

August 19, 2014

**ANNOUNCEMENT OF FEDERAL FUNDING OPPORTUNITY (FFO)  
Forensic Science Center of Excellence Program**

**EXECUTIVE SUMMARY**

- **Federal Agency Name:** National Institute of Standards and Technology (NIST), United States Department of Commerce (DoC)
- **Funding Opportunity Title:** Forensic Science Center of Excellence Program
- **Announcement Type:** Initial
- **Funding Opportunity Number:** 2014-NIST-FS-COE-01
- **Catalog of Federal Domestic Assistance (CFDA) Number:** 11.619: Arrangements for Interdisciplinary Research Infrastructure
- **Dates:** Electronic applications through [www.grants.gov](http://www.grants.gov) must be received no later than 11:59 p.m. Eastern Time, December 11, 2014. Applications received after this deadline will not be reviewed or considered. Paper applications will not be accepted. The earliest anticipated start date for awards under this FFO is expected to be approximately March 2015.

When developing your submission timeline, keep in mind that a free annual registration process in the electronic System for Award Management (SAM) (see Section VI.2.b. of this FFO) takes on average fourteen (14) business days for new registrations, and between seven (7) and ten (10) business days for renewal registrations. The SAM registration process will likely take more time if problems are encountered. Also, please keep in mind that applicants using [www.grants.gov](http://www.grants.gov) will receive a series of receipts over a period of up to two (2) business days before learning via a validation or rejection whether a Federal agency's electronic system has received its application.

- **Application Submission Address:** See Section IV. in the Full Announcement Text of this FFO. Paper, email and facsimile applications are not permitted and will not be accepted by NIST under this FFO.
- **Funding Opportunity Description:** NIST is soliciting applications to establish a Forensic Science Center of Excellence (COE) in which NIST researchers collaborate with interdisciplinary researchers from academia and industry for the wide-spread adoption of probabilistic methods within the forensic science community, specifically in the areas of pattern evidence and digital evidence, by developing the necessary analytical methods, creating a suitable education and training infrastructure in probabilistic methods for the relevant stakeholders, and engaging the forensic science community to promote competence building.
- **Anticipated Amounts:** NIST anticipates approximately \$4,000,000 per year may be made available to award approximately one (1) multi-year award to an eligible applicant. This award would be for up to five (5) years with the possibility to renew for an additional 5 years at the end of the initial award period. If renewed, NIST anticipates a total of approximately \$40,000,000 may be available over the ten (10) year period.
- **Funding Instrument:** Cooperative Agreement
- **Who Is Eligible:** Accredited institutions of higher education, non-profit organizations, and commercial organizations that are organized and operated in the United States and its territories. An

eligible organization may work individually or include proposed subrecipients, contractors and/or unfunded collaborators in a project application, effectively forming a team or consortium. An organization may only serve as the lead organization on one application. In a team or consortium structure, eligible subrecipients are U.S. non-profit organizations, accredited institutions of higher education, commercial organizations, and State, Tribal, and local governments. Federal agencies may participate in projects but may not receive NIST funding.

- **Cost Sharing Requirements:** This program does not require cost sharing.
- **Webinar and Website:** NIST plans to hold a webinar to offer information on the Forensic Science Center of Excellence program. The webinar will be held approximately 30 days after posting of this FFO. The webinar will provide general guidance on preparing applications and provide an opportunity for the public to ask questions about the program. Proprietary technical discussions about specific project ideas will not be permitted, and NIST will not critique or provide feedback on any project ideas during the webinar or at any time before submission of an application to NIST. There is no cost for the webinar, but participants must register in advance. Participation in the webinar is not required for the submission of an application. The webinar will be recorded, and a link to the recording will be available for public access. Additional, information concerning, and registration for, the webinar is available at: [www.nist.gov/coe/forensics](http://www.nist.gov/coe/forensics).

A NIST Forensic Science COE public website exists ([www.nist.gov/coe/forensics](http://www.nist.gov/coe/forensics)) that provides information about NIST's involvement in forensic science, including this Forensic Science Center of Excellence Federal Funding Opportunity. NIST anticipates that a "Frequently Asked Questions" section will be maintained and updated as needed to provide additional guidance and clarifying information that may arise related to this Funding Opportunity. Questions regarding this FFO should be submitted in writing and may be posted in the "Frequently Asked Questions" section. Any amendments to this FFO will be announced through [www.grants.gov](http://www.grants.gov).

## **FULL ANNOUNCEMENT TEXT**

### **I. Funding Opportunity Description**

The statutory authorities for the Forensic Science Center of Excellence are 15 U.S.C. § 272(b)(3), (b)(4), (b)(8), (b)(10), (b)(11), (c)(3), (c)(16), (c)(17).

A critical need in the forensic science community is a more thorough understanding and contextualizing of the uncertainty associated with scientific measurements and/or analytical techniques. Reporting uncertainty in forensic science measurements is currently an uncommon practice, largely because the forensic science community demands an unequivocal conclusion of a binary analysis (in particular, whether or not an item is uniquely associated with a particular source). One approach that could help address this gap in forensic science and strengthen the impact of the evidence is probabilistic analysis. Probabilistic analysis that enables a detailed examination of uncertainties is possible, allowing for a numerical justification for the conclusions made by forensic analysts. There are, however, several major obstacles when applying probabilistic analysis to the field of forensic science, including the need for robust statistical methods for specific forensic science disciplines and the limited availability of probabilistic method training tools for practitioners and relevant stakeholders.

In an effort to overcome these obstacles, NIST is seeking applications to establish a Forensic Science Center of Excellence that will enable the application of probabilistic analysis to two forensic science disciplines: pattern evidence and digital evidence. Broadly, the goals of the Center are to:

1. Provide a strong scientific basis in probabilistic methods and computation development;
2. Create education and training infrastructure in probabilistic methods for practitioners, non-practitioners and stakeholders, and;

3. Promote competence building among and dialogue between NIST, academia, and the forensic science community.

A successful Forensic Science Center of Excellence will leverage NIST's expertise and experience in pattern evidence, digital evidence, and statistics to advance the utility of probabilistic methods to enhance forensic analysis. It will focus on two critical areas: the development of probabilistic methods and the development of the necessary infrastructure to deploy probabilistic method tools to relevant stakeholders. NIST research in Forensic Science is described at <http://www.nist.gov/forensics>.

It is expected that in this endeavor the recipient will accelerate the adoption of methods and standards in the forensic sciences, and that the recipient will establish opportunities for extended collaborations between NIST, lead and partner institutions, forensic practitioners, and recipient scientists through the Center, employing mechanisms such as staff exchanges, jointly advised graduate students, post-doctoral researchers and senior guest scientists.

This endeavor will require multi-disciplinary expertise and collaboration to develop methodologies that support analyses of pattern evidence and digital evidence, and address probabilistic approaches that expand the utility of these forensic science disciplines.

