



### Presidents message

Dear Colleagues,

The organization of our individual labs into one greater organization of ASCLD permits us to take on projects that we could not accomplish individually. ASCLD's Foresight 2020 initiative is one such undertaking. The ASCLD Board made a successful presentation to the Laura and John Arnold Foundation, which has graciously funded the development of an IT solution that will prepare data from our commonly used LIMS systems directly into the Foresight Project run by Professor Paul Speaker of the University of West Virginia. Participating vendors include JusticeTrax, Porter Lee, STaCS and StarLIMS.



Max Houck has been tasked with oversight of the project. Max states: "I'm thrilled with the software versions I've seen for the initial vendors for the alpha labs--very exciting. In the beta phase, it's now up to the labs to work with us to get the software installed. It's a team effort for all parties." Once some of our test labs have worked out the bugs, a version will be available to all crime labs using those vendors.

The Foresight Project offers each lab a great opportunity to take advantage of compiling metrics to compare progress against themselves over time. The Foresight 2020 software will assist with NIJ grant reporting compliance. Crime labs take great pride in the service we provide, and seek continuous improvement in that service. Participation in Foresight promotes self-examination using consistently defined metrics to assist with that improvement.

We look forward to offering this LIMS enhancement product later next year. Thank-you again to the Laura and John Arnold Foundation for sponsoring this exciting initiative.

Be sure to stay up-to-date with our [2017-18 National Priorities and Agenda!](#)

**Our NEW mailing address:** 5 Glen Road, Suite 123, Garner, NC 27529

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### July's Featured Article

**His name was Wilmer Souder.** A physicist at the National Bureau of Standards, now known as the National Institute of Standards and Technology (NIST), Souder played an important role in the early days of forensic science. He helped send countless murderers, bootleggers, gangsters and thieves to prison, and he kept such a low profile partly out of concern for his and his family's safety. Perhaps as a result, he was not long remembered for his forensic work, and his influence on the developing field of forensic science was not as great as it might have been.

NIST Library just finished scanning Souder's nine notebooks and has made them available for anyone to view via the NIST Digital Archives:

<http://nistdigitalarchives.contentdm.oclc.org/cdm/landingpage/collection/p16009coll67>

Bringing together experts from the forensic, research, legal, and law enforcement communities to strengthen forensic science and create a safer, more just society.

<https://www.nist.gov/topics/forensic-science>

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**FORENSIC SCIENCE  
ERROR MANAGEMENT**  
**INTERNATIONAL**  
**FORENSICS SYMPOSIUM**  
July 24-28, 2017 @NIST, Gaithersburg, MD



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**Looking for a new opportunity?**

- [Forensic Scientist – Division of Technical Services](#), Virginia Dept. of Forensic Science, Richmond, VA, Expires: August 11, 2017
- [Quality Specialist](#), Houston Forensic Science Center, Houston, TX, Expires: September 30, 2017
- [Forensic Analyst – Biology/DNA](#), Houston Forensic Science Center, Houston, TX, Expires: September 30, 2017
- [Crime Scene Supervisor](#), Houston Forensic Science Center, Houston, TX, Expires: September 30, 2017
- [Latent Print Examiner](#), Houston Forensic Science Center, Houston, TX, Expires: September 30, 2017
- [Property & Evidence Manager](#), NMS Labs, Grand Prairie, TX, Expires: October 18, 2017
- [Forensic Biologist III or IV Trainer](#), NMS Labs, Willow Grove, PA, Expires: October 18, 2017
- [Forensic Chemist III or IV](#), NMS Labs, Willow Grove/Warminster PA, Expires: October 18, 2017
- [Forensic Scientist I, II, III- Chemistry](#), Kansas Bureau of Investigation, Topeka, KS, Expires: July 31, 2017
- [Forensic Scientist I, II, III- Biology](#), Kansas Bureau of Investigation, Topeka, KS, Expires: July 31, 2017
- [Forensic Scientist I, II, III](#), Kansas Bureau of Investigation, Topeka, KS, Expires: July 31, 2017
- [Non-Tenure Track Forensic Science Faculty Position](#), Pennsylvania State University, University Park, PA, Expires: October 13, 2017
- [Forensic Science Lecturers \(2\)](#), University at Albany, SUNY, Albany, NY, Expires: August 31, 2017
- [Staff Chemist](#), ORAU (Oak Ridge Associated Universities), Charlottesville, VA and OCONUS, Expires: September 29, 2017
- [Forensic Scientist II](#), Scottsdale Police Department, Scottsdale, AZ, Expires: July 23, 2017
- [Forensic Scientist I](#), Scottsdale Police Department, Scottsdale, Arizona, Expires: July 23, 2017
- [Post doctoral scholar](#), The Pennsylvania State University, Forensic Science Program, Department of Biochemistry and Molecular Biology, University Park, PA, Expires: August 31, 2017
- [Latent Print Laboratory Director](#), NYS Division of Criminal Justice Services, Albany, NY, Expires: September 15, 2017

- [Bilingual Accreditation Manager](#), ANSI-ASQ National Accreditation Board, Cary, NC, Expires: September 14, 2017
- [Software Tester](#), JusticeTrax, Inc., Mesa, Arizona, Expires: July 31, 2017
- [QA/QC Project Coordinator](#), Harris County Institute of Forensic Sciences, Houston, Texas, Expires: July 31, 2017
- [Audio/Video Forensic Analyst](#), Houston Forensic Science Center, Houston, TX, Expires: September 30, 2017
- [Staff DNA Analyst \(#01611\)](#), ORAU, Charlottesville, VA and OCONUS, Expires: October 2, 2017
- [Senior DNA Analyst \(#01607\)](#), ORAU, Charlottesville, VA and OCONUS, Expires: October 2, 2017
- [Principal DNA Analyst \(#01604\)](#), ORAU, Charlottesville, VA and OCONUS, Expires: October 2, 2017
- [Associate DNA Analyst \(#01593\)](#), ORAU, Charlottesville, VA and OCONUS, Expires: September 29, 2017
- [Lab Manager](#), Sorenson Forensics, Salt Lake City, Expires: August 2, 2017
- [DNA Analyst I & II](#), Sorenson Forensics, Salt Lake City, Expires: August 2, 2017
- [DNA Technician](#), Sorenson Forensics, Salt Lake City, Expires: August 2, 2017
- [Serologist](#), Sorenson Forensics, Salt Lake City, Expires: August 2, 2017

# TRAINING OPPORTUNITIES



## [New Agilent Sponsored Webinar!](#)

Registration is Open!!

