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CRIME LABORATORY DIRECTORS, INC.**

**65 Glen Road, Suite 123, Garner, NC 27529**

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May 26, 2017

United States Department of Justice (via Federal Register)  
950 Pennsylvania Ave, NW  
Washington, DC 20530-0001

Dear colleagues,

The American Society of Crime Laboratory Directors represents more than 600 members of crime laboratory directors and forensic science managers dedicated to providing excellence in forensic science through leadership and innovation. The membership represents both private and public institutions from all 50 states in the U.S. and eighteen countries from across the globe. Our mission is to promote the effectiveness of crime laboratory leaders throughout the world by facilitating communication among members, sharing critical information, providing relevant training, promoting crime laboratory accreditation, and encouraging scientific and managerial excellence in the global forensic science community.

ASCLD is dedicated to advancing forensic science through a multitude of initiatives including those of the Department of Justice. The efforts of DOJ are important and have significant implications for the entire criminal justice community. As a result, the ASCLD Board of Directors offers the following comments to the Request for Public Comment issued April 13, 2017 via the Federal Register.

ASCLD remains ready to be a continuing resource to assist the Department of Justice in the development of these important work products for the forensic science community so that a broader based acceptance and implementation of these products may be realized.

Kindest regards,  
ASCLD Board of Directors

The American Society of Crime Laboratory Directors (ASCLD) appreciates the opportunity offered by the Department of Justice to provide comments on improving forensic science in the United States. As a society that represents more than 600 crime laboratory leaders across the US and abroad, ASCLD is dedicated to providing public comments on a wide variety of issues, from the work products of the National Commission on Forensic Science (NCFS), to the Department's Uniform Language for Testimony and Reporting, and Forensic Science Discipline Reviews. ASCLD has attended meetings with the Deputy Attorney General (DAG), Office of Legal Policy (OLP), National Institute of Justice (NIJ), Federal Bureau of Investigation (FBI), and other federal labs to discuss issues of national importance in forensic science and has heavily engaged with the Department of Justice (DOJ) on a number of initiatives. ASCLD seeks to ensure that the voice of all forensic laboratories, from small, local laboratories to larger, federal laboratories, is heard. With the expiration of the NCFS Charter, there will undoubtedly be a spectrum of perspectives regarding the type of organization that should perpetuate forensic advancement initiatives into the future; such ideas may include Federal Advisory Committees, internal Department of Justice initiatives, and new offices within the federal government. ASCLD supports all DOJ initiatives that involve a *significant voice of practicing expert forensic scientists and management from all sizes of laboratories in all levels of government* and seek to improve the fundamental science, operational capabilities, and understanding of forensic science by legal practitioners and other stakeholders. ASCLD strongly believes that forensic scientists and managers should play a primary role in any advancement initiative, as they experience the unique challenges of forensic laboratories on a daily basis and have a critical perspective on the current state of forensic science and technologies.

ASCLD aspires to constructively contribute to meaningful dialog regarding the advancement of forensic science with the Department of Justice. With regard to the particular questions posed in the Federal Register notice, ASCLD believes the following:

**What are the biggest needs in forensic science inside the Department and at the federal, state, local, and tribal level?**

Resources are a critical need of forensic science service practitioners at all levels of government. ASCLD strongly supports the completion of the Forensic Science Service Provider Needs Assessment (FSSPNA) contained in the Justice For All Act of 2016 to inform stakeholders, policy makers, legislators, governing bodies, and funding entities of the current state of needs across the industry. Backlogs exist as a symptom of the mismatch of inadequate supply of stable forensic resources to the demand for objective scientific forensic analysis. Forensic analysis has been demonstrated to save investigative time and energy and improve the

effectiveness of the application of justice (1-3). Key figures that would be beneficial to capture in the needs assessment and gap analysis are:

- Correlation of forensic service demand as a function of Uniform Crime Reports (UCR) Part 1 crime types
- Evaluation of the optimal turnaround times per discipline
- Instrumentation and facility needs for appropriate levels of output requirement
- Staffing models based on jurisdiction population size and crime rates
- Establishing the number and type of forensic analysis providers in the country
- Cost and requirements for quality (accreditation, proficiency testing, certification, training, and applied research)
- Level of research currently conducted at federal/state/local levels
- Identification of forensic disciplines and analysis not currently conducted, culminating in a panel of analytical analyses that should be available.
- Evaluation of existing federal grant programs and the potential for new programs to address non-DNA programs

Another need in the forensic industry is education for criminal justice stakeholders on the cost and demand for forensic services, a realistic understanding of forensic capabilities and their limitations, and continuing education for forensic scientists. Awareness of the most pressing issues in forensic science (e.g. Rapid DNA, SAKs, current opioid epidemic) will focus energy on the appropriate targets.

Standards development is an existing need and will continue to be a need well into the future. The Organization of Scientific Area Committees (OSAC) must receive sustained funding and support. The OSAC and all other standards development organizations must be developed and led by individuals with a high level of forensic experience and expertise.