### **Development of Probabilistic Methods**

Forensic investigations involve the collection of evidence, measurements of the evidence, analysis of those measurements, and the determination of conclusions of known validity. A significant challenge in this process lies in the inevitable presence of uncertainty, the unique context of circumstances surrounding each collection, measurement and analysis of the evidence and, in some cases, the complexity due to numerous, interrelated random variables.<sup>1</sup> As much as possible, the process should be supported by a robust framework that is deeply rooted in the scientific method. Developing the science to support a probabilistic methods framework will require rigorous, systematic research in developing quantifiable measures of uncertainty in the conclusions of forensic analyses. NIST envisions this effort in probabilistic methods development to include but not be limited to:

1. Applying advanced statistical methods for both current and new methods of forensic analysis;
2. Developing of robust sets of synthetic and real world standard test data;
3. Assessing the application and robustness of probabilistic methods through (for example) round robin testing and standards test data;
4. Developing and disseminating a standard terminology as related to forensic metrology and probabilistic methods.

While NIST has provided critical scientific underpinnings to a broad range of activities in support of forensic measurements, the Forensic Science Center of Excellence will focus on probabilistic methods as applied to pattern evidence and digital evidence. As defined below, the applicants should address how their application addresses probabilistic methods development in pattern evidence and digital evidence:

**Pattern Evidence.** Pattern and impression evidence includes physical evidence produced when one object comes into contact with another object, such as fingerprints, shoeprints, tool marks, and tire tracks. It also includes tools used in the creation of impressions, such as typewriters and writing instruments. The quality of impression evidence, such as fingerprints, shoe prints and tire tracks, can vary quite widely. Extracting as much useful information as possible using efficient automated methods and using the information to full advantage will provide the forensic community with the objective tools they need. The results and conclusions will not be useful, though, if it cannot be shown that scientifically valid methods were used during the examination and analysis process.

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<sup>1</sup> Simone Gittelsohn (2013). Evolving from inferences to decisions in the interpretation of scientific evidence. PhD thesis, University of Lausanne (Switzerland). [http://www.unil.ch/files/live/sites/esc/files/shared/These\\_Gittelsohn.pdf](http://www.unil.ch/files/live/sites/esc/files/shared/These_Gittelsohn.pdf)

**Digital Evidence.** Ongoing work to apply statistical methods of error analysis in digital evidence has shown that these methods have limited use for digital forensics because the errors and uncertainties do not arise from random processes, but rather from incomplete knowledge. The known unknowns are often in the provenance of digital evidence (e.g., when, where, how, and why these bits were actually written to the disk, and who made it happen) and whether the findings were impacted by an undetected fault in forensic tooling, procedural error, or fraud. Within digital evidence there are many areas where it is impossible to know the exact answer.

### **Develop and Deploy the Probabilistic Method Tools and Infrastructure to the Forensic Science Stakeholder Community**

The wide-spread adoption of probabilistic methods by the forensic science community has not occurred for two main reasons. First, since robust and user-friendly probabilistic method tools for forensic analyses do not exist, practitioners do not yet fully understand how to apply these methods to a specific investigation. Second, the diverse group of stakeholders, which includes investigators, lawyers, judges, and juries, does not possess the knowledge or experience to contextualize the results from such methods. Since these stakeholders rely on analytical results to make decisions, potentially valuable information is either only partially considered or given inappropriate weight. Consequently, these stakeholders are being asked to make decisions based on incomplete information.

For the Center to have maximum and lasting impact on the forensic science community, the results from the probabilistic method development effort will need to be disseminated among the various stakeholders. Traditional modes of communication in the scientific community, however, such as publication in peer-reviewed literature, are insufficient. A new communication and information deployment infrastructure is required to inform, engage and train the forensic science community. For example, new training tools in the application of probabilistic methods for practitioners and educational tools on how to interpret probabilistic results for non-practitioners is needed. The application should clearly address how different groups within the greater forensic science community will be engaged, and how that engagement will be assessed.

It is anticipated that the recipient will develop an intellectual property (IP) management plan, consistent with Section L.04., Department of Commerce Financial Assistance Standard Terms and Conditions for Financial Assistance Awards, "Intellectual Property Rights," and authorities referenced therein, which addresses ownership and licensing of all IP created or acquired under the award and pre-existing IP used under the award by any of the award participants, including subrecipients, contractors, and/or unfunded collaborators, who participate in the project. It is expected that the recipient will obtain the concurrence of each award participant to the recipient's IP management plan. Given the objective under this Funding Opportunity of providing decision-makers and professionals with methods and tools to utilize probabilistic methods in the greater forensic science community, NIST may require the recipient to transfer to NIST its copyright in a particular work (for example, a data architecture or data management tool) if NIST will undertake the primary dissemination of the work. See Section V1.1. of this FFO for a link to the Department of Commerce Financial Assistance Standard Terms and Conditions.

NIST specifically encourages open information sharing and publication on the Internet and in other appropriate venues to the maximum extent practicable, consistent with underlying principles described in the White House Office of Science and Technology Policy memorandum of February 22, 2013 on Increasing Access to the Results of Federally Funded Scientific Research, available at: [http://www.whitehouse.gov/sites/default/files/microsites/ostp/ostp\\_public\\_access\\_memo\\_2013.pdf](http://www.whitehouse.gov/sites/default/files/microsites/ostp/ostp_public_access_memo_2013.pdf).

Pursuant to Executive Order 13555 ("White House Initiative on Educational Excellence for Hispanics"), Executive Order 13270 ("Tribal Colleges and Universities"), and Executive Order 13532 ("Promoting Excellence, Innovation, and Sustainability at Historically Black Colleges and Universities"), as each may be amended and/or continued, the Department of Commerce (DoC) is strongly committed to broadening the participation of minority serving institutions (MSIs) in its financial assistance programs. DoC's goals include achieving full participation of MSIs in order to advance the development of human potential,

strengthen the Nation's capacity to provide high-quality education, and increase opportunities for MSIs to participate in and benefit from Federal financial assistance programs. DoC encourages all applicants and recipients to include meaningful participation of MSIs. Institutions eligible to be considered MSIs are listed on the Department of Education website located here: <http://www2.ed.gov/about/offices/list/ocr/edlite-minorityinst.html>.

In addition, DoC encourages recipients to utilize small businesses, minority business enterprises and women's business enterprises in contracts and subawards under financial assistance awards. The Minority Business Development Agency (MBDA) will assist recipients in matching qualified minority business enterprises with contract opportunities. For further information, visit MBDA's website at <http://www.mbda.gov>.

