for the Detection of Low-Explosives Residue</b> <i>Kathryn R. Chabaud, BS*; Bruce R. McCord, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>B148</b>	<b>Crude Oil Characteristics for Identifying Petroleum Distillates in Fire Debris</b> <i>Jeanet Hendrikse, MSc*</i>
11:30 a.m.	-	1:00 p.m.	<b>B149</b>	<b>Forensic Analysis of Textile Fibers Exposed to Laundry Detergents Using Fluorescence Excitation-Emission Spectroscopy</b> <i>Nirvani Mujumdar, MS*</i>
11:30 a.m.	-	1:00 p.m.	<b>B150</b>	<b>Investigative Predictions of Smokeless Powder Manufacturers</b> <i>Dana-Marie K. Dennis, PhD; Mary R. Williams, MS*; Michael E. Sigman, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>B151</b>	<b>Modern Methodology for Explosives Tagging and Encoding Based on Luminescent Metal Organic Frameworks</b> <i>Filipe Gabriel B. Mauricio, MSc*; Ingrid T. Weber, PhD; Adauto Z. Pralon, MSc; Marcio Talhavini, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>B152</b>	<b>Do the Bulk Area and the Exterior Surface of Modern Container Glass Exhibit Differences in Refractive Index (RI) Measurements?</b> <i>Joseph Insana*; Patrick Buzzini, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>B153</b>	<b>Comparison of Cosmetic Foundations by Analysis of Preservative Content Using Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS)</b> <i>Thomas A. Brettell, PhD*; Emily A. Myers, BS</i>

# CRIMINALISTICS




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11:30 a.m.	-	1:00 p.m.	<b>B154</b>	<b>Development of a Sample Clean-Up Procedure for the Recovery of Trace Quantities of Organic Explosives in Soil and Sand</b> <i>Erin Waddell, PhD*</i> ; <i>Jennifer Thomas, PhD</i> ; <i>Christopher C. Donnelly</i> ; <i>Mark L. Miller, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>B155</b>	<b>Analysis of Inks Via a Microfluidics Extraction Device With a Quadrupole Time-of-Flight Mass Spectrometer (qTOF/MS)</b> <i>Emily Lichtenberger, BS*</i> ; <i>Nelson R. Vinuesa, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>B156</b>	<b>Gas Chromatography/Mass Spectrometry (GC/MS) Measurement of Gasoline Vapor Absorption on Clothing in a Confined Space</b> <i>Charles R. Cornett, PhD*</i> ; <i>Sara C. Karp, BS</i> ; <i>Ruth M. Henk, BS</i> ; <i>Kristy Stowe, BS</i> ; <i>Raymond G. Lenz, BS</i>
11:30 a.m.	-	1:00 p.m.	<b>B157</b>	<b>Observations on the Incidence of Transfer of Fibers to Knives During Penetration Cuts</b> <i>Barbara Doupe, MSc*</i> ; <i>Vanessa Londero, BSc</i> ; <i>Cecilia Hageman, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>B158</b>	<b>Low-Cost Lanthanide-Organic Framework Markers for Gunshot Residue (GSR) Identification</b> <i>Isabela Bastos Serwy*</i> ; <i>Kaline Wanderley, PhD</i> ; <i>Marcella Auxiliadora de Melo Lucena, MS*</i> ; <i>Marcio Talhavini, PhD</i> ; <i>Marcelo O. Roderigues, PhD</i> ; <i>Ingrid T. Weber, PhD*</i>
11:30 a.m.	-	1:00 p.m.	<b>B159</b>	<b>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</b> <i>Diana I. Camacho</i> ; <i>Ira S. Lurie, PhD</i> ; <i>Ioan Marginean, PhD*</i>
11:30 a.m.	-	1:00 p.m.	<b>B160</b>	<b>Analysis of Change in Nitrite-to-Nitrate Ratios in Gunshot Residue Over Time Using Ion Pairing High-Performance Liquid Chromatography (HPLC)</b> <i>Anusha Rankoth*</i> ; <i>Marianne E. Staretz, PhD</i> ; <i>Peter J. Diaczuk, BS</i> ; <i>Thomas H. Pritchett, MS</i> ; <i>Elana Conant, MS</i>

## Patterns and Impressions

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*Moderator:* *Eric S. Sahota, BA*  
*Las Vegas, NV*

*Co-Moderator:* *Philip R. Antoci, MS*  
*NY City Police Department Crime Lab*  
*Jamaica, NY*

1:00 p.m.	-	1:20 p.m.	<b>B161</b>	<b>Evaluation and Validation of a Model to Quantify the Weight of Fingerprint Evidence</b> <i>Henry J. Swofford, MSFS*</i> ; <i>Anthony Koertner</i> ; <i>Michael J. Salyards, PhD</i>
1:20 p.m.	-	1:35 p.m.	<b>B162</b>	<b>I Know It When I See It — Is Complexity the Key to Creating a Workable Documentation Policy for the Pattern Evidence Disciplines?</b> <i>Heidi Eldridge, MS*</i>



## CRIMINALISTICS

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1:35 p.m.	-	1:50 p.m.	<b>B163</b>	<b>A Bibliometric Review of the Impact of the National Academy of Sciences (NAS) Report on the Friction Ridge Discipline</b> <i>Maria A. Roberts; Kathryn B. Knorr, MS; Kyle Tom, MS*</i>
1:50 p.m.	-	2:05 p.m.	<b>B164</b>	<b>Fingerprint Aging Mechanism Determination Through Electrochemistry</b> <i>Roberto Rosa, PhD*; Roberto Giovanardi, PhD; Andrea Bozza, MSc; Paolo Veronesi, PhD; Cristina Leonelli, PhD</i>
2:05 p.m.	-	2:20 p.m.	<b>B165</b>	<b>Performance and Ricochet Characteristics of Frangible Ammunition</b> <i>Peter J. Diaczuk, BS*; Jack Hietpas, PhD; Xiao Shan Law, BS</i>
2:20 p.m.	-	2:35 p.m.	<b>B166</b>	<b>Development of a New Standard Bullet for Ballistic Quality Control</b> <i>Thomas B. Renegar, BS*; Xiaoyu A. Zheng, MS; Robert M. Thompson, BS; Theodore V. Vorbuerger, PhD; Junfeng J. Song, MS; Johannes A. Soons, PhD; James H. Yen, PhD</i>
2:35 p.m.	-	2:50 p.m.	<b>B167</b>	<b>Analyzing a Firearms Proficiency Test Using the Congruent Matching Cells (CMC) Method of Computer-Aided Topography Comparisons</b> <i>Daniel Ott, PhD*; Robert M. Thompson, BS; Junfeng J. Song, MS</i>
2:50 p.m.	-	3:05 p.m.	<b>B168</b>	<b>Modeling Firearm Tool Mark Persistence Through Objective Surface Metrology and Analysis</b> <i>Xiaoyu A. Zheng, MS*; Johannes A. Soons, PhD; Robert M. Thompson, BS; Wei Chu</i>
3:05 p.m.	-	3:20 p.m.	<b>B169</b>	<b>Proposed Congruent Match Cross-Section (CMX) Method for Ballistics Identification of Firing Pin Impressions</b> <i>Junfeng J. Song, MS*; Mingsi Tong, PhD; Hao M. Zhang, PhD; Wei Chu; Robert M. Thompson, BS*</i>
3:20 p.m.	-	3:35 p.m.		<b>Break</b>

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### Interpretation Challenges in the Non-Biological Criminalistics Disciplines: Assessing the Path

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*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*

3:35 p.m.	-	3:55 p.m.	<b>B170</b>	<b>Imparting a Meaningful Application of Statistics to Forensic Scientists</b> <i>Stephen L. Morgan, PhD*</i>
3:55 p.m.	-	4:15 p.m.	<b>B171</b>	<b>Challenges for Implementing a New Paradigm in Fire Debris Analysis and Reporting</b> <i>Mary R. Williams, MS; Michael E. Sigman, PhD*</i>
4:15 p.m.	-	4:35 p.m.	<b>B172</b>	<b>An Overview of Different Approaches to Expressing Significance in Associative Forensic Reports</b> <i>Christopher R. Bommarito, MS*</i>

# CRIMINALISTICS



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- 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!

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*Moderator: Vincent J. Desiderio, MS*  
*United States Postal Inspection Service*  
*Dulles, VA*

*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

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*Moderator: Kristy Kadash, PhD*  
*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

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*Moderator: Sara E. Bitner, MSF*  
*Pittsburgh, PA*

*Co-Moderator: Kimberly S. Kobjek, 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*



# CRIMINALISTICS

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10:55 a.m. - 11:10 a.m.	<b>B176</b>	<b>Massively Parallel Sequencing (MPS) of Microhaplotypes for Forensics</b> <i>Sharon C. Wootton, PhD*</i> ; <i>Kenneth Kidd, PhD</i> ; <i>William C. Speed, PhD</i> ; <i>Joseph P. Chang, BS</i> ; <i>Sheri J. Olson, MS</i> ; <i>Reina Langit, MS</i> ; <i>Chien-Wei Chang, PhD</i> ; <i>Robert Lagace, BS</i>
11:10 a.m. - 11:25 a.m.	<b>B177</b>	<b>Optimization of a Next Generation Sequencing (NGS) Protocol for Processing High-Quality Mitochondrial DNA (mtDNA) Samples</b> <i>Joseph D. Ring, MS*</i> ; <i>Michelle A. Peck, MFS*</i> ; <i>Erin M. Gorden, MFS*</i> ; <i>Charla Marshall, PhD</i> ; <i>Kimberly S. Andreaggi, MFS*</i>
11:25 a.m. - 11:40 a.m.	<b>B178</b>	<b>Assessing the Impact of DNA Damage on the Interpretation of Low-Level Mitochondrial DNA (mtDNA) Heteroplasmy</b> <i>Molly M. Rathbun, BS*</i> ; <i>Jennifer A. McElhoe, DPhil</i> ; <i>Mitchell M. Holland, PhD</i>
11:40 a.m. - 11:55 a.m.	<b>B179</b>	<b>Comparison of DNA Repair Methods for Improved Success With Next Generation Sequencing (NGS) of Compromised Skeletal Remains</b> <i>Erin M. Gorden, MFS*</i> ; <i>Charla Marshall, PhD*</i> ; <i>Kimberly S. Andreaggi, MFS*</i>
11:55 a.m. - 12:10 p.m.	<b>B180</b>	<b>Sequence-Based Analysis of Stutter at Short Tandem Repeat (STR) Loci: Implementation and Utilization</b> <i>Rachel Aponte*</i> ; <i>Katherine B. Gettings, PhD</i> ; <i>David L. Duewer, PhD</i> ; <i>Becky Hill, MS</i> ; <i>Michael D. Coble, PhD</i> ; <i>Peter M. Vallone, PhD</i>
12:10 p.m. - 1:00 p.m.		<b>Lunch</b>

## Advances in Biological Screening

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*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.	<b>B181</b>	<b>Light It Up: Fluorescent Biosensors for the Detection of Biological Fluids and Fingerprints</b> <i>James Gooch*</i> ; <i>Barbara Daniel, PhD</i> ; <i>Vincenzo Abbate, PhD</i> ; <i>Nunzianda Frascione, PhD</i>
1:30 p.m. - 1:45 p.m.	<b>B182</b>	<b>Streamlining Sperm Cell Detection Via Proximity Ligation Real-Time Polymerase Chain Reaction (PLIRT-PCR) With Forensic DNA Analysis</b> <i>Sarah Riman, PhD*</i> ; <i>Daniele S. Podini, PhD*</i>
1:45 p.m. - 2:00 p.m.	<b>B183</b>	<b>Developmental Validation of MicroRNAs (miRNAs) for Body Fluid Identification</b> <i>Carolyn Lewis, BS*</i> ; <i>Jamie Gentry, BS</i> ; <i>Chelsea F. Calloway, BS</i> ; <i>Nerissa Peace, BS</i> ; <i>Ariana Albornoz, MS</i> ; <i>Samantha R. Fleming, MS</i> ; <i>Christina Hayes Nash, MS</i> ; <i>Zendra E. Zehner, PhD</i> ; <i>Sarah J. Seashols Williams, PhD</i>
2:00 p.m. - 2:15 p.m.	<b>B184</b>	<b>Recent Progress in the Development of a Surface-Enhanced Raman Spectroscopy (SERS) Platform for Rapid Identification of Trace Amounts of Human Body Fluids</b> <i>Jennifer Fore, PhD</i> ; <i>Ranjith Premasiri, PhD</i> ; <i>Kathryn A. Zegarelli, BS</i> ; <i>Brandon Scott, PhD</i> ; <i>Jessica Irvine, BS</i> ; <i>Amy N. Brodeur, MFS</i> ; <i>Lawrence Ziegler, PhD*</i>



# CRIMINALISTICS




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2:15 p.m.	-	2:30 p.m.	<b>B185</b>	<b>Optimum Case Detection Limit of the Forensic Luminol Test for Bloodstains</b> <i>Stephen L. Morgan, PhD*</i> ; <i>Brianna M. Cassidy, BS</i> ; <i>Zhenyu Lu, BS</i> ; <i>Jennifer P. Martin, BS</i> ; <i>Shawna K. Tazik, BS</i> ; <i>Katherine A. Witherspoon, BS</i> ; <i>Katherine E. Kilgore</i> ; <i>Stephanie A. DeJong, BS</i> ; <i>Raymond G. Belliveau, BS</i> ; <i>Michael L. Myrick, PhD</i>
2:30 p.m.	-	2:45 p.m.	<b>B186</b>	<b>Time-Dependent Loss of Messenger RNA (mRNA) Transcripts From Forensic Samples Analyzed Using Next Generation Sequencing</b> <i>Katelyn D. Weinbrecht, MS</i> ; <i>Robert W. Allen, PhD*</i>
2:45 p.m.	-	3:00 p.m.	<b>B187</b>	<b>An Evaluation of the Differential Stability of Nucleic Acids in Biological Fluids Compromised by Environmental Exposure</b> <i>Tiffany R. Layne, BS*</i> ; <i>Zendra E. Zehner, PhD</i> ; <i>Sarah J. Seashols Williams, PhD</i>
3:00 p.m.	-	3:20 p.m.		<b>Break</b>

## New Sources of Forensic Biological Evidence

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*Moderator:* *Katerina Doneva, MS*  
*OCSO, 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.	<b>B188</b>	<b>Obtaining Significant Powers of Individual Discrimination From Hair Shaft Proteins</b> <i>Glendon Parker, PhD*</i> ; <i>Deon Anex, PhD</i> ; <i>Katelyn Mason, PhD</i> ; <i>Bradley Hart, PhD</i>
3:45 p.m.	-	4:00 p.m.	<b>B189</b>	<b>Using DNA Barcoding to Assess DNA Viability in Plant and Insect Fragments Isolated From Forensic Soil Samples</b> <i>Kelly A. Meiklejohn, PhD*</i> ; <i>Megan L. Jackson, BS</i> ; <i>Jack Hietpas, PhD</i> ; <i>Libby A. Stern, PhD</i> ; <i>James M. Robertson, PhD</i>
4:00 p.m.	-	4:15 p.m.	<b>B190</b>	<b>Evaluation of a 13-Loci Short Tandem Repeat (STR) Multiplex System for Cannabis Sativa Genetic Identification</b> <i>Rachel M. Houston, BS*</i> ; <i>Sheree R. Hughes-Stamm, PhD</i> ; <i>David A. Gangitano, PhD</i>
4:15 p.m.	-	4:30 p.m.	<b>B191</b>	<b>Development of a High Resolution Real-Time Polymerase Chain Reaction (PCR) Melt Assay for Identifying “Legal High” Plant Material</b> <i>Alicia Quinn, BS*</i> ; <i>Kelly M. Elkins, PhD</i>
4:30 p.m.	-	4:45 p.m.	<b>B192</b>	<b>Epigenetic-Aging-Signature — The Future?</b> <i>Athina Vidaki, PhD*</i> ; <i>Anastasia Aliferi</i> ; <i>David Ballard, PhD</i> ; <i>Leon Barron, PhD</i> ; <i>Denise Syndercombe Court, PhD</i>
4:45 p.m.	-	5:00 p.m.	<b>B193</b>	<b>A Raman “Spectroscopic Clock” for Bloodstain Age Determination: The First Week After Deposition</b> <i>Kyle C. Doty, BS*</i> ; <i>Gregory McLaughlin, MS</i> ; <i>Igor K. Lednev, PhD*</i>





# CRIMINALISTICS

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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**

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*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



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## Criminalistics Management and Philosophy

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*Moderator: Linda C. Rourke, MS  
Bayside, NY  
Vancouver, WA*

*Co-Moderator: Catherine R. Dunn, BS  
WA State Patrol Crime Lab*

- 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

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### The Big Picture

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*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\**



# CRIMINALISTICS

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9:40 a.m. - 10:00 a.m.

**Break**

## DNA Policy

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*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*

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|-------------------------|-------------|--|
| 10:00 a.m. - 10:25 a.m. | <b>B212</b> | <b>National Institute of Justice's (NIJ's) "Using DNA Technology to Identify the Missing" Program: An Update</b><br><i>Charles M. Heurich, MFS*</i>  |
| 10:25 a.m. - 10:50 a.m. | <b>B213</b> | <b>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</b><br><i>Gerald M. LaPorte, MSFS; Heather E. Waltke, MS*</i>   |
| 10:50 a.m. - 11:20 a.m. | <b>B214</b> | <b>What Errors Are We Looking for and How Can We Look for More?</b><br><i>Charlotte J. Word, PhD*</i>  |
| 11:20 a.m. - 11:40 a.m. | <b>B215</b> | <b>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</b><br><i>Erica L. Romsos, MFS*; Margaret C. Kline, MS; David L. Duewer, PhD;<br/>Peter M. Vallone, PhD</i> |
| 11:40 a.m. - 12:00 p.m. | <b>B216</b> | <b>Is the Factor of 10 Still Applicable Today?</b><br><i>Simone Gittelson, PhD*; John S. Buckleton, PhD</i>  |

# DIGITAL & MULTIMEDIA SCIENCES



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## Thursday

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*Moderator: Richard Vorder Bruegge, PhD  
FBI – OTD  
Quantico, VA*

*Co-Moderator: Catalin Grigoras, PhD  
Denver, CO*

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|-----------|---|------------|-----------|---|
| 8:30 a.m. | - | 8:55 a.m.  | <b>C1</b> | <b>Differential Forensic Analysis of Periodic Mobile Forensics Images</b><br><i>Mark D. Guido, MS*</i>  |
| 8:55 a.m. | - | 9:00 a.m.  |           | <b>Discussion</b>   |
| 9:00 a.m. | - | 9:25 a.m.  | <b>C2</b> | <b>Using Deep Learning Methods for Forensic Image and Video Investigation</b><br><i>Zeno J. Geradts, PhD*; Arnout C. Ruifrok, PhD</i>                           |
| 9:25 a.m. | - | 9:30 a.m.  |           | <b>Discussion</b>   |
| 9:30 a.m. | - | 9:55 a.m.  | <b>C3</b> | <b>Discriminating Hacker Techniques by Individual Differences and Techniques of Neutralization</b><br><i>Gregory Bowen*; Kathryn C. Seigfried-Spellar, PhD*</i> |
| 9:55 a.m. | - | 10:15 a.m. |           | <b>Break</b>  |
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*Moderator: Julie J.C.H. Ryan, DSc  
Washington, DC*

*Co-Moderator: Eliud Bonilla, BS  
EB Technologies, LLC  
Kensington, MD*

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|------------|---|------------|-----------|--|
| 10:15 a.m. | - | 10:40 a.m. | <b>C4</b> | <b>Joint Test Action Group (JTAG) Tool Testing</b><br><i>Jenise Reyes-Rodriguez, BS*; Richard Ayers, MS</i>    |
| 10:40 a.m. | - | 10:45 a.m. |           | <b>Discussion</b>  |
| 10:45 a.m. | - | 11:10 a.m. | <b>C5</b> | <b>Mobile Device Data Population for Tool Testing</b><br><i>Jenise Reyes-Rodriguez, BS; Richard Ayers, MS*</i> |
| 11:10 a.m. | - | 11:15 a.m. |           | <b>Discussion</b>  |
| 11:15 a.m. | - | 11:40 a.m. | <b>C6</b> | <b>Defining, Measuring, and Mitigating Errors for Digital Forensic Tools</b><br><i>James R. Lyle, PhD*</i>     |
| 11:40 a.m. | - | 1:00 p.m.  |           | <b>Lunch</b>   |



# DIGITAL & MULTIMEDIA SCIENCES

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*Moderator: William J. Abaunza, MS  
U.S. Customs and Border Protection  
Springfield, VA*

*Co-Moderator: Patrick A. Eller, MS  
Stafford, VA*

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|-----------|---|-----------|-----------|---|
| 1:00 p.m. | - | 1:25 p.m. | <b>C7</b> | <b>Google® Chromebook™: Evaluation of Forensic Methods for Data Extraction</b><br><i>Marcus Rogers, PhD*; Yoshitaka Takase, MS*</i>   |
| 1:25 p.m. | - | 1:30 p.m. |           | <b>Discussion</b>   |
| 1:30 p.m. | - | 1:55 p.m. | <b>C8</b> | <b>Case Study: Snapchat™ Picture Recovery From Mobile Device Unallocated Space</b><br><i>Joseph L. White, MS*</i>   |
| 1:55 p.m. | - | 2:00 p.m. |           | <b>Discussion</b>   |
| 2:00 p.m. | - | 2:25 p.m. | <b>C9</b> | <b>Development of a Portable Mobile Phone Forensic Acquisition and Analysis Toolkit Utilizing Open Source Tools</b><br><i>Kelsey L. Wilkinson, BS*; Robert J. Boggs; Joshua L. Brunty, MS*; Terry Fenger, PhD</i> |
| 2:25 p.m. | - | 2:45 p.m. |           | <b>Break</b>  |
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*Moderator: Zac P. Giammarrusco, MS  
Denver, CO*

*Co-Moderator: Daniel J. Ryan, JD  
Pasadena, MD*

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|-----------|---|-----------|------------|--|
| 2:45 p.m. | - | 3:10 p.m. | <b>C10</b> | <b>Forensic Analysis of Digital Audio File Structures and Formats</b><br><i>Catalin Grigoras, PhD*; Jeff M. Smith, MS</i>  |
| 3:10 p.m. | - | 3:15 p.m. |            | <b>Discussion</b>  |
| 3:15 p.m. | - | 3:40 p.m. | <b>C11</b> | <b>Proposed Analytical Framework for Electronically Frequency/Pitch-Modified Voices</b><br><i>Eliud Bonilla, BS*; Catalin Grigoras, PhD; Jeff M. Smith, MS</i>                 |
| 3:40 p.m. | - | 3:45 p.m. |            | <b>Discussion</b>  |
| 3:45 p.m. | - | 4:10 p.m. | <b>C12</b> | <b>Age Estimation of Adolescents Using Eye Measurements From Various Angles in Videos</b><br><i>Neeka M. Parker*; Joshua L. Brunty, MS; Robert J. Boggs; Terry Fenger, PhD</i> |
| 4:10 p.m. | - | 4:30 p.m. |            | <b>Questions &amp; Answers</b>   |
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# DIGITAL & MULTIMEDIA SCIENCES



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## Friday

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*Moderator: Christina A. Malone, MFS  
Defense Forensic Science Center  
Forest Park, GA*

*Co-Moderator: Amy L. Popejoy, MS  
Houston Forensic Science Center  
Houston, TX*

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|-----------|---|------------|------------|---|
| 8:30 a.m. | - | 8:55 a.m.  | <b>C13</b> | <b>The Use of Photo Response Non-Uniformity (PRNU) Patterns for the Comparison of Online Videos on Social Media</b><br><i>Zeno J. Geradts, PhD*; Rick Cents, BS</i>   |
| 8:55 a.m. | - | 9:00 a.m.  |            | <b>Discussion</b>   |
| 9:00 a.m. | - | 9:25 a.m.  | <b>C14</b> | <b>Source Identification of High-Definition Videos — A Forensic Analysis of Downloaders and YouTube® Video Compression Using a Group of Action Cameras</b><br><i>Zac P. Giammarrusco, MS*; Catalin Grigoras, PhD*; Jeff M. Smith, MS*</i> |
| 9:25 a.m. | - | 9:30 a.m.  |            | <b>Discussion</b>   |
| 9:30 a.m. | - | 9:55 a.m.  | <b>C15</b> | <b>The Authentication of MP4 Video Using File Structure and Metadata</b><br><i>Jacob R. Hall*</i>   |
| 9:55 a.m. | - | 10:15 a.m. |            | <b>Break</b>  |
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*Moderator: Jacob R. Hall  
Patterson, NY*

*Co-Moderator: Fabiola Mejia, BS  
U.S. Customs and Border Protection  
Chicago, IL*

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|------------|---|------------|------------|---|
| 10:15 a.m. | - | 10:40 a.m. | <b>C16</b> | <b>Challenges in Recovering Deleted Data in the Cloud</b><br><i>Robert Jackson, MS; Richard Austin, MS; Martin Herman, PhD*; P.W. Carey, MS; Otto S. Reemelin, MS</i> |
| 10:40 a.m. | - | 10:45 a.m. |            | <b>Discussion</b>   |
| 10:45 a.m. | - | 11:10 a.m. | <b>C17</b> | <b>Counterfeiting and Counterfeit Deterrence Applications for Imaging Technologies</b><br><i>Joel A. Zlotnick, MSFS*</i>  |
| 11:10 a.m. | - | 11:15 a.m. |            | <b>Discussion</b>   |
| 11:15 a.m. | - | 11:40 a.m. | <b>C18</b> | <b>H.Y.D.R.A. (Hyper Yield Data-Driven Real-Time Analysis)</b><br><i>Anthony Skjellum, PhD*; Austin Hancock, BS*; Janice Canedo*; Erby Fischer</i>                    |
| 11:40 a.m. | - | 1:00 p.m.  |            | <b>Lunch</b>  |



# DIGITAL & MULTIMEDIA SCIENCES

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## Poster Session

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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*
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*Moderator: Douglas R. White, MS*  
*Gaithersburg, MD*

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

- 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**



# ENGINEERING SCIENCES



## Thursday

### New Discoveries Enabled by Engineering Analyses

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*Moderator: David Pienkowski, PhD  
University of Kentucky  
AB Chandler Hospital  
Lexington, KY*

*Co-Moderator: Michelle R. Hoffman, MS  
Forensic Injury Analysis, LLC  
Tempe, AZ*

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|------------|---|------------|-----------|---|
| 8:30 a.m.  | - | 9:10 a.m.  | <b>D1</b> | <b>Richard III Discovered: The King's Remains</b><br><i>Sarah V. Hainsworth, PhD*; Guy N. Rutt, MD; Jo Appleby, PhD;<br/>Alison L. Brough, BS</i>   |
| 9:10 a.m.  | - | 9:30 a.m.  | <b>D2</b> | <b>Measurement of High Temperature and High Humidity Moisture Effects in Football Helmet Elastomeric Energy-Absorbing Padding Performance and Implications for Head Injury Danger</b><br><i>Kenneth J. Saczalski, PhD*; Mark N. West, BS; Todd Saczalski, BSMET;<br/>Joseph L. Burton, MD; Paul Renfroe Lewis, Jr., MS; Mark C. Pozzi, MS</i> |
| 9:30 a.m.  | - | 9:45 a.m.  | <b>D3</b> | <b>Specimen Age Affects the Fracture Pattern of Immature Porcine Femurs Under Torsional Loading</b><br><i>Patrick E. Vaughan, BS*; Feng Wei, PhD; Roger C. Haut, PhD</i>  |
| 9:45 a.m.  | - | 10:00 a.m. | <b>D4</b> | <b>Non-Destructive Test Method for Forensic Evaluation of Motorcycle Helmet Shell Failure Mechanism and Resulting Safety Deficiency Causing Fatal Head Injury</b><br><i>Kenneth J. Saczalski, PhD*; Mark N. West, BS; Todd Saczalski, BSMET;<br/>Joseph L. Burton, MD; Paul Renfroe Lewis, Jr., MS; Mark C. Pozzi, MS</i>                     |
| 10:00 a.m. | - | 10:15 a.m. |           | <b>Break</b>  |

### New Analytical Methods in Forensic Engineering

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*Moderator: John Nixon, CEng, MBA  
ARC  
Bippus, IN*

*Co-Moderator: David Pienkowski, PhD  
University of Kentucky  
AB Chandler Hospital  
Lexington, KY*

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|------------|---|------------|-----------|---|
| 10:15 a.m. | - | 10:35 a.m. | <b>D5</b> | <b>Fire Dynamic Simulation — Assessing Structural Damage and Suppression Potential of a Church Fire</b><br><i>Darren Franck, MSME*; Harold Franck, MSEE</i> |
| 10:35 a.m. | - | 11:00 a.m. | <b>D6</b> | <b>Application of Reverse Engineering in Forensic Investigation</b><br><i>Wego Wang, SciD*</i>  |



# ENGINEERING SCIENCES

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11:00 a.m. - 11:15 a.m.	<b>D7</b>	<b>Evaluating the Structural Failure of Wood Bowstring Trusses Under Heavy Snow Loading</b> <i>Daniel M. Honig, PE*</i>
11:15 a.m. - 11:30 a.m.	<b>D8</b>	<b>Comparison of Measurement Error Between 3D Laser Scanning, Total Station Survey, and Photogrammetry Using PhotoModeler®</b> <i>Shannon Wilson*; James E. Flynn, BS; Stephen Harper, BS; Jace Priester, BS</i>
11:30 a.m. - 11:45 a.m.	<b>D9</b>	<b>Natural Language Engineering for Multilingual Forensic Author Identification</b> <i>Carole E. Chaski, PhD*; Nan Decker, PhD; Ali M. Alshehri, MA; Seung-Man Kang, PhD; Angela Almela, PhD</i>
11:45 a.m. - 1:00 p.m.		<b>Lunch</b>

## Poster Session

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11:30 a.m. - 1:00 p.m.	<b>D10</b>	<b>Analysis of Citrate Distribution in Bone for the Estimation of Postmortem Interval</b> <i>Matthew Pysh*; Katherine E. Weisensee, PhD; Mark A. Schlautman, PhD; Melinda Harman, PhD</i>
11:30 a.m. - 1:00 p.m.	<b>D11</b>	<b>Crime Scene Imaging Using a Highly Affordable, User-Friendly, Portable, Open-Source 3D Imaging System</b> <i>Nikolaj Kjaer Nielsen*; Kim Juul Henriksen, BS; Samuel Alber Trysoee, PhD; Henrik Pedersen, PhD; Iana Lesnikova, MD, PhD</i>

## Multidisciplinary Session: Engineering Sciences Session/Jurisprudence Session II — The Judge as Gatekeeper

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*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.		<b>Introduction</b> <i>Peter Alexander, PhD</i>
1:10 p.m. - 1:40 p.m.	<b>F20</b>	<b>Better Ways to Manage Poorly Validated Scientific Evidence</b> <i>Michael J. Saks*</i>
1:40 p.m. - 2:10 p.m.	<b>F21</b>	<b>Upstream Remedies to Prevent Wrongful Convictions: Beating <i>Daubert</i> to the “Gate”</b> <i>Peter Neufeld, JD*</i>
2:10 p.m. - 2:40 p.m.	<b>F22</b>	<b>Holding the Gate Open or Closing It: Evolving <i>Frye</i> and <i>Daubert</i> Approaches?</b> <i>Donald E. Shelton, JD, PhD*; Stephanie Domitrovich, JD, PhD*</i>

# ENGINEERING SCIENCES




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2:40 p.m.	-	3:00 p.m.	<b>Break</b>
3:00 p.m.	-	3:30 p.m.	<b>D12</b> <b>Is the Gatekeeper Concept Failing the Justice System? Is There a Viable Alternative?</b> <i>John Nixon, CEng, MBA*</i>
3:30 p.m.	-	4:00 p.m.	<b>D13</b> <b>The Federal Bureau of Investigation's (FBI's) Misrepresentation of Hair Evidence: History, Response, and Remedy</b> <i>Peter D. Barnett, BS*</i>
4:00 p.m.	-	4:30 p.m.	<b>F23</b> <b>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</b> <i>Andrew Sulner, MSFS, JD*</i>
4:30 p.m.	-	5:00 p.m.	<b>Discussion</b>

## *Friday*

### **Application of Scientific Methods to Forensic Engineering**

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*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.	<b>D14</b> <b>Quantification of Forces Generated by Volunteers in Stabbing Trials</b> <i>Gary Nolan, BS; Sarah V. Hainsworth, PhD*; Guy N. Rutty, MD</i>
9:00 a.m.	-	9:15 a.m.	<b>D15</b> <b>Identification of Building Insulation and Soundproofing Products by Light and Electron Microscopy</b> <i>Richard S. Brown, MS*</i>
9:15 a.m.	-	9:30 a.m.	<b>D16</b> <b>Forensic Microscopy in a Case of Asbestos-Containing Cigarettes</b> <i>James Millette, PhD*</i>
9:30 a.m.	-	9:45 a.m.	<b>D17</b> <b>The Potential of Comprehensive Gas Chromatography (GC) in Forensic Fire Investigations</b> <i>Martin Lopatka, MSc; Gabriel Vivó-Truyols; Marjan J. Sjerps; Peter J. Schoenmakers; Arian C. van Asten, PhD*; Andjo A.S. Sampat, MSc</i>
9:45 a.m.	-	10:00 a.m.	<b>D18</b> <b>Physical Evidence Used in Rollover Crash Reconstruction</b> <i>Kurt D. Weiss, MS*</i>
10:00 a.m.	-	10:15 a.m.	<b>Break</b>



# ENGINEERING SCIENCES

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## Case Studies in Forensic Engineering & Science

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*Moderator: David Pienkowski, PhD  
University of Kentucky  
AB Chandler Hospital  
Lexington, KY*

*Co-Moderator: Darren Franck, MSME  
Advanced Engineering Associates, Inc.  
Charleston, WV*

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|------------|---|------------|------------|--|
| 10:15 a.m. | - | 10:45 a.m. | <b>D19</b> | <b>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</b><br><i>Laura L. Liptai, PhD*; Landa S. Low, JD</i> |
| 10:45 a.m. | - | 11:00 a.m. | <b>D20</b> | <b>Non-Collision Moving Vehicle Fire Caused by Escape of Exhaust Heat and Combustion Gases Due to Muffler Design and Materials Defects</b><br><i>Mark C. Pozzi, MS*; Dean L. Jacobson, PhD; David Bosch, PhD; Scott Anderson, BS</i>                                 |
| 11:00 a.m. | - | 11:15 a.m. | <b>D21</b> | <b>Refueling Fire Caused by Defective Fuel Pump Nozzle, Electrostatic Discharge Ignition, and Violations of Safety Practices</b><br><i>Mark C. Pozzi, MS*</i>  |
| 11:15 a.m. | - | 11:30 a.m. | <b>D22</b> | <b>Friction Tire Testing of a Run-Flat Condition Sport Utility Vehicle (SUV) Tire</b><br><i>Kurt D. Weiss, MS*; Jacqueline Paver</i>   |
| 11:30 a.m. | - | 11:45 a.m. | <b>D23</b> | <b>Witness Identification Under Low Light-Level Conditions: A Case Study</b><br><i>James B. Hyzer, PhD*</i>  |
| 11:45 a.m. | - | 12:00 p.m. |            | <b>Break</b>   |
| 12:00 p.m. | - | 12:15 p.m. | <b>D24</b> | <b>Forensic Engineering Investigation of a Dual Fatality Auto-Pedestrian Collision by an Impaired-Vision Driver</b><br><i>Adam Aleksander, PhD*</i>  |
| 12:15 p.m. | - | 12:30 p.m. | <b>D25</b> | <b>A Case Against "Inattentive Driving" as a Cause for Some Nighttime Vehicle Pedestrian Accidents</b><br><i>James B. Hyzer, PhD*</i>  |
| 12:30 p.m. | - | 12:45 p.m. | <b>D26</b> | <b>An Engineering Perspective on Case Studies Where Performance Does Not Match Scientific Predictions — The Expansive Nature of Collapsible Soils and Other Engineering Oddities</b><br><i>Michael D. McDowell, MS*</i>  |
| 12:45 p.m. | - | 1:45 p.m.  |            | <b>Lunch</b>   |

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## Poster Session

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|------------|---|-----------|------------|---|
| 11:30 a.m. | - | 1:00 p.m. | <b>D27</b> | <b>A Structural Analysis of a Gymnasium Collapse Using the MIDAS Program</b><br><i>Chan-Seong Park, PhD*; Jong-Heon Shim, MS; Jin-Pyo Kim, PhD;<br/>Nam-Kyu Park, PhD</i> |
|------------|---|-----------|------------|---|

# ENGINEERING SCIENCES



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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

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*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*



# GENERAL

## Wednesday

### Poster Session

11:30 a.m. - 1:00 p.m.	E1	<b>Difficulties in the Interpretation of Postmortem Concentrations of Synthetic Cannabinoids</b> <i>Anders Rietz*; Gunilla Thelander, BSc; Robert Kronstrand, PhD</i>
11:30 a.m. - 1:00 p.m.	E2	<b>Technical Considerations for a Drone-Mounted GoPro® Camera for Crime Scene Measurements</b> <i>Jacob Martin; Annalie Martin; Gary H. Naisbitt, PhD*</i>
11:30 a.m. - 1:00 p.m.	E3	<b>Homicide Injury Quantification: Correlations and Reliability of Injury Severity Scores Applied to Homicide Victims</b> <i>Fredrik Tamsen, MD, MSc*; Fia Klötz-Logan, PhD; Ingemar Thiblin, PhD</i>
11:30 a.m. - 1:00 p.m.	E4	<b>A Case for Using Mixed Method Research to Investigate the Relationship Between Art and Science in Forensic Facial Reconstruction</b> <i>Daniel Marion, Jr., PhD*</i>
11:30 a.m. - 1:00 p.m.	E5	<b>A Unique Case of Death by Misadventure Due to Electrocution Involving a Man and a Cat: The Utility of Electron Microscopy</b> <i>Elvira Ventura Spagnolo*; Cristina Mondello, BS; Stefania Zerbo, MD; Antonina Argo; Luigi Cardia; Francesca Giuffrida; Giulio Cardia</i>
11:30 a.m. - 1:00 p.m.	E6	<b>The Value of Outsourcing Selected Cases in a Medical Examiner Population: A Ten-Year Experience</b> <i>Brandi C. McCleskey*; Stephanie Reilly, MD; Daniel Atherton</i>
11:30 a.m. - 1:00 p.m.	E7	<b>The Birth of a National Department for Legal Medicine in the Grand Duchy of Luxemburg</b> <i>Ulrich S. Preiß, MD*; Patricia Lambert, MS; Sarah Toussaint; Andreas Schuff, PhD</i>
11:30 a.m. - 1:00 p.m.	E8	<b>The Value in Integrating Emergency Management and Forensic Death Investigation at the Harris County Institute of Forensic Sciences</b> <i>Allison Woody; Jason M. Wiersema, PhD*; Phong Nguyen; Roxanne Phatak, MS</i>
11:30 a.m. - 1:00 p.m.	E9	<b>Stress Responses of Crime Scene Investigators When Responding to Traumatic Death Events</b> <i>Jalika Rivera Waugh, PhD*</i>
11:30 a.m. - 1:00 p.m.	E10	<b>Deaths in Silence: The Role of Prison Surveillance in Suicides</b> <i>Isabella Aquila, MD*; Silvia Boca*; Ciro Di Nunzio, MFS, PhD; Salvatore Savastano; Francesca Pepe, MD; Santo Gratteri, MD; Pietrantonio Ricci*</i>

# GENERAL



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|------------|---|-----------|------------|---|
| 11:30 a.m. | - | 1:00 p.m. | <b>E11</b> | <b>Survivability of Explosive Residue on Improvised Explosive Device (IED) Components Subjected to an Underwater Detonation</b><br><i>David J. Prasek, MFS*; Ronald L. Kelly, BS; Ismail M. Sebetan, MD, PhD*; Paul Stein, PhD*</i>   |
| 11:30 a.m. | - | 1:00 p.m. | <b>E12</b> | <b>The Lip Prints Morphological Profile in a Brazilian Population: A Prospective Study</b><br><i>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</i> |
| 11:30 a.m. | - | 1:00 p.m. | <b>E13</b> | <b>Applications of Plant Sciences to Forensic Science</b><br><i>Jane H. Bock, PhD*; David O. Norris, PhD*</i>   |
| 11:30 a.m. | - | 1:00 p.m. | <b>E14</b> | <b>Evaluation of Drug Intoxication Cases and Medicolegal Reports</b><br><i>Kenan Kaya; Mete K. Gulmen, PhD, MD*; Derya Kaya; Ahmet Hilal, MD; Necmi Cekin, MD</i>   |
| 11:30 a.m. | - | 1:00 p.m. | <b>E15</b> | <b>Investigation of Human Skeletal Tissue Using Raman Spectroscopy (RS) and Surface-Enhanced Raman Spectroscopy (SERS) for Forensic Applications</b><br><i>Kristin K. Cooke, BS*; David D. Evanoff, Jr., PhD</i>  |

## Thursday

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*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. | <b>E16</b> | <b>John David Brown Brought to Justice 20 Years Later — A Multidisciplinary Approach to a Cold Case Homicide Investigation</b><br><i>Donald Hayden, MFS*; Steven Geniuk, MS*</i>   |
| 8:45 a.m. | - | 9:00 a.m. | <b>E17</b> | <b>A Continuing Need — Certification of Medicolegal Death Investigation Personnel</b><br><i>Julie A. Howe, MBA*; Steven C. Clark, PhD*</i>   |
| 9:00 a.m. | - | 9:15 a.m. | <b>E18</b> | <b>Testing the Use of Pigs as Human Proxies in Decomposition Studies</b><br><i>Melissa A. Connor, PhD*</i>   |
| 9:15 a.m. | - | 9:30 a.m. | <b>E19</b> | <b>An Unusual Case of Complex Suicide by Nail Gun, Carbon Monoxide, and Ethanol</b><br><i>Erick P. Bryant, MFS*</i>  |
| 9:30 a.m. | - | 9:45 a.m. | <b>E20</b> | <b>Method Development and Optimization of Detection of Decomposition Products in Soil Using Headspace/Gas Chromatography/Mass Spectrometry (HS/GC/MS)</b><br><i>Amanda L. Haggerty, BS*; Kimberlee S. Moran, MSc; Heather L. Harris, MFS, JD</i> |





## GENERAL

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9:45 a.m. - 10:00 a.m.	<b>E21</b>	<b>A Follow-Up Study: Recovery of “Touch” DNA From Cleaned Pistol and Ammunition Surfaces</b> <i>Maher Nouredine, PhD*; James A. Bailey, PhD</i>
10:00 a.m. - 10:15 a.m.		<b>Break</b>

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*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.	<b>E22</b>	<b>Bloodstain Evidence of Trophy Taking in a Homicide</b> <i>Bryan R. Burnett, MS*</i>
10:30 a.m. - 10:45 a.m.	<b>E23</b>	<b>Multidisciplinary Approach to the Identification of Military Remains — An Australian Perspective</b> <i>Donna M. MacGregor, MSc*; Marc Oxenham, PhD; Henry Y.H. Wu; Brian Manns</i>
10:45 a.m. - 11:00 a.m.	<b>E24</b>	<b>“We Didn’t Start This Fire” — Understanding What Caused the Fire That Killed Twin Boys</b> <i>Matthew C. Wietbrock, BS*</i>
11:00 a.m. - 11:15 a.m.	<b>E25</b>	<b>Perceptions of the “CSI Effect” by New York State Prosecutors and Forensic Science Requests at Trial</b> <i>Elizabeth A. Erickson, MS*</i>
11:15 a.m. - 11:30 a.m.	<b>E26</b>	<b>How Abductive Reasoning Impacts Criminal Investigations</b> <i>Lyndsie N. Ferrara, MS*; James B. Schreiber, PhD</i>
11:30 a.m. - 11:45 a.m.	<b>E27</b>	<b>A Barrel-Bullet Comparison of Rifling Lines: A Transformation for a Quantifiable Examination Approach</b> <i>John Z. Wang, PhD*</i>
11:45 a.m. - 12:00 p.m.	<b>E28</b>	<b>Forensic Podiatry — How Gait, Footwear, and Footprints Convict Criminals</b> <i>Michael S. Nirenberg, DPM*</i>
12:00 p.m. - 1:00 p.m.		<b>Lunch</b>

### Poster Session

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11:30 a.m. - 1:00 p.m.	<b>E29</b>	<b>Use of Unmanned Aerial Vehicles (UAVs) for Documenting the Forensic Scene and Body Retrieval in a Case of Mid-Air Collision Between Aircraft</b> <i>Angelina I. Phillips, MD*; Lee M. Tormos, MD</i>
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# GENERAL



11:30 a.m.	-	1:00 p.m.	<b>E30</b>	<b>Suicidal Hanging: A Prospective Autopsy-Based Study of 650 Cases</b> <i>Mantaran Singh Bakshi, MBBS*</i> ; <i>Sudhir Kumar Gupta, MD</i> ; <i>Deepak Prakash, MD</i> ; <i>Piyush Sharma, MD</i> ; <i>Shivani Dhaka, MBBS</i>
11:30 a.m.	-	1:00 p.m.	<b>E31</b>	<b>Suicide or Homicide: A Case of Multiple Stab Wounds and Poisoning</b> <i>Kelly Kraus, BS*</i>
11:30 a.m.	-	1:00 p.m.	<b>E32</b>	<b>A Case Review of a Suicide by Homemade Miniature Cannon</b> <i>Meryle A. Dotson, MA*</i> ; <i>Kyle Shaw, MBBS</i> ; <i>Brett E. Harding, MBA</i>
11:30 a.m.	-	1:00 p.m.	<b>E33</b>	<b>Cases of Forensic Human Identification Using Hair</b> <i>Songhie An</i> ; <i>Myung-duck Kim, PhD</i> ; <i>Kiwook Kim, MS</i> ; <i>Jin Hee Lee</i> ; <i>Byung-Ryul Song, PhD</i> ; <i>Geummun Nam, PhD</i> ; <i>Jisook Min*</i>
11:30 a.m.	-	1:00 p.m.	<b>E34</b>	<b>Smartphone Uses in Medicolegal Death Investigation</b> <i>Kathryn H. Haden-Pinneri, MD*</i> ; <i>Bethany L. Bless, MS</i>
11:30 a.m.	-	1:00 p.m.	<b>E35</b>	<b>A Multidisciplinary Approach to Exhuming a Body Buried Under a Newly Built House</b> <i>Dae-Kyoon Park, MD, PhD*</i> ; <i>Nak-Eun Chung, PhD</i> ; <i>Yi-Suk Kim, MD, PhD</i> ; <i>U-Young Lee, MD</i> ; <i>Deog-Im Kim, PhD</i> ; <i>Yong-Woo Ahn, DDS, PhD</i> ; <i>Taeyeong Kim</i> ; <i>Eungmyeong Kang</i>
11:30 a.m.	-	1:00 p.m.	<b>E36</b>	<b>Recognition of Skin Damage Caused by the Presence of Different Insects on Dead Bodies</b> <i>Carolina Nuñez Vázquez, PhD*</i> ; <i>Lorena Valencia Caballero, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>E37</b>	<b>Elemental Composition of Tattoo Inks as an Identification Tool</b> <i>Trevor E. Curtis, BS*</i> ; <i>John P. Buchweitz, PhD</i> ; <i>Ruth Waddell Smith, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>E38</b>	<b>Identification of Bullets Fired From Consecutively Manufactured Double-Broached Ruger® SR9c® Barrels Utilizing Comparison Microscopy and Confocal Microscopy</b> <i>Jennifer L. Stephenson, MSFS*</i> ; <i>Erich D. Smith, MS</i>
11:30 a.m.	-	1:00 p.m.	<b>E39</b>	<b>Surface-Enhanced Raman Spectroscopy (SERS) for the Forensic Analysis of Vaginal Fluid</b> <i>Kathryn A. Zegarelli, BS*</i> ; <i>Jennifer Fore, PhD</i> ; <i>Ranjith Premasiri, PhD</i> ; <i>Brandon Scott, PhD</i> ; <i>Amy N. Brodeur, MFS</i> ; <i>Lawrence Ziegler, PhD*</i>
11:30 a.m.	-	1:00 p.m.	<b>E40</b>	<b>Novel Azo Dye Presumptive Test for the Detection of Nitrites in Gunshot Residue (GSR): An Expansion of the Modified Griess Test</b> <i>Erin M. Noval, BS*</i> ; <i>Jeanne Berk</i>
11:30 a.m.	-	1:00 p.m.	<b>E41</b>	<b>Multidisciplinary Study of a 17<sup>th</sup>-Century French Natural Mummy</b> <i>Dedouit Fabrice, MD*</i> ; <i>Fatima-Zohra Mokrane, MD</i> ; <i>Rozenn Colleter</i> ; <i>Frederic Savall</i> ; <i>Sylvie Duchesne</i> ; <i>Patrice Gerard</i> ; <i>Eric Crubezy, PhD</i> ; <i>Hervé Rousseau, PhD</i> ; <i>Daniel Rouge, MD</i> ; <i>Norbert Telmon, PhD, MD</i>



