

## **Notices regarding the solicitation “Research and Development in Forensic Science for Criminal Justice Purposes, Fiscal Year 2020”**

March 27, 2020: Many of our solicitations encourage research partnerships and require applicants to include a strong letter of support, signed by an appropriate decision-making authority from each proposed partnering entity.

NIJ continues to strongly encourage prospective applicants to submit executed agreements necessary to carrying out the work proposed with applications if they can be obtained, but with an understanding of the circumstances surrounding the pandemic, NIJ will accept applications without them.

Applicants selected for award will be required to submit completed agreements by January 1, 2021. Funds will be withheld until such agreements have been received.

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The original solicitation document begins on the next page.



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## Research and Development in Forensic Science for Criminal Justice Purposes, Fiscal Year 2020

### FY 2020 Competitive Research Grant Solicitation

CFDA No. 16.560

Grants.gov Solicitation Number: NIJ-2020-17294

Solicitation Release Date: March 19, 2020

Application Deadline: 11:59 p.m. eastern time on May 18, 2020

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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 \(TWG\)](#) identifies current technology challenges encountered in operational forensic science laboratories. Research based knowledge and newly developed tools that work towards resolving these identified challenges facilitate the criminal justice community to enforce the law, promote public safety, prevent and reduce crime, and ensure fair and impartial administration of justice.

This solicitation incorporates the [OJP Grant Application Resource Guide](#) by reference. The OJP Grant Application Resource Guide provides guidance to applicants on how to prepare and submit applications for funding to OJP. If this solicitation expressly modifies any provision in the OJP Grant Application Resource Guide, the applicant is to follow the guidelines in this solicitation as to that provision.

### Eligibility (Who may apply)

In general, NIJ is authorized to make grants to, or enter into contracts or cooperative agreements with eligible entities as listed below:

- 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); and
- Institutions of higher education (including tribal institutions of higher education).

Foreign governments, foreign organizations, and foreign colleges and universities are not eligible to apply. Federal agencies are eligible to apply. (Any award made to a federal agency will be made as an inter-agency reimbursable agreement.)

All recipients and subrecipients (including any for-profit organization) must forgo any profit or management fee.

NIJ will consider applications under which two-or-more entities would carry out the federal award; however, only one entity may be the applicant. Any others must be proposed as subrecipients (subgrantees). The applicant must be the entity that would have primary responsibility for carrying out the award, including administering the funding and managing the entire project. For additional information on subawards, see the [OJP Grant Application Resource Guide](#).

## Contact Information

For technical assistance with submitting an application, contact the Grants.gov Customer Support Hotline at 1-800-518-4726 or 1-606-545-5035 (international), at <https://www.grants.gov/web/grants/support.html>, or at [support@grants.gov](mailto:support@grants.gov). The Grants.gov Support Hotline operates 24 hours a day, 7 days a week, except on federal holidays.

An applicant that experiences unforeseen Grants.gov technical issues beyond its control that prevent it from submitting its application by the deadline must email the NIJ contact identified below **within 24 hours after the application deadline** to request approval to submit its application after the deadline. Additional information on reporting technical issues appears under “Experiencing Unforeseen Grants.gov Technical Issues” in the “How To Apply (Grants.gov)” section in the [OJP Grant Application Resource Guide](#).

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](mailto: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. General information on applying for NIJ awards can be found at <https://nij.ojp.gov/funding>. Answers to frequently asked questions that may assist applicants are posted at <https://nij.ojp.gov/funding/frequently-asked-questions-about-applying-grants-and-cooperative-agreements>.

## Deadline Details

Applicants must register with Grants.gov at <https://www.grants.gov/web/grants/register.html> prior to submitting an application. All applications are due by 11:59 p.m. eastern time on May 18, 2020.

To be considered timely, an application must be submitted by the application deadline using Grants.gov, and the applicant must have received a validation message from Grants.gov that indicates successful and timely submission. OJP urges applicants to submit applications at least 72 hours prior to the application due date, to allow time for the applicant to receive validation messages or rejection notifications from Grants.gov, and to correct in a timely fashion any problems that may have caused a rejection notification.

An applicant must use the **Add Attachment** button to attach a file to its application. Do not click the paperclip icon to attach files. This action will not attach the files to the application. After adding an attachment, select the **View Attachment** button to confirm you attached the correct file. To remove the file, select the **Delete Attachment** button.

OJP encourages all applicants to read this [Important Notice: Applying for Grants in Grants.gov](#).

For additional information, see the “How to Apply (Grants.gov)” section in the [OJP Grant Application Resource Guide](#).

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# Research and Development in Forensic Science for Criminal Justice Purposes, Fiscal Year 2020

CFDA No. 16.560

## 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; foster research and development in broader scientific fields applicable to forensic science; and support ongoing forensic science research toward the development of highly-discriminating, accurate, reliable, cost-effective, and rapid methods for the identification, analysis, and interpretation of forensic evidence for criminal justice purposes. Projects should address the challenges and needs of the forensic science community, including but not limited to, the operational needs discussed at NIJ's FY 2020 Forensic Science Technology Working Group (TWG) meeting, which may be found on [NIJ.ojp.gov](https://www.ojp.gov/nijs/fy2020-fswg). Additional research needs of the forensic science community can be found at the Organization of Scientific Area Committees [website](#). While the goals and deliverables of proposed projects are not required to result in immediate solutions to the posted challenges and needs, proposals should, at a minimum, address the foundational work that will lead to eventual solutions.

Applications proposing research involving partnerships with criminal justice or other agencies, are to include a strong letter of support, signed by an appropriate decision-making authority from each proposed, partnering agency. A letter of support must include the partnering agency's acknowledgement that de-identified data provided through this project will be archived at the conclusion of the award. If selected for award, applicants will be expected to have a formal agreement in place with partnering agencies by January 1, 2021. That agreement must include provisions to meet the data archiving requirements of the award. In rare circumstances, for example where law prohibits the archiving of agency data, NIJ may agree to a successful applicant creating and archiving an appropriate synthetic dataset. Those circumstances will be rare, decided by NIJ on a case-by-case basis, and will require extensive documentation and justification for exceptions to be made.

**Statutory Authority:** Title I of the Omnibus Crime Control and Safe Streets Act of 1968 (sections 201 and 202); the Homeland Security Act of 2002 (sections 231-233); 28 U.S.C. 530C; and the Department of Justice Appropriations Act, 2020 (Public Law 116-93).

## Project-Specific Information

This solicitation seeks applications for funding to support basic or applied research and development forensic science projects for criminal justice purposes. For the purposes of this solicitation, the following definitions apply:

- Forensic — Of, relating to, or used in legal proceedings or argumentation.<sup>1</sup>
- Science — The observation, identification, description, experimental investigations, and theoretical explanation of natural phenomena.<sup>2</sup>
- Basic research — A systematic study directed toward fuller knowledge or understanding of the fundamental aspects of phenomena, and of observable facts, without specific applications towards processes or products in mind. Basic research may include activities with broad applications.<sup>3</sup> For the purposes of this solicitation, basic research must include activities with broad application to forensic sciences related to the criminal justice system.
- Applied research — A systematic study to gain knowledge or understanding necessary to determine the means by which a recognized and specific need may be met.<sup>4</sup> For the purposes of this solicitation, the specific need(s) being met must relate to the improvement of forensic science services for criminal justice purposes.
- Development — The systematic application of knowledge or understanding, directed toward the production of useful materials, devices, and systems or methods, including design, development, and improvement of prototypes and new processes to meet specific requirements.<sup>5</sup> For the purposes of this solicitation, the development of forensic technologies and methods should assist in answering questions posed in criminal investigations, or increase crime laboratory capacity to meet the demand for forensic science services.

Funding priorities for this program are expected to align with the Department of Justice's mission. Proposed projects should address the current technology challenges encountered by forensic scientists by generating new knowledge or tools that will lead to better methods, move the state-of-the-art forward, or otherwise resolve identified issues so as to assist law enforcement, enhance public safety, prevent and reduce crime, and ensure the fair and impartial administration of justice. While the goals and deliverables of proposed projects are not required to result in immediate solutions to the posted challenges and needs, proposals should, at a minimum, address the foundational work that will lead to eventual solutions.

Proposals are expected to identify the focus areas (e.g., forensic science discipline[s]) intended to benefit from the project. **The focus areas should be listed in the keywords on the title page.** Some examples are listed below. Where available, links have also been provided to sites containing additional information.

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<sup>1</sup> *Webster's II New Riverside University Dictionary*.

<sup>2</sup> *Ibid.*

<sup>3</sup> OMB Circular A-11, Preparation, Submission, and Execution of the Budget, Section 84 — Character Classification (Schedule C).