## **II. Award Information**

- 1. Funding Instrument.** The funding instrument that will be used is a cooperative agreement. The nature of NIST's "substantial involvement" will generally be collaboration between NIST and the recipient organizations. This includes NIST collaboration with a recipient on the scope of work. Additional forms of substantial involvement that may arise are described in Chapter 5.C of the DoC Grants and Cooperative Agreements Manual, which is available at [http://www.ossec.doc.gov/oam/grants\\_management/policy/documents/FINAL%20Master%20DOC%20Grants%20Manual%202013%20\(03.01.13\)\\_b.pdf](http://www.ossec.doc.gov/oam/grants_management/policy/documents/FINAL%20Master%20DOC%20Grants%20Manual%202013%20(03.01.13)_b.pdf).
- 2. Multi-Year Funding Policy.** When an application for a multi-year award is approved, funding will usually be provided for only the first year of the program. If a project is awarded, NIST has no obligation to provide any additional funding in connection with that award. Continuation of an award to increase funding or extend the period of performance is at the sole discretion of NIST. Continued funding will be contingent upon satisfactory performance, continued relevance to the mission and priorities of NIST, and the availability of funds.
- 3. Funding Availability.** NIST anticipates approximately \$4,000,000 per year may be made available to award one (1) multi-year award to an eligible applicant. This award would be for up to five (5) years with the possibility to renew for an additional 5 years at the end of the initial award period. If renewed, NIST anticipates a total of approximately \$40,000,000 may be available over the ten (10) year period.

## **III. Eligibility Information**

- 1. Eligible Applicants.** Accredited institutions of higher education, non-profit organizations, and commercial organizations that are organized and operated in the United States and its territories. An eligible organization may work individually or include proposed subrecipients, contractors and/or unfunded collaborators in a project application, effectively forming a team or consortium. An organization may only serve as the lead organization on one application. In a team or consortium structure, eligible subrecipients and contractors are U.S. non-profit organizations, accredited institutions of higher education, commercial organizations, and State, Tribal, and local governments. Federal agencies may participate in projects but may not receive NIST funding.
- 2. Cost Sharing or Matching Requirement:** This program does not require cost sharing.
- 3. Other: Abbreviated (Pre-) Applications.** NIST is not accepting abbreviated (pre-) applications or white papers under this FFO.

## **IV. Application and Submission Information**

- 1. Address to Request Application Package:** The standard application package, consisting of the standard forms, i.e., SF-424, SF-424A, SF-424B, SF-LLL, and the CD-511, is available at [www.grants.gov](http://www.grants.gov). The application package provides only one SF-424A form. An additional SF-424A

form will be needed, as described in Section IV.2.a.(2), and must be retrieved from the internet, outside of [www.grants.gov](http://www.grants.gov) as described in Section IV.2.a.(10). The standard application package and additional SF-424A form may be requested by contacting the NIST personnel listed below:

Dave Holbrook, National Institute of Standards and Technology, 100 Bureau Drive, Mailstop 1060, Gaithersburg, MD, 20899-6200. Phone: (301) 975-4462; email: [dave.holbrook@nist.gov](mailto:dave.holbrook@nist.gov).

## **2. Application Content and Format:**

### **a. Required Forms and Documents**

(1) **SF-424, Application for Federal Assistance.** The SF-424 must be signed by an authorized representative of the applicant organization. The FFO number 2014-NIST-FS-COE-01 should be identified in item 12 of the SF-424. The list of certifications and assurances referenced in item 21 of the SF-424 is contained in the SF-424B. Applicants should enter total budget information for the full five (5) years of the project in item 18 on the SF-424.

(2) **SF-424A, Budget Information - Non-Construction Programs.** The budget should reflect anticipated expenses for each year of the project, considering all potential cost increases, including cost of living adjustments. The applicant should submit two SF-424A forms. The first SF-424A form should cover the first four (4) years of the project and is the SF-424A form that appears as part of the mandatory forms in the Grants.gov application package. Details of where to find the second SF-424A form, and how to submit it, are found in Section IV.2.a.(10) of this FFO.

(3) **SF-424B, Assurances - Non-Construction Programs**

(4) **CD-511, Certification Regarding Lobbying**

(5) **SF-LLL, Disclosure of Lobbying Activities** (if applicable)

(6) **Technical Narrative.** The Technical Narrative is a word-processed document of no more than twenty-five (25) pages responsive to the program description (see Section I. of this FFO) and the evaluation criteria (see Section V.1. of this FFO). Any information beyond the twenty-five (25) page limit will not be considered during the evaluation process. The Technical Narrative should contain the following information:

a. **Executive Summary.** An executive summary, describing the proposed Forensic Science Center of Excellence consistent with the evaluation criteria (see Section V.1. of this FFO). The executive summary should not exceed one (1) single-sided page.

b. **Problem Statement.** A problem statement that discusses the barrier(s) or challenge(s) to the forensic science community in developing and adopting probabilistic methods and how the specific objectives of the project will address the barrier(s) or challenge(s). Be clear about what this project would fund that otherwise would not happen. The Forensic Science Center of Excellence Program has identified the barriers and challenges listed in Section I. of this FFO. This section establishes that the proposed project is within the scope of the FFO and provides critical background for the discussion of the proposed work.

This section is the primary, but not the only means by which the application will be evaluated according to the *Rationality* evaluation criteria (see Section V.1.a. of this FFO).

c. **Technical Plan.** A statement of work that describes the scope of work and discusses the specific tasks proposed to be performed, including a schedule of measurable events

and milestones. Narratives should demonstrate that the recipient has a strong technological vision and research agenda; describe new probabilistic methods and computational tool development for integration into the forensic science community; specify how a usable education and training infrastructure in probabilistic methods for relevant stakeholders will be developed, promoted, and utilized by the forensic science community; and describe research focus areas and plans for evolving new areas. Narratives should also describe how the recipient will manage the funds to support R&D in the area of forensic science.

This section is the primary, but not the only means by which the application will be evaluated according to the *Rationality* and *Technical Plan* evaluation criteria (see Sections V.1.a. and V.1.c., respectively, of this FFO).

- d. Experience, Qualifications, and Resource Availability.** A description of the qualifications and proposed operational or management activities of key personnel who will be assigned to work on the proposed project must be provided, including examples of the applicant's and/or proposed subrecipients' and/or contractors' past experience leading programs similar in nature to those described in this FFO (see Section I of this FFO) and experience working with State/Tribal/local government representatives, industry, academia, independent research organizations, and/or related organizations. Applications should describe a broad engagement plan to determine critical forensic science needs that the participants in the Center can address and describe a collaboration model for integrating the efforts and outputs of NIST Forensic Science research programs (see Section I of this FFO) and NIST staff into the technical focus areas of the proposed Forensic Science Center of Excellence. One-page resumes of no more than five key personnel may be included; these do not count toward the page limit; any information beyond one-page for each resume and any resume beyond the five permitted will not be considered.

This section is the primary, but not the only, means by which the application will be evaluated according to the *Experience, Qualifications, and Resource Availability* evaluation criteria (see Section V.1.b. of this FFO).

- e. Success Metrics.** Three or more metrics that will be used to indicate whether measurable progress is being made towards programmatic objectives should be described. Outputs from the Center may be quantified, such as the number and quality of publications, number and types of training tools developed and made publicly available. Impact metrics are strongly encouraged and could include such topics as listing the specific forensic community stakeholders that are supported, gauging probabilistic method adoption, guidelines developed, or consensus standards submitted or approved. Applications should describe plans and metrics for evaluating the outputs of the research effort and describe plans that demonstrate meaningful use, or potential for eventual use by communities and professionals.

