NIJ Forensic Science R&D for Criminal Justice Purposes Program

Office of Investigative & Forensic Sciences
National Institute of Justice

Webinar January 11, 2017

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Important information for today’s webinar

- Today’s webinar will be recorded and archived on the National Institute of Justice (NIJ) website.
- This presentation is being live-captioned for the hearing impaired. The live caption can be viewed by opening the Media Viewer panel.
- If you are logged in to hear the presentation via the computer, but have run into audio difficulties, please click on "Communicate" at the top left of the screen and then "audio connection" to adjust the speaker.
- For technical assistance, please use the Chat Box. We will respond to you as soon as possible.
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NIJ Forensic Science R&D for Criminal Justice Purposes Program

Office of Investigative & Forensic Sciences
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Today’s Presenters:

Danielle McLeod, Physical Scientist, NIJ

Minh Nguyen, Physical Scientist, NIJ
NIJ is the research, development, and evaluation agency of the U.S. Department of Justice

NIJ’s Mission
Improving knowledge and understanding of crime and justice issues through science
Who is NIJ’s Office of Investigative & Forensic Sciences?

Vision of the Office of Investigative & Forensic Sciences
Justice through sound science, scientists, and forensic practice.

Mission of the Forensic Science R&D Program
Advance forensic science by supporting research and innovation to protect the public and ensure justice for all.

https://www.nij.gov/about/Pages/oifs.aspx
What is the goal of NIJ’s Forensic Science R&D Programs?

The development of methods for the identification, analysis, and interpretation of physical evidence for criminal justice purposes.
What are our funding levels & rates?

**Forensic Science R&D Funding Levels**

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Funding Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY 2011</td>
<td>$17,650,918.00</td>
</tr>
<tr>
<td>FY 2012</td>
<td>$15,014,155.00</td>
</tr>
<tr>
<td>FY 2013</td>
<td>$14,844,068.00</td>
</tr>
<tr>
<td>FY 2014</td>
<td>$21,712,987.00</td>
</tr>
<tr>
<td>FY 2015</td>
<td>$29,748,420.00</td>
</tr>
<tr>
<td>FY 2016</td>
<td>$24,260,996.00</td>
</tr>
</tbody>
</table>

**Average Award Size:** $445K

**Forensic Science R&D Funding Rates**

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Applications Received</th>
<th>Applications Funded</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY 2011</td>
<td>205</td>
<td>32</td>
</tr>
<tr>
<td>FY 2012</td>
<td>260</td>
<td>35</td>
</tr>
<tr>
<td>FY 2013</td>
<td>212</td>
<td>40</td>
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<tr>
<td>FY 2014</td>
<td>200</td>
<td>47</td>
</tr>
<tr>
<td>FY 2015</td>
<td>177</td>
<td>60</td>
</tr>
<tr>
<td>FY 2016</td>
<td>172</td>
<td>54</td>
</tr>
</tbody>
</table>

**Average Funding Rate 22.8%**
Who receives Forensic Science R&D grants?

Distribution of Forensic Science R&D Funding by Discipline
2009-2016

- Forensic DNA
- Controlled Substances/Toxicology
- Impression & Pattern Evidence
- Trace Evidence
- Forensic Pathology
- Forensic Toxicology
- Anthropology
- Crime Scene Investigation
- Controlled Substances
- Digital Forensics/Biometrics
- General Forensics
- Forensic Entomology

Awards by Applicant Type

- Academic 70%
- Nonprofit 12%
- For-Profit 9%
- FFRDC/Federal Lab 5%
- Local Gov’t 4%

NIJ
The U.S. Department of Justice (DOJ), Office of Justice Programs (OJP), National Institute of Justice (NIJ) is seeking applications for funding of basic or applied research and development in forensic science for criminal justice purposes. This program furthers the Department’s mission by sponsoring research to provide objective, independent, evidence-based knowledge and tools to meet the challenges of criminal justice, particularly at the state and local levels. NIJ’s Forensic Science Technology Working Group (TWG) assists in identifying and prioritizing operational needs and requirements of the field. The forensic science needs discussed at the FY 2015 TWG meeting may be found on NIJ.gov and are intended to facilitate proposal development.