<sup>4</sup> *Ibid.*

<sup>5</sup> *Ibid.*

- DNA and forensic biology:
  - <http://strbase.nist.gov>
  - <http://www.swgdam.org>
  - <https://www.nist.gov/topics/forensic-science/biologydna-scientific-area-committee>
- Forensic crime scene analysis:
  - <https://www.nist.gov/topics/forensic-science/crime-scenedeath-investigation-scientific-area-committee>
  - <https://www.nist.gov/topics/forensic-science/crime-scene-investigation-subcommittee>
- Forensic anthropology and forensic odontology:
  - <https://www.nist.gov/topics/forensic-science/anthropology-subcommittee>
  - <https://www.nist.gov/topics/forensic-science/odontology-subcommittee>
- Bloodstain pattern analysis:
  - <https://www.nist.gov/topics/forensic-science/bloodstain-pattern-analysis-subcommittee>
- Seized drugs:
  - <http://www.swgdrug.org>
  - <https://www.nist.gov/topics/forensic-science/seized-drugs-subcommittee>
- Fire debris analysis and arson scene investigations:
  - <http://www.swgfex.com>
  - <https://www.nist.gov/topics/forensic-science/fire-and-explosion-investigation-subcommittee>
  - <https://www.nist.gov/topics/forensic-science/fire-debris-and-explosives-subcommittee>
- Firearms and toolmark identification:
  - <https://www.nist.gov/topics/forensic-science/firearms-and-toolmarks-subcommittee>
- Latent print:
  - <http://www.swgfast.org>
  - <https://www.nist.gov/topics/forensic-science/friction-ridge-subcommittee>
- Shoeprint/tire tread examination:
  - <https://www.nist.gov/topics/forensic-science/footwear-and-tire-subcommittee>
- Questioned documents:
  - <http://www.swgdoc.org>
  - <https://www.nist.gov/topics/forensic-science/forensic-document-examination-subcommittee>
- Trace evidence:
  - <http://www.asteetrace.org>
  - <https://www.nist.gov/topics/forensic-science/sac-chemistryinstrumental-analysis>
  - <https://www.nist.gov/topics/forensic-science/materials-trace-subcommittee>



- Forensic toxicology:
  - <https://www.nist.gov/topics/forensic-science/toxicology-subcommittee>
- Medicolegal death investigations, including forensic pathology:
  - <http://www.swgmdi.org>
  - <https://www.nist.gov/topics/forensic-science/crime-scenedeath-investigation-scientific-area-committee>
  - <https://www.nist.gov/topics/forensic-science/medicolegal-death-investigation-subcommittee>
- Digital/multimedia evidence:
  - <https://www.nist.gov/topics/forensic-science/digitalmultimedia-scientific-area-committee>
  - <https://www.swgde.org>

Indicators of successful proposals may include relationships/collaborations with operational, accredited crime laboratories, and demonstrated abilities to produce scholarly products. See the next section on “Goals, Objectives, Deliverables, and Expected Scholarly Products” for more details.

## Goals, Objectives, Deliverables, and Expected Scholarly Products

Proposals should address at least one of the goals specified below. Proposed projects that address more than one goal should be separated into discrete phases that clearly identify the goal to be addressed by each phase (additional information regarding the phasing of proposals can be found in [Section B. Federal Award Information](#)). Proposed projects should include goals that speak to specific forensic science needs and challenges which, if resolved, will aid the criminal justice community in enforcing the law, enhancing public safety, preventing and reducing crime, and ensuring the fair and impartial administration of justice. While some late-stage applied research and development projects may be able to propose tangible or direct solutions, early-stage research projects are not required to result in immediate solutions. However, these early-stage research projects should clearly explain how the proposed objectives, once achieved, will produce knowledge that contributes to eventual solutions.

- **Fundamental/Basic Research Goal:** Improve the understanding of the accuracy, reliability, and measurement validity of forensic science disciplines. Applicants may refer to [\*Strengthening Forensic Science in the United States: A Path Forward\*](#) by the National Research Council of the National Academies to review historical material relevant to this goal. If addressing this goal, projects should meet at least one of the following objectives:
  - Conduct basic scientific research in the physical, life, and cognitive sciences that is designed to increase the knowledge underlying forensic science disciplines intended for use in the criminal justice system. For the purposes of this objective, basic research studies proposed must include activities with broad application to forensic sciences related to the criminal justice system. Proposals should describe the anticipated impact of the study on one or more forensic science disciplines.
  - Perform studies that examine the degree of accuracy and reliability of methods used by forensic scientists to achieve a more complete understanding of the scientific basis of forensic evidence and the interpretation of that evidence. Studies may also examine various processes within forensic methods, from the initial acceptance and examination

of evidence for its probative value and quality, to the final interpretation of forensic results, including assessment of error rate.

- Conduct research studies designed to further the understanding of quantifiable measures of uncertainty in the conclusions of forensic analyses, regardless of the sources of uncertainty. Studies should seek to establish limits of reliability and accuracy that forensic methods can achieve with respect to varying conditions of forensic evidence.
- Develop new approaches to forensic analysis, including quantitation of analyses that are currently qualitative in nature (e.g., in the development of quantitative studies related to friction ridge analysis or other impression and pattern evidence).
- **Applied Research Goal:** Increase knowledge or understanding necessary to guide criminal justice policy and practice related to the forensic sciences. To achieve this goal, projects should meet at least one of the following objectives:
  - Perform applied research to increase knowledge of physical evidence and/or its behavior. Examples include but are not limited to the study of fluid transfer and fluid dynamics of certain biological fluids (e.g., blood) to increase understanding of patterns deposited at crime scenes; the examination of chemical properties of evidence for the purpose of identifying source materials; studies of the behavior of chemical compounds of forensic interest in biological systems; research to better understand aged, degraded, limited, damaged, inhibited, or otherwise compromised physical evidence (e.g., studies on the effect of environmental factors on physical evidence; studies to increase the overall understanding of the processes and mechanisms that result in the inability to obtain analytical results from evidence).
  - Perform evaluation studies of technologies that are expected to have application to forensic sciences in criminal justice settings. The purpose of an evaluation must be to test a new, modified, or previously untested technology to determine whether it is effective for forensic science application. Proposals for evaluation studies should systematically use scientific methods to measure efficiency, implementation, and utility of the technology being evaluated.

The primary intent of a proposed evaluation study must be to generate new knowledge, or contribute to the knowledge in the forensic scientific literature. Furthermore, knowledge gained from an evaluation study should be applicable to sites other than the one(s) being evaluated. An evaluation study should result in a report suitable for publication and dissemination to guide criminal justice policy and/or practice related to the forensic sciences. The results of an evaluation study should contribute to **generalizable knowledge that can be applied beyond a particular program/geography, and can inform other researchers, practitioners, and/or policymakers.**

- **Development Goal:** Produce novel and useful materials, devices, systems, or methods that have the potential for forensic application for criminal justice purposes. For development projects, proposals should demonstrate potential for increased quality of result and/or decreased time/cost for forensic analyses as compared to current standard practices. In order to achieve this goal, projects should meet at least one of the following objectives:

- Improve the “front-end” of the forensic analysis processes. Examples include, but are not limited to, the development of improved methods for detection and identification of evidence at crime scenes; the development of improved screening methods to help assess the probative value of forensic evidence (i.e., onsite presumptive and/or confirmatory analysis of evidence); the development of improved means to remotely detect forensic evidence at a crime scene in order to overcome scene hazards and prevent evidence contamination; the development of nondestructive or minimally destructive methods for evidentiary sample identification and/or collection; the development of improved tools or methods for evidence preservation and/or storage.
- Develop instrumental systems to improve analysis throughput and the reliability, reproducibility, selectivity, and/or sensitivity of current methods used in crime laboratories for forensic analysis.
- Develop tools or methods that can separate the various components of a mixture. The separation method must be successful on typical forensic samples (limited in yield, etc.) and must not reduce the efficiency of downstream forensic methods. Examples of mixtures include, but are not limited to, cells from different sources (e.g., sperm cells from female epithelial cells, epithelial cells from different sources), products of DNA processes (e.g., polymerase chain reaction [PCR] products in mixtures from two-or-more individuals), and trace materials.
- Develop improved tools for examining aged, degraded, limited, damaged, inhibited, or otherwise compromised physical evidence. Examples include, but are not limited to: the development of tools to determine the condition of the evidence to assist crime laboratory analysts in selecting the appropriate analytical approach, the development of methods to repair damaged evidence (without compromising sample integrity) to increase the likelihood of obtaining an analytical result, improvements to the methods for detection and/or removal or remediation of substances that inhibit the success of analysis, or other methods that will maximize the success rate of the analysis of compromised evidence.
- Develop novel approaches to forensic science methods for analysis and interpretation. Examples include streamlined, portable, high-throughput, more informative, more sensitive, less susceptible to inhibition, and other novel methods for analysis of forensic evidence for criminal justice purposes.
- Develop novel approaches and/or enhance current approaches to interpret forensic data derived from physical evidence, including an assessment of the significance of association. This may include development of databases<sup>6</sup> — comprehensive, searchable, easily accessible, secure databases for use in determining the statistical strength of analytical results obtained from evidence found at crime scenes — and/or analyses that provide quantitative measures and statistical evaluation of forensic evidence.