## GENERAL

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11:30 a.m.	-	1:00 p.m.	<b>E42</b>	<b>K9 Water Searches and Volatile Organic Compounds (VOCs): A Method to Aid in Determining the Location of Submerged Human Bodies</b> <i>Marcello Rendine*</i> ; <i>Cristoforo Pomara, MD, PhD</i> ; <i>Carmela Fiore, MD</i> ; <i>Palmira Fortarezza, MS</i> ; <i>Francesco Sessa, MS</i> ; <i>Irene Riezzo, MD, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>E43</b>	<b>Death From Hypothermia During a Training Course Under “Extreme Conditions”: Two Related Cases</b> <i>Lucile Tuchtan, MD*</i> ; <i>Pierre Perich, MD</i> ; <i>Georges Leonetti, PhD</i> ; <i>Marie-Dominique Piercecchi-Marti, PhD</i> ; <i>Christophe Bartoli, MD</i>

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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.	<b>E44</b>	<b>Use of Infrared Photography to Document Bloodstains in Fire Scenes</b> <i>William K. Perdue, MPA*</i> ; <i>Elizabeth Richards, PhD</i> ; <i>Maria C. Castellanos, MFS*</i>
1:15 p.m.	-	1:30 p.m.	<b>E45</b>	<b>The Relevance of a Multidisciplinary Approach to the Crime Scene Investigation: A Case Report of a Homicide Victim Who Was Hidden</b> <i>Natascha Pascale, MD*</i> ; <i>Marcello Rendine</i> ; <i>Francesco Sessa, MS</i> ; <i>Dania De Carlo, MD</i> ; <i>Irene Riezzo, MD, PhD</i>
1:30 p.m.	-	1:45 p.m.	<b>E46</b>	<b>Sudden Unexpected Infant Deaths (SUID) in North Central Indiana — A Comprehensive Look at Infant Deaths in Indiana</b> <i>Matthew C. Wietbrock, BS*</i>
1:45 p.m.	-	2:00 p.m.	<b>E47</b>	<b>The Impact of Fentanyl Use and Abuse</b> <i>Breanna M. Cuchara*</i> ; <i>Thomas A. Andrew, MD</i>
2:00 p.m.	-	2:15 p.m.	<b>E48</b>	<b>“All the Things You Ask of Me”: Law Enforcement Experiences of Infant Death Investigation</b> <i>Jennifer R. Schindell, MA*</i>
2:15 p.m.	-	2:30 p.m.		<b>Break</b>

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*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.	<b>E49</b>	<b>Case Study: Perfect Crime? The Forensic Sciences at the Service of the Crime</b> <i>Eric R. Ruiz Hernandez, MD*</i>
2:45 p.m.	-	3:00 p.m.	<b>E50</b>	<b>Retrospective Analysis of 93 Male Victims of Unnatural Sexual Offenses From 2011 to 2014 in a Tertiary Care Center in India</b> <i>Shashank Pooniya, MD*</i> ; <i>Rajanikanta Swain, MD</i> ; <i>Sanjeev Lalwani, MD</i>

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# GENERAL




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3:00 p.m.	-	3:15 p.m.	<b>E51</b>	<b>Shaken Baby Syndrome/Abusive Head Trauma (SBS/AHT) Mortality in Sweden</b> <i>Jacob Andersson, MS*; Ingemar Thiblin, PhD</i>
3:15 p.m.	-	3:30 p.m.	<b>E52</b>	<b>Case Study: From Maternal Instinct to Staged Domestic Homicide</b> <i>Eric R. Ruiz Hernandez, MD*</i>
3:30 p.m.	-	3:45 p.m.		<b>Break</b>
3:45 p.m.	-	4:00 p.m.	<b>E53</b>	<b>Child Abduction Murder: Regional Differences in Time to Death and Offender Motivation</b> <i>Katherine M. Brown, PhD*</i>
4:00 p.m.	-	4:15 p.m.	<b>E54</b>	<b>An Application of Gunshot Residue (GSR) as Trace Evidence</b> <i>Jason L. Schroeder, MS, MBA*; William M. Davis, PhD; Roger Kahn, PhD</i>
4:15 p.m.	-	4:45 p.m.	<b>E55</b>	<b>Forensic Science as an Indispensable Tool in the International Cooperation in Fighting Terrorism</b> <i>Elazar Zadok*</i>
4:45 p.m.	-	5:00 p.m.	<b>E56</b>	<b>University Groper: How One Suspect Was Identified Using Touch DNA Findings — A Successful Case Study</b> <i>Julie L. Valentine, MS*; Suzanne Miles, BS*</i>

## Friday

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*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.	<b>E57</b>	<b>Analysis of Smokeless Powder Components by Ion Mobility Spectrometry (IMS)</b> <i>Marcela Najarro, MFS*; Rose M. Garcia, BS</i>
8:45 a.m.	-	9:00 a.m.	<b>E58</b>	<b>Examining the Factors Affecting Forensic Scientists' Job Stress and Satisfaction</b> <i>Thomas J. Holt, PhD*; Kristie Blevins, PhD; Ruth Waddell Smith, PhD; David R. Foran, PhD</i>
9:00 a.m.	-	9:15 a.m.	<b>E59</b>	<b>Neanderthals, Werewolves, and a Pig Man: A Novel and Collaborative Method for Differentiating Human and Animal Skeletal Remains</b> <i>Brett E. Harding, MBA*; Barbara C. Wolf, MD; Lindsey A. Bayer, MS; Meryle A. Dotson, MA</i>
9:15 a.m.	-	9:30 a.m.	<b>E60</b>	<b>The Utility of Forensic Evidence in Homicide Cases Tried in London Courts Between 2010 and 2014</b> <i>Dagmar Heinrich, PhD*; Ruth Morgan, PhD; Nick Tilley, PhD</i>



## GENERAL

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9:30 a.m.	-	9:45 a.m.	<b>E61</b>	<b>Identification of Decomposition Odors That Elicit a Response From Trained Cadaver Dogs</b> <i>Lorna C. Irish, BSc*; Gareth Parkes, PhD; Anna Williams, PhD</i>
9:45 a.m.	-	10:00 a.m.	<b>E62</b>	<b>Houston's Approach: A Final Outcome to the National Problem of Untested Sexual Assault Kits</b> <i>Irma Rios, MBA*</i>
10:00 a.m.	-	10:15 a.m.	<b>E63</b>	<b>Validation! Validation! Validation!...With a Touch of Reality</b> <i>Daniele S. Podini, PhD*</i>
10:15 a.m.	-	10:30 a.m.		<b>Break</b>

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<i>Moderator: Donald Hayden, MFS</i>		<i>Co-Moderator: Gina Londino, MS</i>	
<i>Richmond Hill, GA</i>		<i>IUPUI</i>	
		<i>Indianapolis, IN</i>	

10:30 a.m.	-	10:45 a.m.	<b>E64</b>	<b>Standard Protocols: Forensic Archaeology Integration With Standard Archaeological and Anthropological Methodologies Following Natural Disasters</b> <i>Christine L. Halling, MS*; Arbie Goings; Ginesse A. Listi, PhD; Ryan M. Seidemann, MA; Mary H. Manhein, MA</i>
10:45 a.m.	-	11:00 a.m.	<b>E65</b>	<b>A Novel Method for Ninhydrin Development of Fingerprints on Absorbent Surfaces</b> <i>Howard A. Harris, JD, PhD*</i>
11:00 a.m.	-	11:15 a.m.	<b>E66</b>	<b>Forensic Archaeology and Surface Scatter Body Recovery: A Contested Missing Person Case</b> <i>Sharon K. Moses, PhD*</i>
11:15 a.m.	-	11:30 a.m.	<b>E67</b>	<b>The "CSI Effect": The Barristers and the Bench</b> <i>Janne A. Holmgren, PhD*</i>
11:30 a.m.	-	11:45 a.m.	<b>E68</b>	<b>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</b> <i>Season E. Seferyn, MSFS*; Pamela J. Staton, PhD</i>
11:45 a.m.	-	12:00 p.m.	<b>E69</b>	<b>Teaching Today's Students: Hybrid Learning</b> <i>Crystal L. Wagoner, MFS*; Christina A. Leija, MS*</i>
12:00 p.m.	-	1:00 p.m.		<b>Lunch</b>

# GENERAL



## Poster Session

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|------------------------|------------|--|
| 11:30 a.m. - 1:00 p.m. | <b>E70</b> | <b>Multi-Phase Postmortem Computed Tomography Angiography (MPMCTA): Is an Interventional Radiological Approach Possible Instead of the Classical One? A Preliminary Study</b><br><i>Fatima-Zohra Mokrane, MD; Frederic Savall; Silke Grabherr, PhD; Daniel Rouge, MD; Eric Crubezy, PhD; Hervé Rousseau, PhD; Norbert Telmon, PhD, MD; Fabrice F. Dedouit*</i> |
| 11:30 a.m. - 1:00 p.m. | <b>E71</b> | <b>Italian Emergency Medical Team (EMT) Experience Regarding Crime Scene Access: A Proposal for a Specific Training Program</b><br><i>Luciano Garofano, PhD*; Cristina Enrica Brondoni, MS*</i>  |
| 11:30 a.m. - 1:00 p.m. | <b>E72</b> | <b>Autopsy Rate in Suicide by Poisoning Is Low in Denmark Compared to Finland</b><br><i>Seija Ylijoki-Sørensen, MD, DDS, PhD*; Jesper L. Boldsen, PhD; Lene W. Boel, PhD; Henrik Bøggild, PhD; Kaisa Lalu, PhD; Antti Sajantila, MD, PhD</i>   |
| 11:30 a.m. - 1:00 p.m. | <b>E73</b> | <b>A Survey of Abuse of Illicit Drugs in Punjab, Pakistan</b><br><i>Sardar Ali Wattoo, MPhil; Muhammad Taimoor Chaudhary, MPhil*; Mohammad A. Tahir, PhD</i>   |
| 11:30 a.m. - 1:00 p.m. | <b>E74</b> | <b>Brazilian Federal Police (BFP) Forensic Activities in the Paleontological Area</b><br><i>Guilherme H.B. de Miranda*; Camilla Vasconcelos Kafino, MS</i>   |
| 11:30 a.m. - 1:00 p.m. | <b>E75</b> | <b>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</b><br><i>Matthew J. Danker, BS*; Donovan C. Haines, PhD; Joan A. Bytheway, PhD</i>  |
| 11:30 a.m. - 1:00 p.m. | <b>E76</b> | <b>Human Bias in the Case of JonBenet Ramsey</b><br><i>Claudia M. Bonilla*; Ashraf Mozayani, PharmD, PhD</i>   |
| 11:30 a.m. - 1:00 p.m. | <b>E77</b> | <b>Discrimination of Ginseng Cultivation Regions With Stable Isotope Ratio and Multi-Element Analyses</b><br><i>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</i>   |
| 11:30 a.m. - 1:00 p.m. | <b>E78</b> | <b>Association Between Volatile Organic Compounds and Microbes Present During the Decomposition of a Cadaver</b><br><i>Todd A. Deyne, BS*; Donovan C. Haines, PhD; Aaron M. Lynne, PhD; Sibyl R. Bucheli, PhD</i>  |
| 11:30 a.m. - 1:00 p.m. | <b>E79</b> | <b>The Use of Lean Principles in a Forensic Environment to Facilitate Transformation</b><br><i>Zo-dee Ledger*</i>  |
| 11:30 a.m. - 1:00 p.m. | <b>E80</b> | <b>Motor Vehicle Crash or Auto-Pedestrian: Are Stranded Motorists (SM) Left "Stranded"?</b><br><i>Stacy A. Drake, MPH, PhD*; Dwayne A. Wolf, MD, PhD</i>   |



## GENERAL

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11:30 a.m.	-	1:00 p.m.	<b>E81</b>	<b>Forensic Podiatry and Human Identification — The State of This Art in European Countries</b> <i>Pablo Martinez-Escauriaza*</i> ; <i>Sara C. Zapico, PhD</i> ; <i>Joe Adserias, DDS, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>E82</b>	<b>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</b> <i>Terrie Simmons-Ehrhardt, MA*</i> ; <i>Catyana R. Skory Falsetti, MFS</i> ; <i>Christopher J. Ehrhardt, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>E83</b>	<b>Perception of Elder Abuse by Primary Health Care Professionals</b> <i>Mafalda Ferreira, MSc</i> ; <i>César Santos</i> ; <i>Duarte Nuno Vieira, MSc, PhD, MD*</i>
11:30 a.m.	-	1:00 p.m.	<b>E84</b>	<b>A Comprehensive Comparison of Various Postmortem (PM) Fingerprint Recovery Techniques</b> <i>Marzena H. Mulawka, MFS*</i> ; <i>Gary W. Reinecke, MA*</i>

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<b>Moderator:</b> <i>David G. Lord, PhD</i> <i>CA State Poly University</i> <i>Dept of Geography &amp; Anthropology</i> <i>Pomona, CA</i>				<b>Co-Moderator:</b> <i>Phillip M. Curran, MFS</i> <i>Fort Hood, TX</i>
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1:00 p.m.	-	1:30 p.m.	<b>E85</b>	<b>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</b> <i>Patrizia Trapella, JD, MA*</i> ; <i>Luca Massaro, MA*</i> ; <i>Matteo Borrini, PhD*</i>
1:30 p.m.	-	1:45 p.m.	<b>E86</b>	<b>Determining Donor Gender Based on Blood Stains Using Raman Spectroscopy</b> <i>Igor K. Lednev, PhD*</i> ; <i>Aliaksandra Sikirzhyskaya, MS</i> ; <i>Vitali Sikirzhyski, MS</i> ; <i>Ewelina Mistek, BS</i> ; <i>Lenka Halamkova, PhD</i>
1:45 p.m.	-	2:05 p.m.	<b>E87</b>	<b>Evaluation of Decomposition and Insect Colonization of Pig (<i>Sus Scrofa</i>) Cadavers Inside a Vehicle</b> <i>Helene N. LeBlanc, PhD*</i> ; <i>Shari Forbes, PhD</i> ; <i>Kelly Robinson, MSc</i> ; <i>Alicia Buetter, BSc</i>
2:05 p.m.	-	2:15 p.m.	<b>E88</b>	<b>Serial Killers in Colombia: A Comparative Study</b> <i>Edwin O. Olaya Molina, BA*</i>
2:15 p.m.	-	2:30 p.m.		<b>Break</b>

# GENERAL



*Moderator: Scott Roeske, MFS  
Belton, TX*

*Co-Moderator: Daniel V. Christman, MS  
Snohomish County Medical Examiner's Office  
Bothell, WA*

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|-----------|---|-----------|------------|--|
| 2:30 p.m. | - | 2:45 p.m. | <b>E89</b> | <b>Understanding Familial DNA Searching: Policies and Practices in the United States</b><br><i>Sara A. Debus-Sherrill*; Michael B. Field, MS; Saniya Seera, BA</i>   |
| 2:45 p.m. | - | 3:00 p.m. | <b>E90</b> | <b>Statistical Analysis of Key Components of Alcohol-Related Sexual Assault in the Military</b><br><i>Michael J. Bosse, MFS*; Unsil Lee, MS*</i>   |
| 3:00 p.m. | - | 3:30 p.m. | <b>E91</b> | <b>Case Study of Postmortem Dismemberment Using a Coping Saw and a Related Analysis of the Cutting Plane Curvature</b><br><i>Eunah Joo, MS*; Youngil Seo, MS; Sangyoon Lee, MS; Donghwan Kim, PhD; Jin-Pyo Kim, PhD; Nam-Kyu Park, PhD</i> |
| 3:30 p.m. | - | 4:00 p.m. | <b>E92</b> | <b>A Proposal for a Universal Classification of Paraphilias</b><br><i>Anil Aggrawal, MD*</i>   |
| 4:00 p.m. | - | 4:30 p.m. | <b>E93</b> | <b>An Interdisciplinary Approach to Forensic Science Education</b><br><i>John Mabry, JD*; Wayne D. Lord, PhD; Mark R. McCoy, EdD; Thomas H. Jourdan, PhD; Dwight E. Adams, PhD</i>   |
| 4:30 p.m. | - | 5:00 p.m. | <b>E94</b> | <b>Movement and Perception in Shooting Incidents: Neuroscience of Reaction and Reflex</b><br><i>Alexander Jason, BA*</i>   |





# JURISPRUDENCE

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## Wednesday

### Poster Session

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- 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

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*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, 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**

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*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




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11:00 a.m. - 11:20 a.m.	<b>F7</b>	<b>Asymmetric Politics and Forensic Science: “Forget It, Jake — It’s Chinatown”</b> <i>Max M. Houck, PhD*</i>
11:20 a.m. - 11:40 a.m.	<b>F8</b>	<b>Post-Conviction in the Wake of a Crime Lab Scandal: Lessons Learned From the St. Paul Police Department Crime Lab</b> <i>Katie Conners*</i>
11:40 a.m. - 12:00 p.m.	<b>F9</b>	<b>Transferring Management of Forensic Operations From Police Department to Independent Non-Profit Corporation: Houston’s Experience</b> <i>Tom P. Allen, JD*</i>
12:00 p.m. - 1:30 p.m.		<b>Lunch</b>

## Poster Session

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11:30 a.m. - 1:00 p.m.	<b>F10</b>	<b>Arc Burn: Not a Cause of Necrosis From Stun Gun Shock Wounds</b> <i>James F. McNulty, Jr., JD*; Ismail M. Sebetan, MD, PhD*; Paul Stein, PhD*</i>
11:30 a.m. - 1:00 p.m.	<b>F11</b>	<b>Forensic Science and Justice Integration — The Brazilian Experience: People and Systems Working Together for a Better Criminal Prosecution</b> <i>Marcia Aiko Tsunoda, Msc*; Jairo G. Schafer, MSc*</i>

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*Moderator: Nicole Starr, JD*  
*Ramsey County District Court*  
*Saint Paul, MN*

*Co-Moderator: Daniel G. Martin*  
*Superior Court of Arizona*  
*Old Courthouse*  
*Phoenix, AZ*

1:30 p.m. - 1:45 p.m.	<b>F12</b>	<b>The Role of the English Coroner in Preventing Future Deaths in Similar Circumstances</b> <i>A.R.W. Forrest, LLM*</i>
1:45 p.m. - 2:30 p.m.	<b>F13</b>	<b>Good Cop, Bad Cop — Forensic Pathology of Law Enforcement-Associated Deaths and Case Review</b> <i>J.C. Upshaw Downs, MD*; Michael M. Baden, MD*</i>
2:30 p.m. - 3:00 p.m.	<b>F14</b>	<b>The Baby Tyler Case: Should Medical Examiners Have Access to Statements Obtained by Law Enforcement to Determine Cause and Manner of Death?</b> <i>Stephanie Domitrovich, JD, PhD*; Donald E. Shelton, JD, PhD*; Jeffrey M. Jentzen, MD*</i>
3:00 p.m. - 3:15 p.m.	<b>F15</b>	<b>The Role of the Forensic Pathologist in the Judge’s Decision in Italy: A Presentation of a Peculiar Case</b> <i>Anna Gitto, JD*; Giovanni Serinelli, JD; Gabriella Fimiani, JD; Serenella Serinelli, MD; Lorenzo Gitto, MD; Giorgio Bolino, MBBS</i>



# JURISPRUDENCE

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3:15 p.m. - 3:30 p.m. **Break**

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*Moderator: Joseph I. Cassilly, JD  
State Attorney's Office  
Bel Air, MD*

*Co-Moderator: Garrett 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**

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*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\**

# JURISPRUDENCE




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2:40 p.m.	-	3:00 p.m.	<b>Break</b>
3:00 p.m.	-	3:30 p.m.	<b>D12</b> <b>Is the Gatekeeper Concept Failing the Justice System? Is There a Viable Alternative?</b> <i>John Nixon, CEng, MBA*</i>
3:30 p.m.	-	4:00 p.m.	<b>D13</b> <b>The Federal Bureau of Investigation's (FBI's) Misrepresentation of Hair Evidence: History, Response, and Remedy</b> <i>Peter D. Barnett, BS*</i>
4:00 p.m.	-	4:30 p.m.	<b>F23</b> <b>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</b> <i>Andrew Sulner, MSFS, JD*</i>
4:30 p.m.	-	5:00 p.m.	<b>Discussion</b>

## *Friday*

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*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.	<b>F24</b> <b>An Examination of Scientific Expert Testimony: Transforming Evidence Presentation in the Courtroom</b> <i>Shirley Marshall*; Hannah Fawcett, PhD</i>
9:00 a.m.	-	9:20 a.m.	<b>F25</b> <b>From Crime Scene to Hipster Haven: Solving a Rape on Manhattan's Lower East Side</b> <i>Melissa Mourges, JD*; Martha Bashford, JD*</i>
9:20 a.m.	-	9:40 a.m.	<b>F26</b> <b>We Don't Catch the Smart Ones — How a Rubber Glove Left Genetic Fingerprints at the Crime Scene</b> <i>Rachel S. Singer, JD*; Diana Ho*</i>
9:40 a.m.	-	10:00 a.m.	<b>F27</b> <b>Naked DNA: Mounting an Inadvertent Transfer Defense in Cases With Little or No Corroboration</b> <i>Kelley Kulick, JD*</i>
10:00 a.m.	-	10:20 a.m.	<b>Break</b>



# JURISPRUDENCE

Moderator: *Paul Messner, JD*  
*Dry Ridge, KY*

Co-Moderator: *Elena D'Agustino, JD*  
*Vallejo, CA*

- 10:20 a.m. - 10:40 a.m. **F28** **Disputed DNA Stats for a Low-Level Sample: A Case Study**  
*Dan Krane, PhD\**; *Carrie Rowland, MSc*; *Nathaniel D. Adams, BS*
- 10:40 a.m. - 11:00 a.m. **F29** **Overcoming Bias in DNA Mixture Interpretation**  
*Mark W. Perlin, PhD, MD\**
- 11:00 a.m. - 11:20 a.m. **F30** **Limitations of Current DNA Testing: Information That May Not Be in Reports**  
*Charlotte J. Word, PhD\**
- 11:20 a.m. - 11:40 a.m. **F31** **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**  
*Courtney Head, MS\**; *Inger H. Chandler, JD*
- 11:40 a.m. - 12:00 p.m. **F32** **Justice for All, Oversight for Some? The Independent External Investigation Requirement of the Department of Justice's Paul Coverdell Forensic Science Improvement Grants Recipients**  
*Jeffrey A. Benson, JD\**
- 12:00 p.m. - 1:15 p.m. **Lunch**

## Poster Session

- 11:30 a.m. - 1:00 p.m. **F33** **Geographic Variability of Active Ingredients in Spice Within Alaska as an Indicator of Mechanisms of Distribution and Manufacture**  
*Dakota W. Emery\**; *Christopher R. Iceman, PhD*; *Sarah Hayes, PhD*

Moderator: *Julie Maxwell, JD*  
*Rochester, MN*

Co-Moderator: *Gail C. Groy, JD*  
*Rizzo & Diersen, SC*  
*Verona, WI*

- 1:15 p.m. - 1:30 p.m. **F34** **Debating Death: Examining Capital Punishment Legislation More Than 40 Years After *Furman***  
*Christiana Burgess, BS, BA\**
- 1:30 p.m. - 1:50 p.m. **F35** **Innocent, Yet Still Incarcerated in Minnesota**  
*Cynthia L. Evenson, JD\**

# JURISPRUDENCE



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1:50 p.m.	-	2:50 p.m.	<b>F36</b>	<b>The Shifted Paradigm: The Unprecedented Year in Bitemark Analysis and Hair Microscopy Litigation</b> <i>Maxwell Christopher Fabricant, JD*; Dana Delger, JD*</i>
2:50 p.m.	-	3:10 p.m.	<b>F37</b>	<b>The Stingray® Revolution: How the Widespread Use of Cell Site Simulators Is Changing Law Enforcement Tactics and Criminal Prosecutions in Maryland</b> <i>Jason D. Ricke, JD, LLM*</i>
3:10 p.m.	-	3:30 p.m.	<b>F38</b>	<b>Loss of the Fingerprint Exemption: Implications of Changes in Professional Practice</b> <i>David A. Stoney, PhD*; Paul L. Stoney, MBA</i>
3:30 p.m.	-	3:45 p.m.		<b>Break</b>

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*Moderator: Linda L. Chezem, JD*  
*Purdue University*  
*Mooreville, IN*

*Co-Moderator: Anne C. Petty, JD*  
*Chicago, IL*

3:45 p.m.	-	4:05 p.m.	<b>F39</b>	<b>Black Boxes and Due Process: Transparency in Expert Software Systems</b> <i>Dan Krane, PhD*; Nathaniel D. Adams, BS</i>
4:05 p.m.	-	4:30 p.m.	<b>F40</b>	<b>The Legal and Scientific Landscape of a Federal Analogue Prosecution Post-McFadden</b> <i>Heather L. Harris, MFS, JD*; T. Douglas Clifford, JD*</i>
4:30 p.m.	-	5:00 p.m.	<b>F41</b>	<b>New and Better Ways to Challenge Fire Investigators in Court Using National Research Council/National Academy of Sciences (NRC/NAS) Report Initiatives</b> <i>Terry-Dawn Hewitt, LLM*; Wayne J. McKenna, LLB</i>

## ***Saturday***

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*Moderator: Robert M. Sanger, JD*  
*Sanger Swysen & Dunkle*  
*Santa Barbara, CA*

*Co-Moderator: Cynthia L. Evenson, JD*  
*Duluth, MN*

9:00 a.m.	-	9:20 a.m.	<b>F42</b>	<b>Dealing With <i>Daubert</i>: The Change to and Application of a New Evidential Standard in Alcohol- and Drug-Impaired Driving Cases</b> <i>Garett M. Berman, JD*</i>
9:20 a.m.	-	9:40 a.m.	<b>F43</b>	<b>“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?</b> <i>Maria Susana Ciruzzi, PhD*</i>



## JURISPRUDENCE

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9:40 a.m. - 10:00 a.m.	<b>F44</b>	<b>Battlefield Forensics: A Precursor to Counterterrorism, Peace, and Security</b> <i>Abdullah Usman, LLM, MSc*</i>
10:00 a.m. - 10:20 a.m.	<b>F45</b>	<b>Hospital Emergency Rooms: Please Stop the Blunders and Save the Evidence</b> <i>Jayne J. Batts, MD*</i>
10:20 a.m. - 10:40 a.m.		<b>Break</b>

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*Moderator: Maria Susana Ciruzzi, PhD*  
*Hospital Nacional de Pediatría Prof. Dr. Garrahan*  
*Buenos Aires, ARGENTINA*

*Co-Moderator: Alan J. Black, JD*  
*Northampton, MA*

10:40 a.m. - 11:00 a.m.	<b>F46</b>	<b>Risk Factors in Adjudicative Incompetency: A Case Study</b> <i>Lauren Traveller, DNP*; Joyce P. Williams, DNP</i>
11:00 a.m. - 11:20 a.m.	<b>F47</b>	<b>Due Process Necessities for Developing National Forensic Standards: Underscoring the Need to Prevent Domination of the Process by a Given Stakeholder Interest</b> <i>Andrew Sulner, MSFS, JD*</i>
11:20 a.m. - 11:40 a.m.	<b>F48</b>	<b>“De-NIST-ing”: The Evidence and Science Behind the Term</b> <i>Douglas R. White, MS*; Mary T. Laamanen, MS</i>

# ODONTOLOGY



## Wednesday

### Poster Session

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|------------------------|-----------|--|
| 11:30 a.m. - 1:00 p.m. | <b>G1</b> | <b>Does Multimedia Facilitate Training in Dental Hygiene Mass Fatality Preparedness?</b><br><i>Tara L. Newcomb, MS*</i>  |
| 11:30 a.m. - 1:00 p.m. | <b>G2</b> | <b>Dental Maturation and Age Estimation in Children With Down Syndrome</b><br><i>Laura C. Farese, MD*; Giulia Vitale; Viola Bartolini; Claudio Baldinotti, DDS; Stefano Vanin, PhD; Martina Focardi; Vilma Pinchi, PhD</i>                                   |
| 11:30 a.m. - 1:00 p.m. | <b>G3</b> | <b>Selection of Analytical Techniques for Teeth According to Conservation and Conditions After Being Exposed at Different Temperatures</b><br><i>Nancy Vargas Becerril, PhD*; Marco A. Alvarez-Perez, PhD; Lorena Valencia Caballero, PhD; Ivet Gil, PhD</i> |

## Thursday

### Age Estimation I

*Moderator: Richard M. Weledniger, DDS  
Melville, NY*

*Co-Moderator: John B. Nase, DDS  
Dental Forensic Services of Indian Valley  
Harleysville, PA*

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|-----------------------|-----------|--|
| 8:30 a.m. - 8:45 a.m. | <b>G4</b> | <b>Dental Age Estimation: Root Canal Widths (RCW) of Mandibular Permanent Molars at the 18-Year Threshold</b><br><i>Graham J. Roberts, MDS*; Fraser McDonald, PhD; Victoria S. Lucas, PhD</i>  |
| 8:45 a.m. - 9:00 a.m. | <b>G5</b> | <b>Dental Age Estimation: Root Pulp Visibility (RPV) and Periodontal Ligament Visibility (PLV) at the 18-Year Threshold</b><br><i>Victoria S. Lucas, PhD*; Fraser McDonald, PhD; Graham J. Roberts, MDS</i>                                  |
| 9:00 a.m. - 9:15 a.m. | <b>G6</b> | <b>A Comparison of Dental Age Estimation Using Cameriere et al. to Other Osteological Methods in a Deceased, Undocumented Border Crosser (UBC) Population</b><br><i>Melinda Hacker, DDS*; James P. Fancher, DDS, PhD; David R. Senn, DDS</i> |
| 9:15 a.m. - 9:30 a.m. | <b>G7</b> | <b>Validating Tooth Development Staging Techniques Based on the Prediction of the Mature Root Lengths</b><br><i>Patrick W. Thevissen, PhD*; Baraa Khalaf, MSc; Steffen Fieuws, PhD; Guy Willems, PhD</i>                                     |
| 9:30 a.m. - 9:45 a.m. | <b>G8</b> | <b>Combining Radiographically Observed Craniofacial and Tooth Developmental Age Predictors</b><br><i>Parul Khare, MSc*; Guy Willems, PhD; Steffen Fieuws, PhD; Patrick W. Thevissen, PhD</i>   |





# ODONTOLOGY

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9:45 a.m. - 10:00 a.m.	<b>G9</b>	<b>Third Molar Age Estimation: Appropriately Censoring Stage “H” Using the Data From Two Previously Published Studies — Blankenship et al. and Kasper et al.</b> <i>Jennifer A. Moore, DMD*</i>
10:00 a.m. - 10:15 a.m.	<b>Break</b>	

## Age Estimation II

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*Moderator: Genevieve D.S. Bussiere, DMD  
Edmonton, AB, CANADA*

*Co-Moderator: Mark C. Frill, DDS  
Papillion, NE*

*Co-Moderator: Leslie A. Haller, DMD  
Miami, FL*

10:15 a.m. - 10:30 a.m.	<b>G10</b>	<b>Dental Age Estimation in Children With Juvenile Rheumatoid Arthritis (JRA)</b> <i>Giulia Vitale*; Claudio Baldinotti, DDS; Viola Bartolini; Stefano Vanin, PhD; Francesco Pradella, MSc; Gian A. Norelli; Vilma Pinchi, PhD</i>
10:30 a.m. - 10:45 a.m.	<b>G11</b>	<b>An Age Estimation Procedure Based on the 3D Cone Beam Computed Tomography (CBCT) Study of the Dental Pulp Volume in Adults</b> <i>Vilma Pinchi, PhD*; Francesco Pradella, MSc; Claudio Baldinotti, DDS; Cosimo Nardi, MD; Martina Focardi; Giulia Vitale; Gian A. Norelli; Stefano Vanin, PhD</i>
10:45 a.m. - 11:00 a.m.	<b>G12</b>	<b>A Biometric Identification System and Border Control: A Proposal for the Integration of Digital Orthopantomograms (OPGs) and Odontogram Data of Migrants</b> <i>Emilio Nuzzolese, PhD*; Sakher J. AlQahtani, PhD, DDS*; Joe Adserias, DDS, PhD*</i>
11:00 a.m. - 11:15 a.m.	<b>G13</b>	<b>Utilizing Custom Spreadsheets for Age Estimation Cases</b> <i>Derek M. Draft, DDS*</i>
11:15 a.m. - 11:30 a.m.	<b>G14</b>	<b>The Performance of Willem’s Method in Estimating Dental Age in Children: A Systematic Review and Meta-Analysis</b> <i>Mohd Yusmialdil P. Mohd Yusof, MS*; Ilham Wan Mokhtar, MSc; Sivaprakash Rajasekharan, MSc; Rosanna Overholser, PhD; Luc Martens, PhD</i>
11:30 a.m. - 11:40 a.m.	<b>G15</b>	<b>Accuracy of the Third Molar Index for Assessing the Legal Majority of 18 Years of Age in the Turkish Population</b> <i>Roberto Cameriere; Stefano De Luca, PhD; Ayse Gulsahi, PhD*; Burcak Cehreli, PhD; Ebru Tirali, PhD</i>
11:40 a.m. - 12:00 p.m.	<b>G16</b>	<b>Standards of Dental Developmental Stages</b> <i>Sakher J. AlQahtani, PhD, DDS*; Mary A. Cimmancic, DDS</i>

# ODONTOLOGY



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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

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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

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*Moderator: Laura Paige Moses Smalley, DMD*  
*Rome, GA*

*Co-Moderator: Thomas A. Gromling, DDS*  
*Stephens City, VA*

1:45 p.m. - 2:00 p.m.    **G21**    **Bitemarks — Maybe It Is Rocket Science**  
*Ken F. Cohn, 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\**



## ODONTOLOGY

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2:45 p.m.	-	3:00 p.m.	<b>G25</b>	<b>The Rise and Fall of Bitemark Matching and Bitemark Recognition: Blame It on DNA ... or, What's Next?</b> <i>Charles Michael Bowers, DDS, JD*</i>
3:00 p.m.	-	3:15 p.m.		<b>Break</b>

### Bitemarks II

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*Moderator: Alistair Soon, MFM  
Forensic and Scientific Services  
Forensic Odontology/Pathology Unit  
Coopers Plains, AUSTRALIA*

*Co-Moderator: Julie Ann Smith, DDS, MD  
Happy Valley, OR*

3:15 p.m.	-	3:35 p.m.	<b>G26</b>	<b>Bitemark Analysis and Comparison: Science, Observation, and Opinion</b> <i>Thomas J. David, DDS*; Holland Maness, DMD*</i>
3:35 p.m.	-	3:55 p.m.	<b>G27</b>	<b>The Anatomy of an Aborted Retrial Involving Bitemark Evidence</b> <i>Robert B.J. Dorion, DDS*</i>
3:55 p.m.	-	4:15 p.m.	<b>G28</b>	<b>Bitemark Evidence — Part 2: Antemortem vs. Postmortem Bitemarks as Experimental Models</b> <i>Robert B.J. Dorion, DDS*</i>
4:15 p.m.	-	4:30 p.m.	<b>G29</b>	<b>Unusual Bitemark Cases Demonstrate the Value of Bitemark Analysis</b> <i>Richard H. Fixott, DDS*</i>
4:30 p.m.	-	4:45 p.m.	<b>G30</b>	<b>Assessing the Reliability of Measurements of Human Dental Casts Using an Intraoral 3D Scanner</b> <i>Mithun Rajshekar, MFSc*</i>
4:45 p.m.	-	5:00 p.m.	<b>G31</b>	<b>Morphoanalysis of Bitemarks</b> <i>Charles E. Georget, PhD*; Aime Conigliaro, MA</i>
5:00 p.m.	-	5:05 p.m.		<b>Break</b>

### Dental Identifications From World War II

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*Moderator: Judy Y. Marshall, DMD  
Marshall Family Dentistry  
Port Charlotte, FL*

5:05 p.m.	-	5:35 p.m.	<b>G32</b>	<b>Dental Identification Challenges Using World War II Military Dental Records: Tarawa, 2015</b> <i>Corinne D'Anjou, DMD*; David R. Senn, DDS*; James F. Goodrich, BDS*</i>
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# ODONTOLOGY



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## Friday

### Dental Identification I

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*Moderator: Charles E. Berner, DDS  
DMORT, FEMORS, OMORT, Summit Co. MEO  
Cleveland, OH*

*Co-Moderator: Derek M. Draft, DDS  
Grandville, MI*

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|------------|---|------------|------------|--|
| 9:00 a.m.  | - | 9:15 a.m.  | <b>G33</b> | <b>The Trabecular Bone in Identification — Algorithms and Fractal Analysis</b><br><i>Sylvain Desranleau, DMD*; Robert B.J. Dorion, DDS</i>                       |
| 9:15 a.m.  | - | 9:30 a.m.  | <b>G34</b> | <b>Paradise Ablaze 6-2-6: Dental Identification of Charred Human Remains</b><br><i>Judy Y. Marshall, DMD*</i>  |
| 9:30 a.m.  | - | 9:45 a.m.  | <b>G35</b> | <b>You Mean You Made an Identification Using What?</b><br><i>Mary Shields, DMD*; Mark L. Bernstein, DDS</i>  |
| 9:45 a.m.  | - | 10:00 a.m. | <b>G36</b> | <b>Accuracy of the Cameriere's Method on Age Estimation on the Libyan Population</b><br><i>Ashref A.K. Dardouri, MSc; Roberto Cameriere; Stefano Vanin, PhD*</i> |
| 10:00 a.m. | - | 10:15 a.m. |            | <b>Break</b>   |

### Dental Identification II

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*Moderator: Marnie L. Sperling, DMD  
Somerset, NJ*

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|------------|---|------------|------------|---|
| 10:15 a.m. | - | 10:30 a.m. | <b>G37</b> | <b>Restorative-Era Identification of a Severed, Embalmed Head</b><br><i>Raymond G. Miller, DDS*; Mary A. Bush, DDS; Peter J. Bush, BS</i>   |
| 10:30 a.m. | - | 10:45 a.m. | <b>G38</b> | <b>Annapolis Mansion Fire — January 2015: Utilizing Dental Identifications</b><br><i>Patrick A. Murray, DDS*; Ali Behnia, DMD; Pete N. Nickolas, DDS;<br/>Warren D. Tewes, DDS</i>  |
| 10:45 a.m. | - | 11:00 a.m. | <b>G39</b> | <b>Identification of Decomposed Human Remains Found in a Septic Tank</b><br><i>Donna J. Hellwinkel, DDS*</i>  |
| 11:00 a.m. | - | 11:15 a.m. | <b>G40</b> | <b>Dental Morphoanalysis and Identification of Monozygotic Twins</b><br><i>Aime Conigliaro, MA*; Charles E. Georget, PhD</i>  |
| 11:15 a.m. | - | 11:30 a.m. | <b>G41</b> | <b>Photographically and Radiographically Observed Dental Evidences Validated for Human Identification Purposes</b><br><i>Nikolaos Angelakopoulos*; Guy Willems, PhD; Ademir Franco, MSc;<br/>Steffen Fieuws, PhD; Patrick W. Thevissen, PhD</i> |



## ODONTOLOGY

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11:30 a.m. - 11:45 a.m.	<b>G42</b>	<b>Teeth and Fire: Forensic Analysis of Teeth and Dental Material Exposed to Fire</b> <i>Joe Adserias, DDS, PhD*</i> ; <i>Sara C. Zapico, PhD</i> ; <i>Luis L. Cabo, MS</i> ; <i>Steven A. Symes, PhD</i> ; <i>Douglas H. Ubelaker, PhD</i> ; <i>Dennis C. Dirkmaat, PhD</i>
11:45 a.m. - 1:15 p.m.		<b>Lunch</b>

### Poster Session

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11:30 a.m. - 1:00 p.m.	<b>G43</b>	<b>The Forensic Impact of the Humanitarian Work of the Vicente Ferrer Foundation's Rural Development Trust in India</b> <i>Joe Adserias, DDS, PhD*</i> ; <i>Aida Dieguez, DDS</i> ; <i>Sergio Irazusta, DDS</i> ; <i>MD Y. Ballasubbaiah, MD</i> ; <i>Vicente Lozano, PhD</i>
11:30 a.m. - 1:00 p.m.	<b>G44</b>	<b>Imaging Techniques for Intraoral Postmortem Dental Radiographs</b> <i>Ann M. Bruhn, MS*</i> ; <i>Tara L. Newcomb, MS*</i> ; <i>Bridget Giles, PhD</i>
11:30 a.m. - 1:00 p.m.	<b>G45</b>	<b>Morphological Changes in Palatal Rugae After Maxillary Surgical Procedure: Is It Possible?</b> <i>Antonio A. Antunes, PhD*</i> ; <i>Augusto P. Oliveira</i> ; <i>Evelyne P. Soriano, PhD</i> ; <i>Marcus Vitor D. Carvalho, PhD</i> ; <i>Reginaldo I.C. Campello, PhD</i> ; <i>Gabriela G. Porto, PhD</i>

### Software and Statistics to Assist in Identification/MFI

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*Moderator: Marnie L. Sperling, DMD*  
*Somerset, NJ*

1:15 p.m. - 1:30 p.m.	<b>G46</b>	<b>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</b> <i>Tore T. Solheim*</i>
1:30 p.m. - 1:45 p.m.	<b>G47</b>	<b>New Mexico Office of the Medical Investigator: Overview, Dental Identification Statistical Data, and Mass Fatality Incident Plan</b> <i>Cristina M. Dalle Grave, DDS*</i> ; <i>Peter W. Loomis, DDS</i>
1:45 p.m. - 2:00 p.m.	<b>G48</b>	<b>The Use of Dental Patterns in Decedent Identification: The Role of the New and Improved OdontoSearch 3.0 Program</b> <i>Kenneth W. Aschheim, DDS*</i> ; <i>Bradley J. Adams, PhD*</i>
2:00 p.m. - 2:15 p.m.	<b>G49</b>	<b>Dental Encoding Translator Applications Suite (DEnTAS) — “Universal Dental Code Translator”</b> <i>Kenneth W. Aschheim, DDS*</i> ; <i>Bruce Bandini, MS*</i>
2:15 p.m. - 2:30 p.m.		<b>Break</b>

# ODONTOLOGY



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## Standards of Care

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*Moderator: Donna J. Hellwinkel, DDS  
Reno, NV*

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|-----------|---|-----------|------------|--|
| 2:30 p.m. | - | 2:50 p.m. | <b>G50</b> | <b>The Odontologist's Role in Death Investigation in Cases of Deaths After Dentistry</b><br><i>Yolanda Nerkowski, BA; Taylor L. Gardner, BFSc; Jeff Chadwick, DDS;<br/>Kris Cunningham, MD; Robert E. Wood, DDS, PhD*</i>                |
| 2:50 p.m. | - | 3:05 p.m. | <b>G51</b> | <b>How to Deliver Sub-Optimal Dental Care Effectively</b><br><i>Taylor L. Gardner, BFSc; Yolanda Nerkowski, BA; Jeff Chadwick, DDS;<br/>Kris Cunningham, MD; Robert E. Wood, DDS, PhD*</i>   |
| 3:05 p.m. | - | 3:20 p.m. | <b>G52</b> | <b>Dental Litigation Epidemiology</b><br><i>Francesco Pradella, MSc*; Vilma Pinchi, PhD; Stefano Garatti, MSc;<br/>Viola Bartolini; Martina Focardi; Gian A. Norelli</i>   |
| 3:20 p.m. | - | 3:35 p.m. | <b>G53</b> | <b>The Evaluation of 73 Dental Malpractice Cases From the Counsel of Forensic Medicine</b><br><i>Huseyin Afsin, PhD*; Ahmet Sadi Cagdir, MD; Abdi Ozaslan, MD;<br/>Muhammet Nabi Kantarci; Umit Naci Gundogmus; Gulnaz T. Javan, PhD</i> |
| 3:35 p.m. | - | 3:50 p.m. |            | <b>Break</b>   |

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## Potpourri

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*Moderator: Corinne D'Anjou, DMD  
Saint-Lambert, PQ, CANADA*

*Co-Moderator: Leigh-Ann Schuerman, DMD  
Cave Creek, AZ*

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|-----------|---|-----------|------------|--|
| 3:50 p.m. | - | 4:05 p.m. | <b>G54</b> | <b>Partial Faceoff Dissection in Dental Autopsy</b><br><i>William E. Silver, DDS*; Richard R. Souviron, DDS</i>  |
| 4:05 p.m. | - | 4:20 p.m. | <b>G55</b> | <b>3D Analysis of Dental Crown Morphology in Laser-Scanned Dentitions: A Comparison of Three Software Packages</b><br><i>Ademir Franco, MSc*; Guy Willems, PhD; Sérgio Ignácio, PhD; Paulo Souza, PhD;<br/>Patrick W. Thevissen, PhD</i> |
| 4:20 p.m. | - | 4:30 p.m. | <b>G56</b> | <b>Manipulation of Forensic Experts — Altering the Course of Criminal Justice in Hungary</b><br><i>Armin A. Farid, DDS*</i>  |



