



## Engineering Sciences Section - 2012

### **C25 How Far Has the Federal Government Advanced Toward Meeting the Recommendations of the National Academy of Sciences (NAS) Report and How Does the United States Effort to Strengthen Forensic Science Compare With That in Other Countries?**

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After attending this presentation, attendees will be updated regarding Federal efforts in meeting recommendations of the National Academy of Sciences Report.

This presentation will impact the forensic science community by alerting listeners to the progress of efforts to upgrade forensic science in the United States.

Most AAFS members, regardless of our disciplines, will be affected either directly or indirectly by the reverberations flowing from the 2009 National Academy of Sciences (NAS) Report, *Strengthening Forensic Science in the United States: A Path Forward*. A number of federal entities are working on various initiatives linked to the NAS Report. Among these are: The White House Subcommittee on Forensic Science, the U.S. Senate Judiciary Committee, and the National Institute of Standards and Technology (NIST). These entities will be shaping the future of forensic science, as it is practiced in the United States.

Today's session has been structured in an effort to answer a variety of questions. Among these questions are:

- Who are the participants, what have they done, and what are they going to do?
- What are the relationships between the participants?
- What constructive role can we, AAFS members play in this process?

Presenting in this session will be distinguished speakers from the AAFS, the Senate Judiciary Committee, the White House Subcommittee on Forensic Science, the NIST, the NAS, and the Innocence Project. Descriptions of the experiences of the international community in this area will also be presented. Speakers will describe the forensic science activities in Canada, the United Kingdom, and Australia. There are several issues of keen interest to all:

- How should forensic practitioners be certified? Should they be tested, and if so how and by whom? Should they be grandfathered if they have already been certified by an earlier regime?
- What methodology should be used to accredit forensic laboratories? Who should do the accreditation, the federal government, professional organizations, the Judiciary, or the private sector?
- Will any of the money allocated to the above processes make its way outside the federal system to fund the private sector to help with these activities?

Underlying the above issues is the even more important question of validity. The validity of the procedures currently used in many forensic "practices" (methods) has been called into question. Among these methods are DNA mixture analysis, fingerprint identification, and the analysis of hair, bite marks, fibers, shoeprints, soil, and tool marks. Shaken baby syndrome methods and diagnoses are also being questioned. What procedures will be employed to validate these methods? Will this be done by the Government or outside parties? No matter who does the validation work, how can we be sure that they will be done in a scientifically rigorous manner? In this session one speaker will discuss his disagreement with how many of the above techniques have been applied in the past.

Judge Domitrovich will describe how judges can improve their gatekeeping roles regarding the admissibility of relevant and reliable scientific evidence, as well as what resources are available to educate and train judges?

These issues will suffuse today's proceedings. Each talk will be followed by a 10 minute question & answer period.

AAFS President Dr. Ubelaker will begin the session by describing the respective responsibilities assumed by the disparate federal entities that are addressing the 2009 National Academy of Sciences Report mandated by Congress: *Strengthening Forensic Science in the United States: A Path Forward* (NAS Report). As AAFS spokesperson and as a member himself of the White House Subcommittee on Forensic Sciences, President Ubelaker has had a front-row seat as



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both an observer and participant in the actions taken by these entities in addressing the NAS Report. His presentation to the Joint Session will summarize his views of what has been accomplished, where he thinks we are headed, and what the AAFS role should be in strengthening forensic science in the United States.

There can be no better source of information regarding the activities of the White House Subcommittee on Forensic Science and of its interactions with other federal agencies than Mr. Melson and Mr. Stolorow. They have been involved in creating within the Executive Branch of the federal government a structure that in some regards tracks the structure that the Leahy bill seeks to create. Of particular interest will be their observations regarding the comparison and contrast of the two approaches, differences that in part reflect the different natures of the Executive and Legislative Branches of the federal government. In addition to these comments, they are expected to also present their own views on validating practitioners, accrediting laboratories, and determining the validation of forensic theories and techniques. Mr. Melson is the Forensic Science Advisor at the Department of Justice Office of Legal Policy. Mr. Stolorow is Director of the NIST Office of Law Enforcement Standards.

