

EVIDENCE UNCORKED: FORENSIC SCIENCE COMES TO TEMECULA



140TH CAC SEMINAR
HOSTED BY THE CALIFORNIA DOJ RIVERSIDE LAB
TEMECULA CREEK INN

VISIT CACNEWS.ORG FOR MORE INFO



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2026 CAC SEMINAR



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Welcome to the 2026 California Association of Criminalists Seminar!



On behalf of the Seminar Planning Committee, it is our pleasure to welcome you to Temecula and to the beautiful Temecula Creek Inn for this year’s gathering. Our theme, “Evidence Uncorked: Forensic Science Comes to Temecula,” celebrates both the setting and the spirit of the seminar, bringing together expertise, innovation, and collaboration to open new conversations in forensic science.

This seminar brings together a vibrant and diverse community of forensic scientists, faculty, students, and industry partners who support and advance our field. Over the coming days, you will engage in compelling case presentations, hear about emerging scientific studies in forensic science, and learn from presentations highlighting the critical role of law enforcement support systems. Together, these sessions reflect our shared commitment to scientific rigor, ethical practice, and continual learning.

Beyond the formal program, we hope you take full advantage of the opportunities to connect with colleagues, mentors, students, and vendors. These conversations, whether in the meeting rooms, exhibit areas, or over a meal, are often where ideas are sparked, collaborations begin, and professional relationships are strengthened.

Thank you for being part of this seminar and for the important work you do every day in the service of justice and science. We are honored to host you and hope you find the 2026 seminar engaging, thought-provoking, and professionally rewarding.

Welcome to Temecula and enjoy the seminar!

Sincerely,

Caroline Kim
Seminar Co-Chair

Mey Tann
Seminar Co-Chair and Budget Chair

Committee Chairs and Coordinators

Melanie Velasco
Program Chair

Casey Hughes
Vendor Chair

Jennifer Dernoncourt
Hospitality Chair

Cassandra Carlos
Nicole Taylor
Donations/Fundraising Chairs

Celina Moufarrej
Allison Vlasak
Registration Co-Chairs

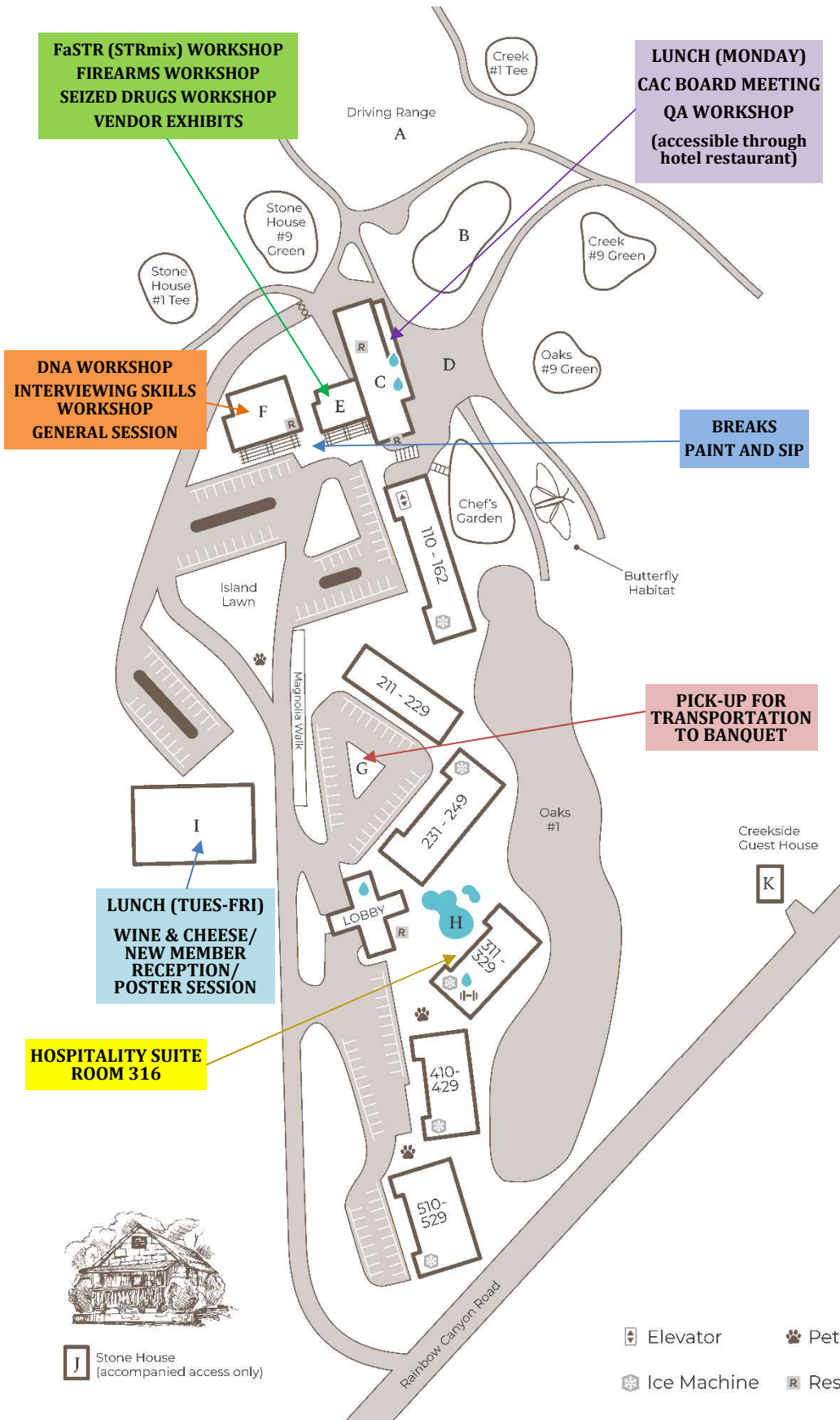
Maya Hamade
Melanie Velasco
Special Project Coordinators

Samantha Bendix
Irene Cabrera
Alina Melkomian
Lizett Ramirez
Elias Valencia
Workshop Coordinators

Chad Eyerly
Christopher Hung
Elias Valencia
Audio/Visual Coordinators

Donavon Childers
Samantha Fielder
Mikaylah Johnson
James Meza
Destiny Rivera
Allysa Tewksbury
Committee Support

TEMECULA CREEK INN MAP



TEMECULA CREEK INN
EST. 1969

44501 Rainbow Canyon Road
Temecula, California 92592
Phone: (951) 694-1000
Text: (951) 476-2002
temeculacreekinn.com

- A Driving Range
- B Putting Green
- C UPPER LEVEL
Cork I Fire Kitchen
Quarry Room
- C LOWER LEVEL
Pro Shop
Porter's 19
- D The Plaza
- E Sage Ballroom + Patio
- F Olive Ballroom + Patio
- G Stone House Shuttle Pick-up
- H Swimming Pool & Hot Tub
- I The Meadows
- J Stone House
- K Creekside Guest House



SCAN TO TOUR OUR
BUTTERFLY GARDEN



J Stone House
(accompanied access only)

- Elevator
- Pet Station
- Water Station
- Ice Machine
- Restroom
- Fitness Center



REGISTRATION HOURS



To check in for the seminar, purchase extra tickets, or purchase a t-shirt, visit the CAC Registration Desk.

Location: Poolside

Sunday: 4:00 PM – 6:00 PM

Location: Olive Patio

Monday: 7:00 AM – 8:00 AM

4:00 PM – 6:00 PM

Tuesday: 7:00 AM – 8:00 AM

4:00 PM – 6:00 PM

Wednesday: 7:00 AM – 5:00 PM

Thursday: 7:00 AM – 5:00 PM

Friday: 7:00 AM – 8:00 AM



HOSPITALITY SUITE



ROOM 316



Join us at the Hospitality Suite to relax and mingle.
Complimentary snacks and alcoholic/non-alcoholic beverages are available.

Sunday: 6 PM – 9 PM

Monday: 6 PM – 10 PM

Tuesday: 6 PM – 10 PM

Wednesday: 7:30 PM – 10 PM

Thursday: 9:30 PM – 11 PM

Co-Sponsored by:

ThermoFisher
SCIENTIFIC

Paint & SIP

TUESDAY

APRIL 28th 6-8 PM

OLIVE PATIO @ TEMECULA CREEK INN



\$40
PER PERSON

**INSTRUCTOR-LED AND
INCLUDES PAINT,
SUPPLIES, AND CANVAS**

**DRINKS AVAILABLE FOR
PURCHASE AT HOTEL BAR**

**REGISTER AT CACNEWS.ORG
BY APRIL 22, 2026**



WINE AND CHEESE RECEPTION



MEADOWS

Wednesday April 29th
6-8 pm

Join us for a relaxed and enjoyable evening featuring a selection of wine and beer paired with delicious light refreshments

Includes Poster Session and New Member Reception
Must have a ticket to attend

Sponsored by:

HAMILTON



2026 CAC SEMINAR BANQUET



THURSDAY, APRIL 30
6-10 PM

Set against the relaxed beauty of Temecula wine country, this banquet invites guests to unwind and connect beneath soft lights and vineyard-inspired décor. It's an evening to enjoy good company, great conversation, and the spirit of Temecula, an elegant close to a week of forensics uncorked.

**The venue is onsite, although transportation to and from the venue is required*

Transportation is provided

No self-transportation allowed

Meet in the parking lot north of the lobby

Dress is cocktail attire

Venue is on the grass

Must have a ticket to attend



WEEK AT A GLANCE

2026 CAC SEMINAR



Monday, April 27	8:00 AM – 4:30 PM	Crime Scene Investigation & Shooting Incident Reconstruction Workshop	Off-site
	8:00 AM – 5:00 PM	FaSTR™ DNA Workshop	Sage Ballroom
	6:00 PM – 9:00 PM	Hospitality Suite	Room 316
Tuesday, April 28	8:00 AM – 5:00 PM	DNA Workshop	Olive Ballroom
	8:00 AM – 5:00 PM	Firearms Workshop	Sage Ballroom
	8:00 AM – 5:00 PM	Seized Drugs Workshop	Sage Ballroom
	8:00 AM – 5:00 PM	Quality Assurance Workshop	Quarry Room
	1:00 PM – 5:00 PM	Interviewing Skills Workshop	Olive Ballroom
	5:30 PM – 7:30 PM	Board of Directors Meeting	Quarry Room
	6:00 PM – 8:00 PM	Paint & Sip	Olive Patio
	6:00 PM – 10:00 PM	Hospitality Suite	Room 316
Wednesday, April 29	8:00 AM – 4:00 PM	General Session	Olive Ballroom
	4:00 PM – 5:00 PM	CAC Business Meeting	Olive Ballroom
	6:00 PM – 8:00 PM	Wine and Cheese/New Member Reception/ Poster Session	The Meadows
	7:30 PM – 10:00 PM	Hospitality Suite	Room 316
Thursday, April 30	8:00 AM – 5:00 PM	General Session	Olive Ballroom
	6:00 PM – 10:00 PM	Banquet	Stone House
	9:30 PM – 11:00 PM	Hospitality Suite	Room 316
Friday, May 1	8:00 AM – 12:30 PM	General Session	Olive Ballroom



CSI WORKSHOP ABSTRACTS

MONDAY, APRIL 27, 2026



Crime Scene Investigation & Shooting Incident Reconstruction Workshop: A Simple Approach to Bullet Path Determination

Presented By:

Michael Appel, *California Department of Justice, Bureau of Forensic Services*

Abstract:

In this 4-hour workshop, participants will learn a precise method for establishing bullet trajectories without relying on trajectory rods, strings, specialized trajectory measuring equipment, lasers, or other scanning devices. Utilizing only a tape measure or a smartphone measurement application, crime scene responders will be able to accurately determine bullet impact locations at a crime scene. Subsequently, in their own laboratories, examiners can reconstruct bullet paths using a scientific calculator—easily accessible via a smartphone—and the principles of right triangle geometry. Participants are encouraged to download a measurement app from the App Store or Google Play prior to the workshop. Practical exercises will involve measuring bullet impacts and calculating bullet trajectories, demonstrating the accuracy of smartphone measurement applications in comparison to traditional tape measures.

Biography:

Mike Appel has given presentations at AFTE and CAC training seminars in the topic of firearms identification and related topics. Mike has provided instruction to Tulare County District Attorney's Office, Fresno County District Attorney's Office, Kings County Sheriff's Office, Central Valley Crime Scene Investigators group, Fresno Public Defenders Office, Merced Police Department, and other local law enforcement agencies, in firearms identification, crime scene investigations, serial number reconstruction, and shooting incident reconstruction. He has also taught classes in firearm and tool mark evidence for the Fresno City College and California State University, Fresno. Mike is currently a Criminalist Supervisor at the BFS Fresno Laboratory, and the instructor for the CCI Shooting Incident Reconstruction Class (S202).



CSI WORKSHOP ABSTRACTS

MONDAY, APRIL 27, 2026



Crime Scene Investigation & Shooting Incident Reconstruction Workshop: Found at the Intersection, a case of Homicide or Suicide?

Presented By:

Sgt. David Lally, *Fontana Police Department*

Forensic Investigator Lisa Young, *Fontana Police Department*

Abstract:

This portion of the workshop will review a specific death investigation that occurred at the Fontana Police Department. We will discuss and examine forensic fundamentals that were utilized to determine the outcome of this case. Trajectory/ballistics, bullet wipe and glass fundamentals are covered in this case debrief.

Biographies:

Sgt. David Lally has been employed with the Fontana Police Department for twenty-six years. He has been the department Range Master for over twenty years. He serves as a department firearms specialist and has qualified as a firearms expert at trial in San Bernardino and Los Angeles Counties. He has previously served as a detective and MAIT investigator. He has also previously hosted and instructed forensic training for the Inland Valley Forensic Investigators and has presented firearm case work to the Southern California Firearms Study Group.

Lisa Young has been employed at the Fontana Police Department for twenty years as a Forensic Investigator and has previous forensic training with the San Bernardino County Sheriff's Department. She has over 25 years of forensic training in crime scene investigations and evidence processing. She is a Certified Crime Scene Analyst with the International Association for Identification and is a general section member of AAFS. She has testified as an expert witness in trajectory, bloodstain pattern interpretation, and general firearms nomenclature for cases in two local counties. She, along with Sgt. Lally, hosted and instructed forensic training for the Inland Valley Forensic Investigators in topics related to death investigations, homicide vs. suicide, and bullet trajectory.



FaSTR™ DNA WORKSHOP

MONDAY, APRIL 27, 2026



FaSTR™ DNA: DNA Profile Analysis in a Validated Process for Efficiency and Interpretation

Presented By:

Meng-Han Lin, *The New Zealand Institute for Public Health and Forensic Science Limited - PHF Science - STRmix*

Helena Wong, *Oakland Police Department*

Veronica Kearney, *The New Zealand Institute for Public Health and Forensic Science Limited - PHF Science - STRmix & Tucson Police Department Crime Laboratory (retired)*

Workshop Description:

Key topics include:

- Examining raw EPG data and the impact of peak smoothing on peak calls
- Comparing sizing variations across different analysis software
- Exploring operator tools for effective analysis
- Understanding stutter modelling and its role in interpretation and determination of the number of contributors
- Developing optimized workflows, including for technical review of DNA analysis
- Validating analysis software for reliable results

We provide live demonstrations of FaSTR™ DNA analysis software, determining the number of contributors using the decision tree, and workflow demonstration of integration with STRmix™ for interpretation.

Biographies:

Meng-Han is a Senior Scientist at The New Zealand Institute for Public Health and Forensic Science Limited (PHF Science) and has been employed in the STRmix team since 2016. A molecular biologist by background, his role is primarily responsible for the development, validation, and support of FaSTR™ DNA analysis software.

Helena completed her Master of Science degree in Forensic Science at UC Davis. She is a Criminalist II at the Oakland Police Department Crime Laboratory in the Forensic Biology Unit, with over 14 years of casework experience.

Veronica is a retired DNA Technical Leader from Tucson Police Department Crime Laboratory and is currently independently contracted as a Technical Specialist with the STRmix team at The New Zealand Institute for Public Health and Forensic Science Limited (PHF Science).