Research and Development in Forensic Science for Criminal Justice Purposes

Applications Due: February 28, 2017
What are we soliciting?

A. Program Description

Overview

With this solicitation, NIJ seeks proposals for basic or applied research and development projects. An NIJ forensic science research and development grant supports a discrete, specified, circumscribed project that will: (1) increase the body of knowledge to guide and inform forensic science policy and practice, or (2) lead to the production of useful material(s), device(s), system(s), or method(s) that have the potential for forensic application. The intent of this program is to direct the findings of basic scientific research; research and development in broader scientific fields applicable to forensic science; and ongoing forensic science research toward the development of highly-discriminating, accurate, reliable, cost-effective, and rapid methods for the identification, analysis, and interpretation of physical evidence for criminal justice purposes. The forensic science operational needs discussed at NIJ’s FY 2015 Forensic Science TWG meeting may be found on NIJ.gov, and are intended to assist in proposal development. Additional research needs of the forensic science community can be found at the Organization of Scientific Area Committees website.
What are the goals of proposed projects?

A. Program Description

Overview

With this solicitation, NIJ seeks proposals for basic or applied research and development projects. An NIJ forensic science research and development grant supports a discrete, specified, circumscribed project that will: (1) increase the body of knowledge to guide and inform forensic science policy and practice, or (2) lead to the production of useful material(s), device(s), system(s), or method(s) that have the potential for forensic application. The intent of this program is to direct the findings of basic scientific research; research and development in broader scientific fields applicable to forensic science; and ongoing forensic science research toward the development of highly-discriminating methods for the identification, analysis, and interpretation of evidence for justice purposes. The forensic science operations and Science TWG meeting may be found on NIJ.gov. Additional research needs of the Organization of Scientific Area Committees were also addressed.

increase the body of knowledge to guide and inform forensic science policy and practice

lead to the production of useful material(s), device(s), system(s), or method(s) that have the potential for forensic application
What are the research areas of interest?

Forensic Biology & DNA
Forensic Anthropology
Forensic Odontology
Forensic Pathology
Medicolegal Death Investigation
Forensic Toxicology
Controlled Substances
Fire & Arson Investigation
Impression & Pattern Evidence
Firearms & Toolmarks
Bloodstain Pattern Analysis
Questioned Documents
Trace Evidence
Crime Scene Investigation

Biology
- Molecular Biology
- Genomics
- Proteomics
- Genetics
- Microbiology
- Anatomy
- Metagenomics

Chemistry
- Biochemistry
- Organic
- Analytical
- Inorganic
- Physical

Physics
- Materials
- Fluid Dynamics
- Imaging
- Machine Vision

Mathematics
- Statistics
- Machine Learning
What are NIJ’s research priorities?

1. Identify needs through stakeholder engagement
2. Develop research agenda
   - Non-Competitive
     - Intramural research
     - Collaboration with other scientific organizations
     - Other
   - Competitive
     - Solicitations
     - Challenges
3. Implement research
4. Post award activities
5. Evaluate research results
   - Results from awards inform future funding opportunities and become part of the process of developing the program of research and agenda
6. Disseminate to the field

What are the needs of the forensic science community?

Needs that require scientific research and/or technology development
Where else can I find research needs of the forensic science community?

OSAC Research & Development Needs

One of the OSAC's objectives is to inform the forensic science community of research needs that are uncovered during the OSAC's standards development activities. These research needs recommendations may be considered by other agencies and organizations when they develop their own agency research needs, and when soliciting funding for forensic science research.

The OSAC encourages the respective funding agencies to consider these research needs recommendations when developing new solicitations so that research efforts can be strategically advanced in areas where they are most needed. Practitioner feedback that arises during research gap analysis is documented, consolidated, and shared with the broader community. This research list will encompass inputs from the all of the 24 subcommittees and five Scientific Area Committees (SACs).