Final Research Report. Any recipient of an award under this solicitation will be expected to submit a final research report. Additional information on the final research report requirement for

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<sup>6</sup> If database development is proposed, subsequent NIJ awardees are encouraged to share such information with the National Institute of Standards and Technology’s forensic catalog of databases at <https://www.nist.gov/oles/forensic-database>.

the solicitation is posted on the [Research, Development, and Evaluation Grant Award Requirements](#) section on NIJ's website.

In addition to these deliverables (and the required reports and data on performance measures described in [Section F. Federal Award Administration Information](#)), NIJ expects scholarly products to result from each award under this solicitation, taking the form of one or more published, peer-reviewed, scientific journal articles, and/or (if appropriate) law review journal articles, book chapter(s) or book(s) in the academic press, technological prototypes, patented inventions, or similar scientific products.

NIJ expects that there will be an equal effort to make the research findings accessible to practitioner and policymaker audiences through articles in trade publications, the development of training manuals, policy briefs, conferences, webinars, and articles for newspapers or magazines.

Some projects may be chosen for technology evaluation or technology transition activities. More information, including examples of previous workshops and evaluations, can be found through the following links: <https://nij.ojp.gov/topics/forensics/forensic-laboratory-operations> and <http://www.forensiccoe.org>.

NIJ encourages researchers to seek guidance from, or partner with, crime laboratories. Such associations foster a greater understanding of the issues unique to the field of forensic science, and may strengthen the scope of the proposed research plan. To assist researchers in identifying appropriate practitioner partners, NIJ has developed a site for crime laboratories to indicate their interest in participating in research. Interested laboratories are encouraged to visit <https://nij.ojp.gov/funding/research-and-evaluation-publicly-funded-forensic-laboratories> to provide their contact information.

Researchers who have developed methods and/or technologies that are ready for evaluation in forensic laboratory practice, including previous and current NIJ research grantees, are strongly encouraged to apply to NIJ's [Research and Evaluation in Publicly Funded Forensic Laboratories](#) program.

Information on NIJ's forensic science research and development programs (including previously funded projects) can be found at <https://nij.ojp.gov/topics/forensics>.

### **Priority Practices to Leverage Research Opportunities**

NIJ is interested in funding innovative research that aligns with administration priorities.<sup>7</sup> Proposals that advance the following administration priorities may be given special consideration in award decisions. **If submitting a research proposal that contributes to one of the following national priorities, the applicant should state this on the title page of the proposal.**

- **Educating and Training a Future Workforce:** NIJ supports the improvement of technical training of future forensic scientists through science, technology, engineering, and math (STEM) training through hands-on laboratory and research experience. NIJ encourages applicants to include the employment of students in their research proposals. Priority consideration may be given to projects that emphasize the participation of student

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<sup>7</sup> See <https://www.whitehouse.gov/wp-content/uploads/2018/07/M-18-22.pdf>.

researchers. Applications submitted under this priority consideration area should include in their management plans how students will be recruited, what laboratory/research activities they will perform, what training/education they will receive through the research, and how their post-graduation/-project activities will be tracked and reported to NIJ.

- **Managing and Modernizing R&D Infrastructure:** NIJ continues to support growing the research infrastructure in the public forensic science laboratories of the United States. Applicant agencies should prioritize infrastructure investments that enable shared resources and improve capabilities across a range of disciplines. Innovative management approaches that enable a broad set of users, outside of government as well as within, should also be prioritized.
- **Maximizing Interagency Coordination and Cross-Disciplinary Collaboration:** NIJ may give priority consideration to proposals that are strengthened by other agency funding, and can leverage such inter-agency support to yield greater impact than from solely NIJ-funded activities. Other agency funding may include any federal research funding agency or larger U.S. government research and development initiatives such as the [National Nanotechnology Initiative](#). If submitting a proposal under the Maximizing Interagency Coordination and Cross-Disciplinary Collaboration priority area, applicants should indicate if non-NIJ support is past, current, or pending funding agency decision; as well as explain how such projects and activities will be managed to avoid duplicative efforts.
- **Transferring Technology from Laboratory to Marketplace:** Aligning with the [goals of this solicitation](#), NIJ continues to support basic and early-stage applied research that provides the fundamental building blocks of new technological advances, and expand efforts to accelerate the transfer of research discoveries to laboratory practice.
- **Partnering with Industry and Academia:** The R&D enterprise requires a strong foundation of academic, industry, and government collaboration. NIJ may give priority consideration to research proposals that incorporate innovative partnership models involving other research agencies, state, local, and Federal government; the private sector; and/or academia. Applicant agencies should engage in collaborations to help align basic research with forensic laboratory needs (See [NIJ's Forensic Science Technology Working Group \[TWG\]](#)).

## New Investigator Opportunities

NIJ is interested in funding new investigators in forensic science research as it pertains to NIJ's mission. Proposals whose principal investigator and any co-investigator(s) are defined as "new investigators" may, in appropriate circumstances, be given special consideration in award decisions.

To be considered a "new investigator" for the purposes of this solicitation, one of the two sets of criteria below must be demonstrated. **If submitting a proposal as a "new investigator", the applicant should identify the principal investigator(s) and any co-investigators, as "new investigator(s)" on the title page of the proposal.**

- The investigator must have received — no earlier than April 1, 2016 — an initial appointment in the United States to a full-time junior faculty position<sup>8</sup> at a university or to

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<sup>8</sup> Typically, the appropriate faculty rank is that of "Assistant Professor," although some institutions may use a different title to designate junior faculty status.

an equivalent full-time staff scientist position in a research institution; hold such a full-time appointment at the time of application submission; and must never have received NIJ funding for a research project — other than a Graduate Research Fellowship program grant; or

- The investigator must be an established researcher who has not successfully competed for NIJ funding as a principal investigator, co-principal investigator, or collaborative researcher in the past 10 years. The investigator must hold a full-time appointment in the United States to a faculty position at a university or an equivalent position as a scientist on the staff of a research institution at the time of application submission.

In the case of a grant application that involves more than one investigator, **all co-investigators must meet the definition of “new investigator” in order for the application to be considered as one from a “new investigator.”**

The Goals, Objectives, Deliverables, and Expected Scholarly Products are directly related to the performance measures that demonstrate the results of the work completed.

### **Performance Measures**

OJP will require each successful applicant to submit regular performance data that demonstrate the results of the work carried out under the award (see “[General Information about Post-Federal Award Reporting Requirements](#)” in [Section F. Federal Award Administration Information](#)).

Applicants should visit OJP’s performance measurement page at [www.ojp.gov/performance](http://www.ojp.gov/performance) for an overview of performance measurement activities at OJP.

The application should demonstrate the applicant’s understanding of the performance data reporting requirements for this grant program and detail how the applicant will gather the required data should it receive funding.

Please note that applicants are **not** required to submit performance data with the application. Performance measures information is included as an alert that successful applicants will be required to submit performance data as part of the reporting requirements under an award.

Objective	Performance Measure(s)	Data Recipient Provides
Conduct research in science, technology, engineering, and/or mathematics having clear implications for criminal justice policy and practice in the United States.	<ol style="list-style-type: none"> <li>1. Relevance to the needs of the field as measured by whether the project's substantive scope did not deviate from the funded project or any subsequent agency-approved modifications to the scope.</li> <li>2. Quality of the research as demonstrated by the scholarly products that result in whole or in part from work funded under the NIJ award, such as published, peer-reviewed, scientific journal articles, and/or (as appropriate for the funded project) law review journal articles, book chapter(s) or book(s) in the academic press, technological prototypes, patented inventions, or similar scientific products.</li> <li>3. Quality of management as measured by such factors as whether significant project milestones were achieved, reporting and other deadlines were met, and costs remained within approved limits.</li> <li>4. If applicable, number of technologies fielded as a result (in whole or in part) of work funded under the NIJ award.</li> </ol>	<ol style="list-style-type: none"> <li>1. Quarterly financial reports, semi-annual and final progress reports, and products of the work performed under the NIJ award (including, at minimum, a final research report).</li> <li>If applicable, an annual audit report.</li> <li>2. List of citation(s) to all scholarly products that resulted in whole or in part from work funded under the NIJ award.</li> <li>3. If applicable, each data set that resulted in whole or in part from work funded under the NIJ award.</li> <li>4. If applicable, description of all technologies fielded as a result (in whole or in part) of work funded under the NIJ award.</li> </ol>

## B. Federal Award Information

Total funding for this solicitation and the number of awards made will depend on the availability of funds, the quality of the applications, and other pertinent factors. NIJ funding of an individual research or development project rarely exceeds a \$500,000 total project cost, although total funding for some projects requiring multiple years to complete has exceeded \$1 million in previous years. In FY 2019, the average forensic science research and development award was approximately \$209,000 per year. The average project period was two years. Information on previous years' awards is provided solely for reference. Applicants should propose costs using calculations based on the specific activities proposed in the narratives. Costs estimates should be focused on maximizing the potential for success of the proposed project, rather than past averages.