Power of High Res Mass Spec to Detect Fentanyl Analogues  
When: July 27th, 2017 at 11:00am EST

This webinar summarizes the pharmacology of Non-Pharmaceutical Fentanyl (NPFs), trends of abuse, and explore novel techniques for the analysis of NPFs in forensic toxicology casework using Q-TOF mass spectrometry applications.

The number of opioid overdoses in the United States has dramatically increased over the past few years. The abuse of heroin and synthetic opioids such as fentanyl and its analogues are major contributors to this epidemic. Non-pharmaceutical fentanyl (NPFs) such as carfentanil, furanyl fentanyl, acetyl fentanyl, fluoroisobutryl fentanyl, and other novel opioids such as U-47700 and 4-ANPP are being routinely encountered in forensic toxicology and drug chemistry casework. Furthermore, we will highlight prevalence statistics from Alabama, Palm Beach County, and other laboratories...

[Click HERE to find out more and Register!](#)

## [NIJ Forensic Technology Center of Excellence](#)

Attendee Enrollment Open!

Rapid DNA Technology Forum

When: August 15th - 17th, 2017 from 8am - 5:30pm EST

Where: The Alexandrian in Old Town, Alexandria, VA

The FTCoE will host the Rapid DNA Technology Forum on August 15-17, 2017 in Alexandria, VA. Rapid DNA technology has quickly advanced over the past several years with two commercially available systems being adapted to analyze the CODIS panel, and the introduction of the Rapid DNA Act of 2017 which may soon become law. This forum will provide the forensic DNA community an opportunity to be updated on commercially available Rapid DNA technologies, and hear lessons learned from several early adopters spanning local law enforcement and federal agencies. The evolution of Rapid DNA will be discussed along with technologies currently in development which have the potential to impact the future of forensic DNA analysis.

## **Episode 9 Podcast!! Just Blood Spatter**

In episode nine of Just Science, funded by the National Institute of Justice's Forensic Technology

Center of Excellence [Award 2016-MU-BX-K110], we spoke with Dr. Marc Smith, from the Georgia Institute of Technology. Dr. Smith's NIJ funded research in blood spatter has connected computational fluid dynamics with empirical studies to improve the understanding of blood spatter onto solid, slanted surfaces. His work looks at many variables, including droplet size, speed, surface roughness and wettability. [Listen and Subscribe HERE.](#)

Subscribe to the channel at:

- [Google Play](#)
- [iTunes](#)
- [Stitcher](#)
- [Soundcloud](#)

#### **DNA - Bode**

[16<sup>th</sup> Annual DNA & Investigators Conference – Bode East. September 11-14 in Philadelphia, PA](#)

#### **ASCLD/RTI Backlog Series**

Archival versions of the ASCLD/RTI Backlog Series can be found at the following links:

- [The Paradox of Backlog Reduction – How Doing Less Can Be Doing More](#)
- [Taking the First Steps Toward Backlog Reduction](#)
- [Managing Customer Expectations and Education](#)
- [How to Increase your Staff without Increasing Budget](#)
- [Efficiency Improvements](#)
- [Developing a Statewide Approach to Backlog Management](#)
- [Case Acceptance Policies and Guidelines](#)

#### **ASCLD/RTI Rapid DNA Series**

Archival versions of the ASCLD/RTI Rapid DNA Series can be found at the following links:

- [Rapid DNA: The QAS and NDIS](#)
- [Rapid DNA: Arizona DPS and Richland County, SC](#)
- [Rapid DNA: Booking Stations and CODIS](#)

#### **NFSTC News**

NFSTC is now offering online proficiency testing in crime scene investigation to agencies across the globe. After the Fact has been used as the competency standard since 2011 and is a cost-effective training tool. Assessments are \$250 and available at [www.csi-skills.com](http://www.csi-skills.com). NFSTC online training courses can be found [on their website](#).

#### **[ANAB Training](#)**

##### **[Introduction to ISO/IEC 17025](#)**

September 14-15, 2017, Denver, CO and October 1-2, 2017, Riyadh, KSA

##### **[Internal Auditing to ISO/IEC 17025](#)**

August 21-23, 2017, Memphis, TN; October 3-5, 2017 Riyadh, KSA; and November 13-15, 2017, San Francisco, CA

##### **[Fundamental Measurement Uncertainty](#)**

August 24-25, 2017, Memphis, TN and November 16-17, 2017, San Francisco, CA

**[ISO/IEC 17025 Lead Assessor Training](#)** October 2-6, 2017, San Antonio, TX and October 8-12, 2017, Riyadh, KSA

##### **[Internal Auditing to ISO/IEC 17020](#) - **NEW!****

October 17-19, 2017, Alexandria, VA



### [June 2017 Newsletter](#)

OSAC Promotes Hundreds of Forensic Science Standards, Guidelines, and Other Documents During 2017 OSAC Public Status Reports & Open Discussions

The [webcasts](#) and [PowerPoint presentations](#) are available for public viewing on the NIST OSAC website."

The OSAC Registry is a trusted repository of high-quality, science-based standards and guidelines for forensic sciences.

[WK58027 - Standard Practice for Preserving Ignitable Liquids and Ignitable Liquid Residue Extracts from Fire Debris Samples \(link is external\)](#) is a work item revision to existing standard E2451-13

[WK58028 - Standard Guide for Forensic Examination of Non-Reactive Dyes in Textile Fibers by Thin-Layer Chromatography \(link is external\)](#) is a work item revision to existing standard E2227-13

#### New Approved Standards

[ASTM E2926 - 17 Standard Test Method for Forensic Comparison of Glass Using Micro X-ray Fluorescence \( \$\mu\$ -XRF\) Spectrometry \(link is external\)](#)

[ASTM E1588 - 17 Standard Practice for Gunshot Residue Analysis by Scanning Electron Microscopy/Energy Dispersive X-Ray Spectrometry \(link is external\)](#)

#### E30.12 Digital and Multimedia Evidence

The following work item is underway:

[WK58084 - Standard Practice for Computer Forensics \(link is external\)](#) is a work revision to existing standard ASTM E2763-10

Learn more about [ASTM E30 \(link is external\)](#).

## Forensic Science in the News

### [Forensic science used to create facial reconstruction for skull found on Akron sidewalk](#)

The reconstruction, created using a 3D printer and clay, is a first for an investigation in Northeast Ohio. The Ohio Bureau of Criminal Investigation created reconstructions three other times over the past seven months for cases across the state.