This section is the primary, but not only, means by which the application will be evaluated according to the *Success Metrics* evaluation criteria (see Section V.1.d. of this FFO).

- (7) Budget Narrative.** Applicants should use the SF-424A to complete the budget submission. In addition to the SF-424A, applicants must provide a detailed budget narrative to explain fully and justify all proposed project funding in accordance with applicable federal cost principles. In this narrative, the recipient should provide adequate information to support the costs identified in each budget category. For example, applicants should provide the annual salary and the percentage of time dedicated to the project by personnel to demonstrate the total cost of that individual; provide the airfare, lodging, per diem, number of days and number of travelers for

each proposed trip; and identify anticipated subaward/contract amounts, the recipients if known at the time of application, and a detailed description of the purpose of each subaward/contract.

- (8) Indirect Cost Rate Agreement.** If indirect costs are included in the proposed budget, provide a copy of the approved negotiated agreement if this rate was negotiated with a cognizant Federal agency. If the rate was not established by a cognizant Federal agency, provide a statement to this effect. If the successful applicant includes indirect costs in the budget and has not established an indirect cost rate with a cognizant Federal audit agency, the applicant will be required to obtain such a rate in accordance with the Department of Commerce Financial Assistance Standard Terms and Conditions, found at a link in Section VI.1. of this FFO.

- (9) Letters of Commitment or Interest.** Letters are not included in the page count.

- (a) Letters of commitment to participate, as applicable.** If the applicant's application identifies third parties, including subrecipients and/or contractors, who will participate in the proposed project, effectively forming a team or consortium, then a letter from each currently known participant, describing its participation should be submitted. Each letter should indicate the organization's willingness to participate and what they will be doing for the project. A letter should be submitted whether or not the organization is receiving Federal funds.
- (b) Letters of interest, optional.** Letters of interest may be provided from parties who might benefit from the technology or knowledge developed as discussed in the proposed project.

- (10) SF-424A, Budget Information - Non-Construction Programs** for those applications which are for five (5) year projects. The SF-424A form that appears as part of the mandatory forms in the Grants.gov application package covers the first four (4) years of the project. The second SF-424A form should be submitted to cover year five (5) of the project. A fillable SF-424A form can be found at <http://www.nist.gov/director/grants/upload/sf424a.pdf>. Applicants should download the fillable SF-424A form, complete the information for year five (5) of the project and submit the completed form as an attachment, using the procedure described in the next paragraph.

Items IV.2.a.(1) through IV.2.a.(5) above are part of the standard application package in Grants.gov and can be completed through the download application process. **Items IV.2.a.(6) through IV.2.a.(10) must be completed and attached by clicking on "Add Attachments" found in item 15 of the SF-424, Application for Federal Assistance.** This will create a zip file that allows for transmittal of the documents electronically via Grants.gov. Applicants should carefully follow specific Grants.gov instructions at [www.grants.gov](http://www.grants.gov) to ensure the attachments will be accepted by the Grants.gov system. *A receipt from Grants.gov indicating an application is received does not provide information about whether attachments have been received.*

#### **b. Application Format**

- (1) Paper submissions.** Will not be accepted.
- (2) E-mail submissions.** Will not be accepted.
- (3) Facsimile submissions (fax).** Will not be accepted.
- (4) Figures, graphs, images, and pictures.** Should be of a size that is easily readable or viewable and may be landscape orientation.
- (5) Font.** Easy to read font (10-point minimum). Smaller type may be used in figures and tables, but must be clearly legible.

- (6) **Line spacing.** Single-spaced.
- (7) **Margins.** One (1) inch top, bottom, left, and right.
- (8) **Page layout.** Portrait orientation only except for figures, graphs, images, and pictures (see Section IV.2.b.(4)).
- (9) **Page Limit.** Applications are limited to twenty-five (25) pages.

**Page limit includes:** Technical Application, including management information and qualifications, figures, graphs, tables, images, and pictures.

**Page limit excludes:** Table of contents (if included), SF-424, Application for Federal Assistance; both copies of the SF-424A, Budget Information – Non-Construction Programs; SF-424B, Assurances – Non-Construction Programs; SF-LLL, Disclosure of Lobbying Activities; CD-511, Certification Regarding Lobbying; Cover Page, Gantt Chart or Work Breakdown Structure or other planning document (if included); Architecture and data flow diagrams (if included); Budget Narrative; Resumes; Indirect Cost Rate Agreement; Letters of commitment; and Letters of interest.

- (10) **Page numbering.** Number pages sequentially.
- (11) **Page size.** 21.6 by 27.9 centimeters (8 ½ by 11 inches).
- (12) **Language.** English.

- 3. **Submission Dates and Times.** Applications must be received by NIST no later than 11:59 p.m. Eastern Time, December 11, 2014 via the Grants.gov website. Applications received after the deadline will not be reviewed or considered. NIST will consider the date and time stamped on the validation generated by [www.grants.gov](http://www.grants.gov) as the official submission time.

NIST strongly recommends that applicants do not wait until the last minute to submit an application. NIST will not make allowance for any late submissions resulting from an applicants' inability to register with Sam.gov or grants.gov in a timely manner. The responsibility for ensuring a complete application is received by NIST by the deadline is the sole responsibility of the applicant. To avoid any potential processing backlogs due to last minute Grants.gov registrations, applicants are highly encouraged to begin their Grants.gov registration process early.

When developing your submission timeline, keep in mind that (1) a free annual registration process in the electronic System for Award Management (SAM) (see Section VI.2.b. of this FFO) may take more than two weeks, and (2) applicants using Grants.gov will receive a series of receipts over a period of up to two business days before learning via a validation or rejection notification whether a Federal agency's electronic system has received its application.

- 4. **Intergovernmental Review.** Applications under this Program are not subject to Executive Order 12372.

- 5. **Funding Restrictions.** Profit or fee is not an allowable cost.

#### 6. Other Submission Requirements

- a. Submit electronic applications via Grants.gov at [www.grants.gov](http://www.grants.gov) under announcement 2014-NIST-FS-COE-01.

- (1) Submitters of electronic applications should carefully follow specific Grants.gov instructions to ensure the attachments will be accepted by the Grants.gov system. A receipt from

Grants.gov indicating an application is received does not provide information about whether attachments have been received. For further information or questions regarding applying electronically for the 2014-NIST-FS-COE-01 announcement, contact Christopher Hunton by phone at 301-975-5718 or by e-mail at [christopher.hunton@nist.gov](mailto:christopher.hunton@nist.gov).