# PATHOLOGY/BIOLOGY

## Wednesday

### Poster Session

11:30 a.m. - 1:00 p.m.	<b>H1</b>	<b>From 3 Years to 3,000 Years: Forensic Taphonomy of Human Remains From the Irish Peatlands</b> <i>Esther Jack, MB BCh BAO*; Niamh A. McCullagh, MSc; Linda M. Mulligan, MBBCH</i>
11:30 a.m. - 1:00 p.m.	<b>H2</b>	<b>Assessment of Infrared (IR) Thermography for the Estimation of Postmortem Interval in Rats</b> <i>Jason W. Brooks, VMD, PhD*; Stephen Lynch, PhD</i>
11:30 a.m. - 1:00 p.m.	<b>H3</b>	<b>Blood-Derived Biomarkers for Estimation of Postmortem Interval (PMI)</b> <i>Isabel Costa, MS; Teresa Magalhães, PhD*; Paula Pinho, PhD; Félix Carvalho, PhD; Ricardo Silvestre, PhD; Ricardo Jorge Dinis-Oliveira*</i>
11:30 a.m. - 1:00 p.m.	<b>H4</b>	<b>Decomposition of Mouse Carcasses Infected With Fluorescently Labeled Bacteria Provide Insight on Postmortem Microbial Translocation</b> <i>Zachary M. Burcham, BS*; Jennifer L. Pechal, PhD; Jeffrey L. Bose, PhD; M. Eric Benbow, PhD; Carl J. Schmidt, MD; Heather R. Jordan, PhD</i>
11:30 a.m. - 1:00 p.m.	<b>H5</b>	<b>A Meta-Analysis of Carcass Decomposition on O'ahu, Hawaii</b> <i>Alexis J.L. Peterson*; Whitney A. Kodama, BA; David O. Carter, PhD</i>
11:30 a.m. - 1:00 p.m.	<b>H6</b>	<b>Analysis of Possible Impact Factors on the Regeneration Process of Hematomas in the Subcutaneous Fatty Tissue</b> <i>Kathrin Ogris, MA*; Thomas Widek; Eva M. Hassler; Patrick P. Torreiter; Andreas Petrovic, MSc; Eva Scheurer, MD</i>
11:30 a.m. - 1:00 p.m.	<b>H7</b>	<b>A New Approach to Collecting, Fixing, and Preparing Samples for Sperm Cells in Cases of Alleged Rape</b> <i>Helga Haahr-Lillevang, MD; Maria Pihlmann, MD; Anette M. D. Funder; Marianne S. Martiny, MA; Tine H. Meyer, MA; Iana Lesnikova, MD, PhD*</i>
11:30 a.m. - 1:00 p.m.	<b>H8</b>	<b>A Preliminary Study of Shifting Bacterial Communities of the Face During Human Cadaver Decomposition in Southeast Texas</b> <i>Lauren R. Smith, BS*; Joseph F. Petrosino, PhD; Sibyl R. Bucheli, PhD; Aaron M. Lynne, PhD</i>
11:30 a.m. - 1:00 p.m.	<b>H9</b>	<b>Bacteria Triggering a Preference in Flesh Flies (Diptera: Sarcophagidae) Associated With Human Cadavers</b> <i>Keli L. King*; Aaron M. Lynne, PhD; Sibyl R. Bucheli, PhD; Joseph F. Petrosino, PhD</i>
11:30 a.m. - 1:00 p.m.	<b>H10</b>	<b>The Six Little Pigs: Estimation of Long-Term Postmortem Interval (PMI) Based on Bacterial Community Succession in Porcine Remains</b> <i>Michael S. Woolf, BS*; Vanessa Sufirin, MS; Baneshwar Singh, PhD; Tal Simmons, PhD</i>



# PATHOLOGY/BIOLOGY



11:30 a.m.	-	1:00 p.m.	<b>H11</b>	<b>Investigation of the Utility of Five Messenger RNA (mRNA) Markers (SEM1, KLK3, PRM1, PRM2, and TGM4) in the Identification of Semen</b> <i>Ayşe Serin, PhD*</i> ; <i>Vugar K. Huseynov, PhD</i> ; <i>Husniye Canan, PhD</i> ; <i>Ayca Ulubay</i> ; <i>Mete K. Gulmen, PhD, MD</i>
11:30 a.m.	-	1:00 p.m.	<b>H12</b>	<b>Blow Flies and Nicotine: An Entomotoxicology Study</b> <i>Paola A. Magni, PhD*</i> ; <i>Marco Pazzi, PhD</i> ; <i>Eugenio Alladio, MS</i> ; <i>Marco Vincenti, MS</i> ; <i>Marco Brandimarte, MSc</i> ; <i>Ian Dadour, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>H13</b>	<b>Internal Validation of the Promega® PowerPlex® Y23 Amplification Kit for Use in Forensic Casework</b> <i>Jordan L. Clarke, BS*</i> ; <i>Jody West</i> ; <i>Kristin Meyer, MFS</i> ; <i>Pamela J. Staton, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>H14</b>	<b>Study on Forensically Important Insects Collected From Medicolegal Autopsies in South Korea</b> <i>Sang Eon Shin*</i> ; <i>Im Joo Rhyu, PhD*</i> ; <i>Seong Ho Yoo, PhD*</i> ; <i>Hyung Seok Kim, PhD</i> ; <i>Seong Hwan Park, PhD*</i>
11:30 a.m.	-	1:00 p.m.	<b>H15</b>	<b>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</b> <i>Ayca Ulubay*</i> ; <i>Husniye Canan, PhD</i> ; <i>Ayşe Serin, PhD*</i> ; <i>Necmi Cekin, MD</i> ; <i>Mete K. Gulmen, PhD, MD</i>
11:30 a.m.	-	1:00 p.m.	<b>H16</b>	<b>Interactions Between Microbes and Larvae on a Human Corpse</b> <i>Vadim Mesli, MD*</i> ; <i>Damien Charabidze, PhD</i> ; <i>Valéry C. Hedouin, MD, PhD</i> ; <i>Christel Neut, PhD</i> ; <i>Didier Gosset, MD, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>H17</b>	<b>Can DNA Data Be Used to Establish a Cut-Off Time for Juvenile Sexual Assault Exams?</b> <i>Daniela Anane-Bediakoh, BS*</i> ; <i>Martin Lopez, MS</i> ; <i>Holly Whillock, BS</i> ; <i>Sheree R. Hughes-Stamm, PhD</i> ; <i>Amy Castillo, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>H18</b>	<b>Application of a 6-Plex Microsatellite Kit in the Analysis of Aged Fecal DNA Samples: Prospective Use in Equine Slaughter Forensic Cases</b> <i>Ketaki Deshpande, MS*</i> ; <i>Melissa V. Oswald, MSFS</i> ; <i>DeEtta Mills, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>H19</b>	<b>The Assessment of GeoChip™ Functional Gene Microarray as an Aid for Soil Provenance</b> <i>Priyanka Kushwaha, MS*</i> ; <i>DeEtta Mills, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>H20</b>	<b>Comparison of Extraction Methods From Cotton Swabs in Reference to Background DNA From Commonly Touched Surfaces</b> <i>Meghan Roig, BS*</i> ; <i>Thais Simoes</i> ; <i>Bruce R. McCord, PhD</i> ; <i>Kerry Lynn Opel, MA, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>H21</b>	<b>Wildlife Forensic Investigation: Identifying an Unidentified Specimen Using NADH Subunit 2 (ND2) and Cytochrome B (cytb) Genes</b> <i>Hailey McClenon*</i> ; <i>Ashraf Mozayani, PharmD, PhD</i> ; <i>Hector Miranda, PhD</i>





# PATHOLOGY/BIOLOGY

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11:30 a.m. - 1:00 p.m.	<b>H22</b>	<b>Forensic Taphonomy: Investigating the Relationship Between Gross Postmortem Change and Mass Loss</b> <i>Adam Orimoto, MS; Kanani N. Thompson; Emily Junkins, BS; Christopher G. Inoue, BS; David O. Carter, PhD*</i>
11:30 a.m. - 1:00 p.m.	<b>H23</b>	<b>Dynamics of Decomposition in Tropical Environments: A Multidisciplinary Approach</b> <i>Ashley A. Matchett; Jariangely Rivera*</i>

## Thursday — Session I

### Pediatrics I

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*Moderator: Carl J. Schmidt, MD  
Wayne County MEO  
Detroit, MI*

8:30 a.m. - 8:45 a.m.	<b>H24</b>	<b>Severe Retinal Hemorrhages With Retinoschisis Are Not Pathognomonic for Abusive Head Trauma</b> <i>Kenneth D. Hutchins, MD; Mark J. Shuman, MD*</i>
8:45 a.m. - 9:00 a.m.	<b>H25</b>	<b>Evaluation of the Presence and Distribution of Leptomeningeal Inflammation in Cases of Sudden Death in Infancy</b> <i>Esther Jack, MB BCh BAO*; Elisabeth Haas, MPH; Terri L. Haddix, MD</i>
9:00 a.m. - 9:15 a.m.	<b>H26</b>	<b>Nerve Root and Dorsal Root Ganglia (NR/DRG) Hemorrhage as an Indicator of Pediatric Traumatic Head Injury (THI)</b> <i>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</i>
9:15 a.m. - 9:30 a.m.	<b>H27</b>	<b>Accidental Injuries in Children: A Clinical Study for Improving the Forensic Interpretation of Child Physical Abuse</b> <i>Federica Collini, MD*; Enrico A. Muccino, MD; Annalisa Cappella, BS; Lorenza Grappeja, MD; Pasquale Poppa, BS; Alessandra Kustermann, MD; Cristina Cattaneo, PhD</i>
9:30 a.m. - 9:45 a.m.	<b>H28</b>	<b>A Unique Type of Birth Trauma Mistaken for Abuse</b> <i>Carolyn V. Isaac, PhD*; Jered B. Cornelison, PhD; Joyce L. deJong, DO</i>
9:45 a.m. - 10:00 a.m.	<b>H29</b>	<b>Histological Abnormalities of the Costochondral Growth Plate in Infants and Young Children</b> <i>Sandacan Waduge, MD; Micheline Lubin, MD*; Richard C. Harruff, MD, PhD</i>
10:00 a.m. - 10:30 a.m.		<b>Discussion and Break</b>

# PATHOLOGY/BIOLOGY



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## Pediatrics II

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

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|------------|---|------------|------------|---|
| 10:30 a.m. | - | 10:45 a.m. | <b>H30</b> | <b>Risk Assessment for Asphyxia Without Doll Reenactments in Infant Deaths</b><br><i>Christopher Kiefer, MD*; Kent E. Harshbarger, MD, JD</i>   |
| 10:45 a.m. | - | 11:00 a.m. | <b>H31</b> | <b>Comparison of Safe vs. Unsafe Sleep Environments in Sudden, Unexpected Death in Infants</b><br><i>Michael D. Eckhardt, MD*; Steven M. White, MD, PhD; Jon Gates, MD; Eric August Eason, MD</i>   |
| 11:00 a.m. | - | 11:15 a.m. | <b>H32</b> | <b>Unusual Blunt Force Trauma to the Cranial Vault: Investigation of an Atypical Infant Abuse/Homicide</b><br><i>Jered B. Cornelison, PhD*; Carolyn V. Isaac, PhD; Brandy Shattuck, MD; Joyce L. deJong, DO</i>   |
| 11:15 a.m. | - | 11:30 a.m. | <b>H33</b> | <b>Infant and Child Deaths Associated With Drug Intoxication: A Series of Six Cases Over 15 Years in Eastern Virginia</b><br><i>Babatunde L. Stokes, MD*; Wendy M. Gunther, MD</i>  |
| 11:30 a.m. | - | 11:45 a.m. | <b>H34</b> | <b>Undiagnosed Metabolic Cardiomyopathy as a Cause of Pediatric Sudden, Unexpected Death: Case Report and Review of the Literature</b><br><i>Lauren M. Woertz; Steven M. White, MD, PhD; Audrey Deeken-Draisey, MD*</i>   |
| 11:45 a.m. | - | 12:00 p.m. | <b>H35</b> | <b>Use of an Automated, Nested, Multiplex, Respiratory Pathogen Polymerase Chain Reaction (PCR) Panel Postmortem in the Pediatric Forensic Setting</b><br><i>Tiffany Baker*; Cynthia A. Schandl, MD, PhD; S. Erin Presnell, MD; James Madory, DO; Nicholas I. Batalis, MD</i> |
| 12:00 p.m. | - | 12:15 p.m. |            | <b>Discussion</b>   |
| 12:15 p.m. | - | 1:30 p.m.  |            | <b>Lunch</b>  |

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## Poster Session

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|------------|---|-----------|------------|---|
| 11:30 a.m. | - | 1:00 p.m. | <b>H36</b> | <b>A Retrospective Study of Natural Causes of Sudden Unexpected Infant Deaths in Hubei, China</b><br><i>Xiang Zhang, MD*; Ling Li, MD*; Guoqiang Qian, MD*; Zhiyong Yang, MD*; Tiantong Yang*; Zhaoming Guo, MD*</i>                                |
| 11:30 a.m. | - | 1:00 p.m. | <b>H37</b> | <b>Female Suicides in Southern Marmara: A Retrospective Analysis of 8,048 Cases Between 2009 and 2014</b><br><i>Nursel Turkmen Inanir; Murat S. Gürses, MD*; Selcuk Cetin, MD; Mustafa N. Ural; Eser Bayraktar, MD*; Bulent Eren; Recep Fedakar</i> |



## PATHOLOGY/BIOLOGY

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11:30 a.m.	-	1:00 p.m.	<b>H38</b>	<b>Early Ischemic Heart Injury: An Immunohistochemical Study of a Paradigmatic Case</b> <i>Silvia D. Visonà, MD*</i> ; <i>David Forni, MD</i> ; <i>Giovanni Pierucci, MD</i> ; <i>Luisa Andrello, MD</i> ; <i>Antonio M.M. Osculati, MD</i>
11:30 a.m.	-	1:00 p.m.	<b>H39</b>	<b>Saddle Pulmonary Embolism With Paradoxical Coronary Artery Embolism Through a Patent Foramen Ovale: A Case Study</b> <i>Amber L. Achesinski, BS*</i> ; <i>Catherine B. Pearman, MPAS</i> ; <i>Wendy M. Gunther, MD</i>
11:30 a.m.	-	1:00 p.m.	<b>H40</b>	<b>Massive Fetomaternal Transfusion (FMT): Case Reports and Review of the Literature</b> <i>Silvana Temi, MD*</i> ; <i>Giovanni Botta, MD</i> ; <i>Giancarlo Di Vella, MD, PhD*</i>
11:30 a.m.	-	1:00 p.m.	<b>H41</b>	<b>The Prevalence of Paraphernalia Found at the Scene of Drug-Related Deaths</b> <i>Jason Gene Lozano, MD*</i> ; <i>Kimberley Molina, MD</i> ; <i>Nicole L. Healy, BS</i>
11:30 a.m.	-	1:00 p.m.	<b>H42</b>	<b>Sudden Cardiac Death (SCD) Visualized by Postmortem Magnetic Resonance Imaging (PMMRI) — How to Make the Invisible Visible</b> <i>Christian Jackowski, MD, EMBA*</i> ; <i>Nicole Schwendener, HF</i> ; <i>Anders Persson, MD, PhD</i> ; <i>Wolf-Dieter Zech, MD</i>
11:30 a.m.	-	1:00 p.m.	<b>H43</b>	<b>Liver Laceration as a Complication of Cardiopulmonary Resuscitation (CPR)</b> <i>Selcuk Cetin, MD*</i> ; <i>Hasan Din, MD*</i> ; <i>Murat S. Gürses, MD*</i> ; <i>Filiz Eren</i> ; <i>Bulent Eren</i> ; <i>Eser Bayraktar, MD*</i>
11:30 a.m.	-	1:00 p.m.	<b>H44</b>	<b>A Nine-Year Review of All-Terrain Vehicle-Related Fatalities at the West Tennessee Regional Forensic Center: 2006–2014</b> <i>Travis M. Sullivan, BS*</i> ; <i>Zachary O'Neill, DO</i>
11:30 a.m.	-	1:00 p.m.	<b>H45</b>	<b>Mechanisms of Death Due to Inadvertent Administration of Ionic Hypertonic Contrast Media Into the Subarachnoid Space</b> <i>Kazuhiko Kibayashi, MD*</i> ; <i>Ryo Shimada, PhD</i> ; <i>Jiro Ezaki, MD</i>
11:30 a.m.	-	1:00 p.m.	<b>H46</b>	<b>An Autopsy Case of Suspected Anti-N-Methyl-D-Aspartate Receptor (NMDAR) Encephalitis</b> <i>Kino Hayashi, MD*</i> ; <i>Kumiko Asakura, MD</i> ; <i>Wakako Hikiji, MD</i> ; <i>Tatsushige Fukunaga, MD</i> ; <i>Yohsuke Makino, MD</i> ; <i>Hisaomi Suzuki, MD</i> ; <i>Mitsumoto Onaya, MD</i> ; <i>Takahiro Iizuka, MD</i>
11:30 a.m.	-	1:00 p.m.	<b>H47</b>	<b>Medical Doctor Specialized in Legal Inspections (MDSLI): A Professional Interface Between State Prosecutors and Medical Examiners — The Swiss Model</b> <i>Emilio Scossa Baggi</i> ; <i>Ilaria Monico, MS*</i> ; <i>Ario Conti, BD</i> ; <i>Franco Ghiggia, MHME</i> ; <i>Roberto Cianella, MHEM</i> ; <i>Jhon Nosedá, LLD</i> ; <i>Luisa Andrello, MD</i> ; <i>Tony Fracasso, MD, PhD</i> ; <i>Patrice Mangin, MD, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>H48</b>	<b>Expression of Heat Shock Protein 70 (HSP70) After Human Brain Injury in Different Post-Traumatic Intervals</b> <i>Martina Focardi*</i> ; <i>Vilma Pinchi, PhD</i> ; <i>Defraia Beatrice</i> ; <i>Laura Pieri</i> ; <i>Francesca Castiglione</i> ; <i>Gian A. Norelli</i>

# PATHOLOGY/BIOLOGY



11:30 a.m. - 1:00 p.m.	<b>H49</b>	<b>Computed Tomography (CT) Findings of Unsuspected Aortic Dissection and Adult Polycystic Kidney Disease (APKD)</b> <i>Christopher J. Gordon, MD*; Edward Mazuchowski II, MD, PhD; Wendy S. Warren, DO*; Howard T. Harcke, Jr., MD</i>
11:30 a.m. - 1:00 p.m.	<b>H50</b>	<b>Pack Mentality: Fatal Mauling in the African Painted Dogs' Zoo Exhibit</b> <i>Farshaad Bilimoria, MD*; Stacey L. Reed, DO; Jessica B. Dwyer, MD; Joseph A. DelTondo, DO; Todd M. Luckasevic, DO; Karl E. Williams, MD</i>
11:30 a.m. - 1:00 p.m.	<b>H51</b>	<b>A Fatal Moose Attack</b> <i>Petur G. Gudmannsson, MD*; Anders Eriksson, MD, PhD*; Johan Berge, MD; Henrik Druid, MD, PhD; Göran Ericsson</i>
11:30 a.m. - 1:00 p.m.	<b>H52</b>	<b>Fatality During Servicing of a Fire Extinguisher: A Case Study</b> <i>Nilesh K. Tumram, MD*</i>
11:30 a.m. - 1:00 p.m.	<b>H53</b>	<b>Getting It Right: How Seemingly Obvious Manners of Death Can Change Through Historical and Autopsy Investigations</b> <i>Phouthasone Thirakul, MD*; Daniel L. Schultz, MD*; Kelly G. Devers, MD</i>
11:30 a.m. - 1:00 p.m.	<b>H54</b>	<b>Diagnostic Accuracy of Postmortem Imaging vs. Autopsy: A Systematic Literature Review</b> <i>Anders Eriksson, MD, PhD*; Torfinn Gustafsson, BM; Monica Hultcrantz, PhD; Malin Höistad, PhD; Stella Jacobson, PhD; Anders Persson, MD, PhD</i>
11:30 a.m. - 1:00 p.m.	<b>H55</b>	<b>Prevalence and Etiology of Intervention-Related Deaths — A Swedish Perspective</b> <i>Torfinn Gustafsson, BM*; Peter Carlsson, MD; Fredrik Tamsen, MD, MSc; Anders Eriksson, MD, PhD</i>
11:30 a.m. - 1:00 p.m.	<b>H56</b>	<b>Treatment for Injury Predicts the Risk of Child Homicide — A Case-Control Study</b> <i>Björn Bäckström*; Jonatan Hedlund, MD; Anna Jinghede, DDS; Joakim Sturup, PhD</i>
11:30 a.m. - 1:00 p.m.	<b>H57</b>	<b>Deaths Associated With Choking: An Istanbul Experience</b> <i>Erdinc Ozdemir*; Muhammet Nabi Kantarci; Timucin Yildirim; Sermet Koc</i>

## Trauma

*Moderator: Jan M. Gorniak, DO  
Office of the Chief Medical Examiner  
Washington, DC*

1:30 p.m. - 1:45 p.m.	<b>H58</b>	<b>A Mercury "Bullet" at Autopsy</b> <i>Sarah Long, BS*; Richard Wiggins, BS; Jennifer T. Akin, MS; Amy C. Gruszecki, DO</i>
1:45 p.m. - 2:00 p.m.	<b>H59</b>	<b>Chain Saw-Related Fatalities: What Is All the Buzz About?</b> <i>Abigail J. Grande, BS*; Shawn A. Silver, BS; Joseph A. Prahlow, MD; Joyce L. deJong, DO</i>



## PATHOLOGY/BIOLOGY

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2:00 p.m. - 2:15 p.m.	<b>H60</b>	<b>Intpretation of Pedestrian Injuries: A Collaborative Research Approach</b> <i>Jeffrey M. Jentzen, MD*</i> ; <i>Joel B. MacWilliams, BA</i> ; <i>Diana I. French, BA</i> ; <i>Stewart C. Wang, MD</i>
2:15 p.m. - 2:30 p.m.	<b>H61</b>	<b>Characteristics of Traffic Crash-Related Blunt Traumatic Aortic Injury (BTAI)</b> <i>Michael Freeman, MD, PhD*</i> ; <i>Todd M. Luckasevic, DO</i> ; <i>Karl E. Williams, MD</i> ; <i>Anders Eriksson, MD, PhD</i>
2:30 p.m. - 2:45 p.m.	<b>H62</b>	<b>If at First You Don't Succeed ...</b> <i>Richard C. Fries, DO</i> ; <i>Tasha Z. Greenberg, MD</i> ; <i>Nizam Peerwani, MD</i> ; <i>Allison Mautone, MD*</i>
2:45 p.m. - 3:05 p.m.	<b>H63</b>	<b>Pathologist Consensus in the Interpretation of Patterned Injuries From Photographs: Reasons for Lack of Consensus</b> <i>William R. Oliver, MD*</i>
3:05 p.m. - 3:30 p.m.		<b>Discussion and Break</b>

### Natural and More ...

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*Moderator: Jan M. Gorniak, DO*  
*Office of the Chief Medical Examiner*  
*Washington, DC*

3:30 p.m. - 3:45 p.m.	<b>H64</b>	<b>Effect of Angled Impact on Bone Fracture Pattern</b> <i>Jacob E. Hoerter*</i> ; <i>David J. Porta, PhD</i> ; <i>Tyler A. Kress, PhD</i>
3:45 p.m. - 4:00 p.m.	<b>H65</b>	<b>Sudden Unexpected Deaths Due to Sarcoidosis: A Forensic Autopsy Study</b> <i>Tiantong Yang*</i> ; <i>Xiang Zhang, MD*</i> ; <i>Zhaoming Guo, MD*</i> ; <i>Allen Burke, MD</i> ; <i>Mary G. Ripple, MD</i> ; <i>David R. Fowler, MD</i> ; <i>Ling Li, MD</i>
4:00 p.m. - 4:15 p.m.	<b>H66</b>	<b>Sudden Unexpected Deaths Due to Intracranial Meningioma: A Presentation of Six Fatal Cases and a Discussion of the Mechanisms of Death</b> <i>Lorenzo Gitto, MD*</i> ; <i>Stephen J. Cina, MD</i> ; <i>James A. Filkins, MD, JD, PhD</i> ; <i>Serenella Serinelli, MD</i>
4:15 p.m. - 4:30 p.m.	<b>H67</b>	<b>Non-Rheumatoid Fibrinous Pericarditis: A Medical Examiner Quest With an Update on Myocarditis and Use of Molecular Diagnostic Techniques</b> <i>Avneesh Gupta, MD*</i> ; <i>Kilak Kesha, MD</i> ; <i>Francisco J. Diaz, MD</i> ; <i>Carl J. Schmidt, MD</i>
4:30 p.m. - 4:45 p.m.	<b>H68</b>	<b>Liver Pathology at Autopsy in First Presentation of Diabetic Ketoacidosis (DKA)</b> <i>Anita Lal, MD*</i> ; <i>Jacqueline L. Parai, MD</i> ; <i>Chris Milroy, MD, LLB</i>
4:45 p.m. - 5:05 p.m.	<b>H69</b>	<b>DNA Testing in Homicide Investigations</b> <i>Joseph A. Prahlow, MD*</i> ; <i>Thomas J. Cameron</i> ; <i>Alexander Arendt, BS</i> ; <i>Kenneth Cornelis</i> ; <i>Anthony Bontrager, BA</i> ; <i>Michael Suth, BS</i> ; <i>Lisa B. Black, BS</i> ; <i>Rebecca Tobey, BS</i> ; <i>Sharon M. Pollock, BS</i> ; <i>Shawn Stur, BS</i> ; <i>Kenneth Cotter, JD</i> ; <i>Joel Gabrielse, JD</i>

# PATHOLOGY/BIOLOGY



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## *Thursday — Session II*

### **Jay Dix Memorial Bonus Day**

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*Moderator: Michael A. Graham, MD  
Saint Louis University School of Medicine  
Division of Forensic Pathology  
St. Louis, MO*

9:00 a.m.	-	9:10 a.m.	<b>H70</b>	<b>Jay Dix Memorial Lecture Series</b> <i>Michael A. Graham, MD*; Randy L. Hanzlick, MD*; Joseph A. Prahlow, MD*; Jonathan Hayes, MD*; Keith Pinckard, MD, PhD*; Rudy J. Castellani, MD*</i>
9:10 a.m.	-	10:00 a.m.	<b>H70</b>	<b>Electricity and Death</b> <i>Michael A. Graham, MD*</i>
10:00 a.m.	-	10:50 a.m.	<b>H70</b>	<b>Blunt Force Injuries</b> <i>Joseph A. Prahlow, MD*</i>
10:50 a.m.	-	11:10 a.m.		<b>Break</b>
11:10 a.m.	-	12:00 p.m.	<b>H70</b>	<b>Postmortem Changes</b> <i>Jonathan Hayes, MD*</i>
12:00 p.m.	-	2:00 p.m.		<b>Lunch</b>
2:00 p.m.	-	2:50 p.m.	<b>H70</b>	<b>Infant Deaths</b> <i>Keith Pinckard, MD, PhD*</i>
2:50 p.m.	-	3:00 p.m.		<b>Break</b>
3:00 p.m.	-	3:50 p.m.	<b>H70</b>	<b>Pediatric Head Trauma</b> <i>Rudy J. Castellani, MD*</i>
3:50 p.m.	-	4:00 p.m.		<b>Discussion</b>



# PATHOLOGY/BIOLOGY

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## Friday — Session I

### Multidisciplinary Session: Pathology/Biology Session I/Toxicology

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*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.	<b>K65</b>	<b>Postmortem Findings in Deaths Related to Synthetic Cannabinoids</b> <i>Robert Kronstrand, PhD*</i>
8:45 a.m.	-	9:00 a.m.	<b>H71</b>	<b>Insights Into the Postmortem Redistribution (PMR) of Diazepam, Methadone, and Morphine: Sampling Site, Time, and Method Matter</b> <i>Eric Lemaire, MD*; Carl J. Schmidt, MD</i>
9:00 a.m.	-	9:15 a.m.	<b>K66</b>	<b>Report of Increasing Acetyl Fentanyl Deaths in Allegheny County, Pennsylvania</b> <i>Todd M. Luckasevic, DO; Jennifer K. Janssen, MS; Abdulrezak M. Shakir, MD; Karl E. Williams, MD; Jessica B. Dwyer, MD*</i>
9:15 a.m.	-	9:30 a.m.	<b>H72</b>	<b>Postmortem Distribution and Detection of Butyryl Fentanyl</b> <i>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</i>
9:30 a.m.	-	9:45 a.m.	<b>K67</b>	<b>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)</b> <i>Elisa N. Shoff, BS*; Diane Boland, PhD</i>
9:45 a.m.	-	10:00 a.m.	<b>H73</b>	<b>Buprenorphine Prevalence in the Office of the Chief Medical Examiner (OCME) Cases Positive for Drugs of Abuse: To Screen or Not to Screen?</b> <i>Diana Geli*; Rebecca Jufer Phipps, PhD; Meghan A. Mulligan, MS; Mary G. Ripple, MD; David R. Fowler, MD</i>
10:00 a.m.	-	10:30 a.m.		<b>Break</b> <i>Supported by: Randox Toxicology, Ltd.</i>



# PATHOLOGY/BIOLOGY



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## Multidisciplinary Session: Pathology/Biology Session I/Toxicology

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*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. | <b>K68</b> | <b>Blood Clonazepam and 7-Aminoclonazepam Trends in Postmortem and Driving Under the Influence of Drugs (DUID) Cases</b><br><i>Lucas Marshall, MS*; Timothy A. Robert, PhD; David L. Black, PhD; Rebecca Heltsley, PhD</i> |
| 10:45 a.m. | - | 11:00 a.m. | <b>H74</b> | <b>Chi-Squared Automatic Interaction Detection (CHAID) Analysis as a Technique for Discerning Patterns of Drug Use in Postmortem Toxicology</b><br><i>Candace Savonen, BS; Carl J. Schmidt, MD*; Michael Bannon, PhD</i>   |
| 11:00 a.m. | - | 11:15 a.m. | <b>K69</b> | <b>A Case of Death by Diclazepam: Lorazepam in Disguise</b><br><i>Fessessework Guale, DVM*; Warren C. Samms, PhD; Jeffrey Walterscheid, PhD; Dana L. Johnson</i>   |
| 11:15 a.m. | - | 11:30 a.m. | <b>H75</b> | <b>Deaths Associated With Synthetic Cannabinoids in Mississippi</b><br><i>Mark M. LeVaughn, MD*; Brent Davis, MD*; Lisa Funte, MD; Thomas Dobbs, MD</i>  |
| 11:30 a.m. | - | 11:45 a.m. | <b>K70</b> | <b>Fatal Toxicity Involving 3-Methoxyphencyclidine (3-MeO-PCP)</b><br><i>Amelia Romoser, PhD*; Jeffrey Walterscheid, PhD</i>   |
| 11:45 a.m. | - | 12:00 p.m. | <b>H76</b> | <b>Using Enzyme-Multiplied Immunoassay Technique (EMIT) Analysis of Vitreous Humor to Identify Heroin Use at Autopsy</b><br><i>Brandi C. McCleskey*; C. Andrew Robinson, Jr., PhD; Daniel W. Dye, MD</i>                   |
| 12:00 p.m. | - | 1:30 p.m.  |            | <b>Lunch</b>   |

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## Poster Session

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|------------|---|-----------|------------|--|
| 11:30 a.m. | - | 1:00 p.m. | <b>H77</b> | <b>Post-Traumatic Meningitis in the Setting of an Accidental Fall of a Two-Year-Old Child</b><br><i>Krishna D. Shah, MD*; Sarah A. Higdon, MD; Meredith H. Frame, MD; Gregory J. Davis, MD</i>   |
| 11:30 a.m. | - | 1:00 p.m. | <b>H78</b> | <b>Defining "Mass Fatality Incident" for Medicolegal Jurisdictions in the United States: A Planning Tool</b><br><i>Allison Woody; Jason M. Wiersema, PhD*; Frank DePaolo, BS; Emily Carroll; Adriana M. Fernandez, BS; Rachel Canfield, BA</i> |
| 11:30 a.m. | - | 1:00 p.m. | <b>H79</b> | <b>Unexpected Pediatric Death Due to Congenital Mesenteric Defect</b><br><i>Hannah C. Jarvis, MRCs*; Carolyn A. Kappen, MD</i>   |





## PATHOLOGY/BIOLOGY

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11:30 a.m. - 1:00 p.m.	<b>H80</b>	<b>Entrance or Exit? A Multidisciplinary Approach to Gunshot Wound Interpretation on Fresh Remains</b> <i>MariaTeresa A. Tersigni-Tarrant, PhD*; Deiter J. Duff, MD*; Jane W. Turner, PhD, MD</i>
11:30 a.m. - 1:00 p.m.	<b>H81</b>	<b>In-Custody Deaths in Sweden: 1992-2014</b> <i>Susan Sprogoe-Jakobsen*; Jonn Ekman, BM; Anders Eriksson, MD, PhD</i>
11:30 a.m. - 1:00 p.m.	<b>H82</b>	<b>Case Report of Cerebral Tissue Pulmonary Embolism (CTPE) Following Blunt Force Head Injuries</b> <i>Paul V. Benson, MD; Cory Bosworth, BS*</i>
11:30 a.m. - 1:00 p.m.	<b>H83</b>	<b>A Retrospective Study of the Histologic Features and Scene Investigation in the Differential of Homicidal and Accidental Childhood Asphyxial Deaths</b> <i>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</i>
11:30 a.m. - 1:00 p.m.	<b>H84</b>	<b>Postmortem Iris Recognition and Its Application in Human Identification</b> <i>Alora Sansola*; Dennis J. Chute, MD; Robert J. Bready, MS; Amy N. Brodeur, MFS</i>
11:30 a.m. - 1:00 p.m.	<b>H85</b>	<b>A Retrospective Review of All-Terrain Vehicle (ATV) -Related Fatalities in Puerto Rico</b> <i>Javier G. Serrano, MD*; Carlos F. Chavez-Arias, MD</i>
11:30 a.m. - 1:00 p.m.	<b>H86</b>	<b>Heart Fatty Acid Binding Protein (H-FABP): Early Detection of Myocardial Infarction in Postmortem Analysis</b> <i>Shashi K. Jasra, PhD*; Sean Murphy, BSc; Azin Shirin-Bayan; Janeta Szczepanik, BS; Janelle Hinds, BS; Pardeep K. Jasra, PhD; David Shum, MD</i>
11:30 a.m. - 1:00 p.m.	<b>H87</b>	<b>Deaths Due to Carbon Monoxide Intoxication Involving Burning Charcoal Briquettes in Enclosed Spaces</b> <i>Patricia Aronica, MD*; Jack M. Titus, MD; David R. Fowler, MD</i>
11:30 a.m. - 1:00 p.m.	<b>H88</b>	<b>Influence of "Final Exit" on Asphyxial Suicides in New Mexico: A Retrospective Review</b> <i>Adela S. Magallanes, BS*; Hannah A. Kastenbaum, MD*</i>
11:30 a.m. - 1:00 p.m.	<b>H89</b>	<b>North Carolina Deaths Involving Acetyl Fentanyl: A Two-Year Retrospective Review</b> <i>Kimberly E. Janssen*; Justin O. Brower, PhD; Michelle B. Aurelius, MD; Ruth E. Winecker, PhD</i>
11:30 a.m. - 1:00 p.m.	<b>H90</b>	<b>Human or Non-Human: Identification of a Gastrointestinal Tract</b> <i>Sarah Schaerli*; Nadja Morf, MS; Michael Thali, MD; Dominic Gascho*</i>
11:30 a.m. - 1:00 p.m.	<b>H91</b>	<b>Tire Marks: Don't Tread on Me</b> <i>Dennis J. Chute, MD*; Robert J. Bready, MS</i>
11:30 a.m. - 1:00 p.m.	<b>H92</b>	<b>Micro-Computed Tomography (CT) Analysis of Deadly Gunshot Wounds</b> <i>Paolo Fais, MD; Chiara Giraudo, MD; Guido Pelletti, MD; Alessia Viero, MD; Diego Miotto; Massimo Montisci, PhD; Giovanni Cecchetto, MD, PhD*</i>

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# PATHOLOGY/BIOLOGY



11:30 a.m. - 1:00 p.m.	<b>H93</b>	<b>When Insect Colonization Starts Before Death: A Case From Central Italy</b> <i>Stefano Vanin, PhD*</i> ; <i>Martina Focardi*</i> ; <i>Manuela Bonizzoli, MD</i> ; <i>Marialuisa Migliaccio, MD</i> ; <i>Laura Tadini Buoninsegni, MD</i> ; <i>Marco Mangini, MD</i> ; <i>Vilma Pinchi, PhD</i> ; <i>Gian A. Norelli</i>
11:30 a.m. - 1:00 p.m.	<b>H94</b>	<b>Medicolegal Issues in Lethal Necrotizing Fasciitis: Presentation of a Case Series</b> <i>Paolo Fais, MD*</i> ; <i>Giovanni Cecchetto, MD, PhD</i> ; <i>Renzo Giordano, MD</i> ; <i>Massimo Montisci, PhD</i> ; <i>Dario Raniero, PhD</i> ; <i>Federica Bortolotti, PhD, MD</i> ; <i>Franco Tagliaro, PhD, MD</i>
11:30 a.m. - 1:00 p.m.	<b>H95</b>	<b>Recreational Sporting Activity Vehicle-Related Deaths</b> <i>Samuel Prahlow*</i> ; <i>Andrew Renner, MD</i> ; <i>Abigail J. Grande, BS</i> ; <i>Joyce L. deJong, DO</i> ; <i>Joseph A. Prahlow, MD</i>
11:30 a.m. - 1:00 p.m.	<b>H96</b>	<b>Facial Dissection: Two Case Reports Showing the Need for This Special Autopsy Technique</b> <i>Bruno M. Santos, MSc*</i> ; <i>Luís Eiras, MD</i> ; <i>Maria C. Mendonça, PhD</i>
11:30 a.m. - 1:00 p.m.	<b>H97</b>	<b>Forensic Botany: Judicial or Circumstantial Evidence? A Case Report and Review of the Literature</b> <i>Isabella Aquila, MD*</i> ; <i>Ciro Di Nunzio, MFS, PhD*</i> ; <i>Silvia Boca</i> ; <i>Pietrantonio Ricci*</i>
11:30 a.m. - 1:00 p.m.	<b>H98</b>	<b>The Forensic Applications of 3D Postmortem Multislice Computed Tomography (PMCT): From “Radiopsy” to “Virtopsy”</b> <i>Isabella Aquila, MD*</i> ; <i>Ciro Di Nunzio, MFS, PhD</i> ; <i>Carmela Falcone, MD</i> ; <i>Oscar Tamburrini, PhD</i> ; <i>Silvia Boca</i> ; <i>Pietrantonio Ricci*</i>
11:30 a.m. - 1:00 p.m.	<b>H99</b>	<b>Right Atrial Infarction With Rupture</b> <i>Sait Özsoy, MD*</i> ; <i>Sultan Pehlivan</i> ; <i>Bahadır Özen</i> ; <i>Gulnaz T. Javan, PhD</i>

## Toxicology for Pathologists

*Moderator: Karen F. Ross, MD*  
*Montgomery County Forensic Services Division*  
*Conroe, TX*

1:30 p.m. - 1:45 p.m.	<b>H100</b>	<b>Lung Weights in Deaths Due to Drug Intoxication</b> <i>Heather I. Chen, BA*</i> ; <i>Joyce L. deJong, DO</i>
1:45 p.m. - 2:00 p.m.	<b>H101</b>	<b>Heroin and Asthma Deaths in Cook County, Illinois — A Two-Year Review</b> <i>Serenella Serinelli, MD*</i> ; <i>Matthew F. Fox, MD</i> ; <i>Ponni Arunkumar, MD</i> ; <i>Lorenzo Gitto, MD</i>
2:00 p.m. - 2:15 p.m.	<b>H102</b>	<b>Utility of Toxicology Screening in Older Adults Based on History and Scene Investigation</b> <i>Matthew F. Fox, MD*</i> ; <i>Steven M. White, MD, PhD</i>



## PATHOLOGY/BIOLOGY

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2:15 p.m. - 2:30 p.m.	<b>H103</b>	<b>A Prospective Double-Blinded Comparison of Autopsy and Postmortem Computerized Tomography (PMCT) for the Evaluation of Potential Drug Poisoning Deaths</b> <i>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</i>
2:30 p.m. - 2:45 p.m.	<b>H104</b>	<b>Heroin-Related Deaths in Denver, Colorado</b> <i>Meredith A. Frank, MD*</i>
2:45 p.m. - 3:00 p.m.	<b>H105</b>	<b>Case Report: Fatal Use of a Suspected Herbal Medication</b> <i>Tiffany O'Neill, DO*; Donald R. Jason, MD, JD</i>
3:00 p.m. - 3:30 p.m.		<b>Break</b>

### Pathology — Miscellaneous

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*Moderator: Karen F. Ross, MD  
Montgomery County Forensic Services Division  
Conroe, TX*

3:30 p.m. - 3:45 p.m.	<b>H106</b>	<b>Postpartum Non-Atherosclerotic Spontaneous Coronary Artery Dissection (NA-SCAD) Recurrence in Subsequent Pregnancies: A Case Report</b> <i>Casey P. Bitting, DO*; Ross E. Zumwalt, MD</i>
3:45 p.m. - 4:00 p.m.	<b>H107</b>	<b>Custodial Suicides: A Review of Suicides of Incarcerated Persons Investigated by the Harris County Institute of Forensic Sciences Over a Ten-Year Period</b> <i>Sara N. Doyle, MD*; Sharon M. Derrick, PhD</i>
4:00 p.m. - 4:15 p.m.	<b>H108</b>	<b>Deaths Associated With a November 2014 Snowstorm ("Winter Storm Knife") in Erie County, New York</b> <i>Katherine F. Maloney, MD*; Nicole A. Yarid, MD; Janinne Blank; Tara J. Mahar, MD</i>
4:15 p.m. - 4:30 p.m.	<b>H109</b>	<b>Effects of Weather and Lunar Phases on Forensic Autopsy Case Load: A Four-Year Review</b> <i>Matthew D. Cain, MD*; Daniel W. Dye, MD</i>
4:30 p.m. - 4:45 p.m.	<b>H110</b>	<b>Trends in Officer-Involved Firearm Deaths in Oklahoma From 2005 to 2014</b> <i>Kyla M. Jorgenson, MSc*; Andrea L. Wiens, DO; Eric Pfeifer, MD; Joshua Lanter, MD</i>
4:45 p.m. - 5:00 p.m.	<b>H111</b>	<b>Emergency Management, Death Investigation, and Pathology of a Mass Fatality Industrial Workplace Accident: The La Porte, Texas, Dupont® Plant Incident</b> <i>Pramod Gumpeni, MD*; Jason M. Wiersema, PhD; Allison Woody</i>

# PATHOLOGY/BIOLOGY



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## Friday — Session II

### Insects and DNA

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

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|------------|---|------------|-------------|---|
| 8:30 a.m.  | - | 8:45 a.m.  | <b>H112</b> | <b>Cadaver Gravesoil Microbial Profiles During Decomposition</b><br><i>Sheree J. Finley, MS*; Jennifer L. Pechal, PhD; M. Eric Benbow, PhD;<br/>Boakai K. Robertson, PhD; Gulnaz T. Javan, PhD</i>  |
| 8:45 a.m.  | - | 9:00 a.m.  | <b>H113</b> | <b>The Influence of Predator Presence and Habitat Type on Blow Fly Oviposition</b><br><i>Kristi Bugajski, PhD*</i>  |
| 9:00 a.m.  | - | 9:15 a.m.  | <b>H114</b> | <b>Dynamics of Necrophagous Insect Species and Bacteria From Swine Carcasses During the Warm Season in Romania</b><br><i>Lavinia Iancu, PhD*; Cristina Purcarea, PhD</i>  |
| 9:15 a.m.  | - | 9:30 a.m.  | <b>H115</b> | <b>Postmortem Community Dynamics of the Larval Mass Microbiome</b><br><i>Emily Junkins, BS*; David O. Carter, PhD</i>   |
| 9:30 a.m.  | - | 9:45 a.m.  | <b>H116</b> | <b>Indoor vs. Outdoor Forensic Entomology: Exploring the Differences, Challenges, and Opportunities of Indoor Scenes</b><br><i>Michelle R. Sanford, PhD*</i>  |
| 9:45 a.m.  | - | 10:15 a.m. |             | <b>Break</b>  |
| 10:15 a.m. | - | 10:30 a.m. | <b>H117</b> | <b>The Utility of Soil Eukaryotes During Human Decomposition and Their Potential Forensic Applications</b><br><i>Vanessa Sufrin, MS*; Tawni L. Crippen, PhD; Jeffery K. Tomberlin, PhD;<br/>Aaron M. Tarone, PhD; Jennifer L. Pechal, PhD; M. Eric Benbow, PhD;<br/>Baneshwar Singh, PhD*</i> |
| 10:30 a.m. | - | 10:45 a.m. | <b>H118</b> | <b>Heat Signatures Produced by Maggot Masses: Using Forward Looking Infrared Radar (FLIR) Mounted on a Helicopter to Locate Human Remains</b><br><i>Ian Dadour, PhD*; Michael Lee, PhD</i>  |
| 10:45 a.m. | - | 11:00 a.m. | <b>H119</b> | <b>Statistical Confidence Limits for a Prediction of Carrion Insect Age Based on a Categorical Response Variable</b><br><i>Lynn R. LaMotte, PhD; Amanda L. Roe, PhD; Jeffrey D. Wells, PhD*;<br/>Leon G. Higley, PhD</i>  |
| 11:00 a.m. | - | 11:15 a.m. | <b>H120</b> | <b>Thanatotranscriptome: Gene Expression in Cadaver Livers</b><br><i>Gulnaz T. Javan, PhD; Ismail Can, BS; Sheree J. Finley, MS*; Shivani Soni, PhD</i>   |



## PATHOLOGY/BIOLOGY

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11:15 a.m.	-	11:35 a.m.	<b>H121</b>	<b>An Evaluation of a New Rapid DNA Platform for Field-Forward Applications</b> <i>Rachel E. Wiley, MFS; Kelly Sage, BS; Bruce Budowle, PhD; Bobby L. LaRue, Jr., PhD*</i>
11:35 a.m.	-	11:50 a.m.		<b>Discussion</b>
11:50 a.m.	-	1:30 p.m.		<b>Lunch</b>

### Skin Trace Evidence and More

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

*Co-Moderator: Rob Knight, PhD  
University of California San Diego  
La Jolla, CA*