### [EDUCATION BGSU gaining notice for forensic science education](#)

The Center for the Future of Forensic Science at BGSU was established in July, 2014. During the last three years, the university has grown its academic program from three specializations — one each in biology, chemistry, and criminal justice — to adding bachelor's and master's degrees in forensic science. The Ohio Department of Higher Education approved the master of science in forensic science in February, 2016, and the bachelor of science in forensic science in August.

### [Hennepin County is first in Minnesota to fund new drug test](#)

Hennepin is the first Minnesota county to tap into a new drug test that's considered more reliable, cheaper and faster than other tests, helping alleviate a backlog of court cases.

[Rideout Trial: Defense hammers at forensic evidence](#)

...an attorney for Alexander Rideout, challenged Hamilton's testimony that DNA found on an item would indicate ownership. In a house where 10 people were living, she asked, couldn't skin cells be picked up on someone's socks as they walked across the floor? Hamilton acknowledged that was a possibility.

['Embarrassed' police to re-test forensic evidence from 1980 murder of Maria James](#)

The bungle means all forensic evidence will now have to be re-tested, and Assistant Commissioner Fontana said it would be a "painstaking" and time-consuming process.

[Md. child porn suspect walked free as evidence sat for months](#)

For months, the cellphones of a Charles County coach charged with sexually assaulting boys sat waiting. For months, no one saw the videos or images that depict the abuse at his home and in a classroom. And for months the former teaching assistant was free.

[Skepticism of Forensic Methods Urged at 9th Circuit Conference](#)

Trial judges should be more skeptical of forensic methods that don't pass scientific muster, a panel of legal experts told judges at the Ninth Circuit Judicial Conference on Tuesday.

[Director leaving Montana State Crime Lab: AG to appoint replacement](#)

Kinsey joined the lab in 2005 as the DNA supervisor and was appointed to the facility's top position in January 2013 as Attorney General Tim Fox took office. He has played a critical role in several reforms at the lab, which conducts evidence analysis and autopsies for law enforcement and coroners statewide.

[Crime Lab Backlog Delays an Investigation in Mississippi](#)

Calhoun County Sheriff Greg Pollan says he spoke with a forensic anthropologist at the state crime laboratory in Pearl last week. He says they told him that there were other cases ahead of his.

[Utah State Crime Lab unveils new rape kit hotline number to streamline process](#)

An new advocate is now available for victims of sexual assault and the hope is to slowly overcome the backlog state workers have seen in years past, according to state and county leaders.

[Hamilton Co. Crime Lab Stops Testing CPD Rape Kits](#)

The Hamilton County Coroner's office, which houses the county crime lab, will no longer process rape kits from the Cincinnati's police department, according to Cincinnati City Manager Harry Black.

[Cincinnati's returned rape kits going to state crime lab in London](#)

After the Hamilton County coroner returned rape kits to Cincinnati police, citing a massive backlog, the chief says the kits will be sent to the state crime lab in London for evaluation.

[To cut risk of exposure to fentanyl, police can now test substances at state Crime Lab](#)

Nationally, several officers have had near-death experiences after coming into contact with the lethal drug, including an officer in Menasha, who nearly overdosed on fentanyl while giving CPR to a man who had overdosed on the drug Sunday. He was administered two doses of the opioid antidote Narcan to counteract the drug.

[DOJ To Hire New Drug Agents, Open Crime Lab For Opioid Testing](#)

The Wisconsin Department of Justice is opening its crime labs to local law enforcement looking to test for opioids. Attorney General Brad Schimel announced Tuesday officers may now schedule drug tests with Wisconsin State Crime Laboratory facilities.

[The ABCs of the BCA: A look at the agency investigating the Justine Damond shooting](#)

Forensics. The BCA has the only full-service, accredited crime lab in Minnesota. It does crime scene processing and DNA testing, among other functions.

[Prosecutors push for ruling on 'Stocking Strangler' Carlton Gary's new trial motion](#)

... attorneys were left with conflicting DNA results. Defense attorneys called the Dimenstein semen evidence "a messy sample that was a mixture," but prosecutors countered the evidence came from vaginal washings and thus was more reliable than samples derived from Miller's clothes.

[Waxhaw man charged with murder in man's overdose death](#)

[Dog DNA being used to identify UNF students not picking up poop](#)

A Jacksonville apartment complex is finding success after cracking down on dog owners who don't clean up after their pets.

A doggy DNA crime lab is helping track down owners who are leaving a mess at a University of North Florida apartment complex.

[Cass County cyber crimes unit trained by U.S. Secret Service](#)

It now takes Sartor about a week to process a computer. It's a task, he says, that would take the state crime lab two years because of a backlog of evidence. The office is now using this technology to fight crime. Shelton said, "Cass County definitely has its fair share of sexual assault cases." Sartor added, "We've recovered a bit over a thousand illicit images and videos, and those cases are still under investigation."

[New director a 'fresh look' for DCSO Crime Lab](#)

Acting lab director Justin Aumann now is permanently in his role, as is field supervisor Jodi Adams. Aumann worked on numerous cases including Andrea Kruger's murder.

[FBI releases 'unusual' analysis of pipe bomb found in man's apartment after Bixby Air Force recruiting office bombing](#)

"FBI bomb technicians noted the nature of the IED was unusual for Oklahoma, because IEDs with these features are typically seen in other parts of the world," according to the affidavit, filed Monday in Tulsa federal court in support of a request for a search warrant.

[Study: Supreme Court Decision Complicates Prosecuting Child Abusers](#)

A Supreme Court decision that limits the types of statements that can be admitted as evidence unless the victim testifies in court discourages prosecutors from trying some child maltreatment cases, according to a recent national survey of more than 200 prosecutors.

[Cop Suspended: Defense Lawyers Say Video Shows Drugs Planted](#)

The video released Tuesday by the public defender's office was taken during a drug arrest in January. It shows an officer placing a can in a trash-filled lot as two other officers look on, then activating the camera and returning to pick up the can and pulling out a plastic bag of white capsules.

[16-year-old From Minnesota ID'd as Victim of John Wayne Gacy](#)

More than 40 years later, a detective from Illinois arrived at the family's home to tell Haakenson's relatives that at some point after hanging up the phone, the teenager crossed paths with serial killer John Wayne Gacy. Haakenson's body, it turns out, was among dozens found in a crawl space of Gacy's Chicago-area home in 1978. But the remains were only recently identified thanks to DNA technology that wasn't available then, the Cook County Sheriff's Department announced Wednesday.