An applicant should base its federal funding request and period of performance on the actual requirements of the research, and not necessarily on the anticipated amount of funding available in FY 2020 for awards under this solicitation. However, to expedite the budget approval process, applicants are encouraged to break out their budgets by project year or by phases, in the event that NIJ chooses to fund the project partially or incrementally.



To allow time for (among other things) any necessary post-award review and financial clearance by OJP of the proposed budget and for any associated responses or other action(s) that may be required of the recipient, applicants should propose an award start date of January 1, 2021.

If the applicant is proposing a project that reasonably could be conducted in discrete phases, with each phase resulting in completion of one or more significant, defined milestones, then NIJ strongly recommends that the applicant structure the application — specifically including the narrative, expected scholarly products, timelines/milestones, and budget detail worksheet and budget narrative — to clearly define each phase. (This is particularly the case if the applicant proposes a project that will exceed — in cost or the length of the period of performance — the amount or length of time anticipated for an individual award (or awards) under this solicitation.) Given limitations on the availability to NIJ of funds for awards for research, development, and evaluation, this information will assist NIJ in considering whether partial funding of applications would be productive. (If, in FY 2020, NIJ elects to fund only certain phases of a proposed project, the expected scholarly products from the partial-funding award may, in some cases, vary from those described above.)

Under this solicitation, any particular applicant entity may submit more than one application, as long as each application proposes a different project in response to the solicitation. Also, an entity may be proposed as a subrecipient (“subgrantee”) in more than one application.

NIJ may elect to fund applications submitted under this FY 2020 solicitation in future fiscal years, dependent on, among other considerations, the merit of the applications and on the availability of appropriations.

All awards are subject to the availability of appropriated funds and to any modifications or additional requirements that may be imposed by law.

### **Type of Award**

NIJ expects to make awards under this solicitation as grants. See the “[Administrative, National Policy, and Other Legal Requirements](#)” section of the [OJP Grant Application Resource Guide](#) for additional information.

However, on a case-by-case basis, NIJ may elect to make an award to non-federal recipients under this solicitation as cooperative agreements, which provides for OJP to have substantial involvement in carrying out award activities. See the “[Administrative, National Policy, and Other Legal Requirements](#)” section of the [OJP Grant Application Resource Guide](#) for additional information.

**Please note:** Any recipient of an award under this solicitation will be required to comply with DOJ regulations on confidentiality and protection of human subjects. See “Requirements related to Research” under “[Overview of Legal Requirements Generally Applicable to OJP Grants and Cooperative Agreements – FY 2020 Awards](#)” in the [OJP Funding Resource Center](#).



## Financial Management and System of Internal Controls

Award recipients and subrecipients (including recipients or subrecipients that are pass-through entities) must, as described in the Part 200 Uniform Requirements<sup>9</sup> as set out at 2 C.F.R. 200.303, comply with standards for financial and program management. See [OJP Grant Application Resource Guide](#) for additional information.

## Budget Information

### What will not be funded:

- Applications 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.
- Applications 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.)
- Proposals primarily to provide training.
- Proposals that provide direct criminal/forensic laboratory services.
- Proposals that focus primarily on crimes directly related to nonhuman animals. (A project may include nonhuman animals, if: (a.) they are necessary to conduct the proposed research [e.g., the use of animals or other organisms for experimental modeling]; or (b.) the nonhuman biological components are analogous to the physical evidence that would be examined in criminal investigations involving human suspects and victims.)
- Proposals focusing on the estimation of postmortem interval (i.e., time since death) whose research design is not novel nor applicable across the geography of the United States. The primary intent of these studies must be to generate new knowledge or contribute to the knowledge in the forensic scientific literature that is applicable to locations other than the one(s) being evaluated.
- Proposals that focus on predicting the behavior of criminal offenders or indicators that result in victimization.
- Proposals that seek to administer surveys on the perceptions of forensic evidence collection policies among evidence examiners.

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<sup>9</sup> The "Part 200 Uniform Requirements" means the DOJ regulation at 2 C.F.R Part 2800, which adopts (with certain modifications) the provisions of 2 C.F.R. Part 200.

- Proposals that focus on legal factors involved in how forensic evidence is processed.
- Proposals for social science research whose primary focus is not identification, collection, testing and interpretation of forensic evidence.
- Proposals focused on criminal psychology.
- Proposals involving the use of canines (e.g. detector dogs).
- Proposals on voice authentication.
- Proposals on deception detection.
- Costs associated with conducting conferences. A conference is a symposium, seminar, workshop, or any other organized and formal meeting, whether conducted face-to-face or via the Internet, where individuals assemble (or meet virtually) to exchange information and views or explore or clarify a defined subject, problem, or area of knowledge, whether or not a published report results from such meeting. A meeting where a gathering discusses general matters as part of a normal course of doing business is not considered a conference. Funds may be used to attend conferences for the purposes of dissemination of research findings.

### **Cost Sharing or Matching Requirement**

See “Cofunding” paragraph under item 4 (“Budget Information and Associated Documentation”) under [“What an Application Should Include”](#) in [Section D. Application and Submission Information](#).

Please see the [OJP Grant Application Resource Guide](#) for information on the following:

- [Pre-agreement Costs \(also known as Pre-award Costs\)](#)
- [Limitation on Use of Award Funds for Employee Compensation; Waiver](#)
- [Prior Approval, Planning, and Reporting of Conference/Meeting/Training Costs](#)
- [Costs Associated with Language Assistance](#) (if applicable)

## **C. Eligibility Information**

For eligibility information, see title page.

For information on cost sharing or match requirements, see [“What an Application Should Include”](#) in [Section D. Application and Submission Information](#).

## **D. Application and Submission Information**

This solicitation expressly modifies the OJP Grant Application Resource Guide by not incorporating the “Disclosure of Process Related to Executive Compensation” provisions in the “Application Attachments” section of the [OJP Grant Application Resource Guide](#).

## What an Application Should Include

The following application elements **MUST** be included in the application submission for an application to meet the basic minimum requirements (BMR) to advance to peer review and receive consideration for funding: Program Narrative, Budget Detail Worksheet (including Budget Narrative), and resumes/curriculum vitae of key personnel. (For purposes of this solicitation, “key personnel” means the principal investigator, and any and all co-principal investigators.)

See the “Application Elements and Formatting Instructions” section of the [OJP Grant Application Resource Guide](#) for information on what happens to an application that does not contain all the specified elements, or that is nonresponsive to the scope of the solicitation.

### 1. Application for Federal Assistance (Standard Form (SF)-424)

The SF-424 is a required standard form used as a cover sheet for submission of pre-applications, applications, and related information. See the [OJP Grant Application Resource Guide](#) for additional information on completing the SF-424.

**Intergovernmental Review:** This solicitation (“funding opportunity”) **is not** subject to [Executive Order 12372](#). (In completing the SF-424, an applicant is to answer question 19 by selecting the response that the “Program is not covered by E.O. 12372.”)

### 2. Project Abstract

The project abstract is a very important part of the application, and serves as an introduction to the proposed project. NIJ uses the project abstract for a number of purposes, including assignment of the application to an appropriate review panel. If the application is funded, the project abstract typically will become public information and be used to describe the project.

Applications should include a high quality project abstract that summarizes the proposed project in no more than 400 words. Project abstracts should be:

- Written for a general public audience.
- Submitted as a separate attachment with “Project Abstract” as part of its file name.
- Single-spaced, using a standard 12-point Times New Roman font with 1-inch margins.

As a separate attachment, the project abstract will not count against the page limit for the program narrative.

Project abstracts should follow the detailed template (including the detailed instructions as to content) available on the [NIJ webpage](#).

### 3. Program Narrative

The program narrative section of the application should not exceed 18 single-spaced pages in 12-point font with 1-inch margins, of which a minimum of nine (9) pages should be

dedicated to Project Design and Implementation. If included in the main body of the program narrative, tables, charts, figures, and other illustrations count toward the 18-page limit for the narrative section. The project abstract, table of contents, appendices, and government forms do not count toward the 18-page limit.

If the program narrative fails to comply with these length-related restrictions, NIJ may negatively consider such noncompliance in peer review and in final award decisions.

The following sections should be included as part of the program narrative.<sup>10</sup>

Program Narrative Guidelines:

**a. Title Page** (not counted against the 18-page program narrative limit)

The title page should include:

- Project title
- Submission date
- Funding opportunity number
- Principal Investigator (and any co-principal investigators)
- Unique author identifier (e.g., [ORCID](#), [ResearcherID](#), [Scopus Author ID](#)), if available
- Requests for consideration under “new investigator” and/or “priority areas of research” areas
- Key words, including forensic science focus areas
- Contact information (that is, name, address, telephone number, and e-mail address) for both the applicant and the principal investigator.