- (2) Applicants are strongly encouraged to start early and not wait until the approaching due date before logging on and reviewing the instructions for submitting an application through Grants.gov. The Grants.gov registration process must be completed before a new registrant can apply electronically. If all goes well, the registration process takes three (3) to five (5) business days. If problems are encountered, the registration process can take up to two (2) weeks or more. Applicants must have a Dun and Bradstreet Data Universal Numbering System (DUNS) number (see Section VI.2.b. of this FFO) and must maintain a current registration in the Federal government's primary registrant database, the System for Award Management (<https://www.sam.gov/>), as explained on the Grants.gov Web site. After registering, it may take several days or longer from the initial log-on before a new Grants.gov system user can submit an application. Only authorized individual(s) will be able to submit the application, and the system may need time to process a submitted application. Applicants should save and print the proof of submission they receive from Grants.gov. If problems occur while using Grants.gov, the applicant is advised to (a) print any error message received and (b) call Grants.gov directly for immediate assistance. If calling from within the United States or from a U. S. territory, please call 800-518-4726. If calling from a place other than the United States or a U. S. territory, please call 606-545-5035. Assistance from the Grants.gov Help Desk will be available around the clock every day, with the exception of Federal holidays. Help Desk service will resume at 7:00 a.m. Eastern Time the day after Federal holidays. For assistance using Grants.gov, you may also contact [support@grants.gov](mailto:support@grants.gov).
- (3) To find instructions on submitting an application on Grants.gov, Applicants should refer to the "Applicants" tab in the banner just below the top of the [www.grants.gov](http://www.grants.gov) home page. Clicking on the "Applicants" tab produces the "Grant Applicants" page.

In addition to following the "Steps" and instructions described in the "Applicant Actions" section and its sub-categories, further detailed instructions are described in "Applicant Resources" and all of its subcategories. This appears in the box near the top left of the Grant Applicants page. Applicants should follow the links associated with each subcategory.

**Applicants will receive a series of receipts during a process of up to two business days before the application is either validated as electronically received by the Federal agency system, or rejected by it. Closely following the detailed information in these subcategories will increase the likelihood of acceptance of the application by the Federal agency's electronic system.**

**Applicants should pay close attention to the instructions under "Applicant FAQs," as it contains information important to successful submission on Grants.gov, including essential details on the naming conventions for attachments to Grants.gov applications.**

*All applicants should be aware that adequate time must be factored into applicants' schedules for submission of their application, and applicants **are advised that volume on Grants.gov may be extremely heavy on the deadline date.***

Refer to important information in Section IV.3. Submission Dates and Times, to help ensure your application is received on time.

If timely application submissions are interrupted by the manifestation of a natural disaster, such as a hurricane, blizzard, or similar extreme inclement weather event, or by the aftermath of such an event,

such as power outages and/or Federal, public and/or private institution closures, NIST may: (1) consider an appeal for an individual situation involving such circumstances, or (2) extend the due date for all applicants. For an individual appeal, an applicant must request a deadline waiver and present in writing compelling circumstances, related only to such unavoidable causes involving forces of nature, which must be received by the NIST Programmatic and Technical Questions Point of Contact as listed in Section VII., within three business days of the deadline, by 5:00 p.m. Eastern Time. In addition, in the event of Federal government closure on the application deadline day, the deadline will be extended for all applicants to the next business day, under the same conditions described in the FFO. In the event of Federal government closure(s) during the week before the application deadline, NIST will post a statement at the top of the FFO on [www.grants.gov](http://www.grants.gov) and [www.nist.gov/coe/forensics](http://www.nist.gov/coe/forensics) as soon as practicable indicating whether the deadline is extended for all applicants, under the same conditions described in the FFO. The FFO may be amended to extend the deadline under these and other circumstances. For information on signing up for any amendments to the FFO that may arise, refer to Section IV.6.b. of this FFO.

- b. Amendments.** Any amendments to this FFO will be announced through Grants.gov. Applicants may sign up for Grants.gov FFO amendments or may request copies from Dave Holbrook by telephone on (301) 975-4462; or email: [dave.holbrook@nist.gov](mailto:dave.holbrook@nist.gov).

## **V. Application Review Information**

- 1. Evaluation Criteria.** The evaluation criteria that will be used in evaluating applications are as follows:
  - a. Rationality (0 to 15 points).** The rationality and clarity of the applicant's approach to effectively address scientific and technical challenges relevant to the objectives of the Forensic Science Center of Excellence.
  - b. Experience, Qualifications, and Resource Availability (0 to 30 points).** The extent to which the applicant has access to the necessary facilities and overall support to accomplish project objectives. Factors considered as a whole and not given particular weights within the category include: (1) the degree to which requested resources are appropriate for the proposed project's scope; (2) the quality of organizational resources proposed to be used on the project; (3) the rationality and potential effectiveness of any planned sub-awards and/or contracts; (4) demonstrated commitment to encouraging and assisting under-represented participants in the proposed project; (5) plans for staff exchange of extended duration, for example of more than sixty (60) days, between NIST and the applicant, including the type and number of personnel.
  - c. Technical Plan (0 to 40 points).** The technical merit of the proposed work and the value it would contribute to future breakthroughs in the forensic science community. Factors considered as a whole and not given particular weights within the category include: (1) creativity and originality of the proposed approach, (2) plausibility of the technical approach, (3) scope of work, including the number and type of probabilistic methods development and proposed inter-disciplinary approaches, (4) the magnitude and reach of potential technical outcomes, (5) linkage between the technical outcomes and forensic science community needs as described in the application, and (6) degree of integration with NIST programs and capabilities in the areas of pattern evidence and digital evidence.
  - d. Success Metrics (0 to 15 points).** The clarity and quality of proposed metrics and mechanisms for evaluating the effectiveness of outputs from the Forensics Center of Excellence, including the engagement, education, training and utilization of the developed tools by the greater forensic science stakeholder community.
- 2. Selection Factors.** The Selecting Official shall select applications for award based upon the rank order of the applications. The Selecting Official may select an application out of rank based on one or more of the following additional selection factors:

- a. Results of the reviewers' evaluations;
- b. The extent to which the proposed scope of the research (Forensic Science) is complementary to the research programs and research goals in these areas at NIST as described at [www.nist.gov/coe/forensics](http://www.nist.gov/coe/forensics);
- c. Relevance of an application to the program as described in Section I. of this FFO.
- d. The availability of Federal funds;
- e. Whether the project duplicates other projects funded by the Department of Commerce or other Federal agencies.

