



A102 The Challenges of Translating Forensic Science Research Into Practice: Resources, Backlogs, and Accreditation

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After attending this presentation, attendees will have discussed major challenges of translating research into practice for forensic laboratories, which are limited resources, increased backlogs, and stringent requirements for accreditation.

This presentation will impact the forensic science community by attempting to dissect these challenging issues with an emphasis on the fundamentally important need for research, but even more vital, translating research into practice.

In 2009, the National Research Council, an arm of the National Academy of Sciences (NAS), published, *Strengthening Forensic Science in the United States: A Path Forward* and stated the following: *Forensic science often produces valuable evidence that can be used to successfully prosecute and convict criminals, as well as exonerate the innocent. Based on technological innovations and the evolution of the field in the past several decades, forensic scientists, as a whole, have continued to improve knowledge and better understand methods and practices. After years of general acceptance about theories and fundamental concepts, the criminal justice system is now demanding scientists to demonstrate that the methods and practices employed in various forensic disciplines are based on accurate, reliable, and valid testing.*

Following the NAS Report, there has been an increase in forensic science research throughout the nation and this has been evidenced by a significant increase in funding by the National Institute of Justice (NIJ) for research, development, and evaluation. From 2009 through 2011, NIJ has funded 174 projects for a total funding of \$71,280,619, which has resulted in 122 publications, 264 presentations, and 28 final technical reports. Approximately one-third of the total funding since 2009 has been allocated to basic and fundamental research, but the far majority of funding in forensic science still focuses on applied research and new technology. Analytical instruments, software packages for data processing, and database technology in the forensic sciences have evolved at a significant pace over the past two decades. Although forensic laboratories throughout the United States continue to make progress analyzing evidence efficiently and effectively, backlogs continue to be a major challenge for many forensic service providers. Research in the forensic sciences is often perceived solely as a means to strengthen the underlying science, but research, conducted in the appropriate capacity, can be the impetus to increased quality and efficiency. The 2009 Census of Publicly Funded Forensic Crime Laboratories was released in August 2012 showing that resources dedicated to research diminished significantly from 2002 until 2009. With this reduction in resources, it then becomes very difficult to test and implement advanced technology.

What is the underlying cause of these ever-increasing struggles that forensic laboratories must face? Is it lack of resources? Perhaps the stringent requirements necessary to achieve and maintain accreditation, which in effect, reduce efficiency? Or, are the ever-increasing backlogs prohibiting laboratories from embracing new technology? Should laboratories invest more in research as a means to become more efficient? Technology transfer can be a daunting task for any laboratory in terms of resources, and the question often arises whether multiple labs should be conducting tests on materials that are not frequently submitted and require expensive instrumentation. Is outsourcing a viable option for non-routine analysis? This presentation will attempt to dissect these challenging issues with an emphasis on the fundamentally important need for research, but even more vital, translating research into practice.

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