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# ASCLD *Forensic Research Committee* Bulletin

If you look at history, innovation doesn't come just from giving people incentives; it comes from creating environments where their ideas can connect.

Steven Johnson

Dear Forensic Community,

Welcome to Issue 3 of the Forensic Research Committee Bulletin. The Future Forensics Task Group has been actively reviewing the 2019 INTERPOL review papers published in FSI:Synergy listed as "in-press". The executive summaries coordinated by the FRC task group can be found in the Future Forensics section of this bulletin and on the FRC webpage: <https://www.ascl.org/forensic-research-committee/>

***Strategic Goals:*** Identify RDT&E needs, foster collaboration, and support the development of enduring future forensic capabilities.



## FRC HOT TOPICS

### Latest news – Interdisciplinary forensics Research Articles

[Touch DNA in forensic science: The use of laboratory-created eccrine fingerprints to quantify DNA loss](#)

[Cemetery hoodoo: Culture, ritual crime and forensic archaeology](#)

[Must the random man be unrelated? A lingering misconception in forensic genetics](#)



[Forensic epistemology: A need for research and pedagogy](#)

[Is police investigation of rape biased by characteristics of victims?](#)

[Cadaveric blood cards: Assessing DNA quality and quantity and the utility of STRs for the individual estimation of trihybrid ancestry and admixture proportions](#)

The FRC Bulletin is designed to highlight developments within these core priorities. The status of the LEAP project is featured in this issue. You are encouraged to submit any comments regarding this bulletin to [ASCLDFRC@gmail.com](mailto:ASCLDFRC@gmail.com)

**Core FRC Priorities**

**Fostering the development of collaborative relationships between forensic science labs and academia.**

<p style="text-align: center;"><b>Laboratories &amp; Educators Alliance Program (LEAP)</b></p> <p><b>Objective:</b> The objective of the Laboratories and Educators Alliance Program (LEAP) is to facilitate collaborative research between academia and forensic science laboratories. This joint effort between the American Society of Crime Lab Directors (ASCLD) and the Council of Forensic Science Educators (COFSE) identifies forensic science needs and provides a platform for laboratories, researchers, and students to seek projects aligning with their mutual research capabilities.</p> <p><b>Status:</b></p> <p style="text-align: center;"><b><u>97 LEAP Participating Labs and Universities</u></b></p> <p style="text-align: center;"><b>25 Forensic Science Labs</b></p> <p style="text-align: center;"><b>72 Universities</b></p> <p>Outreach efforts will now be taking place to socialize LEAP which is anticipated to increase the number of participating labs and universities.</p> <p><b>Goal:</b> To grow the number of LEAP participating labs to 150 by the end of 2020.</p>	<p style="text-align: center;"><b>Evaluation and Validation Tracking</b></p> <p><b>Objective:</b> Provide a centralized location to share information that may be useful to the broader community of forensic practitioners. This will include timely evaluations of new tools or technology that labs are curious about, as well as recent validations of new tools or technology that can serve as a blueprint to help labs avoid reinventing an entire experimental design.</p> <p><b>Status:</b> The website collector is now live! <a href="https://www.asclcd.org/validation-evaluation-repository/">https://www.asclcd.org/validation-evaluation-repository/</a> Please submit your new and exciting evaluations and validations! FRC STRATEGY: This cultivated repository is designed to catalog the outstanding work of experts in the field and share these results with the forensic science community. ASCLD is excited about creating an environment to foster communication and reduce unnecessary repetition of validations which will benefit the practitioners working in the laboratory and the field.</p> <p>If you find a validation or research project that you would like more information about, simply use the contact information provided to request a copy or chat with the experts who did the work.</p> <p><b>Goal:</b> To have at least 20 evaluations or validations of new technology available on the website by the end of 2020</p>
<p style="text-align: center;"><b>Implementation Team</b></p> <p><b>Objective:</b> To promote and facilitate interlaboratory collaboration related to RTD&amp;E and validation efforts to strengthen the foundations and facilitate the transitions of new technologies &amp; capabilities into mainstream forensic science practice.</p> <p><b>Status:</b> Working to solicit input from forensic science laboratories regarding potential or planned implementation efforts related to standards, practices, and methods as well their challenges, capabilities, and strategies for implementation.</p> <p>Near-term – a survey has been distributed to solicit input from ASCLD membership related to (i) the adoption and implementation of standards, practices, and methods currently on the OSAC Approved Registry and (ii)</p>	<p style="text-align: center;"><b>Future Forensics</b></p> <p><b>Objective:</b> To identify new and emerging needs and pain points within forensic science practice and to identify research, processes, technology and tools with potential to address the new and emerging needs.</p> <p><b>Immediate Goal:</b> To publish an executive summary of the research highlights found in the recent peer-reviewed literature from sources such as the INTERPOL research reviews and FLNTWG white papers, for the benefit of the ASCLD membership.</p> <p><b>Status:</b> Research highlights will be published on the FRC website as they become available by topic. Listed below are the first six executive summaries:</p> <ol style="list-style-type: none"> <li>1. <a href="#">Friction Ridge Skin Comparisons and Identification Processes</a></li> </ol>