### 3. Review and Selection Process

- a. **Initial Administrative Review of Applications.** An initial review of timely received applications will be conducted to determine eligibility, completeness, and responsiveness to this FFO and the scope of the stated program objectives. Applications determined to be ineligible, incomplete, and/or non-responsive may be eliminated from further review. However, NIST, in its sole discretion, may continue the review process for an application that is missing non-substantive information which may easily be rectified or cured.
- b. **Full Review of Eligible, Complete, and Responsive Applications.** Applications that are determined to be eligible, complete, and responsive will proceed for full reviews in accordance with the review and selection process below:
  - a. **Merit Review.** All eligible, complete and responsive applications will be reviewed by at least three (3) independent, objective individuals with appropriate professional and technical expertise relating to the topics covered in this FFO to conduct a merit-based technical review of each application. Reviews will be limited to technical and cost matters, based on the evaluation criteria (see Section V.1 of this FFO). Any mix of Federal and non-Federal reviewers may be used. The reviewers' scores will be determined on an individual basis not as a consensus. The reviewers may ask questions of some or all applicants in writing. Reviewers will assign each application a score, based on the application's responsiveness to the FFO evaluation criteria, with a maximum score of 100.
  - b. **Program Review.** Following the merit review described above in Section V.3.b.(a) of this FFO, an Evaluation Panel will conduct a programmatic review of the eligible, complete and responsive applications. The Evaluation Panel will consist of at least three (3) persons and will be comprised of any mix of NIST staff, and other federal agency employees with appropriate professional and technical expertise. The Evaluation Panel may ask questions of some or all applicants in writing and/or may require teleconferences or site visits with some or all applicants. The Evaluation Panel will prepare and provide a final adjectival ranking of the applications to the Selecting Official for further consideration, taking into consideration the relevance of an application to the program goals and objectives described in Section I. of this FFO, the results of the merit reviewers' evaluations including scores and written comments, and any additional information obtained from the applicant by the evaluation panel. The adjectival ratings are:
    - Fundable, Outstanding;
    - Fundable, Very Good;
    - Fundable; or
    - Unfundable.
  - c. **Ranking and Selection.** The evaluation panel will provide final adjectival ratings to the Selecting Official for further consideration. If warranted, a rank order within the adjectival ratings will be prepared based on the Evaluation Panel's review.

The Selecting Official, who is the NIST Associate Director for Laboratory Programs, or designee, will make final award recommendations to the NIST Grants Officer. Recommendations for awards will be made by the Selecting Official in rank order unless an application is justified to be selected out of rank based upon one or more of the selection factors described in Section V.2. of this FFO.

NIST reserves the right to negotiate the budget costs with any applicant selected to receive an award, which may include requesting that the applicant remove certain costs. Additionally, NIST may request that the successful applicant(s) modify objectives or work plans and provide supplemental information required by the agency prior to award. NIST also reserves the right to reject an application where information is uncovered that raises a reasonable doubt as to the responsibility of the applicant. NIST may select some, all, or none of the applications, or part(s) of any particular application.. NIST may request that applicants ranked fundable or higher consider working together in a combined project if this approach might effectively advance the program mission. The final approval of selected applications and issuance of awards will be by the NIST Grants Officer. The award decisions of the NIST Grants Officer are final.

**c. Full Review of Award Progress for Renewal.** Prior to considering renewal for a second potential five-year, multi-year award term, NIST anticipates seeking an independent, objective evaluation of the Forensic Science Center of Excellence project that includes scientific and technical experts not affiliated with NIST or the recipient to assess the effectiveness and continued desirability of the program. NIST plans to consider the results of such a review, including any findings and recommendations, as part of the process of determining whether to approve potential renewal of the project. This process may be used as part of the overall assessment, consistent with the potential long-term nature and purpose of the program. The full process is expected to include programmatic, policy, financial, administrative, and responsibility assessments, and the availability of funds, consistent with Department of Commerce and NIST policies and procedures in effect at that time.

**4. Anticipated Announcement and Award Dates.** The earliest anticipated start date for awards under this FFO is expected to be approximately March 2015.

## **5. Additional Information**

**a. Application Replacement Pages.** Applicants may not submit replacement pages and/or missing documents once an application has been submitted. Any revisions must be made by submission of a new application that must be received by NIST by the submission deadline (see Section IV.3 of this FFO) via [www.grants.gov](http://www.grants.gov).

**b. Notification to Unsuccessful Applicants.** Unsuccessful applicants will be notified in writing.

**c. Retention of Unsuccessful Applications.** An electronic copy of each non-selected applications will be retained for three (3) years for record keeping purposes. After three (3) years, it will be destroyed.

## **VI. Award Administration Information**

**1. Award Notices.** Successful applicants will receive an award from the NIST Grants Officer. The award cover page, i.e., CD-450, Financial Assistance Award is available at [http://ocio.os.doc.gov/s/groups/public/@doc/@os/@ocio/@oitpp/documents/content/dev01\\_002513.pdf](http://ocio.os.doc.gov/s/groups/public/@doc/@os/@ocio/@oitpp/documents/content/dev01_002513.pdf) and the DoC Financial Assistance Standard Terms and Conditions (January 2013) are available at [http://www.osec.doc.gov/oam/grants\\_management/policy/documents/DOC\\_Standard\\_Terms\\_and\\_Conditions\\_01\\_10\\_2013.pdf](http://www.osec.doc.gov/oam/grants_management/policy/documents/DOC_Standard_Terms_and_Conditions_01_10_2013.pdf).

## 2. Administrative and National Policy Requirements

- a. **DoC Pre-Award Notification Requirements.** The DoC Pre-Award Notification Requirements for Grants and Cooperative Agreements, 77 FR 74634 (December 17, 2012), are applicable to this FFO and are available at <https://www.federalregister.gov/articles/2012/12/17/2012-30228/departments-of-commerce-pre-award-notification-requirements-for-grants-and-cooperative-agreements>.
- b. **Employer/Taxpayer Identification Number (EIN/TIN), Dun and Bradstreet Data Universal Numbering System (DUNS), and System for Award Management (SAM).** All applicants for Federal financial assistance are required to obtain a universal identifier in the form of DUNS number and maintain a current registration in the Federal government's primary registrant database, SAM. On the form SF-424 items 8.b. and 8.c., the applicant's 9-digit EIN/TIN and 9-digit DUNS number must be consistent with the information in SAM (<https://www.sam.gov/>) and the Automated Standard Application for Payment System (ASAP), if the applicant has received prior Federal awards and has received award funding through ASAP. For complex organizations with multiple EIN/TIN and DUNS numbers, the EIN/TIN and DUNS numbers MUST be the numbers for the applying organization. Organizations that provide incorrect/inconsistent EIN/TIN and DUNS numbers may experience significant delays in receiving funds if their application is selected for funding. Confirm that the EIN/TIN and DUNS number are consistent with the information on the SAM and ASAP. **Please note that a federal assistance award cannot be issued if the designated recipient's registration in the System for Award Management (SAM.gov) is not current at the time of the award.**

Per 2 C.F.R. Part 25, each applicant must:

- (1) Be registered in the Central Contractor Registry (CCR) before submitting an application noting the CCR now resides in SAM;
- (2) Maintain an active CCR registration, noting the CCR now resides in SAM, with current information at all times during which it has an active Federal award or an application under consideration by an agency; and
- (3) Provide its DUNS number in each application it submits to the agency.