Forensic scientist-informed research is a crucial need. While research scientists with limited, practical forensic science experience can broaden the overall knowledge and scope of the field, extensive forensic expertise is needed to assist those researchers to direct and ensure practicality and applicability of their research. Basic research is necessary for new and emerging technologies, but it must also be balanced with practical implementation and technology transfer initiatives. A national research agenda and sustained forensic research infrastructure must be developed. Additionally, practitioner access to scientific journals and publications must be dramatically enhanced. Informed research on the topics of human factors and statistics is also critically important. Research on human factors in forensic science must be

validated and then coupled with realistic implementation strategies that have been vetted in a real-world forensic science service provider environment.

**What is required to improve forensic science practices at the federal, state, local, and tribal levels?**

ASCLD is firm in its belief that the universal accreditation of all forensic science service providers, private and public, in all disciplines where work is being performed is a critical quality component that represents the greatest single improvement each organization can undertake. Additionally, use of appropriate, standardized, and validated methods in all disciplines is crucial to quality assurance.

In addition to universal accreditation, forensic science practices can also be improved in the following ways:

- Uniform delivery of results, conclusions, and/or opinions through reporting and testimony, to include uniform language and terminology
- Development, education, and appropriate application of statistical methods and tools
- Universal certification of forensic providers and enhanced funding for certification programs
- Development of enforceable ethics policies at all levels
- Ensuring freedom of scientists from undue influence from investigatory and judicial system stakeholders, interest groups, parent agencies, and political influence
- Continued support and funding for standards development and principal involvement by forensic scientist experts
- Development of a national forensic scientist-informed research agenda that includes practical human factors and statistical application issues, technology transfer, underlying scientific foundation improvement, and a sustainable research infrastructure for forensic science at academic institutions

**What is needed to improve capacity at federal, state, local, and tribal levels?**

Sustainable resources are needed to improve capacity at all levels of government. State and local governments must fund forensic laboratories at a level commensurate with their critical role in the criminal justice system. Federal resources are also needed to supplement state and local funding, but federal grant programs should also seriously evaluate the scarcity of funding for disciplines other than DNA. Limiting factors of production (e.g., lack of trained staff, equipment, and facilities) in turn limit the number of analyses that can be conducted. Many labs are not currently meeting the demand for services, resulting in backlogs and long

turnaround times. Resources must be matched to the long-term demand, which is the number of cases that have forensic evidence that should be analyzed to provide objective scientific information. The Forensic Science Service Providers Needs Assessment created in the 2016 Justice for All Act could contribute to a greater understanding of the resource needs across all types of laboratories and levels of government.

Regionalization of forensic science services through cooperative agreements, especially in expensive, less common, and training intensive disciplines such as trace analysis, could be explored to assist with maximizing economies of scale. Use of cooperative agreements can maximize economies of scale with federal leadership and collaboration. A map of forensic services and a gap analysis will provide necessary data to highlight these opportunities.

Lastly, capacity enhancement could be achieved with novel approaches to training that lessen the hiring-to-casework process while still providing competent analysts. Current models take forensic scientists out of production to provide education and training to newly hired employees. Dedicated training positions or training programs based on successful federal models (e.g. ATF Firearms, Beltsville, MD) provide uniform training to new scientists while reducing the internal training burden on case-working lab staff.

**What are the barriers to improving capacity and what resources are needed to overcome those barriers?**

A key barrier to improving capacity at many forensic laboratories is simply forensic facility space. Additional staff cannot be hired and be productive if there is not adequate physical space for them to work. Additionally, when facility improvement and capital improvement projects are undertaken, the procurement and contract process is typically extremely burdensome and takes significant lead time before improvements are realized. DOJ can simplify this process by providing direct equipment and subdivision contracts to state and local units of government. Staffing problems also plague forensic laboratories with high turnover and uncompetitive salaries. The constant hiring, training, replacing cycle leads to significant downtime and capacity limitations. DOJ can help in this area by providing tuition reimbursement and other incentives for forensic scientists to work in the laboratory that invests in their initial training.

Technology challenges also contribute to capacity limitations as new technologies take a long time to be implemented into the laboratory. Significant time, cost, and expertise are required to upgrade, validate, and implement new technologies to withstand the scrutiny of our courts. DOJ can assist in this area by funding validation studies when instruments are purchased on

DOJ grants, assisting with federal laboratory leadership, and providing a federal repository for validation data. There is frequently concern over being the first laboratory to implement something new due to the burden of court challenge and acceptance. Federal labs have been successful leaders in this area, but could do more to lead in technology implementation.

Communication across the entire criminal justice system also poses significant capacity challenges. Frequently, there is a serious lack of communication from investigating and prosecuting agencies with their laboratories. Often cases in which forensic analysis have been requested are adjudicated, without the laboratories being notified, leading to unnecessary testing and wasted resources. Laboratories struggle with the issue of how many items per case truly need testing and what is necessary for the justice system. Greater communication with prosecuting agencies would also help laboratories prioritize casework in meeting the needs of the court, as it progresses through motion hearings and court dates. Lastly, better communication would assist laboratories in determining the appropriate types of testing and numbers of samples to be tested on a given case. A more uniform approach to customer needs and agreements would significantly improve the system nationwide.