FaSTR™ DNA WORKSHOP SCHEDULE

MONDAY, APRIL 27, 2026



Time	Title
08:00 - 08:10	Introduction
08:10 - 08:50	How to generate a DNA profile
08:50 - 09:30	Stutter models in DNA analysis
09:30 - 10:00	Artificial Neural Networks (ANN)
10:00 - 10:30	BREAK (OLIVE PATIO)
10:30 - 11:20	Estimating the Number of Contributors
11:20 - 12:00	Validating analysis software
12:00 - 13:00	LUNCH (QUARRY ROOM)
13:00 - 13:35	Validating analysis software
13:35 - 14:45	Implementation and Training
14:45 - 15:15	BREAK (OLIVE PATIO)
15:15 - 16:30	Analysis workflow in FaSTR™ DNA
16:30 - 16:45	FaSTR v1.3 sneak peek
16:45 - 17:00	Discussions / Questions / Workshop close



DNA WORKSHOP SCHEDULE

TUESDAY, APRIL 28, 2026



8:00 AM – 8:15 AM	Welcoming Remarks
8:15 AM – 9:00 AM	Transforming the Ecosystem: The Future in Focus <i>Danielle Jardell and Andrew Ingram, Thermo Fisher Scientific</i>
9:00 AM – 9:45 AM	The Use of Evidence Charts for Presenting and Understanding LR's and the Criminal Trial Procedure <i>Christina Walsh, Riverside County District Attorney's Office</i>
9:45 AM – 10:15 AM	Overcoming Stutter in STR Analysis with Novel Enzyme <i>Joe Pasternak, Promega Corporation</i>
10:15 AM – 10:30 AM	BREAK (OLIVE PATIO)
10:30 AM – 11:15 AM	Using Microbial DNA to Track Saliva Across a Mock Crime Scene <i>Nadia Cisse MS, California DOJ - Jan Bashinski DNA Laboratory & University of California Davis Forensic Science Graduate Program</i>
11:15 AM – 12:00 PM	Is there really no DNA in my case? A look at how advancements in DNA collection and testing may generate new leads <i>Melissa Haas, Bode Technology</i>
12:00 PM – 1:00 PM	LUNCH (THE MEADOWS)
1:00 PM – 1:45 PM	Multi-Dimensional Forensic Intelligence: A New Era in Forensic Genetic Genealogy <i>Gabriel Feltner, Othram, Inc.</i>
1:45 PM – 2:30 PM	Success Stories through the use of Investigative Genetic Genealogy <i>Robert Taft, Riverside County District Attorney's Office</i>
2:30 PM – 2:50 PM	BREAK (OLIVE PATIO)
2:50 PM – 3:35 PM	The Scientific Working Group on DNA Analysis Methods (SWGDM) Position on Formal Activity Level Reporting <i>Shawn Monpetit, San Diego Police Department</i>
3:35 PM – 4:05 PM	DNA in Court – Legal Updates <i>Michael Chamberlain, California Department of Justice</i>
4:05 PM – 4:30 PM	Modernizing DNA Workflows Using Artificial Intelligence <i>Mandi Van Buren, DNA Labs International</i>
4:30 PM – 5:00 PM	Bridging the Gap: Strengthening DNA Analyst Training for Courtroom Testimony <i>Amanda Murray, DNA Labs International</i>



DNA WORKSHOP ABSTRACTS

TUESDAY, APRIL 28, 2026



Transforming the Ecosystem: The Future in Focus

Presented By:

Danielle Jardel, *Thermo Fisher Scientific*

Andrew Ingram, *Thermo Fisher Scientific*

Abstract:

What if the biggest breakthroughs in your field aren't about doing more—but about finally seeing clearly?

In an era where complexity continues to grow and expectations rise, the next wave of innovation isn't just incremental—it's transformative. This session invites you to step into a rapidly evolving landscape where long-standing challenges are being reimaged, and where the boundaries of what's possible are quietly shifting.

Through a compelling narrative of progress, integration, and forward-thinking design, we'll explore how emerging approaches from Thermo Fisher Scientific are reshaping workflows, redefining performance, and unlocking new levels of confidence in outcomes. Attendees will gain a fresh perspective on how seemingly separate pieces can come together to create something far more powerful—and far simpler—than before.

Whether you're pushing the limits of your current capabilities, or preparing for what's next, this presentation offers a glimpse into a future that is already beginning to take shape.

Come curious. Leave with a new lens on what's possible.

Biographies:

Danielle Jardel is a Field Application Scientist at Thermo Fisher Scientific with six years of experience supporting the Human Identification product portfolio. She works closely with laboratories to provide support and training in the implementation of technologies and optimize forensic workflows. Prior to joining Thermo Fisher, Danielle spent over a decade in forensic casework as a Forensic Biology Supervisor and DNA Analyst in private crime laboratories, bringing practical expertise in forensic DNA analysis to her role.

Andrew Ingram is a Senior Account Manager for the Southwest region at Thermo Fisher Scientific, where he has spent over six years supporting the Human Identification portfolio. He works closely with laboratories and agencies to bring forward innovative solutions that enhance forensic workflows and capabilities. Prior to his current role, Andrew served as a Senior Field Application Scientist at Thermo Fisher, supporting both Human Identification technologies and next-generation sequencing. Before joining the company, he spent more than a decade as a Forensic DNA Analyst with the Louisiana State Police Crime Laboratory.



DNA WORKSHOP ABSTRACTS

TUESDAY, APRIL 28, 2026



The Use of Evidence Charts for Presenting and Understanding LRs and the Criminal Trial Procedure

Presented By:

Christina Walsh, *Riverside County District Attorney's Office*

Abstract:

This presentation will cover when and how to create an evidence chart summarizing DNA evidence for use at trial in criminal cases, strategies for presenting and effectively explaining likelihood ratios to a jury at trial, and general criminal trial procedure, from the filing of a criminal case to the discovery process, to the coordinating, preparing, and presenting of witness testimony at trial.

Biography:

Christina Walsh is a Deputy District Attorney at the Riverside County District Attorney's Office. She has been a Deputy District Attorney for about 18 years and currently works in the Sexual Assault and Child Abuse Unit prosecuting sexual assault cases, physical child abuse cases, and homicide cases, many of which involve the use of DNA evidence. She has worked with criminalists to successfully present DNA evidence in court in numerous cases.



DNA WORKSHOP ABSTRACTS

TUESDAY, APRIL 28, 2026



Overcoming Stutter in STR Analysis with Novel Enzyme

Presented By:

Joe Pasternak, *Promega Corporation*

Abstract:

Short tandem repeat (STR) analysis is a fundamental tool in forensic DNA investigations. One of the primary challenges in STR analysis is the presence of stutter artifacts, which arise from polymerase slippage during amplification. These artifacts complicate mixture interpretation and can impact the accuracy of forensic DNA profiling. By focusing on protein engineering and machine learning approaches, we aimed to modify DNA polymerase properties to enhance its fidelity and processivity. This resulted in the development of a novel DNA polymerase that significantly reduces stutter while maintaining the robustness and sensitivity required for forensic applications.

This novel polymerase (Reduced Stutter Polymerase or RSP) has been incorporated into Paradyme 27GY STR System, an advanced STR system leveraging eight-color technology for both casework and direct amplification samples. The system amplifies the 20 CODIS core loci along with Penta D, Penta E, and SE33, while also including markers for gender determination, two rapidly mutating Y-STR loci, and two Quality Indicators (QI). By drastically reducing stutter artifacts, Paradyme 27GY STR System delivers clearer, more interpretable DNA profiles without altering standard workflows, offering significant advantages for forensic DNA analysis.

Biography:

Joe Pasternak is a Global Validation Scientist in the Genetic Identity Division at Promega Corporation. In this role, he provides validation services for chemistries and instrumentation to forensic laboratories around the world. Before joining Promega, Joe accumulated over 21 years of forensic experience. He began his career at the City of Phoenix Police Crime Laboratory, working as a serologist for three and a half years. He then spent the remainder of his forensic career at the Montana State Crime Laboratory, serving as a DNA Analyst and later as the Biology Supervisor and DNA Technical Leader for 11 years.

Joe has also contributed to forensic quality assurance across the country as both a Technical and Lead Assessor for the National Forensic Science Technology Center and as a Technical Assessor for ANAB, conducting DNA laboratory audits nationwide. Joe is also a former member of the California Association of Criminalists and has presented at past CAC Seminars.

In his free time, Joe enjoys hiking and biking the many trails throughout Montana and is an avid restorer of vintage automobiles.



DNA WORKSHOP ABSTRACTS

TUESDAY, APRIL 28, 2026



Using Microbial DNA to Track Saliva Across a Mock Crime Scene

Presented By:

Nadia Cisse MS, *California DOJ - Jan Bashinski DNA Laboratory | University of California Davis Forensic Science Graduate Program*

Abstract:

Microbiology has a well-established history of use in forensic science, playing a large role in determining post-mortem intervals, trace analysis, and sexual assault cases. Recent studies have shown that body fluids can be identified based on their unique microbial communities. Primers and probes have been designed for bacteria that are present in high quantities in feces, saliva and vaginal/menstrual secretions. Previous studies have focused on the presumptive identification of the aforementioned body fluids using microbial DNA. The aim of our study is to use this information to track how body fluids transfer across a crime scene, providing information of activity-level questions and analyzing if this method is potentially applicable to casework.

Identifying body fluids plays a crucial role in many forensic investigations since the body fluids present at a crime scene provide key information about what took place. Since microbial DNA co-extracts alongside human DNA in regularly performed DNA extraction methods, this technique allows analysts to use the same sample to both identify the body fluid and develop a profile. This method could be very impactful would allow analysts to presumptively identify the body fluids while they are doing DNA analysis, rather than using a separate swab or sample from an apparent stain specifically for body fluid identification.

Using previously validated primers and probes designed for *Streptococcus salivarius*, we used qPCR to determine if saliva can be presumptively detected after secondary transfer in a mock crime scene. We worked with saliva because of its notably high and well-established microbial community. Additionally, approximately 15% of all touch DNA comes from body fluids present on the hands, including saliva. The primary transfer consisted of a known quantity of saliva being deposited onto a mock hand, which was then used to simulate opening a doorknob. For the secondary transfer, saliva was deposited onto one mock hand (Hand A), a handshake was conducted with a separate mock hand (Hand B). Hand B was then used to simulate opening a doorknob. Results of this study showed that saliva could be detected after both primary and secondary transfer. Furthermore, bitemarks were simulated and examined to determine if this method could be used to aid in identifying bitemarks based on the presence of saliva since bitemark impression evidence can be unreliable on its own. Saliva was presumptively detected in the bitemarks.

With this method, serology-related benefits of forensic microbiology have the potential to be applied to activity-level propositions and aid in bitemark identification. If we can distinguish between primary and secondary transfer of specific body fluids and detect them even after secondary transfer, analysts would be able to make better use of the evidence provided to determine the sequence of events that took place at a crime scene. Similarly, the addition of this method could add credence to bitemark identification in violent crimes. Although we focused on salivary microbial DNA in this study, the methodology developed could be applied to other body fluids in the future.

Biography:

In September 2025, Nadia completed her Master of Science degree in Forensic Science with a focus in DNA analysis at the University of California Davis Forensic Science Graduate Program. She is currently employed as a Criminalist in the Casework Department at the Jan Bashinski DNA Laboratory. Training in casework has been an immensely valuable experience so far for her, and she looks forward to continuing to grow with the people at the Richmond Lab. In her free time, she enjoys anything craft-related, such as crocheting or painting, and attempting to recreate recipes from her home country, Trinidad and Tobago. Nadia completed her undergraduate degree in Biochemistry and Biology at the University of the West Indies St. Augustine Campus in Trinidad. She has greatly enjoyed living in California, and she especially enjoys the variety of seasons, particularly the spring.



DNA WORKSHOP ABSTRACTS

TUESDAY, APRIL 28, 2026



Is there really no DNA in my case? A look at how advancements in DNA collection and testing may generate new leads

Presented By:

Melissa Haas, *Bode Technology*

Abstract:

Screening and sampling methods for biological evidence recovery and DNA analysis have drastically changed since the beginning of DNA testing in criminal casework. Testing limitations forty years ago no longer apply as updated collection techniques, extraction methods and DNA typing methods have evolved and improved. This presentation will outline factors that impact the success of obtaining a profile and dives into advanced techniques with real-world examples that can be used for successful lead generation.

Biography:

Melissa Haas serves as a Technical Account Manager for Bode Technology. She holds a Bachelor of Science in Biology and Psychology from East Texas Baptist University and a Master of Science in Forensic DNA Analysis and Serology from the University of Florida. Melissa is licensed as a Forensic DNA Analyst in the state of Texas and holds a Forensic Manager Level II certification from the National Forensic Science Academy. Prior to joining Bode Technology, she served as the Casework Laboratory Director for the Center for Human Identification at the University of North Texas Health Science Center overseeing all technical operations of the laboratory and as a DNA Section Supervisor for the Texas Department of Public Safety Regional Crime Laboratory in Garland, Texas. Melissa has over 20 years of experience in forensic DNA casework with expertise in STRs, Y-STRs, and SNPs.



DNA WORKSHOP ABSTRACTS

TUESDAY, APRIL 28, 2026



Multi-Dimensional Forensic Intelligence: A New Era in Forensic Genetic Genealogy

Presented By:

Gabriel Feltner, *Othram, Inc.*

Abstract:

Since 2018, Othram, Inc. has been focused on utilizing Forensic Genetic Genealogy to assist law enforcement agencies as they attempt to solve cold and active cases, as well as unidentified human remains cases. Leveraging Forensic Grade Genome Sequencing and Multi-Dimensional Forensic Intelligence, Othram, Inc. has developed unparalleled expertise and success in Forensic Genetic Genealogy. This presentation will focus on the capabilities and success with real world case studies as well as a look at the Othram Deployed Solutions. The Othram Deployed Solutions allow labs and agencies across the globe to bring the Othram workflow in-house without compromises.

Biography:

Gabe Feltner got his start at Ohio Bureau of Criminal Investigation (BCI) in 2004 as a DNA analyst. After several years working cases, he took a role as a Field Application Scientist at Applied Biosystems, eventually moving into sales in 2011. Gabe has been the North American Sales Director at Othram since 2024 and has worked with laboratories and law enforcement agencies across North America.



DNA WORKSHOP ABSTRACTS

TUESDAY, APRIL 28, 2026



Success Stories through the use of Investigative Genetic Genealogy

Presented By:

Robert Taft, *Riverside County District Attorney's Office*

Abstract:

Case #1: Tracy Coreen Hobson – aka: Anaheim Jane Doe

Skeletonized remains were found in a remote area of Eastern Orange County in September 1987. Remains were estimated to be a Caucasian female 18 – 30 years old with a slight build. This case involved the first use of clay model reconstruction in Orange County (October 1987). Case quickly went cold. May 2018, partnered with a 3rd party organization to implement the use of Investigative Genetic Genealogy in hopes of getting her identified. Since this was new technology for law enforcement, many areas were unfamiliar and collaboration was required to develop a path to success. Subject was eventually identified in 2020 as Tracy Hobson. Tracy had been the victim of an assault, and the suspect had been arrested. The day the suspect bailed out of jail was the last day Tracy was seen alive. She was estranged from her family, so no one initially reported her missing. Once the victim had been identified, now the homicide investigation began. A tentative suspect was eventually identified, and a case was presented to the District Attorney's Office. Unfortunately, the DA refused to file, but the family and her loved ones were able to know what happened to her.

Case # 2: Michael Schlicht – aka: 1974 Laguna Hills John Doe.

In September 1974, a nude male subject was discovered off a fire break in what was then, rural southern Orange County. His case was initially ruled an accidental overdose and not investigated as a homicide. Over the course of the next several years, several additional male victims were found throughout Southern California. From the late 1970s to the early 1980s, there were three serial killers operating in the SoCal area, Patrick Kerney, Randy Kraft and William Bonnin. Randy Kraft, later dubbed the scorecard killer, was arrested in May 1983 in Mission Viejo, CA. He was eventually convicted of 16 homicides and sentenced to death. Kraft's manner of incapacitating his victims was to drug them with sedatives and alcohol. This matched the "accidental death" of our 1974 John Doe and several additional victims associated with Kraft. Investigative genetic genealogy was initiated in 2023, and he was successfully identified as Michael Schlicht in 2024. Schlicht's mother and sister were still alive, and they recalled Michael was last seen leaving Cedar Rapids, Iowa in April 1974. Coincidentally, there was an entry for "Iowa" on Kraft's list. The family opted to leave Michael's remains in Orange County and he was now provided a head stone to mark his final resting place. This case was presented to the Orange County District Attorney's Office in July 2024, currently waiting on a final disposition. Kraft is still incarcerated with the California Department of Corrections but is no longer on death row. Schlicht's family referred to us as Michael's guardian angels for continuing to pursue his case and providing them with the answer to what happened to him.

Biography:

Investigator Robert (Bob) Taft is a 32-year veteran of a Southern California law enforcement agency, who recently retired in March of 2025. He spent the last 17 years of his career as an Investigator (Detective) assigned to General Investigations, Special Investigations and the final 8+ years in Homicide. During his time in homicide, he was assigned to the Orange County District Attorney's Cold Case Task Force, and when that unit disbanded in the fall of 2020, he was the Cold Case Investigator for the Orange County Sheriff's Department. In May 2018, following the arrest of Joseph DeAngelo, Inv. Taft was collaterally assigned to the OC District Attorney's Golden State Killer Task Force, where he was first exposed to the then, groundbreaking technology of Investigative Genetic Genealogy. Working with some of the initial pioneers regarding the use of IGG in Law Enforcement, Inv. Taft was instrumental in introducing this concept to the Orange County Sheriff's Department and its eventual use in solving some of his department's long cold cases. Initially partnering with a private entity and subsequently with their Regional FBI Genealogy Team, Inv. Taft continued to pursue his education in the IGG field and has completed the University of New Haven's Certificate Program in Investigative Genetic Genealogy, the FBI's Genetic Genealogy Training Course, and Ramapo College of New Jersey Investigative Genetic Genealogy Certificate Program. Inv. Taft and his law enforcement partners eventually became proficient enough to implement their own IGG investigations for his agency. Prior to his retirement, the Orange County Sheriff's Department had successfully identified seven unidentified subjects using Forensic Investigative Genetic Genealogy. Since his retirement, Inv. Taft accepted a part time position with the Riverside County (CA) District Attorney's Office, Regional Cold Case Homicide Team, and became a Reserve Deputy with the Orange County Sheriff's Department, where he volunteers with the Coroner Division in assisting in trying to identify their John and Jane Doe cases. Inv. Taft is also an avid presenter on the topic of Investigative Genetic Genealogy in Law Enforcement, with his most recent presentation being a Keynote Speaker for the 2025 Ramapo College of NJ annual Investigative Genetic Genealogy Conference.