The applicant can obtain a DUNS number from Dun and Bradstreet. A DUNS number can be created within one business day. The CCR or SAM registration process may take in excess of fourteen (14) business days to complete. If you are currently registered with the CCR, you may not need to make any changes. However, please make certain that the EIN/TIN associated with your DUNS number is correct. Also note that you will need to update your CCR registration annually. This may take three or more business days to complete. Information about SAM is available at [www.sam.gov](http://www.sam.gov). See also 2 C.F.R. Part 25 and the *Federal Register* notice published on September 14, 2010, at 75 FR 55671.

- c. **Collaborations with NIST Employees.** All applications should include a description of any work proposed to be performed by an entity other than the applicant, and the cost of such work should ordinarily be included in the budget.

The Forensic Science Center of Excellence Program Description specifically anticipates collaboration with NIST. Applicants are not required to collaborate with specific NIST employees and may propose staff exchanges, sabbatical programs, activities involving jointly advised students, and other research collaboration activities without proposing any specific NIST collaborators. If the applicant wishes to propose collaboration with a specific NIST employee, the statement of work should include a statement of this intention, a description of the collaboration, and prominently identify the NIST employee(s) involved, if known. Any collaboration by a NIST employee must be approved by appropriate NIST management and is at the sole discretion of NIST. Prior to beginning the merit review process, NIST will verify the approval of the proposed collaboration. Any unapproved collaboration will be stricken from the application prior to the merit review. Any collaboration with an identified NIST employee that is approved by appropriate NIST management will not make an application more or less favorable in the competitive process.

- d. **Use of NIST Intellectual Property.** If the applicant anticipates using any NIST-owned intellectual

property to carry out the work proposed, the applicant should identify such intellectual property. This information will be used to ensure that no NIST employee involved in the development of the intellectual property will participate in the review process for that competition. In addition, if the applicant intends to use NIST-owned intellectual property, the applicant must comply with all statutes and regulations governing the licensing of Federal government patents and inventions, described in 35 U.S.C. §§ 200-212, 37 C.F.R. Part 401, 15 C.F.R. § 14.36, and in Section B.21 of the DoC Pre-Award Notification Requirements, 77 FR 74634 (December 17, 2012). Questions about these requirements may be directed to the Chief Counsel for NIST, (301) 975-2803.

Any use of NIST-owned intellectual property by an applicant is at the sole discretion of NIST and will be negotiated on a case-by-case basis if a project is deemed meritorious. The applicant should indicate within the statement of work whether it already has a license to use such intellectual property or whether it intends to seek one.

If any inventions made in whole or in part by a NIST employee arise in the course of an award made pursuant to this FFO, the United States government may retain its ownership rights in any such invention. Licensing or other disposition of NIST's rights in such inventions will be determined solely by NIST, and include the possibility of NIST putting the intellectual property into the public domain.

- e. **Research Activities Involving Human Subjects, Human Tissue, Data or Recordings Involving Human Subjects Including Software Testing.** Any application that includes research activities involving human subjects, human tissue/cells, or data or recordings involving human subjects, including software testing, must meet the requirements of the Common Rule for the Protection of Human Subjects ("Common Rule"), codified for the Department of Commerce (DoC) at 15 C.F.R. Part 27. In addition, any such application that includes research activities on these topics must be in compliance with any statutory requirements imposed upon the Department of Health and Human Services (DHHS) and other Federal agencies regarding these topics, all regulatory policies and guidance adopted by DHHS, the Food and Drug Administration, and other Federal agencies on these topics, and all Executive Orders and Presidential statements of policy on these topics.

NIST reserves the right to make an independent determination of whether an applicant's research activities involve human subjects. NIST policy also requires a NIST administrative review for research involving human subjects approved by a non-NIST Institutional Review Board (IRB). (15 C.F.R. § 27.112 Review by Institution.) If NIST determines that your application involves human subjects, you will be required to provide additional information for review and approval. If an award is issued, no research activities involving human subjects shall be initiated or costs incurred under the award until the NIST Grants Officer issues written approval. Retroactive approvals are not permitted.

NIST will accept applications that include exempt and non-exempt human subjects research activities. Organizations that have an IRB are required to follow the procedures of their organization for approval of exempt and non-exempt research activities that involve human subjects, if the application is funded. Non-exempt human subjects research activities by either domestic or foreign organizations will be required to have protocols approved by a cognizant active IRB currently registered with the Office for Human Research Protections (OHRP) within the DHHS that is linked to the engaged organizations possessing a currently valid Federal-wide Assurance (FWA) on file from OHRP. Information regarding how to apply for an FWA and register and IRB with OHRP can be found at <http://www.hhs.gov/ohrp/assurances/index.html>. NIST relies only on OHRP-issued FWAs and IRB Registrations for both domestic and foreign organizations for NIST supported research involving human subjects. NIST will not issue its own FWAs or IRB Registrations for domestic or foreign organizations.

***The applicant should clearly indicate in the application, by separable task, all research activities believed to be exempt or non-exempt research involving human subjects and the expected institution(s) where the research activities involving human subjects may be conducted.***

If an activity/task involves data obtained through intervention or interaction with living individuals or identifiable private information obtained from or about living individuals but the applicant participant(s) believes that the activity/task is not research as defined under the Common Rule, the following may be requested for that activity/task:

Justification, including the rationale for the determination and in some cases additional documentation, to support a determination that the activity/task in the application is not research as defined under the Common Rule. See 15 C.F.R. § 27.102. This may result in a NIST determination. If the applicant participant(s) uses a cognizant IRB that provides an IRB approval, a copy of that IRB approval documentation will be required by NIST. The applicant participant(s) is not required to establish a relationship with a cognizant IRB if they do not have one, but if the applicant participant(s) has a cognizant IRB that requires review of the activity/task, or the applicant participant(s) elects to obtain IRB review, a copy of the IRB approval documentation will be required by NIST.

If the application appears to NIST to include exempt research activities, and the performer of the activity or the supplier and/or the receiver of the biological materials, or data from human subjects **does not** have a cognizant IRB to provide an exemption determination, the following information may be requested during the review process so that NIST can evaluate whether an exemption under the Common Rule applies (see 15 C.F.R. § 27.101).

- (a) The name(s) of the institution(s) where the exempt research will be conducted; and/or from which biological materials, or data from human subjects will be provided.
- (b) A copy of the protocol of the research to be conducted; and/or the biological materials, or data from human subjects to be collected/provided, not pre-existing samples (*i.e.*, will proposed research collect only information without personal identifiable information, will biological materials or data be de-identified and when and by whom was the de-identification performed, how were the materials or data originally collected).
- (c) For pre-existing biological materials, or data from human subjects provide copies of the consent forms used for collection and a description of how the materials or data were originally collected and stripped of personal identifiers. If copies of consent forms are not available, explain.
- (d) Any additional clarifying documentation that NIST may request during the review process in order to make a determination that the activity or use of biological materials or data from human subjects is exempt under the Common Rule (see 15 C.F.R. § 27.101).