[Glacier Bodies Identified by Swiss Police as Couple Missing Since 1942](#)

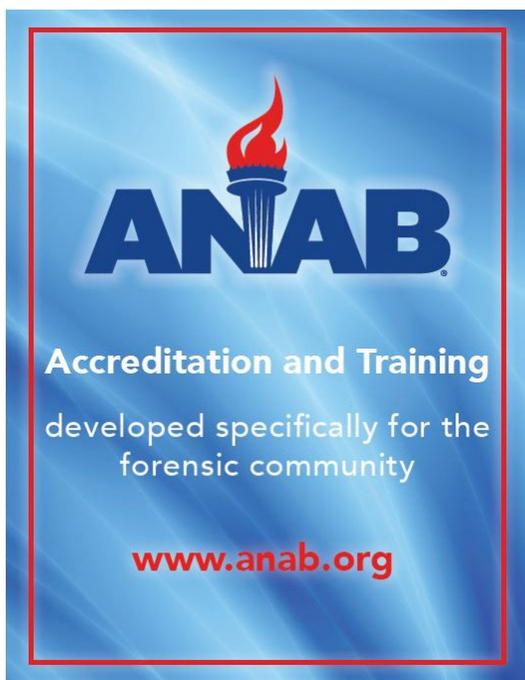
Swiss police say they've formally identified two bodies found on an Alpine glacier as those of a couple missing for nearly 75 years.

NFSTC News

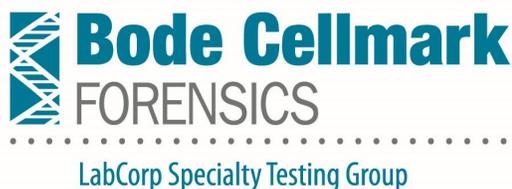
[A Dozen Cadets Fall In for a Unique Internship Program](#)

Posted on July 17, 2017

For the ninth year, The National Forensic Science Technology Center (NFSTC) is hosting ROTC Cadets from across the country for the Biometric and Forensic Internship. The sought after program covers hands-on introductory training from DNA to digital forensics in an intense two-week course, from Monday, July 17 – Friday, July 28. Each discipline is taught ... [Continue reading A Dozen Cadets Fall In for a Unique Internship Program →](#)



**OSAC Subcommittees**  
<https://www.nist.gov/topics/forensic-science/osac-subcommittees>



[Bode Cellmark Forensics](#) provides advanced forensic solutions offering crime labs ways to reduce their workloads and budgets.

Bode's newest offerings include:  
[Sexual Assault Kit Backlog Reduction Program](#) streamlines processes to eliminate backlogs of untested sexual assault kits.

[Bode Buccal 2™](#) is uniquely designed to improve DNA databanking collecting and automate processing. The Bode Buccal 2 is a DIRECT COLLECTION SYSTEM that requires minimal training. There is NO Transfer Step Required.

[Independent Validation Services](#) are customized to meet your laboratory's needs. Validation services provide completely unbiased analysis on your equipment, chemistries, or process.

**Forensic Science Policy and Management: An International Journal**  
<http://www.tandfonline.com/toc/ufpm20/current>

**Next Professional Orientation Schools Scheduled**  
 The next Professional Orientation Schools for a New Crime Laboratory Scientists have been scheduled to begin on August 14 and October 9th. Laboratory directors and supervisors with new employees are encouraged to have them enroll as soon as possible. For more information or to enroll, please visit [www.jmcollinsjr.com/pos.html](http://www.jmcollinsjr.com/pos.html). To reach the instructor, John Collins, please call (517) 803-4063 or email at [forensicedirector@gmail.com](mailto:forensicedirector@gmail.com).

**Evidence Technology Magazine**  
<http://www.evidencemagazine.com>

**FORESIGHT 20./20**  
 The American Society of Crime Laboratory Directors (ASCLD) has received funding from the [Laura and John Arnold Foundation](#) to develop software that will transfer data from forensic Laboratory Information Management Systems (LIMS) to **FORESIGHT**, a business quantitative process tailored to forensic laboratories  
 The goal of the project, called FORESIGHT 20/20, will be to allow laboratories to easily upload

  
**Establishment of an Office of Forensic Sciences and a Forensic Science Board Within the Department of Justice**  
 Revision 2/14/17  
[http://thecfso.org/advocacy/20170214\\_CFSO\\_OFS\\_Proposal\\_Rev.pdf](http://thecfso.org/advocacy/20170214_CFSO_OFS_Proposal_Rev.pdf)  
 Formed in 2000, CFSO is an association of six forensic science professional organizations: American Academy of Forensic Sciences; American Society of Crime Lab Directors; International Association for Identification; International Association of Forensic Nurses; National Association of Medical Examiners; and Society of Forensic Toxicologists - American Board of Forensic Toxicology. These professional organizations together represent more than 21,000 forensic science professionals across the United States.  
[Read the CFSO Newsletter here.](#)

business-relevant information from their individual LIMS to the FORESIGHT project, hosted at West Virginia University.

Software development and installations for JusticeTrax Alpha labs is progressing. The software provides a dashboard of the labs' own stats and FORESIGHT stats, among other information. The information, formatting, and interface may vary somewhat by vendor.

### Foresight 20/20



### West Virginia University Forensic Management Academy

#### Human Psychopharmacology: Clinical & Experimental

Received: 31 June 2015 | Revised: 14 October 2016 | Accepted: 2 November 2016  
DOI: 10.1002/hup.2560

WILEY

#### RESEARCH ARTICLE

Association between overall rate of change in rising breath alcohol concentration and the magnitude of acute tolerance of subjective intoxication via the Mellanby method

David H. Morris<sup>1,2,3</sup> | Michael T. Amlung<sup>4</sup> | Chia-Lin Tsai<sup>1</sup> | Denis M. McCarthy<sup>1</sup>



#### Technical Colloquium on the Weight of Evidence

How can we transition the reporting of forensic results from simple "match/no match" statements to statements that integrate error and uncertainty?

The first day will be about defining the weight of evidence - what it means and how to quantify it. The second day will cover collecting evidence and analyzing data with these quantification challenges in mind. The third day will focus on communicating and reporting findings of forensic examination.