**b. Resubmit Response** (if applicable) (not counted against the 18-page program narrative limit)

If an applicant is resubmitting an application presented previously to NIJ, but not funded, the applicant should indicate this. A statement should be provided, no more than two pages, addressing: (1) the title, submission date, and NIJ-assigned application number of the previous application, and (2) a brief summary of revisions to the application, including responses to previous feedback received from NIJ.

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<sup>10</sup> As noted earlier, if the proposed program or project reasonably could be conducted in discrete phases, with each phase resulting in completion of one or more significant, defined milestones, then NIJ strongly recommends that the applicant structure the application – specifically including the narrative, expected scholarly products, timelines/milestones, and budget detail worksheet and budget narrative – to set out each phase clearly. (In appropriate cases, the expected scholarly product(s) from a particular phase may vary from those described above.) See generally “Goals, Objectives, Deliverables, and Expected Scholarly Products” under “Program-Specific Information,” above.

**c. Table of Contents and Figures** (not counted against the 18-page program narrative limit)

**d. Main Body**

The main body of the program narrative should describe the proposed project in depth. The following sections should be included as part of the program narrative:

- Statement of the Problem and Research Questions. The statement of the problem should address the need for research in this area. Applicants should discuss current gaps in data, research, and knowledge, including those for particular justice sectors, for certain populations, and to answer questions relevant to current policy and practice needs and public interests. It is not uncommon for multiple problems to exist simultaneously (for example, there may be a criminal justice problem affecting public safety, a current technical challenge/need identified by forensic practitioners, as well as a scientific/technology gap between the current state of the art and a desired solution) and applicants should discuss each of these clearly and justify the importance of the separate issues. As part of this discussion, applicants should present a review of previous literature and discuss previous research related to these problems.

This section should also identify the proposed research questions and introduce the purpose, goals, and objectives of the proposed project.

The Statement of the Problem and Research Questions section should do the following:

- Explain the importance of the problem, or critical barrier to progress in the field, that the proposed project addresses.
  - Explain the criminal justice significance of the problem.
  - Describe the scientific premise for the proposed project, including consideration of the strengths and weaknesses of published research or preliminary data crucial to the support of your application.
  - Describe the current state of the art and technologies, both in practice and in past/current research, directed at the described problem. If this request is a direct follow-up of an earlier study, describe those results.
  - Explain how the proposed project will improve scientific knowledge, technical capability, and/or forensic practice. Describe how concepts, methods, technologies, or services that drive the forensic science field will be changed if the proposed aims are achieved.
  - Include a review of relevant literature.
- Project Design and Implementation. (This section should account for a minimum of nine (9) pages of the main body of the narrative.) Applicants should provide a detailed description of the strategies to implement this research project and address the research questions. Design elements should follow directly from the research

project's goals and objectives and address the program-specific information noted on page 8. Applicants should describe the research methodology in detail and demonstrate the validity and usefulness of the data they will collect. Applicants should consider the rigor and soundness of the methodology and analytical and technical approaches for the proposed research and address the feasibility of the proposed project and potential challenges or problems in carrying out the activities.

The Project Design and Implementation section should include the following:

- Describe the overall strategy, methodology, and analyses to be used to accomplish the specific aims of the project. Describe the experimental design and methods proposed and how they will achieve robust and unbiased results. Include how the data will be collected, analyzed, and interpreted, as well as any data archiving plans, as appropriate.
- Human subjects/study population: If the project will involve human subjects, clearly describe the study population. Include detailed information about how subjects were, or will be, identified and sampled and the method(s) of characterization. For case-control studies, provide inclusion and exclusion criteria and any matching done between cases and controls. Describe relevant environmental factors and how they were measured. If the subjects provided for this study are a subset of a family population, explain which individuals were included and how they were selected. Highlight special features of the study population that would enhance success.
- Sample information: In table form, provide: sample description such as case/control status and/or collection site; number of samples included in the study; subsample source (e.g., tissue source of the DNA). If data from other subjects will be included in the analysis, add row(s) to describe those samples.

Three examples are provided below:

Sample Set	Target # of Samples	Source	Service	Previous Service
Known controls	500	Buccal	Targeted sequencing	STR base genotyping
Forensic samples	500	Buccal	Targeted sequencing	STR base genotyping

Sample Set	Target # of Samples	Source	Subsample Set	Service
Crania	300	Modern Donated Collection	300 individuals of known Hispanic Ancestry; 150 Male, 150 Female	Morphometric sex estimation
Pelvis	300	Modern Donated Collection	300 individuals of known Hispanic Ancestry; 150 Male, 150 Female	Morphometric sex estimation

<b>Subject Description</b>	<b>Target # of Samples</b>	<b>Collection Site</b>
Patients at drug rehab facilities	100	Scalp, cut (not plucked)
Controls – subjects donating hair for wigs	100	Scalp, cut (not plucked)

- Provide supporting text that justifies the choice of samples. Describe other relevant information (e.g., the extraction methods used for each DNA source and the approximate DNA concentrations). Describe previous analyses done on these subjects.
- Power and effect size: Use power analyses to describe the range of effect sizes detectable by the study. Address relevant features of the analytic plan, such as the model(s) to be tested, the extent of multiple testing, and what significance level would be used for testing. Include all appropriate parameters. If the study design requires separate analysis of subject groups, provide power analyses for each category. If there is a plan to test for environment effects, address the power for detection of these effects.
- Data analyses: Provide a thorough plan for data analyses. Include: analytical approaches to be used and their justification; plans for quality control analyses; methods to control for possible confounding effects; how false positive rates will be controlled in light of multiple testing; etc. If there is a plan to analyze the data obtained with earlier data, or to perform comparisons to determine success, describe your strategy for that process.
- Describe the role of each team member in the analysis process, and summarize the team's experience with the approaches proposed.
- Discuss potential problems, alternative strategies, and benchmarks for success anticipated to achieve the aims.
- If the project is in the early stages of development, describe any strategy to establish feasibility, and address the management of any high-risk aspects of the proposed work.
- Explain how relevant variables are factored into research designs and analyses.
- Data management: Describe the institutional computing resources available for this study, the type of database that will be used (if applicable), and how the data will be managed. Highlight the team's experience with management of data sets (especially those similar to the proposed project). Also describe strategies for data sustainability beyond the proposed funded work.
- Preliminary Data/Results: For new lines of research, include preliminary results, if available. Discuss the PI's preliminary studies, data, and or experience pertinent to this application. Preliminary data can be an essential part of a research grant application, and help to establish the likelihood of success of the proposed project. New Investigators should include preliminary data.

- Potential Impact. Applicants should describe the potential impact of the research and how it may inform or improve criminal or juvenile justice-related policy, practice, or theory in the United States.

The Potential Impact section should do the following:

- Explain the criminal justice significance of the proposed study.
  - Explain how the application challenges and seeks to shift current research or forensic practice paradigms.
  - Describe any novel theoretical concepts, approaches or methodologies, instrumentation, or interventions to be developed or used, and any advantage over existing methodologies, instrumentation, or inventions.
  - Explain any refinements, improvements, or new applications of theoretical concepts, approaches or methodologies, or instrumentation.
  - Describe planned scholarly products (See [Goals, Objectives, Deliverables, and Expected Scholarly Products](#) above, for a discussion of expected scholarly products.) Grants funds may be used to cover costs associated with open access publication.
  - Describe implications for criminal justice policy and practice in the United States.
  - Describe the plan for dissemination to appropriate audiences. Applicants should also identify plans to broader interested practitioners and policy makers in a form that is designed to be readily accessible and useful to them.
- Capabilities/Competencies. This section should describe the experience and capability of the applicant organization, key staff, and any proposed subgrantees (including consultants) that the applicant will use to implement and manage this effort and the federal funds under this award, highlighting any previous experience implementing projects of similar scope, design, and magnitude. Applicants should address:
    - Experience and capacity to work with the proposed data sources in the conduct of similar research efforts.
    - Experience and capacity to design and implement rigorous research and data analysis projects.
    - Experience producing and disseminating meaningful deliverables.

Applicants should also outline the management plan and organization that connects to the goals and objectives of the project.

The Capabilities/Competencies section should include the following:

- Facilities and other resources: Describe how the scientific environment in which the research will be done contributes to the probability of success (e.g.,



institutional support, physical resources, and intellectual rapport). In describing the scientific environment in which the work will be done, discuss ways in which the proposed studies will benefit from unique features of the scientific environment or subject populations or will employ useful collaborative arrangements. If there are multiple performance sites, describe the resources available at each site.

