

Improving the Science Base for Forensic Tests

National Commission on Forensic Science
January 9, 2017

The quality of forensic testing is under constant scrutiny

- To be credible, tests must have been shown scientifically to be reliable
- There's agreement that all tests can and should be improved

Ultimately, the only way to improve the quality of and confidence in forensic science is through rigorous research

- And the application of consistently applied standards

How to strengthen the scientific underpinnings of forensic science has already received substantial attention

- NRC “Strengthening Forensic Science in the United States – a Path Forward” 2009
- NRC “Strengthening the National Institute of Justice” 2010



REPORT TO THE PRESIDENT
Forensic Science in Criminal Courts:
Ensuring Scientific Validity
of Feature-Comparison Methods

Executive Office of the President
President's Council of Advisors on
Science and Technology

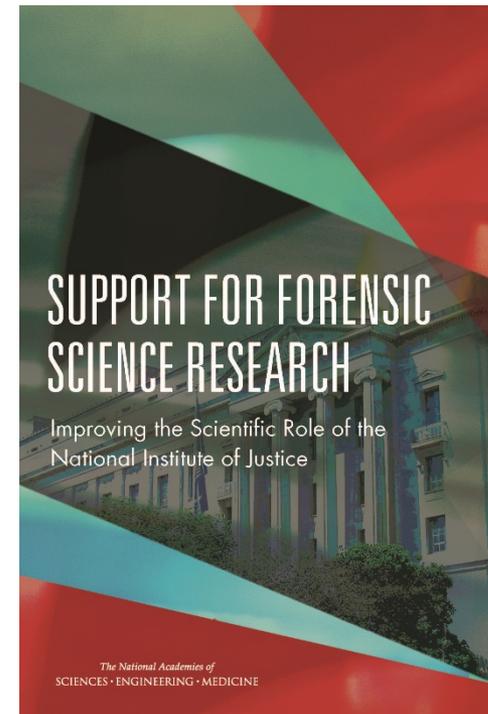
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Support for Forensic Science Research: Improving the Scientific Role of the National Institute of Justice

**Committee on Strengthening Forensic
Science at the National Institute of
Justice**

**Alan Leshner– Chair
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2015

There is plenty of guidance

- Now need:
 - National commitment
 - Leadership
 - Coordination across the government
 - A long-term and stable strategy
 - Adequate and stable funding
 - Appropriate staffing

All are fixable

- Just do it!

Step one

- Go back to 2009, 2010 and 2015 NRC and PCAST reports and do more to implement them
 - Some significant improvements have been made
 - But not enough

Need leadership and government-wide coordination

- No one is currently in charge

Forensic Science Research in the Federal Government

- **National Institute of Justice**
 - Largest external research funder, supporting research conducted by academics and at state and local laboratories
 - Primary focus is applied research
- **National Science Foundation**
 - Focused on basic research
 - 2013 “dear colleague” letter & Industry/University Cooperative Research Center program
- **National Institute of Standards and Technology**
 - Supports research conducted within the institute and the Forensic Science Center of Excellence
 - Leads the Organization of Scientific Area Committees (OSAC)
 - Cochairs the National Commission on Forensic Sciences
- **Other Agencies**

We recommended research leadership responsibility go to the National Institute of Justice

- Largest external research funder, supporting research conducted by academics and at state and local laboratories
- Has made substantial progress since 2009/2010 reports
 - Although it isn't fully there yet

To enable NIJ to lead:

- Must be agreement from DOJ leadership and other agencies/players
- Needs a bigger budget
- It must have full control of its own research agenda
 - With stable priorities
- Research agenda needs to reflect scientists' views of gaps, not just practitioners' views
- NIJ practices and policies need to be brought further in line with other science agencies

What are we advocating?

Step #2: Develop a government-wide strategic plan

- Articulate the major problems and a path to addressing them
- Assigning roles to various agencies

Areas for Improvement

- Integrating the perspective of research scientists with that of practitioners in identifying research needs for forensic science.
- Articulating the long-term strategic research agenda to the research community.
- Improving the collection of measures to assess the impact of the research portfolio on the practice of forensic science.

Solicitations

Conclusion 3-2:the priority issues appear to be reactive to short-term political and public concerns, and it is not clear how the priorities relate to an overall long-term research agenda for forensic science.

Priorities shift from year to year, at times with little carryover.

Current Budget and Staffing

- **Conclusion 3-9:** The **lack of adequate and stable funding** ...from year to year contributes to the difficulty of establishing a long-term research agenda for forensic science.
- **Conclusion 3-11:** The **programmatic staffing** for forensic science research has not changed commensurate with the increasing scope of responsibilities for the National Institute of Justice in this area.
 - Both in size and in breadth of substantive expertise

Developing a Strategic Plan

Recommendation 4-1: The National Institute of Justice should take immediate steps to **develop a formal and comprehensive strategic plan** for its forensic science research and development program..

Research Advisory Board

Recommendation 4-2: The National Institute of Justice should **establish a research advisory board** that includes a broad array of scientists, ...and practitioners, It should also **monitor progress in achieving the strategic plan's designated goals.**

Building A Research Infrastructure

Recommendation 4-3: The National Institute of Justice should increase efforts to expand forensic science research by **recruiting researchers from the broader scientific community** whose work may have a nexus with forensic science.

Improving Communication: Facilitating Knowledge Transfer

Recommendation 4-7: As part of its strategic plan, the National Institute of Justice should expand **support for the transfer of technologies** developed in its research and development portfolio to end users.

There is plenty of guidance

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 - Coordination across the government
 - A strategy
 - Adequate and stable funding
 - Appropriate staffing