1:30 p.m.	-	1:45 p.m.	<b>H122</b>	<b>Thanatophagy in Brain and Heart Tissues</b> <i>Gulnaz T. Javan, PhD*; Insu Kwon; Sheree J. Finley, MS; Youngil Lee, PhD</i>
1:45 p.m.	-	2:00 p.m.	<b>H123</b>	<b>Novel Association Between the Thanatomicrobiome and Postmortem Interval (PMI)</b> <i>Gulnaz T. Javan, PhD*; Ismail Can, BS; Nathalie Lorenzo; Sheree J. Finley, MS; Jennifer G. Mulle, PhD</i>
2:00 p.m.	-	2:15 p.m.	<b>H124</b>	<b>Inferring Patterns of Occupancy From Human Microbial Signatures</b> <i>Simon Lax*, Jack Gilbert, PhD</i>
2:15 p.m.	-	2:30 p.m.	<b>H125</b>	<b>Evaluating the Skin Microbiome as Trace Evidence on Common Surface Types</b> <i>Jessica L. Metcalf, PhD*; Embriette R. Hyde, BS; Se Jin Song, BA; Simon Lax; Jack Gilbert, PhD; David O. Carter, PhD; Rob Knight, PhD</i>
2:30 p.m.	-	2:45 p.m.	<b>H126</b>	<b>Drugs and Bugs (Bacteria): Does What You Use Relate to What You Grow?</b> <i>Jennifer L. Pechal, PhD*; Carl J. Schmidt, MD; Heather R. Jordan, PhD; M. Eric Benbow, PhD</i>
2:45 p.m.	-	3:00 p.m.		<b>Discussion</b>
3:00 p.m.	-	3:15 p.m.		<b>Break</b>
3:15 p.m.	-	3:30 p.m.	<b>H127</b>	<b>A Predictive Knowledgebase Linking Microbial Signatures to Human Lifestyle Characteristics</b> <i>Jack Gilbert, PhD*; Jose Lopez, PhD; Simon Lax; George T. Duncan, PhD; Jessica L. Metcalf, PhD</i>
3:30 p.m.	-	3:45 p.m.	<b>H128</b>	<b>Do Postmortem Skin Microbial Communities Change During Morgue Transit and Cooler Storage?</b> <i>Whitney A. Kodama, BA*; David O. Carter, PhD; Jessica L. Metcalf, PhD; Rob Knight, PhD</i>

# PATHOLOGY/BIOLOGY



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3:45 p.m. - 4:05 p.m. **H129 The Human Postmortem Microbiome and Manner of Death**  
*M. Eric Benbow, PhD\**; *Jennifer L. Pechal, PhD*; *Carl J. Schmidt, MD*;  
*Heather R. Jordan, PhD*

4:05 p.m. - 4:20 p.m. **Discussion**

## *Saturday*

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*Moderator: Francisco J. Diaz, MD*  
*Detroit, MI*

8:30 a.m. - 8:45 a.m. **H130 Development of a Free, Customizable, Forensic Autopsy Report Generator**  
*Matthew D. Cain, MD\**; *Yihong R. Ma, MD*; *Daniel W. Dye, MD*

8:45 a.m. - 9:00 a.m. **H131 Detection and Differentiation of Early Acute and Following Age Stages of Myocardial Ischemia With Quantitative Postmortem Cardiac Magnetic Resonance (PMCMR)**  
*Wolf-Dieter Zech, MD\**; *Nicole Schwendener, HF*; *Anders Persson, MD, PhD*;  
*Marcel Warntjes, PhD*; *Frederick Schuster, MD*; *Fabiano Riva, PhD*;  
*Christian Jackowski, MD, EMBA*

9:00 a.m. - 9:15 a.m. **H132 Forensic Radiology Pitfalls**  
*Mark A. Giffen, Jr., DO\**; *Jerri McLemore, MD*; *Jason Powell, MD\**

9:15 a.m. - 9:30 a.m. **H133 Postmortem Computed Tomography (PMCT) and Initial Experiences in Postmortem Angiography in Pediatric Cases**  
*Silke Grabherr, PhD\**; *Christine Chevallier*; *Beatriz V. Krentz*; *Leonor T. Alamo*;  
*Coraline Egger, MD*; *Jochen Grimm, MD, JD*

9:30 a.m. - 9:45 a.m. **H134 Blast Injuries: Radiology-Pathology Correlation**  
*Edward Mazuchowski II, MD, PhD\**; *Howard T. Harcke, Jr., MD*

9:45 a.m. - 10:00 a.m. **H135 Clinicopathologic Correlations in a Free-Dive Competition Fatality**  
*M.G.F. Gilliland, MD\**; *Kerry Hollowell, MD*

10:00 a.m. - 10:15 a.m. **Discussion**

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

10:30 a.m. - 10:45 a.m. **H136 Human Fatalities Due to Animal Attacks: A Six-Year Study From 2009 to 2014 in the Vidarbha Region of Maharashtra, India**  
*Nilesh K. Tumram, MD\**

10:45 a.m. - 11:00 a.m. **H137 A Quantitative Assessment of Peri-Mortem Blunt Force Trauma of the Neck**  
*Deborah C. Pinto, PhD\**; *Deanna Oleske, MD*



## PATHOLOGY/BIOLOGY

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11:00 a.m.	-	11:15 a.m.	<b>H138</b>	<b>Anatomical Larynx Variations and Hyoid and Thyroid Fractures</b> <i>Joao E.S. Pinheiro, MD*</i> ; <i>Jose L. Cascallana, PhD</i> ; <i>Benito Lopez de Abajo, MD</i> ; <i>Xose L. Otero, PhD</i> ; <i>María Sol Rodríguez-Calvo, PhD</i>
11:15 a.m.	-	11:30 a.m.	<b>H139</b>	<b>Social Media and Medicolegal Death Investigation: Logged in ... to the Morgue</b> <i>Lorenzo Gitto, MD*</i> ; <i>Stephen J. Cina, MD</i> ; <i>Ponni Arunkumar, MD</i> ; <i>Matthew F. Fox, MD</i> ; <i>Serenella Serinelli, MD</i>
11:30 a.m.	-	11:45 a.m.	<b>H140</b>	<b>What is Sex? Autopsy Documentation and Death Certification in the Transgender Population</b> <i>Jan M. Gorniak, DO*</i>
11:45 a.m.	-	12:00 p.m.	<b>H141</b>	<b>The Current System of Forensic Science Inspection and Accreditation in China</b> <i>Zhaoming Guo, MD*</i> ; <i>Ling Li, MD*</i> ; <i>Tiantong Yang*</i> ; <i>Xiang Zhang, MD*</i>

# PSYCHIATRY & BEHAVIORAL SCIENCE



## 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; Gianmichele Laquale, PhD; Alessio Ostuni, MD; Nicola Petruzzelli, 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** **Women Accused of Sexual Abuse: Three Case Reports From Turkey**  
*Esra Unal, MD\*; Volkan Unal, MD; Tuba Özcanli; Murat Imali; Ibrahim Balcioglu*
- 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 21<sup>st</sup> 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\**





# PSYCHIATRY & BEHAVIORAL SCIENCE

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11:00 a.m. - 11:15 a.m.	<b>I8</b>	<b>Evaluating Access to Substance Abuse Treatment in a Public Hospital Setting for Persons on Probation Under California's Realignment Program</b> <i>Eric Chaghouri*</i> ; <i>Kimberly Brown, MD*</i> ; <i>Kate Taylor, PhD</i> ; <i>Kellie Spector, BS</i>
11:15 a.m. - 11:30 a.m.	<b>I9</b>	<b>Predicting Success: A Study of Demographic Indicators of Success in Prison Career and Technology Education Training Programs</b> <i>Ronald R. Thrasher, PhD*</i> ; <i>Kimberly Litterell, BS*</i>
11:30 a.m. - 11:50 a.m.	<b>I10</b>	<b>Risk Factors and Legal Implications of Psychiatric Patient Elopement From Hospital Settings</b> <i>George Elias*</i>
11:50 a.m. - 1:00 p.m.		<b>Lunch</b>

## Poster Session

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11:30 a.m. - 1:00 p.m.	<b>I11</b>	<b>Stopping the Revolving Door: Identifying Factors Associated With Repeated Trial Competency Evaluations</b> <i>Bipin Subedi, MD</i> ; <i>Martin Nau, MD*</i> ; <i>Elizabeth P. Moreira, MA</i>
11:30 a.m. - 1:00 p.m.	<b>I12</b>	<b>The Detection of Feigned Legal Knowledge Deficits in Defendants Undergoing Competency to Stand Trial Evaluations: The Use of the Inventory of Legal Knowledge (ILK)</b> <i>Emily D. Gottfried, PhD*</i> ; <i>Joyce L. Carbonell, PhD</i> ; <i>B. Lee Hudson, PhD</i>
11:30 a.m. - 1:00 p.m.	<b>I13</b>	<b>Occurrence of a Suicide Attempt by Penis Auto-Amputation by a Murder Suspect: A Case Report</b> <i>Esra Unal, MD*</i> ; <i>Volkan Unal, MD</i> ; <i>Tuba Özcanli</i> ; <i>Murat Imali</i> ; <i>Ibrahim Balcioglu</i>
11:30 a.m. - 1:00 p.m.	<b>I14</b>	<b>Elder Abuse and Violence: Descriptions of the Phenomenon by Health Care Workers From Two Italian Hospitals</b> <i>Graziamaria Corbi, PhD</i> ; <i>Ignazio Grattagliano, PsyD*</i> ; <i>Lidia Scarabaggio, RN</i> ; <i>Carlo Sabbà, MD</i> ; <i>Giorgio Fiore, MD</i> ; <i>Nicola Ferrara, MD</i> ; <i>Roberto Catanesi, MD</i> ; <i>Carlo P. Campobasso, MD, PhD</i>

## Sexual Behavior

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*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*

1:00 p.m. - 1:20 p.m.	<b>I15</b>	<b>Explorative Study on the Level of Online Sexual Activities and Sexual Paraphilias</b> <i>Cinzia Gimelli, PsyD, PhD*</i> ; <i>Melania Lugli, PhD</i> ; <i>Davide Dèttore, PsyD, PhD</i> ; <i>Andrea Giannelli, PHD</i>
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# PSYCHIATRY & BEHAVIORAL SCIENCE




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1:20 p.m.	-	3:20 p.m.	<b>I16</b>	<b>The Assessment, Treatment, and Community Management of Sex Offenders</b> <i>R. Gregg Dwyer, MD, EdD*; J. Paul Fedoroff, MD*; Lisa Murphy, MCA*; Rebekah Ranger, BA*; Natasha M. Knack, BA*</i>
3:20 p.m.	-	3:40 p.m.		<b>Break</b>
3:40 p.m.	-	4:00 p.m.	<b>I17</b>	<b>Autoeroticism in Autism Spectrum</b> <i>Denise C. Kellaher*</i>
4:00 p.m.	-	4:30 p.m.	<b>I18</b>	<b>A Scientist-Practitioner Model for the Identification and Interpretation of Sadistic Offenders</b> <i>Julian C.W. Boon, PhD*; Lynsey F. Gozna, PhD</i>
4:30 p.m.	-	5:00 p.m.	<b>I19</b>	<b>Interpreting and Assessing Benign and Malign Sexual and Non-Sexual Necrophilous Interests in Criminal Cases</b> <i>Lynsey F. Gozna, PhD*; Julian C.W. Boon, PhD</i>

## *Friday*

### **Psychopathy and Violence**

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*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.	<b>I20</b>	<b>Effects of a Treatment Program for Combat Veterans Charged With Domestic Violence</b> <i>Giuseppe Troccoli, MD*; Mary Sullivan, MSN*</i>
8:45 a.m.	-	9:05 a.m.	<b>I21</b>	<b>The Psychopathy Checklist-Revised (PCL-R) Use for Psychopath Diagnosis — A Study of a Sample of Italian Female Offenders Deemed a Danger to Society</b> <i>Felice F. Carabellese, MD*; Andrea Pinotti, MD; Donatella La Tegola, PhD; Ilaria Rossetto, MD; Filippo Franconi, MD; Rosa Taratufolo, MD; Roberto Catanesi, MD</i>
9:05 a.m.	-	9:25 a.m.	<b>I22</b>	<b>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</b> <i>Vincenzo Lusa, JD*; Annarita Franza, PhD*</i>
9:25 a.m.	-	9:40 a.m.		<b>Break</b>
9:40 a.m.	-	9:55 a.m.	<b>I23</b>	<b>Suicide Note Writers: Are Medicolegal and Forensic Psychiatric Items Linked?</b> <i>Pasquale Beltempo, MD*; Ilaria De Vitis, MD*; Roberto Catanesi, MD</i>



# PSYCHIATRY & BEHAVIORAL SCIENCE

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9:55 a.m. - 10:40 a.m.	<b>I24</b>	<b>Stalking Charges Among Defendants Referred for Competency to Stand Trial and Criminal Responsibility Evaluations: A 10-Year Case Series</b> <i>Christopher Fields, MD*</i> ; <i>Sheresa Christopher, PhD*</i> ; <i>Diana Mullis, MD*</i> ; <i>Adam Bloom, MD*</i>
10:40 a.m. - 11:10 a.m.	<b>I25</b>	<b>The Sound of Music: Effects on Post-Traumatic Stress Disorder (PTSD)</b> <i>Sundeep S. Randhawa, MD*</i> ; <i>Michael Liepman, MD</i>
11:10 a.m. - 11:30 a.m.	<b>I26</b>	<b>Reducing the Risk of Violence in a Psychiatric Inpatient Setting by Examining External Factors</b> <i>Rebecca Najera, DO*</i>
11:30 a.m. - 12:00 p.m.	<b>I27</b>	<b>WITHDRAWN</b>
12:00 p.m. - 1:00 p.m.		<b>Lunch</b>

## Poster Session

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11:30 a.m. - 1:00 p.m.	<b>I28</b>	<b>The Risk of Assault by Patients in Psychiatry Settings: A Case Report and Review of the Literature</b> <i>Giancarlo Di Vella, MD, PhD*</i> ; <i>Lucia Tattoli, PhD</i> ; <i>Fiammetta Marella</i> ; <i>Mary Sullivan, MSN</i> ; <i>Roberto Catanesi, MD</i> ; <i>Ignazio Grattagliano, PsyD</i>
11:30 a.m. - 1:00 p.m.	<b>I29</b>	<b>Aggression and Harassment: An Underrated Risk in the Health Care Workplace</b> <i>Ignazio Grattagliano, PsyD*</i> ; <i>Stefano Berardi, MD</i> ; <i>Gabriella Martina, MD</i> ; <i>Antonio Baladassarre, MD</i> ; <i>Luigi Vimercati, MD</i> ; <i>Marina Musti, MD</i>
11:30 a.m. - 1:00 p.m.	<b>I30</b>	<b>Genetic Study of Single Nucleotide Polymorphisms (SNPs) in the Oxytocin Receptor (OXTR)</b> <i>Elizabeth Chesna, BS*</i> ; <i>Gabriella Cansino, MS</i> ; <i>Peyton Gandy, MSFS</i> ; <i>Jessica Wells, MS</i> ; <i>Danielle Boisvert, PhD</i> ; <i>Todd Armstrong, PhD</i> ; <i>David A. Gangitano, PhD</i>
11:30 a.m. - 1:00 p.m.	<b>I31</b>	<b>Means and Dynamics of Suicide in Human History</b> <i>Luca Massaro, MA*</i> ; <i>Matteo Borrini, PhD*</i>

## Homicide

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*Moderator: Peter Ian Collins, MD*  
*Ontario Provincial Police*  
*Behavioral Sciences Service*  
*Orillia, ON, CANADA*

*Co-Moderator: Eleanor B. Vo, MD*  
*OmaDesala Psychiatric Services*  
*Ewing, NJ*

1:00 p.m. - 1:30 p.m.	<b>I32</b>	<b>Neurobiology of Psychopathy: Developments and Directions</b> <i>Arin Abnoosian, MD*</i> ; <i>Michael Cummings, MD</i>
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# PSYCHIATRY & BEHAVIORAL SCIENCE




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1:30 p.m.	-	2:00 p.m.	<b>I33</b>	<b>Killer Cult Members and the Insanity Plea: Exploring the Line Between Belief and Delusion</b> <i>Brian J. Holoyda, MD*; William Newman, MD</i>
2:00 p.m.	-	3:20 p.m.	<b>I34</b>	<b>Civil and Criminal Commitment for Homicidal Ideation</b> <i>Jason Beaman, DO*; Jennifer Piel, MD, JD*; John P. Shand, MD*</i>
3:20 p.m.	-	3:40 p.m.		<b>Break</b>
3:40 p.m.	-	3:50 p.m.	<b>I35</b>	<b>The Massacre of Erba: An Uncommon Homicide by a “Normal Peaceable” Couple</b> <i>Federica Collini, MD*; Isabella Merzagora Betsos, PhD</i>
3:50 p.m.	-	4:10 p.m.	<b>I36</b>	<b>The Pseudocommando and the Terrorist: Casuistic Comparison and Cnalysis</b> <i>Samuel J. Leistedt, MD, PhD*; Fabienne Fabienne Glowacz, PhD</i>
4:10 p.m.	-	4:30 p.m.	<b>I37</b>	<b>Killing a Child: Neuropsychological Profiles of Murderers of Children</b> <i>Nicole Azores-Gococo*; Robert Hanlon, PhD; Saritha Teralandur, MS; Michael Brook, PhD</i>
4:30 p.m.	-	4:50 p.m.	<b>I38</b>	<b>Confirmation Bias and Metalinguistic Awareness</b> <i>Carole E. Chaski, PhD*; Elizabeth A. Smith, PhD; Cristina Aggazzotti, MS; Ying Liu, BA</i>
4:50 p.m.	-	5:00 p.m.	<b>I39</b>	<b>Among a German Sample of Forensic Patients: Previous Animal Abuse Mediates Between Psychopathy and Sadistic Actions</b> <i>Stupperich Alexandra*; Micha Strack</i>

## ***Saturday***

### **Child and Adolescent**

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*Moderator: Robert Weinstock, MD  
Los Angeles, CA*

*Co-Moderator: Laura Volpini, PhD  
Rome, ITALY*

8:30 a.m.	-	9:30 a.m.	<b>I40</b>	<b>Resolving Ethical Dilemmas Using Dialectical Principlism in End-of-Life Decisions</b> <i>Robert Weinstock, MD*; William C. Darby, MD*</i>
9:30 a.m.	-	9:45 a.m.	<b>I41</b>	<b>Effects of Anger Management and Social Support to Cope With Cyber Bullying of Adolescents</b> <i>Nursen Turan, MD*; Asligul Metin; Sazimet Geyik; Sitti Hatice Nur Nas; Berfin Aydogdu; Burcu Kilic; Yesim Yenigul, PhD</i>
9:45 a.m.	-	10:05 a.m.		<b>Break</b>
10:05 a.m.	-	11:05 a.m.	<b>I42</b>	<b>Juvenile Sex Trafficking</b> <i>Sara R. Thomas, MS*</i>



## PSYCHIATRY & BEHAVIORAL SCIENCE

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- 11:05 a.m. - 11:20 a.m. **I43** **Empirical Survey in the Italian Courts**  
*Laura Volpini, PhD\**; *Roberta Russo, MS*; *Federica Rossi Berluti, MS*;  
*Cristina Mazza*
- 11:20 a.m. - 11:40 a.m. **I44** **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**  
*Annarita Franza, PhD\**; *Vincenzo Lusa, JD\**
- 11:40 a.m. - 12:00 p.m. **I45** **Hypnosis in the Courtroom**  
*Sebastien S. Prat, MD\**; *Joseph Ferencz, MD, PhD\**

# QUESTIONED DOCUMENTS



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## Thursday

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*Moderator: Kevin P. Kulbacki, MSFS  
South Carolina Law Enforcement Division  
Columbia, SC*

8:30 a.m.	-	8:45 a.m.		<b>Opening Remarks</b> <i>Thomas W. Vastrick, BS</i>
8:45 a.m.	-	9:45 a.m.		<b>Discussion</b>
9:45 a.m.	-	10:00 a.m.	<b>J1</b>	<b>Evaluation of the Problems in the Field of Questioned Documents in Turkey</b> <i>Isil Ocal*; Mete K. Gulmen, PhD, MD</i>
10:00 a.m.	-	10:30 a.m.		<b>Break</b>

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*Moderator: Kevin P. Kulbacki, MSFS  
South Carolina Law Enforcement Division  
Columbia, SC*

10:30 a.m.	-	11:30 a.m.	<b>J2</b>	<b>Electrostatic Detection Apparatus (ESDA®) for Questioned Document Examination — Theory and Application</b> <i>F.L. Jim Lee, Jr., MS*</i>
11:30 a.m.	-	1:30 p.m.		<b>Lunch</b>

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## Poster Session

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11:30 a.m.	-	1:00 p.m.	<b>J3</b>	<b>A Study of Bandings in Printed Black Texts for the Identification of Monochromic Laser Printers</b> <i>Ning Liu, MA*</i>
11:30 a.m.	-	1:00 p.m.	<b>J4</b>	<b>Determination of the Sequence of Non-Intersecting Lines From Laser Toner Particles and Pen Ink by Stereomicroscope</b> <i>Ismail Çakir, PhD*; Gürsel Çetin, MD*; Abdi Ozaslan, MD; Ibrahim E Çaki</i>



## QUESTIONED DOCUMENTS

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*Moderator: David S. Moore, MEd  
Fair Oaks, CA*

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|-----------|---|-----------|-----------|--|
| 1:30 p.m. | - | 2:00 p.m. | <b>J5</b> | <b>Oh Brother — Another Paper on Following the Basics</b><br><i>Thomas W. Vastrick, BS*</i>  |
| 2:00 p.m. | - | 3:00 p.m. | <b>J6</b> | <b>Counterfeit Detection Training in Distributed Learning Environments</b><br><i>Joel A. Zlotnick, MSFS*; Zhengfan E. Song, MS; Tyra Lundy, MS</i> |
| 3:00 p.m. | - | 3:30 p.m. |           | <b>Break</b>   |
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*Moderator: David S. Moore, MEd  
Fair Oaks, CA*

- |           |   |           |            |  |
|-----------|---|-----------|------------|--|
| 3:30 p.m. | - | 3:45 p.m. | <b>J7</b>  | <b>A Survey of Usage of Opinion Terminology in Questioned Document Examination and on Varying Proposed Approaches to the Standardized Terminology</b><br><i>Carl R. McClary, BA*</i> |
| 3:45 p.m. | - | 4:30 p.m. | <b>J8</b>  | <b>The Impact of <i>Daubert</i> on Forensic Document Examinations — The Paradigm Shift</b><br><i>Jan S. Kelly, BA*</i>   |
| 4:30 p.m. | - | 4:45 p.m. | <b>J9</b>  | <b>Forensic Document Examination by a Multispectral Mobile Forensic Imaging System</b><br><i>Halis Dokgöz*, Hakan Kar, MS*</i>   |
| 4:45 p.m. | - | 5:00 p.m. | <b>J10</b> | <b>Developing an Ink Database for Commonly Used Pens Manufactured in Pakistan</b><br><i>Zumrad U. Bhutta, MS*; Ayesha Imtiaz, MS*</i>  |

### ***Friday***

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*Moderator: Linda L. Mitchell, BS  
Escondido, CA*

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|-----------|---|-----------|------------|---|
| 8:30 a.m. | - | 8:45 a.m. | <b>J11</b> | <b>Conductive Inks: Implications for Forensic Document Examiners</b><br><i>Kevin P. Kulbacki, MSFS*</i> |
|-----------|---|-----------|------------|---|

# QUESTIONED DOCUMENTS



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8:45 a.m.	-	9:00 a.m.	<b>J12</b>	<b>A Comparative Study of Common Individual Writing Characteristics in Determining Left- and Right-Hand Writings</b> <i>Vikram Raj Singh Chauhan, PhD*</i>
9:00 a.m.	-	10:00 a.m.	<b>J13</b>	<b>Security Feature Implementation: The Other Side of Document Security</b> <i>Joel A. Zlotnick, MSFS*</i>
10:00 a.m.	-	10:30 a.m.		<b>Break</b>

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*Moderator: Linda L. Mitchell, BS  
Escondido, CA*

10:30 a.m.	-	11:00 a.m.	<b>J14</b>	<b>The Value of Skill Task Assessments (STA)</b> <i>Jan S. Kelly, BA*</i>
11:00 a.m.	-	11:30 a.m.	<b>J15</b>	<b>A Triad of Techniques and Instruments for the Examination of Questioned Documents</b> <i>F.L. Jim Lee, Jr., MS*</i>
11:30 a.m.	-	1:30 p.m.		<b>Lunch</b>

## Poster Session

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11:30 a.m.	-	1:00 p.m.	<b>J16</b>	<b>How Well Do People Know Their Signatures?</b> <i>Zuzanna Kazmierczyk, BS*; Ian J. Turner, PhD</i>
11:30 a.m.	-	1:00 p.m.	<b>J17</b>	<b>Properties of Inkless Pens</b> <i>Samiah Ibrahim, BSc*; Tobin A. Tanaka, BS*</i>

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*Moderator: Carl R. McClary, BA  
Atlanta, GA*

1:30 p.m.	-	1:55 p.m.	<b>J18</b>	<b>The Leon Savoy Estate</b> <i>David S. Moore, MEd*</i>
1:55 p.m.	-	2:25 p.m.	<b>J19</b>	<b>Status of the Expert Working Group on Human Factors in Handwriting Examinations</b> <i>Thomas W. Vastrick, BS*</i>
2:25 p.m.	-	2:55 p.m.	<b>J20</b>	<b>Critics Say the Darndest Things!</b> <i>Jan S. Kelly, BA*</i>
2:55 p.m.	-	3:10 p.m.		<b>Closing Remarks</b>





# TOXICOLOGY

## Wednesday

### Toxicology Section Awardees Recognition (*by invitation only*)

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6:30 p.m. - 7:30 p.m.      Supported by:    Randox Toxicology, Ltd.

### Poster Session

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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

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|-----------------------|-----------|--|
| 7:30 p.m. - 9:00 p.m. | <b>K1</b> | <b>Driving Under the Influence of 5-MAPB: A Case Report</b><br><i>Brittany Thomas, MFS*; Lisa Noble, BS; Brianna Peterson, PhD;<br/>Fiona J. Couper, PhD</i>   |
| 7:30 p.m. - 9:00 p.m. | <b>K2</b> | <b>Incidence and Trends of Driving Under the Influence (DUI) of Zolpidem: A Retrospective Study of DUI Cases From 2001 to 2014</b><br><i>Monica Jacobs*; Lisa J. Reidy, PhD</i>  |
| 7:30 p.m. - 9:00 p.m. | <b>K3</b> | <b>Retrospective of Phencyclidine (PCP) Incidence in Cleveland, Ohio, in Driving Under the Influence of Drugs (DUID) and Homicide Cases</b><br><i>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</i> |
| 7:30 p.m. - 9:00 p.m. | <b>K4</b> | <b>Patterns of Drugs and Poisons on Criminal Cases in Southeastern Korea (Busan, Ulsan, and Gyeongsangnam-Do) for 2014</b><br><i>Eunmi Kim, PhD*; Hongil Ha; Park Yonghoon; Hee-Sun Chung, PhD</i>   |
| 7:30 p.m. - 9:00 p.m. | <b>K5</b> | <b>Case Report: Detection of 25C-NBOMe in Three Related Cases</b><br><i>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</i>                      |
| 7:30 p.m. - 9:00 p.m. | <b>K6</b> | <b>Determination of Synthetic Hallucinogens: 25I-, 25C-, and 25B-NBOMe by Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS) Using D3-25I-NBOMe Internal Standard</b><br><i>Joseph A. Cox, MS*; Naga Venkata Naidu, PhD; Ernest D. Lykissa, PhD</i>   |
| 7:30 p.m. - 9:00 p.m. | <b>K7</b> | <b>The Rapid Identification of Synthetic Hallucinogens 25I-NBOMe and 2C-B Using DART®-MS</b><br><i>Joseph Stone, BS*; Justin L. Poklis, BS; Michelle R. Peace, PhD; Alphonse Poklis, PhD</i>   |

# TOXICOLOGY



7:30 p.m.	-	9:00 p.m.	<b>K8</b>	<b>Fragmentation Pathways and Structural Characterization of Synthetic Cathinones Using Electrospray Ionization (ESI) and High Resolution Mass Spectrometry</b> <i>Lindsay Glicksberg*</i> ; Kelsie Bryand, MS; Sarah Kerrigan, PhD
7:30 p.m.	-	9:00 p.m.	<b>K9</b>	<b>Development and Validation of a Confirmatory Method for Six Novel Psychoactive Substances (NPS) in Whole Blood Using Ultra Performance Liquid Chromatography/Tandem Mass Spectrometry (UPLC/MS/MS)</b> <i>Melissa Friscia, MSFS*</i> ; Amanda L.A. Mohr, MSFS; Francis X. Diamond, BS; Barry K. Logan, PhD
7:30 p.m.	-	9:00 p.m.	<b>K10</b>	<b>The Application of Gold Nanoparticles for the Trace Detection of PINACAs in Urine by Surface Enhanced Raman Spectroscopy (SERS)</b> <i>Thaddeus Mostowtt, MFS*</i> ; Bruce R. McCord, PhD
7:30 p.m.	-	9:00 p.m.	<b>K11</b>	<b>Forensic Medical Evaluation of Fatalities Resulting From Lighter Gas Inhalation</b> <i>Erdinc Ozdemir*</i> ; Ibrahim Üzün; Muhammet Demir; Huseyin Es
7:30 p.m.	-	9:00 p.m.	<b>K12</b>	<b>Domino Effect: A Singular Case of Six Fatal Hydrogen Sulfide (H<sub>2</sub>S) Poisonings in Quick Succession — Evaluation of the Sulfides Quantification Method</b> <i>Nunziata Barbera, MD; Angelo Montana, MD; Francesca Indorato, MD*</i> ; Nadia Arbouche, SB; Guido Romano, SB
7:30 p.m.	-	9:00 p.m.	<b>K13</b>	<b>An Extremely Rare Suicidal Intoxication With Sodium Azide: A Case Report</b> <i>Francesco Randazzo*</i> ; Massimiliano Scida; Alessandro De Gaetano; Marco Motta; Antonella Profumo; Angelo Groppi; Luca Morini
7:30 p.m.	-	9:00 p.m.	<b>K14</b>	<b>Epidemiological and Toxicological Traits in Methadone-Related Deaths — A Five-Year (2010-2014) Retrospective Study in Vojvodina, Serbia</b> <i>Isidora Samojlik, MD, PhD*</i> ; Vesna Mijatovic, MD, PhD; Vladimir Knezovic; Stojan Petkovic, MD, PhD
7:30 p.m.	-	9:00 p.m.	<b>K15</b>	<b>A Remarkable Case of Fatal Monocrotaphos Poisoning by Cutaneous Absorption While Sleeping</b> <i>Jatin Bodwal, MBBS, MD*</i> ; Seema Sarohe Sarohe, MeD
7:30 p.m.	-	9:00 p.m.	<b>K16</b>	<b>Detection of Metal Phosphide Poisoning by Using Headspace/Gas Chromatography With Flame Ionization Detector (HS/GC/FID)</b> <i>Sardar Ali Wattoo, MPhil; Muhammad Taimoor Chaudhary, MPhil*</i> ; Mohammad A. Tahir, PhD
7:30 p.m.	-	9:00 p.m.	<b>K17</b>	<b>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</b> <i>Glenda M. Easterling, BS*</i> ; Pavlos Karamanidis, BS; Eric A. Ingle, BA; Chinyere M. Williams, BS; Jeffery Hackett, PhD; Nikolas P. Lemos, PhD
7:30 p.m.	-	9:00 p.m.	<b>K18</b>	<b>A European Rave Drug (Prolintane) Fatality in Phoenix, Arizona</b> <i>Whitney Brown, BS*</i> ; Ian Duffy, BS; Norman A. Wade, MS



# TOXICOLOGY

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7:30 p.m.	-	9:00 p.m.	<b>K19</b>	<b>Dangers of Carbon Monoxide (CO) Generated From Small Internal Combustion Engines</b> <i>Sandra Bishop-Freeman, PhD*</i> ; <i>Marc Feaster, BS*</i> ; <i>Franklin Pippen, BS</i> ; <i>Ruth E. Winecker, PhD</i>
7:30 p.m.	-	9:00 p.m.	<b>K20</b>	<b>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</b> <i>Shivani Dhaka, MBBS*</i> ; <i>Sudhir Kumar Gupta, MD</i> ; <i>Chittaranjan Behera, MD</i> ; <i>Rajanikanta Swain, MD</i>
7:30 p.m.	-	9:00 p.m.	<b>K21</b>	<b>The Analysis of Benzodiazepines in Dried Blood Spots (DBS) Using Liquid Chromatographic/Tandem Mass Spectrometry (LC/MS/MS)</b> <i>Andrea L. Jones, BS*</i> ; <i>Thomas A. Brettell, PhD</i>
7:30 p.m.	-	9:00 p.m.	<b>K22</b>	<b>Detecting Ketamine in the Hair of Buried Decomposed Rats Using Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS)</b> <i>Christine Barrett, BS*</i> ; <i>Kimberlee S. Moran, MSc</i> ; <i>Gail Cooper, PhD</i> ; <i>Karen S. Scott, PhD</i>
7:30 p.m.	-	9:00 p.m.	<b>K23</b>	<b>Detection, Quantification, and Relative Distribution of Ketamine, Norketamine, and Dehydronorketamine in Skeletal Tissue of Dosed and Buried Rat Remains at Different Stages of Decomposition</b> <i>Kimberlee S. Moran, MSc</i> ; <i>James Watterson, PhD</i> ; <i>Karen S. Scott, PhD</i> ; <i>Erica N. Johnson, BA*</i>
7:30 p.m.	-	9:00 p.m.	<b>K24</b>	<b>Comparison of Cocaine Concentrations in Heart Blood, Thigh Muscles, and Thigh Bones</b> <i>Ken-ichiro Nakao*</i> ; <i>Kazuhiko Kibayashi, MD*</i>
7:30 p.m.	-	9:00 p.m.	<b>K25</b>	<b>Methamphetamine, Amphetamine, and Norephedrine Levels in Dermestid Beetles From the Consumption of Dosed, Buried Rat Remains</b> <i>Meaghan P. Drumm*</i> ; <i>M. Lee Goff, PhD</i> ; <i>Karen S. Scott, PhD</i> ; <i>Kimberlee S. Moran, MSc</i>
7:30 p.m.	-	9:00 p.m.	<b>K26</b>	<b>Determination of Drug Distribution in Postmortem Tissues and Bones of Pigs Administered Drugs</b> <i>Ismail E. Goren, BS</i> ; <i>Nebile Gokce Daglioglu, PhD*</i> ; <i>Mete K. Gulmen, PhD, MD</i> ; <i>Pinar Efeoglu, MS</i>
7:30 p.m.	-	9:00 p.m.	<b>K27</b>	<b>Detection of Ketamine by Analyzing Dermestid Beetles Feeding on Buried, Dosed Rats by Liquid Chromatography With Tandem Mass Spectrometry (LC/MS/MS)</b> <i>Thomas J. Nolan, BA*</i> ; <i>M. Lee Goff, PhD</i> ; <i>Karen S. Scott, PhD</i> ; <i>Kimberlee S. Moran, MSc</i>
7:30 p.m.	-	9:00 p.m.	<b>K28</b>	<b>Determination of Zolpidem and Glyphosate in Blood From Emergency Room (ER) Patients</b> <i>Hee-Sun Chung, PhD*</i>

# TOXICOLOGY



7:30 p.m.	-	9:00 p.m.	<b>K29</b>	<b>Quetiapine Stability as It Relates to the Time Frames of Case Studies</b> <i>Mariah D. Carson, BS*; Jeffrey Walterscheid, PhD</i>
7:30 p.m.	-	9:00 p.m.	<b>K30</b>	<b>Mass Spectral Library for Phosphodiesterase Type 5 Inhibitors by Ultra High-Performance Liquid Chromatography/Quadrupole-Time-of-Flight/Mass Spectrometry (UHPLC/Q-TOF/MS)</b> <i>Marissa J. Finkelstein, MS*; Mathew Hautman, BS; Lucas Marshall, MS; Rebecca Heltsley, PhD; Timothy A. Robert, PhD; David L. Black, PhD</i>
7:30 p.m.	-	9:00 p.m.	<b>K31</b>	<b>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</b> <i>Victor Vandell, PhD*; Elena Gairloch, BS; Bruce R. Kempf, BS</i>
7:30 p.m.	-	9:00 p.m.	<b>K32</b>	<b>Quantification of Buprenorphine and Norbuprenorphine in Postmortem Blood and Urine by Ultra High-Performance Liquid Chromatography/Tandem Mass Spectrometry (UHPLC/MS/MS)</b> <i>Chu-An Yang, MS*; Hsiu-Chuan Liu, MS; Ray H. Liu, PhD; Dong-Liang Lin, PhD</i>
7:30 p.m.	-	9:00 p.m.	<b>K33</b>	<b>The Analysis of N,N-Dimethyltryptamine (DMT) in Plasma by Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS)</b> <i>David M. Andrenyak, PhD*; David E. Moody, PhD</i>
7:30 p.m.	-	9:00 p.m.	<b>K34</b>	<b>Rapid Screening and Quantitation of Pesticides in Biological Samples Using Gas Chromatography (GC) With Mass Spectrometer (MS)</b> <i>Muhammad Taimoor Chaudhary, MPhil*; Mohammad A. Tahir, PhD</i>
7:30 p.m.	-	9:00 p.m.	<b>K35</b>	<b>Applicability of Biochip Array Technology to the Simultaneous Screening of Drugs Associated With Driving Under the Influence of Drugs (DUID)</b> <i>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</i>
7:30 p.m.	-	9:00 p.m.	<b>K36</b>	<b>Fragmentation Pathways and Structural Characterization of Mitragynine and Its Metabolite Using Electrospray Ionization (ESI) and High Resolution Mass Spectrometry</b> <i>Stephanie Basiliere, BS*; Sarah Kerrigan, PhD; Kelsie Bryand, MS</i>
7:30 p.m.	-	9:00 p.m.	<b>K37</b>	<b><i>In Vitro</i> Metabolism Studies on P-Methoxyamphetamines (PMA) Using Human Liver Microsomes and Liquid Chromatography With Tandem Mass Spectrometry (LC/MS/MS) With Chemical Derivatization</b> <i>Tanasiri Yokchue, MSc*; Robert A. Anderson, PhD</i>
7:30 p.m.	-	9:00 p.m.	<b>K38</b>	<b>Analysis of Illicit Substances in Urine by Biocompatible Solid-Phase Microextraction (BioSPME) and Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS)</b> <i>Kaitlyn E. Hess, BS*; Thomas A. Brettell, PhD</i>



# TOXICOLOGY

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7:30 p.m.	-	9:00 p.m.	<b>K39</b>	<b>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)</b> <i>Erin Walsh*</i> ; Robert D. Johnson, PhD; Peter Tracy, BS; Sabra R. Botch-Jones, MS, MA
7:30 p.m.	-	9:00 p.m.	<b>K40</b>	<b>Extraction of Selected Barbiturates, Primidone, and Phenyton From Blood Using Supported Liquid Extraction Columns With Gas Chromatography/Mass Spectrometry (GC/MS) Analysis</b> <i>Gregory A. Priebe, MS*</i> ; Brent Dawson, PhD; Lister M. Macharia, MBA; Laureen Marinetti, PhD
7:30 p.m.	-	9:00 p.m.	<b>K41</b>	<b>FAST Analysis of 6-Monoacetyl Morphine (6-MAM) and Acetylcodeine (AC) in Urine of Opiate-Positive Drugs and Driving Cases</b> <i>Albert A. Elian, MS*</i> ; Jeffery Hackett, PhD*
7:30 p.m.	-	9:00 p.m.	<b>K42</b>	<b>Analysis of Opioids in Urine Specimens by Solid Phase Extraction (SPE) and Ultra Performance Liquid Chromatography/Tandem Mass Spectrometry (UPLC/MS/MS)</b> <i>Melissa A. Johnson, BA*</i> ; Chinyere M. Williams, BS; Jeffery Hackett, PhD; Nikolas P. Lemos, PhD
7:30 p.m.	-	9:00 p.m.	<b>K43</b>	<b>Comparison of Blood Concentrations for Commonly Encountered Drugs in Postmortem and Human Performance Forensic Toxicology Cases in the City and County of San Francisco</b> <i>Constantine Konstantakis, BA*</i> ; Tamy Chan; Jeffery Hackett, PhD; Nikolas P. Lemos, PhD

## Thursday

### Special Session: Driving Under the Influence of Drugs — Synthetic Cannabinoids

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*Moderator:* Amy Miles, BS  
Madison, WI

*Co-Moderator:* David M. Benjamin, PhD  
Chestnut Hill, MA

8:30 a.m.	-	8:50 a.m.	<b>K44</b>	<b>Synthetic Cannabinoids in Drivers: Clinical and Psychophysical Indications of Intoxication</b> <i>Kayla M. Neuman, MS*</i>
8:50 a.m.	-	9:10 a.m.	<b>K45</b>	<b>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</b> <i>Brittany Thomas, MFS*</i> ; Brianna Peterson, PhD; Fiona J. Couper, PhD
9:10 a.m.	-	9:30 a.m.	<b>K46</b>	<b>XLR-11 and Impaired Driving — Case Reports</b> <i>Sherri L. Kacinko, PhD*</i> ; Barry K. Logan, PhD

# TOXICOLOGY




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9:30 a.m. - 9:50 a.m.	<b>K47</b>	<b>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)</b> <i>Joshua Seither, MS*; Lisa J. Reidy, PhD</i>
9:50 a.m. - 10:10 a.m.	<b>K48</b>	<b>Indazole-Carboxamide (NACA) Series Synthetic Cannabinoids and Driving Impairment</b> <i>Sherri L. Kacinko, PhD; Barry K. Logan, PhD*</i>
10:10 a.m. - 10:30 a.m.	<b>Break</b>	<i>Supported by: Immunalysis Corporation</i>

## Impaired Driving

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*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.	<b>K49</b>	<b>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</b> <i>Ayako Chan-Hosokawa, MS*</i>
10:45 a.m. - 11:00 a.m.	<b>K50</b>	<b>Statistical Assessment of Toxicology Cases Submitted to the Las Vegas Metropolitan Police Department (LVMPD) From 2000 Through 2014</b> <i>Michael P. Stypa, MS*; Denise K. Heineman, BS; Darby A. Lanz, MSFS; Jennifer O. Rattanaprasit, MS</i>
11:00 a.m. - 11:15 a.m.	<b>K51</b>	<b>Zolpidem Concentrations Found in 644 Blood Samples Submitted for Driving Under the Influence of Drugs (DUID) Analysis</b> <i>Lee M. Blum, PhD; Laura M. Labay, PhD*</i>
11:15 a.m. - 11:30 a.m.	<b>K52</b>	<b>Methamphetamine and Amphetamine in Suspected Driving Under the Influence (DUI) Cases in the City and County of San Francisco: A Six-Year Review</b> <i>Mariya Mayevskaya, BA; Justin A. Volk; Jonas E. Knight, MS; Pavlos Karamanidis, BS; Glenda M. Easterling, BS; Chinyere M. Williams, BS; Jeffery Hackett, PhD; Nikolas P. Lemos, PhD; Eric A. Ingle, BA*</i>
11:30 a.m. - 11:45 a.m.	<b>K53</b>	<b>Blood Cannabinoid Pharmacokinetics in Frequent Cannabis Smokers After Controlled Smoked, Vaporized, and Oral Cannabis Administration: Markers of Recent Cannabis Intake</b> <i>Matthew N. Newmeyer, BS*; Karl B. Scheidweiler, PhD; Allan J. Barnes, BS; Agnes O. Coffay, MD; Osama A. Abulseoud, MD; Marilyn A. Huestis, PhD</i>
11:45 a.m. - 12:00 p.m.	<b>K54</b>	<b>Neurocognitive Performance in Occasional and Frequent Smokers Following Controlled Smoked, Vaporized, and Oral Cannabis Administration</b> <i>Madeleine J. Swortwood, PhD; Matthew N. Newmeyer, BS; Agnes O. Coffay, MD; Osama A. Abulseoud, MD; Marilyn A. Huestis, PhD*</i>





# TOXICOLOGY

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

## Annual Lectureship in Toxicology

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*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

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*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.*

# TOXICOLOGY



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## Designer Drugs

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*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*

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|-----------|---|-----------|------------|---|
| 3:30 p.m. | - | 3:45 p.m. | <b>K59</b> | <b>Development and Validation of Two Methods for the Analysis of Synthetic Cannabinoids in Whole Blood</b><br><i>Marykathryn Tynon, MSFS*; Joseph Homan, MS; Sherri L. Kacinko, PhD; Barry K. Logan, PhD</i>  |
| 3:45 p.m. | - | 4:00 p.m. | <b>K60</b> | <b>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</b><br><i>Amanda L.A. Mohr, MSFS*; Jillian K. Yeakel, MS; Melissa Friscia, MSFS; Francis X. Diamond, BS; Barry K. Logan, PhD</i> |
| 4:00 p.m. | - | 4:15 p.m. | <b>K61</b> | <b>Metabolic Profile Determination of NBOMe Compounds Using Human Liver Microsomes</b><br><i>Keith-Dane H. Temporal, BS*; Melissa Friscia, MSFS; Karen S. Scott, PhD; Amanda L.A. Mohr, MSFS; Barry K. Logan, PhD</i>   |
| 4:15 p.m. | - | 4:30 p.m. | <b>K62</b> | <b>Case Report of AB-FUBINACA Exposure With Chemical and Toxicological Confirmation</b><br><i>David Buzby, BS*; Donna M. Papsun, MS; Mark Nyvean, MD; Barry K. Logan, PhD</i>   |
| 4:30 p.m. | - | 4:45 p.m. | <b>K63</b> | <b>Cannabinoid Receptor Bioassay: A Characterization of UR-144, XLR-11, and Their Metabolites and Degradants</b><br><i>Kelsey Longe, BS*; Amy B. Cadwallader, PhD; Darcie Wallace-Duckworth, PhD; Pamela J. Staton, PhD</i>   |
| 4:45 p.m. | - | 5:00 p.m. | <b>K64</b> | <b>Analysis for Synthetic Cannabinoids in Oral Fluid Samples Obtained From a Music Festival Cohort</b><br><i>Marykathryn Tynon, MSFS*; Joseph Homan, MS; Sherri L. Kacinko, PhD; Barry K. Logan, PhD</i>  |

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## Toxicology Open Forum

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*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.*





# TOXICOLOGY

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## Friday

### Multidisciplinary Session: Pathology/Biology Session I/Toxicology

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*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.	<b>K65</b>	<b>Postmortem Findings in Deaths Related to Synthetic Cannabinoids</b> <i>Robert Kronstrand, PhD*</i>
8:45 a.m.	-	9:00 a.m.	<b>H71</b>	<b>Insights Into the Postmortem Redistribution (PMR) of Diazepam, Methadone, and Morphine: Sampling Site, Time, and Method Matter</b> <i>Eric Lemaire, MD*; Carl J. Schmidt, MD</i>
9:00 a.m.	-	9:15 a.m.	<b>K66</b>	<b>Report of Increasing Acetyl Fentanyl Deaths in Allegheny County, Pennsylvania</b> <i>Todd M. Luckasevic, DO; Jennifer K. Janssen, MS; Abdulrezak M. Shakir, MD; Karl E. Williams, MD; Jessica B. Dwyer, MD*</i>
9:15 a.m.	-	9:30 a.m.	<b>H72</b>	<b>Postmortem Distribution and Detection of Butyryl Fentanyl</b> <i>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</i>
9:30 a.m.	-	9:45 a.m.	<b>K67</b>	<b>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)</b> <i>Elisa N. Shoff, BS*; Diane Boland, PhD</i>
9:45 a.m.	-	10:00 a.m.	<b>H73</b>	<b>Buprenorphine Prevalence in the Office of the Chief Medical Examiner (OCME) Cases Positive for Drugs of Abuse: To Screen or Not to Screen?</b> <i>Diana Geli*; Rebecca Jufer Phipps, PhD; Meghan A. Mulligan, MS; Mary G. Ripple, MD; David R. Fowler, MD</i>
10:00 a.m.	-	10:30 a.m.		<b>Break</b> <i>Supported by: Randox Toxicology, Ltd.</i>