Download the article [here](#)

### Grant Assistance for DNA

| Federal Grant Assistance for Rapid DNA  | State Grant Assistance for Rapid DNA   |
|---|--|
| <p>Rapid DNA is included in two Federal Emergency Management Agency (FEMA) Authorized Equipment Lists (AEL):</p> <ul style="list-style-type: none"> <li>• 07BD-02-DNRN: Analysis, DNA/RNA Detection</li> <li>• 09MY-01-DNAK: Kit, DNA Tools</li> </ul> <p>These AEL's are in these FEMA grants:</p> <ul style="list-style-type: none"> <li>• Operation Stonegarden</li> <li>• Port Security Grant Program</li> <li>• Tribal Homeland Security Grant Program</li> <li>• Transit Security Grant Program</li> <li>• Urban Areas Security Initiative Program</li> <li>• Homeland Security Grant Program</li> <li>• State Homeland Security Program</li> </ul> <p>Grants.gov discusses these FEMA Grants and other Federal Grant opportunities</p> <ul style="list-style-type: none"> <li>• Some of these are submitted through your State - see other side of this card</li> </ul> <p>How to find applicable Grants:</p> <ol style="list-style-type: none"> <li>1. On <a href="#">Grants.gov</a>, under Search Grants:               <ol style="list-style-type: none"> <li>a. Keyword search with terms: DNA, Identity, biometric, security, mass casualty, etc.</li> <li>b. Use checklists to limit number of grants, e.g., Eligibility, Category</li> <li>c. Select a grant by Opportunity Number</li> </ol> <p>View Grant Opportunity page for:</p> <ol style="list-style-type: none"> <li>i. Synopsis - key information, e.g. dates, POC</li> <li>ii. Package - under Actions-Apply provide email to get info on application package</li> </ol> </li> <li>2. On <a href="#">Grants.gov</a>, under Search Applicants:               <ol style="list-style-type: none"> <li>a. Use Register to apply for Workspace as either Organizational or Individual</li> <li>b. Get your DUNS number from your organization's finance office or call DUNS at: 1-866-705-5711</li> <li>c. Use Apply tab under Applicants for Workspace instructions</li> <li>d. Complete required forms</li> <li>e. Submit and track application</li> </ol> </li> <li>3. Get alerts for new or revised grants at: <a href="#">apply07_grants.gov/search/subscribe/all.do</a></li> </ol> | <ol style="list-style-type: none"> <li>1. Find contact information for your State Emergency Management (EM) Office at: <a href="#">www.fema.gov/emergency-management-agencies</a></li> <li>2. Call or go to the website of your State EM Office.               <ol style="list-style-type: none"> <li>a. Request information on FEMA and other Federal grants.</li> <li>b. Request a contact in the EM Office for grants.</li> </ol> </li> <li>3. If EM Office cannot help, find a contact who works with grant applications in your State. Key offices to contact:               <ol style="list-style-type: none"> <li>a. Administration</li> <li>b. Finance</li> <li>c. Budget</li> </ol> </li> <li>4. Identify appropriate grant(s).               <ol style="list-style-type: none"> <li>a. Apply under all applicable grants.</li> <li>b. Comply with Open-Close times.</li> </ol> </li> <li>5. Request proper forms.</li> <li>6. Complete forms. Cite the proper FEMA AEL Item ID:               <ul style="list-style-type: none"> <li>• 07BD-02-DNRN - Analysis, DNA/RNA Detection</li> <li>• 09MY-01-DNAK - Kit, DNA Tools</li> </ul> </li> <li>7. File forms on time</li> <li>8. Periodically monitor               <ol style="list-style-type: none"> <li>a. Call or email your State contact</li> <li>b. Call or email the contact given in the grant announcement</li> </ol> </li> <li>9. Request feedback on your application and apply the next year. Many are successful on their 2<sup>nd</sup> or 3<sup>rd</sup> year</li> </ol> <p>Contact the Rapid DNA vendors for assistance:</p> <ul style="list-style-type: none"> <li>• ANDE (NetBio):<br/>www.ANDE.com<br/>sales@ANDE.com<br/>817-705-4055</li> <li>• IntegenX<br/>www.integenX.com<br/>sales@integenX.com</li> </ul> |



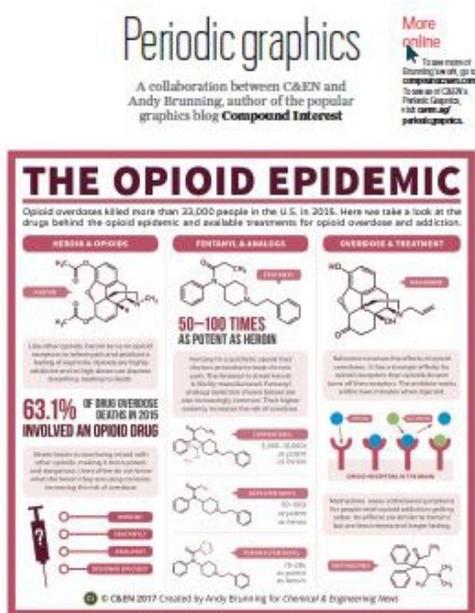
An opportunity to work at JusticeTrax doesn't come around very often. We have a Software Tester position open! This one is going to go fast! Please read about the opening at <https://justicetrax.com/employment/>

The Software Tester basic function is to validate the quality of JusticeTrax products. The Software Tester finds weaknesses in the products in an efficient and timely manner so Software Developers can resolve them before customers experience a problem. Experience with JusticeTrax applications, especially LIMS-plus, may be substituted for experience as a software tester.



Following a number of requests from recipients for a direct link to the digest, I am in the process of creating a web-page on the ChemCentre web-site ([www.chemcentre.wa.gov.au](http://www.chemcentre.wa.gov.au)) for you to directly link to. I am hopeful that this will be active when the next issue of the digest is published and I will notify you accordingly. Please also continue providing me with

<http://onlinelibrary.wiley.com/doi/10.1002/hup.2565/epdf>



**The chemistry behind the opioid epidemic**  
Andy Brunning  
C&EN; 95(24); p. 24; June 6, 2017



**As new and lethal opioids flood U.S. streets, crime labs race to identify them**  
Max Blau  
STAT; July 5, 2017 Photos by Raymond McCrea Jones for STAT

<https://www.statnews.com/2017/07/05/opioid-identification-analogs/>

feedback that enhances the value of this publication.