<p>challenges and needs of the forensic science community that are barriers to implementation.</p> <p>Identify laboratories willing to share information or materials to assist other laboratories with similar implementation efforts.</p> <p>Identify appropriate infrastructure for hosting the data and make accessible to ASCLD membership to facilitate inter-laboratory collaboration.</p> <p>Long-term – identify options to facilitate sharing and access to sample validation plans, test samples, operational procedures, training materials, and other resources related to implementation of standards, practices, or methods.</p> <p><b>Goal:</b> To provide a central location for ASCLD members to identify, connect, and coordinate with other laboratories conducting research, development, testing, evaluation (RDT&amp;E) and validation activities related to the implementation of new methods and technologies.</p>	<ol style="list-style-type: none"> <li>2. <a href="#">Trends in the Forensic Examination and Interpretation of Paint and Glass Evidence</a></li> <li>3. <a href="#">Forensic Biology and Forensic DNA Typing</a></li> <li>4. <a href="#">Analysis of Controlled Substances</a></li> <li>5. <a href="#">Gunshot Residue Analysis</a></li> <li>6. <a href="#">Analysis of Toxicology</a></li> </ol> <p><b>Goal:</b> To develop the infrastructure within the ASCLD FRC to facilitate rapid communications between the ASCLD membership regarding current and future needs in the forensic science enterprise.</p> <p>The subcommittee will take the initiative to engage the ASCLD membership through outreach efforts to identify current and emerging problems that impact them, and will also review relevant literature to help identify the future of forensic science practice using a “technology roadmap”.</p>
<p style="text-align: center;"><b>Innovation Award</b></p> <p><b>Objective:</b> To acknowledge operational scientists who incorporate cutting-edge techniques to the practice of forensic science, and call attention to their work.</p> <p><b>Status:</b> The winner of the 2020 Innovation Award is Amber K. Burns, the Chemistry Section Manager for the Maryland State Police – Forensic Sciences Division. Amber has been instrumental in establishing a new workflow for safely and efficiently testing fentanyl and other novel psychoactive substances by testing swipes of the outside of drug packaging using TD-DART-MS technology. She has provided a template for strategies to maximize collaboration between researchers and practitioners in forensic science.</p> <p><b>Goal:</b> To recognize activities highlighting new technologies, protocols, or tools that impact the operational forensic science laboratory.</p>	<p style="text-align: center;"><b>FRC Outreach</b> <b>Meet with the FRC at the AAFS in 2021!</b></p> <p>As details become available for the FRC table, updates will be provided in this section.</p> <p style="text-align: center;"><b>2021 AAFS Annual Scientific Meeting</b></p> <p style="text-align: center;">February 15 - 20, 2021 George R. Brown Convention Center Houston, TX</p> <p style="text-align: center;">Meeting Theme: <i>One Academy Pursuing Justice Through Truth in Evidence</i></p> <p>Ashraf Mozayani <a href="mailto:Ashraf.Mozayani@tsu.edu">Ashraf.Mozayani@tsu.edu</a></p>

**Meet the FRC Committee!**

**Henry Maynard** – (Chair and LEAP), **Lisa Yoshida** (Evaluation/Validation Tracking), **Ashley Hall** (Research Innovation Award), **Debbie Leben** (Outreach), **Jose Almirall** (**Future Forensics**), **Henry Swofford** (**Implementation**), **Ashraf Mozayani**, **Jeremy Triplett**, **Bruce Hoolihan**, **Tracy Dawson Cruz**, **Jeff Comparin**, **Ed Sisco** (**New Task Groups in Green**)



## American Society of Crime Laboratory Director's Research Priorities 2019-2021



### Research Area

Practical statistical approaches for the interpretation of forensic evidence

Development and validation of standardized forensic methods and conclusions in Impressions, Patterns, and Trace Evidence disciplines

Assessment of Examiners' Toolmark Categorization Accuracy (Firearms/Toolmarks)

Research to establish validated methods for THC quantity in plant materials, edibles, extracts, etc. that also accounts for the moisture content of the plant

Error Rates in Qualitative Methods of Analysis for Controlled Substances

The ability to detect and locate sufficient biological material (e.g., epithelial cells, extracellular DNA, etc.) associated with touched or worn objects, that is not visible to the eye or with alternate light sources, for downstream DNA analysis

Examiner Reliability Study: Black and White Box Studies on Bloodstain Pattern Analysis

Error rate studies on qualitative analysis (single tests and schemes) in Controlled Substances. The conclusion of such a study will also explain its limitations

Characterizing, Designing and Constructing Integrated DNA Mixture Interpretation Solutions

Expert System for Forensic Evidence Analysis (including mixtures) in DNA

Development of an Integrated and Multidisciplinary Approach for the Advancement of Data Collection, Data Management and Data Analysis to Aid Interpretation of Trace Evidence

Validation of Conclusion Scale in Forensic Document Examination

Comprehensive GSR Persistence Study

Specific Identification of Shooters via GSR

Evaluation into the Validity of Facial Comparison Training Methods (Facial Identification)

You are encouraged to submit any comments regarding this bulletin to [ASCLDFRC@gmail.com](mailto:ASCLDFRC@gmail.com) or contact the **Task Group Point of Contact for more information.**