# TOXICOLOGY



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## Multidisciplinary Session: Pathology/Biology Session I/Toxicology

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*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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|------------|---|------------|------------|--|
| 10:30 a.m. | - | 10:45 a.m. | <b>K68</b> | <b>Blood Clonazepam and 7-Aminoclonazepam Trends in Postmortem and Driving Under the Influence of Drugs (DUID) Cases</b><br><i>Lucas Marshall, MS*; Timothy A. Robert, PhD; David L. Black, PhD; Rebecca Heltsley, PhD</i> |
| 10:45 a.m. | - | 11:00 a.m. | <b>H74</b> | <b>Chi-Squared Automatic Interaction Detection (CHAID) Analysis as a Technique for Discerning Patterns of Drug Use in Postmortem Toxicology</b><br><i>Candace Savonen, BS; Carl J. Schmidt, MD*; Michael Bannon, PhD</i>   |
| 11:00 a.m. | - | 11:15 a.m. | <b>K69</b> | <b>A Case of Death by Diclazepam: Lorazepam in Disguise</b><br><i>Fessessework Guale, DVM*; Warren C. Samms, PhD; Jeffrey Walterscheid, PhD; Dana L. Johnson</i>   |
| 11:15 a.m. | - | 11:30 a.m. | <b>H75</b> | <b>Deaths Associated With Synthetic Cannabinoids in Mississippi</b><br><i>Mark M. LeVaughn, MD*; Brent Davis, MD*; Lisa Funte, MD; Thomas Dobbs, MD</i>  |
| 11:30 a.m. | - | 11:45 a.m. | <b>K70</b> | <b>WITHDRAWN</b>   |
| 11:45 a.m. | - | 12:00 p.m. | <b>H76</b> | <b>Using Enzyme-Multiplied Immunoassay Technique (EMIT) Analysis of Vitreous Humor to Identify Heroin Use at Autopsy</b><br><i>Brandi C. McCleskey*; C. Andrew Robinson, Jr., PhD; Daniel W. Dye, MD</i>                   |
| 12:00 p.m. | - | 1:00 p.m.  |            | <b>Lunch</b>   |

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## General Toxicology

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*Moderator: Denice M. Teem, BS  
NMS Labs  
Willow Grove, PA*

*Co-Moderator: Matthew N. Newmeyer, BS  
Baltimore, MD*

- |           |   |           |            |   |
|-----------|---|-----------|------------|---|
| 1:00 p.m. | - | 1:15 p.m. | <b>K71</b> | <b>A Crazy Mini Heroin Epidemic in Richmond, Virginia</b><br><i>Carl E. Wolf II, PhD*; Michelle Hieger, DO; Brandon K. Willis, DO; Alphonse Poklis, PhD</i>   |
| 1:15 p.m. | - | 1:30 p.m. | <b>K72</b> | <b>Rise in Fentanyl Derivatives Acetyl and Butyryl Fentanyl Detection in Blood and Serum Coinciding With Rise in Opiate and Novel Psychoactive Substances (NPS) Use</b><br><i>David Buzby, BS*; Donna M. Papsun, MS; Daniel S. Isenschmid, PhD; Barry K. Logan, PhD</i> |



# TOXICOLOGY

- 
- 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*

## Postmortem Pediatric Toxicology

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*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**  
*Robert A. Middleberg, PhD; Nikolas P. Lemos, PhD; Tracey S. Corey, MD\*;*  
*Alane Olson, MD\*; Karen Cline-Parhamovich, DO\*; Kenneth E. Ferslew, PhD\*;*  
*Robert Kronstrand, PhD\**

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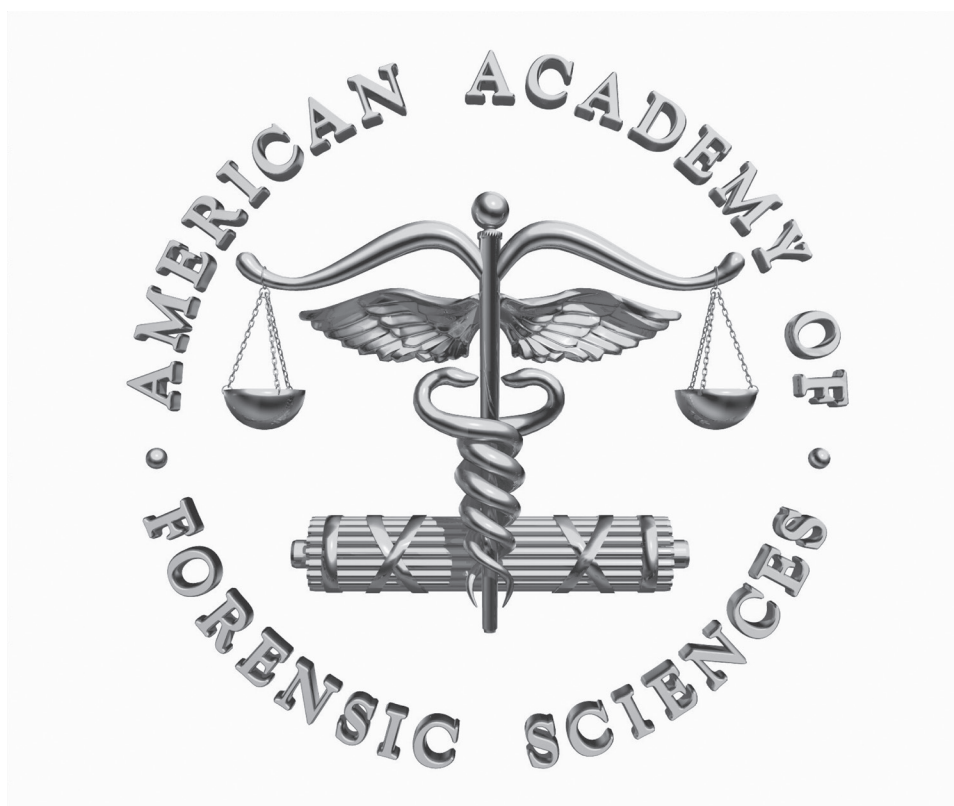
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## *Thursday*

*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.  | <b>LW1</b> | <b>The Best Forensic Scientist You've Never Heard of: Wilmer Souder and the Early History of Forensic Science at the National Bureau of Standards</b><br><i>Kristen Frederick-Frost, PhD*; Robert M. Thompson, BS; John M. Butler, PhD*</i> |
| 8:20 p.m. | - | 8:40 p.m.  | <b>LW2</b> | <b>Giving Voice to a Serial Killer: Clinical Implications</b><br><i>Katherine Ramsland, PhD*</i>  |
| 8:40 p.m. | - | 9:00 p.m.  | <b>LW3</b> | <b>Capital Punishment by Lethal Injection</b><br><i>David M. Benjamin, PhD*</i>   |
| 9:00 p.m. | - | 9:20 p.m.  | <b>LW4</b> | <b>WITHDRAWN</b>  |
| 9:20 p.m. | - | 9:40 p.m.  | <b>LW5</b> | <b>Small Town Forensics in the Land of Oz</b><br><i>Bryan R. Burnett, MS*</i>   |
| 9:40 p.m. | - | 10:00 p.m. | <b>LW6</b> | <b>Houdini on the Crime Scene: Debunking Psychic Sleuthing</b><br><i>Matteo Borrini, PhD*</i>   |





## 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) \_\_\_\_\_

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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. If you have any questions, contact Salena Medina at (719) 636-1100, or at the on-site AAFS Staff Office.

AAFS STAFF USE ONLY: Date Received: \_\_\_\_\_ Time: \_\_\_\_\_



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Todd W. Bille, MS - B174

ESR, NicheVision, Inc (Discussion of Commercial Products or Services).

Bureau of Alcohol, Tobacco, Firearms and Explosives (Employee).

Peter Bilous, PhD - B63

Bayer, Thermo Fisher Scientific, Inc (Discussion of Commercial Products or Services).

Eastern Washington University (Employee).

Brittania J. Bintz, MSc - B51

Broad Institute, Illumina, Inc, Life Technologies Corporation (Discussion of Commercial Products or Services).

National Institute of Justice (Grant Support).

Cate E. Bird, PhD - A126

National Institute of Justice (Grant Support).

Pima County Office of the Medical Examiner (Employee).

Heather Birks, BS - B45

Agilent Technologies (Discussion of Commercial Products or Services).

Jon E. Birt, BA - L2

Queensland Police Service (Employee).

Sandra Bishop-Freeman, PhD - K19

Draeger (Discussion of Commercial Products or Services).

Office of the Chief Medical Examiner, NC (Employee).

Casey P. Bitting, DO - H106

Discloses no financial relationships with commercial entities.

Cynthia Blackwell, JD - F5

Los Alamos National Laboratory (Employee).

Kathleen A.S. Blake, PhD

SUNY Oswego, Rice Creek Associates (Grant Support). - A17

State University of New York (Grant Support). - A93

Adam Bloom, MD - I24

Discloses no financial relationships with commercial entities.

Silvia Boca - E10

Discloses no financial relationships with commercial entities.

Jane H. Bock, PhD - E13

Discloses no financial relationships with commercial entities.

Jatin Bodwal, MBBS, MD - K15

Discloses no financial relationships with commercial entities.

Richard Boguslaw, DMD - G20

Discloses no financial relationships with commercial entities.

Katelyn L. Bolhofner, MA - A53

Maricopa County Office of the Medical Examiner (Other Financial/Material Support).

Christopher R. Bommarito, MS - B172

Discloses no financial relationships with commercial entities.

Claudia M. Bonilla - E76

Discloses no financial relationships with commercial entities.

Eliud Bonilla, BS - C11

Discloses no financial relationships with commercial entities.

Joseph P. Bono, MA - F3

Discloses no financial relationships with commercial entities.

Alessandro Bonsignore, MD, PhD - K73

Discloses no financial relationships with commercial entities.

Julian C.W. Boon, PhD - I18

Discloses no financial relationships with commercial entities.

Matteo Borrini, PhD

Liverpool John Moores University (Employee). - A55

Discloses no financial relationships with commercial entities.

- E85, F1, I31, LW6

Michael J. Bosse, MFS - E90

Discloses no financial relationships with commercial entities.

Cory Bosworth, BS - H82

University of Tennessee Health Science Center (Employee).

Sabra R. Botch-Jones, MS, MA - W16

Discloses no financial relationships with commercial entities.

Gregory Bowen - C3

The University of Alabama College of Arts and Sciences

Undergraduate Creativity and Research Academy (Grant Support).



# FINANCIAL DISCLOSURE



Charles Michael Bowers, DDS, JD - G25

Discloses no financial relationships with commercial entities.

Cliff Boyd, PhD - A25

Discloses no financial relationships with commercial entities.

Donna C. Boyd, PhD - A77

Keyence Corporation (Discussion of Commercial Products or Services).

Sean Brady - B32

National Institute of Justice, Office of Justice Programs, U.S. Department of Justice (Grant Support).

Thomas V. Brady, DMD - G24

Discloses no financial relationships with commercial entities.

Stephanie R. Breitenbach, BS - B20

Waters Corporation (Discussion of Commercial Products or Services).

National Institute of Justice (Grant Support).

Charles H. Brenner, PhD - B97, B174

Brenner, C.H. (Discussion of Commercial Products or Services).

Thomas A. Brettell, PhD

Agilent Technologies, PerkinElmer, Inc (Discussion of Commercial Products or Services). - B72

EMD Millipore, SCIEX, Shimadzu Corporation, Restek Corporation (Discussion of Commercial Products or Services). - B153

Cedar Crest College (Employee). - B72, B153

Alice Briones, DO - W23

DoD DNA Registry a division of the Armed Forces Medical Examiner System (Speakers Bureau).

Kristen A. Broehl, BA - A57

Discloses no financial relationships with commercial entities.

Ryan P. Brokaw, MFS - W7

U.S. Army CID (Employee).

Cristina Enrica Brondoni, MS - E71

Discloses no financial relationships with commercial entities.

Jason W. Brooks, VMD, PhD - H2

Discloses no financial relationships with commercial entities.

Helmut G. Brosz, BASc, PEng - S2

Discloses no financial relationships with commercial entities.

Samuel I. Brothers, BBA - W15

U.S. Customs & Border Protection (Employee).

Anastasia M. Brown, BS - B71

National Institute of Justice, Sam Houston State University (Grant Support).

Catherine O. Brown, BA - B11

Agilent Technologies (Discussion of Commercial Products or Services).

Arcadia University (Other Financial/Material Support).

Katherine M. Brown, PhD - E53

Discloses no financial relationships with commercial entities.

Kimberly Brown, MD - I8

Discloses no financial relationships with commercial entities.

Lyndsey T. Brown, BS - B64

Discloses no financial relationships with commercial entities.

Michael A. Brown, PhD - A122

National Institute of Justice (Grant Support).

Richard S. Brown, MS - D15

MVA Scientific Consultants (Employee).

Theodore T. Brown, MD - H83

Discloses no financial relationships with commercial entities.

Whitney Brown, BS - K18

Arizona Criminal Justice Committee for the National Institute of Justice (Grant Support).

Ann M. Bruhn, MS - G44

Aribex, Inc, DENTSPLY International, Patterson Companies, Inc (Discussion of Commercial Products or Services).

Joshua L. Brunty, MS - C9

Discloses no financial relationships with commercial entities.

Erick P. Bryant, MFS - E19

Discloses no financial relationships with commercial entities.

Clinton D. Buchanan, PhD - B135

Applied Biosystems, Inc, QIAGEN, Inc (Discussion of Commercial Products or Services).

Defense Forensic Science Center, U.S. Army CIL (Employee).

Helio Buchmuller, PhD - B210

Discloses no financial relationships with commercial entities.

Rebecca E. Bucht, PhD - W9

Discloses no financial relationships with commercial entities.

Kristi Bugajski, PhD - H113

IBM Corporation (Discussion of Commercial Products or Services).

Pierce Cedar Creek Institute, Valparaiso University (Grant Support).

Zachary M. Burcham, BS - H4

National Institute of Justice (Grant Support).

Christiana Burgess, BS, BA - F34

Discloses no financial relationships with commercial entities.

Bryan R. Burnett, MS - B200, E22, LW5

Discloses no financial relationships with commercial entities.

JoAnn Buscaglia, PhD - B91

FBI Laboratory (Employee).

Alice J. Butcher, BSc - A67

Discloses no financial relationships with commercial entities.

John M. Butler, PhD

Thomson Reuters (Discussion of Commercial Products or Services). - W1

National Institute of Standards and Technology (Employee). - LW1, W1

David Buzby, BS - K62, K72

NMS Labs (Employee).

Patrick Buzzini, PhD - W9

Discloses no financial relationships with commercial entities.

Nichole D. Bynum, MS - B76

FLIR Systems, Inc (Discussion of Commercial Products or Services).

National Institute of Justice (Grant Support).

Jennifer F. Byrnes, PhD - A29

University of Hawaii - West O'ahu (Employee).



# FINANCIAL DISCLOSURE

Joan A. Bytheway, PhD

Discloses no financial relationships with commercial entities. - S2  
AceTool, Condor Tool & Knife, Dexter-Russell, Inc, Estwing,  
HDX, Marshalltown Company, Ryobi (Discussion of Commercial  
Products or Services). - A123

## C

Matthew D. Cain, MD

SAS Institute, Inc (Discussion of Commercial Products or  
Services). - H109

GitHub, Inc, Oracle Corporation, Twitter Bootstrap Team  
(Discussion of Commercial Products or Services). - H130

Ismail Çakir, PhD - J4

CTMS, Leica Microsystems (Discussion of Commercial Products  
or Services).

Roberto Cameriere - G17

Discloses no financial relationships with commercial entities.

Jessica L. Campbell, MS - A81

Ousley, S.D. (Discussion of Commercial Products or Services).  
University of Indianapolis (Grant Support).

Janice Canedo

Google, Inc (Discussion of Commercial Products or Services).  
- C18

Auburn Cyber Research Center (Other Financial/Material  
Support). - C23

Sarah E. Canty, PhD - A55

Liverpool John Moores University (Employee).

Jodi M. Caple, BS - A71

Perception Lab (Discussion of Commercial Products or Services).

Felice F. Carabellese, MD - I21

Discloses no financial relationships with commercial entities.

Sean Y. Carlson-Greer, BA - A31

Solution Technologies, Inc (Discussion of Commercial Products  
or Services).

Amy Y. Carney, PhD - W24

Discloses no financial relationships with commercial entities.

Kelsey A. Carpenter, BS

Leica Microsystems (Discussion of Commercial Products  
or Services). - A24

Discloses no financial relationships with commercial entities. - S2

Mark Carroll, BA - W24

Discloses no financial relationships with commercial entities.

Mariah D. Carson, BS - K29

Quetiapine (Discussion of Unlabeled/Investigational Use of  
Product/Device).

David O. Carter, PhD - H22

Chaminade University of Honolulu (Employee).

Carlos B. Carvalho, PhD - B60

National Institute of Criminalistics, Brazilian Federal Police  
(Employee).

Mary E.S. Case, MD - BS1

Discloses no financial relationships with commercial entities.

Rudy J. Castellani, MD - H70

Discloses no financial relationships with commercial entities.

Maria C. Castellanos, MFS - E44

Calumet Specialty Products Partners L.P., Foster + Freeman, Ltd,  
Nikon, Inc (Discussion of Commercial Products or Services).

Air Force Office of Investigations (Employee).

Michael Cavilla, BA - W11

Discloses no financial relationships with commercial entities.

Giovanni Cecchetto, MD, PhD - H92

Discloses no financial relationships with commercial entities.

Elizabeth N. Celata, MS - A133

Binghamton University (Other Financial/Material Support).

Adam Cervellone, BS - C19

AccessData, Apple, Inc, DELL, Guidance Software, Inc, SANS  
Institute (Discussion of Commercial Products or Services).

Gürsel Çetin, MD - J4

Discloses no financial relationships with commercial entities.

Selcuk Cetin, MD - H43

Discloses no financial relationships with commercial entities.

Kathryn R. Chabaud, BS - B147

National Institute of Justice (Grant Support).

Eric Chaghouri, MD - I8

Discloses no financial relationships with commercial entities.

Ayako Chan-Hosokawa, MS - K49

NMS Labs (Employee).

Kermit B. Channell II, BS - B25

Discloses no financial relationships with commercial entities.

Carole E. Chaski, PhD

ALIAS Technology, LLC (Discussion of Commercial Products  
or Services). - D9

Multilingual Parser (Discussion of Unlabeled/Investigational Use  
of Product/Device). - D9

Discloses no financial relationships with commercial entities. - I38

Muhammad Taimoor Chaudhary, MPhil - E73, K16, K34

Discloses no financial relationships with commercial entities.

Vikram Raj Singh Chauhan, PhD - J12

Discloses no financial relationships with commercial entities.

Heather I. Chen, BA - H100

Discloses no financial relationships with commercial entities.

Susan Cheng, BS - B7

QIAGEN, Inc, Zymo Research (Discussion of Commercial  
Products or Services).

Cedar Crest College (Other Financial/Material Support).

Jacob L. Cheramie - A110

IBM Corporation, Jantz, R.L./Ousley, S.D. (Discussion of  
Commercial Products or Services).

Elizabeth Chesna, BS - I30

Discloses no financial relationships with commercial entities.

Linda L. Chezem, JD - F3

Discloses no financial relationships with commercial entities.

Hae Jong Cho - A44

GOM, VATECH America, Z Corporation (Discussion of  
Commercial Products or Services).

Helen Cho, PhD - A44

GOM, VATECH America, Z Corporation (Discussion of  
Commercial Products or Services).

# FINANCIAL DISCLOSURE



Angi M. Christensen, PhD - A1

Discloses no financial relationships with commercial entities.

Sheresa Christopher, PhD - I3, I24

Discloses no financial relationships with commercial entities.

Hee-Sun Chung, PhD - K28

Discloses no financial relationships with commercial entities.

Jennifer D. Churchill, PhD - B54

Thermo Fisher Scientific, Inc (Discussion of Commercial Products or Services).

UNTHSC (Employee).

Dennis J. Chute, MD - H91

Dutchess County MEO (Employee).

Maria Susana Ciruzzi, PhD - F43

Discloses no financial relationships with commercial entities.

Steven C. Clark, PhD - E17

Discloses no financial relationships with commercial entities.

Jordan L. Clarke, BS - H13

Applied Biosystems, Inc, Promega Corporation, QIAGEN, Inc (Discussion of Commercial Products or Services).

North Carolina Department of Justice (Grant Support).

T. Douglas Clifford, JD - F40

Discloses no financial relationships with commercial entities.

Karen Cline-Parhamovich, DO - K75

Discloses no financial relationships with commercial entities.

Michael D. Coble, PhD - B174

National Institute of Standards and Technology (Employee).

Ashley Cochran, BS - B45

Agilent Technologies (Discussion of Commercial Products or Services).

Ken F. Cohn, DDS - G21

Discloses no financial relationships with commercial entities.

Federica Collini, MD - H27, I35, S2

Discloses no financial relationships with commercial entities.

John Collins, Jr., MA - S1

Discloses no financial relationships with commercial entities.

Mary B. Collins-Morton, MS

Federal Bureau of Investigation CIRG FBI Academy (Employee). - BS2

Discloses no financial relationships with commercial entities. - W8

Aime Conigliaro, MA - G40

Discloses no financial relationships with commercial entities.

Gerald J. Conlogue, MHS - W18

Quinnipiac University (Employee).

Katie Conners - F8

State of Minnesota (Employee).

Melissa A. Connor, PhD - E18

Onset Computer Corporation (Discussion of Commercial Products or Services).

Kristin K. Cooke, BS - E15

Discloses no financial relationships with commercial entities.

Stuart Cooper, MSc - B96

New Zealand Crown Research Institute ESR, Forensic Science South Australia (Discussion of Commercial Products or Services).

Katie Corcoran, BS - A74

The Department of Defense (Grant Support).

S. Cordner, MB - W16

Discloses no financial relationships with commercial entities.

Tracey S. Corey, MD - K75

Discloses no financial relationships with commercial entities.

Jered B. Cornelison, PhD - H32

Discloses no financial relationships with commercial entities.

Charles R. Cornett, PhD

WiSys Technology Foundation, University of Wisconsin-Platteville (Grant Support). - B73

Discloses no financial relationships with commercial entities. - B156

Brigida Corrieri, MSc - A62

Discloses no financial relationships with commercial entities.

Amanda K. Costello, MS - A92

Solution Technologies, Inc (Discussion of Commercial Products or Services).

Joseph A. Cox, MS - K6

Expertox, Inc (Employee).

Christian Crowder, PhD - A127

Harris County Institute of Forensic Sciences (Employee).

Breanna M. Cuchara - E47

Discloses no financial relationships with commercial entities.

Eugenia Cunha, PhD - A73

Universidade de Coimbra (Employee).

David Cunningham, PhD - B33

IonSense, Inc, Thermo Fisher Scientific, Inc (Discussion of Commercial Products or Services).

Krista Currie, MSc - B211

Discloses no financial relationships with commercial entities.

Trevor E. Curtis, BS - E37

Eternal Tattoo Supply, StarBrite, (Discussion of Commercial Products or Services).

Forensic Sciences Foundation, Inc Lucas Grant (Grant Support).

Natalia Czado, MS - B2

GE Healthcare Life Sciences, Illumina, Inc, Life Technologies Corporation, QIAGEN, Inc, Sigma-Aldrich Co (Discussion of Commercial Products or Services).

Sam Houston State University (Employee).

## D

Corinne D'Anjou, DMD - G32

Discloses no financial relationships with commercial entities.

Gretchen R. Dabbs, PhD - A120

IBM Corporation (Discussion of Commercial Products or Services), Southern Illinois University (Employee).

Ian Dadour, PhD - H118

Discloses no financial relationships with commercial entities.

Nebile Gokce Daglioglu, PhD - K26

Cukurova University (Grant Support).

Richard N. Dalby, PhD - W14

Discloses no financial relationships with commercial entities.





## FINANCIAL DISCLOSURE

- Cristina M. Dalle Grave, DDS - G47  
Dennis Babkin, Dexis, Microsoft Corporation (Discussion of Commercial Products or Services).
- Matthew J. Danker, BS - E75  
Discloses no financial relationships with commercial entities.
- William C. Darby, MD - I6, I40  
Discloses no financial relationships with commercial entities.
- Angela M. Dautartas, MA - A118  
National Institute of Justice, United States Department of Justice (Grant Support).
- Thomas J. David, DDS - G26  
Discloses no financial relationships with commercial entities.
- Brent Davis, MD - H75  
Mississippi State Medical Examiner's Office (Employee).
- Gregory G. Davis, MD - BS3  
Jefferson County (Employee).
- Lucy A. Davis, BHS - ES1  
Discloses no financial relationships with commercial entities.
- William M. Davis, PhD - B86  
PerkinElmer, Inc, Royal Canadian Mounted Police (Discussion of Commercial Products or Services).
- Josep De Alcaraz-Fossoul, PhD - B68  
Discloses no financial relationships with commercial entities.
- Peter R. De Forest, DCrim - W9  
Discloses no financial relationships with commercial entities.
- Guilherme H.B. de Miranda - E74  
Brazilian Federal Police (Employee).
- Ilaria De Vitis, MD - I23  
Discloses no financial relationships with commercial entities.
- Sara A. Debus-Sherrill - E89  
National Institute of Justice (Grant Support).
- Summer J. Decker, PhD - A7  
IBM Corporation (Discussion of Commercial Products or Services).
- Stephanie DeDore, BS - B110  
FTI, IntegenX, Inc, NetBio, Inc (Discussion of Commercial Products or Services).  
SNA International (Paid Consultant).
- Fabrice F. Dedouit - E70  
Discloses no financial relationships with commercial entities.
- Audrey Deeken-Draisey, MD - H34  
Discloses no financial relationships with commercial entities.
- Tania Delabarde, PhD - A79  
Discloses no financial relationships with commercial entities.
- Yann Delannoy, MD - A22  
Discloses no financial relationships with commercial entities.
- Dana Delger, JD - F36  
Innocence Project (Employee).
- John P. Demas, DDS - W5  
Trumbull, ICRA Sapphire, Inc (Discussion of Commercial Products or Services).
- Gina Dembinski, MS - B61  
Life Technologies Corporation, Promega Corporation (Discussion of Commercial Products or Services).
- Frank DePaolo, BS - W5  
American Airlines, Trumbull, ICRA Sapphire, Inc (Discussion of Commercial Products or Services).  
Office of Chief Medical Examiner of the City of New York (Employee).
- Rebecca T. DeRienz, MS - K74  
Franklin County Coroner's Office (Employee).
- Ketaki Deshpande, MS - H18  
QIAGEN, Inc (Discussion of Commercial Products or Services).
- Betty Layne DesPortes, JD, MS - F3  
Discloses no financial relationships with commercial entities.
- Sylvain Desranleau, DMD - G33  
ThéMA University of Franche (Discussion of Commercial Products or Services).
- Kelsey M. DeWitt, BS - B196  
Bruker Corporation (Discussion of Commercial Products or Services).  
Food and Drug Administration's Forensic Chemistry Center (Employee).
- Todd A. Deyne, BS - E78  
IBM Corporation, National Institute of Standards and Technology, Royal Society of Chemistry, Sigma-Aldrich Co., The R Foundation, The Samuel Roberts Noble Foundation (Discussion of Commercial Products or Services).
- Shivani Dhaka, MBBS - K20  
AIIMS (Employee).
- Ciro Di Nunzio, MFS, PhD - B65, B66, H97  
Discloses no financial relationships with commercial entities.
- Giancarlo Di Vella, MD, PhD  
Life Technologies Corporation, Promega Corporation (Discussion of Commercial Products or Services). - B144  
Discloses no financial relationships with commercial entities. - I28, H40
- Peter J. Diaczuk, BS - B165  
Discloses no financial relationships with commercial entities.
- James R. Dibble, BS - W22  
Discloses no financial relationships with commercial entities.
- Allyson K. Digmann, BS - B79  
Southeast Missouri State University (Other Financial/Material Support).
- Hasan Din, MD - H43  
Discloses no financial relationships with commercial entities.
- Ricardo Jorge Dinis-Oliveira - H3  
Discloses no financial relationships with commercial entities.
- Lawrence A. Dobrin, DMD - W5  
Trumbull, ICRA Sapphire, Inc (Discussion of Commercial Products or Services).
- Halis Dokgöz - J9  
Grimed (Discussion of Commercial Products or Services, Discussion of Unlabeled/Investigational Use of Product/Device, and Other Financial/Material Support).
- Julia A. Dolan, MS - B205  
Bureau of Alcohol, Tobacco, Firearms and Explosives (Employee).
- Stephanie Domitrovich, JD, PhD - F14, F22  
Discloses no financial relationships with commercial entities.

# FINANCIAL DISCLOSURE



Laura Donato - A40

Discloses no financial relationships with commercial entities.

Robert B.J. Dorion, DDS - G27, G28

Discloses no financial relationships with commercial entities.

Meryle A. Dotson, MA - E32

Discloses no financial relationships with commercial entities.

Kyle C. Doty, BS - B193

National Institute of Justice, Office of Justice Programs,  
U.S. Department of Justice. (Grant Support).

Barbara Doupe, MSc - B157

The Centre of Forensic Sciences funded the materials used in the  
project (Employee).

Ana Paula S. Doval - B210

Discloses no financial relationships with commercial entities.

J.C. Upshaw Downs, MD

Discloses no financial relationships with commercial entities. -  
F13, S2

AMBLIN Entertainment (Discussion of Commercial Products  
or Services). - BS5

Sara N. Doyle, MD - H107

Harris County Institute of Forensic Sciences (Employee).

Derek M. Draft, DDS - G13

Microsoft Corporation (Discussion of Commercial Products  
or Services).

Stacy A. Drake, PhD, MPH - E80

Discloses no financial relationships with commercial entities.

Meaghan P. Drumm, BA - K25

Agilent Technologies, BioTage (Discussion of Commercial  
Products or Services).

Arcadia University (Other Financial/Material Support).

Beatrix Dudzik, PhD - A30

The R Foundation (Discussion of Commercial Products  
or Services).

Deiter J. Duff, MD - H80

Discloses no financial relationships with commercial entities.

Rebecca F. Dunn - B23

Discloses no financial relationships with commercial entities.

Tim G. Dunn, MS - D30

Discloses no financial relationships with commercial entities.

Jessica B. Dwyer, MD - K66

Allegheny County Medical Examiner's Office (Employee).

R. Gregg Dwyer, MD, EdD - I16

Discloses no financial relationships with commercial entities.

Josiah Dykstra, PhD - W4

Discloses no financial relationships with commercial entities.

Christopher J. Ehrhardt, PhD - B104

National Institute of Justice, Virginia Commonwealth University  
(Grant Support).

Heidi Eldridge, MS - B162, W12

National Institute of Justice (Grant Support).

Albert A. Elian, MS - K41

Discloses no financial relationships with commercial entities.

George Elias - I10

Discloses no financial relationships with commercial entities.

Kelly M. Elkins, PhD - B8

Lee BioSolutions, Microsoft Corporation, Thermo Fisher  
Scientific, Inc (Discussion of Commercial Products or Services).  
Towson University (Employee).

Sarah Ellingham, MSc - A50

Discloses no financial relationships with commercial entities.

Sarah J. Ellis, MS - S2

Discloses no financial relationships with commercial entities.

Kyleen Elizabeth Elwick, BS - B4

Applied Biosystems, Inc, Eppendorf AG, Life Technologies  
Corporation, Promega Corporation, ZyGem Corporation, Ltd  
(Discussion of Commercial Products or Services).

Dakota W. Emery - F33

Agilent Technologies, Branson, Enzo Life Sciences, Inc, Sigma  
Chemicals (Discussion of Commercial Products or Services).  
University of Alaska Fairbanks (Grant Support).

Spice, Synthetic Cannabinoids. (Discussion of Unlabeled/  
Investigational Use of Product/Device).

Alexandra L. Emmons, MA - A61

University of Tennessee. (Other Financial/Material Support).

Elizabeth A. Erickson, MS - E25

Discloses no financial relationships with commercial entities.

Anders Eriksson, MD, PhD

Discloses no financial relationships with commercial entities.  
- H51

Elsevier, John Wiley & Sons, Inc, National Library of Medicine,  
University of Bristol (Discussion of Commercial Products or  
Services). - H54

Kenyon M. Evans-Nguyen, PhD - W2

BaySpec, Inc, 1st Detect, FLIR Systems, Inc, IonSense, Inc,  
MassTech, , Microsaic Systems plc, 908 Devices, Prosoia, Inc,  
Smiths Detection, Torion, Waters Corporation (Discussion of  
Commercial Products or Services).

The University of Tampa (Employee).

Cynthia L. Evenson, JD - F35

Discloses no financial relationships with commercial entities.

## E

Glenda M. Easterling, BS - K17

Office of the Chief Medical Examiner, San Francisco (Employee).

Michael D. Eckhardt, MD - H31

Discloses no financial relationships with commercial entities.

## F

Maxwell Christopher Fabricant, JD - F36

Innocence Project (Employee).

Dedouit Fabrice, MD - E41

Discloses no financial relationships with commercial entities.

Paolo Fais, MD - H94

Discloses no financial relationships with commercial entities.



## FINANCIAL DISCLOSURE

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Laura C. Farese, MD - G2

Discloses no financial relationships with commercial entities.

Armin A. Farid, DDS - G56

Discloses no financial relationships with commercial entities.

Amanda L. Farrell, PhD - W21

Discloses no financial relationships with commercial entities.

Davin Faulkner, DMD - W5

Trumbull, ICRA Sapphire, Inc (Discussion of Commercial Products or Services).

Marc Feaster, BS - K19

Draeger (Discussion of Commercial Products or Services).

Office of the Chief Medical Examiner, NC (Employee).

J. Paul Fedoroff, MD - I16

Discloses no financial relationships with commercial entities.

Joseph Ferencz, MD, PhD - I45

Discloses no financial relationships with commercial entities.

Lyndsie N. Ferrara, MS - E26

Duquesne University (Employee).

Renato T. Ferreira de Paranaiba, BA - B57

Affymetrix, Inc, National Library of Medicine, New England Biolabs, Tamura/Stecker/Peterson/Filipski/Kumar, Ratnasingham, S/Hebert, P.D.N., Thermo Fisher Scientific, Inc (Discussion of Commercial Products or Services).

Brazilian Federal Police (Employee).

Kenneth E. Ferslew, PhD - K75

Discloses no financial relationships with commercial entities.

Christopher Fields, MD - I3, I24

Discloses no financial relationships with commercial entities.

Alejandra Figueroa, BSc - B59

Illumina, Inc, Thermo Fisher Scientific, Inc (Discussion of Commercial Products or Services).

Program Fondecyt (Grant Support).

Marissa J. Finkelstein, MS - K30

Bayer Healthcare Pharmaceuticals, Lilly USA, LLC, Pfizer, Inc, SCIEX, Shimadzu Corporation (Discussion of Commercial Products or Services).

Aegis Sciences Corporation (Other Financial/Material Support).

Sheree J. Finley, MS

Discloses no financial relationships with commercial entities.

- H112

National Science Foundation (Grant Support). - H120

Richard H. Fixott, DDS - G29

Discloses no financial relationships with commercial entities.

Jamie N. Fleming, BS - B16

Federal Bureau of Investigation (Other Financial/Material Support).

Martina Focardi - H48, H93

Discloses no financial relationships with commercial entities.

Patricia A. Foley-Melton, PhD - B98

Brenner, C.H., Cybergenetics, Softgenetics, NicheVision, Inc, (Discussion of Commercial Products or Services).

National Institute of Justice, RTI International (Other Financial/Material Support).

Luis Fondebrider, PhD - W16

Discloses no financial relationships with commercial entities.

Jonathan M. Ford, PhD - A7

IBM Corporation (Discussion of Commercial Products or Services).

A.R.W. Forrest, LLM - F12

Discloses no financial relationships with commercial entities.

Matthew F. Fox, MD - H102

Discloses no financial relationships with commercial entities.

Lara Frame-Newell, MA - S2

Discloses no financial relationships with commercial entities.

Darren Franck, MSME - D5

National Institute of Standards and Technology (Discussion of Commercial Products or Services).

Ademir Franco, MSc - G55

AGE Solutions, Cad Cam Technologies, EDF, Maestro, Telecom ParisTech (Discussion of Commercial Products or Services).

Meredith A. Frank, MD - H104

Denver Office of the Medical Examiner (Employee).

Katrin Franke, PhD - W20

Discloses no financial relationships with commercial entities.

Annarita Franza, PhD - I22, I44

Discloses no financial relationships with commercial entities.

Kristen Frederick-Frost, PhD - LW1

National Institute of Standards and Technology (Employee).

Michael Freeman, MD, PhD - H61

National Highway Traffic Safety Administration (Discussion of Commercial Products or Services).

Clare M. Fried, BS - B43

Albrayco Technologies, Inc, SCIEX, WD-40 Company (Discussion of Commercial Products or Services).

Cedar Crest College (Other Financial/Material Support).

Melissa Friscia, MSFS - K9

Waters Corporation (Discussion of Commercial Products or Services).

National Institute of Justice (Employee).

The Center for Forensic Science Research and Education (Grant Support).

John Fudenberg, MBA - W5

Trumbull, ICRA Sapphire, Inc (Discussion of Commercial Products or Services).

Clark County Coroner's Office (Employee).

Sarah M. Furnier, BS - A114

Jantz R.L. /Ousley, S.D. (Discussion of Commercial Products or Services).

Kenneth G. Furton, PhD - S1

Florida International University (Employee).

---

## G

Hallie Gaffney - A93

State University of New York (Grant Support).

Catherine M. Gaither, PhD - A116

Discloses no financial relationships with commercial entities.

Elizabeth A. Gardner, PhD - B82

National Science Foundation (Grant Support).

# FINANCIAL DISCLOSURE



Luciano Garofano, PhD - E71 Apple, Inc (Discussion of Commercial Products or Services). - B81 Discloses no financial relationships with commercial entities. -E71	Jack Gilbert, PhD - H127 Discloses no financial relationships with commercial entities.
Paolo Garofano, MD, PhD - B95 Brenner, C.H., Netherlands Forensic Studio, SCIEG (Discussion of Commercial Products or Services).	M.G.F. Gilliland, MD - H135 Discloses no financial relationships with commercial entities.
Dominic Gascho - H90 Discloses no financial relationships with commercial entities.	Rhesa G. Gilliland, MS - W22 Discloses no financial relationships with commercial entities.
Vernon J. Geberth, MS, MPS - W10 CRC Press, LLC (Discussion of Commercial Products or Services).	Cinzia Gimelli, PsyD, PhD - I15 Discloses no financial relationships with commercial entities.
Diana Geli - H73 Immunalysis Corporation (Discussion of Commercial Products or Services).	Simone Gittelson, PhD - B216 Thermo Fisher Scientific, Inc (Discussion of Commercial Products or Services).
Steven Geniuk, MS - E16, W7 Discloses no financial relationships with commercial entities.	National Institute of Standards and Technology (Employee).
Rebecca L. George, MA - A65 California State University, Chico (Grant Support).	Anna Gitto, JD - F15 Discloses no financial relationships with commercial entities.
Charles E. Georget, PhD - G31 Discloses no financial relationships with commercial entities.	Lorenzo Gitto, MD Discloses no financial relationships with commercial entities.- H66
Zeno J. Geradts, PhD Ministry of Security and Justice (Employee). - C2, W20	Facebook, Google, Inc, IG Market, LabLynx, Inc, LinkedIn, Snapchat, Inc, Twitter (Discussion of Commercial Products or Services). - H139
Canon, Inc, Facebook, Inc, Google, Inc (Discussion of Commercial Products or Services). - C13	Lindsay Glicksberg - K8 National Institute of Justice (Grant Support).
Netherlands Forensic Institute (Employee). - C13, S1	Claire Glynn, PhD- B5 QIAGEN, Inc, Zymo Research (Discussion of Commercial Products or Services).
Katherine B. Gettings, PhD - W23 Battelle Memorial Institute, Illumina, Inc, Promega Corporation, Thermo Fisher Scientific, Inc (Discussion of Commercial Products or Services).	University of New Haven (Other Financial/Material Support).
National Institute of Standards and Technology (Employee).	Timothy P. Gocha, PhD - A82 ESRI, IBM Corporation (Discussion of Commercial Products or Services).
Melodi Ghui - A21 Discloses no financial relationships with commercial entities.	Kanya Godde, PhD - A91 University of La Verne (Grant Support).
Dean M. Gialamas, MS - W8 Discloses no financial relationships with commercial entities.	Francisco Valente Gonçalves, MSc - B22 Marie Curie Early Stage Researcher funded by the European Union (Grant Support).
Zac P. Giammarrusco, MS - C14 aTube Downloader, GoPro, Inc, Real Networks, Inc, YouTube, LLC, YTD Downloader, (Discussion of Commercial Products or Services).	James Gooch - B181 King's College London, Metropolitan Police Service, UK Home Office (Grant Support).
Kemper Gibson - B111 Takara Bio, Inc, Thermo Fisher Scientific, Inc (Discussion of Commercial Products or Services).	James F. Goodrich, BDS - G32 Discloses no financial relationships with commercial entities.
Georgiana C. Gibson-Daw, MS - B12 Florida International University (Employee).	Erin M. Gorden, MFS New England BioLabs (Discussion of Commercial Products or Services). - B179
Mark A. Giffen, Jr., DO - H132 Discloses no financial relationships with commercial entities.	Illumina, Inc, Kapa Biosystems, New England Biolabs (Discussion of Commercial Products or Services). - W23
Katelyn M. Gigl, BS - B112 Harris, IntegenX, Inc, NetBio, Inc, Promega Corporation, QIAGEN, Inc, SoftGenetics, LLC, Thermo Fisher Scientific, Inc, ZyGem Corporation, Ltd (Discussion of Commercial Products or Services).	AFDIL (Employee). - B177, B179, W23
The Pennsylvania State University (Other Financial/Material Support).	Christopher J. Gordon, MD - H49 Discloses no financial relationships with commercial entities.
DNA analysis reagents, instruments, software (Discussion of Unlabeled/Investigational Use of Product/Device).	Jan M. Gorniak, DO - H140 IAC Company (Discussion of Commercial Products or Services).
	Emily D. Gottfried, PhD - I12 PAR, Inc (Discussion of Commercial Products or Services).
	Lynsey F. Gozna, PhD - I19 Discloses no financial relationships with commercial entities.
	Silke Grabherr, PhD - H133 Discloses no financial relationships with commercial entities.





# FINANCIAL DISCLOSURE

Ema H. Graham - B132

Applied Biosystems, Inc, Promega, QIAGEN, Inc, Spectronics Corporation, SPEX SamplePrep (Discussion of Commercial Products or Services and Discussion of Unlabeled/Investigational Use of Product/Device).

Michael A. Graham, MD - H70

Discloses no financial relationships with commercial entities.

Abigail J. Grande, BS - H59

Discloses no financial relationships with commercial entities.

Ignazio Grattagliano, PsyD - I2, I14, I29

Discloses no financial relationships with commercial entities.

Ashley Green, MA - A80

Discloses no financial relationships with commercial entities.

Jacob Griffin, BS - A14

The R Foundation (Discussion of Commercial Products or Services).

Catalin Grigoras, PhD

Alesis, D&M Holdings, Inc, Olympus America, Inc, Philips, Roland Corporation, SanDisk Corporation, Sony Corporation of America, TASCAM, Toshiba America Information Systems, Inc, Zoom Corporation (Discussion of Commercial Products or Services).

University of Colorado Denver (Employee). - C10

GoPro, Inc (Discussion of Commercial Products or Services). - C14

Megan E. Grimes, MFS - B114

Applied Biosystems, Inc, QIAGEN, Inc (Discussion of Commercial Products or Services).

ORISE (Other Financial/Material Support).

Kelly Grisedale, PhD - B10

ILLUMINA, Inc, Life Technologies Corporation, QIAGEN, Inc, University of North Texas Health Science Center (Discussion of Commercial Products or Services).

Western Carolina University (Employee).

Fessessework Gual, DVM - K69

Harris County Institute of Forensic sciences (Employee).

Petur G. Gudmannsson, MD - H51

Discloses no financial relationships with commercial entities.

Richard A. Guerrieri, MS - W23

Battelle Memorial Institute, Promega Corporation, ILLUMINA, Inc (Discussion of Commercial Products or Services). - W23

Battelle Memorial Institute (Employee). - S1, W23

Mark D. Guido, MS - C1

Samsung, Google, Inc (Discussion of Commercial Products or Services).

The MITRE Corporation (Employee).

Mete K. Gulmen, PhD, MD - E14

Discloses no financial relationships with commercial entities.

Chinmoy Gulrajani, MD - I6

Discloses no financial relationships with commercial entities.

Ayşe Gulsahi, PhD - G15

Discloses no financial relationships with commercial entities.

Pramod Gumpeni, MD - H111

Dupont (Discussion of Commercial Products or Services).

Harris County Institute of Forensic Sciences (Employee).

Zhaoming Guo, MD - H36, H65, H141

Discloses no financial relationships with commercial entities.

Avneesh Gupta, MD - H67

Discloses no financial relationships with commercial entities.

Murat Serdar Gürses, MD

Uludağ University Network (Discussion of Commercial Products or Services). - H37

Discloses no financial relationships with commercial entities. - H43

Torfinn Gustafsson, BM - H55

Discloses no financial relationships with commercial entities.

## H

Melinda Hacker, DDS - G6

Discloses no financial relationships with commercial entities.

Jeffery Hackett, PhD - K41

Discloses no financial relationships with commercial entities.

Kathryn H. Haden-Pinneri, MD - E34

Discloses no financial relationships with commercial entities.

Amanda L. Haggerty, BS - E20

Agilent Technologies, AMS, Inc, CTC Analytics (Discussion of Commercial Products or Services).

Sarah V. Hainsworth, PhD - D1, D14

University of Leicester (Employee).

Amanda R. Hale, MA

North Carolina State University (Employee). - S1

Discloses no financial relationships with commercial entities. - S2

Adam B. Hall, PhD

Cumberland Farms, Gulf Corporation, IonSense, Inc, Irving Corporation, Sunoco Corporation, Shell Corporation, (Discussion of Commercial Products or Services). - B42

Agilent Technologies, Field Portable, IonSense, Inc, 908 Devices, SCIEX (Discussion of Commercial Products or Services). - W2

Northeastern University (Employee). - B42, W2

Ashley Hall, PhD - B137

Life Technologies Corporation, Promega Corporation (Discussion of Commercial Products or Services).

University of Nebraska-Lincoln (Employee).

Jacob R. Hall - C15

Apple, Inc (Discussion of Commercial Products or Services).

Christine L. Halling, MS - E64

Discloses no financial relationships with commercial entities.

Kristine Hamann, JD - F6

Discloses no financial relationships with commercial entities.

Austin Hancock, BS - C18

Google, Inc (Discussion of Commercial Products or Services).

Auburn University (Other Financial/Material Support).

Randy L. Hanzlick, MD - H70

Discloses no financial relationships with commercial entities.

Brett E. Harding, MBA - E59

Discloses no financial relationships with commercial entities.