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**FORENSIC SCIENCE RESEARCH DIGEST**

Volume 1, Issue 4, May 2017

[Forensic Science Research Digest](#)

NIFS Newsletter --  
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**National Victimization Statistical Support Program**

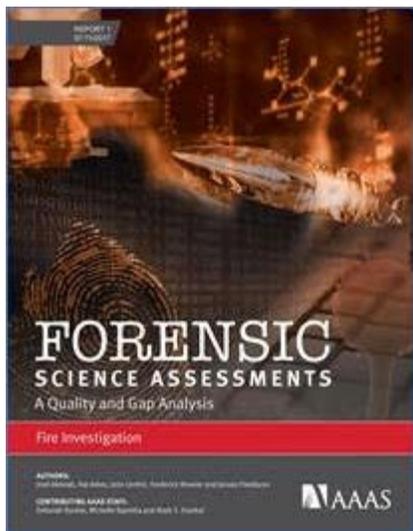
BJS-2017-11480

The Bureau of Justice Statistics (BJS) seeks an agent to implement the National Victimization Statistical Support Program (NVSSP) project, which is designed to provide scientific and technical support for statistical and methodological research, statistical analyses, documentation, and dissemination related to BJS work on crime and victimization. Specifically, the NVSSP will support general methodological research related to improving the utility and cost effectiveness of BJS's National Crime Victimization Survey (NCVS), including the continued development of the NCVS subnational estimation program; efforts to improve the efficiency of the survey mode and sample design; efforts to enhance the ability to measure emerging crime trends and other issues related to contact with and use of the criminal and civil justice system; and continued research on improving the measurement of sensitive crime types and topics, including rape, sexual assault, and intimate partner violence. BJS intends to fund the NVSSP project through a cooperative agreement for a 3-year period.

**Deadline:** Applicants must register with Grants.gov prior to submitting an application. All applications are due by 11:59 p.m. eastern time on July 24, 2017.

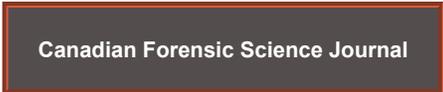
**Eligibility:** Eligible applicants are national, regional, state, or local private entities, including for-profit and nonprofit organizations, faith-based and community organizations, and federally recognized Indian tribal governments as determined by the Secretary of the Interior that support initiatives to improve the functioning of the criminal justice system. For-profit organizations must forgo any profit or management fee.

**Contact Information:** For assistance with any other requirements of this solicitation, contact Grace Kena, BJS Statistician, by telephone at 202-307-0765, or by email at askbjs@usdoj.gov. Include "NVSSP" in the



**Forensic Science Assessments: A Quality and Gap Analysis - Fire Investigation**

José Almirall, Hal Arkes et al  
AAAS; 89 pages; July 11, 2017



**NIJ Forensic Science R&D Reports for ASCLD Crime Lab Minute Vol 10**

*These research reports have been submitted by the National Institute of Justice (NIJ) especially for their relevance to crime laboratory activities. ASCLD has not reviewed nor does it necessarily endorse the findings of this research.*

Report: NIJ's DNA Analysis, Capacity Enhancement and other Forensic Activities  
This report summarizes NIJ's approach to improving forensic science includes long term strategic advances and necessary immediate relief to address the challenges of satisfying increasing demand for DNA analysis. From 2008 to 2014, the turnaround time for analysis has remained nearly constant, while testing capacity increased by over 60 percent. Average cost per case has decreased from \$1,279 in 2007 to \$607 in 2014. And since 2009, uploads of DNA profiles to the Combined DNA Index System (CODIS) have increased 143 percent. The need for this assistance has never been greater, through capacity building, technical assistance, research, development, evaluation and dissemination, NIJ is working to address the challenges experienced by forensic laboratories.

Tune in to the FTCoE Just Science Podcast!  
NIJ's Forensic Technology Center of Excellence has launched Just Science, a podcast for forensic science professional and others interested in learning how crime laboratories are working to produce more accurate results, become more efficient and solve more crimes. The podcast covers every forensic science discipline. Recent episodes discussed lab management, human factors, 3D optical topography, subjective probability, DNA mixture interpretations and economics and crime labs.

The Evidence for Very Small Particles  
NIJ recently published an article in Forensics discussing the work of Stoney Forensic in developing an investigatory technique called "very small particle analysis." This approach involves the careful examination of dust on an object to trace it back to its original location, or the comparison of two or more

subject line.

[Full solicitation in PDF format \(PDF 369K\)](#)

**Census of Medical Examiners and Coroners' Offices**

BJS-2017-12660

The Bureau of Justice Statistics (BJS), in collaboration with the National Institute of Justice, seeks applications for the administration of the 2018 Census of Medical Examiners and Coroners' Offices (CMEC). The new census will obtain and update information about operations, workload (including backlogs), staffing, training, policies, and procedures of approximately 2,400 medical examiners and coroners' (ME/C) offices that are responsible for providing medicolegal death investigation (MDI) services to America's criminal justice system. Among other responsibilities, the recipient of funds will act as the data collection agent, update the roster of ME/C offices, revise and update the previous data collection instrument as necessary, administer the 2018 census, and transmit final deliverables and data files to BJS.

**Deadline:** Applicants must register with Grants.gov prior to submitting an application. All applications are due by 11:59 p.m. eastern time on July 24, 2017.

**Eligibility:** Eligible applicants are national, regional, state, or local public and private entities, including for-profit and nonprofit organizations, faith-based and community organizations, institutions of higher education, federally recognized Indian tribal governments as determined by the Secretary of the Interior, and units of local government that support initiatives to improve the functioning of the criminal justice system. For-profit organizations must forgo any profit or management fee.

**Contact Information:** For assistance with any other requirements of this solicitation, contact Connor Brooks, BJS Statistician, by telephone at 202-307-0765 or by email at AskBJS@usdoj.gov. Include "CMEC" in the subject line.

[Full solicitation in PDF format \(PDF 537K\)](#)

**Federal Justice Statistics Analytical Support Program**

BJS-2017-127000

The Bureau of Justice Statistics' (BJS) Federal Justice Statistics Program (FJSP) collects, standardizes, and publishes statistics about the federal response to crime and the operation of the federal criminal justice system. The FJSP produces annual standard analysis files (SAFs), which document the federal criminal case processing stages from arrest to prosecution, pretrial release, adjudication, sentencing, appeals, and corrections. The FJSP also

objects to determine if they have, at some point, been in the same place. The researchers have successfully used this analysis to support U.S. government agencies and local and international law enforcement investigations, for example to trace the origins of illegal shipments of elephant tusks.

#### Developing Reliable Methods for Microbial Fingerprinting of Soils

Soil evidence has the potential of being a valuable tool for linking a suspect, victim, or item to a crime scene. Currently, however, only class characteristics of soil are considered in traditional analysis. This NIJ-supported research project examined the utility of soil bacterial profiling via next-generation sequencing of the 16S rRNA gene to identify a soil's origin. The researchers successfully differentiated soil samples from diverse and similar habitats back to their location of origin 100 percent of time in multidimensional space and 87.5 percent of time through supervised classification. Time and space within a habitat did not affect bacterial profiles enough to hinder location-of-origin assignment. Soil collected from evidentiary items remained clustered nearest its location of origin with 100 percent accuracy, even after a full year or long-term storage. The success in tracing soils back to a location of origin demonstrates the potential of next-generation sequencing of bacteria, in conjunction with a combination of robust statistical techniques, for the individualization of forensic soil samples.