- Equipment: List major items of equipment already available for this project and, if appropriate identify location and pertinent capabilities.
- Senior/key personnel profile: Describe each senior/key personnel's role in the project, and why the individual is well-suited for that role. The relevant factors may include: aspects of past training; previous experimental work on this specific topic or related topics; technical expertise; collaborators or scientific environment; and/or past performance in this or related fields. Senior/key personnel are defined as all individuals who contribute in a substantive, meaningful way to the scientific development or execution of the project, whether or not salaries are requested. Consultants should be included if they meet this definition.
  - Principal investigator (PI) profile should be listed first.
  - The remaining senior/key personnel profiles should be listed in alphabetical order. While alphabetical order is preferred, it is not required. However, be aware that these profiles will appear in the application in the order provided by the applicant. Therefore, peer reviewers will see them in the order presented. Those with a postdoctoral role should be included if they meet the definition of senior/key personnel.
  - Other significant contributors (OSCs): OSCs are those individuals who commit to contribute to the scientific development or execution of the project, but do not commit any specified measurable effort (i.e., person months) to the project. These individuals are typically presented at effort of "zero person months" or "as needed." Individuals with measurable effort may not be listed as OSCs. Consultants should be included if they meet the OSC definition. OSCs should be listed after all senior/key persons.

**e. Appendices** not counted against the 18-page program narrative limit) include:

- Bibliography/references. Provide a bibliography of any references cited in the Project Narrative. Each reference must include the names of all authors (in the same sequence in which they appear in the publication), the article and journal title, book title, volume number, page numbers, and year of publication. Include only bibliographic citations. While there is not a page limitation, it is important to be concise, and to select only those literature references pertinent to the proposed research. Attach this information as a separate PDF file titled "Bibliography and References Cited."
- Any tools/instruments, questionnaires, tables/charts/graphs, or maps pertaining to the proposed project that are supplemental to such items included in the main body of the narrative. (Tables, charts, graphs, or other relevant illustrations that are

essential for comprehension of the project/program design should be included in the main body of the narrative.)

- Curriculum vitae, resumes, or biosketches of senior/key personnel. For the purposes of this solicitation, “senior/key personnel” means the principal investigator, any and all co-principal investigators, and other significant contributors. Reviewers use these pages in part to address the “Capabilities/Competencies” selection criterion. Attach this information as a separate PDF file titled “CVs of Key Personnel.”
- Documentation of “new investigator” status, if applicable.
- Progress report for renewal and revision applications, if applicable. For renewal/revision applications, provide a progress report. Provide the beginning and ending dates for the period covered since the last competitive review. Summarize the specific aims of the previous project period and the importance of the findings, and emphasize the progress made toward their achievement. Explain any significant changes to the specific aims and any new directions, including changes to the specific aims resulting from significant budget reductions. For any studies meeting the NIH definition for research involving human subjects (<https://nij.ojp.gov/funding/human-subjects-and-privacy-protection>), discuss previous participant enrollment (e.g., recruitment, retention, inclusion of women, minorities, children, etc.) as part of the progress report, particularly if relevant to studies proposed in the renewal or revision application. If applicable, Reviewers use these pages in part to address the “Project Design and Implementation” selection criterion. Attach this information as a separate PDF file titled “Progress Report for Renewal”.
- Progress report publication list (renewal applications only). List the titles and complete references to all appropriate publications, manuscripts accepted for publication, patents, and other printed materials that have resulted from the project since it was last reviewed competitively. This list should be included with the “Progress Report for Renewal” PDF file attachment noted above.
- Multiple PI leadership plan. For applications designating multiple PIs, a leadership plan must be included. For applications designating multiple PIs, all such individuals must be assigned the PI role on the Senior/Key Personnel Profile form, even those at organizations other than the applicant organization. A rationale for choosing a multiple PI approach should be described. The governance and organizational structure of the leadership team and the research project should be described, including communication plans, process for making decisions on scientific direction, and procedures for resolving conflicts. The roles and administrative, technical, and scientific responsibilities for the project or program should be delineated for the PIs and other collaborators. Do not submit a leadership plan if you are not submitting a multiple PI application. Reviewers use these pages in part to address the “Capabilities/Competencies” selection criterion. Attach this information as a separate PDF file titled “Multiple PI Leadership Plan.”
- Consortium/contractual arrangements. Explain the programmatic, fiscal, and administrative arrangements to be made between the applicant organization and the consortium organization(s). If consortium/contractual activities represent a significant portion of the overall project, explain why the applicant organization, rather than the

ultimate performer of the activities, should be the grantee. Reviewers use these pages in part to address the “Project Design and Implementation” selection criterion. Attach this information as a separate PDF file titled “Consortium/Contractual Arrangements”

- Letters of support. Attach all appropriate letters of support, including any letters necessary to demonstrate the support of consortium participants and collaborators such as senior/key personnel and other significant contributors included in the grant application. Letters are not required for personnel (such as research assistants) not contributing in a substantive, measurable way to the scientific development or execution of the project. Letters should stipulate expectations for co-authorship, and whether samples, data, or other resources promised in the letter are freely available to other investigators in the scientific community or will be provided to the particular investigators only. For consultants, letters should include rate/charge for consulting services and level of effort/number of hours per year anticipated. In addition, letters ensuring access to core facilities and resources should stipulate whether access will be provided as a fee-for-service. Combine and attach this information as one separate PDF file titled “Letters of Support”.
- Data Archiving Plan(s). NIH considers the archiving and sharing of unique research resources developed through NIH-sponsored research an important means to enhance the value and further the advancement of the research. When resources have been developed with NIH funds and the associated research findings published or provided to NIH, it is important that they be made readily available for research purposes to qualified individuals within the scientific community. Applications should include as an appendix a brief plan about proposed data management and archiving, including submission to NIH of all files and documentation necessary to allow for future efforts by others to reproduce the project’s findings and/or to extend the scientific value of the data set through secondary analysis. Pertinent files and documentation include, among other things, qualitative and quantitative data produced, instrumentation and data collection forms, codebook(s), any specialized programming code necessary to reproduce all constructed measures and the original data analysis, description of necessary de-identification procedures, and (when required) a copy of the privacy certificate and informed consent protocols. Attach this information as a separate PDF file titled “Data Archiving Plan(s).”
- List of proposed project staff, affiliation, and roles. To assist OJP in assessing actual or apparent conflicts of interest (including such conflicts on the part of prospective reviewers of the application, a complete list of the individuals named or otherwise identified anywhere in the application (including in the budget or in any other attachment) who will or may work (or advise or consult) on the proposed research, development, or evaluation project. This applies to all such individuals, including, for example, individuals who are or would be employees of the applicant or employees of any proposed subrecipient entity, any individuals who themselves may be a subrecipient, and individuals who may (or will) work without compensation (such as advisory board members). This appendix to the program narrative is to include, for each listed individual: name, title, employer, any other potentially-pertinent organizational affiliation(s), and the individual's proposed roles and responsibilities in carrying out the proposed project. If the application identifies any specific entities or organizations (other than the applicant) that will or may work (or advise or consult)

on the proposed project, without also naming any associated individuals, the name of each such organization also should be included on this list.

Applicants should use the “[Proposed Project Staff, Affiliation, and Roles](#)” form available on the NIJ webpage to prepare this list.

If the application (including the budget) identifies any proposed non-competitive agreements that are or may be considered procurement "contracts" (rather than subawards) for purposes of federal grants administrative requirements the applicant also must list the entities with which the applicant proposes to contract. Applicants should provide this list as a separate sheet entitled "Proposed non-competitive procurement contracts."

For information on distinctions — for purposes of federal grants administrative requirements — between subawards and procurement contracts under awards, see “Budget Information and Associated Documentation,” below.

- Proposed project timeline and expected milestones.
- Human Subjects Protection paperwork (documentation and forms related to Institutional Review Board [IRB] review). See <https://nij.ojp.gov/funding/human-subjects-and-privacy-protection>. **Note:** Final IRB approval is not required at the time an application is submitted.
- Privacy Certificate (for further guidance go to <https://nij.ojp.gov/funding/confidentiality-and-privacy-protections> and <https://nij.ojp.gov/funding/model-privacy-certificate>).
- List of any previous and current NIJ awards to the applicant and investigator(s), including the NIJ-assigned award numbers and a brief description of any scholarly products that resulted in whole or in part from work funded under the NIJ award(s). (See “[Goals, Objectives, Deliverables, and Expected Scholarly Products](#)” under “Program-Specific Information,” above, for definition of “scholarly products.”)
- List of other agencies, organizations, or funding sources to which this application has been submitted (if applicable).
- Applicants proposing to use incentives or stipends payments as part of their research project design, must submit an incentive or stipend approval request, as a separate document, according to the requirements set forth at <https://nij.ojp.gov/funding/participant-support-costs-and-incentives-social-science-research>.
- Letters of cooperation/support or administrative agreements from organizations collaborating in the project, such as law enforcement and correctional agencies (if applicable).

Please see the [OJP Grant Application Resource Guide](#) for information on the following:

4. [Budget Information and Associated Documentation](#) in the Budget Preparation and Submission Information section.

The following paragraph (on “Cofunding”) expressly modifies the “Cost Sharing or Matching Requirement” provisions in the OJP Grant Application Resource Guide. The applicant is to follow the guidance in the following paragraph instead of the guidance stated under the “Cost Sharing or Matching Requirement” heading in the [OJP Grant Application Resource Guide](#).