Laurel A. Hardy, BS - B35

Restek Corporation (Discussion of Commercial Products or Services).

# FINANCIAL DISCLOSURE



Heather L. Harris, MFS, JD - F40

Discloses no financial relationships with commercial entities.

Howard A. Harris, JD, PhD - E65

Discloses no financial relationships with commercial entities.

Kristen Hartnett-McCann, PhD - A93

SOFA Grant, State University of New York Scholarly and Creative Activity Grant (Grant Support).

Gary M. Hatch, MD - A1

New Mexico Office of the Medical Investigator (Employee).

Kino Hayashi, MD - H46

Discloses no financial relationships with commercial entities.

Donald Hayden, MFS

Discloses no financial relationships with commercial entities.  
- E16, W7

Christina G. Hayes, BS

Discloses no financial relationships with commercial entities. - S2  
St. Louis Metropolitan Police Department (Employee) - S1

Jonathan Hayes, MD - H70

Discloses no financial relationships with commercial entities.

Courtney Head, MS - F31

Federal Bureau of Investigation (Discussion of Commercial Products or Services).

Houston Forensic Science Center (Employee).

Joseph T. Hefner, PhD - A28

Discloses no financial relationships with commercial entities.

Dagmar Heinrich, PhD - E60

EPSRC Grant at UCL SECRiT, Secure Societies Institute,  
University of Huddersfield (Grant Support).

Donna J. Hellwinkel, DDS - G39

Google, Inc (Discussion of Commercial Products or Services).  
Washoe County Medical Examiner's Office (Paid Consultant).

Jeanet Hendrikse, MSc - B148

Discloses no financial relationships with commercial entities.

Matthew T. Henshon, AB, JD - W20

Discloses no financial relationships with commercial entities.

Martin Herman, PhD - C16

National Institute of Standards and Technology (Employee).

Edward E. Herschaft, DDS - W5

Office of the Chief Medical Examiner City of New York  
(Discussion of Commercial Products or Services).

Kaitlyn E. Hess, BS - K38

Restek Corporation, SCIEX, Shimadzu Corporation (Discussion  
of Commercial Products or Services).

Bio-SPME fiber stationed in pipet tippet (Discussion of Unlabeled/  
Investigational Use of Product/Device).

Cedar Crest College (Other Financial/Material Support).

Charles M. Heurich, MFS - B212

United States Department of Justice/National Institute of Justice  
(Employee).

Terry-Dawn Hewitt, LLM - F41

Discloses no financial relationships with commercial entities.

Maureen Hickman, MS - B50

Illumina, Inc (Discussion of Commercial Products or Services).

Agilent Technologies, Illumina, Inc (Discussion of Unlabeled/  
Investigational Use of Product/Device).

National Institute of Justice (Grant Support).

Jack Hietpas, PhD - B83

National Institute of Standards and Technology (Discussion of  
Commercial Products or Services).

Oak Ridge Institute for Science and Education, Federal Bureau of  
Investigation (Grant Support).

Jennifer L. Higginbotham, MFS - W23

CLC bio, Illumina, Inc, New England BioLabs (Discussion of  
Commercial Products or Services).

Armed Forces DNA Identification Laboratory (Employee).

Diana Ho - F26

Office of the Chief Medical Examiner City of New York  
(Employee).

Jacob Hock - B146

Discloses no financial relationships with commercial entities.

Jacob E. Hoerter - H64

FUTEK Advanced Sensor Technology, Inc, Omega, Inc,  
(Discussion of Commercial Products or Services).

FUTEK Advanced Sensor Technology, Inc, instruNet, Omega, Inc,  
SENSIT Technologies (Discussion of Unlabeled/Investigational  
Use of Product/Device).

Janne A. Holmgren, PhD - E67

Discloses no financial relationships with commercial entities.

Anastasia Holobinko, MS - A64

Discloses no financial relationships with commercial entities.

Brian J. Holoyda, MD - I33

Discloses no financial relationships with commercial entities.

Thomas J. Holt, PhD - E58

National Institute of Justice (Grant Support).

Daniel M. Honig, PE - D7

RISA Technologies, LLC (Discussion of Commercial Products  
or Services).

Jurian A. Hoogewerff, PhD

University of Canberra (Employee). - B126, B201

Mary F. Horvath, MFS - W4

Discloses no financial relationships with commercial entities.

Max M. Houck, PhD - F7

Discloses no financial relationships with commercial entities.

Philip E. Houldsworth, MSc - A121

Discloses no financial relationships with commercial entities.

James Hault, MS - B44

Nippon Soda Co., Ltd (Discussion of Commercial Products or  
Services).

Rachel M. Houston, BS - B190

Life Technologies Corporation, QIAGEN, Inc (Discussion of  
Commercial Products or Services).

Sam Houston State University (Employee).

Julie A. Howe, MBA - E17

Discloses no financial relationships with commercial entities.

Anthony W. Hudson, BS - A51

Discloses no financial relationships with commercial entities.

Marilyn A. Huestis, PhD

Discloses no financial relationships with commercial entities.  
- W16

National Institutes of Health, IRP, National Institute on Drug  
Abuse (Employee). - K54



## FINANCIAL DISCLOSURE

Lurena A. Huffman, BS - W21

Discloses no financial relationships with commercial entities.

Ted R. Hunt, JD - F3

Discloses no financial relationships with commercial entities.

Cheryl D. Hunter - S2

Discloses no financial relationships with commercial entities.

Ja'Neisha Hutley, MS - S2

Discloses no financial relationships with commercial entities.

James B. Hyzer, PhD

Discloses no financial relationships with commercial entities. - D23, D25

### I

Lavinia Iancu, PhD - H114

Discloses no financial relationships with commercial entities.

Samiah Ibrahim, BSc - J17

Napkin Forever (Discussion of Commercial Products or Services).

Kena Ihle, BA - A24

Leica Microsystems (Discussion of Commercial Products or Services).

Nahyok Im, PhD - A44

GOM, VATECH America, Z Corporation (Discussion of Commercial Products or Services).

Ayesha Imtiaz, MS - J10

Discloses no financial relationships with commercial entities.

Francesca Indorato, MD - K12

Discloses no financial relationships with commercial entities.

Eric A. Ingle, BA - K52

Office of the Chief Medical Examiner, San Francisco (Employee).

Megan E. Ingvaldstad, PhD - A99

Discloses no financial relationships with commercial entities.

Joseph Insana - B152

Discloses no financial relationships with commercial entities.

Lorna C. Irish, BSc - E61

University of Huddersfield (Grant Support).

Mariyam I. Isa, BS - A78

Dassault Systèmes (Discussion of Commercial Products or Services).

National Science Foundation (Grant Support).

Carolyn V. Isaac, PhD - H28

Discloses no financial relationships with commercial entities.

Marilyn Isaacks, BA - A75

Texas State University Research Scholarship (Grant Support).

Daniel S. Isenschmid, PhD

Randox Laboratories, Ltd (Discussion of Commercial Products or Services) - K55

NMS Labs (Employee) - K55, W19

### J

Esther Jack, MBBCh

Discloses no financial relationships with commercial entities. - H1  
Lucas Grant from the American Academy of Forensic Sciences (Grant Support) - H25

Christian Jackowski, MD, EMBA - H42

Discloses no financial relationships with commercial entities.

David S. Jackson, BS - B34

United States Food and Drug Administration Forensic Chemistry Center (Employee).

George F. Jackson, PhD - K5

Discloses no financial relationships with commercial entities.

Glen P. Jackson, PhD - B94

National Institute of Justice (Grant Support).

Megan L. Jackson, BS - B55

Agilent Technologies, Integrate DNA Technologies, Inc, Kapa Biosystems, Promega Corporation, QIAGEN, Inc, Thermo Fisher Scientific, Inc (Discussion of Commercial Products or Services).  
Oak Ridge Institute for Science and Education, Federal Bureau of Investigation (Grant Support).

Monica Jacobs - K2

Discloses no financial relationships with commercial entities.

Yu Ryang Jang, PhD - A44

GOM, VATECH America, Z Corporation (Discussion of Commercial Products or Services).

Kimberly E. Janssen - H89

Office of Chief Medical Examiner, NC (Employee).

Brian L. Janysek, MFS - W7

Department of Defense Office of Inspectors General (Employee).

Hannah C. Jarvis, MRCS - H79

Discloses no financial relationships with commercial entities.

Alexander Jason, BA - E94

Discloses no financial relationships with commercial entities.

Shashi K. Jasra, PhD - H86

Discloses no financial relationships with commercial entities.

Gulnaz T. Javan, PhD

National Science Foundation (Grant Support) - H122, H123

Roger Jefferys, BS - B30

ARCUS, Inc, Beemiller Manufacturing Facility, Forensic Technology International, Kel-Tec CNC Industries, Inc, Norsys Software Corp., RStudio, Ruger & Co., Inc, SCCY Industries, LLC, Springfield Armory, Sturm, Taurus International MFG, Inc USA (Discussion of Commercial Products or Services).  
West Virginia University (Employee).

Brad Jenkins, MS - B174

Cybergenetics (Discussion of Commercial Products or Services).  
Virginia Department of Forensic Science (Employee).

Jeffrey M. Jentzen, MD - BS1, F14, H60

Discloses no financial relationships with commercial entities.

Yangseung Jeong, PhD - A2

William M. Bass Endowment — Forensic Anthropology Center-University of Tennessee (Grant Support).

Donald J. Johnson, MS - B194

QIAGEN, Inc (Discussion of Commercial Products or Services).

# FINANCIAL DISCLOSURE



Erica N. Johnson, BA - K23

BioTage, Waters Corporation (Discussion of Commercial Products or Services).

Arcadia University (Other Financial/Material Support).

Mark E. Johnson, PhD - W6

National Institute of Justice (Grant Support).

Melissa A. Johnson, BA - K42

Discloses no financial relationships with commercial entities.

Jude L. Jokwi, MA - F2

Discloses no financial relationships with commercial entities.

Andrea L. Jones, BS - K21

GE Healthcare, SCIEX, Shimadzu Corporation, Ultra (Discussion of Commercial Products or Services).

Cedar Crest College (Other Financial/Material Support).

John P. Jones II, MBA - B40

ASTM International (Discussion of Commercial Products or Services).

National Institute of Standards and Technology and Organization of Scientific Area Committees Affairs (Employee).

Eunah Joo, MS - E91

National Forensic Service (Grant Support).

Kyla M. Jorgenson, MSc - H110

Discloses no financial relationships with commercial entities.

Chelsey A. Juarez, PhD - A3

Jantz, R.L./Ousley, S.D. (Discussion of Commercial Products or Services).

Go-Un Jung, BS - A90

ISTI – CNR, Robert McNeel & Associates, The University of Manchester, Wolfram Research, Inc (Discussion of Commercial Products or Services).

National Research Foundation of Korea and Global PhD Fellowship Program — National Research Foundation- The Ministry of Education, Science and Technology (Grant Support).

Emily Junkins, BS - H115

United States Air Force Research Laboratory (Grant Support).

Kelly R. Kamnikar, BS - A106

National Institutes of Health, The R Foundation (Discussion of Commercial Products or Services).

A. Bakarr Kanu, PhD - B70

Winston-Salem State University (Employee and Grant Support).

Fabian Kanz, PhD - A56

Discloses no financial relationships with commercial entities.

Hakan Kar, MS - J9

Grimed, Ltd (Discussion of Commercial Products or Services, Discussion of Unlabeled/Investigational Use of Product/Device, and Other Financial/Material Support).

Hannah A. Kastenbaum, MD - H88

Discloses no financial relationships with commercial entities.

Zuzanna Kazmierczyk, BS - J16

Discloses no financial relationships with commercial entities.

Denise C. Kellaher - I17

Discloses no financial relationships with commercial entities.

Caroline Machal Kelley, BS - B24

United States Food and Drug Administration's Forensic Chemistry Center (Employee).

Jan S. Kelly, BA

Discloses no financial relationships with commercial entities. - J8, J20

LaTrobe University, Skill-Task Training Assessment & Research, Inc - J14

Michael W. Kenyhercz, PhD - A88

R Core Development Team, Joseph Hefner (Discussion of Commercial Products or Services).

Meghan S. Kessler, DO - H72

SPEware Corporation (Discussion of Commercial Products or Services).

Marisa Teal Ketchum, BS - B3

Applied Biosystems, EMD Millipore, QIAGEN, Inc (Discussion of Commercial Products or Services).

Parul Khare, MSc - G8

Adobe Systems Incorporated (Discussion of Commercial Products or Services).

Kazuhiko Kibayashi, MD

Discloses no financial relationships with commercial entities. - K24

Bayer AG (Discussion of Commercial Products or Services). - H45

Christopher Kiefer, MD - H30

Montgomery County Coroner's Office (Employee).

Dong-Ho Eddie Kim, BSc

Discloses no financial relationships with commercial entities. - A6  
IBM Corporation, Materialise (Discussion of Commercial Products or Services). - A39

Eunmi Kim, PhD - K4

Busan Institute, National Forensic Service (Employee).

Hyung Seok Kim, PhD - H14

Discloses no financial relationships with commercial entities.

Keli L. King - H9

National Institute of Justice (Grant Support).

## K

Abuzar Kabir, PhD - B197

Discloses no financial relationships with commercial entities.

Sherri L. Kacinko, PhD

NMS Labs (Discussion of Commercial Products or Services and Employee). - K46, W2

Cynthia Kaeser, MS - B131

Lawrence Livermore National Laboratory (Employee).

Hidetoshi Kakuda - B67

Matrox Electronic Systems, Ltd, Quantum Composers, Inc (Discussion of Commercial Products or Services)

National Police Agency (Grant Support).

Brooke W. Kammrath, PhD

Malvern Instruments, Ltd (Discussion of Commercial Products or Services) - B17

University of New Haven (Employee) - B17, B125





## FINANCIAL DISCLOSURE

Rebecca King, MS - A27

Mercyhurst Archaeological Institute, Immersion, North Carolina State University, Jantz, R.L./Ousley, S.D. (Discussion of Commercial Products or Services).  
Boston University School of Medicine (Other Financial/Material Support).

Juliet Kinyua, MSc - B28

Agilent Technologies, Phenomenex, Inc (Discussion of Commercial Products or Services)  
EU International Training Network SEWPROF - Marie Curie Grant (Grant Support).

Alexandra R. Klaes, PhD

Discloses no financial relationships with commercial entities.  
- A124

National Institute of Justice (Grant Support). - A72

Natasha M. Knack, BA - I16

Discloses no financial relationships with commercial entities.

Sandra Koch, MS - B89

Discloses no financial relationships with commercial entities.

Whitney A. Kodama, BA - H128

Illumina, Inc, MO BIO Laboratories, Inc (Discussion of Commercial Products or Services).  
National Institute of Justice (Grant Support).

Constantine Konstantakis, BA - K43

Discloses no financial relationships with commercial entities.

Roger G. Koppl, PhD - B203

Discloses no financial relationships with commercial entities.

Andrew C. Koutrakos, MS - B17

Malvern Instruments, Ltd (Discussion of Commercial Products or Services).

Dan Krane, PhD

Applied Biosystems (Discussion of Commercial Products or Services). - B143, F28

Alcotest (Discussion of Commercial Products or Services). - F39

Kelly Kraus, BS - E31

Discloses no financial relationships with commercial entities.

Kewal Krishan, PhD

Discloses no financial relationships with commercial entities.  
- A8, A38

IrfanViewMATLAB (Discussion of Commercial Products or Services). - C20

Robert Kronstrand, PhD- K65, K75

Discloses no financial relationships with commercial entities.

Brianna Kroon - B37

Discloses no financial relationships with commercial entities.

Melissa K. Kuhn - A113

Discloses no financial relationships with commercial entities.

Kevin P. Kulbacki, MSFS - J11

Discloses no financial relationships with commercial entities.

Kelley Kulick, JD - F27

Discloses no financial relationships with commercial entities.

Stephanie Kumor, MA - K56

NMS Labs (Employee).

Priyanka Kushwaha, MS - H19

Glomics Incorporation (Discussion of Commercial Products or Services).

Aaron R. Kuzel, BS - A68

Discloses no financial relationships with commercial entities.

Kelsey Kyllonen, MA - A42

Oak Ridge Institute for Science and Education, Visiting Scientist Program (Other Financial/Material Support).

## L

Ericka N. L'Abbe, PhD - A104

University of Pretoria (Employee).

National Research Foundation Research Grant, South Africa (Grant Support).

Laura M. Labay, PhD - K51

Sanofi-Aventis S.A. (Discussion of Commercial Products or Services).

NMS Labs (Employee).

Anita Lal, MD - H68

Discloses no financial relationships with commercial entities.

Jack N. Lane, MS - B62

Dynex Technologies (Discussion of Commercial Products or Services).

Natalie R. Langley, PhD - A49

Jantz R.L./Ousley, S.D. (Discussion of Commercial Products or Services).

Lincoln Memorial University (Grant Support).

Patrick E. Lantz, MD - W17

Discloses no financial relationships with commercial entities.

Bobby L. LaRue, Jr., PhD - H121

IntegenX, Inc (Discussion of Commercial Products or Services).

University of North Texas Health Science Center (Employee).

Eric F. Law, BS - B30

ARCUS, Inc, Beemiller Manufacturing Facility, Forensic Technology International, Kel-Tec CNC Industries, Inc, Norsys Software Corp., SCCY Industries, LLC, Springfield Armory, Sturm, Ruger & Co., Inc, Taurus International Manufacturing, Inc (Discussion of Commercial Products or Services).

West Virginia University (Employee).

Simon Lax - H124

Sloan Foundation (Grant Support).

Tiffany R. Layne, BS - B187

BIO-RAD Laboratories, Inc, Life Technologies Corporation, Q-Lab, Inc, QIAGEN, Inc, Quanta BioSciences, Inc, Roche (Discussion of Commercial Products or Services).

Erwan Le Garff, MD - G18

Discloses no financial relationships with commercial entities.

Marc A. LeBeau, PhD - BS3

Federal Bureau of Investigation (Employee).

Helene N. LeBlanc, PhD - E87

General Motors Company, Volkswagen of America, Inc (Discussion of Commercial Products or Services).

Natural Science and Engineering Research Council (Grant Support).

Zo-dee Ledger - E79

Discloses no financial relationships with commercial entities.

# FINANCIAL DISCLOSURE



Igor K. Lednev, PhD

The Mathworks, Inc (Discussion of Commercial Products or Services). - E86

National Institute of Justice, Office of Justice Programs, United States Department of Justice (Grant Support). - B193, E86

F.L. Jim Lee, Jr., MS - J2, J15

Foster + Freeman, Ltd (Discussion of Commercial Products or Services and Employee).

Unsil Lee, MS - E90

Discloses no financial relationships with commercial entities.

Christina A. Leija, MS - E69

Discloses no financial relationships with commercial entities.

Samuel J. Leistedt, MD, PhD - I36

Discloses no financial relationships with commercial entities.

Eric Lemaire, MD - H71

Discloses no financial relationships with commercial entities.

Nikolas P. Lemos, PhD - S2, W19

Discloses no financial relationships with commercial entities.

Ashton D. Lesiak - B122

JEOL, Ltd (Discussion of Commercial Products or Services).

University at Albany-SUNY Presidential Initiatives Fund Grand for Forensic Sciences and Cybersecurity (Grant Support).

Iana Lesnikova, MD, PhD - H7

Independent Forensics, Hologic (Discussion of Commercial Products or Services).

Mark M. LeVaughn, MD - H75

Mississippi State Medical Examiner's Office (Employee).

Carolyn Lewis, BS - B183

Agilent Technologies, Illumina, Inc, Life Technologies Corporation, New England BioLabs, QIAGEN, Inc, Quanta BioSciences Thermo Fisher Scientific, Inc (Discussion of Commercial Products or Services).

Virginia Commonwealth University (Employee).

Ling Li, MD - H36, H141

Discloses no financial relationships with commercial entities.

Emily Lichtenberger, BS - B155

Agilent Technologies, Office Depot, Inc, Sharpie, Sigma-Aldrich Co., Whatman, Inc (Discussion of Commercial Products or Services).

Nelson Vinueza, North Carolina State University (Grant Support).

Laura L. Liptai, PhD

Free Agent BMX (Discussion of Commercial Products or Services). - D19

BioMedical Forensics (Employee). - D19

Discloses no financial relationships with commercial entities. - W20

Kimberly Litterell, BS - I9

Discloses no financial relationships with commercial entities.

Ning Liu, MA - J3

Hewlett-Packard Development Company, LP (Discussion of Commercial Products or Services).

NMS Labs (Employee).

Barry K. Logan, PhD

NMS Labs (Discussion of Commercial Products or Services and Employee) - K48

NMS Labs (Employee) - BS3

Sarah Long, BS - H58

Discloses no financial relationships with commercial entities.

Kelsey Longe, BS - K63

Perkin Elmer, Inc (Discussion of Commercial Products or Services).

Aegis Sciences Corporation (Employee).

Kaitlyn A. Lopez - A91

Discloses no financial relationships with commercial entities.

Michael M. Losavio, JD - W22

Discloses no financial relationships with commercial entities.

Nicolene Lottering, BS - A84

Discloses no financial relationships with commercial entities.

Kevin M. Lougee, DO - A115

Denver Office of the Medical Examiner (Employee).

Jennifer C. Love, PhD - A103

Discloses no financial relationships with commercial entities.

Landa S. Low, JD - D19

Free Agent BMX (Discussion of Commercial Products or Services).

California Department of Transportation/Legal (Employee).

Jason Gene Lozano, MD - H41

Discloses no financial relationships with commercial entities.

Micheline Lubin, MD - H29

King County (Employee).

Douglas M. Lucas, DSc - W9

Discloses no financial relationships with commercial entities.

Victoria S. Lucas, PhD - G5

Discloses no financial relationships with commercial entities.

Marcella Auxiliadora de Melo Lucena, MS - B158

CBC Brazil, Glock, Inc (Discussion of Commercial Products or Services).

Ira S. Lurie, PhD

Waters Corporation (Discussion of Commercial Products or Services). - B127

Perkin Elmer, Inc (Discussion of Commercial Products or Services). - K58

National Institute of Justice, Perkin Elmer, Inc, George Washington University (Grant Support). - B127

Perkin Elmer, Inc, George Washington University (Grant Support). - K58

Vincenzo Lusa, JD - I22, I44

Discloses no financial relationships with commercial entities.

James R. Lyle, PhD - C6

Discloses no financial relationships with commercial entities.

## M

John Mabry, JD - E93

Discloses no financial relationships with commercial entities.



## FINANCIAL DISCLOSURE

Donna M. MacGregor, MSc

3D Systems, Inc, Skeletal Biology and Forensic Anthropology Research Laboratory (Discussion of Commercial Products or Services). - L2

Queensland University of Technology and Australian Army (Employee). - E23

Queensland University of Technology and Queensland Police Service (Employee). - L2

Teresa Magalhães, PhD - H3, I1

Discloses no financial relationships with commercial entities.

Adela S. Magallanes, BS - H88

Discloses no financial relationships with commercial entities.

Paola A. Magni, PhD - H12

Discloses no financial relationships with commercial entities.

Christopher A. Maier, MA - A86

University of Nevada — Reno Graduate Student Research and Travel Grant (Grant Support).

Heli Maijanen, PhD - A9

Solution Technologies, Inc (Discussion of Commercial Products or Services).

Susan Makar, MA - W1

Thomson Reuters (Discussion of Commercial Products or Services).

National Institute of Standards and Technology (Employee).

Amanda Malanowski, BS - W1

Thomson Reuters (Discussion of Commercial Products or Services).

National Institute of Standards and Technology (Employee).

Katherine F. Maloney, MD - H108

Erie County Medical Examiner's Office (Employee).

Sergey Mamedov, PhD - B84

Discloses no financial relationships with commercial entities.

Holland Maness, DMD - G26

Discloses no financial relationships with commercial entities.

Michael Marciano, MS - B99

Life Technologies Corporation, Promega Corporation (Discussion of Commercial Products or Services).

National Institute of Justice (Grant Support).

Ioan Marginean, PhD - B159

Perkin Elmer, Inc (Discussion of Commercial Products or Services and Discussion of Unlabeled/Investigational Use of Product/Device).

Pierre A. J-L. Margot, PhD - W9

Discloses no financial relationships with commercial entities.

Luisa Marinho, MSc - A23

Department of Archaeology Graduate Travel Grants (Other Financial/Material Support).

Daniel Marion, Jr., PhD - E4

Discloses no financial relationships with commercial entities.

Nicholas Márquez-Grant, PhD - A62

Discloses no financial relationships with commercial entities.

Charla Marshall, PhD

New England BioLabs (Discussion of Commercial Products or Services). - B179

Armed Forces DNA Identification Laboratory (Employee). - B179, W23

Judy Y. Marshall, DMD - G34

Discloses no financial relationships with commercial entities.

Lucas Marshall, MS - K68

Discloses no financial relationships with commercial entities.

Shirley Marshall - F24

Teesside University Staff Development (Other Financial/Material Support).

Pablo Martinez-Escauriaza - E81

Discloses no financial relationships with commercial entities.

Luca Massaro, MD - E85, F1, I31

Discloses no financial relationships with commercial entities.

Evan Matshes, MD - W3, W11

Discloses no financial relationships with commercial entities.

Sabrina Mauf - I5

Discloses no financial relationships with commercial entities.

Filipe Gabriel B. Mauricio, MSc - B151

Higher Education Personnel Improvement Coordination (Grant Support).

Allison Mautone, MD - H62

Tarrant County Medical Examiner's Office (Employee).

Edward Mazuchowski II, MD, PhD

Discloses no financial relationships with commercial entities. - W8

United States Air Force Office of the Armed Forces Medical

Examiner (Employee). - H143

Thomas C. McAndrew, BA - W10

Practical Homicide Investigation (Discussion of Commercial Products or Services).

Brittany S. McClain, BA - A96

Texas State University (Other Financial/Material Support).

Carl R. McClary, BA - J7

Discloses no financial relationships with commercial entities.

Hailey Mcclenon - H21

QIAGEN, Inc, Thermo Fisher Scientific, Inc (Discussion of Commercial Products or Services).

BLAST (Basic Local Alignment Search Tool), Geneious Pro Software (Discussion of Unlabeled/Investigational Use of Product/Device).

Brandi C. McCleskey - E6, H76

Discloses no financial relationships with commercial entities.

Soraya McClung - B25

Discloses no financial relationships with commercial entities.

Kyle A. McCormick, MA - A69

Discloses no financial relationships with commercial entities.

Chloe P. McDanel, BS - A19

Grady Early Grant (Grant Support).

Jennifer L. McDowell, MSc - A129

University of Otago, New Zealand (Grant Support).

Michael D. McDowell, MS - D26

Discloses no financial relationships with commercial entities.

Mary C. McKiel, PhD - ES1

Discloses no financial relationships with commercial entities.

Timothy P. McMahon, PhD - W23

American Registry of Pathology for the Armed Forces DNA Identification Laboratory-Armed Forces Medical Examiner System (Employee).

# FINANCIAL DISCLOSURE



James F. McNulty, Jr., JD - F10

Discloses no financial relationships with commercial entities.

Lauren Alyssa Meckel, BS

Discloses no financial relationships with commercial entities. - A98

Texas State University (Employee). - A60

Mary S. Megyesi, PhD - A4

Joint POW/MIA Accounting Command-Central Identification Laboratory (Employee).

Andria H. Mehlretter, MSFS - B88

Discloses no financial relationships with commercial entities.

Kelly A. Meiklejohn, PhD - B189

Kapa Biosystems, Inc, Thermo Fisher Scientific, Inc (Discussion of Commercial Products or Services).

Oak Ridge Institute for Science and Education/Federal Bureau of Investigation (Grant Support).

Judy Melinek, MD - L1

Scribner (Discussion of Commercial Products or Services).

Lisa Mertz, MS - B211

Discloses no financial relationships with commercial entities.

Vadim Mesli, MD - H16

Discloses no financial relationships with commercial entities.

Jessica L. Metcalf, PhD - H125

Earth Microbiome Project, Greengenes Database Consortium, Illumina, Inc, MOBIO Laboratories, Inc, QIIME (Discussion of Commercial Products or Services).

Roger D. Metcalf, JD

Discloses no financial relationships with commercial entities. - G22

Tarrant County (Employee). - G23

Suzanne Miles, BS - E56

Utah Bureau of Forensic Services (Employee).

Keith W. Miller, PhD - W22

Discloses no financial relationships with commercial entities.

Raymond G. Miller, DDS - G37, S2

Discloses no financial relationships with commercial entities.

James Millette, PhD - D16

R.J. Reynolds Tobacco Company (Discussion of Commercial Products or Services).

Chris Milroy, MD, LLB - W11

Discloses no financial relationships with commercial entities.

Jisook Min - E.33, E77

Discloses no financial relationships with commercial entities.

T.J. Mitchell, BA - L1

Scribner (Discussion of Commercial Products or Services).

Linton Mohammed, PhD - S2

Discloses no financial relationships with commercial entities.

Mohd Yusmialdil P. Mohd Yusof, MS - G14

RStudio (Discussion of Commercial Products or Services).

Amanda L.A. Mohr, MSFS - K60

Waters Corporation (Discussion of Commercial Products or Services).

National Institute of Justice and The Center for Forensic Science Research and Education (Grant Support).

Angela S. Mohrhaus, BS - B74

Discloses no financial relationships with commercial entities.

Mehdi Moini, PhD

SCIEX (Discussion of Commercial Products or Services) - B123

Pfizer, Inc, SCIEX, Thermo Fisher Scientific, Inc (Discussion of Commercial Products or Services). - B129N

George Washington University (Employee). - W20

National Science Foundation (Grant Support). - B123, B129

Ilaria Monico, MS - H47

Discloses no financial relationships with commercial entities.

David S. Moore, MEd - J18

Discloses no financial relationships with commercial entities.

Jennifer A. Moore, DMD - G9

Discloses no financial relationships with commercial entities.

Katherine N. Moore, MS

ALFRED Database, FROG-kb Database (Discussion of Commercial Products or Services). - B141

National Institute of Justice (Grant Support). - B141

National Forensic Laboratory Information System (Other Financial/Material Support). - B29

Melissa D. Moore, BS - B134

Paternity Testing Corporation, QIAGEN, Inc, Tecan Schweiz AG, Thermo Fisher Scientific, Inc (Discussion of Commercial Products or Services).

Stephen L. Morgan, PhD

Discloses no financial relationships with commercial entities. - B170

National Institute of Justice (Grant Support). - B185

Keith B. Morris, PhD - B30

ARCUS, Inc, Beemiller Manufacturing Facility, Forensic Technology International, Kel-Tec CNC Industries, Inc, Norsys

Software Corp., RStudio, SCCY Industries, LLC, Springfield Armory, Sturm, Ruger & Co., Inc, Taurus International MFG, Inc

(Discussion of Commercial Products or Services).

Department of Defense, West Virginia University (Grant Support).

Reanna J. Morris - A105

Discloses no financial relationships with commercial entities.

Robert J. Morton, MS - BS2

Discloses no financial relationships with commercial entities.

Sharon K. Moses, PhD - E66

Northern Arizona University (Employee).

Thaddeus Mostowtt, MFS - K10

Discloses no financial relationships with commercial entities.

Melissa Mourges, JD - F25, G22

Discloses no financial relationships with commercial entities.

Ashraf Mozayani, PharmD, PhD - F2

Discloses no financial relationships with commercial entities.

Nirvani Mujumdar, MS - B149

Discloses no financial relationships with commercial entities.

Marzena H. Mulawka, MFS - E84

National Institute of Justice (Grant Support).

Dawn M. Mulhern, PhD - W16

Discloses no financial relationships with commercial entities.

Diana Mullis, MD - I3, I24

Discloses no financial relationships with commercial entities.

Shin Muramoto, PhD - B198

Discloses no financial relationships with commercial entities.





# FINANCIAL DISCLOSURE

Audrey Murchland, BS - A32

Baylor University Undergraduate Research and Scholarly Achievement Small Grant Award (Grant Support).

Lisa Murphy, MCA - I16

Discloses no financial relationships with commercial entities.

Patrick A. Murray, DDS - G38

Maryland Responds Medical Reserve Corps to the Office of the Chief Medical Examiner (Other Financial/Material Support).

## N

Gary H. Naisbitt, PhD - E2

GoPro, Inc (Discussion of Commercial Products or Services).

Marcela Najarro, MFS - E57

Morpho Detection (Discussion of Commercial Products or Services).

Rebecca Najera, DO - I26

Discloses no financial relationships with commercial entities.

Ken-ichiro Nakao - K24

Discloses no financial relationships with commercial entities.

Martin Nau, MD - I11

Discloses no financial relationships with commercial entities.

Andrew Neal, MS - W4

Discloses no financial relationships with commercial entities.

Christina M. Neal, MS - W23

Armed Forces DNA Identification Laboratory (Employee).

Klaus C. Neudecker, MD - W21

Discloses no financial relationships with commercial entities.

Peter Neufeld, JD - F21

Discloses no financial relationships with commercial entities.

Kayla M. Neuman, MS - K44

AIT Laboratories, NMS Labs (Discussion of Commercial Products or Services).

Wisconsin State Laboratory of Hygiene (Employee).

Tara L. Newcomb, MS

Discloses no financial relationships with commercial entities. - G1

Aribex, DENTSPLY International, Patterson Companies, Inc (Discussion of Commercial Products or Services). - G44

Matthew N. Newmeyer, BS - K53

National Institutes of Health, IRP, National Institute on Drug Abuse (Employee).

Thutrang Nguyen, BA - B139

Applied Biosystems, ZyGem Corporation, Ltd (Discussion of Commercial Products or Services).

Nikolaj Kjaer Nielsen - D11

Microsoft Corporation (Discussion of Commercial Products or Services).

University of Aarhus Denmark (Grant Support).

Michael S. Nirenberg, DPM - E28

Discloses no financial relationships with commercial entities.

John Nixon, CEng, MBA - D12, S2

Discloses no financial relationships with commercial entities.

Thomas J. Nolan, BA - K27

BioTage, Waters Corporation (Discussion of Commercial Products or Services).

Arcadia University (Other Financial/Material Support).

Kurt B. Nolte, MD - S1

National Institute of Justice (Grant Support).

David O. Norris, PhD - E13

Discloses no financial relationships with commercial entities.

Maher Nouredine, PhD - E21

Copan Flock Technologies, Copan Italia, Life Technologies Corporation, Smith & Wesson, The Clorox Company (Discussion of Commercial Products or Services).

Erin M. Noval, BS - E40

Cedar Crest College (Other Financial/Material Support).

Carla Miller Noziglia, MS - BS5

Universal Studios, Inc (Discussion of Commercial Products or Services).

Carolina Nuñez Vázquez, PhD - E36

Discloses no financial relationships with commercial entities.

Emilio Nuzzolese, PhD - G12

Discloses no financial relationships with commercial entities.

## O

Tiffany O'Neill, DO - H105

Discloses no financial relationships with commercial entities.

Jenna L. Oakes-Smith, MFS - B206

JusticeTrax (Discussion of Commercial Products or Services).

St. Louis Metropolitan Police Department Crime Lab (Employee).

Isil Ocal - J1

Discloses no financial relationships with commercial entities.

Kathrin Ogris, MA - H6

Noras MRI Products GmbH, Siemens Corporation (Discussion of Commercial Products or Services).

Edwin O. Olaya Molina, BA - E88

Discloses no financial relationships with commercial entities.

William R. Oliver, MD - H63

National Institute of Justice (Grant Support).

Martin S. Olivier, PhD - C22

University of Pretoria and National Research Foundation, South Africa (Grant Support).

Alane Olson, MD - K75

Discloses no financial relationships with commercial entities.

Daniel Ott, PhD - B167

Collaborative Testing Services, Inc (Discussion of Commercial Products or Services).

National Institute of Standards and Technology (Employee).

Shana Ott - A58

Discloses no financial relationships with commercial entities.

Stephen D. Ousley, PhD

Jantz R.L./Ousley, S.D. (Discussion of Commercial Products or Services) - A16, A101

National Institute of Justice (Grant Support) - A16

# FINANCIAL DISCLOSURE



Erdinc Ozdemir

Discloses no financial relationships with commercial entities.  
- H57, K11

Sait Özsoy, MD - H99

Discloses no financial relationships with commercial entities.

## P

Jacqueline L. Parai, MD - W11

Discloses no financial relationships with commercial entities.

Chan-Seong Park, PhD - D27

MIDAS Information Technology Co., Ltd (Discussion of  
Commercial Products or Services).

Dae-Kyoon Park, MD, PhD - E35

Discloses no financial relationships with commercial entities.

Seong Hwan Park, PhD - H14

Discloses no financial relationships with commercial entities.

Glendon Parker, PhD - B188

Lawrence Livermore National Laboratory (Paid Consultant).

Neeka M. Parker - C12

Adobe Systems Incorporated, Apple, Inc, Nikon, Inc (Discussion  
of Commercial Products or Services).

Walther Parson, PhD - W23

Institute of Legal Medicine, Innsbruck Medical University  
(Employee).

Michael N. Parsons, MS - B58

CLC bio, F. Hoffmann-La Roche, Ltd, MOBIO Laboratories, Inc,  
NCBI (Discussion of Commercial Products or Services).  
Bode Technology (Employee).

Natascha Pascale, MD - E45

Discloses no financial relationships with commercial entities.

Ian Paul, MD - H103

Microsoft Corporation (Discussion of Commercial Products  
or Services).

National Institute of Justice (Grant Support).

New Mexico Office of the Medical Investigator (Employee).

Michelle R. Peace, PhD - W14

National Institute of Justice (Grant Support).

Electronic Cigarettes (Discussion of Unlabeled/Investigational  
Use of Product/Device).

Jennifer L. Pechal, PhD - H126

Discloses no financial relationships with commercial entities.

Michelle A. Peck, MFS

CLC bio (Discussion of Commercial Products or Services). - W23  
Armed Forces DNA Identification Laboratory (Employee).  
- B177, W23

William K. Perdue, MPA - E44

Calumet Packaging, Foster + Freeman, Ltd, Nikon, Inc (Discussion  
of Commercial Products or Services).

Bureau of Alcohol, Tobacco, Firearms and Explosives (Employee).

Mark W. Perlin, PhD, MD

Cybergenetics, Inc, Life Technologies Corporation, Microsoft  
Corporation (Discussion of Commercial Products or Services).  
- B100

Cybergenetics, Inc (Discussion of Commercial Products or  
Services and Employee). - B100, F29

Alexis J.L. Peterson - H5

GraphPad Software, Inc (Discussion of Commercial Products  
or Services).

Louis Stokes Alliance for Minority Participation (Grant Support).

Lauren R. Pharr, PhD - A132

Argos GPS, ESRI, Movebank (Discussion of Commercial Products  
or Services).

National Science Foundation, Louisiana State University (Grant  
Support).

Angelina I. Phillips, MD - E29

Cessna Aircraft Company, General Dynamics Corporation  
(Discussion of Commercial Products or Services).

Jennifer Piel, MD, JD - I34

Discloses no financial relationships with commercial entities.

Vilma Pinchi, PhD - G11

CyberMed, Inc (Discussion of Commercial Products or Services).

Keith Pinckard, MD, PhD - H70, W3

Discloses no financial relationships with commercial entities.

Joao E.S. Pinheiro, MD - H138

Discloses no financial relationships with commercial entities.

Deborah C. Pinto, PhD - H137

Harris County Institute of Forensic Sciences (Employee).

Dane T. Plaza, BS - B138

EMD Millipore Corporation, Life Technologies Corporation,  
Promega Corporation, QIAGEN, Inc (Discussion of Commercial  
Products or Services).

Amber M. Plemons, BS - A33

Jantz R.L./Ousley, S.D. (Discussion of Commercial Products  
or Services).

Christopher J. Plourd, JD - W4

Discloses no financial relationships with commercial entities.

Daniele S. Podini, PhD

Thermo Fisher Scientific, Inc (Discussion of Commercial Products  
or Services). - B182, E63

Promega Corporation (Discussion of Commercial Products  
or Services). - E63

National Institute of Justice (Grant Support). - B182

George Washington University (Employee). - E63

Justin L. Poklis, BS - W14

JEOL, Ltd, (Discussion of Commercial Products or Services).

National Institute of Justice (Grant Support).

Electronic Cigarettes (Discussion of Unlabeled/Investigational  
Use of Product/Device).

Adam Polhemus, BA - W14

Discloses no financial relationships with commercial entities.

Michael S. Pollanen, MD - W16

Discloses no financial relationships with commercial entities.

Mark Pollitt, PhD - W4

Discloses no financial relationships with commercial entities.



## FINANCIAL DISCLOSURE

Shashank Pooniya, MD - E50

Discloses no financial relationships with commercial entities.

Amy L. Popejoy, MS - B204

Houston Forensic Science Center (Employee).

Rachel Potter, BS - K57

General Electric Company, Thermo Fisher Scientific, Inc  
(Discussion of Commercial Products or Services).

National Institute of Justice (Grant Support).

Jason Powell, MD - H132

Discloses no financial relationships with commercial entities.

Mark C. Pozzi, MS - D20, D21

Discloses no financial relationships with commercial entities.

Francesco Pradella, MSc - G52

Discloses no financial relationships with commercial entities.

Joseph A. Prahlow, MD - H69, H70

Discloses no financial relationships with commercial entities.  
Western Michigan University Homer Stryker MD School of  
Medicine (Employee).

Samuel Prahlow - H95

Discloses no financial relationships with commercial entities.

David J. Prasek, MFS - E11

Discloses no financial relationships with commercial entities.

Sebastien S. Prat, MD - I45

Discloses no financial relationships with commercial entities.

Ulrich S. Preiß, MD - E7

Laboratoire National de Santé, Department of Legal Medicine,  
Dudelange, Luxembourg (Employee).

Alan A. Price, MA - S2

Discloses no financial relationships with commercial entities.

Meghan Price - A11

Boston University School of Medicine, Department of Anatomy  
and Neurobiology (Other Financial/Material Support).

Gregory A. Priebe, MS - K40

Shimadzu Corporation (Discussion of Commercial Products  
or Services).

Emily Prisaznik, BS - B21

Cedar Crest College (Other Financial/Material Support).

Ka-Man Pun

Discloses no financial relationships with commercial entities. - B14  
EMD Millipore, QIAGEN, Inc, Thermo Fisher Scientific, Inc  
(Discussion of Commercial Products or Services). - B117  
University of Lausanne — School of Criminal Sciences-Institute  
of Forensic Sciences (Other Financial/Material Support). - B117

Matthew Pysh - D10

Discloses no financial relationships with commercial entities.

## Q

Guoqiang Qian, MD - H36

Discloses no financial relationships with commercial entities.

Alicia Quinn, BS

Lee BioSolutions, Inc, Microsoft Corporation, Thermo Fisher  
Scientific, Inc (Discussion of Commercial Products or Services).  
- B8

Bio-Rad Laboratories, Inc, BioFire Defense, QIAGEN, Inc  
(Discussion of Commercial Products or Services). - B191

TU Graduate Student Association (Grant Support). - B8, B191

## R

Mithun Rajshekar, MFS - G30

Zfx GmbH Corporation (Discussion of Commercial Products  
or Services).

Jed S. Rakoff, JD - S1

Discloses no financial relationships with commercial entities.

Katherine Ramsland, PhD - LW2

Discloses no financial relationships with commercial entities.

Anjali A. Ranadive, JD - F16, W8

Discloses no financial relationships with commercial entities.

Francesco Randazzo - K13

Discloses no financial relationships with commercial entities.

Sundeep S. Randhawa, MD - I25

AstraZeneca, Genetec, Inc, Pfizer, Inc (Discussion of Commercial  
Products or Services).

Rebekah Ranger, BA - I16

Discloses no financial relationships with commercial entities.

Anusha Rankoth - B160

Agilent Technologies, Beacon Technologies, Inc, Phenomenex, Inc  
(Discussion of Commercial Products or Services).

Molly M. Rathbun, BS - B178

Applied Biosystems, Clontech Laboratories, Inc, Illumina, Inc,  
Life Technologies Corporation (Discussion of Commercial  
Products or Services).

The Pennsylvania State University Forensic Science Program  
(Other Financial/Material Support).

Kaitlyn M. Redman, BS - B13

Applied Biosystems, Fabbbrica d'Armi Pietro Beretta S.p.A.,  
Glock, Inc, Promega Corporation, QIAGEN, Inc, Smith & Wesson,  
Spectronics Corporation, Taurus International MFG, Inc  
(Discussion of Commercial Products or Services).

Kristen L. Reese, BA - B15

Discloses no financial relationships with commercial entities.

Henry R. Reeve, JD - W4

Discloses no financial relationships with commercial entities.

Kathleen J. Reichs, PhD - BS6

Penguin Random House, FOX Broadcasting Company (Discussion  
of Commercial Products or Services).

FOX Broadcasting Company, Penguin Random House (Other  
Financial/Material Support).

Gary W. Reinecke, MA - E84

Boston University, National Institute of Justice (Grant Support).

Robin C. Reinecke, PhD - A36

Colibri Center for Human Rights (Employee).



# FINANCIAL DISCLOSURE



Marcello Rendine - B26, E42

Discloses no financial relationships with commercial entities.

Thomas B. Renegar, BS - B166

Freeman Manufacturing & Supply Company, National Institute of Standards and Technology (Discussion of Commercial Products or Services).

National Institute of Standards and Technology (Employee).

Samuel R. Rennie, BSc - A26

AESOP Erasmus Mundus (Grant Support).

Jenise Reyes-Rodriguez, BS - C4

Facebook, Inc, JTAG Technologies, LinkedIn, Twitter, Inc (Discussion of Commercial Products or Services).

National Institute of Standards and Technology (Employee).

Mikaela S. Reynolds, MSc - A46

3D Systems, Inc (Discussion of Commercial Products or Services).

Im Joo Rhyu, PhD

Cybermed, Inc, Siemens Corporation (Discussion of Commercial Products or Services). - A107

Discloses no financial relationships with commercial entities. - H14

Pietrantonio Ricci - E10, H97, H98

Discloses no financial relationships with commercial entities.

Charles A. Richardson-Gongora - B119

Discloses no financial relationships with commercial entities.

Jason D. Ricke, JD, LL.M - F37

Harris Corporation (Discussion of Commercial Products or Services).

Anders Rietz - E1

Discloses no financial relationships with commercial entities.

George R. Riley, PhD - B116

National Center for Biotechnology Information, National Institute of Health, National Library of Medicine (Discussion of Commercial Products or Services).

National Institute of Health (Employee).

Sarah Riman, PhD - B182

George Washington University (Other Financial/Material Support).

Joseph D. Ring, MS

Advanced Analytical Technologies, Inc, Agilent Technologies, Beckman Coulter, Inc, CLC bio, Clontech Laboratories, Inc, Hamilton Company, Illumina, Inc, Integrated DNA Technologies, Inc, KAPA Biosystems, New England BioLabs, QIAGEN, Inc, Thermo Fisher Scientific, Inc (Discussion of Commercial Products or Services). - B177

Advanced Analytical Technologies, Inc, Agilent Technologies, Hamilton Company, KAPA Biosystems, QIAGEN, Inc (Discussion of Commercial Products or Services). - W23

Armed Forces DNA Identification Laboratory (Employee). - B177, W23

Irma Rios, MBA - E62

National Institute of Justice (Grant Support).

Jariangely Rivera - H23

Matchett, A. (Other Financial/Material Support).

