



# NATIONAL COMMISSION ON FORENSIC SCIENCE

**NIST**  
National Institute of  
Standards and Technology  
U.S. Department of Commerce

## Recommendation to Fund Post-Doctoral Projects to Facilitate Translation of Research into Forensic Science Practice

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### Subcommittee

Scientific Inquiry and Research

### Type of Work Product

Directives—Recommendation

### Recommendation

The National Commission on Forensic Science (NCFS) recommends that the Department of Justice (DOJ) develop and implement a grant program specifically directed toward funding multiyear post-doctoral fellowships at Federal, state, and local Forensic Science Service Providers (FSSPs) and Forensic Medicine Service Providers (FMSPs).

### Statement of Issue and Background

A core objective of the NCFS is to identify and assess the current and future needs of the forensic sciences to strengthen their disciplines and meet growing demands. One way to do so is to support advanced research at the post-doctoral level that can clearly link cutting-edge science with current and future application needs and new directions in the forensic science community.

The NCFS believes that translational models must be developed to ensure that current research is integrated into forensic laboratories in a timely way that does not disrupt the workflow within them. Importantly, these models should also be directed toward integrating a research culture within the forensic sciences by creating a new path for research scientists that can lead to careers with FSSPs.

The post-doctoral fellowship model is well suited to translate research into practice. The goals of these post-doctoral positions would be to: (1) attract early-career scientists to posts in which their research skills can be developed so as to benefit the individual awardee and facilitate scientific transfer from the academic environment to practice within forensic laboratories; (2) incentivize the promotion and implementation of research within host organizations; (3) publish original validated methodologies or results of forensic science community investigations; (4) generate a cadre of scientifically trained investigators capable of establishing their own research programs in forensic science; and (5) enhance communication between academia and forensic laboratories.

In the forensic context, post-doctoral fellowships would play a dual role because the environment of a casework-focused laboratory is often unfamiliar to recent Ph.D. scientists. Similarly, the forensic laboratory culture is equally unfamiliar with the research focus of recent Ph.D. graduates. The benefits that may arise from such programs are described in Chapter 8 of the NRC report, *Strengthening Forensic Science in the United States: A Path Forward* (2009).

The NCFS believes that bridging the existing gap between the academic research aspects of forensic science and the daily reality faced by practitioners in casework laboratories is vital to the scientific evolution of the profession. Bridging this divide presents an opportunity for nurturing the incorporation of promising research into forensic practice.

### **Recommended Implementation Strategy**

The proposed grants should be based on demonstrated partnerships between an academic institution and a FSSP or FMSP laboratory and linked to on-going or recently completed NIJ research projects. There are successful models of such programs in the Federal research system that should be evaluated as the proposed forensic model is developed.

The NCFS believes that the following criteria should be considered in the award of such grants:

- The principal investigator for the project should be the laboratory director.
- The grant should emphasize a demonstrated partnership between an academic institution and the forensic laboratory. This would provide an academic environment for the trainee, who in turn would help forge closer bonds between academia and the laboratory.
- Salary and benefits should be commensurate with the needs of a post-doctoral fellow to work on-site at the forensic laboratory for 2–3 years.
- The grant should fund the cost of the project, including instrumentation as needed.
- The grants should be part of an integrated program in which the post-doctoral fellows interact with each other and meet on a regular basis for discussions, mentoring, and presentations.
- Proposed outcomes of the award should include publication of results of the projects in peer-reviewed journals, which promotes both the foundation of forensic sciences and the culture of publication in a forensic science laboratory, and is a necessary component for post-doctoral fellows' careers.

The NCFS urges the DOJ to work with Federal agencies such as the National Science Foundation, the National Institutes of Health, the Department of Defense, and the Department of Energy to develop and implement this pilot program as soon as is practicable.

## References and Resources

National Defense Science and Engineering Fellowship Programs

[https://ndseg.asee.org/ndseg\\_fellows/opportunities](https://ndseg.asee.org/ndseg_fellows/opportunities)

Research Associate Programs, National Research Council

<http://sites.nationalacademies.org/pga/rap/>

National Science Foundation

[https://www.nsf.gov/funding/education.jsp?fund\\_type=3](https://www.nsf.gov/funding/education.jsp?fund_type=3)

Oakridge Institute for Science and Education

<http://orise.ornl.gov/science-education/internships-scholarships-fellowships/postdocs.aspx>

National Institutes of Standards and Technology

<http://www.nist.gov/iaao/postdoc.cfm>

National Institutes of Health