**Cofunding:** An award made by NIJ under this solicitation may account for up to 100 percent of the total cost of the project. The application should indicate whether it is feasible for the applicant to contribute cash, facilities, or services as non-federal support for the project. The application should identify generally any such contributions that the applicant expects to make and the proposed budget should indicate in detail which items, if any, will be supported with non-federal contributions.

5. [Indirect Cost Rate Agreement](#)
6. [Tribal Authorizing Resolution](#) (if applicable)
7. [Financial Management and System of Internal Controls Questionnaire \(including applicant disclosure of high-risk status\)](#)
8. [Disclosure of Lobbying Activities](#)
9. [Applicant Disclosure of Pending Applications](#)
10. [Applicant Disclosure and Justification – DOJ High Risk Grantees](#)<sup>11</sup> (if applicable)
11. [Research and Evaluation Independence and Integrity](#)
12. **Additional Attachments**

- a. **Potential Environmental Impact Coversheet and Checklist – National Environmental Policy Act (NEPA)**

Each applicant is to submit an NIJ Programmatic Coversheet and Checklist with the application to assist NIJ in assessing the potential environmental impacts of the activities proposed for funding by the applicant. Specifically, the applicant is expected to:

- Carefully read the [Programmatic Environmental Assessment](#);
- Complete the [Cover Sheet and the attached the Programmatic Checklist](#); and
- Attach the completed documents to the grant application.

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<sup>11</sup> A “DOJ High Risk Grantee” is a recipient that has received a DOJ High-Risk designation based on a documented history of unsatisfactory performance, financial instability, management system or other internal control deficiencies, or noncompliance with award terms and conditions on prior awards, or that is otherwise not responsible.

The applicant should also submit a Cover Sheet and NIJ Programmatic Checklist for any organization identified in the Budget Detail Worksheet that will receive grant funds through a sub-award or procurement contract to perform any of the following activities: new construction or renovations that change the basic prior use of a facility or significantly change the size; research and/or technology development that could be expected to have an effect on the environment; or implementation of programs involving the use of chemicals. For more information about NEPA and NIJ's NEPA Process, please go to <https://nij.ojp.gov/funding/national-environmental-policy-act-nepa>.

## **How To Apply (Grants.gov)**

Applicants must register in and submit applications through [Grants.gov](https://www.grants.gov), a primary source to find federal funding opportunities and apply for funding. Find information on how to apply in response to this solicitation in the [OJP Grant Application Resource Guide](#).

## **Registration and Submission Steps**

Applicants will need the following identifying information when searching for the funding opportunity on Grants.gov.

- Assistance Listing 16.560, National Institute of Justice Research, Evaluation, and Development Project Grants.
- Funding Opportunity Number # NIJ-2020-17294.

For information on each registration and submission step, see the [OJP Grant Application Resource Guide](#).

## **E. Application Review Information**

### **Review Criteria**

Depending on the number of applications received, applications may be categorized by scientific discipline into discrete groups for purposes of peer review and/or selection of award.

Applications that meet basic minimum requirements will be evaluated by peer reviewers using the following review criteria. Each individual criterion is assigned a different weight based on the percentage value listed. For example, the first criterion, Statement of the Problem, is worth 10 percent of the score in the assessment of the application's technical merit.

**Statement of the Problem and Research Questions** (Understanding of the problem, research questions, and their importance) – 10%

1. Demonstrated understanding of the problem(s) that exist in an identified forensic science field/discipline.
2. Demonstrated understanding of the technology needs of the forensic science practitioners.

3. Demonstrated awareness of the current state of the art and technologies, both in practice and in past/current research, directed at the described problem(s).
4. Demonstrated importance of research questions, goals and objectives, including alignment with the aims of the solicitation.
5. Demonstrated awareness of the state of current research.

**Project Design and Implementation (Quality and technical merit) – 50%**

1. Soundness of methods and analytic and technical approach to addressing the stated aim(s) of the proposed project. The overall strategy, methodology, and analyses should be well-reasoned and appropriate to accomplish the specific aims of the project.
2. Feasibility of proposed project and the strength of supporting data. The proof-of-principle of the proposed technology or methodology should be established and supported by preliminary data presented in, or referenced, in the proposal. More innovative plans and/or plans with a higher potential for failure, should be counterbalanced to manage the inherent risk; e.g., by firm theoretical basis, reasonable preliminary data (depending on the mechanism), the track record of the principal investigator and any co-principal investigator(s), and an outstanding scientific and management plan.
3. Detailed description and justification of the sample type and sample size to be tested and approaches for data analysis are thorough and appropriate to accomplish the specific aims of the project.
4. Awareness of potential pitfalls of proposed project design and feasibility of proposed actions to minimize and/or mitigate them.
5. Feasibility of completing the deliverables noted in the solicitation (which include datasets, peer-reviewed journal articles, technological prototypes and patented inventions, as appropriate).

**Potential Impact – 20%**

Potential for a significant scientific or technical advance(s) that will improve criminal/juvenile justice in the United States, such as:

- Potential for significantly improved understanding of the stated forensic science problem.
  - If the goals of the project are achieved, how will scientific knowledge, technical capability, and/or forensic science practice in the criminal justice system be improved?
  - What is the likelihood that the project will exert a sustained, powerful influence on the forensic science field(s) related to criminal justice?
- Potential for innovative solution to address (all or a significant part of) the stated forensic science problem.

- How will successful completion change the concepts, methods, technologies, treatments, or services that drive the forensic science field as it relates to criminal justice?
- How will a successful project address the identified criminal justice or forensic science problem and associated critical barriers to progress?

**Capabilities/Competencies** (Capabilities, demonstrated productivity, and experience of the applicant organization and proposed project staff) – 20%

1. Qualifications and experience of proposed project staff (that is, the principal investigator, any and all co-principal investigators, and all other individuals (and organizations) identified in the application (regardless of “investigator” status) who will be significantly involved in substantive aspects of the proposed project).
2. Demonstrated ability of the applicant organization to implement the proposed strategies and manage the effort.
3. Relationship between the capabilities/competencies of the proposed project staff (including the applicant organization) and the scope and strategies of the proposed project.
4. Strength of the scientific environment (e.g., institutional support, equipment and other physical resources, or collaborative arrangements) in which the work will be done and its contribution to the probability of success.
5. Demonstrated ability to produce scholarly products.

**Plan for Dissemination to Broader Audiences (if applicable to the proposed project)**

Peer reviewers may comment — in the context of scientific and technical merit — on strength and feasibility the proposed plan (if any) to produce or to make available to broader interested audiences, such as forensic science practitioners or policymakers, summary information from the planned scholarly products of the project.

**Budget**

In addition, peer reviewers will consider and may comment on the following additional items in the context of scientific and technical merit.

1. Total cost of the project relative to the perceived benefit (cost effectiveness).
2. Appropriateness of the budget relative to the level of effort.
3. Use of existing resources to conserve costs.
4. Alignment of the proposed budget with proposed project activities.



## Review Process

NIJ reviews the application to make sure that the information presented is reasonable, understandable, measurable, achievable, and consistent with the solicitation.

The following five paragraphs in this solicitation expressly modify the “Application Review Information” provisions in the OJP Grant Application Resource Guide. An applicant is to follow the guidance in these five paragraphs instead of the guidance stated under the “Application Review Information” heading in the Guide.

Peer reviewers will review the applications submitted under this solicitation that meet basic minimum requirements. For purposes of assessing whether an application meets basic minimum requirements and should proceed to further consideration, OJP screens applications for compliance with those requirements. Although specific requirements may vary, the following are common requirements applicable to all solicitations for funding under OJP programs:

- The application must be submitted by an eligible type of applicant.
- The application must request funding within programmatic funding constraints (if applicable).
- The application must be responsive to the scope of the solicitation.
- The application must include all items necessary to meet the basic minimum requirements.
- The application, if submitted by an applicant that is a DOJ High Risk Grantee,<sup>12</sup> or is designated “high risk” by a federal grant-making agency outside of DOJ, must not have been determined by the Director to pose a substantial risk of program implementation failure, based on 1) the applicant’s lack of sufficient progress in addressing required corrective actions necessary for removal of the DOJ High Risk Grantee (or non-DOJ high risk) designation, 2) the nature and severity of the issues leading to or accompanying the DOJ High Risk Grantee (or non-DOJ high risk) designation, and/or 3) the applicant’s expected ability to manage grant funds and achieve grant goals and objectives.

For a list of the application elements that **MUST** be included in the application submission in order for an application to meet the basic minimum requirements, see [“What an Application Should Include”](#) under [Section D. Application and Submission Information](#).