Graham J. Roberts, MDS - G4

Discloses no financial relationships with commercial entities.

Lindsey G. Roberts, MA - A20

Southern Illinois University (Employee).

Brianna L. Robinson - A17

Rice Creek Associates Small Grants Program (Grant Support).

Nancy Rodriguez, PhD - S1

National Institute of Justice (Employee).

Sandra E. Rodriguez-Cruz, PhD - B90, B118

Department of Justice (Employee).

Scott Roeske, MFS - W7

Discloses no financial relationships with commercial entities.

Marcus Rogers, PhD

Google, Inc, Microsoft Corporation (Discussion of Commercial Products or Services). - C7

Discloses no financial relationships with commercial entities.

- W22

Meghan Roig, BS - H20

Pressure BioScience, Inc (Discussion of Commercial Products or Services).

Florida International University, Department of Chemistry and Biochemistry (Other Financial/Material Support).

Christopher M. Rollman, BS - B49

National Science Foundation (Grant Support).

Amelia Romoser, PhD - K70

Discloses no financial relationships with commercial entities.

Erica L. Romsos, MFS - B215

Promega Corporation, QIAGEN, Inc, Thermo Fisher Scientific, Inc (Discussion of Commercial Products or Services).

National Institute of Standards and Technology Law Enforcement Standards Office (Employee).

Jeri D. Ropero-Miller, PhD

The National Institute of Justice (Grant Support). - S1

The National Institute of Justice Forensic Technology Center of Excellence (Employee). - W12

Roberto Rosa, PhD - B164

Princeton Applied Research (Discussion of Commercial Products or Services).

Karen B. Rosenbaum, MD - I6

Discloses no financial relationships with commercial entities.

Adam R. Rosenblatt, PhD - A37

Mellon/American Council of Learned Societies Dissertation Completion Fellowship (Grant Support).

Alastair Ross, AM - W9

Discloses no financial relationships with commercial entities.

Ann H. Ross, PhD - A3

Jantz R.L./Ousley, S.D. (Discussion of Commercial Products or Services).

Walter F. Rowe, PhD - B195

Thermo Fisher Scientific, Inc, IBM Corporation (Discussion of Commercial Products or Services).

George Washington University (Employee).

Katie M. Rubin, MS - A87

H. David Sheets, Immersion Corporation (Discussion of Commercial Products or Services).

Norah Rudin, PhD - B174

SCIEG (Discussion of Commercial Products or Services).

Eric R. Ruiz Hernandez, MD - E49, E52

Discloses no financial relationships with commercial entities.



# FINANCIAL DISCLOSURE

Stewart D. Ryckman, MD - W24

Discloses no financial relationships with commercial entities.

## S

Kenneth J. Saczalski, PhD

Independent Supported Research (Paid Consultant). - D2

Discloses no financial relationships with commercial entities. - D4

Anthony J. Saitta - B9

QIAGEN, Inc (Discussion of Commercial Products or Services and Discussion of Unlabeled/Investigational Use of Product/Device).

Summer Undergrad Research Fellowship, SURF, University of New Haven (Other Financial/Material Support).

Michael J. Saks - F20

Discloses no financial relationships with commercial entities.

Warren C. Samms, PhD - B31

Harris County Institute of Forensic Sciences (Employee).

Isidora Samojlik, MD, PhD - K14

The Ministry of Education and Science of the Republic of Serbia (Grant Support).

University of Novi Sad, Faculty of Medicine (Employee).

Michelle R. Sanford, PhD - H116

Harris County (Employee).

Robert M. Sanger, JD - F4

Discloses no financial relationships with commercial entities.

Alora Sansola - H84

IriTech, Inc (Discussion of Commercial Products or Services).

Sierra Santana, BA - A12

Discloses no financial relationships with commercial entities.

Bruno M. Santos, MSc - H96

Discloses no financial relationships with commercial entities.

Kelly Sauerwein, MA - B18

University of Tennessee (Employee).

Tiffany B. Saul, MS - B18

University of Tennessee (Employee).

Melanie A. Schade - B19

Cedar Crest College (Other Financial/Material Support).

Maureen Schaefer, PhD - A54

Michigan State University (Employee).

Sarah Schaeferli - H90

Siemens Medical Solutions USA, Inc (Discussion of Commercial Products or Services).

Jairo G. Schafer, MSc - F11

Discloses no financial relationships with commercial entities.

Jason E. Schaff, PhD - W2

Agilent Technologies, SCIEX, Waters Corporation (Discussion of Commercial Products or Services).

William C. Schaffer, MA - A108

Discloses no financial relationships with commercial entities.

Eileen M. Schilling, MSc - A41

Discloses no financial relationships with commercial entities.

Jennifer R. Schindell, MA - E48

Discloses no financial relationships with commercial entities.

Tyler J. Schlagetter - B6

University of New Haven (Employee).

Carl J. Schmidt, MD - H74

IBM Corporation, Microsoft Corporation (Discussion of Commercial Products or Services).

University of Michigan (Employee).

Howard A. Schmidt, MS - S1

Discloses no financial relationships with commercial entities.

Candace H. Schoppe, MD - W17

Discloses no financial relationships with commercial entities.

Jason L. Schroeder, MS, MBA - E54

Discloses no financial relationships with commercial entities.

Ellen M. Schuetzner, BA - W6

National Institute of Justice (Grant Support).

Daniel L. Schultz, MD - H53

Discloses no financial relationships with commercial entities.

John J. Schultz, PhD - A80

Discloses no financial relationships with commercial entities.

David M. Schwowe, PhD - W2

Aegis Scientific, Inc, Thermo Fisher Scientific, Inc (Discussion of Commercial Products or Services).

Aegis Labs (Employee).

Gary T. Scott, MA

Discloses no financial relationships with commercial entities. - A18

Metropolitan State University of Denver (Employee) - A58

Veronica Scotti, JD - F19

Discloses no financial relationships with commercial entities.

Sarah J. Seashols Williams, PhD - B53

Life Technologies Corporation, QIAGEN, Inc (Discussion of Commercial Products or Services).

Jeffress Foundation (Grant Support).

Ismail M. Sebetan, MD, PhD

EMD Millipore Corporation, Life Technologies Corporation, MACHEREY-NAGEL GmbH & CO KG, Santorius Stedim Biotech, Thermo Fisher Scientific, Inc (Discussion of Commercial Products or Services). - B133

Paternity Testing Corporation, QIAGEN, Inc, Tecan Schweiz AG, Thermo Fisher Scientific, Inc (Discussion of Commercial Products or Services). - B134

Discloses no financial relationships with commercial entities.

- A113, E11, F10

Season E. Seferyn, MSFS - E68

National Institute of Justice (Discussion of Commercial Products or Services).

Andrew C. Seidel, MA - A94

Discloses no financial relationships with commercial entities.

Kathryn C. Seigfried-Spellar, PhD

Amazon.com, Inc, Qualtrics, LLC (Discussion of Commercial Products or Services). - C3

Discloses no financial relationships with commercial entities.

- W22

Joshua Seither, MS - K47

Discloses no financial relationships with commercial entities.

David R. Senn, DDS - G32

Discloses no financial relationships with commercial entities.

# FINANCIAL DISCLOSURE



Ayşe Serin, PhD

Cukurova University (Grant Support) - H11

Discloses no financial relationships with commercial entities. - H15

Serenella Serinelli, MD - H101

Discloses no financial relationships with commercial entities.

Javier G. Serrano, MD - H85

Puerto Rico Institute of Forensic Sciences (Employee).

Francesco Sessa, MS - A102

Discloses no financial relationships with commercial entities.

Heather J. Seubert, MS - B92

Alicona Imaging GmbH, ScanBi Technology, Sensofar, Topmatch  
(Discussion of Commercial Products or Services).

Krishna D. Shah, MD - H77

Discloses no financial relationships with commercial entities.

John P. Shand, MD - I34

Discloses no financial relationships with commercial entities.

Piyush Sharma, MD - A66

All India Institute of Medical Sciences (Employee).

Donald E. Shelton, JD, PhD - F14, F22

Discloses no financial relationships with commercial entities.

Claire E. Shepard, MS - S2

Discloses no financial relationships with commercial entities.

Mary Shields, DMD - G35

Discloses no financial relationships with commercial entities.

Sang Eon Shin - H14

The Ministry of Education, Science and Technology  
(Speakers Bureau).

Elisa N. Shoff, BS - K67

Bruker Corporation, Thermo Fisher Scientific, Inc, UCT, Inc  
(Discussion of Commercial Products or Services).

Miami-Dade Medical Examiner Department (Employee).

Mark J. Shuman, MD - H24

Discloses no financial relationships with commercial entities.

Inga Siebke - A97

Discloses no financial relationships with commercial entities.

Michael E. Sigman, PhD - B171

National Institute of Justice (Grant Support).

University of Central Florida (Employee).

William E. Silver, DDS - G54

Discloses no financial relationships with commercial entities.

Tal Simmons, PhD - A59, A119

Discloses no financial relationships with commercial entities.

Terrie Simmons-Ehrhardt, MA - E82

Information Science and Technologies Institute - CNR, Kitware,  
Inc, Materialise, National Cancer Institute, SAS IP, Inc (Discussion  
of Commercial Products or Services).

Virginia Commonwealth University (Employee).

National Institutes of Justice (Grant Support).

Alison Simon, BS - B27

Discloses no financial relationships with commercial entities.

Rachel S. Singer, JD - F26

Discloses no financial relationships with commercial entities.

Ankit Kumar Singh, BS - C23

Auburn Cyber Research Center (Other Financial/Material  
Support).

Baneshwar Singh, PhD

InnoGenomics Technologies, LLC, Life Technologies Corporation,  
QIAGEN, Inc (Discussion of Commercial Products or Services)  
- B145

Virginia Commonwealth University (Grant Support) - B145

Free Software Foundation, Inc, Thermo Fisher Scientific, Inc  
(Discussion of Commercial Products or Services). - H117

National Institute of Justice, Virginia Commonwealth University  
(Grant Support). - H117

Pankaj Sinha - K35

Randox Toxicology, Ltd (Employee).

Kitrina D. Skaggs, BA - B80

Discloses no financial relationships with commercial entities.

Cassie E. Skipper, BS - A10

Discloses no financial relationships with commercial entities.

Anthony Skjellum, PhD

Google, Inc (Discussion of Commercial Products or Services).  
- C18

Auburn Cyber Research Center (Other Financial/Material  
Support). - C23

Discloses no financial relationships with commercial entities.  
- W22

Catyana R. Skory Falsetti, MFS - F18

Google, Inc, Maxon Computer, Inc, Microsoft Corporation  
(Discussion of Commercial Products or Services).

Maricopa County Attorney's Office (Employee).

Donia Slack, MS - B103

CLC bio, Illumina, Inc, Promega Corporation, QIAGEN, Inc  
(Discussion of Commercial Products or Services).

CTTSO/TSWG, Bode Cellmark Forensics (Grant Support).

Kathryn Sloper, BS - A112

Discloses no financial relationships with commercial entities.

Jeff M. Smith, MS - C14

GoPro, Inc (Discussion of Commercial Products or Services).

Lauren R. Smith, BS - H8

Illumina, Inc, Knight Lab (Discussion of Commercial Products  
or Services).

National Institute of Justice, Sam Houston State University  
(Grant Support).

Vivian Snyder, DO - W3

Discloses no financial relationships with commercial entities.

Tore T. Solheim - G46

Plass Data Software A/S (Discussion of Commercial Products or  
Services and Discussion of Unlabeled/Investigational Use of  
Product/Device).

April D. Solomon, BS - B108

EMD Millipore Corporation, PerkinElmer, Inc, QIAGEN, Inc,  
STRATEC Biomedical AG, Thermo Fisher Scientific, Inc, ZyGem  
Corporation, Ltd (Discussion of Commercial Products or Services).  
National Institute of Justice (Grant Support).

Junfeng J. Song, MS - B169

National Institute of Standards and Technology (Employee).



## FINANCIAL DISCLOSURE

Amy E. Sorensen, MSFS - B113

Biomatrix, Inc, DNA Genotek, Inc, Life Technologies Corporation, Promega Corporation (Discussion of Commercial Products or Services).

Sam Houston State University (Employee).

Miriam E. Soto Martinez, MA - A103

Texas Center for the Judiciary - Children's Justice Act (Grant Support).

Harris County Institute of Forensic Sciences (Employee).

Curtis E. Sparling, MA - W7

U.S. Army CID (Employee).

Debi Spencer, MFS - W24

Discloses no financial relationships with commercial entities.

Kate Spradley, PhD - A5

Texas State University (Employee).

Susan Sprogoe-Jakobsen - H81

Discloses no financial relationships with commercial entities.

Cristina E. Stanciu, BS - B106

Becton, Dickinson and Company (Discussion of Commercial Products or Services).

Virginia Commonwealth University (Employee).

Dawnie W. Steadman, PhD - A128

University of Tennessee — National Institute of Justice (Grant Support).

Paul Stein, PhD

EMD Millipore Corporation, Life Technologies Corporation, MACHEREY-NAGEL GmbH & CO KG, Santorius Stedim Biotech, Thermo Fisher Scientific, Inc (Discussion of Commercial Products or Services). - B133

Paternity Testing Corporation, QIAGEN, Inc, Tecan Schweiz AG, Thermo Fisher Scientific, Inc (Discussion of Commercial Products or Services). - B134

Discloses no financial relationships with commercial entities. - E11, F10

Carl N. Stephan, PhD - A70

Phil Harvey (Discussion of Commercial Products or Services).

The University of Queensland (Employee).

Peter J. Stephens, MD - LW4

Discloses no financial relationships with commercial entities.

Jennifer L. Stephenson, MSFS - E38

Remington Arms Company, LLC, Sensofar, Sturm, Ruger & Co., Inc (Discussion of Commercial Products or Services).

Babatunde L. Stokes, MD - H33

Discloses no financial relationships with commercial entities.

Nancy A. Stokes, MS - B105

Promega Corporation (Discussion of Commercial Products or Services).

Mark D. Stolorow, MS, MBA

Discloses no financial relationships with commercial entities. - B41  
National Institute of Standards and Technology (Employee). - BS3

Joseph Stone, BS - K7

JEOL, Ltd, (Discussion of Commercial Products or Services).

National Institute on Health Center for Drug Abuse (Grant Support).

David A. Stoney, PhD

Sirchie Finger Print Laboratories (Discussion of Commercial Products or Services). - B85

National Institute of Justice (Grant Support). - B85

Stoney Forensic, Inc (Employee). - F38

Michael P. Stypa, MS - K50

Las Vegas Metropolitan Police Department (Employee).

Vanessa Sufrin, MS - H117

Free Software Foundation, Inc, Thermo Fisher Scientific, Inc (Discussion of Commercial Products or Services).

National Institute of Justice, Virginia Commonwealth University (Grant Support).

Garett Sugimoto, MS - B100

Cybergenetics, Inc, Life Technologies Corporation, Microsoft Corporation (Discussion of Commercial Products or Services).

Kern Regional Crime Laboratory (Employee).

Mary Sullivan, MSN - I20

Discloses no financial relationships with commercial entities.

Travis M. Sullivan, BS - H44

Discloses no financial relationships with commercial entities.

Andrew Sulner, MSFS, JD - F23, F47

Discloses no financial relationships with commercial entities.

Joel D. Sutton, MSFS - B174

NicheVision, Inc (Discussion of Commercial Products or Services).

U.S. Army CIL/DFFS (Employee).

Henry J. Swofford, MSFS - B161, F17

U.S. Army CIL (Employee).

## T

Yoshitaka Takase, MS - C7

Discloses no financial relationships with commercial entities.

Fredrik Tamsen, MD, MSc - E3

The Swedish National Board of Forensic Medicine (Employee).

Tobin A. Tanaka, BS - J17

Discloses no financial relationships with commercial entities.

Melissa K. Taylor, BA - W1

National Institute of Standards and Technology (Discussion of Commercial Products or Services and Employee).

Tammy Taylor, MS - B209

Life Technologies Corporation (Discussion of Commercial Products or Services).

Harris County Institute of Forensic Sciences (Employee).

Jeff Teitelbaum, MS - W1

Google, Inc, National Center for Biotechnology Information, OCLC Online Computer Library Center, Inc, U.S. Department of Justice (Discussion of Commercial Products or Services).

Washington State Patrol (Employee).

Silvana Temi, MD - H40

Discloses no financial relationships with commercial entities.

Keith-Dane H. Temporal, BS - K61

Waters Corporation (Discussion of Commercial Products or Services).



# FINANCIAL DISCLOSURE



MariaTeresa A. Tersigni-Tarrant, PhD - A100, H80

Discloses no financial relationships with commercial entities.

Patrick W. Thevissen, PhD - G7

Discloses no financial relationships with commercial entities.

Rebecca Thielen, BS - B39

Agilent Technologies, Bridgestone Manufacturing Company, Faulkin Tire, GITI Tire Pte., Ltd, Michelin Manufacturing Company, The Goodyear Tire & Rubber Company, (Discussion of Commercial Products or Services).

Phouthasone Thirakul, MD - H53

Discloses no financial relationships with commercial entities.

Brittany Thomas, MFS

AIT Laboratories, NMS Labs (Discussion of Commercial Products or Services). - K45

Washington State Patrol Toxicology Laboratory (Employee). - K1, K45

Sara R. Thomas, MS - I42

Discloses no financial relationships with commercial entities.

Monica M. Thompson - A91

Discloses no financial relationships with commercial entities.

Robert M. Thompson, BS

Discloses no financial relationships with commercial entities.

- B169, W20

Alicona Imaging, GmbH, GelSight, Inc, NanoFocus AG, Leica Microsystems, Sensofar (Discussion of Commercial Products or Services). - B173

National Institute of Standards and Technology (Employee). - B173

Ronald R. Thrasher, PhD - I9

Discloses no financial relationships with commercial entities.

Morris V. Tidball-Binz, MD - W16

Discloses no financial relationships with commercial entities.

Andreas Tillmar, PhD - B208

Discloses no financial relationships with commercial entities.

Meredith L. Tise, PhD - A89

SAS Institute, Inc, Solution Technologies, Inc (Discussion of Commercial Products or Services).

Cathy Tobin - W19

Discloses no financial relationships with commercial entities.

Kyle Tom, MS - B163

Thomson Reuters (Discussion of Commercial Products or Services).

Federal Bureau of Investigation (Employee).

Patrizia Trapella, JD, MA - E 85, F1

Discloses no financial relationships with commercial entities.

Lauren Traveller, DNP - F46

Discloses no financial relationships with commercial entities.

Giuseppe Troccoli, MD - I20

Discloses no financial relationships with commercial entities.

Janamarie Truesdell, MSc

Eley, K. (Discussion of Commercial Products or Services) - A48

Discloses no financial relationships with commercial entities. - A83

Marcia Aiko Tsunoda, Msc - F11

Brazilian Federal Police (Employee).

Lucile Tuchtan, MD - D28, E43

Discloses no financial relationships with commercial entities.

Hugh H. Tuller, MA - A35

Defense POW/MIA Accounting Agency (Employee).

Nilesh K. Tumram, MD - H52, H136

Discloses no financial relationships with commercial entities.

Nursen Turan, MD - I41

Discloses no financial relationships with commercial entities.

Katherine Turner, BS - K3

Cuyahoga County Medical Examiner's Office (Discussion of Commercial Products or Services).

Nichole M. Tuscher, MFS - B133

EMD Millipore Corporation, Life Technologies Corporation, MACHEREY-NAGEL GmbH & CO KG, Santorius Stedim Biotech, Thermo Fisher Scientific, Inc (Discussion of Commercial Products or Services).

Marykathryn Tynon, MSFS - K59, K64

Waters Corporation (Discussion of Commercial Products or Services).

NMS Labs (Employee).

## U

Douglas H. Ubelaker, PhD - W16

Discloses no financial relationships with commercial entities.

Naeem Ullah, BS - W5

Office of Chief Medical Examiner City of New York (Discussion of Commercial Products or Services and Employee).

Ayca Ulubay - H15

Applied Biosystems, Life Technologies Corporation (Discussion of Commercial Products or Services).

Cukurova University Department of Forensic Medicine (Employee).

Noelle J. Umbach, PhD - S2, W8

Discloses no financial relationships with commercial entities.

Esra Unal, MD - I4, I13

Discloses no financial relationships with commercial entities.

Petra Urbanová, PhD - C21

Berkeley Vision and Learning Center, Canfield Scientific, Inc, Fidentis (Discussion of Commercial Products or Services).

Masaryk University (Employee).

Abdullah Usman, LLM, MSc - F44

Discloses no financial relationships with commercial entities.

Yuriy Uvaydov, MS - B75

IonSense, Inc, Thermo Fisher Scientific, Inc (Discussion of Commercial Products or Services).

Drug Enforcement Administration (Employee).

## V

Julie L. Valentine, MS - E56

Brigham Young University (Employee).

Peter M. Vallone, PhD - W23

National Institute of Standards and Technology (Employee).



# FINANCIAL DISCLOSURE

Arian C. van Asten, PhD  
Netherlands Forensic Institute (Employee). - D17, W20  
Netherlands Organization for Scientific Research (Grant Support).  
- D17

Lisa M.M. Van Den Broek - A45  
Information Science and Technologies Institute - CNR (Discussion  
of Commercial Products or Services).

Victor Vandell, PhD - K31  
Agilent Technologies, BioTage, SCIEX (Discussion of  
Commercial Products or Services).  
BioTage (Employee).

Stefano Vanin, PhD - G36, H93  
Discloses no financial relationships with commercial entities.

Nancy Vargas Becerril, PhD - G3  
Discloses no financial relationships with commercial entities.

Thomas W. Vastrick, BS  
Discloses no financial relationships with commercial entities.  
- J5, J19  
National Institute of Justice (Grant Support). - W6

Patrick E. Vaughan, BS - D3  
Michigan State University Engineering EnSURE Program,  
Orthopaedic Biomechanics Laboratories (Other Financial/  
Material Support).

Jessica Ann Veltri, MS - W7  
U.S. Army CID (Employee).

Elvira Ventura Spagnolo - E5  
Discloses no financial relationships with commercial entities.

Athina Vidaki, PhD - B192  
Illumina, Inc (Discussion of Commercial Products or Services).  
Papadaki Foundation, National and Kapodistrian University  
of Athens King's College London, University of London (Grant  
Support).

Duarte Nuno Vieira, MSc, PhD, MD  
Discloses no financial relationships with commercial entities. - W16  
Faculty of Medicine - University of Coimbra (Employee). - E83

Margarita M. Villarreal, BS - A109  
Discloses no financial relationships with commercial entities.

AnniLauri Villeme, BS - B142  
Future Technologies, Inc, InnoGenomics Technologies, LLC  
(Discussion of Commercial Products or Services).  
U.S. National Institute of Standards and Technology - Guest  
Researcher (Other Financial/Material Support).

Mark D. Viner, MSc - W18  
Cranfield University (Employee).

Kyle E. Vircks, MS - B199  
JEOL, Ltd, (Discussion of Commercial Products or Services)  
National Institute of Justice, Office of Justice Programs,  
U.S. Department of Justice. (Grant Support).

Silvia D. Visonà, MD - H38  
Discloses no financial relationships with commercial entities.

Giulia Vitale - G10  
Discloses no financial relationships with commercial entities.

Erin L. Vollmer, BA - B3  
Applied Biosystems, EMD Millipore Corporation, QIAGEN, Inc  
(Discussion of Commercial Products or Services).

Jennifer M. Vollner, MS - A76  
Michigan State University (Employee).  
Laura Volpini, PhD - I43  
Discloses no financial relationships with commercial entities.

## W

Erin Waddell, PhD - B154  
3M, Agilent Technologies, Waters Corporation (Discussion of  
Commercial Products or Services).  
Visiting Scientist Program at the FBI, Oak Ridge Institute for  
Science and Education (Other Financial/Material Support).

Ruth Waddell Smith, PhD - B46  
Michigan State University (Employee).

Audriana M. Wagner - B38  
Discloses no financial relationships with commercial entities.

Sarah Wagner - A34  
Discloses no financial relationships with commercial entities.

Crystal L. Wagoner, MFS - E69  
Discloses no financial relationships with commercial entities.

Erin Walsh - K39  
Discloses no financial relationships with commercial entities.

Richard D. Walter, MA - W21  
Discloses no financial relationships with commercial entities.

Heather E. Waltke, MS - B213  
National Institute of Justice (Employee).

John Z. Wang, PhD - E27  
Discloses no financial relationships with commercial entities.

Ling Wang, MS - B36  
National Institute of Justice (Grant Support).

Wego Wang, SciD - D6  
Discloses no financial relationships with commercial entities.

Wendy S. Warren, DO - H49  
Discloses no financial relationships with commercial entities.

Steven B. Watson, BA - W15  
Elma Schmidbauer GmbH (Discussion of Commercial Products  
or Services).

Daniel Watsula, MS - B115  
Bode Cellmark Forensics, Life Technologies Corporation,  
QIAGEN, Inc (Discussion of Commercial Products or Services).  
Bode Cellmark Forensics (Employee).

Jalika Rivera Waugh, PhD - E9  
Discloses no financial relationships with commercial entities.

Ingrid T. Weber, PhD - B158  
CBC, Glock, Inc (Discussion of Commercial Products or Services).

Victor W. Weedn, MD, JD - W20  
George Washington University (Employee).

Robert Weinstock, MD - I6, I40  
Discloses no financial relationships with commercial entities.

Kelsie R. Weir, BA - B1  
Applied Biosystems, BioTek Instruments, Inc, Minitab, Inc,  
QIAGEN, Inc, Spectronics Corporation, Thermo Fisher Scientific,  
Inc (Discussion of Commercial Products or Services).  
University of New Haven (Other Financial/Material Support).

# FINANCIAL DISCLOSURE



Kurt D. Weiss, MS

Discloses no financial relationships with commercial entities. - D18  
Racelogic, United Kingdom (Discussion of Commercial Products or Services). - D22

Jeffrey D. Wells, PhD - H119

National Institute of Justice (Grant Support).

Daniel J. Wescott, PhD - A60, A117

Texas State University (Employee).

Roland Wessling, MSc - A47

Discloses no financial relationships with commercial entities.

Christian G. Westring, PhD - BS3

NMS Labs (Employee).

Amanda Wheeler, BS - B109

QIAGEN, Inc, Thermo Fisher Scientific, Inc (Discussion of Commercial Products or Services).

Douglas R. White, MS - F48

National Institute of Standards and Technology, U.S. Department of Commerce (Discussion of Commercial Products or Services).  
National Institute of Standards and Technology (Employee).

Joseph L. White, MS - C8

Cellebrite, Guidance Software, Inc, Snapchat, Inc (Discussion of Commercial Products or Services).

U.S. Army CIL (Employee).

Jason M. Wiersema, PhD

Discloses no financial relationships with commercial entities. - H78  
Harris County Institute of Forensic Sciences (Employee) - E8

Matthew C. Wietbrock, BS - E24, E46

Discloses no financial relationships with commercial entities.

Kelsey L. Wilkinson, BS - C9

Apple, Inc, Cellebrite, Google, Inc, MSAB, The Raspberry Pi Foundation (Discussion of Commercial Products or Services).  
Marshall University (Grant Support).

Amanda Williams, MA - A52

UNR Graduate Student Association Research Grant and Alice M. Brues Research Award (Grant Support).

Chinyere M. Williams, BS - W19

Discloses no financial relationships with commercial entities.

John A. Williams, PhD - S2

Discloses no financial relationships with commercial entities.

Mary R. Williams, MS - B150

National Institute of Justice-Office of Justice Programs, University of Central Florida. (Grant Support).

Tyler Williams - B121

Agilent Technologies, Cerilliant Corporation (Discussion of Commercial Products or Services).

Sheila Willis, PhD - W9

Discloses no financial relationships with commercial entities.

Emily K. Wilson - A125

Defense POW/MIA Accounting Agency (Employee).  
Oak Ridge Institute for Science and Education (Other Financial/Material Support).

Laura A. Wilson, BS - B175

Illumina, Inc, Life Technologies Corporation, Takara Bio, Inc (Discussion of Commercial Products or Services).  
Penn State University (Other Financial/Material Support).

Mark R. Wilson, PhD - B101

Cybergenetics, Inc (Discussion of Commercial Products or Services).

Western Carolina University (Employee).

Probabilistic Software for DNA Mixture Deconvolution (Discussion of Unlabeled/Investigational Use of Product/Device).

Shannon Wilson - D8

Eos Systems, Inc, Faro Technologies, Inc, Trimble Navigation, Ltd (Discussion of Commercial Products or Services).

Jessica Winborn, BS - B78

National Institute of Justice, Office of Justice Programs, U.S. Department of Justice (Grant Support).

Gwyn Winfield, MA - W20

Falcon Communications (Employee).

Barbara C. Wolf, MD - W10

CRC Press, LLC (Discussion of Commercial Products or Services).

Carl E. Wolf II, PhD - K71

BioTage, Restek Corporation, Waters Corporation (Discussion of Commercial Products or Services).

Eun Jin Woo, PhD - A44

GOM, VATECH America, Z Corporation (Discussion of Commercial Products or Services).

Matthew R. Wood, MS

NSF-CRIF and the Rutgers Academic Excellence Fund (Grant Support). - B124

Discloses no financial relationships with commercial entities. - W14

Robert E. Wood, DDS, PhD - G50, G51

Discloses no financial relationships with commercial entities.

Michael S. Woolf, BS

Discloses no financial relationships with commercial entities. - A59  
Free Software Foundation, Inc, Illumina, Inc, The R Foundation, UCHIME (Discussion of Commercial Products or Services). - H10

Sharon C. Wootton, PhD - B176

Thermo Fisher Scientific, Inc (Discussion of Commercial Products or Services and Employee).

Charlotte J. Word, PhD - B214, F30

Discloses no financial relationships with commercial entities.

Diana M. Wright, PhD - B87

Department of Justice (Employee).

## Y

Chu-An Yang, MS - K32

Agilent Technologies (Discussion of Commercial Products or Services).

Tiantong Yang - H36, H65, H141

Discloses no financial relationships with commercial entities.

Zhiyong Yang, MD - H36

Discloses no financial relationships with commercial entities.

Jillian K. Yeakel, MS - W2

Agilent Technologies (Discussion of Commercial Products or Services).

Lehigh Valley Toxicology (Employee).





# FINANCIAL DISCLOSURE

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Seija Ylijoki-Sørensen, MD, DDS, PhD - E72

Discloses no financial relationships with commercial entities.

Tanasiri Yokchue, MSc - K37

Royal Thai Government (Grant Support).

Seong Ho Yoo, PhD - H14

Discloses no financial relationships with commercial entities.

John L. Young, MD - I7

Discloses no financial relationships with commercial entities.

## **Z**

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Elazar Zadok - E55

Discloses no financial relationships with commercial entities.

Andrea Zaferes, BA - W10

Discloses no financial relationships with commercial entities.

Sara C. Zapico, PhD - A85

Discloses no financial relationships with commercial entities.

Wolf-Dieter Zech, MD - H131

Discloses no financial relationships with commercial entities.

Kathryn A. Zegarelli, BS - E39

Boston University (Employee).

National Institute of Justice Award (Grant Support).

Sharon E. Zeller, BS - B145

InnoGenomics Technologies, LLC, QIAGEN, Inc, Thermo Fisher Scientific, Inc (Discussion of Commercial Products or Services).

Virginia Commonwealth University (Grant Support).

Xiang Zhang, MD

Discloses no financial relationships with commercial entities.

- H36, H141

Office of the Chief Medical Examiner, State of MD (Employee).

- H65

Xiaoyu A. Zheng, MS - B168

Fabbrica d'Armi Pietro Beretta S.p.A., Sturm, Ruger & Co., Inc (Discussion of Commercial Products or Services).

National Institute of Standards and Technology (Employee).

Lawrence Ziegler, PhD - B184

Boston University, National Institute of Justice (Grant Support and Employee).

Lawrence Ziegler, PhD - E39

National Institute of Justice (Grant Support).

Patrick Zirpoli - W21

Discloses no financial relationships with commercial entities.

Joel A. Zlotnick, MSFS

Adobe Systems Incorporated, Foster + Freeman, Ltd, GIMP, Regula, Sony Corporation of America, Ultra Electronics Forensic Technology (Discussion of Commercial Products or Services) - J6  
U.S. Department of State, Bureau of Consular Affairs (Employee).  
- J6, J13, J17

# KEY WORD INDEX



<b>B</b>	Accidental Injury-H27	Animal-G18
$\beta$ -hydroxythiofentanyl-K67	Accidents-E54	Animal Abuse-G29, I39
<b>2</b>	Accreditation-A127, B41, H141	Animal Attack-H51, H136
2,5-Dimethoxyphenethylamine-B82	Accumulated Degree Days-A117, A119, A121	Animal Bones-A66
25C-NBOMe-K5	Accuracy-A41	Animal Forensics-B138
25I-NBOMe-K6, K7	Accurate Mass Screening-K55	Animal Model-D3
2C-B-K7	Accustomed-J12	Animal Models-E18
<b>3</b>	Acetocodeine-K41	Animation-F18
3D Bones-A47	Acetyl-K66	Annapolis-G38
3D Digital Camera-G31	Acetyl Fentanyl-H89, K72	ANSI-ES1, F47
3D Face Recognition-C21	Adhesive Sheet-B107	Antemortem-A25
3D Models-A45	Administration Route-K54	Antemortem Healing-A77
3D Printing-A44	Administration Routes-K53	Anthropological Theory-A35
3D Scanning-A44, D8, D11, G55	Admissibility-F20, F22, F28, F38	Anthropology-A29, A71, BS6, H80
3D Superimposition-G55	Adolescents-I1	Anthropometry-A44, A66, E12
3D Topography-E38	Adulterated Supplements-B122	Anti-Exhumation-A37
3D-ID-A3, A27	Advanced Techniques-W2	Antisocial Personality-I32
3-MeO-PCP-K70	Aerial Drones-A75	Aortic Dissection-H49
<b>5</b>	African Painted Dogs-H50	APCI-B43
5-MAPB-K1	Age Dating-B198	APKD-H49
<b>6</b>	Age Estimation-A12, A13, A14, A15, A16, A54, A81, A82, A83, A84, A106, C12, G9, G11, G12, G13, G14, G19, G36, H6	Appeals-F8
6-MAM-K41	Age Indicators-G8	Applicability-B170
<b>7</b>	Age of Majority-G17	Applications-J15
7-Aminoclonazepam-K68	Age Prediction-B192	Aquatic Death-W10
7-Hydroxymitragynine-K36	Age-at-Death-A85, A99, A125	Aqueous Decomposition-A133
<b>18</b>	Age-at-Death Estimation-A11	Archived Fingerprints-B108
18-Year Threshold-G4, G5	Aggravating Circumstances-F34	Arrestee STR Profiles-H121
<b>A</b>	Aging-A98, B68	Arson-B45
AB-FUBINACA-K62	Aging Mechanism-B164	Artifact-H132
Abuse Deterrent-B120	Alcohol-E90	Artifacts-H43
Abusive Head Trauma-E51, H24	Algorithms-G33	Asbestos-D16
Accelerants-B43	Allele Frequency-B141, H15	Assembly Bill 109-I8
Accident-H59, H77	Allele Probabilities-B216	Associative Scale-B172
Accident Reconstruction-D25	All-Terrain Vehicle-H44	Asthma-H101
Accidental Death-H95	Alternate Light Sources-B62	ATR/FTIR-B8
	Aluminum Powder-B47	Atrial Infarction-H99
	Ambient Ionization-B199	Atrial Rupture-H99
	Amended Birth Certificate-H140	ATV-Related Fatalities-H85
	Amended Data-F31	Audio Authentication-C10
	Analysis-A67, B94, E75, G37, K33	Australia-E23
	Analytical Morphomics-H60	Autism Spectrum-I17
	Ancestry-A27, A33, A86, A87, A110, B89, B176	Automated Genotyping-H121
	Ancestry Estimation-A65	Automated Measurements-A45
	Ancient DNA-A102	Automated PCR-H35
	Android-C18	Automated Speaker Recognition-C11
	Anger Management-I41	Automated Stage Analysis-B47
	Angle-H64	Automation-W20
		Auto-Pedestrian-E80
		Autopsy-A23, E6, E41, G54, H14, H53, H54, H76, H99, H103, H108, W3
		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  
BDSM-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  
Bitemark Analysis-G30  
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, K59  
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



- 
- |                                |   |  |
|--------------------------------|---|--|
| Chemical Analysis-D6           | Comparison Microscopy-B165                          | Crime Laboratory-E58                             |
| Chemometrics-B42, B193         | Comparisons-B201                                    | Crime Labs-F8                                    |
| Chemotherapy-B81               | Competency-E68, I3, I24                             | Crime Reporting-I44                              |
| Child Abduction Murder-E53     | Competency Evaluation-I11                           | Crime Scene-B112, E9, E71, F45                   |
| Child Abuse-H27, H28, H32, I27 | Competency to Stand Trial-I12                       | Crime Scene Investigation-E45, E49, F1, F43, K13 |
| Child Custody-I43              | Complex Cases-W9                                    | Crime Scene Measurements-E2                      |
| Child Homicide-H56, W11        | Complex Mixtures-B143                               | Criminal Autobiography-LW2                       |
| Child Victims-I37              | Complex Suicide-E19                                 | Criminal Behavior-E88                            |
| Childhood Asphyxial Deaths-H83 | Computed Radiography-W18                            | Criminal Behavior Analysis-E49                   |
| Children-E52, G14              | Computed Tomography-A43, A106, E82, G19, H132, H134 | Criminal Investigation-E26, W21                  |
| Chinese System-H141            | Computer Evidence-W4                                | Criminalistics-B90, B91, B118                    |
| Chiral-B20                     | Computer Program-C20, G46                           | Critic-J20                                       |
| Choking-H57                    | Computer System Integration-F11                     | Crosswalk-D24                                    |
| Chromebook™-C7                 | Conductive-J11                                      | Crow-Glassman Scale-A52                          |
| CIL-A100                       | Concave Beam Computed Tomography-G11                | Crude Oil-B148                                   |
| Citrate-A122, D10              | Confirmation Bias-I38                               | Crystallography-B124                             |
| Civil Commitment-I34           | Congenital-A22                                      | CSI Canines-B26                                  |
| Civil Rights-LW4               | Congruent Match Cross-Section-B169                  | “CSI Effect”-E25, E67                            |
| Clandestine Remains-A75        | Contamination-F43                                   | CT-A7  |
| Clavicle-A11                   | Continuous-B97                                      | Cuba-A89   |
| Cleaning Firearms-E21          | Continuous Improvement-E79                          | Cukurova Population-H15                          |
| Clenbuterol-K71                | Continuous Models-B96                               | Cult-I33   |
| Climate Modeling-B126          | Contrast Media-H45                                  | Culture-B204                                     |
| Clinical Forensic Medicine-E14 | Controlled Substance-F40                            | Curvature of the Kerf Wall-E91                   |
| Clonidine-H33                  | Controlled Substance Analogue-F40                   | Custodial Deaths-H107                            |
| Clothing-B156                  | Controlled Substances-B72, W14                      | Customer Working Group-F6                        |
| Cloud Computing-C16            | Coordinated Response-W8                             | Cut Marks-A21                                    |
| Cloud Forensics-W4             | Coronary-H106                                       | Cyber Bullies-I41                                |
| Club Drugs-E73                 | Coroner-E7, H47                                     | Cyberbullying-I1, I41                            |
| CMC Method-B167                | Coroners-F12  | Cybercrime-I15                                   |
| CMU-D29                        | Correctional Education-I9                           | Cybersex-I15                                     |
| Cocaine-H41, K24               | Corrosive Chemicals-A111                            | Cytochrome B (cytb)-H21                          |
| Code of Ethics-W22             | Cortical Thickness-A99                              | Cytology-H7                                      |
| CODIS-B137, B209, E89          | Cosmetic Evidence-B38                               |  |
| Co-Extraction-B5               | Cosmetics-B153                                      |  |
| Cognitive Bias-F14, F29        | Council of Forensic Medicine-G53                    |  |
| Cold Case-A125, E16, F26       | Counterfeit-C17, J6, J13                            |  |
| Cold Case Rape-F25             | Counterfeit Pharmaceuticals-B196                    |  |
| Cold Cases-A126, B211          | Counterterrorism-F44                                |  |
| Collaboration-E56              | Courtroom Exhibits-F18                              |  |
| Collapse-BS4                   | Coverdell-F32                                       |  |
| Collection-B13                 | CpG Marker-A85                                      |  |
| Colonization Delay-E87         | CPR-H43   |  |
| Color Test-B73                 | Cranial Fracture-A78, A112                          |  |
| Colorimetric-B147              | Cranial Fractures-A76                               |  |
| Colorimetric Reagents-B36      | Cranial Non-Metric Traits-A96                       |  |
| Combat Troops-E43              | Craniofacial-G8                                     |  |
| Combat Veterans-I20            | Cranium-A95, A109                                   |  |
| Commensal-H4                   | Cremation-A51                                       |  |
| Commingle-A4, A69              | Crime Assessment-W21                                |  |
| Comparative Study-E88          |   |  |
|                                |   | <b>D</b>   |
|                                |   | D3-25I-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

Death Certificate-H140  
Death Investigation-E8, E34, H22, H70, H111, H139, K19  
Death Penalty-I6  
Death Scene Investigation-H129  
Deaths-F13, H81, K17  
Decision Trees-A30, G51  
Decomposition-A17, A20, A59, A111, A118, A119, A121, B61, E18, E20, E61, E75, H22, H115, H116, H118  
Deconvolution-B99  
Deduplication-F48  
Deep Learning-C2  
Defective-D21  
Defects-D26  
Defendant-F46  
Degradation-B187  
Deleted Data Recovery-C16  
Delivery Modality-E69  
DeNISTing-F48  
Dental-G54  
Dental Age-G16  
Dental Age Estimation-G6, G7, G8, G10  
Dental Codes Translation-G49  
Dental Evidence-G30, G34  
Dental Hygiene-G1, G44  
Dental Identification-G32, G34, G39, G47, G48, W5  
Dental Identifiers-G41  
Dental IDs-G38  
Dental Malpractice-G53  
Dental Non-Metrics-A65  
Dental Profile-G37  
Dental Radiograph-A12  
Dental Radiology-G41  
Dentistry-G50, G51  
Department of Defense-A100  
Dermestid Beetles-K25  
Descomposition-H23  
Desiccation-A18  
Design-J13  
Designer Drug-F33  
Designer Drugs-B31, B131, K1  
Developmental Osteology-A54  
Diabetic Ketoacidosis-H68  
Diacetylmorphine-B19  
Diagenesis-E75  
Diagnostic Accuracy-H54  
Dialysis-B34  
Diazepam-K69  
Dietary Supplements-K30

Differential Extraction-B111, B134  
Differential Forensics-C1  
Differential Taphonomy-A115  
Digital-C4, C5, F48  
Digital Dimensioning-D8  
Digital Evidence-C6, C8, F37, W4  
Digital Examination-E27  
Digital Forensic Artifacts-C22  
Digital Forensics-C7, C16, W22  
Digital Images-A120  
Digital Video-C12  
Dilemma-I40  
Direct Amplification-B112, B115  
Direct PCR-B12  
Direct Thermal Extraction-B21  
Direct-to-PCR-B113  
Disaster Response-E64  
Disaster Victim Identification-G43, H78  
Discriminant Analysis-A91  
Disinterment-A4, A115  
Dismemberment-A79  
Dismemberment, Saw Mark-E91  
Disorders of Sex Development-I44  
Dissection-H106  
Dissociation-I25  
Distribution Functions-B201  
Diversity and Inclusion-W19  
DNA-B3, B5, B9, B13, B52, B57, B98, B116, B132, B191, B211, B212, E15, E89, F25, F27, F28, F30, F32, H13, H17, H69  
DNA Analysis-B140, W23  
DNA Barcoding-B58, B59, B60, B189  
DNA Damage-B109, B178, B179  
DNA Database-B210  
DNA Databasing-B4  
DNA Evidence-B117  
DNA Extraction-B55, B114  
DNA Filtration Device-B133  
DNA Interpretation-B216  
DNA Methylation-A85, B7, B192  
DNA Mixture-B99, B100, F29  
DNA Mixtures-B101  
DNA Paternity Testing-B65  
DNA Preservation-B113, B140  
DNA Repair-B179  
DNA Screening-B107  
DNA Testing-B66, B213  
DNA Typing-B108, B138, I30  
DNA Typing *Triticum Aestivum* L-B59  
Document-C17

Document Examination-J15, J17, J18  
Documentation-B162, E56, LW4, W12  
Documents-J11  
Doll Reenactment-H30  
Domestic Violence-G29, I20  
Donor Age-B80  
Down Syndrome-G2  
DRE-K44, K45, K46, K47  
Drew Peterson-BS1  
Drew's Law-BS1  
Dried Blood Spots-K21, K57  
Driver-K48  
Driving-K46  
Drones-E29  
Drug-H100  
Drug Abuse-E47, H74  
Drug Analysis-B33, B124, B128  
Drug Chemistry-B121  
Drug Concentrations-K43  
Drug Intoxications-E14  
Drug Use-H126  
Drug-Impaired Driving-K55  
Drugs-B32, B125, K4, K31, K58  
Drugs Analysis-K26  
DSM-5-I7  
Duct Tape-B87, B88  
Due Process-F39  
DUI-K2, K50, K52  
DUID-K1, K3, K35, K45, K51, K68  
DUID Drug Screen-K49  
Dust-D15  
DVI-B113, G46  
Dynamic-C18

### 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



# KEY WORD INDEX



Electrocution-E5, LW4  
Electron Microscopy-E5  
Electronic Cigarettes-W14  
Electronic Evidence-C7  
Electroshock Weapon Wounds-F10  
Electrostatic Discharge-D21  
Element Composition-E37  
Elemental Analysis-A68  
E-Liquids-K39  
ELISA-K49  
Elopement-I10  
Embalmed-B109  
Emergency Management-E8  
Emergency Room-F45  
EMT-E71  
EnCase® Forensic-C19  
Endocranium-A31  
End-of-Life-I40  
Entomofauna-H14  
Entomological Evaluation-H93  
Entomology-H115  
Entomotoxicology-H12, K27  
Environmental Samples-B49  
Ephedrine-B122  
Epiphyseal Union-A13  
Equine-H18  
Equivocal Death-W10  
ER Patient-K28  
Eradication-G22  
Error-D8  
Error of Measurement-A29  
Error Rate-C6  
Error Tolerance-B203  
Errors-B22, B214  
ESDA®-J2  
ESI-HPIMS-B70  
Ethical Responsibilities-F3  
Ethics-I6, I40  
Ethylone-K56  
Eukaryotes-H117  
Evaporation-B46  
Evidence-F16, F42, G21, G27, G28, H97, I45  
Evidence Collection-F45  
Evidential Value-E60  
Evidentiary Value-B171  
Examination Gloves-B3  
Excited Delirium Syndrome-H55  
Exhumation-K26  
Exhuming the Body-E35  
Exoneration-F2, F8

Expert Evidence-W11  
Expert Testimony-D12, F24  
Expert Verification-D12  
Expert Witness-F3  
Explosive-B151  
Explosive Drugs Optical Isomer-B123  
Explosives-B48, B154, E57