Dr. Gallagher is the Director of the one of the most important scientific bodies within the federal government: the National Institute of Standards and Technology (NIST). Reflecting this, and the bill's intent to emphasize science, the Leahy bill calls on NIST resources and personnel for a major part of the new forensic structure it envisions. It will be of great interest to learn how he expects this expansion to take place and whether he sees NIST as awarding outside grants for forensic research.

Mr. Bookbinder and Mr. Park, senior staff members of the Senate Judiciary Committee chaired by Senator Patrick Leahy. Senator Leahy began working in 2009 on a legislative approach to addressing the issues in forensic science highlighted in the NAS Report. In assisting the Senator to approach this task, Mr. Bookbinder and Mr. Park sought to confer with all segments of the forensic community and, over an 18-month period, sat down, separately and in concert, with forensic scientists, crime lab directors, defense attorneys, law enforcement officials, Innocence Project members, and others. AAFS members were well represented at these gatherings. Through this process and guided by political realities, they developed the bill introduced in January 2011 by Sen. Leahy under the caption *Forensic Science Reform Act of 2011*. Regardless of whether this bill in some form becomes law by the time of the 2012 AAFS Annual Meeting, an account of considerable interest and help to anyone hoping for legislative solutions to the needs of the forensic community will be provided.

Since its creation in 1999, Dr. Mazza has been the Director of the NAS Committee on Science, Technology, and Law, the body that created and oversaw the ad hoc Committee responsible for the NAS Report. Associated with the NAS since 1995, she also worked during 1999-2000 with the White House Office of Science and Technology Policy. With this broad background in science policy and the specific experience involved in taking part in the preparation of the NAS Report, she is in an excellent position to discuss the generation of that report, the history behind it, and the manner in which its findings have been understood and misunderstood, construed and misconstrued.

The key recommendation of the NAS Report is that a National Institute of Forensic Science (NIFS) be created as an independent agency of the federal government. Although the Leahy bill does not go so far as to call for the creation of such an agency, it does envision an Office of Forensic Science within the Department of Justice. Therefore, it should be illuminating to learn the experience of Australia in setting up and operating its National Institute of Forensic Science. Mr. Ross, as one of the creators and presently the Director of the NIFS serving Australia and New Zealand, is an excellent person to describe the problems in creating such an organization, as well as the benefits that it has provided to those it serves. NIFS currently resides within the Australia New Zealand Police Advisory Agency as a Directorate.

Dr. Milroy, a forensic pathologist based in Canada after an extensive career in the United Kingdom, where he was a member of the National Forensic Science Service, has for many years been an active participant in the Evidence-Based Medicine movement. He will address the efforts in the United Kingdom and Canada to police forensic science practitioners and laboratories, including thinking in those countries regarding oversight committees. It is anticipated that he will discuss the recent dismantling of the forensic-practitioner registry developed over many years in the United Kingdom, thereby providing valuable insight to those looking toward the certification of forensic practitioners in other countries.

Mr. Neufeld is co-founder and co-director of the Innocence Project, which, directly or indirectly, has been responsible for the DNA exonerations of more than half of the nearly 300 persons wrongly convicted of homicides and/or sexual assaults in the United States. In most cases these individuals served long sentences for crimes which forensic DNA proved they had not committed. In seventeen cases, they had been sentenced to death. The post conviction DNA exonerations and the revelation that in a substantial number of the underlying trials, forensic analysts called by the prosecution provided invalid testimony at trial, were important factors in the NAS investigation of forensics and cited in the final 2009 NAS Report. As a consequence, Mr. Neufeld and his associates at the Innocence Project have been expected to play a major role, along with other entities, in the government led collaborative undertaking to enhance forensics. He will detail some of forensics' systemic problems and offer appropriate remediation. As a corollary to this, he will comment on various improvements proposed by Congress and agencies of the Executive Branch.



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AAFS Board of Directors member Ms. DesPortes and former AAFS President Dr. Bohan plan to provide a summary of the day's proceedings augmented by their own experiences since the release of the NAS Report. They will advise audience members of the opportunities for involvement in the initiatives described by the other program presenters.

**Forensic Science, Forensic, NAS**