DNA WORKSHOP ABSTRACTS

TUESDAY, APRIL 28, 2026



The Scientific Working Group on DNA Analysis Methods (SWGDM) Position on Formal Activity Level Reporting

Presented By:

Shawn Monpetit, *San Diego Police Department*

Abstract:

The Scientific Working Group on DNA Analysis Methods (SWGDM) position statement on formal activity level reporting (ALR) addresses the growing interest in evaluating DNA evidence beyond source attribution. While traditional reporting focuses on associating potential contributors to DNA results, activity level reporting considers how and when DNA was deposited, which are often the questions that are critical in judicial proceedings. SWGDM emphasizes that formal activity level evaluations are not yet sufficiently developed or validated for routine use in U.S. courts.

This presentation will define formal activity level reporting as outlined in the SWGDM position statement, including its conceptual framework and the distinction between source and activity level propositions. It will highlight current concerns regarding the application of formal activity level reporting in U.S. courts, such as limitations in empirical data, challenges in modeling transfer and persistence, and the dynamic nature of the adversarial court system. Additionally, the presentation will discuss ongoing efforts by SWGDM to address these challenges, including the development of guidance, to improve consistency, transparency, and scientific support for dealing with activity level questions in court in the absence of formal ALR.

Biography:

Shawn Montpetit has been employed with the San Diego Police Department for 26 years and has 28 years of experience in the field of forensic DNA analysis. Shawn is currently employed as a Supervising Criminalist in the Forensic Biology Unit and has served in that capacity since 2021. In addition, he has participated in SWGDM since 2014 and currently serves on SWGDM's autosomal DNA interpretation subcommittee.



DNA WORKSHOP ABSTRACTS

TUESDAY, APRIL 28, 2026



DNA in Court - Legal Updates

Presented By:

Michael Chamberlain, *California Department of Justice*

Abstract:

Recent legal developments related to DNA evidence will be discussed. One topic addressed will be current thinking and judicial rulings on activity level testimony, and the evidentiary questions it raises.

Biography:

Mike Chamberlain is a Deputy Attorney General in the California Department of Justice's Office of General Counsel, after serving in the Division of Criminal Law for more than 20 years. Before joining the AG's Office, Mike served as a Deputy District Attorney in San Diego and Contra Costa counties. Mike is counsel to DOJ's Bureau of Forensic Services and Division of Law Enforcement. He provides advice, training, and consultation on forensic evidence topics to law enforcement and prosecutors statewide and nationally. He is a past Chair of the State Bar of California's Criminal Law Section. Mike co-authored *Forensic DNA Evidence: Science and the Law*, a legal practice guide. He teaches at the U.C. Davis Forensic Science Master's Program.



DNA WORKSHOP ABSTRACTS

TUESDAY, APRIL 28, 2026



Modernizing Forensic DNA Workflows Using Artificial Intelligence

Presented By:

Mandi Van Buren, *DNA Labs International*

Abstract:

The integration of artificial intelligence (AI) into forensic DNA laboratory workflows offers opportunities to improve efficiency, consistency, and analytical throughput while maintaining rigorous scientific and ethical standards. This presentation outlines practical implementation considerations, ethical safeguards, and an example of a successfully deployed AI-enabled workflow suitable for international forensic collaboration.

AI can support multiple stages of the forensic DNA pipeline, including sample triage, contamination-risk assessment, data interpretation, and reporting. Machine-learning models trained on validated datasets can identify low-quality samples, inform amplification strategies, and promote consistency in mixture interpretation. When responsibly implemented, these tools reduce analyst workload, minimize inter-analyst variability, and accelerate turnaround times without replacing expert judgment.

Ethical deployment requires transparency, auditability, and continuous human oversight. Models must be trained on representative data to mitigate bias, and AI-generated outputs must remain interpretable, reviewable, and subject to challenge by qualified analysts.

Laboratories implementing AI-assisted interpretation alongside probabilistic genotyping have demonstrated reduced review time, improved reproducibility, and clearer documentation of analytical decisions. These outcomes illustrate how AI can responsibly augment forensic DNA workflows while preserving human experts as the final decision-makers.

Biography:

Mandi Van Buren is an account specialist and former DNA Analyst with DNA Labs International (DLI). Prior to DLI, she was the DNA Technical Leader for the Kern Regional Crime Laboratory in California. Mandi graduated from the University of Florida with a Master's Degree in Pharmacy specializing in forensic drug chemistry and the University of Tampa with a Bachelor's Degree in Biology. She began her forensic career at the Utah Bureau of Forensic Services and now has over 17 years of experience as a DNA analyst in forensic casework, crime scene processing, and 7 years as a drug chemist. Beyond casework, her expertise is in advanced DNA technologies such as next generation sequencing (NGS) and probabilistic genotyping including validations, implementation, training and expert testimony.



DNA WORKSHOP ABSTRACTS

TUESDAY, APRIL 28, 2026



Bridging the Gap: Strengthening DNA Analyst Training for Courtroom Testimony

Presented By:

Amanda Murray, PhD, *DNA Labs International*

Abstract:

As forensic DNA interpretation continues to advance, courtroom testimony has become increasingly complex. Modern DNA analysts are now expected to clearly explain probabilistic genotyping results, statistical weight of evidence, activity-level propositions, and the implications of emerging technologies to judges, attorneys, and juries with varying levels of scientific literacy. Despite these growing demands, initial training programs for new DNA analysts have historically emphasized laboratory methods and technical interpretation, often placing courtroom preparation as a secondary focus. As a result, many analysts enter casework with limited formal training in testimony and are left to develop courtroom skills reactively through on-the-job experience. This approach can leave analysts underprepared for challenging cross-examinations, complex legal questions, and evolving expectations regarding transparency and communication of uncertainty. This presentation examines the expanding scope of DNA testimony and identifies key gaps in traditional analyst training programs. Practical recommendations are provided for better integrating courtroom-focused education into initial analyst training, including early exposure to legal concepts, structured communication training, and more extensive use of moot court exercises. Emphasis is placed on building confidence, consistency, and clarity in testimony before analysts appear in court. Strengthening courtroom preparation during initial training can enhance analyst performance, support scientific integrity, and improve the effective communication of DNA evidence within the justice system.

Biography:

Amanda Murray is a Senior DNA Analyst, Analyst Team Lead, and Training Analyst Specialist at DNA Labs International. She is also an Adjunct Assistant Professor at Pace University where she teaches Forensic Biology, Forensic Pharmacology, and Forensic Seminar courses for undergraduate and graduate students. She is passionate about bridging the gap between the academic and forensic laboratory settings as well as ensuring the integrity, quality and reliability of forensic DNA testing through proper training and continuing education. When she isn't working on DNA cases, training serologists and DNA analysts, and/or teaching the future generation of forensic scientists, she can be found pouring her energy into her family, friends, garden, and workout routine.



FIREARMS WORKSHOP

TUESDAY, APRIL 28, 2026



Presented By:

Jessica Winn, *California Department of Justice – Fresno Laboratory*
Todd Weller, *Weller Forensics*

Workshop Description:

This workshop will cover a variety of topics around firearms and toolmarks examination admissibility. We plan to cover topics such as: California-specific admissibility rulings and standards, National Academy of Sciences reports, PCAST report, firearms examiner error rate studies, common critiques, and topics every examiner should be ready to discuss. The workshop will be a mixture of lectures as well as group discussions.

Biographies:

Jessica Winn earned her B.A. in Chemistry and her M.S. in Forensic Science, both from California State University, Fresno. In 2008, Jessica was hired as a Criminalist by the BFS Fresno Laboratory, where she began her career in forensic alcohol analysis and seized drugs analysis. In 2014, Jessica was promoted to Senior Criminalist working in multiple disciplines, including firearms and tool marks, at the BFS Fresno Laboratory. In 2019, Jessica was promoted to Criminalist Supervisor where she currently supervises the firearm and tool marks, seized drug analysis, ignitable liquids, clandestine laboratory, and crime scene units. In 2021, she became a peer support counselor with the DOJ/DMFEA's Peer Support Program. She became a member of the Association of Firearm and Tool Mark Examiners (AFTE) in 2012 and became a Distinguished member in 2016. She is also a member of the California Association of Criminalists (CAC), where she serves as co-chair of the Northern Firearm Study Group committee. She has presented several presentations at CAC Conferences related to firearms examination and served on the host committee for the BFS Fresno hosted CAC Conference. Jessica maintains her involvement in controlled substances and forensic alcohol analysis. She is certified by the American Board of Criminalistics (ABC) in Drug Analysis. She is a member of the Clandestine Laboratory Investigating Chemists (CLIC) Association. She also serves as the Control Substances Technical Advisory Group (TAG) facilitator for BFS. In 2022, along with three of her colleagues and friends, formed the KLTW Group, a non-profit training and mentorship collective. KLTW Group provides pro-bono mentorship and training for college students, as well as new and existing forensic examiners. Jessica is an adjunct faculty member at California State University, Fresno where she teaches a course in Forensic Science.

Todd Weller, MS, has been a forensic scientist for over 25 years. He started his career at the Oakland Police Criminalistics Laboratory, in Oakland California, and for the past 10 years has worked at his own company, Weller Forensics. Todd is the current chair of Firearms and Toolmarks subcommittee and has been on the OSAC Firearm and Toolmarks Subcommittee since OSAC was founded in 2014.



SEIZED DRUGS WORKSHOP SCHEDULE

TUESDAY, APRIL 28, 2026



8:00 AM – 8:15 AM	Introduction/Greetings <i>Irene Cabrera, California Department of Justice, Riverside Laboratory</i>
8:15 AM – 8:30 AM	Ketamine Clandestine Laboratory (part 1) <i>Will Langston, Drug Enforcement Agency</i>
8:30 AM – 9:00 AM	Ketamine Synthesis (part 2) <i>Robert Rzasa, Drug Enforcement Agency</i>
9:00 AM – 10:15 AM	Narcotics Detection Canine and Narcotics Enforcement <i>Robert Stevens, California Highway Patrol Border Division</i>
10:15 AM – 10:45 AM	BREAK (OLIVE PATIO)
10:45 AM – 12:00 PM	Fentanyl Update <i>Andrea Larick, Drug Enforcement Agency</i>
12:00 PM – 1:00 PM	LUNCH (THE MEADOWS)
1:00 PM – 2:00 PM	Fentanyl Bulk Synthesis <i>Dean Kirby, Drug Enforcement Agency</i>
2:00 PM – 2:30 PM	An Optimized Separation Scheme for Psilocybin and Psilocin using Liquid Chromatography Followed by Ultraviolet Absorbance and Fluorescence Detection <i>George N. Sakellariou, George Washington University</i>
2:30 PM – 2:50 PM	BREAK (OLIVE PATIO)
2:50 PM – 3:50 PM	Agency Method Standardization (GUARDS) <i>Sharareh Amini and Annecia Martin, Drug Enforcement Agency</i>
3:50 PM – 4:50 PM	Roundtable discussion <i>Open to anyone who has questions or wants to discuss any topics related to seized drugs</i>
4:50 PM – 5:00 PM	Workshop Closing



SEIZED DRUGS WORKSHOP ABSTRACTS

TUESDAY, APRIL 28, 2026



Ketamine Clandestine Laboratory

Presented By:

Will Langston, *Drug Enforcement Agency*

Abstract:

A potential ketamine synthesis lab was discovered after a phone was confiscated from an individual and pictures of the lab along with notes in Chinese were discovered. Ramona Sanderson and Will Langston responded to the lab in Anza, CA where sophisticated glassware along with ample reagents, solvents and precursors consistent with the synthesis of ketamine were discovered. Items were inventoried, documented and samples of interest were taken for analysis at the DEA lab in Vista, CA. Residual amounts of finished ketamine were also found.

Biography:

Will Langston received his Bachelor of Science in Chemistry from the University of Mary Washington. He worked in the environmental chemistry field for 4 years before joining the DEA in 2019. He has 5 years of experience as a forensic chemist with the DEA.



SEIZED DRUGS WORKSHOP ABSTRACTS

TUESDAY, APRIL 28, 2026



Ketamine First Occurrence of Illicit Manufacturing in USA

Presented By:

Robert Rzasa, *Drug Enforcement Agency*

Abstract:

A review of ketamine syntheses will be presented. Preliminary studies using modified Stevens conditions will also be presented.

Biography:

Robert earned his B.S. in Chemistry from California State University, Long Beach, and his Ph.D. in Chemistry from Texas A&M University. For over 17 years, Robert worked in the pharmaceutical industry synthesizing small organic compounds for biological evaluation. He later transitioned into forensic science, serving with the Los Angeles County Sheriff's Department and is currently a forensic chemist with the Drug Enforcement Administration.



SEIZED DRUGS WORKSHOP ABSTRACTS

TUESDAY, APRIL 28, 2026



Narcotics Detection Canine and Narcotics Enforcement

Presented By:

Officer Robert Stevens, *California Highway Patrol Border Division*

Abstract:

Officer Stevens' presentation will encompass an overview of how narcotics detection canines are trained and certified to alert to the odor of narcotics, which will include a canine demonstration of narcotics detection. Additionally, Officer Stevens will talk about narcotics interdiction efforts on the interstates within his jurisdiction which will include common methods narcotics are concealed within compartments of vehicles and transported.

Biography:

Rob Stevens has been an officer with the California Highway Patrol for 8 years. Officer Stevens began his career working regular patrol duties while assigned to the El Cajon area office, working in East County San Diego. In September 2020, he was assigned to the Border Division K-9 unit focusing his efforts on narcotics enforcement and criminal interdiction within San Diego and Riverside County.

In February of 2023, he was certified as dual-purpose patrol and narcotics detection canine handler with his K-9 partner "Sickel". He is a member of the California Narcotics Officer Association (CNOA) and California Narcotics Canine Association (CNCA). Officer Stevens has over 300 hours of formal training in controlled substances investigations. He has been involved with or assisted with over 200 investigations involving the use, sale, and transportation of narcotics. While assisting with these investigations, which included working alongside agents with the Drug Enforcement Agency (DEA) and investigators assigned to Narcotic Task Forces (NTF), Homeland Security Investigations (HSI) and agents with the United States Customs and Border Protection (CBP), he has learned about the investigation, identification, and methods used to commit drug related offenses.



SEIZED DRUGS WORKSHOP ABSTRACTS

TUESDAY, APRIL 28, 2026



DEA - Drug Trends

Presented By:

Andrea Larick, *Drug Enforcement Agency*

Abstract:

This presentation will provide an overview of the scope of the Drug Enforcement Administration (DEA) Forensic Science Programs and an analysis of current trends in controlled substances across the United States. Additionally, this presentation will cover California-specific statistics, to include methamphetamine, cocaine, fentanyl, and counterfeit tablets, as well as emerging substances like xylazine and nitazene variants.

Biography:

Andrea Larick has been a Forensic Chemist for the DEA for nearly 10 years. She has a Bachelor of Science degree in Chemistry with a minor in Mathematics from California State University, San Bernardino.



SEIZED DRUGS WORKSHOP ABSTRACTS

TUESDAY, APRIL 28, 2026



Current Trends in Fentanyl Precursors and Synthesis

Presented By:

Dean Kirby, *Drug Enforcement Agency*

Abstract:

The vast majority of fentanyl submitted to forensic labs is illicitly produced in Mexican clandestine laboratories and smuggled through the southwest border region of the United States. Large seizures of bulk powders and counterfeit tablets are intercepted on a frequent basis and are analyzed at the DEA Southwest laboratory where new trends are often first recognized. DEA research chemists have duplicated the large-scale process of making fentanyl from simple precursors, both in a controlled laboratory setting as well as in the field, likely to imitate the steps used by the cartel cooks. This workshop presentation will examine some new trends in manufacturing illicit fentanyl from known and previously unknown precursor materials and will highlight the lessons learned in the large-scale synthesis project.

Biography:

Mr. Kirby came to forensics following a 14-year career as a Medicinal Chemist at the Salk Institute for Biological Studies in La Jolla, California, where he designed and synthesized novel drug candidates. Kirby prepared milligram to multi-gram amounts of high purity bioactive polymers for clinical investigations and specifically produced hundreds of analogues of novel substances. This portion of Mr. Kirby's career was summarized in numerous journal publications, presentations, and U.S. patents.

In 2002, Mr. Kirby joined the Drug Enforcement Administration's Southwest Laboratory in Vista, CA. Mr. Kirby has analyzed thousands of drug exhibits, has testified as an expert witness over 50 times, and has investigated numerous clandestine drug laboratories attempting to produce various psychoactive substances. Mr. Kirby combined his clan lab investigation experience with his organic synthesis experience by reporting on the novel synthesis of various controlled substances using unique precursors. For example, in 2011 Kirby published a novel three step method of producing 3,4-methylenedioxyamphetamine (MDA) from helional. In 2014, Kirby published a unique method of producing AH-7921 (a synthetic opioid) from the unregulated chemicals 3,4-dichlorobenzoyl chloride and (1-aminomethyl-cyclohexyl)-dimethylamine. In 2022, Kirby was the first to demonstrate the process of l-methamphetamine recycling using azoisobutylnitrile (AIBN), a new step in clandestine methamphetamine production that essentially doubled the yield of finished product. Mr. Kirby has provided instruction to thousands of domestic and international law enforcement and military personnel, specifically on the challenges of safely processing synthetic products and precursor chemicals found in clandestine laboratory environments. In 2022, Mr. Kirby returned to full time research by joining the organic chemistry team at DEA's Special Testing and Research Laboratory in the role of Senior Research Chemist where he has researched methods leading to the production of large-scale amounts of methamphetamine and fentanyl. Currently, Mr. Kirby continues to conduct analysis of drug submissions to the Southwest Laboratory as well as provide technical instruction to chemists and law enforcement personnel around the world.