**What are the specific issues related to digital forensic evidence analysis and how can the Department address those needs?**

Staying current with digital evidence technologies is difficult and the costs of training is exorbitant. Finding qualified individuals to perform this analysis has also proven challenging. There is an exponential growth of the digital evidence discipline and many digital sections within forensic service providers are not currently accredited. Additionally, there is often a culture clash between digital evidence examiners who typically have a law enforcement background and the civilian scientific background of analysts in other disciplines.

Digital evidence also poses the following additional challenges with which the crime laboratory community is still struggling:

- Investigation versus examination – When does “analysis” begin?
- Validation of technologies
- Unique human resources needs due to the psychological effect of exposure to traumatic images
- Resource issues with the exponential growth of evidence technology, types and volume
- Difficulties with vendors and encryption privacy, proprietary information
- Retention mechanisms for digital evidence – cost of storage of vast amounts of digital data

The Department of Justice is particularly positioned to be able to assist the forensic science community with complex digital evidence issues. The Department could undertake the responsibility to perform validation of new and emerging technologies on a national level. The Department could clear the legal hurdles and establish agreements with technology corporations to successfully navigate proprietary technology issues. In addition, the Federal forensic science laboratories and other Federal agencies, through cooperative agreements, should share information with state and local laboratories regarding digital evidence technology. The Department could continue to support the digital evidence community through participation of experts in OSAC. Lastly, the Department has the most experience in digital evidence accreditation and could provide models, training, and the leadership to encourage universal accreditation of digital evidence sections.

**How should the Department, or any Department entity, coordinate with the Organization of Scientific Area Committees?**

Federal laboratories should support OSAC by allowing DOJ employees to participate in OSAC. The Department should support the work of OSAC by voluntarily adopting OSAC standards/guidelines at all Federal labs. The Department can also support OSAC by allowing OSAC to develop and promulgate uniform standards on reporting and testimony as opposed to developing Department-specific policies. The Department can support OSAC with funding, as necessary, to ensure OSAC has the ability to host in-person meetings at least annually. Lastly, the Department should encourage the National Institute of Standards and Technology (NIST) to request funding for OSAC in the NIST annual budget to ensure that Congress continues to authorize and appropriate this funding.

**What resources and relationships can the Department draw on to ensure thoughtful and representative input?**

There are numerous relationships that the Department can draw on to ensure thoughtful and representative input, not the least of which is the American Society of Crime Laboratory Directors. ASCLD can provide managerial input on the real-world impact of policy and granting decisions at the Department as they trickle down to state and local jurisdictions, where 95% of forensic services are provided. It should be recognized that state and local labs do a great deal of forensic work for DOJ and DOJ-affiliated agencies. Federal investigators use local and state forensic science service providers when they can provide the service faster or as part of a task force or local working group. Assistant US Attorneys all over the country rely on local forensic science providers to work evidence on federal cases.

The Department must ensure that state, local, academic, and private laboratory forensic expert practitioners are intimately involved in discussions on how to advance forensic science in the United States. This includes conversations not just on the future of which organization leads forensic efforts, but Department initiatives such as the FSDR, Uniform Laboratory Testimony and Reporting (ULTRs), and national discipline reviews. Communication on these national initiatives must be directed to states and localities. Many of the reviews conducted by DOJ laboratories will also be done on the state and local level. Lessons learned, best practices, and protocols developed must be effectively transferred to all levels of government.

The Department should continue to support and interface with the Organization of Scientific Area Committees.

Finally, the Department should coordinate with numerous federal agencies such as Department of Defense (DOD), Department of Health and Human Services (HHS), National Institute of Health (NIH), Department of Homeland Security (DHS), and Department of Transportation (DOT) on research needs and emerging issues. ASCLD encourages DOJ to lead in this area by establishing a forensic science research advisory board with a high representation of practicing forensic scientists to inform the group of research needs. DOJ should encourage all applicable federal agencies to establish a similar group. These groups should meet to share ideas, collaborate, and ensure a forensic science research culture is established and fostered in academic institutions in the United States.

ASCLD is committed to advancing forensic science and welcomes the opportunity to work with the Department to further our field.

**References:**

1. **Doleac, J.L.**, “The Effects of DNA Databases on Crime”, *American Economic Journal: Applied Economics*, 9(1): 165-201.
2. **Wickenheiser, R.A.**, “Forensic Laboratory Efficiency and Funding”, Chapter in *The Encyclopedia of Forensic Sciences*, Jay A, Siegel and Pekka J. Saukko editors, Elsevier Academic Press, San Diego, 2013, Volume I, pp 344-350.
3. **Wickenheiser, R.A.**, “The Business Case for Using Forensic DNA Technology to Solve and Prevent Crime”, *Journal of Biolaw and Business*, Vol. 7, No 3 (2004) pp 34-50.