Biology/DNA Scientific Area Committee

Biological Data & Interpretation:
- Assessment of Specific Classes of Evidence Types to Determine the Necessity to Quantify DNA Before Amplification of Human Autosomal STR Loci
- Characterizing, Designing and Constructing Integrated DNA Mixture Interpretation Solutions
- Proficiency Testing for Complex Data Interpretation and Biostatistical Evaluations
- Software Solutions for Y-STR Mixture Deconvolution

Biological Methods:
- To Improve the Analysis of Serological Evidence: ID of Body Fluid

Wildlife Forensics:
- Development of New Technologies for Discovery and Characterization of Forensically Useful Markers of Relevant Species' Biogeography
- Validate STR/SNP Panels for Species of Forensic Interest Using the OSAC DNA Validation Standards
Who is Eligible?

State governments
Nonprofits
Institutions of higher education
For-profits
Local governments
Federal agencies
Individuals

Eligibility

In general, NIJ is authorized to make grants to, or enter into contracts or cooperative agreements with, states (including territories), units of local government, federally recognized Indian tribal governments that perform law enforcement functions (as determined by the Secretary of the Interior), nonprofit and for-profit organizations (including tribal nonprofit and for-profit organizations), institutions of higher education (including tribal institutions of higher education), and certain qualified individuals. Federal agencies are eligible to apply. (Any award made to a federal agency will be made as an interagency reimbursable agreement). For-profit organizations must agree to forgo any profit or management fee. Foreign governments, foreign organizations, and foreign colleges and universities are not eligible to apply.

Foreign entities are NOT eligible to apply.
What are proposals reviewed for first?

- Internal review for basic minimum requirements
- Internal review for responsiveness


Solicitation, Pages 39, Review Process
What are the basic **minimum** requirements?

Moreover, an applicant should anticipate that an application that OJP determines is nonresponsive to the scope of the solicitation, or that OJP determines does not include the application elements that NIJ has designated to be critical, will neither proceed to peer review nor receive further consideration. For this solicitation, NIJ has designated the following application elements as critical: **Program Narrative**, **Budget Detail Worksheet**, **Budget Narrative**, and **resumes/curriculum vitae of key personnel**. (For purposes of this solicitation, “senior/key personnel” means the principal investigator, and any and all co-principal investigators and other significant contributors.) An applicant may combine the Budget Narrative and the Budget Detail Worksheet in one document. However, if an applicant submits only one budget document, it must contain both narrative and detail information. Please review the “Note on File Names and File Types” under **How to Apply** to be sure applications are submitted in permitted formats.

Four critical (mandatory) elements:

1. Program Narrative
2. Budget Detail Worksheet
3. Budget Narrative
4. Resumes/CVs of Key Personnel

Use descriptive file names!
How is responsiveness determined?

What will not be funded:

- Proposals that are not responsive to this specific solicitation. This includes:
  - Proposals that do not contain a research component or do not respond to the specific goals of this solicitation.
  - Proposals that do not clearly address criminal justice concerns in the United States.
- Proposals primarily to purchase equipment, materials, or supplies. (A budget may include these items if they are necessary to conduct research, development, demonstration, evaluation, or analysis). Proposals that include equipment purchases should include a discussion of how federally-funded equipment is proposed to be used after the funded work has been completed and/or the project period has ended. Note that OJP may issue specific equipment disposition instructions in appropriate circumstances.
- Provision of training or direct service.
- Proposals in the area of digital evidence or digital forensics. Digital evidence includes information stored or transmitted in binary form that may be relied on in court. It is typically found on computer hard drives, mobile phones, personal digital assistants, CDs/DVDs, flash memory equipment and other electronic devices. Digital evidence is commonly associated with electronic crime (e.g., child pornography or credit card fraud); however, digital evidence can also be used as forensic evidence in other types of crimes.

See solicitation for the full list.
What are proposals reviewed for next?

External Peer Review for Selection Criteria!
What are the selection criteria?