SEIZED DRUGS WORKSHOP ABSTRACTS

TUESDAY, APRIL 28, 2026



An Optimized Separation Scheme for Psilocybin and Psilocin using Liquid Chromatography Followed by Ultraviolet Absorbance and Fluorescence Detection

Presented By:

George Sakellariou, *George Washington University*

Abstract:

Psilocybin and psilocin were defined by the Controlled Substances Act of 1970 as Schedule I controlled substances in the United States. These psychoactive compounds are found in hallucinogenic “magic mushrooms” of the *Psilocybe* genus. Unlike the legislation surrounding Cannabis, there are no legal protections related to the percent composition of psilocybin and psilocin in seized drugs. While Colorado and Oregon have since decriminalized the use of psilocybin and psilocin, the drugs remain federally illegal, which stresses the need for continued method development for implementation into forensic laboratories.

Gas chromatography (GC) is widely considered the “gold standard” for the analysis of seized drugs in forensic laboratories. However, the chemical and physical properties of psilocybin make this type of analysis difficult. In aqueous standards, psilocybin is photosensitive and oxidizes in contact with air and light (1). Additionally, psilocybin’s poor volatility and thermal lability (1) lead to dephosphorylation in the GC inlet, which will produce psilocin (2). For this reason, liquid chromatography (LC) with various detection methods such as ultraviolet (UV) absorbance, fluorescence (FL), mass spectrometry (MS), and tandem mass spectrometry (MS-MS) is a far more favorable tool for psilocybin detection and quantification.

The Chemical Sciences Division at the National Institute of Standards and Technology had previously developed an LC-UV method for the analysis of 11 cannabinoids in Cannabis plant samples (3). Considering the current implementation of this method in forensic laboratories, the present study evaluates similar conditions for the detection of psilocybin and psilocin. The initial results demonstrate the use of a 100% water (H₂O) with 0.085% phosphoric acid mobile phase and an Octadecyl (C18) column. These analytes are baseline resolved from each other in less than 10 minutes. A second LC method using UV absorbance and FL detection was developed to separate psilocybin, psilocin, norpsilocin, norbaeocystin, baeocystin, and aeruginascin. Several reverse-phase LC columns were evaluated by their separation of the tryptamine standards while optimizing parameters including, but not limited to the column temperature, gradient conditions, and mobile phase composition for improved peak resolution. Native fluorescence data were obtained using a stop-flow function on the LC instrument to collect fluorescence spectra. In the analysis of these compounds, fluorescence is a sensitive and selective means of detection which will be critical to the analysis of complex sample matrices such as gummies and chocolates.

Biography:

George Nicholas Sakellariou obtained his B.S. in Applied Chemistry from UC Davis in 2024 while interning at the Sacramento County District Attorney’s Laboratory of Forensic Services. During this time, he worked on method optimization for extracting THC from edible gummy samples. In August 2024, he enrolled in the George Washington University’s Forensic Chemistry Master’s program. He later joined NIST’s Chemical Sciences Division in the Materials Measurement Laboratory as a Guest Researcher to assist with psychedelic research as part of his Master’s thesis.



SEIZED DRUGS WORKSHOP ABSTRACTS

TUESDAY, APRIL 28, 2026



GUARDS - Global Uniform Analysis & Reporting of Drug Related Substances

Presented By:

Sharareh Amini, *Drug Enforcement Agency*

Annecia Martin, *Drug Enforcement Agency*

Abstract:

This presentation will provide an overview regarding the installation, validation, and use of the DEA GUARDS method. Additionally, information will be provided in order to assist with the unification of laboratory analysis and reporting of seized drugs, in accordance with National Forensic Laboratory Information System (NFLIS) requirements.

Biographies:

Sharareh Amini is a DEA forensic chemist at the Southwest Laboratory with over 4.5 years of experience in drug analysis and casework.

Mrs. Martin is a Senior Forensic Chemist for the Drug Enforcement Administration at the Southwest Laboratory. Prior to her employment with the DEA, she was employed with the Philadelphia Police Department as a Forensic Scientist for 6 1/2 years. She has 21 years of cumulative experience analyzing controlled substances, offering expert testimony in court and responding to clandestine laboratories in the past. In addition, Mrs. Martin has over 18 years' experience working with GC-MS instrumentation including the optimization of DEA GC-MS method development and validation using multiple GC-MS platforms. She has prior experience as a training coordinator in her previous employment with regards to training of new analysts and continues to assist in training with regards to new chemists onboarding with the DEA.



QUALITY ASSURANCE WORKSHOP

TUESDAY, APRIL 28, 2026



Utilizing Uncertainty - The Path to Process Improvement & Root Cause Analysis/Corrective Action

Presented By:

Josh Spatola, *California Department of Justice - Bureau of Forensic Services*

Abstract:

The first half of the workshop will present a refresher on the corrective action process, specifically focusing on the benefits of thorough root cause analysis. Additionally, real world forensic examples of root cause analysis with interesting or unexpected outcomes will be presented. There will also be time for discussion of attendees' experiences with the topic as well.

The second half of the workshop will present a refresher on the concept of measurement confidence which includes measurement traceability, measurement uncertainty, and measurement assurance. Then, we will explore how to use the information and data gathered during measurement uncertainty and measurement assurance experiments in order to improve existing measurement processes. There will also be time for discussion of attendees' experiences with the topic as well.

Biography:

Josh Spatola is the Bureau Quality Assurance Manager for the 12 forensic laboratories in the California Department of Justice (CA DOJ), Bureau of Forensic Services (BFS) Crime Laboratory System. He leads a team of 8 Criminalist Supervisors who are designated as the Laboratory Quality Manager for one or more BFS laboratories and two Senior Criminalists who support the BFS Quality Assurance Program. As a Senior Criminalist, Josh worked in the areas of fire debris analysis, hair examination and comparison, clandestine laboratory analysis and scene response, drug analysis, forensic alcohol analysis, and crime scene response. During his time as a Senior Criminalist in the Quality Assurance Program, Josh also led different discipline specific teams in order to implement measurement uncertainty and traceability requirements for forensic alcohol analysis, drug weights, firearms lengths, and drug quantitations in toxicology. He is also a technical assessor for the accrediting body ANAB in the discipline of fire debris, seized drugs, materials (trace), and toxicology (alcohol).



INTERVIEWING SKILLS WORKSHOP

TUESDAY, APRIL 28, 2026



Presented By:

Raymond J. Davis, *CourtSkills*

Workshop Description:

This special four-hour workshop is designed for the new employee, for those wishing to promote within their laboratory, and for those seeking advancement into management. This workshop will also benefit those who sit on their laboratory's interview panels.

Students will learn how to deal with the eight most challenging questions during the interview. Those questions are:

1. The interpersonal question.
2. The professional career question.
3. The ethics question.
4. The loyalty question.
5. The strength and weakness question.
6. The value proposition question.
7. The hiring question.
8. Questions for the panel.

Knowing ahead of time and preparing to address these questions will help the candidate to succeed at the interview.

Raymond will discuss practical ways to increase your success including: your pre-interview preparation, your conduct on the day of your interview, the escorted laboratory walk-through, and post interview strategies for winning the position.

Students will be required to participate during the workshop by offering their answers to the questions listed above. Raymond will also be utilizing material from his Courtroom Presentation of Evidence course to give future candidates an edge during their interviews.

Biography:

Raymond has conducted twelve Interviewing Skills Workshops over the past 20 years for the CAC, most recently at the previous CAC meeting in Folsom, CA for 24 UC Davis graduate students. Raymond has interviewed over 200 candidates on behalf of four different Bay Area crime labs: Oakland PD, San Francisco PD, Santa Clara County, and the DOJ DNA Lab in Richmond. There is a tremendous need for interview training as each candidate is not afforded any feedback or encouragement on their interview. As a result, many candidates continue to make the same kinds of mistakes, frustrated at not winning the position.



GENERAL SESSION SCHEDULE

WEDNESDAY, APRIL 29, 2026



Location: OLIVE BALLROOM
Moderators: Jennifer Deroncourt and Alice Hilker

8:00 AM – 8:10 AM	Seminar Commencement <i>Bureau Chief Barry Miller, California Department of Justice, Bureau of Forensic Services</i>
8:10 AM – 9:10 AM	A Perfect Storm: DNA Transfer in the University of Idaho Student Murders Case <i>Ruth Ballard, PhD, California State University Sacramento</i>
9:10 AM – 9:40 AM	Connected Evidence: Strengthening Collaboration Across Law Enforcement, Labs, and Attorneys <i>Mandi Van Buren, DNA Labs International</i>
9:40 AM – 10:10 AM	Quirks and Fictions of the Criminal Justice System, For Expert Witnesses <i>Michael Chamberlain, California Department of Justice</i>
10:10 AM – 10:30 AM	BREAK (OLIVE PATIO)
10:30 AM – 11:30 AM	Cody Virgin Arson Murder <i>Edward Nordskog, Los Angeles County Sheriff's Department - Retired</i>
11:30 AM – 12:00 PM	Comparison of the Ultraviolet/Visible and Near Infrared Regions of Reflectance Spectra for Estimating Bloodstain Time-Since-Deposition (TSD) Using Multivariate Analytical Methods <i>Jessica Hovingh, Department of Forensic and Investigative Science, West Virginia University</i>
12:00 PM – 1:00 PM	LUNCH (THE MEADOWS)
1:00 PM – 2:00 PM	Missing and Murdered Indigenous People: A Forensic Professional's Role in Justice <i>Samantha Thornsberry and Anu Watts, Cahuilla Consortium</i>
2:00 PM – 2:20 PM	Activity-Level Evaluations of Realistic Crime Scene Scenarios <i>Dr. Ashley Hall, University of California Davis</i>
2:20 PM – 2:40 PM	Ethics & You: How to Handle Yourself in Various Situations <i>Catherine Currier, Sacramento County District Attorney's Office, Laboratory of Forensic Services</i>
2:40 PM – 3:00 PM	BREAK (OLIVE PATIO)
3:00 PM – 4:00 PM	Protecting Children in a Digital World: A Shared Responsibility <i>Joel Pabelico & Jason Polanco, Riverside District Attorney's Office - Bureau of Investigation</i>
4:00 PM – 5:00 PM	CAC Business Meeting
6:00 PM – 8:00 PM	Wine and Cheese Reception, Poster Session, and New Member Reception (The Meadows)
7:30 PM – 10:00 PM	Hospitality Suite (Room 316)



GENERAL SESSION ABSTRACTS

WEDNESDAY, APRIL 29, 2026



A Perfect Storm: DNA Transfer in the University of Idaho Student Murders Case

Presented by:

Ruth Ballard, PhD, *California State University, Sacramento*

Abstract:

In the cold early morning hours of November 13, 2022, Madison Mogen, Kaylee Goncalves, Xana Kernodle, and Ethan Chapin, all University of Idaho students, were fatally stabbed in their three-story off-campus house on King Road in Moscow, Idaho.

A tan leather knife sheath with DNA was found on the bed next to the body of victim Mogen and eventually led police to 29-year-old Bryan Christopher Kohberger, a criminology graduate student at the University of Washington in nearby Pullman, as the primary suspect. The murder weapon was never found, and no other DNA evidence implicating Kohberger was discovered despite an exhaustive investigation. Kohberger was arrested in December of 2022 and pled guilty to the crime in August of 2025, a high-octane drama that was followed closely by the press and tracked assiduously on social media.

I was retained by Bryan's defense team in 2023 to review the DNA discovery produced by the Washington State Patrol and FBI crime labs and assist them in understanding the strengths and weaknesses of the prosecution's DNA case against their client. What I unearthed in the two years that followed was a "perfect storm" of evidence that brought together the very best of what today's DNA technologies have to offer but also raised questions and concerns that linger to this day.

In this presentation, I will take listeners on a journey into the "perfect storm," where they will learn how the extreme sensitivity of current DNA profiling systems (storm 1), the wonders of probabilistic genotyping (storm 2), and the new tool of investigative genetic genealogy (storm 3) converged to help investigators track down a killer who left almost no evidence in his wake. But it will offer no definitive, easy resolution to the University of Idaho student murders case, where other factors continue to cast doubt on Kohberger's involvement. And it is a cautionary tale as well – one that reveals the potential pitfalls of this new convergence, explaining why and how innocent people are more vulnerable to false arrests, convictions, and unjust incarcerations than ever before.

Biography:

Dr. Ruth Ballard is a human molecular geneticist who specializes in forensic serology and DNA. She was a professor at California State University, Sacramento from 1996-2023, where she developed and ran an undergraduate education, research, and training program in forensic biology. She was the DNA/biology advisor for the University of California, Davis Forensic Science Graduate Program for five years, and taught for the California Criminalistics Institute, the training arm of the California Department of Justice Bureau of Forensic Services. She also gives presentations nationwide about forensic DNA evidence and its interpretation.

Dr. Ballard retired from academics in 2023 to devote herself full-time to forensic DNA consulting, an independent practice that she founded in 1998. As part of this work, she has reviewed DNA discovery in hundreds of criminal and civil cases, providing an independent assessment of the evidence and serving as an educator for attorneys, judges, and juries. Over the years, she's reviewed thousands of crime lab reports from dozens of crime labs, hundreds of thousands of pages of analyst bench notes, and thousands of electronic DNA profiles and statistical interpretations. She has reviewed legal discoveries from cold cases stretching back to the mid-1980s (the dawn of DNA technology) all the way through to cases where the testing is very recent (only weeks or months old). She is familiar with the many changes in forensic biology technologies over this time span, and with the progressive march to greater sensitivity and discriminatory power. Because she has been in the profession for so long, she also has hands-on experience with most of these technologies, with an appreciation for their limitations and the factors that drove the development of innovations.

Dr. Ballard produced reports or testified in court in most of these cases and she stays current in the technologies utilized by the profession and with the ongoing research in the discipline. She views consulting as an extension of her teaching: translating complex scientific ideas/concepts into clear, accessible language for non-experts.



GENERAL SESSION ABSTRACTS

WEDNESDAY, APRIL 29, 2026



Connected Evidence: Strengthening Collaboration Across Law Enforcement, Labs, and Attorneys

Presented by:

Mandi Van Buren, *DNA Labs International*

Abstract:

Forensic science is often viewed through the lens of individual disciplines, with DNA frequently perceived as the gold standard of forensic evidence. In practice, successful criminal investigations and prosecutions rely on coordinated efforts among law enforcement agencies that own the evidence and investigative context, forensic laboratories tasked with scientific analysis, and attorneys responsible for presenting results in court. These three entities must function as partners, yet historically they have operated in silos, often speaking different professional “languages” rather than working collaboratively.

This presentation explores the importance of early and continuous communication across all forensic disciplines, from the crime scene through courtroom testimony. Laboratories depend on investigative context to guide appropriate testing and interpretation, while attorneys rely on clear, timely communication to understand evidentiary value and limitations. A lack of collaboration can result in inefficient testing, missed opportunities, and challenges during testimony.

To illustrate the impact of effective collaboration, a successful criminal case involving multiple forensic disciplines and international partners will be highlighted. The session emphasizes shared responsibility and the value of a unified approach to strengthen forensic outcomes and the justice system as a whole.

Biography:

Mandi Van Buren is an account specialist and former DNA Analyst with DNA Labs International (DLI). Prior to DLI, she was the DNA Technical Leader for the Kern Regional Crime Laboratory in California. Mandi graduated from the University of Florida with a Master’s Degree in Pharmacy specializing in forensic drug chemistry and the University of Tampa with a Bachelor’s Degree in Biology. She began her forensic career at the Utah Bureau of Forensic Services and now has over 17 years of experience as a DNA analyst in forensic casework, crime scene processing and 7 years as a drug chemist. Beyond casework, her expertise is in advanced DNA technologies such as next generation sequencing (NGS) and probabilistic genotyping including validations, implementation, training and expert testimony.



GENERAL SESSION ABSTRACTS

WEDNESDAY, APRIL 29, 2026



Quirks and Fictions of the Criminal Justice System, For Expert Witnesses

Presented by:

Michael Chamberlain, *California Department of Justice*

Abstract:

Have you ever thought about how juries of laypeople are expected to decide complex factual disputes beyond a reasonable doubt based on disputed secondhand information, while trained experts must carefully qualify and constrain opinions based on observed empirical data? Or how the need to establish criminal culpability once and for all conflicts with the ever-evolving ability of scientific methods to explain evidence? Or how the law assumes that both jurors and experts have the ability to disregard knowledge that's already known? This presentation will explore sometimes unrealistic, illogical, and contradictory design features of the criminal justice system, using expert witnesses as a point of reference.