Peer review panels will evaluate, score, and rate applications that meet basic minimum requirements. NIJ may use external peer reviewers, internal peer reviewers, or a combination, to assess applications on technical merit using the solicitation’s review criteria. An external peer reviewer is an expert in the subject matter of a given solicitation who is not a current DOJ employee. An internal reviewer is a current DOJ employee who is well-versed or has expertise in the subject matter of this solicitation. Peer reviewers’ ratings and any resulting recommendations are advisory only, although reviewer views are considered carefully.

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<sup>12</sup> See “Applicant Disclosure and Justification – DOJ High Risk Grantees” under “What an Application Should Include,” above, for a definition of “DOJ High Risk Grantee.”

Other important considerations for NIJ include priority consideration areas as described previously, geographic diversity, strategic priorities past performance, available funding, the planned scholarly products, and the extent to which the Budget Detail Worksheet and Budget Narrative accurately explain project costs that are reasonable, necessary, and otherwise allowable under federal law and applicable federal cost principles.

Pursuant to the Part 200 Uniform Requirements, before award decisions are made, OJP also reviews information related to the degree of risk posed by the applicant. Among other things to help assess whether an applicant that has one or more prior federal awards has a satisfactory record with respect to performance, integrity, and business ethics, OJP checks whether the applicant is listed in SAM as excluded from receiving a federal award.

In addition, if OJP anticipates that an award will exceed \$250,000 in federal funds, OJP also must review and consider any information about the applicant that appears in the non-public segment of the integrity and performance system accessible through SAM (currently, the Federal Awardee Performance and Integrity Information System, FAPIIS).

**Important note on FAPIIS:** An applicant, at its option, may review and comment on any information about itself that currently appears in FAPIIS and was entered by a federal awarding agency. OJP will consider any such comments by the applicant, in addition to the other information in FAPIIS, in its assessment of the risk posed by the applicant.

All final award decisions will be made by Director of the National Institute of Justice, who may take into account not only peer review ratings and NIJ recommendations, but also other factors as indicated in this section.

## F. Federal Award Administration Information

Please see the [OJP Grant Application Resource Guide](#) for information on the following:

- [Federal Award Notices](#)
- [Administrative, National Policy, and Other Legal Requirements](#)

If selected for funding, in addition to implementing the funded project consistent with the OJP-approved application, the recipient must comply with all award conditions, and all applicable requirements of federal statutes and regulations (including applicable requirements referred to in the assurances and certifications executed in connection with award acceptance).

For additional information on these legal requirements, see the “Administrative, National Policy, and Other Legal Requirements” section in the [OJP Grant Application Resource Guide](#).

- [Information Technology \(IT\) Security Clauses](#)
- **General Information about** [Post-Federal Award Reporting Requirements](#)

In addition to the deliverables described in [Section A. Program Description](#), any recipient of an award under this solicitation will be required to submit certain reports and data.

Required reports. Recipients typically must submit quarterly financial reports, semi-annual progress reports, final financial and progress reports, and, if applicable, an annual audit report in accordance with the Part 200 Uniform Requirements or specific award conditions. Applicants should anticipate that progress reports will be required to follow the non-budgetary components of the Research Performance Progress Report (RPPR) template/format. General information on RPPRs may be found at [www.nsf.gov/bfa/dias/policy/rppr/](http://www.nsf.gov/bfa/dias/policy/rppr/). Future awards and fund drawdowns may be withheld if reports are delinquent. (In appropriate cases, OJP may require additional reports.)

See the [OJP Grant Application Resource Guide](#) for additional information on specific post-award reporting requirements, including performance measures data.

## **G. Federal Awarding Agency Contact(s)**

For questions directed to the Federal Awarding Agency, see NCJRS contact information on page 2.

For contact information for Grants.gov, see page 2.

## **H. Other Information**

Please see the [OJP Grant Application Resource Guide](#) for information on the following:

- [Freedom of Information and Privacy Act \(5 U.S.C. 552 and 5 U.S.C. 552a\)](#)
- [Provide Feedback to OJP](#)

## Application Checklist

### Research and Development in Forensic Science for Criminal Justice Purposes, Fiscal Year 2020

This application checklist has been created as an aid in developing an application.

#### What an Applicant Should Do:

##### *Prior to Registering in Grants.gov:*

- ☐ Acquire a DUNS Number (see [OJP Grant Application Resource Guide](#))
- ☐ Acquire or renew registration with SAM (see [OJP Grant Application Resource Guide](#))

##### *To Register with Grants.gov:*

- ☐ Acquire AOR and Grants.gov username/password (see [OJP Grant Application Resource Guide](#))
- ☐ Acquire AOR confirmation from the E-Biz POC (see [OJP Grant Application Resource Guide](#))

##### *To Find Funding Opportunity:*

- ☐ Search for the Funding Opportunity on Grants.gov (see page 18)
- ☐ Access Funding Opportunity and Application Package (see [OJP Grant Application Resource Guide](#))
- ☐ Sign up for Grants.gov email [notifications](#) (optional) (see [OJP Grant Application Resource Guide](#))
- ☐ Read [Important Notice: Applying for Grants in Grants.gov](#)
- ☐ Read OJP policy and guidance on conference approval, planning, and reporting available at [ojp.gov/financialguide/DOJ/PostawardRequirements/chapter3.10a.htm](http://ojp.gov/financialguide/DOJ/PostawardRequirements/chapter3.10a.htm) (see [OJP Grant Application Resource Guide](#))

##### *After Application Submission, Receive Grants.gov Email Notifications That:*

- ☐ (1) application has been received,
- ☐ (2) application has either been successfully validated or rejected with errors (see [OJP Grant Application Resource Guide](#))

##### *If No Grants.gov Receipt, and Validation or Error Notifications are Received:*

- ☐ Contact NIJ regarding technical difficulties (see [OJP Grant Application Resource Guide](#))

#### Overview of Post-Award Legal Requirements:

- ☐ Review the “[Overview of Legal Requirements Generally Applicable to OJP Grants and Cooperative Agreements – FY 2020 Awards](#)” in the [OJP Funding Resource Center](#).

#### Scope Requirement:

- ☐ The federal amount requested is within the allowable limit(s).

**Eligibility Requirement:** See cover page.

## What an Application Should Include:

The following items are critical application elements required to pass basic minimum requirements review. An application that OJP determines does not include the application elements that must be included in the application submission in order for the application to meet the basic minimum requirements, will neither proceed to peer review, nor receive further consideration.

- ☐ Program Narrative (see page 18)
- ☐ Budget Detail Worksheet (including Budget Narrative)  
(see [OJP Grant Application Resource Guide](#))
- ☐ Resumes/curriculum vitae/biosketches of key personnel (see page 25)
- ☐ Application for Federal Assistance (SF-424) (see [OJP Grant Application Resource Guide](#))
- ☐ Project Abstract (see page 18)
- ☐ Appendices (see page 24)
  - \_\_\_\_\_ Bibliography/references
  - \_\_\_\_\_ Any tools/instruments, questionnaires, tables/charts/graphs, or maps pertaining to the proposed study that supplement those in the narrative
  - \_\_\_\_\_ Documentation of “new investigator” status (if applicable)
  - \_\_\_\_\_ Proposed project timeline and expected milestones
  - \_\_\_\_\_ Progress report for renewal and revision applications (if applicable)
  - \_\_\_\_\_ Progress report publication list
  - \_\_\_\_\_ Multiple PI leadership plan
  - \_\_\_\_\_ Consortium/contractual arrangements
  - \_\_\_\_\_ Letters of support
  - \_\_\_\_\_ Data archiving plan
  - \_\_\_\_\_ List of proposed project staff, affiliation, and roles
  - \_\_\_\_\_ Human subjects protection paperwork
  - \_\_\_\_\_ Privacy Certificate
  - \_\_\_\_\_ List of any previous and current NIJ awards to applicant organization and investigator(s) (if applicable)
  - \_\_\_\_\_ List of other agencies, organizations, or funding sources to which this proposal has been submitted (if applicable)
  - \_\_\_\_\_ Incentive or stipend approval request (if applicable)
- ☐ Indirect Cost Rate Agreement (if applicable) (see [OJP Grant Application Resource Guide](#))
- ☐ Tribal Authorizing Resolution (if applicable) (see [OJP Grant Application Resource Guide](#))
- ☐ Financial Management and System of Internal Controls Questionnaire  
(see [OJP Grant Application Resource Guide](#))
- ☐ [Disclosure of Lobbying Activities \(SF-LLL\)](#) (see [OJP Grant Application Resource Guide](#))
- ☐ Applicant Disclosure of Pending Applications (see [OJP Grant Application Resource Guide](#))
- ☐ Applicant Disclosure and Justification – DOJ High-Risk Grantees (if applicable)  
(see [OJP Grant Application Resource Guide](#))
- ☐ Research and Evaluation Independence and Integrity  
(see [OJP Grant Application Resource Guide](#))

**Additional Attachments:**

- ☐ Request and Justification for Employee Compensation; Waiver (if applicable)  
(see [OJP Grant Application Resource Guide](#))
- ☐ Potential Environmental Impact Coversheet and Checklist (NEPA) (see page 28)