- Potential Impact (Potential for a significant scientific or technical advance), 20%
- Project Design and Implementation (Quality and technical merit), 50%
- Capabilities/Competencies (Capabilities, demonstrated productivity, and experience), 20%
- Statement of the Problem (Understanding of the problem and its importance), 10%

Other criteria:
- Plan for Dissemination to Broader Audiences
- Budget

See solicitation for the detailed list.
How do I find a forensic scientist to collaborate with?

409 publicly funded forensic crime laboratories in the US
88% are accredited*

Search OJP Award Data*** for law enforcement lab receiving
NIJ capacity enhancement grants

*https://www.bjs.gov/content/pub/pdf/pffclqap14.pdf
**http://www.ascld-lab.org/accredited-laboratory-index/
***https://ojp.gov/funding/Explore/OJPAwardData.htm
Webinar for these programs is scheduled for tomorrow!!!

Sidebar: What are capacity enhancement programs?

Event Information: NIJ FY2017 Funding Opportunities for Publicly Funded Crime Labs
Registration is required to join this event. If you have not registered, please do so now.

Webinar dates are tentative pending release of the solicitations. We will alert registrants if the date and times listed here are changed.

This webinar will inform the audience of the changes to three programs available for publicly funded forensic laboratories and introduce a new program for FY 2017. Changes to these programs will be highlighted:

- Paul Coverdell Forensic Science Improvement Grants Program
- Research and Evaluation for the Testing and Interpretation of Physical Evidence in Publicly Funded Forensic Laboratories
- The DNA Capacity and Backlog Reduction (DNA CEER) program

A new funding opportunity in FY 2017 for publicly funded forensic DNA laboratories will be introduced:

- The Forensic DNA Laboratory Efficiency Improvement and Capacity Enhancement (DNA EI&CE) Program

In addition to the changes in FY 2017, presenters will discuss the background and goals of the solicitations, recommendations for successful applications, application expectations and requirements, the review process, and the application checklist. There will also be time for questions and answers at the end of the webinar.

https://www.nij.gov/funding/pages/funding-webinar-series.aspx
https://www.nij.gov/topics/forensics/lab-operations/capacity/pages/welcome.aspx
How do I learn more about NIJ funding opportunities?

1. Go to www.nij.gov & click on FUNDING & AWARDS
2. Read the FAQs
3. Read active solicitations
4. Read past solicitations for examples
5. Sign up for email updates when solicitations post

For examples, go to www.nij.gov & click on FUNDING & AWARDS > Past Awards > Solicitations. For email updates, navigate to www.nij.gov & click on SIGN UP FOR EMAIL UPDATES.
Questions About the Solicitation?

For technical assistance with submitting an application, contact the Grants.gov Customer Support Hotline at 800-518-4726 or 606-545-5035, or via email to support@grants.gov. The Grants.gov Support Hotline hours of operation are 24 hours a day, 7 days a week, except federal holidays.

Issues uploading your application?
Contact support@grants.gov

For assistance with any other requirements of this solicitation, contact the National Criminal Justice Reference Service (NCJRS) Response Center: toll-free at 1-800-851-3420; via TTY at 301-240-6310 (hearing impaired only); email grants@ncjrs.gov; fax to 301-240-5830; or web chat at https://webcontact.ncjrs.gov/ncjchat/chat.jsp. The NCJRS Response Center hours of operation are 10:00 a.m. to 6:00 p.m. eastern time, Monday through Friday, and 10:00 a.m. to 8:00 p.m. eastern time on the solicitation close date.

Questions about requirements?
Contact grants@ncjrs.gov

General information on applying for NIJ awards can be found at www.nij.gov/funding/Pages/welcome.aspx. Answers to frequently asked questions that may assist applicants are posted at www.nij.gov/funding/Pages/qa.aspx.

General information?
Check NIJ’s webpage www.nij.gov/funding/Pages/welcome.aspx or FAQs: www.nij.gov/funding/Pages/qa.aspx
Please submit questions during the presentation by using the **Q&A box** and selecting **all presenters**.