Biography:

Mike Chamberlain is a Deputy Attorney General in the California Department of Justice's Office of General Counsel, after serving in the Division of Criminal Law for more than 20 years. Before joining DOJ, Mike served as a Deputy District Attorney in San Diego and Contra Costa counties. Mike is counsel to DOJ's Division of Law Enforcement, with a focus on the Bureau of Forensic Services. He provides advice, training, and consultation on scientific evidence topics to criminalists, law enforcement, and prosecutors statewide and nationally. He is a past Chair of the State Bar of California's Criminal Law Section. Mike co-authored *Forensic DNA Evidence: Science and the Law*, a legal practice guide. He teaches at the U.C. Davis Forensic Science Master's Program.



GENERAL SESSION ABSTRACTS

WEDNESDAY, APRIL 29, 2026



Cody Virgin Arson Murder

Presented by:

Edward Nordskog, *Los Angeles County Sheriff's Department – Retired*

Abstract:

The presenter will be discussing a recently adjudicated case from Arizona. The case involves the "catfishing" murder of a young man named Cody Virgin. Virgin was "catfished" online and lured to a remote location in the desert where he was shotgun murdered. The suspect then took Virgin's body, moved it more than 25 miles, and burned it at another remote location. The suspect then drove to a third remote area and disposed of evidence of the murder and later, arson.

The presentation will focus on the use of digital forensics, along with impression evidence, and blood evidence, as well as using soil experts and vegetation experts to link the offender to the three scenes, as well as several other locations where he conducted anti-forensics measures.

Biography:

Ed Nordskog is one of the most decorated arson investigators in the world with four internationally recognized awards, and over 100 other commendations and medals for arson investigations. He is currently a Cold Case investigator for arson murders and fire deaths, and a consultant for prosecutors and other attorneys for major arson cases. He is the founder of the Serial and Wildland Arson Investigation training group based in Reno, Nevada. He is an internationally recognized expert and instructor on serial arson and fire death investigations.



GENERAL SESSION ABSTRACTS

WEDNESDAY, APRIL 29, 2026



Comparison of the Ultraviolet/Visible and Near Infrared Regions of Reflectance Spectra for Estimating Bloodstain Time-Since-Deposition (TSD) Using Multivariate Analytical Methods

Presented by:

Jessica Hovingh, *Department of Forensic and Investigative Science, West Virginia University*

Abstract:

Bloodstains are a type of biological evidence often present at crime scenes and of tremendous value in criminal investigations. When shed during the commission of an offense, these stains permit event reconstruction, provide an important medium that can capture footwear and fingerprint impressions, and at the highest level of association, allow for the genetic identification and differentiation of possible perpetrators and victims. However, the use of bloodstains in time-since-deposition (TSD) estimation has not yet been fully explored, and if successful, may assist in elucidating valuable temporal information for forensic investigations.

The aim of this study is to compare the use of ultraviolet (UV)/visible (VIS), and near infrared (NIR) reflectance spectra for the age estimate of bloodstains. To accomplish this goal, a total of $n = 29$ adult human volunteers deposited $n = 95$ bloodstains for analysis. Using a FieldSpec® Spectroradiometer, $n = 907$ reflectance spectra were collected every hour for the first six hours after deposition, and every twenty-four hours thereafter up to five days.

First, principal component analysis (PCA) was performed through eigen-decomposition on the correlation matrix of the resulting spectra. Inspection of principal components 1 and 2 permitted an evaluation of inter-donor variability, which was determined to be low. Next, using partial least squares regression (PLSR), the reflectance spectra were reduced to a maximum of 10 latent variables. Finally, regression models were constructed using the reduced-dimension data, and accuracy in predicting TSD was evaluated via hold-one-donor-out cross validation. Preliminary results indicate that multinomial logistic regression (MLR) based on UV/VIS reflectance spectra is marginally superior to NIR reflectance spectra in forming accurate TSD predictions, and that more than 85% of all MLR-predicted TSDs are accurate within ± 1 time interval. In other words, the best root mean square error of prediction (RMSEP) for short (1 - 6 hours) and long (1 - 5 days) TSD windows was 1.2 hours and 15.7 hours, respectively, when using UV/VIS spectra. The same measurement was 1.8 hours and 19.2 hours, respectively, when using NIR spectra. Moreover, an accuracy of 93.2% was obtained for MLR predicted 'TSD ± 1 hour' for stains evaluated between 1 - 6 hours using UV/VIS, and 95.4% for 'TSD ± 1 day' for stains evaluated every 24 hours (up to 120 hours or 5 days) after the first day since deposition, again using UV/VIS spectra. The same predictions were slightly less accurate (86.4% and 92.6%) when using NIR spectra. These preliminary observations and quantitative analyses strongly suggest that MLR is an attractive method for estimating bloodstain TSD for small stains (less than 20 mm in diameter), that are fully dry within 1 hour, and held at $21.4 \pm 0.9^\circ\text{C}$ and $36.1 \pm 3.3\%$ relative humidity for the duration of aging. Future work will explore how baseline accuracy varies as a function of stain dilution, environment, and diffusion on a porous substrate (for example, a blood droplet on a cotton bedsheet, or nylon carpet).

Biography:

Jessica is a third-year Ruby fellow and PhD student in forensic science at West Virginia University. Her research focuses on the use of hyperspectral imaging for detecting and identifying biological traces in crime scenes. Originally from Pennsylvania, Jessica has a BS in forensic science with a biology focus from Penn State, and an MS in forensic science with a chemical criminalistics focus from the University of Lausanne in Switzerland. She has previously researched enhancement and photography of textile impressions in vehicle surfaces, and visual characteristics of bloody fingerprints versus latent fingerprints "developed" by blood.



GENERAL SESSION ABSTRACTS

WEDNESDAY, APRIL 29, 2026



Missing and Murdered Indigenous People: A Forensic Professional's Role in Justice

Presented by:

Samantha Thornsberry, *Cahuilla Consortium*

Anu Watts, *Cahuilla Consortium*

Abstract:

American Indian and Alaska Native (AI/AN) people are overrepresented in missing person's data. While Native people comprise about 1% of the total U.S. population, they account for approximately 10% of national missing person cases. AI/AN also experience violence at a higher rate with 84.3% of Native woman and 82% of Native men having experienced violence in their lifetime. A combination of historical and intergenerational trauma, systemic abuse, and lack of culturally informed services perpetuate the pipeline of vulnerability among Tribal communities, contributing to the Missing and Murdered Indigenous People (MMIP) Crisis. Cahuilla Consortium Victim Advocacy Program seeks to bridge the information gap between Tribal and Non-Tribal entities to better assist active MMIP cases to bring loved-one's home, find justice for survivors, and improve safety responses.

Biography:

Samantha Thornsberry is an enrolled member of the Cahuilla Band of Indians. In 2008, after 18 years working in secondary and higher education as a Professor of Literature, earning a Bachelor of Science in Education (English and History) and a Master's degree in English from the University of Central Arkansas, Samantha moved back home to Cahuilla and began working as a Victim Advocate for the newly formed Cahuilla Consortium Victim Advocacy Program in 2010, becoming the Program Director in 2015, a position she currently maintains. Additionally, Samantha has served on various committees for the Cahuilla Band, including the Scholarship committee, the Economic Development Committee, served as an alternate-delegate on the Indian Health Board, served as the Board Secretary on the Cahuilla Casino's Board of Directors (2014-2021), and is currently serving as a Tribal College alternate-delegate (2022-2023), as Co-Chair of the Riverside Tribal Alliance (2022 to present), and as a Tribal Councilmember (2010-2014, 2024 to present). Samantha continues to engage and serve on behalf of the Cahuilla Band and the tribal community through activities that support and promote the welfare and security of Native people.



GENERAL SESSION ABSTRACTS

WEDNESDAY, APRIL 29, 2026



Activity-Level Evaluations of Realistic Crime Scene Scenarios

Presented by:

Dr. Ashley Hall, *University of California, Davis*

Abstract:

In the U.S. criminal justice system, juries are the finders-of-fact, and they need guidance. As the focus of biological evidence analysis shifts from identifying the DNA source to evaluating the activity by which the evidence arrived at the crime scene, it is critical that forensic scientists draw on their training, education, and experience to offer opinions that assist the finder-of-fact in their deliberations. This is especially critical when specialized knowledge is required to interpret the evidence, such as in cases involving trace/touch DNA. The forensic scientist is best-equipped to interpret the evidence and to address activity-level questions; if they do not, then the jury will do so themselves during deliberations.

The goal of the project was to produce empirical data informative on DNA transfer using quantification DNA recovery across a crime scene. A well-established ground truth sample containing a known quantity of DNA, the domesticated fingerprint, and its cousin the wild fingerprint, were both incorporated into experimental analysis. Two crime scenes were mocked, one involving gunfire and the second, a transfer to a drug baggie. In the first, a fingerprint was transferred to a cartridge case, which was fired from a handgun. The expended cartridge case was collected for analysis and quantification of DNA transfer and recovery. In the second case, domesticated and wild fingerprints were transferred in both direct and indirect pathways, with the drug baggie serving as the final surface. DNA recovery was quantified and persistence as a contributing variable was evaluated.

Each of the pathways were repeated twenty times, producing statistically significant quantification data and DNA profiles that may be useful in activity-level evaluations. Assessments of alternate scenarios provide tremendous value when they are backed by empirical data; they may greatly aid the trier-of-fact in their deliberations.

Biography:

Dr. Ashley Hall is the Director of the Forensic Science Graduate Program at the University of California, Davis. She is an AAFS Fellow, a member of the American Society of Crime Lab Directors, the ASCLD Forensic Research Committee, the California Association of Criminalists, and the National Technology Validation and Implementation Collaborative (NTVIC). She is a member of the Council of Forensic Science Educators and is a FEPAC assessor. Dr. Hall teaches the DNA courses in the Forensic Science Graduate Program at UC Davis and has an active research lab that focuses on the use of touch and trace-level DNA to inform activity-level propositions.



GENERAL SESSION ABSTRACTS

WEDNESDAY, APRIL 29, 2026



Ethics Committee Presentation

Presented by:

Catherine Currier, *Sacramento County District Attorney's Office, Laboratory of Forensic Services*

Abstract:

A brief overview of the code of ethics we all adhere to (from CAC and ANAB) will be given and then various hypothetical ethical dilemmas will be provided, which will be solved with audience participation.

Biography:

Catherine Currier is a Criminalist with the Sacramento District Attorney's Office, Laboratory of Forensic Services where she is assigned to the Comparative Evidence Section. She received her degree in Biological Sciences and a graduate degree in Forensic Science from the University of California, Davis. Catherine has almost 20 years of experience working in the forensics field, both in Sacramento and at the Contra Costa Sheriff's Office Crime Laboratory. She has been a CAC member since 2009 and has attended numerous CAC seminars and study group meetings. She has served this organization as President-Elect, President, and Past President from 2021-through 2023. She has been a member of the By-laws and the Awards Committees. Catherine is currently a member of the New Members and Ethics Committees. She was also the co-chair for the 2025 CAC seminar held in Folsom, CA (Yee-haw!)



GENERAL SESSION ABSTRACTS

WEDNESDAY, APRIL 29, 2026



Protecting Children in a Digital World: A Shared Responsibility

Presented by:

Joel Pabelico, *Riverside County District Attorney's Office - Riverside County Child Exploitation Team (RCCET)*
Jason Polanco, *Riverside County District Attorney's Office - Riverside County Child Exploitation Team (RCCET)*

Abstract:

The online world is evolving faster than ever, and unfortunately, so are the ways offenders exploit it to target children. This presentation discusses current trends in online exploitation—how offenders are using apps, games, social media, and even financial platforms to groom, manipulate, and exploit minors. We will talk about our team, the Riverside County Child Exploitation Team, which is a multi-agency task force dedicated to investigating these crimes, identifying offenders, and protecting children. Our goal is not only to hold offenders accountable, but also to educate families and communities on what these threats look like and how to prevent them before they happen. Together, we can create a safer digital world for every child.

Biographies:

Senior DA Investigator Joel Pabelico is a K9 Handler with over 23 years of law enforcement experience. He has spent fifteen years as a criminal investigator primarily focused on Sexual Assault Child Abuse (SACA) and Internet Crimes Against Children (ICAC) investigations. He is currently assigned to the Riverside DA's Office - Riverside County Child Exploitation Team with Electronic Storage Detection (ESD) K9 Partner, Chewie.

Sr. DA Investigator Jason Polanco is a K9 Handler with over 20 years of law enforcement experience. He has spent eleven years as a criminal investigator working Major Crimes and Internet Crimes Against Children investigations with extensive training in digital forensics, cybersecurity, and cryptocurrency investigations. He is currently assigned to the Riverside DA's Office - Riverside County Child Exploitation Team with Electronic Storage Detection (ESD) K9 Partner, Solo.



POSTER SESSION ABSTRACTS

WEDNESDAY, APRIL 29, 2026



DNA Methylation at the ELOVL2 Locus as a Predictor of Donor Age in Hair Samples

Authors:

Grace Davidson, Katherine A. Roberts

School of Criminal Justice and Criminalistics, California State University, Los Angeles

Abstract:

DNA methylation at CpG islands within promoters influences gene expression and is a dynamic epigenetic process affected by various genetic and environmental factors, including aging. From a forensic perspective, estimating chronological age can provide investigative leads in human identification cases. The methylation level at CpG islands in the promoter of the human ELOVL2 gene has been strongly associated with chronological age across different populations, cell types, and tissues. Therefore, ELOVL2 promoter methylation levels could potentially serve as markers for estimating human age.

A total of 33 donors, ranging in age from 23 to 58 years, each provided three hair samples that were collected, purified, and processed for bisulfite conversion. DNA methylation analysis was then conducted using an assay targeting 14 CpG sites within the ELOVL2 gene. The Human Age-associated ELOVL2 Promoter Methylation Quantification qPCR Assay Kit (ScienceCell, Carlsbad, CA) is designed to measure human ELOVL2 promoter methylation. The reference DNA sample contains an equal ratio of methylated to nonmethylated ELOVL2 promoter copies (both representing bisulfite-converted promoter sequences). It serves as a reference for determining the methylated-to-nonmethylated ELOVL2 promoter ratio in target samples.

The objectives were to compare our methylation percentage data with published models and to develop our own age prediction model based on correlations between methylation profiles and chronological age. This presentation will assess the accuracy of the prediction models using methylation data at the ELOVL2 CpG site, focusing on mean absolute deviation for each sample.



POSTER SESSION ABSTRACTS

WEDNESDAY, APRIL 29, 2026



Comparative Evaluation of Leuco Crystal Violet and Amido Black for Bloodstain Enhancement and DNA Recovery on Forensic Substrates

Authors:

Debora Fernandez Clemente, Katherine A. Roberts
School of Criminal Justice and Criminalistics, California State University, Los Angeles

Abstract:

The detection and enhancement of latent bloodstains are critical in forensic investigations, particularly when biological evidence has been altered, diluted, or transferred. Chemical enhancement reagents such as Leuco Crystal Violet (LCV) and Amido Black enhance bloodstain visualization; however, their effectiveness across different substrates and their impact on DNA recovery require further investigation. This study evaluated LCV and Amido Black on four substrates commonly encountered in casework: tile, carpet, and wood.

Sixteen samples were prepared for each reagent–substrate combination. Blood was deposited using a gloved hand dipped once into a human blood sample to simulate contact transfer, with subsequent impressions made to mimic decreasing blood quantity. Positive and negative controls were included.

Before chemical enhancement, all samples were examined with the Crime-lite® ML PRO using blood-specific and additional wavelength settings to assess alternate light source (ALS) detection. Images were recorded under these conditions. Bloodstains were then enhanced with LCV or Amido Black following standard forensic procedures and re-photographed.

Biological material was collected using sterile swabs. Each sample was pretreated for DNA isolation, and DNA was extracted using the EZ1&2 DNA Investigator Kit (Qiagen) on the EZ2 instrument. The samples were quantified using the Quantifiler Trio DNA Quantification Kit (ThermoFisher Scientific), and STR amplification was performed using the MainstAY kit (Qiagen/Verogen) on the MiSeq FGx Forensic Genomics System. Metrics were compared before and after enhancement. This presentation will discuss the findings regarding enhancement and DNA recovery for each reagent-substrate combination to inform best practices for enhancement techniques that optimize bloodstain detection and DNA preservation.



POSTER SESSION ABSTRACTS

WEDNESDAY, APRIL 29, 2026



Discrimination Among 3D Printer Filament Manufacturers Using FTIR-ATR Analysis

Authors:

Hayley Hayakawa, Katherine A. Roberts

School of Criminal Justice and Criminalistics, California State University, Los Angeles

Abstract:

Additive manufacturing, or 3D printing, is the process of fusing materials to create objects from 3D model data, layer by layer. While this technology has existed for some time, it has only recently become affordable for the public, opening opportunities to develop commercial products and enabling hobbyists to build items for personal use. However, there has been a rise in manufacturing for illegal purposes. Cases involving 3D-printed firearms and an increase in other 3D-printed weapons have emerged due to a lack of regulation and their nearly untraceable nature. Because they are easily accessible, these weapons can bypass security measures; they lack serial numbers for identification, are difficult to trace or source, and can be assembled from parts that do not resemble traditional weapons. These “ghost” guns are unregistered, and anyone with access to open-source files can download and build them. As a result, the absence of universal regulation makes it difficult to classify weapons or parts produced by 3D printers.