#### Quantitative Algorithm for the Digital Comparison of Torn Duct Tape

Researchers from University of California, Davis sought to minimize human contextual bias in decisions about whether torn duct tape found at a crime scene matches a duct-tape roll found in a suspect's possession by combining digital image analysis and an objective, quantitative algorithm in assessing the likelihood of a match. These NIJ-supported researchers performed edge detection and morphological smoothing operations on high-resolution images of torn duct tape edges to extract the torn-edge coordinates. In 97 percent of examined tears, the true match had the lowest observed sum of square residuals, with false positive rates ranging from 0.5 percent for some types of hand-torn duct tape to 62 percent for scissors-cut duct tape. This work provides a starting point for quantitative assessment of the likelihood of physical end matching of duct tape without human contextual bias.

#### Non-Medical Use of Prescription Drugs: Policy, Law Enforcement, and Diversion Tactics

The goal of this University of Central Florida study was to determine whether Florida law HB 7095 and related legislation reduced the number of pain clinics abusively dispensing opioid prescriptions in the State, as well as to assess the logistics of administering the law. The findings presented in this NIJ-supported report indicate that the Florida effort against rampant "pill mills" was largely successful, which is consistent with research that has documented reductions in opioid-related deaths in Florida. Further, the findings show the key role of interagency cooperation in the success of the legislation, which in conjunction with Florida's legislation, should be considered a model for future efforts in reducing easy access to prescription opioids.

#### Differential Sampling of Footwear to Separate Evidentiary Particles from Background Noise

This NIJ-supported project by Stoney Forensic tested the ability to separate particle signals on the footwear soles using differential analysis of loosely held, moderately held, and strongly held particle fractions. Prior research has used a generalized sampling of particles on footwear soles from both contact and recessed areas shows the retention of particles from earlier contacts. The current study determined that although particles on the contact surfaces of footwear were removed and replaced, particles on the more recessed areas of the sole were not. Three environmental exposure sites were chosen to have different characteristic particle types (soil minerals) and shoes of two types (work boots and tennis shoes) were tested. Some shoes were exposed to only one environment, and others were exposed to all three in

produces linking files that permit analysis of defendants and cases across stages of the federal criminal justice system. With this solicitation, BJS seeks an agent to implement the Federal Justice Statistics Analytical Support Program (FJSASP) project. This project is designed to provide scientific and technical support to BJS for methodological research, statistical analysis, and the generation of statistical reports using data from the FJSP. In addition, the FJSASP will work with BJS to identify additional sources of data to further enhance the FJSP (e.g., immigration enforcement and court statistics, enforcement data from federal regulatory agencies, civil data from the federal courts, and staffing and budget statistics).

There are three priority areas for this project: (1) using the FJSP data to address pressing substantive questions about the federal justice system through the production of statistical reports, (2) assessing the strengths and shortcomings of the FJSP data for federal criminal justice statistical reporting purposes and proposing and implementing methodological solutions to address deficiencies, and (3) identifying and assisting to integrate outside data sources with FJSP data files.

Deadline: Applicants must register with Grants.gov prior to submitting an application. All applications are due by 11:59 p.m. eastern time on August 7, 2017.

Eligibility: Eligible applicants are limited to for-profit (commercial) organizations, nonprofit organizations (including tribal nonprofit or for-profit organizations), faith-based and community organizations, and institutions of higher education (including tribal institutions of higher education). For-profit organizations (as well as other recipients) must forgo any profit or management fee.

Contact Information: For assistance with any other requirements of this solicitation, contact Mark Motivans, BJS Statistician, by telephone at 202-307-0765, or by email at askbjs@usdoj.gov. Include "2017FJSASP" in the subject line.

[Full solicitation in PDF format \(PDF 488K\)](#)

one of six sequences. Sampling methods were developed to separate particles from the contact surface of the shoe based on how tightly they were held to the sole.

#### Laser Ablation Inductively Coupled Plasma Mass Spectrometry (LA-ICP-MS) and Laser Induced Breakdown Spectroscopy (LIBS) Analyses of Paper, Inks, and Soils

Florida International University researchers sought to demonstrate the utility of an analytical chemistry tool that is relatively new to forensic laboratories, Laser Induced Breakdown Spectroscopy (LIBS), in conducting elemental analysis of ink, paper, and soil evidence quickly and with little or no sample preparation. The commercial LIBS instrumental results were compared to previously optimized in-house LIBS systems and also to the alternative forensic tools, which offer good analytical performance but suffer from either very high costs and significant complexity (in the case of LA-ICP-MS) or analytical limitations in the form of sample requirement and relatively high detection limits (in the case of mXRF and SEM-EDS). Although less mature than LA-ICP-MS, LIBS also shares the benefits associated with laser ablation methods, with the added advantage of improved speed, versatility, ease of operation, affordability, and portability. This NIJ-supported project shows that both LA-ICP-MS and LIBS are useful analytical tools for the analysis of paper, inks, soil, and cotton.

#### Method Validation for a Statistically Based Comparison of Tool Marks using GelSight-Based Three Dimensional Imaging and Novel Comparison Algorithms for Firearm Forensics

TopMatch technology for structural 3D imaging and comparison of cartridge casings shows excellent and continually improving match accuracy; however, in order to fully establish the base credibility of the platform, it was necessary to establish best-scanning practices and to demonstrate that the method meets the quality-control criteria of other forensic instruments. This NIJ-supported project by Cadre Research Labs aimed to enhance TopMatch by establishing best practices and conducting a set of methodology studies. The project complements the previous studies on accuracy and evidence stability by addressing the remaining issues of precision, repeatability, reproducibility, contamination risk, and performance checks. In addition, researchers studied the effects of cleaning protocols, focus variation, and ambient lighting variation.

#### Measuring the Frequency Occurrence of Handwriting and Hand-Printing Characteristics

One of the basic axioms of handwriting comparison is that no two writers use the exact same set of handwriting characteristics. The database created by NIJ-supported researchers and the resulting frequency occurrence proportions provide the forensic and judicial communities with some empirical data with which to assess this axiom. The specific approach in collecting samples that match the U.S. demographics provides unique insight and substantive data on the quantitative relationship between the presence/absence of readily identifiable features and key demographic factors as noted by Huber and Headrick (age, gender, ethnicity, education, location of second/third grade schooling, and handedness) while controlling for other factors, such as temporal state and geographic locations. The original set of specimens collected from a wide spectrum of participants provided an initial large collection that was eventually pared down to achieve what is considered a representative sample from the entire target population.