## F

Face Expression-C21  
Faceoff-G54  
Facial Approximation-A42, E82  
Facial Dissection-H96  
Facial Identification-A38  
Facial Reconstruction-A39, A40, A41, A42, A43, C20, E4  
FACS-B106  
Failure-D7  
False Positive-B214  
Familial-E89  
Families-A37  
Family Tragedy-G24  
Fatal Fire-E24  
Fatalities-H44  
FBI-F31  
Fecal Matter-H18  
Feedback-F11  
Female Sexual Abusers-I4  
Femoral Neck Axis Length-A32  
Fentanyl-B119, E47, H72, K66, K67, K74  
Fentanyl Analogues-B119  
Fetomaternal Transfusion-H40  
Fiber-B157  
Fibrinous Pericarditis-H67  
Field Test-E45  
File Structure Analysis-C10  
Filicide-H56  
Final Exit-H88  
Fingerprint-B68, B69, B79, B81  
Fingerprint Quality-B80  
Fingerprint Recovery Technique-E84  
Fingerprints-B22, B161, B164, B181, B198, E65, F17  
Fire-D17, D20, G38  
Fire Debris-B42, B43, B44, B171  
Fire Debris Analysis-B46  
Fire Extinguisher-H52  
Fire Scene-E44  
Firearm-H62

Firearm and Tool Mark-B173  
Firearm DNA-E21  
Firearm Identification-B169, E38  
Firearm Tool Marks-B168  
Firearms-B13, B30, E54, E68  
Firearms Examination-E27  
First Presentation-H68  
Fish Substitutions-B60  
Fitness Restoration-I11  
Flawed Methods-LW3  
Flesh Flies-H9  
FLIR-H118  
Flow-G20  
Flow Cytometry-B104  
Flowchart-A21  
Fluid-D5  
Fluorescence-B69  
Fluorescence Spectroscopy-B149  
FMVSS302-D20  
Food-H57  
Food Fraud-B60  
Football Helmet Testing-D2  
Footprint Length-A8  
Footprints-E28, E81  
Footwear-B85  
Foramen Magnum-A109  
Force-D14, F13  
FORDISC®-A27, A49  
ForenScope®-J9  
Forensic-A73, B16, B145, D17, E93, G18  
Forensic Analysis-B120  
Forensic Anthropology-A1, A5, A11, A15, A26, A28, A40, A50, A52, A57, A62, A63, A68, A70, A79, A82, A86, A92, A100, A111, A118, A120, A127, A128, H127  
Forensic Archaeology-A72, A74, E64, E66  
Forensic Art-E82, F18  
Forensic Autopsy-E72, H36, H109, H130  
Forensic Botany-B59, B190, H97  
Forensic Data Bank-A101  
Forensic Death Investigation-I31  
Forensic DNA-B53  
Forensic DNA Typing-B54  
Forensic Document-J9  
Forensic Document Examiner-J20  
Forensic Drugs-B75  
Forensic Emergency Management-H111  
Forensic Entomology-E87, H14, H16, H113, H114, H119  
Forensic Evidence-E60, F24



## KEY WORD INDEX

Forensic Examination-H70  
Forensic Fiber Analysis-B149  
Forensic Genetics-B52, B208  
Forensic Geology-B83  
Forensic History-LW1  
Forensic Identification-A35  
Forensic Image Analysis-H63  
Forensic Imaging-D11, H42, H131, H133  
Forensic Intelligence-E55, W9  
Forensic Interview-LW2  
Forensic Investigation-D6, H132  
Forensic Laboratories-J1  
Forensic Laboratory-A116  
Forensic Linguistics-D9  
Forensic Literature-W1  
Forensic Metrology-F19  
Forensic Microbiology-H124  
Forensic Odontology-E16, F36, G2, G6, G9, G10, G11, G19, G22, G27, G28, G30, G32, G39, G42, G47, G48, G49, W5  
Forensic Pathology-H1, H27, H70, H94, H96, H98, H110, L1  
Forensic Pathology Diagnosis-H63  
Forensic Pathologist-F15  
Forensic Podiatry-A8, E28, E81  
Forensic Psychiatry-E92, I4, I5  
Forensic Psychology-E92  
Forensic Radiography-W18  
Forensic Radiology-A1  
Forensic Samples-B135  
Forensic Science-A133, B7, B11, B38, B65, B66, B169, B205, BS5, E25, E67, E76, E80, G9, G39, H36, H97, H105, W10, W19  
Forensic Science Inspection-H141  
Forensic Science Standards-BS3  
Forensic Sciences-A28, E5, H98  
Forensic Scientists-W8  
Forensic Services-B207  
Forensic Soil Samples-B189  
Forensic Standards-F47  
Forensic Statistical Tool-F26  
Forensic Taphonomy-H1  
Forensic Toxicology-K12, K38, K50, K59, K64  
Forensic Video Analysis-C15  
Forensic Voice Comparison-C11  
ForensicGEM™-B4, B107  
Forensics-A21, A80, C23, H7, H10, H117  
Forgery-J5

Formalin-Fixed-B2  
Fossils-E74  
Fourth Rib-A94  
Fractal Analysis-G33  
Fracture-A80, H28, H64  
Fracture Biomechanics-A76  
Fracture Healing-H32  
Fracture Pattern-D3  
Fragmentary Remains-A33  
Fragmentation-K8, K36  
Framework-C23  
Frangible-B165  
FRE 702-F23, J20  
Free-Dive Competition-H135  
Frequency Occurrence-W6  
Friction-D22  
Friction Ridge-B163  
FROG-kb-B141  
Frontal Sinuses-A105  
*Frye*-F22  
FTIR-J10  
FTIR Imaging-B86  
FTK®-C19  
Fuel Gas-D30  
Functional Genes-H19  
Fusion™-B136

### G

Gait-E28  
Ganglia Hemorrhage-H26  
Gas Chromatography-B35, B121  
Gasoline-B45, B156  
Gatekeeper-D12  
GC/MS-B19, B21, B72, F33, K25, K39  
GC-IRD-B128  
Gender Determination-E86  
Gender-Specific Factors-I21  
Generator-H130  
Genital Self Mutilation-I13  
Genotyping-B101  
Gentrification-F25  
Genuine Signatures-J16  
GeoChip™ Microarray-H19  
Geographic Differences-E53  
Geometric Morphometrics-A69, A90, A92  
Geosourcing-B58  
Geostatistics-A28  
Ginseng-E77  
GIS-A62

Glass-B84, B152  
Glyphosate-K28  
Golden Crescent-E73  
GoPro®-C14, E2  
GPS Tracking-A132  
Green Analytical Chemistry-B197  
Griess Test-E40  
Grills-H87  
Growth Plate Abnormality-H29  
Guilt-G56  
Gunshot Residue-B158, B160, B200, E54  
Gunshot Residues-H92  
Gunshot Wound Interpretation-H80  
Gunshot Wounds-H92

### H

Hackers-C3  
Hair-B89, B159, B188, D13, E33, K22  
Hair Decomposition-B16  
Hair Microscopy-F36  
Handcrafted Weapon-E32  
Handedness-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

## I

IBIS®-B30  
 ICP-MS-E37  
 Identification-A1, A4, A5, A36, A40, A61, A63, A64, B1, B184, E23, E33, F17, G3, G35, G40, H90  
 Identity Confirmation-B70  
 Ignitable Liquid-B44, B156  
 Iliac Crest Apophysis-A84  
 Ill-Structured Problems-E4  
 Illicit Drugs-B129

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  
 Incidence-K2  
 Incompetency-F46  
 Incompetent Defendants-I11  
 Incorporation-B204  
 INDELS-B2  
 Indented Writing-J2  
 Independence-B204, F7  
 India-K15  
 Indices-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

INNUL-B142  
 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

### K

---

K9 Water Searches-E42  
Kent® Cigarettes-D16  
Ketamine-K22, K23, K27  
Kinship-B110  
Kleihauer-Betke Test-H40  
Klingsor Syndrome-I13  
Knife Cuts-B157  
Korean Skeletal Remains-A2

### L

---

Laboratory-F9  
LA-ICP/MS-B93  
Larynx-H137  
Las Vegas-K50  
Laser Printer Identification-J3  
Latent Fingerprint-B67  
Latent Print Evidence-F38  
Latent Prints-W12  
Laundry Detergents-B149  
Law Enforcement-E48  
Law School-F4  
LC/MS-B15, K37  
LC/MS/MS-B153, K21, K23, K27, K31,  
K33, K38, K39, K41, K47, K71  
LC/MS/TOF-K69  
LCN DNA-F26  
LC/qTOF-K8  
LC/qTOF/MS/MS-K30  
Lean-E79  
Learning Lessons-F12  
Legal Challenges-B92  
Legal High-B82  
Legal Majority-G15  
Legal Medicine-E7  
Legal Psychoactives-B122  
Legislation-F34  
Lens Location-A39  
Leptomeninges-H25  
Lethal Injection-LW3  
Library Preparation-B177  
Ligature-E30  
Light Minerals-B83  
Likelihood-B161  
Likelihood Ratios-B143, B172  
Liminality-E4  
Limit of Detection-B185  
Limitations-F30

LIMS-B206  
Linear Amplification-B50  
Linear Sequential Unmasking-B203  
Lip Prints-E12  
Liquid Chromatography-B23, B159, K58  
Litigation-F27, F36, G52, I43  
Liver Laceration-H43  
Liver Pathology-H68  
Living Participants-A48  
Loss-B81  
Low Copy DNA-H20  
Low Explosives-B147  
Low Level DNA-B133  
Low Template DNA-B139  
LSAM-B142  
LT DNA Mixture Interpretation-B95  
Lumbar Spine-A7  
Luminescent Marker-B158  
Luminol-B185  
Lung Weight-H100

### M

---

MAB-CHMINACA-H75  
Machine Learning-B99  
Macromorphoscopies-A86  
Maggot Crop-B145  
Maggot Masses-H118  
Male Rape-E50  
Malingering-I12  
Malware-C18  
Management-B205, B206  
Mandible-D28  
Mandibular Morphology-A9  
Manipulation-G56  
Manner-H53  
Marijuana-B71, B77, B78  
Marine-A130  
Marine Decomposition-A129  
Maritime IED-E11  
Market Failure-F7  
Mass Defect-B130  
Mass Disaster-W8  
Mass Fatality-BS4, G44, H78  
Mass Fatality Incident-G47  
Mass Fatality Training-G1  
Mass Murder-I35  
Mass Murderer-I36  
Mass Spectrometry-B76, B90, B130,  
B131, B155, B159, B198, B199, W2

Massacre of Erba-I35  
Massive Parallel Sequencing-B2  
Massively Parallel Sequencing-B10, B51,  
B54, B102, B176  
Matching Algorithms-C21  
Mathematical Modeling-B46  
Mauling-H50  
MDMA-B23  
Measurement Uncertainty-F19  
Mechanism of Injury-H85  
Mechanisms of Death-H66  
Medial Clavicle-A56  
Medical Examiner-E8, H47  
Medical Examiners-H126, H129  
Medical Experts-F14  
Medical Imaging-A48, A83  
Medical Malpractice-H45, H94  
Medically Compromised-G51  
Medicolegal-H139, I10  
Medicolegal Agencies-E17  
Medicolegal Expertise-E14  
Medicolegal Investigations-E59  
Meningioma-H66  
Meningitis-H77  
Mens Rea-F40  
Menstrual Blood-B8  
Mercury-H58  
Metabolic Disorder-H34  
Metabolism-K61  
Metal Phosphides-K16  
Metalinguistic Awareness-I38  
Metal-Organic Framework (MOF)-B158  
Methadone-K14, K73  
Methadone-Related Deaths-K14  
Methamphetamine-K25  
Methamphetamine & Amphetamine-K52  
Method Validation-B70  
Metric Assessment-A93  
Metrics-A89  
Microbe-E78  
Microbial Community-H19  
Microbial Degradation-B44  
Microbial Diversity-H112  
Microbial Translocation-H4  
Microbiology-H114  
Microbiome-H8, H127, H128  
Microcomputed X-Ray Tomography-D1  
Microcrystal Tests-B32, B124  
Microcrystalline Tests-B125  
Micro-CT-H92  
Microdevice-B111

# KEY WORD INDEX



Microenvironment-A115  
 Microextraction-E78  
 Microextraction Capsules (MEC)-B197  
 Microfluidic Y-STR Analysis-B12  
 Microfluidics-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  
 MircoRNA-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  
 Morphologically 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  
 Multidisciplinary Approach-A102, E35  
 Multi-Element Analysis-E77  
 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  
 Myasis-H93  
 Myocardial Infarction-H86  
 Myocardial Ischemia-H38, H131  
 Myocarditis-H67

## N

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  
 Natural 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, BS3, 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-BS6  
 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  
Orbit-A39, A87  
Orthognathic Surgery-G45  
Os Coxae-A95  
OSAC-B40, B41, BS3, J7  
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-I2  
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  
Polycystic 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-A117  
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



# KEY WORD INDEX



Primary Health Care-E83  
Principal Component Analysis-B78, B146, B195  
Principal Components Analysis-A26  
Prison-E10  
Prison Rehabilitation-I2  
PRNU-C13  
Probabilistic Genotyping-B100, B105, B174, F39  
Probabilistic Interpretation-B96  
Probabilistic Software-B95  
Probability-B101  
Probability of Wrong Decision-F19  
Procedures-F38  
Profession-W22  
Professional Ethics-C22  
Professional Liability-G52  
Proficiency Tests-B167, J14  
Prolintane-K18  
Promethazine-B121  
Property Crimes-B209  
Prosecuting Perpetrators-E35  
Prosecutor-F15  
Prosecutors-E25, F6  
Protein Typing-B188  
Proteomics-B11, B188  
Provenance-A64, B83, B201  
Proximity Ligation-B182  
Proxy-A110  
Psychiatric Safety-I28  
Psychiatry-I24  
Psychic Detective-LW6  
Psychoactive Substances-K56, K65  
Psychological Autopsy-E30  
Psychopathology-I36  
Psychopathy-I21, I32, I39  
Psychopathy Neurobiology-I32  
Pubic Bone-A10, A93  
Pubic Symphysis-A83  
Public Corporation-F9  
Public Health-H73  
Public Perception-E76  
Public Relations-L1  
Pulmonary Barotrauma-H135  
Pulmonary Embolism-H39, H82  
Pulp-G5  
Pyrolysis-B39, B82

## Q

QIAGEN®-B115  
QIAGEN® Investigator 24-Plex-B135  
QPCR-B215  
QTOF-K61  
Qualitative-B35, F16  
Quality-B206, I7  
Quality Assurance-A116, A127, B208  
Quality Control-B166, B214  
Quantification-E3  
Quantitation-B71  
Quantitative-F16  
Quantitative Methodology-E9  
Quantitative Postmortem MRI-H131  
Quantitative Ultrasound-A103  
Questioned Documents-J1, J7, J10  
Quetiapine-K29  
Queuing Theory-B207

## R

Radial Tuberosity-A90  
Radiographic Film-W18  
Radiology-E70, G1, H134  
*Raffaelea Lauricola*-B27  
Raman-B6  
Raman Spectroscopy-B17, B193, E86  
Randox® Evidence-K55  
Rapid DNA-B110, H121  
Rapid Extraction-B4  
Rapid PCR-B12  
Rapid Screening-B75  
Rapidly Mutating Y-STRs-B144  
Raspberry Pi-C9  
Rat Poison-E31  
Reasonable Doubt-F1  
Reasoning-E26  
Recidivism-I9  
Reconstruction-E94  
Recovery Protocols-A72  
Recreational Sports-H95  
Reference-A71  
Referral-E6  
Refractive Index-B152  
Refueling-D21  
Regioisomers-B128  
Regional Trends-B29  
Reliability-A29, A104, J8, J14  
Reliability of Assignment-G4

Remote Sensing-A74, A75  
Report-H130  
Reports-F30  
Reproducibility-B116  
Research-B91, S2  
Resource Center-W16  
Respiratory Pathogen-H35  
Restorations-G37  
Retinal Hemorrhage-H24, W17  
Retinoschisis-H24  
Retrospective-B31  
Reverse Engineering-A46, D6  
Rheumatoid Arthritis-G10  
Rhodamine-B-H105  
Ribs-A24  
Richard III-D1  
Ridge-B68  
Rifling Lines-E27  
Risk-I19  
Risk Factors-I10  
RNA-B187, H120  
Robotics-W20  
Rollover-D22  
Rollover Reconstruction-D18  
Root Canal Widths-G4  
Rubber Deposits-B39  
Run-Flat-D22  
Rupture-H61  
Rural Development Trust-G43

## S

Sadism-I18, I39  
Sample Age-B186  
Sample Analysis-B76  
Sample Prep-K31  
Sample Preparation-B33, B197, W2  
Sampling Techniques-H71  
San Francisco-K52  
Sand-B84  
Sarcoidosis-H65  
Sarcophagidae-H116  
Scapula-A113  
Scattered Remains-A58  
Scavenger-A132  
Scavenging-A17, A58, A128  
Scene Documentation-E29  
Science-F5, G26  
Science Curriculum-F4  
Scientific-D13



## KEY WORD INDEX

- Scientific Process-A35  
Scientific Proof-F1  
Screen-H73  
Screening-F46, H102  
Screenplays-BS6  
SDO-ES1, F47  
Search Strategies-W1  
Searches-A58  
Searching-C2  
Season-H5  
Season of Death-A117  
Security Feature-J13  
Seized Drugs-B20, B36, B118  
Selective Degradation-B134  
Self-Esteem-I1  
Self-Inflicted Injuries-I5  
SEM/EDX-A50, B38  
Semen-B62  
Semen Detection-B64  
Semen DNA Stains-B14  
Semen Identification-H11  
Seminal Fluid-B11  
Seminal Fluid Fluorescence-B62  
Sensory-I17  
Sequence of Writing/Printing-J4  
Serial Killer-LW2  
Serial Killers-E88  
Serial Murder-B34, BS2  
Serial Rape-B100  
Serial Sniper-BS2  
SERS-B184, E15, E39, K10  
Sewage-Based Epidemiology-B28  
Sex-A110  
Sex Assessment-A31  
Sex Crimes Against Children-I15  
Sex Determination-A6, A32, A53, A93, A113  
Sex Estimation-A7, A9, A10, A30, A57, A89, A94, A95, A96  
Sex Offender-I16  
Sex Trafficking-I42  
Sexual Assault-B144, B182, B213, E50, E90, H17  
Sexual Assault Evidence-B134  
Sexual Assault Kit-B213  
Sexual Dimorphism-A55, A90, A92  
Sexual Identity-I44  
Shaken Baby Syndrome-E51  
Sharp Force Trauma-A123  
Shooting Incidents-E94  
Short Tandem Repeats-B10, B190  
Shotgun-B9  
Shoulder Development-A54  
SIDS-E46  
SIDS/SUDI-H31  
SIFT Workstation-C19  
Signature-J5  
Signature Forgery-J16  
Significance-B172  
Silicone-B24  
Similarity Measurement-B173  
Simulated Signatures-J16  
Single Nucleotide Polymorphism-I30  
Single-Tube Extraction-B139  
Skeletal-A67  
Skeletal Histology-A82  
Skeletal Remains-A66, A122, E16, E59  
Skeleton-A16, A73  
Skeptic-LW6  
Skill Task Assessment-J14  
Skin Damage-E36  
Skin Debris-B200  
Skin Microbiome-H125  
Skull-H77  
Skull Capacity-A107  
Sleep Environment-H31  
Small Town Justice-LW5  
Smartphone-E34, W17  
Smokeless Powders-B15, B150, E57  
Snapchat™-C8  
Sniper-BS2  
Snow-D7  
Snowstorm-H108  
SNPs-B103  
Social Contract Theory-C22  
Social Media-C13, H139  
Sociocultural Anthropology-A34, A36  
Sodium Azide-K13  
Soft Tissue Thickness-A43  
Software-B98  
Software Testing-C6  
Soil-E20, H117  
Soil Analysis-B17  
Soil Taphonomy-A61  
Solid Phase Extraction-B154  
Solid-Phase Microextraction-B71  
Soot-D5  
SOPs-B162, W12  
Southeastern Korea-K4  
SPE-K42  
Species Identification-B189  
Spectroscopy-B37, B125  
Sperm-B64  
Sperm Cells-H7  
Spermatozoa-B182  
Spice-F33, H75, K65  
SPME-B48  
Spreadsheet-G13  
SRM 2372-B215  
Stab-D14  
Stabbing-E31  
Stability-K29  
Stable-A64  
Stable D15N Isotope-A97  
Stable Isotope Ratio-E33, E77  
Staged Domestic Homicide-E52  
Stalking-I24  
Standard-B215  
Standard Bullet-B166  
Standardization-B93  
Standardized Guideline-K49  
Standards-B22, B25, B40, G16  
Standards and Guidelines-B41  
Standards Development-ES1  
*Stare Decisis*-G25  
Statistical Consensus Profile-B95  
Statistical Methods-A101, H119  
Statistics-B161, B170, B174, B208, F28, F31, W6  
Stature-A125  
Stature Estimation-A8, A109  
StepMeter-D31  
Stingray-F37  
STR-B112, B136  
STR Analysis-H15  
STR Loci-B180  
STR Profiling-B104  
Stress-E58  
Structural-D26  
Structural Analysis-D27  
Stucco-D29  
Student Interns-A116  
Stutter Artifacts-B180  
Styloid Process-G35  
Subadult-A84  
Subadult Sex Estimation-A105  
Subclass Characteristics-E38  
Submerged Human Victims-E42  
Submerged Specimens-A133  
Subpopulations-B216  
Substance Use-I27  
Substance Use Disorder-I8  
Sudden Cardiac Death-H42

# KEY WORD INDEX



Sudden Death-H65, H66, K11  
Sudden Infant Death Syndrome-H36  
Suffocation-H88  
Suicidal Hanging-E30  
Suicide-E19, E31, E32, E72, E85, H37,  
H58, H62, H88, H107, I31, K13  
Suicide Method-I23  
Suicide Note-I23  
SUID Death-E46  
SUIDI-H30  
Supercritical Fluid-B20, B127  
Supported Liquid Extraction-K40  
Surface Area-A6  
Surface Metrology-B168  
Surface Scatter-E66  
Surveillance-E10  
Survival Time-A97  
Sweden-E51  
SWGDRUG-B118  
Swine Carcasses-H114  
Switzerland-H47  
Synthase Enzymes-B56  
Synthetic-K59  
Synthetic Cannabinoid-B35, H75, K44,  
K48  
Synthetic Cannabinoids-B127, E1, K45,  
K47, K62, K64, K65  
Synthetic Cathinone-B73  
Synthetic Cathinones-B127, K8  
Synthetic Designer Drugs-B130  
Synthetic LSD-K6  
Syringes-B72

## T

Taggant-B151  
Taphonomy-A17, A20, A23, A51, A59,  
A60, A118, A119, A123, A128, A129,  
A130, A131, E18, H5, H16, H115, H128  
Tarps-A19  
Tattoo Ink-E37  
TBS-A19  
Technical Committee-B25  
Technology-B92, S1  
Teeth-G3, G36  
Telogen Roots-B89  
Temperature-G3, H2  
Teratoma-H46  
Terrorism-E55, I36  
Tertiary Transfer-B3

Testimony-D13, F21  
Text Messages-E34  
Thanatomicrobiome-H123  
Thanatophagy-H122  
Thanatotranscriptome-H120  
The Baby Tyler Case-F14  
Third Molar Index-G15  
Third Molar Maturity Index-G17  
Thyro-Hyoid Lateral Ossificati-H138  
Thyroid Cartilage-A53  
Thyroid Ectopic Horns-H138  
Tier 1-K35  
Time Since Deposition-B79  
Time To Death-E53  
Timeline-BS5  
Time-Resolved Spectroscopy-B67  
Tire Mark-H91  
Tire Tread-H91  
Tires-B39  
Tissue Depths-A42  
Tissue Distribution-K5  
Tissue Sampling-B109  
Toner Particles-J4  
Tool Marks-D1  
Tool Testing-C5  
Tooth Development-G2, G16  
Tooth Development Staging-G7  
Tooth Loss-A9  
Tooth Maturation-G7  
Total Body Score-H5  
Touch DNA-B9, B108, B209, E21, E56,  
H69  
Toxicity-E1  
Toxicology-H72, H89, H102, H103, K10,  
K18, K19, K57, K75, W14  
Trabecular Bone-G33  
Trace Analysis-B154  
Trace Evidence-B85, B152, H124, H125,  
H127  
Training-E17, E71, J6, L1  
Transection-H61  
Transfer-B157  
Transfer From Police Control-F9  
Transgender-H140  
Transition Analysis-A16, A81  
Transmesenteric Hernia-H79  
Transparency-F21  
Trauma-A80, I3  
Trauma Biomechanics-A78  
Traumatic Head Injury-H26  
Traumatic Stress-E9

Treatment-I16  
Treatment Barriers-I8  
Treatment Program-I20  
Treatment Resistant PTSD-I25  
Trends-K60  
Triage-G20  
Trial-I45  
Trial Evidence-F20  
Tris(2-carboxyethyl)phosphine-B114  
Trophy Taking-E22  
Tropical-H23  
Turkey-G53  
Turkish Judicial System-J1  
Turkish Population-G15  
Twins-G40  
Two-Photon Excitation-B69  
Type of Injury-H85  
Typical Suicide-I31

## U

UBC-A65  
UDIM-G49, W5  
UHPLC/MS/MS-K32  
Ultraviolet Radiation-B79  
Undercover-W11  
Underwater CSI-E11  
Undocumented Border Crossers-A96, G6  
Unidentified Deceased-E84  
Unidentified Decedents-A126  
Unidentified Human Remains-L2  
Uniqueness Human Dentition-G55  
United States/Mexico-A5  
Unmanned Aerial Vehicles-E29  
Unmanned Aircraft-E2  
Unnatural Sexual Offence-E50  
Unsolved-B211  
Untested SAKs-E62  
Untrained Diagnosis-G24  
UPLC/MS/MS-K9  
Uppercut-D28  
UR-144-K63  
Urban-H104  
Urine-K42, K58

## V

Vaginal Fluid-E39





## KEY WORD INDEX

Validation-B92, B110, B183, E63, K40,  
K56, W23  
Validation Study-B51  
Validity-G21  
Variation-B87, B88  
Vehicle-E87  
Vehicle Artifacts-D18  
Vehicle Fires-A72  
Vehicle-Related Death-H95  
Venous Blood-B8  
Vertebrae-A14, A15  
Vertebral Maturation-A13  
Victim Psychology-I42  
Victim Recovery-A74  
Victim Role Staging-I5  
Victim-Centric-E62  
Victimology-E49  
Video Analysis-C14  
Video Authentication-C15  
Video Superimposition-A70  
Violence-I26, I28, W7  
Virtopsy-H98  
Virtual-A67  
Virtual Anthropology-L2  
Virtual Skeletal Analysis-A45, A47  
Visibility-D23, D25  
Visual Biometrics-C12  
Vitamin D Deficiency-H29  
Vitreous-H76  
Vitreous Humor Chemistry-K17  
VOC-E61  
Voice Modification-C11  
Volatile-E78  
Volatile Organic Compounds-A121, B26,  
E42  
Volatile Substance-K11  
Volumetric Analysis-A105  
VSC 6000/HS-J10  
Vulture-A132

### W

---

Walkway Safety-D31  
Warning Agent-D30  
Water Damaged Devices-W15  
Water Immersion-B132  
Weather Effect-H109  
Weathering-B45  
West Tennessee-H44  
Wildlife Forensics-H21

Willem's Method-G14  
Witness Identification-D23  
Women Offenders-I4, I21  
Workplace-W19  
Workplace Violence-I29  
World War II-G32  
Wound-of-Origin-B194  
Writing Instrument-J17  
Wrongful Conviction-F2  
Wrongful Convictions-F7  
WWII Skeletal Remains-E23

### X

---

XLR-11-K46, K63  
X-Ray Diffraction-B196  
X-Ray Mapping-B86  
XRF-A68, B84  
XRPD-B196

### Y

---

Y23-H13  
Y Chromosome-B144  
YFSF-S2  
YouTube®-C14  
Y-STRs-H13

### Z

---

Zolpidem-K2, K28, K51  
Zoo-H50  
Zygomatic-A114

# PRESENTING AUTHOR INDEX



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
B	Criminalistics	K	Toxicology
C	Digital & Multimedia Sciences	LW	Last Word Society
D	Engineering Sciences	BS	Breakfast Seminar
E	General	ES	Evening Session
F	Jurisprudence	L	Luncheon
G	Odontology	S	Special Session
H	Pathology/Biology	W	Workshop
I	Psychiatry & Behavioral Science		

## A

Abnoosian, Arin-I32  
 Abraham, Abigail-W4  
 Achesinski, Amber L.-H39  
 Adams, Bradley J.-G48  
 Adelman, Jonathan-B99  
 Adserias, Joe-G12, G42, G43  
 Afsin, Huseyin-G53  
 Aggrawal, Anil-E92  
 Aiken, Sally S.-BS3  
 Akase, Shinichiro-B107  
 Akiba, Norimitsu-B69  
 Al Na'imi, Khudooma S.-B207  
 Al Oraer, Dina-B52  
 Albert, A. Midori-A13  
 Aleksander, Adam-D24, D29  
 Aleman, Janice L.-B128  
 Alexandra, Stupperich-I39  
 Alladio, Eugenio-B95  
 Allen, Robert W.-B56, B186  
 Allen, Tom P.-F9  
 Almirall, Jose R.-B93  
 Almog, Joseph-S2  
 AlQahtani, Sakher J.-G12, G16  
 Altes, Kristina B.-A15  
 Anane-Bediakoh, Daniela-H17  
 Andersson, Jacob-E51  
 Andreaggi, Kimberly S.-B177, B179, W23  
 Andrenyak, David M.-K33  
 Andrews, Sam W.-W3  
 Angelakopoulos, Nikolaos-G41  
 Angelotta, Cara-I27  
 Anstead, James-B136  
 Anstett, Alexandria-B130

Antunes, Antonio A.-A43, E12, G45  
 Aponte, Rachel-B180  
 Aquila, Isabella-B65, B66, E10, H97, H98  
 Aronica, Patricia-H87  
 Aschheim, Kenneth W.-G48, G49, W5  
 Ash, Jordan-B48  
 Ayers, Richard-C5  
 Azores-Gococo, Nicole-I37

## B

Bäckström, Björn-H56  
 Baden, Michael M.-F13  
 Baglieri, Gina E.-A111  
 Baigent, Christiane-A18, A131  
 Bailey, Christine-A57  
 Baker, Andrew M.-B202, BS4  
 Baker, Daniel-K74  
 Baker, Tiffany-H35  
 Bakshi, Mantaran Singh-E30  
 Baldaino, JenaMarie-B47  
 Baldinotti, Claudio-G19  
 Ballard, David-B102  
 Bandini, Bruce-G49  
 Barnett, Peter D.-D13  
 Barrett, Christine-K22  
 Barsley, Robert E.-W8  
 Barta, Jodi Lynn-B140  
 Bartelink, Eric J.-A63  
 Bartick, Edward G.-W20  
 Bashford, Martha-F25  
 Basiliere, Stephanie-K36  
 Bastos Serwy, Isabela-B158  
 Batts, Jayne J.-F45

Bayraktar, Eser-H37, H43  
 Beaman, Jason-I34  
 Bell, Lynne S.-A130  
 Beltempo, Pasquale-I23  
 Benbow, M. Eric-H129  
 Benjamin, David M.-LW3  
 Benson, Jeffrey A.-F32  
 Berman, Garrett M.-F42  
 Berman, Gary M.-S2  
 Bernhard, Werner-B77  
 Besser, Marcus P.-D31  
 Best, Kaleigh C.-A95  
 Beynon, Marianne E.-H26  
 Bhutta, Zumrad U.-J10  
 Bianchi, Robert P.-B120  
 Bilimoria, Farshaad-H50  
 Bille, Todd W.-B174  
 Bilous, Peter-B63  
 Bintz, Britannia J.-B51  
 Bird, Cate E.-A126  
 Birks, Heather-B45  
 Birt, Jon E.-L2  
 Bishop-Freeman, Sandra-K19  
 Bitting, Casey P.-H106  
 Blackwell, Cynthia-F5  
 Blake, Kathleen A.S.-A17, A93  
 Bloom, Adam-I24  
 Boca, Silvia-E10  
 Bock, Jane H.-E13  
 Bodwal, Jatin-K15  
 Boguslaw, Richard-G20  
 Bolhofner, Katelyn L.-A53  
 Bommarito, Christopher R.-B172  
 Bonilla, Claudia M.-E76  
 Bonilla, Eliud-C11



## PRESENTING AUTHOR INDEX

Bono, Joseph P.-F3  
Bonsignore, Alessandro-K73  
Boon, Julian C.W.-I18  
Borrini, Matteo-A55, E85, F1, I31, LW6  
Bosse, Michael J.-E90  
Bosworth, Cory-H82  
Botch-Jones, Sabra R.-W16  
Bowen, Gregory-C3  
Bowers, Charles Michael-G25  
Boyd, Cliff-A25  
Boyd, Donna C.-A77  
Brady, Sean-B32  
Brady, Thomas V.-G24  
Breitenbach, Stephanie R.-B20  
Brenner, Charles H.-B97, B174  
Brettell, Thomas A.-B72, B153  
Briones, Alice-W23  
Broehl, Kristen A.-A57  
Brokaw, Ryan P.-W7  
Brondoni, Cristina Enrica-E71  
Brooks, Jason W.-H2  
Brosz, Helmut G.-S2  
Brothers, Samuel I.-W15  
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, Nichole 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  
Cetin, Selcuk-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  
Cornelison, Jered 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, Ian-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

# PRESENTING AUTHOR INDEX



DeDore, Stephanie-B110  
Dedouit, 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  
Dinis-Oliveira, Ricardo Jorge-H3  
Dobrin, Lawrence A.-W5  
Dokgöz, Halis-J9  
Dolan, Julia A.-B205  
Domitrovich, Stephanie-F14, F22  
Donato, Laura-A40  
Dorion, Robert B.J.-G27, G28  
Dotson, Meryle A.-E32  
Doty, Kyle C.-B193  
Doupe, Barbara-B157  
Doval, Ana Paula S.-B210  
Downs, J.C. Upshaw-BS5, F13, S2  
Doyle, Sara N.-H107  
Draft, Derek M.-G13  
Drake, Stacy A.-E80  
Drumm, Meaghan P.-K25  
Dudzik, Beatrix-A30  
Duff, Deiter J.-H80  
Dunn, Rebecca F.-B23  
Dunn, Tim G.-D30  
Dwyer, Jessica B.-K66  
Dwyer, R. Gregg-I16  
Dykstra, Josiah-W4

## E

Easterling, Glenda M.-K17  
Eckhardt, Michael D.-H31

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  
Erickson, Elizabeth A.-E25  
Eriksson, Anders-H51, H54  
Evans-Nguyen, Kenyon M.-W2  
Evenson, Cynthia L.-F35

## F

Fabricant, Maxwell Christopher-F36  
Fabrice, Dedouit-E41  
Fais, Paolo-H94  
Farese, Laura C.-G2  
Farid, Armin A.-G56  
Farrell, Amanda L.-W21  
Faulkner, Davin-W5  
Feaster, Marc-K19  
Fedoroff, J. Paul-I16  
Ferencz, Joseph-I45  
Ferrara, Lyndsie N.-E26  
Ferreira de Paranaiba, Renato T.-B57  
Ferslew, Kenneth E.-K75  
Fields, Christopher-I3, I24  
Figueroa, 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  
Franza, Annarita-I22, I44  
Frederick-Frost, Kristen-LW1  
Freeman, Michael-H61

Fried, Clare M.-B43  
Friscia, Melissa-K9  
Fudenberg, John-W5  
Furnier, Sarah M.-A114  
Furton, Kenneth G.-S1

## G

Gaffney, Hallie-A93  
Gaither, Catherine M.-A116  
Gardner, 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  
Geradts, Zeno J.-C2, C13, S1, W20  
Gettings, Katherine B.-W23  
Ghui, Melodi-A21  
Gialamas, Dean M.-W8  
Giammarrusco, Zac P.-C14  
Gibson, Kemper-B111  
Gibson-Daw, Georgiana C.-B12  
Giffen, Jr., Mark A.-H132  
Gigl, Katelyn M.-B112  
Gilbert, Jack-H127  
Gilliland, M.G.F.-H135  
Gilliland, Rhessa G.-W22  
Gimelli, Cinzia-I15  
Gittelson, Simone-B216  
Gitto, Anna-F15  
Gitto, Lorenzo-H66, H139  
Glicksberg, Lindsay-K8  
Glynn, Claire-B5  
Gocha, 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.-I12  
Gozna, Lynsey F.-I19  
Grabherr, Silke-H133  
Graham, Ema H.-B132  
Graham, Michael A.-H70



## PRESENTING AUTHOR INDEX

Grande, Abigail J.-H59  
Grattagliano, Ignazio-I2, I14, I29  
Green, Ashley-A80  
Griffin, Jacob-A14  
Grigoras, Catalin-C10, C14  
Grimes, Megan E.-B114  
Grisedale, Kelly-B10  
Guale, Fessessework-K69  
Gudmannsson, Petur G.-H51  
Guerrieri, Richard A.-S1, W23  
Guido, Mark D.-C1  
Gulmen, Mete K.-E14  
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

### H

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  
Herschaft, 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, Janne A.-E67  
Holobinko, Anastasia-A64  
Holleyda, 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  
Huestis, 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

### I

Iancu, Lavinia-H114  
Ibrahim, Samiah-J17  
Ihle, Kena-A24  
Im, Nahyok-A44  
Imtiaz, Ayesha-J10  
Indorato, Francesca-K12  
Ingle, Eric A.-K52  
Ingvaldstad, Megan E.-A99  
Insana, Joseph-B152  
Irish, Lorna C.-E61  
Isa, Mariyam I.-A78  
Isaac, Carolyn V.-H28  
Isaacks, Marilyn-A75  
Isenschmid, Daniel S.-K55, W19

### J

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, Yangseung-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

### K

Kabir, Abuzar-B197  
Kacinko, Sherri L.-K46, W2  
Kaeser, Cynthia-B131  
Kakuda, Hidetoshi-B67  
Kammrath, Brooke W.-B17, B125  
Kamnikar, Kelly R.-A106  
Kanu, A. Bakarr-B70  
Kanz, Fabian-A56  
Kar, Hakan-J9  
Kastenbaum, Hannah A.-H88  
Kazmierczyk, Zuzanna-J16  
Kellaher, Denise C.-I17  
Kelley, Caroline Machal-B24  
Kelly, Jan S.-J8, J14, J20  
Kenyhercz, Michael W.-A88



# PRESENTING AUTHOR INDEX



Kessler, Meghan S.-H72  
Ketchum, Marisa Teal-B3  
Khare, Parul-G8  
Kibayashi, Kazuhiko-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, Kelley-F27  
Kumor, Stephanie-K56  
Kushwaha, Priyanka-H19  
Kuzel, Aaron R.-A68  
Kyllonen, Kelsey-A42

## L

L'Abbe, Ericka N.-A104  
Labay, Laura M.-K51  
Lal, Anita-H68  
Lane, Jack N.-B62  
Langley, Natalie R.-A49  
Lantz, Patrick E.-W17  
LaRue, Jr., Bobby L.-H121  
Law, Eric F.-B30  
Lax, Simon-H124  
Layne, Tiffany R.-B187  
Le Garff, Erwan-G18  
LeBeau, Marc A.-BS3  
LeBlanc, Helene N.-E87  
Ledger, Zo-dee-E79  
Lednev, Igor K.-B193, E86  
Lee, Jr., F.L. Jim-J2, J15  
Lee, Unsil-E90

Leija, Christina A.-E69  
Leistedt, Samuel J.-I36  
Lemaire, Eric-H71  
Lemos, Nikolas P.-S2, W19  
Lesiak, Ashton D.-B122  
Lesnikova, Iana-H7  
LeVaughn, Mark M.-H75  
Lewis, Carolyn-B183  
Li, Ling-H36, H141  
Lichtenberger, Emily-B155  
Liptai, Laura L.-D19, W20  
Litterell, Kimberly-I9  
Liu, Ning-J3  
Logan, Barry K.-BS3, K48  
Long, Sarah-H58  
Longe, Kelsey-K63  
Lopez, Kaitlyn A.-A91  
Losavio, Michael M.-W22  
Lottering, Nicolene-A84  
Lougee, Kevin M.-A115  
Love, Jennifer C.-A103  
Low, Landa S.-D19  
Lozano, Jason Gene-H41  
Lubin, Micheline-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

## M

Mabry, John-E93  
MacGregor, Donna M.-E23, L2  
Magalhães, Teresa-H3, I1  
Magallanes, Adela S.-H88  
Magni, Paola A.-H12  
Maier, Christopher A.-A86  
Maijanen, Heli-A9  
Makar, Susan-W1  
Malanowski, Amanda-W1  
Maloney, Katherine F.-H108  
Mamedov, Sergey-B84  
Maness, Holland-G26  
Marciano, Michael-B99  
Marginean, Ioan-B159  
Margot, Pierre A. J.-L.-W9  
Marinho, Luisa-A23  
Marion, Jr., Daniel-E4

Márquez-Grant, Nicholas-A62  
Marshall, Charla-B179, W23  
Marshall, Judy Y.-G34  
Marshall, Lucas-K68  
Marshall, Shirley-F24  
Martinez-Escauriaza, 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  
McClain, Brittany S.-A96  
McClary, Carl R.-J7  
McClenon, Hailey-H21  
McCleskey, Brandi C.-E6, H76  
McClung, Soraya-B25  
McCormick, Kyle A.-A69  
McDanel, Chloe P.-A19  
McDowell, Jennifer L.-A129  
McDowell, Michael D.-D26  
McKiel, Mary C.-ES1  
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 Yusmiadil P.-G14  
Mohr, Amanda L.A.-K60  
Mohrhaus, Angela S.-B74  
Moini, Mehdi-B123, B129, W20  
Monico, Ilaria-H47  
Moore, David S.-J18  
Moore, Jennifer A.-G9  
Moore, Katherine N.-B29, B141  
Moore, Melissa D.-B134



## PRESENTING AUTHOR INDEX

Morgan, Stephen L.-B170, B185  
Morris, Keith B.-B30  
Morris, Reanna J.-A105  
Morton, Robert J.-BS2  
Moses, Sharon K.-E66  
Mostowtt, 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

### N

Naisbitt, Gary H.-E2  
Najarro, Marcela-E57  
Najera, Rebecca-I26  
Nakao, Ken-ichiro-K24  
Nau, Martin-I11  
Neal, Andrew-W4  
Neal, Christina M.-W23  
Neudecker, Klaus C.-W21  
Neufeld, Peter-F21  
Neuman, Kayla M.-K44  
Newcomb, Tara L.-G1, G44  
Newmeyer, Matthew N.-K53  
Nguyen, Thutrang-B139  
Nielsen, Nikolaj Kjaer-D11  
Nirenberg, Michael S.-E28  
Nixon, John-D12, S2  
Nolan, Thomas J.-K27  
Nolte, Kurt B.-S1  
Norris, David O.-E13  
Noureddine, Maher-E21  
Noval, Erin M.-E40  
Noziglia, Carla Miller-BS5  
Nuñez Vázquez, Carolina-E36  
Nuzzolese, Emilio-G12

### O

O'Neill, Tiffany-H105  
Oakes-Smith, Jenna L.-B206

Ocal, Isil-J1  
Ogris, Kathrin-H6  
Olaya Molina, Edwin O.-E88  
Oliver, William R.-H63  
Olivier, Martin S.-C22  
Olson, Alane-K75  
Ott, Daniel-B167  
Ott, Shana-A58  
Ousley, Stephen D.-A16, A101  
Ozdemir, Erdinc-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, Deborrah C.-H137  
Plaza, Dane T.-B138  
Plemons, Amber M.-A33  
Plourd, Christopher J.-W4  
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  
Priebe, 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, Sundeep 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.-BS6  
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  
Rhyu, 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  
Riman, Sarah-B182  
Ring, Joseph D.-B177, W23  
Rios, Irma-E62



# PRESENTING AUTHOR INDEX



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  
Rollman, Christopher M.-B49  
Romoser, Amelia-K70  
Romsos, Erica L.-B215  
Roper-Miller, Jeri D.-S1, W12  
Rosa, Roberto-B164  
Rosenbaum, Karen B.-I6  
Rosenblatt, Adam R.-A37  
Ross, Alastair-W9  
Ross, Ann H.-A3  
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  
Schaerli, 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  
Seashols 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, Inga-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, Kitrina 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  
Sprogoe-Jakobsen, Susan-H81  
Stanciu, Cristina E.-B106  
Steadman, Dawnie W.-A128  
Stein, Paul-B133, B134, E11, F10  
Stephan, Carl N.-A70  
Stephens, Peter J.-LW4  
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  
Sufrin, Vanessa-H117  
Sugimoto, Garrett-B100  
Sullivan, Mary-I20  
Sullivan, Travis M.-H44  
Sulner, 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  
Temi, Silvana-H40  
Temporal, Keith-Dane H.-K61  
Tersigni-Tarrant, MariaTeresa A.-A100, H80  
Thevissen, Patrick W.-G7  
Thielen, Rebecca-B39  
Thirakul, Phouthasone-H53  
Thomas, Brittany-K1, K45  
Thomas, Sara R.-I42  
Thompson, Monica M.-A91  
Thompson, Robert M.-B169, B173, W20  
Thrasher, Ronald R.-I9  
Tidball-Binz, Morris V.-W16  
Tillmar, Andreas-B208  
Tise, Meredith L.-A89  
Tobin, Cathy-W19



## 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, Lucile-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

### U

Ubelaker, Douglas H.-W16  
Ullah, Naeem-W5  
Ulubay, Ayca-H15  
Umbach, Noelle J.-S2, W8  
Unal, Esra-I4, I13  
Urbanová, Petra-C21  
Usman, Abdullah-F44  
Uvaydov, Yuriy-B75

### V

Valentine, Julie L.-E56  
Vallone, Peter M.-W23  
van Asten, Arian C.-D17, W20  
Van Den Broek, Lisa M.M.-A45  
Vandell, Victor-K31  
Vanin, Stefano-G36, H93  
Vargas Becerril, Nancy-G3  
Vastrick, Thomas W.-J5, J19, W6  
Vaughan, Patrick E.-D3  
Veltri, Jessica Ann-W7  
Ventura Spagnolo, Elvira-E5  
Vidaki, Athina-B192  
Vieira, Duarte Nuno-E83, W16  
Villarreal, Margarita M.-A109  
Villeme, AnniLauri-B142  
Viner, Mark D.-W18  
Vircks, Kyle E.-B199  
Visonà, Silvia D.-H38  
Vitale, Giulia-G10  
Vollmer, Erin L.-B3  
Vollner, Jennifer M.-A76  
Volpini, Laura-I43

### W

Waddell, Erin-B154  
Waddell Smith, Ruth-B46  
Wagner, Audriana M.-B38  
Wagner, Sarah-A34  
Wagoner, 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  
Waugh, Jalika Rivera-E9  
Weber, Ingrid T.-B158  
Weedn, Victor W.-W20  
Weinstock, Robert-I6, 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  
Wilkinson, 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.-I7

### Z

Zadok, Elazar-E55  
Zaferes, 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

# NOTES





## NOTES

284

# NOTES







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