Given concerns about 3D-printed weapons, examining additive manufacturing from a forensic science perspective could benefit law enforcement, scientists, and the public. Conducting experimental research on filaments from various manufacturers to determine their chemical compositions could help establish a centralized database for source identification based on class characteristics. This study explores whether commercially available 3D printer filament can be distinguished based on the manufacturer's chemical profile using Fourier Transform Infrared Spectroscopy in Attenuated Total Reflectance mode (ThermoFisher IS50). FTIR spectra were obtained from five 3D-printed cubes representing six manufacturers, with six replicates per manufacturer, to assess intra-sample variation within each filament and differences across manufacturers. Control samples from each filament spool were analyzed before and after processing on the 3D printer. The standard filament used was Dremel (filament type: ECO-ABS), and the five experimental filaments included Polymaker PolyLite, Printlife, Sunlu, Elegoo, and Ender, all of filament type: PLA. This presentation will review the results and discuss potential improvements in the characterization and interpretation of 3D-printed evidence.



POSTER SESSION ABSTRACTS

WEDNESDAY, APRIL 29, 2026



Optimization of Δ 9-THC Extraction from Cannabinoid-Containing Edibles for GC-MS Analysis

Authors:

Olivia Lee, Jonathan Charron

Sacramento County District Attorney's Laboratory of Forensic Services

Abstract:

The 2018 Farm Bill legally differentiated marijuana, a Schedule I controlled substance, from hemp, an uncontrolled substance defined by containing less than 0.3% delta-9-tetrahydrocannabinol (Δ 9-THC) by dry weight. As a result, the cannabis industry has quickly grown as new products enter the market, offering various ways for consumers to experience the psychoactive effects of cannabinoids. Edible cannabinoid products, in particular, have become increasingly popular as they are accessible, discreet, and produce a longer-lasting psychoactive effect than smoking. The Sacramento County District Attorney's Laboratory of Forensic Services currently lacks a method for extracting Δ 9-THC from edible samples, creating a gap in its technical procedures. In this project, pre-existing Δ 9-THC extraction methods sourced from external laboratories and literature will be evaluated for efficiency, effectiveness, and compatibility across multiple edible matrices. The procedures include a basic-acidic extraction obtained from an external crime laboratory, a modified QuEChERS extraction, and various hexane- and ethanol-based extractions. After comparative testing, the method with the highest purity and efficiency will be further modified to produce an optimal extraction method for multiple edible types. The goal of this project is to develop a robust extraction method, ideally utilizing reagents and instrumentation already available in the laboratory's Controlled Substances unit, that can ultimately be applied to casework samples.



POSTER SESSION ABSTRACTS

WEDNESDAY, APRIL 29, 2026



Artificial Intelligence Assisted Behavioral Characterization of Drug Exposure in Planarians

Authors:

Paola Pazos, Jay R. Vargas

California State University, Los Angeles

Abstract:

Freshwater planarians are invertebrate flatworms widely used in behavioral research due to their regenerative capacity and simple yet vertebrate-like nervous system. They possess key neurotransmitter systems, including dopamine, serotonin, GABA, acetylcholine, and glutamate, which support quantifiable behavioral responses relevant to pharmacological and toxicological studies. In this study, planarians are used as a model system to evaluate drug-induced behavioral changes. Behavioral data is collected and analyzed using LabGym, an artificial intelligence-based tracking platform that enables objective classification of movement and behavioral states. The goal of this work is to develop a rapid and reproducible screening approach for assessing the effects of emerging drugs of abuse. Preliminary results examining behavioral responses to 2-fluoromethcathinone and methamphetamine will be presented and discussed.



POSTER SESSION ABSTRACTS

WEDNESDAY, APRIL 29, 2026



LC-MS/MS method development for the most frequently screened pharmaceuticals and other impairing substances of forensic interest

Authors:

Emily Pinkerton, Craig Triebold

Sacramento County District Attorney's Laboratory of Forensic Science Services

Abstract:

The development of analytical methods to include pharmaceuticals and other CNS-active drugs is essential for forensic toxicology laboratories to confront evolving drug abuse trends. Consensus-based testing recommendations published by the American National Standards Institute-National Accreditation Board are adapted from laboratory-reported statistics surveyed across numerous jurisdictions and provide a standardized baseline for the scope of analytes to be included in forensic toxicology testing protocols. Evolving the scope of confirmation for impaired driving and drug-facilitated crime investigations to include prescription and other recommended substances allows laboratories to detect a wider range of relevant drugs. This expanded testing can provide important information for individual cases and can allow laboratories to collect more comprehensive data to better understand the prevalence and impact of drug-related crimes in the community. Laboratories without adequate methodology are restricted in their testing and testimony and may end up obligated to spend time and resources outsourcing evidence analysis upon request. Testing performed by reference laboratories is often expensive and it can be cost-prohibitive to arrange for the reference laboratory analyst(s) to provide in-person testimony at trial. As such, it is important for forensic laboratories to develop and validate their own methods to meet the published scope of testing recommendations. This project will outline a fully developed liquid chromatography-tandem mass spectrometry method to confirm a panel of antidepressants, antipsychotics, anticonvulsants, antihistamines, dissociatives, and other psychoactive drugs of forensic interest. Certified reference materials for target analytes will be infused into a Waters Xevo TQ Absolute tandem mass spectrometer to establish optimal ionization parameters and to identify target product ions of interest. Chromatographic conditions will be optimized on a Waters UPLC I-Class PLUS liquid chromatograph by systematically evaluating analyte retention using a Waters UPLC BEH C18 column under varied mobile phase gradient conditions. A simple protein precipitation procedure will be used for the sake of efficiency and broad analyte selectivity. Spiked porcine blood will be used initially to evaluate limit of detection, matrix effects, carryover, interference, and ion suppression/enhancement. Further method validation will be performed using casework samples that have been reported negative for analytes of interest by the Sacramento County District Attorney's Laboratory of Forensic Science Services. Validation experiments will be conducted in accordance with ANSI/ASB Standard 036 Standard Practices for Method Validation in Forensic Toxicology.



POSTER SESSION ABSTRACTS

WEDNESDAY, APRIL 29, 2026



Fingerprint Aging Model Comparison of OPTIC-4 PYRO and Extraction Methods Using GCxGC-TOFMS

Authors:

Rayana Ramirez, Marilyn Heidecker, Petr Vozka, Katherine A. Roberts
School of Criminal Justice and Criminalistics, California State University, Los Angeles

Abstract:

Fingerprints are widely used for personal identification in forensic casework; however, fingerprint residue also contains chemical information that can aid forensic interpretation. This research aims to use the chemical degradation of target analytes to estimate the time since deposition. Prior work using solvent-based extraction with GC-TOFMS demonstrated reproducible aging patterns but had limitations, including a small number of donor samples, labor-intensive preparation, variable extraction efficiency, and loss of environmentally sensitive analytes.

This study systematically compares solvent extraction with direct thermal desorption using an OPTIC-4 pyrolyzer coupled to GCxGC-TOFMS. This alternative approach reduces sample preparation by directly introducing residues into the GC inlet, potentially enhancing sensitivity for high-molecular-weight lipids and decreasing handling variability. This study assesses analytical reliability and degradation patterns of cholesterol, squalene, and their byproducts (e.g., cholesta-3,5-diene), as well as the effects of thermal desorption on time-since-deposition modeling. Preliminary results show continued detection of squalene and cholesterol in fingerprints, with variations in cholesterol-to-squalene ratios over time.



POSTER SESSION ABSTRACTS

WEDNESDAY, APRIL 29, 2026



Discrimination Among Automotive Vinyl Wrap Manufacturers Using FTIR-ATR Analysis

Authors:

Yahira Rivas, Katherine A. Roberts

School of Criminal Justice and Criminalistics, California State University, Los Angeles

Abstract:

Automobile vinyl wraps are enhancements added to vehicles for aesthetic appeal or protection. They have quickly become popular because they come in a wide range of finishes and colors, allowing for full customization. When these vehicles are involved in accidents, examining physical evidence from vinyl wrap material can be challenging. Trace evidence is a forensic science discipline that involves the transfer of materials between people, objects, and the environment. Traditional trace evidence from vehicle collisions includes paint transfers, fibers, glass, and other materials transferred during impact.

This study focuses on analyzing automobile vinyl wraps, specifically characterizing their chemical properties to provide more information beyond paint evidence. Standard vinyl wraps are made of polyvinyl chloride (PVC), the most commonly used synthetic plastic in the automotive industry due to its flexibility and thermal stability. Fourier transform infrared spectroscopy was used to determine the chemical composition of each manufacturer's automotive vinyl wrap.

The study specifically investigates whether automotive vehicle wraps can be identified by their manufacturer's chemical profile using Fourier Transform Infrared spectroscopy in attenuated total reflectance mode. FTIR spectra were collected from six sample sets from five different vinyl wrap manufacturers, with three replicates per manufacturer, to evaluate variation within each wrap and differences among manufacturers. The process was repeated for both the adhesive and non-adhesive polymer backing of each wrap sample. The manufacturers included Avery Dennison, TeckWrap, The Vivid Shop, 3M, and TinyBot Vinyl, offering finishes such as matte, gloss, and satin. This presentation will review the results and discuss potential improvements in the characterization and interpretation of automotive vehicle wraps.



POSTER SESSION ABSTRACTS

WEDNESDAY, APRIL 29, 2026



DNA Methylation at the ELOVL2 Locus as a Predictor of Donor Age in Saliva Samples

Authors:

Yesha Shah, Katherine A. Roberts

School of Criminal Justice and Criminalistics, California State University, Los Angeles

Abstract:

DNA methylation at CpG islands within promoters affects gene expression and is a flexible epigenetic process influenced by various genetic and environmental factors, including aging. From a forensic perspective, estimating chronological age can aid investigations in human identification cases. The methylation level at CpG islands in the promoter of the human ELOVL2 gene has been consistently linked to chronological age across different populations, cell types, and tissues. Therefore, ELOVL2 promoter methylation levels could potentially be used as markers for estimating human age.

A total of 34 saliva samples from individuals aged 23 to 58 years were collected, purified, and processed for bisulfite conversion. DNA methylation analysis was then performed using an assay targeting 14 CpG sites within the ELOVL2 gene. The Human Age-associated ELOVL2 Promoter Methylation Quantification qPCR Assay Kit (ScienceCell, Carlsbad, CA) is designed to measure human ELOVL2 promoter methylation. The reference DNA sample contains an equal ratio of methylated to nonmethylated ELOVL2 promoter copies (both representing bisulfite-converted promoter sequences). It serves as a reference to determine the methylated-to-nonmethylated ELOVL2 promoter ratio in the target samples.

The objectives were to compare our percentage methylation data with published models and to develop our own age prediction model based on correlations between methylation profiles and chronological age. This presentation will discuss the accuracy of the prediction models using methylation data from the ELOVL2 CpG site, focusing on mean absolute deviation values for each sample.



POSTER SESSION ABSTRACTS

WEDNESDAY, APRIL 29, 2026



Fluorescent Imaging of Latent Fingerprint Analysis Using Conjugated Polyelectrolytes

Author:

Brooke Sutton

University of Strathclyde

Abstract:

Latent fingerprints (LFPs) are among the most frequently encountered types of evidence found at crime scenes and can provide crucial information in identifying and linking individuals to evidence and crime scenes. Conjugated polyelectrolytes (CPEs) have been heavily considered for forensic fingerprint analysis for their chemical and photophysical properties such as strong fluorescence, high resolution, and photostability that compete with the most commonly used fingerprint analysis methods such as ninhydrin, 1,8-diazafluoren-9-one, and cyanoacrylate. In this study, Poly([9,9bis(6'-N,N,N-trimethylammonium)-hexyl]fluorene]bromide (FPQ), a CPE, was utilized to visually enhance LFPs by fluorescing sebaceous, eccrine, and normal fingerprints on non-porous surfaces. FPQ was synthesized through a modified Suzuki-Miyaura cross-coupling polymerization and suspended in a solution containing the surfactant tween 85 to stabilize the solution.

The findings revealed that the CPE standard solution produced high-resolution, high-contrast, fluorescent fingerprints with discernible pores within the ridge detail. The addition of tween 85 improved the solution's stability and overall development, however, it hindered eccrine fingerprint development, limiting its ability to detect fingerprints with minimal biomaterial available that might be encountered in an investigation. Challenges also arose in the timing of the application process, underscoring a need for adjustments in surfactant concentrations to improve the stability and convenience of the solution. Although the FPQ surfactant was capable of producing high quality fluorescent fingermarks as intended, it lacked the consistency and reliability necessary for forensic evidence and needs further development towards the working solution. Regardless, these findings contributed new insight into the potential of an understudied conjugated polyelectrolyte, FPQ, in its application of forensic fingerprint analysis from a chemical and forensic perspective.



POSTER SESSION ABSTRACTS

WEDNESDAY, APRIL 29, 2026



Development of LC-MS/MS Confirmation Method for the Effective Separation of Common Cannabinoid Isomers and their Metabolites

Authors:

Melanie Weed, Craig Triebold

Sacramento County District Attorney's Office Laboratory of Forensic Services

Abstract:

Since the passing of the 2018 Farm Bill, which based the legality of cannabis products on the concentration of delta-9-THC, the market for hemp-derived cannabinoid compounds has greatly expanded. Other psychoactive cannabinoids, such as the isomer delta-8-tetrahydrocannabinol (Δ 8-THC), are commonly being used in cannabis products but have been difficult to differentiate in both a qualitative and quantitative manner within forensic toxicology laboratories. Thus, there is a need for a method that is able to chromatographically separate the Δ 8-THC and Δ 9-THC isomers as well as their metabolites using liquid chromatography-tandem mass spectrometry (LC-MS/MS) instrumentation. The market continues to change in regards to cannabinoids, with new, synthetic products being produced, so this study includes lesser known products, exo-THC, tetrahydrocannabiphorol (THCP), and Δ 10-THC, as well as other cannabinoids such as cannabidiol (CBD) and cannabigerol (CBG) to provide more comprehensive analytical results. A new method could allow for more accurate identification and interpretation in driving under the influence (DUI) and in other forensic cases where impairment or toxicity are of concern.



GENERAL SESSION SCHEDULE

THURSDAY, APRIL 30, 2026



Location: OLIVE BALLROOM

Moderators: Casey Hughes and Mey Tann

8:00 AM – 8:45 AM	The South Hill Serial Rapist <i>Raymond Davis, CourtSkills</i>
8:45 AM – 9:20 AM	Retail Investigation Teams <i>Todd Fernandez, Loss Prevention and Safety</i>
9:20 AM – 10:05 AM	Ignitable Liquids Detection Canine <i>Shawn Reiss, San Bernardino County Fire Protection District</i> <i>Brian Headley, San Bernardino County Fire Protection District</i>
10:05 AM – 10:25 AM	BREAK (OLIVE PATIO)
10:25 AM – 11:55 AM	From Contamination to CODIS: The Forensic Unraveling of People v. Horace Roberts <i>Michael Semanchik, The Innocence Center</i> <i>Chad Eyerly, California Department of Justice, Riverside Laboratory</i> <i>Emily Hanks, Riverside County District Attorney's Office</i> <i>William Robinson, Riverside County District Attorney's Office</i>
11:55 AM – 12:00 PM	2027 CAC Seminar Announcement
12:00 PM – 1:00 PM	LUNCH (THE MEADOWS)
1:00 PM – 1:30 PM	Dental Spa Arson <i>Xente Baker, City of Corona Fire Department</i>
1:30 PM – 2:00 PM	Missing Person DNA Program <i>Michelle Halsing, California Department of Justice, Jan Bashinski Laboratory</i>
2:00 PM – 2:30 PM	K9 Bloodhounds <i>Deputy Tyler Topping, Riverside County Sheriff's Office</i>
2:30 PM – 2:50 PM	BREAK (OLIVE PATIO)
2:50 PM – 3:20 PM	3D Printed Firearms and Firearm Components and their Related Evidence <i>Kirk Garrison, San Bernardino County Sheriff's Department</i>
3:20 PM – 3:50 PM	DNA and Firearms: From the Crime Scene to the Courtroom <i>Amanda Murray, DNA Labs International</i>
3:50 PM – 4:05 PM	DEA - Drug Trends <i>Andrea Larick, Drug Enforcement Agency</i>
4:05 PM – 5:05 PM	Practical Lessons from Fentanyl-Induced Homicides <i>District Attorney Michael Hestrin, Riverside County District Attorney's Office</i> <i>Deputy District Attorney Jerry Pfohl, Riverside County District Attorney's Office</i>
6:00 PM – 10:00 PM	Banquet <i>Must use provided transportation. Meet in parking lot north of hotel lobby.</i>
9:30 PM – 11:00 PM	Hospitality Suite (Room 316)



GENERAL SESSION ABSTRACTS

THURSDAY, APRIL 30, 2026



The South Hill Serial Rapist

Presented by:

Raymond Davis, *CourtSkills*

Abstract:

This tragic and controversial case began in early 1978 with women being attacked by a clever and elusive rapist. His M.O. was to find women walking or jogging alone then attacking them from behind, forcing them to the ground. He would often stuff an oven mitt into their mouths to keep them from calling out for help. There were more than fifty victims before a suspect, Frederick Coe, was arrested in Spokane, Washington in 1981.