#### Gunshot Residue in a Non-Firearm Detainee Population

Studies have shown varying amounts of gunshot residue (GSR) in the police environment, with most being on surfaces within facilities occupied and operated by law enforcement. This NIJ-supported study by researchers at the Harris County Institute of Forensic Sciences examined whether GSR contamination could be found on the hands of detainees at the Harris County Jail (Texas) who were

not charged with any offenses related to the discharge of a weapon. Of the 175 samples obtained and tested, not one characteristic GSR particle was found. Coupling the results of this study with one in which no GSR particles were on 100 persons answering bench warrants in Bexar County (Texas) gives an average of less than one GSR particle in 275 hand samples. Considering that a different study of random surfaces within the Chicago Police Department (n=201) found a total of 56 GSR particles, the current study concludes that GSR particles are not readily transferred to surfaces not in close proximity to a recently fired gun.

#### Comparison of Microspectrophotometry and Fluorescence Excitation-Emission Matrix (EEM) Spectroscopy for Non-Destructive Fiber Examination.

When spectral information is used in the study of fiber evidence, variations within a fiber source lead to the recommendation that multiple spectra be collected from each fiber to properly characterize the sample. Although this methodology is sufficient for comparison of profiles with obvious differences, the chemometric methods used in this NIJ-supported study from researchers at the University of Central Florida show higher accuracies than the visual method commonly used in forensic laboratories. Current practices in forensic labs that involve fluorescence microscopy do not take advantage of the information content that exists in the spectral signature of textile fibers. The coupling of a microscope to a spectrofluorimeter allows for the acquisition of a complete training set of EEMs for fiber dye identification from an individual fiber. Accounting for the variance of the EEM spectra at different regions along the length of the fiber provides a useful training set that can be used as the basis for principal component cluster analysis.

#### Development of a Mobile, Automated Tool Mark Characterization/Comparison System

This NIJ-supported project developed a portable prototype instrument that provides forensic examiners with the ability to characterize a tool-marked surface, compare the data from that surface to data files obtained from any other surface, and assess the likelihood that the marks on the two surfaces were made by the same tool. To date, the system has been successfully tested on data sets consisting of fully striated marks created from 50 sequentially manufactured screwdrivers, quasi-striated markings produced by 50 sequentially manufactured shear-cut pliers, and impression marks produced by 50 sequentially manufactured cold chisels.

#### The Interpretation of Patterned Injuries in Medicolegal Death Investigation

In this report, NIJ-supported researchers describe the results of their survey evaluating the effect of image processing and image quality on the ability of forensic pathologists to accurately interpret images of patterned injury of the skin. The study consisted of three surveys: the first, a collection of "classic" images that most pathologists would diagnose with high consensus (baseline survey); the second, degraded images with lesser resolution poorer composition to determine how degradation affected diagnostic consensus; and the third, images treated with various enhancement techniques to determine whether any benefit was gained. Surprisingly, the first survey produced a median of only 74 percent consensus. An analysis of the second and third surveys demonstrated the importance of context and history in forensic pathologic diagnosis. When provided with history, consensus rose to approximately 98 percent per question (median value) for the matching subset of the first survey.

#### Prediction of Drug Interactions with Methadone, Buprenorphine and Oxycodone

The impact of drug interactions spreads beyond the field of forensic toxicology to encompass general medicine, pharmacy and other areas involved in drug use and dispensing. These can all directly and indirectly impact the criminal justice systems, as many in these professions are called upon as consultants and expert witnesses for cases. Information on potential drug interactions with methadone, buprenorphine, and oxycodone can benefit these

fields. A NIJ-supported project by researchers at the University of Utah hypothesized that the inhibition of the metabolism of opioids may contribute to their toxic effects and set out to measure the in vitro inhibition of metabolism of three opioids: methadone, buprenorphine, and oxycodone. This report outlines the progress made optimizing incubation conditions, establishing positive controls and screening inhibitory potential of the three drug classes.

Evaluation of a Novel Fluorescent Dye to Detect Anogenital Injury in Women of Color

NIJ-supported researchers at the University of Virginia tested fluorescent dyes to detect sexual assault injuries on different skin colors and tones. Trials were conducted to identify non-toxic suitable dyes that can be easily visualized using equipment already in common use among forensic examiners and will not interfere with subsequent forensic DNA testing. Findings suggest that fluorescein is both safe and feasible to use in detecting genital injury across all skin tones. However, additional research on alternative dyes across all skin tones is recommended.

Development of an Analytical System for Comparison and Identification of Fiber Dyes

In order to overcome challenges to generalized fiber dye characterizations, this NIJ-supported research explored a significant range of dyestuffs that span numerous major dye application classes, chemistries, chromophores, and fiber types, using techniques and methodologies currently available in most forensic laboratories. Numerous aspects of dye analysis, from extraction through micro analytical characterization, classification, and identification were examined for a set of 300 commercially prevalent dyestuffs. The results show that dye identification can be conducted using techniques available in many labs. It is anticipated that this research will provide a basis from which laboratories can expand their approach from a generalized comparison of color between questioned and known materials to a specific identification of the colorants present in a sample. This has the potential to increase the significance of results in the prosecution or defense of a case and improve the value of investigative leads in cases for which a comparison sample does not exist by constraining or identifying specific dyes.

Trace Metal Analysis by Laser Ablation-Inductively Coupled Plasma-Mass Spectrometry and X-Ray K-Edge Densitometry

This NIJ-supported dissertation by an Iowa State University researcher describes studies on determining trace elements in samples with forensic importance, including trace analysis in lipstick, copper wire, fly larvae and porcine skin tissue for gunshot residue and bullet residue in bones, as well as, soil from decomposed pig carcasses.

Pre-Feedback Eyewitness Statements: Proposed Safeguard against Feedback Effects on Evaluations of Eyewitness Testimony

This NIJ-supported study from an Iowa State University researcher tested pre-feedback statements as a safeguard for protecting against, and correcting for, the effects of confirming feedback on evaluations of eyewitness testimony. Results suggest that confirming feedback did not appear to have any influence on witnesses in the no pre-feedback statements condition. Additionally, confirming feedback did not impair evaluators' abilities to discriminate between accurate and mistaken eyewitnesses in the conditions in which witnesses provided pre-feedback statements. Witnesses' pre-feedback statements to evaluators did not improve evaluators' abilities to discriminate between accurate and mistaken eyewitnesses who received feedback. Finally, evaluators tended to judge witnesses who gave no pre-feedback statements more favorably than they judged witnesses who gave pre-feedback statements.

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American Society of Crime Laboratory Directors

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