

OVERVIEW OF THE NATIONAL ACADEMY OF SCIENCES (NAS) PRE-PUBLICATION REPORT “STRENGTHENING FORENSIC SCIENCE IN THE UNITED STATES: A PATH FORWARD”

On November 22, 2005 the Science, State, Justice, Commerce and related Agencies Appropriations Act of 2006 became law. Under the terms of this statute, Congress authorized “the National Academy of Sciences to conduct a study on forensic science, as described in the Senate report.” In the fall of 2006 the Forensic Science Committee was established by the NAS to undertake this task. This body consisted of members of the scientific, forensic and legal communities and operated under the title “*Identifying the Needs of the Forensic Science Community*”. In addition to holding eight formal meetings in 2007 and 2008, which provided testimony from numerous experts the committee reviewed published materials, performed independent research studies and reports related to forensic science. Following extensive review the pre-publication report of the committee was released in February, 2008 under the title “**Strengthening Forensic Science in the United States: A Path Forward**”. The general central finding of the committee was:

The forensic science system, encompassing both research and practice, has serious problems that can only be addressed by a national commitment to overhaul the current structure that supports the forensic science community in this country. This can only be done with effective leadership at the highest levels of both federal and state governments, pursuant to national standards, and with a significant infusion of federal funds.

In addition, other important related findings were presented in the report among which were:

- 1) *The forensic science disciplines currently are an assortment of methods and practices used in both the public and private arenas. Forensic science facilities exhibit wide variability in capacity, oversight, staffing, certification, and accreditation across federal and state jurisdictions. Too often they have inadequate educational programs, and they typically lack mandatory and enforceable standards, founded on rigorous research and testing, certification requirements, and accreditation programs. Additionally, forensic science and forensic pathology research, education, and training lack strong ties to our research universities and national science assets.*
- 2) *What also is needed is an upgrading of systems and organizational structures, better training, the widespread adoption of uniform and enforceable best practices, and mandatory certification and accreditation programs.*
- 3) *Forensic science research is not well supported, and there is no unified strategy for developing a forensic science research plan across federal agencies. Relative to other areas of science, the forensic disciplines have extremely limited opportunities for research funding. Although the FBI and NIJ have supported some research in forensic science, the level of support has been well short of what is necessary for the forensic science community to establish strong links with a broad base of research universities. Moreover, funding for academic research is limited and requires law enforcement collaboration, which can inhibit the pursuit of more fundamental scientific questions essential to establishing the foundation of forensic science. The broader research community generally is not engaged in conducting research relevant to advancing the forensic science disciplines.*
- 4) *The forensic science enterprise needs strong governance to adopt and promote an aggressive, long-term agenda to help strengthen the forensic science disciplines. Governance must be strong enough—and independent enough—to identify the limitations of forensic science methodologies, and must be well connected with the Nation’s scientific research base to effect meaningful advances in forensic science practices.*

- 5) *Forensic science serves more than just law enforcement; and when it does serve law enforcement, it must be equally available to law enforcement officers, prosecutors, and defendants in the criminal justice system. The entity that is established to govern the forensic science community cannot be principally beholden to law enforcement. The potential for conflicts of interest between the needs of law enforcement and the broader needs of forensic science are too great.*

In light of these and other findings the committee set forth a series of recommendations which represented the committee's studied opinion on how best to achieve these critical goals. First and foremost among these recommendations was the establishment of an independent body:

To promote the development of forensic science into a mature field of multidisciplinary research and practice, founded on the systematic collection and analysis of relevant data, Congress should establish and appropriate funds for an independent federal entity, the National Institute of Forensic Science (NIFS). NIFS should have a full-time administrator and an advisory board with expertise in research and education, the forensic science disciplines, physical and life sciences, forensic pathology, engineering, information technology, measurements and standards, testing and evaluation, law, national security, and public policy. NIFS should focus on:

- a) establishing and enforcing best practices for forensic science professionals and laboratories;*
- b) establishing standards for the mandatory accreditation of forensic science laboratories and the mandatory certification of forensic scientists and medical examiners/forensic pathologists—and identifying the entity/entities that will develop and implement accreditation and certification;*
- c) promoting scholarly, competitive peer-reviewed research and technical development in the forensic science disciplines and forensic medicine;*
- d) developing a strategy to improve forensic science research and educational programs, including forensic pathology;*
- e) establishing a strategy, based on accurate data on the forensic science community, for the efficient allocation of available funds to give strong support to forensic methodologies and practices in addition to DNA analysis;*
- f) funding state and local forensic science agencies, independent research projects, and educational programs as recommended in this report, with conditions that aim to advance the credibility and reliability of the forensic science disciplines;*
- g) overseeing education standards and the accreditation of forensic science programs in colleges and universities;*
- h) developing programs to improve understanding of the forensic science disciplines and their limitations within legal systems; and*
- i) assessing the development and introduction of new technologies in forensic investigations, including a comparison of new technologies with former ones.*

Based on the degree of discussion, both within and outside the forensic community, the NAS report will result in profound and long term changes in the practice of forensic science in the United States. The North Dakota State University Forensic DNA Facility (NDSU FDF) has already accomplished a number of the NAS recommendations including international ISO accreditation, individual certification of two senior personnel, university partnership, an active research program and establishment of a forensic science teaching program. Therefore, the NDSU FDF is well positioned to contribute to the new efforts that will be required to satisfy the recommendations set forth in the NAS report.