Although no one was able to positively identify Coe as their attacker, they were collectively able to provide sufficient information through enhanced hypnosis to warrant Coe's arrest. He was later tried and convicted on these six assault cases and sentenced to 25 years in prison. Coe's attorneys appealed his conviction based upon the enhanced hypnosis and the judge granted Coe a new trial. Fortunately, there were no deaths.

Coe's case was later transferred to King County (Seattle), Washington, where he received new counsel. I was contacted by Coe's new attorneys to review this unusual case and to evaluate and reexamine the limited physical evidence against Coe. This physical evidence included pubic hair combings and ABO typing conducted on the vaginal swabs. No advanced serological testing was conducted and certainly no DNA testing was even available for testing on the swabs. This presentation will highlight the efforts made to convict Coe, partially through the misidentification of the pubic hair combings and later perjured testimony by the criminalist.

Biography:

Raymond Davis is a long-time member of the CAC, serving as past president, editorial secretary, and currently, chair of the Founder's Lecture committee. He has received numerous awards from the CAC over his distinguished career, including Life Member.

He has authored over 25 articles for the CACNews as well as several other forensic journals. Raymond's most recognized accomplishment was the creation of the first formalized training for expert witnesses in the United States, the Courtroom Presentation of Evidence course.

Since 1990, Raymond has conducted over 300 workshops across America, totaling over 7,000 students, training law enforcement professionals the skills to survive and thrive in the courtroom.



GENERAL SESSION ABSTRACTS

THURSDAY, APRIL 30, 2026



Retail Investigation Teams

Presented by:
Todd Fernandez

Abstract:

The presentation will provide insight into how retail investigation teams are providing support throughout our communities.

Biography:

Todd Fernandez has served over 30 years as Director of Loss Prevention and Safety for a prominent retail chain, focused on protecting people, property, and profits in one of California's most challenging regions. His investigative team has built collaborative partnerships with over 48 Southern California law enforcement agencies to proactively reduce criminal activity and enhance the safety of their stores and the communities they serve.



GENERAL SESSION ABSTRACTS

THURSDAY, APRIL 30, 2026



Ignitable Liquids Detection Canine

Presented by:

Shawn Reiss, *San Bernardino County Fire Protection District*

Brian Headley, *San Bernardino County Fire Protection District*

Abstract:

This presentation explores the critical role of ignitable liquids detection (ILD) canines in modern fire investigations. Attendees will gain insight into the capabilities, limitations, and deployment strategies of ILD K-9 teams in both residential and commercial fire scenes.

The presentation will highlight real-world case studies demonstrating how canine alerts assist investigators in identifying potential areas of origin and guiding evidence collection. Emphasis will be placed on proper scene integration, handler communication, and maintaining evidentiary integrity in accordance with NFPA 921 guidelines.

Biography:

Fire Investigator II Shawn Reiss is assigned to the San Bernardino County Fire Protection District, Office of the Fire Marshal, Fire Investigation Unit. Investigator Reiss serves as a certified Ignitable Liquids Detection Canine (ILDC) handler, working alongside his K-9 partner to assist in the detection of ignitable liquid residues in fire scenes. Investigator Reiss has extensive experience in fire origin and cause investigations, having investigated over a thousand fire incidents including residential, commercial, vehicle, and vegetation fires. As a K-9 handler, he deploys his canine partner to support fire investigations by rapidly identifying the possible presence of ignitable liquids, helping to narrow investigative focus and guide evidence collection. The ILDC team is trained to detect a wide range of ignitable liquids such as gasoline, diesel, and other accelerants commonly associated with intentionally set fires. Their work enhances the efficiency and accuracy of fire investigations and supports the identification and prosecution of arson-related crimes. In addition to his investigative duties, Investigator Reiss regularly collaborates with local, state, and federal agencies, and provides expert testimony in court regarding fire origin and cause as well as canine-assisted detection findings. The Ignitable Liquids Detection Canine Team plays a critical role in protecting the community by supporting fire investigations, helping determine fire causes, and assisting in holding those responsible for arson accountable.

Brian Headley began his career in the fire service in 1991 as a firefighter. In 1999, he transitioned to the prevention unit with the Hesperia Fire District, where he conducted life safety inspections and performed fire investigations. In 2004, the Hesperia Fire District was absorbed into the San Bernardino County Fire Protection District. Brian joined the Office of the Fire Marshal, focusing on fire and arson investigations. Over the past two decades, he has advanced through the ranks, becoming Investigation Supervisor in 2014 and, in 2021, Assistant Fire Marshal of the newly established Arson Unit, which operates independently from the Prevention Unit. Over the course of his career, he has conducted more than 3,000 investigations. In 2022, Brian was selected by the State Farm Arson Dog Program as a canine handler—an honor recognizing his expertise in fire investigations. His canine partner, Ginnie, is a six-year-old yellow Labrador Retriever. The team received certification from Maine Specialty Dogs in Gray, Maine, and Ginnie is recertified annually by the Maine State Police at locations throughout the United States. Under Brian's leadership, the Arson Unit has grown to seven investigators, including two canine teams, covering approximately 22,000 square miles across San Bernardino County. The unit conducts an average of 600 to 800 investigations annually and works closely with the San Bernardino County Arson Task Force. The team also provides mutual aid to neighboring jurisdictions for fire and arson investigations.



GENERAL SESSION ABSTRACTS

THURSDAY, APRIL 30, 2026



From Contamination to CODIS: The Forensic Unraveling of People v. Horace Roberts

Presented by:

Michael Semanchik, *The Innocence Center*

Chad Eyerly, *California Department of Justice, Riverside Laboratory*

Emily Hanks, *Riverside County District Attorney's Office*

William Robinson, *Riverside County District Attorney's Office*

Abstract:

This presentation examines the wrongful conviction and eventual exoneration of Horace Roberts, a case that highlights the power of modern DNA analysis to correct injustice and identify the true perpetrators. In 1998, Terry Cheek was found murdered in Riverside County, California. The investigation quickly focused on Horace Roberts, a coworker and acquaintance of the victim. Prosecutors relied heavily on circumstantial evidence, including workplace relationships, carpooling routines, and interpersonal dynamics. Forensic evidence was limited, given the time period. Roberts was ultimately convicted despite the absence of definitive biological evidence linking him to the crime. This presentation will start by laying out the relevant parties and their relationships, and how pretrial narratives—such as coworker interactions, alleged affairs, and cohabitation timelines—shaped investigative assumptions. It then turns to the forensic evidence collected at the crime scene, including biological material recovered from the victim's body and clothing, and how that evidence was initially interpreted at trial. A central focus of the presentation is the evolution of DNA testing in this case. Early testing conducted in 1998 yielded limited results. Subsequent rounds of testing, however, exposed critical issues, including a contamination issue associated with SERI's testing of a watch. Expert review, including analysis of Ed Blake's report and additional testing conducted by the California Department of Justice, raised significant questions about the reliability of earlier forensic conclusions. The presentation will explore specific evidentiary items, such as fingernail scrapings and clothing, and demonstrate how advances in DNA technology, combined with improved laboratory practices, enabled a more accurate interpretation of the biological evidence. These developments ultimately led to the identification of foreign DNA profiles suitable for entry into CODIS. A breakthrough occurred when a CODIS hit linked the crime scene DNA to individuals with no prior connection to Horace Roberts. This discovery prompted a reinvestigation that uncovered the involvement of multiple perpetrators. The subsequent prosecution and conviction of Googie Harris Sr., Googie Harris Jr., and Joaquin Leal not only confirmed Roberts' innocence, but also underscored the public safety implications of wrongful convictions: while an innocent man was imprisoned, the true perpetrators remained free. This case study offers lessons for forensic practitioners in how post-conviction investigation and litigation occur. It also showcases how forensic work shows up in wrongful conviction cases, and how the prosecution and defense work together on occasion in search of the truth.



GENERAL SESSION ABSTRACTS

THURSDAY, APRIL 30, 2026



From Contamination to CODIS: The Forensic Unraveling of People v. Horace Roberts (continued)

Biographies:

Michael Semanchik is the Executive Director of The Innocence Center, where he leads efforts to free wrongfully convicted individuals and improve the reliability of the criminal legal system. A California attorney with more than a decade of experience in post-conviction litigation, he has personally helped secure the exoneration of 12 individuals who collectively served nearly 200 years in prison. Before his current role, Semanchik served as Managing Attorney at the California Innocence Project, where he litigated habeas petitions and DNA testing motions and managed major grant-funded initiatives. He is a frequent speaker on forensic science, wrongful convictions, and the use of emerging technologies in legal practice, and has presented at national conferences and in media outlets across the country.

Chad Eyerly serves as a Senior Criminalist with the California Department of Justice's Bureau of Forensic Services at the Riverside Laboratory. With 10 years of experience, he currently functions as the laboratory's DNA Technical Leader and is an active primary crime scene responder. In addition to his forensic casework, he is an Adjunct Professor with the Riverside Community College District, where he teaches courses in criminalistics and crime scene investigation, helping to prepare the next generation of forensic professionals.

Emily Hanks is a Managing Deputy District Attorney with the Riverside County District Attorney's Office. She has been with the office for 14 years. She oversees the appellate unit which includes the conviction review unit. William Robinson is a Chief Deputy District Attorney with more than 20 years of experience in criminal prosecution and leadership with the Riverside County District Attorney's Office. Throughout his career, he has handled a wide range of major felony assignments including homicide, gangs, public integrity, sexual assault and child abuse, and has tried numerous complex and high-profile cases, including multiple death penalty trials.

In his leadership roles, Mr. Robinson has overseen major prosecution units including Western Homicide, Gang, Vehicular Homicide, Crimes Against Police Officers, and the Sexual Assault and Child Abuse Unit. He has also supervised the Countywide Juvenile Division and the Administrative and Clerical Divisions, where he oversaw more than 130 employees and led internal affairs and hiring investigations.

Deeply committed to mentorship and public service, Mr. Robinson has trained and mentored new prosecutors, coached mock trial teams, and actively supported programs serving underserved communities. He serves as President of the Richard T. Fields Bar Association Foundation and has served on the boards of the Riverside Area Rape Crisis Center and the Riverside Deputy District Attorneys Association. Through community programs and partnerships, he has mentored high school and first-generation college students and frequently speaks at educational and alumni events at UC Riverside.



GENERAL SESSION ABSTRACTS

THURSDAY, APRIL 30, 2026



Dental Spa Arson

Presented by:

Xente Baker, *City of Corona Fire Department*

Abstract:

This presentation will provide an overview of a past commercial arson fire that led to the discovery of an organized insurance fraud ring.

Biography:

Xente X. Baker is a seasoned fire service professional with more than 26 years of experience in fire inspection and 23 years as a fire investigator. He currently serves as Deputy Fire Marshal/Fire Investigator with the City of Corona Fire Department, Fire Prevention Division, where he plays a critical role in safeguarding life and property through prevention, investigation, and education.

In his capacity as Deputy Fire Marshal, Mr. Baker reviews complex development, architectural, and building construction plans to ensure compliance with California Building and Fire Codes, as well as applicable local and national regulations. He represents the Fire Department at City of Corona development meetings, providing fire code guidance to residential, commercial, and industrial developers prior to project approval. He also conducts comprehensive field inspections of new and existing occupancies and oversees the testing and acceptance of fire detection, alarm, and suppression systems.

As a Fire Investigator, Mr. Baker has conducted approximately 500 fire origin and cause investigations involving structures, vehicles, and wildland fires. His work includes arson and insurance fraud investigations, evidence collection, scene documentation, witness interviews, preparation of investigative reports, and authorship of search warrants and affidavits. He has testified in both civil and criminal courts at the county, state, and federal levels and has participated in autopsies related to fire fatalities. His investigative expertise is grounded in extensive formal training, including advanced coursework aligned with NFPA 921 and 1033, National Fire Academy programs, DOJ and FBI instruction, and hundreds of additional certified training hours.

Mr. Baker is also a recognized leader in juvenile firesetter intervention, having conducted 165 youth firesetter interventions as of September 2025. He coordinates and administers the Corona Fire Department's Youth Firesetter Intervention Program (YFSIP), providing education, assessment, and intervention services to youth and families while maintaining program records and compliance. His efforts in this area have contributed to regional training initiatives and interagency collaboration.

Beyond investigations, Mr. Baker instructs fire department recruits and oversees the department's Shift Fire Investigator Trainee Program. He has coordinated and delivered presentations to schools, behavioral health professionals, probation departments, and fire service personnel throughout Southern California.

Mr. Baker's service has been recognized with numerous awards, including community service honors, fire investigation citations, departmental commendations, and regional and national investigator nominations. He is an active member of several professional organizations and currently serves as Interim President of the Riverside County Arson Task Force and Chairperson of the Inland Empire Juvenile Firesetter Coalition.

Through his career, Xente X. Baker has demonstrated a sustained commitment to public safety, professional excellence, and community-focused fire prevention and investigation.



GENERAL SESSION ABSTRACTS

THURSDAY, APRIL 30, 2026



Missing Person DNA Program

Presented by:

Michelle Halsing, *California Department of Justice, Jan Bashinski Laboratory*

Abstract:

The presentation will discuss the law that established and funds the California Missing Persons DNA Program (MPDP), as well as the requirements for law enforcement agencies, Coroners/Medical Examiners, and the MPDP. It will outline the types of services provided and how these resources can support laboratories and agencies. Additionally, the presentation will include selected case examples and highlight important considerations related to emerging technologies, such as genealogy and Rapid DNA instruments.

Biography:

Michelle graduated in June 2001 from California Polytechnic State University, San Luis Obispo, where she studied biological sciences and played D1 softball.

Michelle started with the California Department of Justice in December 2001 as a Criminalist in the California State Offender DNA Database (CAL-DNA). In August of 2007, she became a qualified casework analyst in the Missing Persons DNA Program. Michelle is currently one of two supervisors in that program. She is also currently qualified in DNA casework doing STR and mtDNA DNA cases. She is responsible for the laboratory's case management, Kinship search program, and is the liaison for forensic genetic genealogy cases.

For the past 14 years, Michelle has been a qualified ANAB/FBI QAS assessor. This allows her to assess and audit laboratories across the world to make sure they are following certain industry standards and procedures for DNA casework.

Michelle presents at several training courses a year, informing and educating our law enforcement agencies of the laws and services of the California Missing Persons DNA Program.



GENERAL SESSION ABSTRACTS

THURSDAY, APRIL 30, 2026



K9 Bloodhounds

Presented by:

Deputy Tyler Topping, *Riverside County Sheriff's Office*

Abstract:

This presentation will cover the role and responsibilities of a K9 team, with a focus on the use of bloodhounds. It will examine the function and daily operations of a bloodhound team, including how bloodhounds are deployed and managed in the field. This presentation will also explore the bloodhound's unique capabilities in trailing and scent work, highlighting how these skills enhance search efforts and contribute valuable support to a department's operations.

Biography:

Deputy Topping has worked with the Riverside County Sheriff's Office for 10 years. He has been with the K9 team for four years and is a certified bloodhound trainer.



GENERAL SESSION ABSTRACTS

THURSDAY, APRIL 30, 2026



3D Printed Firearms and Firearm Components and their Related Evidence

Presented by:

Kirk Garrison, *San Bernardino County Sheriff's Department*

Abstract:

As 3D-printing technologies continue to develop, the desktop machines available to consumers get more advanced while simultaneously becoming easier to set-up and use. Through forums and YouTube tutorials, an individual can get a 3D-printer, producing parts of sufficient quality to create frames, conversion devices, magazines, and other accessories. As the printers themselves advance, the plastic filaments that the printers use also develop and become more resilient and at a lower cost. The financial incentive to mass produce cheap firearm parts and components is present, creating an opportunity for an individual to profit from the sales of un-serialized parts and firearms. There are several opportunities to find the origins of these parts, including both digital and physical evidence. This presentation will cover the basics of getting a 3D-printer up and running, and the potential methods of tracing printed parts back to the printer that made them.

Biography:

Kirk Garrison graduated from Clarke University in Dubuque, Iowa in 2010 with a BS in Biology, and teaching credentials in biology, chemistry, and middle school physical science. After teaching and working in environmental science, he moved to Big Bear, California where he began his career in forensics as a Sheriff's Service Specialist for the San Bernardino County Sheriff's Department in 2013. Kirk was promoted to the crime lab as a Sheriff's Crime Scene Specialist in 2016 and again promoted into his current position as a Criminalist in 2018. As a Criminalist, he has worked in Breath Alcohol and is currently in the Firearms and Toolmarks Unit. Kirk is currently a member of the Association of Firearm and Toolmark Examiners, the California Association of Criminalists, and a former member of the International Association for Identification.

Kirk's main research focus is on 3D-printed firearms and components. He has co-authored an exploratory study and is currently advising and co-authoring a second study, which is still going through the peer review process.



GENERAL SESSION ABSTRACTS

THURSDAY, APRIL 30, 2026



DNA and Firearms: From the Crime Scene to the Courtroom

Presented by:

Amanda Murray, *DNA Labs International*

Abstract:

The examination of firearms associated with DNA evidence presents unique challenges that span crime scene practices, laboratory analysis, investigative use, and courtroom presentation. This presentation provides an overview of key considerations involved in the handling and interpretation of DNA related to firearms, following evidence from initial collection through courtroom testimony. It will focus on firearm handling and DNA collection at the crime scene, with emphasis on the importance of following best practices to minimize contamination and support reliable results. Laboratory considerations for the processing of DNA from firearms, spent shell casings, magazines, and other components, including common issues such as low-level DNA, mixtures, and transfer will be discussed. The role of firearm-related DNA evidence in criminal investigations, courtroom considerations, including testimony preparation, admissibility, transfer and persistence, and presentation of DNA and firearms evidence in criminal proceedings will be highlighted. This talk is intended for a broad forensic audience and emphasizes the integration of firearms and DNA evidence across disciplines.

Biography:

Amanda Murray is a Senior DNA Analyst, Analyst Team Lead, and Training Analyst Specialist at DNA Labs International. She is also an Adjunct Assistant Professor at Pace University where she teaches Forensic Biology, Forensic Pharmacology, and Forensic Seminar courses for undergraduate and graduate students. She is passionate about bridging the gap between the academic and forensic laboratory settings, as well as ensuring the integrity, quality and reliability of forensic DNA testing through proper training and continuing education. When she isn't working on DNA cases, training serologists and DNA analysts, and/or teaching the future generation of forensic scientists, she can be found pouring her energy into her family, friends, garden, and workout routine.



GENERAL SESSION ABSTRACTS

THURSDAY, APRIL 30, 2026



DEA - Drug Trends

Presented By:

Andrea Larick, *Drug Enforcement Agency*

Abstract:

This presentation will provide an overview of the scope of the Drug Enforcement Administration (DEA) Forensic Science Programs and an analysis of current trends in controlled substances across the United States. Additionally, this presentation will cover California-specific statistics, to include methamphetamine, cocaine, fentanyl, and counterfeit tablets, as well as emerging substances like xylazine and nitazene variants.

Biography:

Andrea Larick has been a Forensic Chemist for the DEA for nearly 10 years. She has a Bachelor of Science degree in Chemistry with a minor in Mathematics from California State University, San Bernardino.



GENERAL SESSION ABSTRACTS

THURSDAY, APRIL 30, 2026



Practical Lessons from Fentanyl-Induced Homicides

Presented by:

District Attorney Michael Hestrin, *Riverside County District Attorney's Office*

Deputy District Attorney Jerry Pfohl, *Riverside County District Attorney's Office*

Biographies:

Michael Hestrin was elected as Riverside County District Attorney in June 2014 and sworn in to serve in this capacity on January 5, 2015. He was re-elected to a third term in 2022 and continues to hold the position of Riverside County District Attorney.

Born in the Coachella Valley, Hestrin graduated from the University of Arizona in Tucson in 1993, earning a Bachelor's degree in history. Following his undergraduate studies, he spent a year living in Mexico with relatives while working as a reporter for a small newspaper based in Guadalajara. Hestrin then returned to the United States to pursue his legal education at Stanford University, where he graduated in 1997 with both a Juris Doctorate in Law and a Master's degree in Latin American studies.

Prior to his election as District Attorney, Hestrin dedicated nearly 20 years to serving as a line prosecutor in the Riverside County DA's Office. Throughout his tenure, he handled numerous complex criminal cases, successfully prosecuting over 100 jury trials. He served as Trial Team Leader for the District Attorney's Sexual Assault and Child Abuse Unit, demonstrating his commitment to seeking justice for victims of child abuse. Additionally, for the majority of his last decade before assuming office, he worked in the Homicide Unit, where he conducted more than 40 murder trials, including seven death penalty cases.

Throughout his tenure as District Attorney, Hestrin has remained steadfast in his commitment to ensuring public safety in our community. He has prioritized tough prosecution of serious and violent felonies, leading to the establishment of initiatives such as the DA's Bureau of Investigation-led Gang Impact Team and Riverside County Child Exploitation Team. These multiagency teams are dedicated to aggressively investigating and prosecuting violent felons, child predators, and human traffickers. In 2021, Hestrin took a firm stance against drug dealers distributing fentanyl, a lethal substance causing detrimental harm to the community. Under his leadership, the Riverside County District Attorney's Office has pursued aggressive prosecution of fentanyl dealers, including charging them with murder when supported by evidence.

DA Hestrin currently lives in Murrieta with his wife and children.

Jerry Pfohl is currently in his 19th year as a Deputy District Attorney with the Riverside County District Attorney's Office. Over the course of his career, he has served in numerous assignments within the office, developing broad prosecutorial experience across a wide range of criminal cases. For the past five years, he has served in the office's Homicide Unit, where he handles some of the most serious and complex prosecutions.

He has been at the forefront of fentanyl-induced homicide prosecutions. In 2023, he prosecuted *People v. Vicente Romero*, the first state-level trial in the nation to result in a jury conviction for murder based on furnishing fentanyl. In 2025, he again obtained guilty verdicts at jury trial in another fentanyl-induced murder prosecution, *People v. Quinn McKellips*. These cases have placed him among the leading prosecutors in the country addressing criminal accountability in fentanyl-related deaths.



GENERAL SESSION SCHEDULE

FRIDAY, MAY 1, 2026



Location: OLIVE BALLROOM
Moderator: Destiny Rivera

- 8:00 AM – 9:30 AM Prosecution of David and Louise Turpin
Kevin Beecham, Riverside County District Attorney's Office
- 9:30 AM – 10:30 AM The Courtroom Presentation of Forensic Evidence in a Dynamic Murder Prosecution
Michelle Weiske, Los Angeles County District Attorney's Office
Phil Sterling, Los Angeles County District Attorney's Office
- 10:30 AM – 10:45 AM BREAK (OLIVE PATIO)
- 10:45 AM – 11:20 AM The Misuse of Post Conviction DNA Testing
Daniel J. Gregonis, Retired Senior Criminalist
Susan E. Coleman, JD, Partner at Burke, Williams & Sorensen, LLP; CA AG's Office
- 11:20 AM – 12:20 PM It Could Happen to You: A Criminalist in the Crosshairs - Epilogue
Daniel J. Gregonis, Retired Senior Criminalist
Gregory Laskowski, Criminalistics Services International, LLC
- 12:20 PM Closing Remarks
Caroline Kim, California Department of Justice, Riverside Laboratory



GENERAL SESSION ABSTRACTS

FRIDAY, MAY 1, 2026



Prosecution of David and Louise Turpin

Presented by:

Kevin Beecham, *Riverside County District Attorney's Office*

Abstract:

The presentation will cover the prosecution of David and Louise Turpin who tortured and malnourished their 13 children for many years, including imprisoning them in their house. This will cover the initial rescue, what was charged, and the difficulties surrounding the case.

Biography:

Kevin Beecham has been an attorney for 21 years, 20 as a prosecutor with the Riverside County District Attorney. Kevin is currently a Managing Deputy District Attorney for the Sexual Assault / Child Abuse Unit. Prior to that he was a line DDA assigned to the major crimes division for 15 years where he has prosecuted in the Domestic Violence, Vehicular Homicide, Sexual Assault / Child Abuse, and Homicide Units. Prior to promoting, Kevin spent 5 years litigating special circumstance murder cases, including death penalty trials.

Kevin has been assigned several high-profile cases such as *People v. David and Louise Turpin*; *People v. Joseph Jimenez*, the Corona movie theater double murder; and *People v. Anurag Chandra*, the triple murder of 3 teenagers who were killed for "ding-dong-ditching" the defendant's house.



GENERAL SESSION ABSTRACTS

FRIDAY, MAY 1, 2026



The Courtroom Presentation of Forensic Evidence in a Dynamic Murder Prosecution

Presented by:

Michelle Weiske, *Los Angeles County District Attorney's Office*
Phil Sterling, *Los Angeles County District Attorney's Office*

Abstract:

We aim to present a detailed discussion of the forensic evidence that was presented in the murder prosecution of *People v. Sarinana*. In this 17-week jury trial, we presented a variety of forensic evidence including but not limited to expert testimony in crime scene investigation, trace evidence, toxicological evidence, coroner/autopsy evidence, forensic anthropological evidence, entomology (maggots and fly evidence), DNA evidence, and location data/GPS/phone tracking evidence.

Biographies:

Phil Stirling has been a Deputy District Attorney in Los Angeles County for over 33 years. He has served in the most complex divisions including the Gang Homicide Division, the Special Trials Division, Crimes Against Peace Officers Section, and the Hardcore Gang Division. He has been recognized as the Los Angeles County District Attorney's Prosecutor of the Year, DDA of the Month, and Outstanding Prosecutor Award, Justice for Homicide Victims. Aside from his work at the DA's Office, he has coached softball, baseball, and football. He teaches fifth grade students about the law as a Project LEAD Instructor and he has been involved as a board member with Dads Uniting Dads in Education & Service (DUDES). He lives and works by the moto: "We have the best job in the world, do it right."

Michelle has been a Los Angeles County Deputy District Attorney for over 18 years holding a variety of assignments including the complex trial assignments in the Pomona Branch Office, Child Abduction Unit, and the Juvenile Division. Notably, she has conducted a total of 80 jury trials, including 13 murder trials to verdict. The cases she prosecutes often present unique issues including decomposition, no cause of death, and various types of unconventional weapons, including cinder blocks and hammers, as well as the usual knives and guns. She has also frequently battled issues involving self-defense, imperfect self-defense, and provocation. Additionally, she lectures to law enforcement agencies on report writing and court presentation.



GENERAL SESSION ABSTRACTS

FRIDAY, MAY 1, 2026



The Misuse of Post Conviction DNA Testing

Presented by:

Daniel J. Gregonis, *Retired Senior Criminalist*

Susan E. Coleman, JD, *Partner at Burke, Williams & Sorensen, LLP since 2010; CA AG's Office 1994-2010*

Abstract:

DNA, especially since the development of STR technology, has become a standard tool for testing a variety of samples in post-conviction investigations. The high sensitivity of current DNA STR testing kits can lead to detection of minor or low-level profiles. Many of these minor or low-level profiles are a result of touch or handlers' DNA or potentially an individual speaking over an item of evidence, none of which can be attributed to a specific body fluid. Furthermore, these "touch" DNA profiles often cannot be attributed to any individual that can be logically associated with the case. Some parties will raise the idea that those touch DNA profiles belong to the "real" assailant, thus paving the way for a habeas to release the person and to then sue for wrongful conviction. Because the items submitted are from older cases, such as in the 2000s and 1990s and sometimes earlier, the known history of the evidence can be extremely important for interpreting those "touch" DNA results.

This presentation will review a 1993 homicide case in which post-conviction testing was performed. The DNA results were conducted, reported, and interpreted without any apparent consideration of the significant known history of the evidence. This included jurors and lawyers having touched the "evidence" during several criminal proceedings. One question is whether the post-conviction testing should have been conducted at all. This lack of taking into account the known history, as well as gross mischaracterization of the evidence by lawyers and judges, contributed significantly to a declaration of "factual innocence" that played a huge role in a subsequent Federal civil lawsuit.

Biography:

Daniel Gregonis has worked as a Criminalist and Deputy Sheriff with the San Bernardino County Sheriff's Department working in disciplines including crime scenes (homicides and officer involved shootings), clandestine laboratories, blood alcohol, narcotics, trace evidence, including hair analysis, conventional serology, and DNA analysis. Following his time at San Bernardino, he was a Senior Criminalist at Los Angeles County Sheriff's Department and California Department of Justice, Riverside Laboratory, working in the DNA and Firearms units. He is currently retired, but still maintains memberships with the California Association of Criminalists, American Academy of Forensic Sciences, and Association of Firearm and Toolmark Examiners. He was initially certified with the California Association of Criminalists and is currently certified with the American Board of Criminalistics.



GENERAL SESSION ABSTRACTS

FRIDAY, MAY 1, 2026



It Could Happen to You: A Criminalist in the Crosshairs - Epilogue

Presented by:

Daniel J. Gregonis, *Retired Senior Criminalist*

Gregory Laskowski, *Criminalistics Services International, LLC*

Abstract:

The night of August 10, 1993, was no different than any hot August night in the remote areas of San Bernardino County, except for one thing. Members of the San Bernardino County Sheriff's Department homicide and crime scene response units were roused from their sleep to respond to the report of a deceased body in a remote location of the county. When the teams arrived on scene, they found an isolated location with no power. The area was pitch black, so prudently it was decided to process the scene at sunup, occurring three to four hours later. Processing the scene went without incident. The seized evidence was bagged, tagged, and transferred back to the crime lab. That same evidence was later processed by San Bernardino Sheriff's Department Crime Laboratory personnel. There was one notable occurrence at autopsy; a suspicious mark thought to be a bitemark was discovered on the hand of the victim. Detectives decided to send images of that mark to an outside expert for review, a well-regarded forensic odontologist named Dr. Skip Sperber. After three trials ending with two hung juries and a mistrial, the San Bernardino County District Attorney's Office decided to call in Dr. Sperber to elicit testimony on the potential bitemark in a fourth trial. Dr. Sperber was sworn in and testified to the efficacy of bitemark comparison analysis and offered a qualified opinion that he could not exclude the suspect, the victim's husband William Richards, as potentially having left the mark. Years later, Dr. Sperber recanted his testimony. This caused the California Supreme Court to vacate the conviction of the defendant. It also resulted in the California state legislature to pass a law, signed by the state's governor with regard to recanted expert testimony in criminal trials. The fall out of this was that a California Innocence Project took up the case, and a private law firm began the process of filing a civil lawsuit against the County of San Bernardino, including its Sheriff's department, the responding officer, the detectives, Dr. Sperber, and Criminalist Daniel Gregonis. A number of charges, 93 in all, were alleged against the above defendants including: conspiracy, malfeasance, planting evidence, giving false and misleading and/or false testimony, employee misconduct, inadequate training, dishonesty, abuse of power, violation of constitutional rights, and failing to preserve exculpatory evidence. Plaintiff's counsel secured services of a number of forensic scientists in such fields as forensic pathology, forensic odontology, DNA analyses, forensic serology, crime scene investigation, and bloodstain pattern analysis who offered commentary, reports, and deposition, and photogrammetry. On September 3, 2019, United States District Court Judge James Otero of the Central District of California granted a summary judgement in favor of the County of San Bernardino and the named defendants ruling the case closed. However, through the process of 'judge' shopping, the plaintiff's attorneys were able to convince the 9th Circuit Court of Appeals to reopen the matter. A civil trial was ordered to be held in Los Angeles Federal District Court. This trial focused on the scene detectives delaying the coroner's investigators access to the crime to establish the postmortem interval, and more specifically, accused the criminalist who worked the scene and analyzed physical evidence of planting evidence, specifically blue cotton fibers, from the plaintiff's shirt onto one of the fingernails of the decedent. The reports, trial testimonies, expert opinions by plaintiff's witnesses, and the opinions proffered by this plaintiff's expert will be discussed.

Biography:

Gregory E. Laskowski is the president/chief consultant of Criminalistics Services International, LLC. Gregory is a Diplomate with certification in Comprehensive Criminalistics with the American Board of Criminalistics. In addition, Gregory has lectured on forensic science techniques and case histories in the former Soviet Union, the FBI Academy in Quantico Virginia, and for various professional societies and associations in the United States and Europe. He has published papers in the Journal of Forensic Sciences, the Journal of Identification, and the Association of Firearm and Tool Mark Examiners Journal. His memberships in professional associations include: Retired Fellow of the Criminalistics section of the American Academy of Forensic Sciences and member of the Academy Standards Board Firearms and Toolmarks Consensus Body; Distinguished Member of the Association of Firearms and Toolmark Examiners; Distinguished and Life Member of the International Association for Identification, where he serves as the Chair of the Science and Practices Committee; past-president of the California Association of Criminalists; and Member of the California Association of Crime Lab Directors. He is a commissioner for the Forensic Science Education Program Evaluation Commission FEPAC. Gregory also consults or has consulted for television crime dramas and has appeared in three episodes of Forensic Files.



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kellie.fenesan@nmslabs.com

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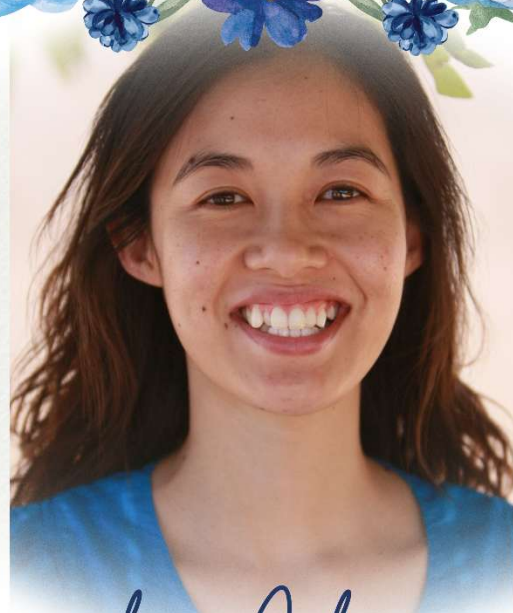
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IN LOVING MEMORY OF



Wanwafai Charoenchote

Senior Criminalist

California DOJ BFS Riverside Laboratory

12/05/1978 - 01/06/2024

We pause to honor and remember our co-worker and CAC member, Wanwalai "Wan" Charoenchote. She was a cherished daughter, sister, wife, mother, and friend whose presence is deeply missed by all who knew her.

Wan showed remarkable strength and courage in her battle with hepatocellular carcinoma. In her memory, donations supporting cancer research may be made to USC Norris and City of Hope, where she received her care.

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