If the application appears to NIST to include research activities (exempt or non-exempt) involving human subjects, and the performer of the activity has a cognizant IRB, the following information may be requested during the review process:

- (1) The name(s) of the institution(s) where the research will be conducted;
- (2) The name(s) and institution(s) of the cognizant IRB(s), and the IRB registration number(s);
- (3) The FWA number of the applicant linked to the cognizant IRB(s);
- (4) The FWAs associated with all organizations engaged in the planned research activity/task-linked to the cognizant IRB;
- (5) If the IRB review(s) is pending, the estimated start date for research involving human subjects;
- (6) The IRB approval date (if currently approved for exempt or non-exempt research);
- (7) If any FWAs or IRB registrations are being applied for, that should be clearly stated.

Additional documentation may be requested by NIST for performers with a cognizant IRB during review of the application, and may include the following for research activities involving human subjects that are planned in the first year of the award:

- (1) A signed (by the study principal investigator) copy of each applicable final IRB-approved protocol;

- (2) A signed and dated approval letter from the cognizant IRB(s) that includes the name of the institution housing each applicable IRB, provides the start and end dates for the approval of the research activities, and any IRB-required interim reporting or continuing review requirements;
- (3) A copy of any IRB-required application information, such as documentation of approval of special clearances (i.e., biohazard, HIPAA, etc.) conflict-of-interest letters, or special training requirements;
- (4) A brief description of what portions of the IRB submitted protocol are specifically included in the application submitted to NIST, if the protocol includes tasks not included in the application, or if the protocol is supported by multiple funding sources. For protocols with multiple funding sources, NIST will not approve the study without a non-duplication-of-funding letter indicating that no other federal funds will be used to support the tasks proposed under the proposed research or ongoing project;
- (5) If a new protocol will only be submitted to an IRB if an award from NIST is issued, a draft of the proposed protocol may be requested;
- (6) Any additional clarifying documentation that NIST may request during the review process to perform the NIST administrative review of research involving human subjects. (see 15 C.F.R. § 27.112 Review by Institution.)

**f. Research Applications Involving Live Vertebrate Animals.** Any application that includes research activities involving live vertebrate animals, that are being cared for, euthanized, or used by participants in the application to accomplish research goals, teaching, or testing, must be in compliance with the National Research Council's "Guide for the Care and Use of Laboratory Animals," which can be obtained from National Academy Press, 500 5<sup>th</sup> Street, N.W., Department 285, Washington, DC 20055. In addition, such applications must meet the requirements of the Animal Welfare Act (7 U.S.C. § 2131 et seq.), 9 C.F.R. Parts 1, 2, and 3, and if appropriate, 21 C.F.R. Part 58. These regulations do not apply to proposed research using preexisting images of animals or to research plans that do not include live animals. These regulations also do not apply to obtaining stock items from animal material suppliers (e.g., tissue banks), such as cell lines and tissue samples, or from commercial food processors, where the vertebrate animal was euthanized for food purposes and not for sample collection. NIST does require documentation for obtaining custom samples from live vertebrate animals from animal material suppliers and other organizations (i.e., universities, companies, and government laboratories, etc.). Custom samples includes samples from animal material suppliers, such as when a catalog item indicates that the researcher is to specify the characteristics of the live vertebrate animal to be used, or how a sample is to be collected from the live vertebrate animal.

***The applicant should clearly indicate in the application, by separable task, all research activities believed to include research involving live vertebrate animals and the institution(s) where the research activities involving live vertebrate animals may be conducted.***

NIST reserves the right to make an independent determination of whether an applicant's research activities involve live vertebrate animals or custom samples from live vertebrate animals. If NIST determines that the application includes research activities or custom samples involving live vertebrate animals, you will be required to provide additional information for review and approval. If an award is issued, no research activities involving live vertebrate animals subjects shall be initiated or costs incurred under the award until the NIST Grants Officer issues written approval.

If the applicant's application appears to include research activities or custom sample collections involving live vertebrate animals the following information may be requested during the application review process:

- (1) The name(s) of the institution(s) where the animal research will be conducted and/or custom samples collected;
- (2) The assurance type and number, as applicable, for the cognizant Institutional Animal Care and Use Committee (IACUC) where the research activity is located. [For example: Animal

Welfare Assurance from the Office of Laboratory Animal Welfare (OLAW) should be indicated by the OLAW assurance number, i.e. A-1234; an USDA Animal Welfare Act certification should be indicated by the certification number i.e. 12-R-3456; and an Association for the Assessment and Accreditation of Laboratory Animal Care (AAALAC) should be indicated by AAALAC.]

- (3) The IACUC approval date (if currently approved);
- (4) If the review by the cognizant IACUC is pending, the estimated start date for research involving vertebrate animals;
- (5) If any assurances or IACUCs need to be obtained or established, that should be clearly stated.

Additional documentation may be requested by NIST during review of the application and may include the following for research activities and/or custom sample collections involving live vertebrate animals that are planned in the first year of the award:

- (1) A signed (by the Principal Investigator) copy of the IACUC approved Animal Study Application (ASP);
- (2) Documentation of the IACUC approval indicating the approval and expiration dates of the ASP; and
- (3) If applicable, a non-duplication-of-funding letter if the ASP is funded from several sources.
- (4) If a new ASP will only be submitted to an IACUC if an award from NIST issued, a draft of the proposed ASP may be requested.
- (5) Any additional clarifying documentation that NIST may request during review of applications to perform the NIST administrative review of research involving live vertebrate animals.

For more information regarding human subjects or research projects involving live vertebrate animals, contact Linda Beth Schilling, Senior Coordinator and Policy Advisor for Human & Animal Subjects Research at NIST (email: [linda.schilling@nist.gov](mailto:linda.schilling@nist.gov); phone: 301-975-2887).

- g. Funding Availability and Limitation of Liability.** Funding for the program listed in this FFO is contingent upon the availability of appropriations. In no event will NIST or DoC be responsible for application preparation costs if the program fails to receive funding or is cancelled because of agency priorities. Publication of this FFO does not oblige NIST or DoC to award any specific project or to obligate any available funds.
- h. Certifications Regarding Federal Felony and Federal Criminal Tax Convictions, Unpaid Federal Tax Assessments and Delinquent Federal Tax Returns.** In accordance with Federal appropriations law, an authorized representative of the selected applicant(s) may be required to provide certain pre-award certifications regarding federal felony and federal criminal tax convictions, unpaid federal tax assessments, and delinquent federal tax returns.
- i. OMB Uniform Administrative Requirements, Cost Principles and Audit Requirements.** Please note that on December 26, 2013, OMB published final guidance titled "Uniform Administrative Requirements, Cost Principles, and Audit Requirements" (OMB Uniform Guidance) (<https://www.federalregister.gov/articles/2013/12/26/2013-30465/uniform-administrative-requirements-cost-principles-and-audit-requirements-for-federal-awards>), which streamlines the language from eight existing OMB circulars, including Cost Principles (OMB Circulars A-21, A-87, A-122) and administrative requirements (OMB Circulars A-102 and A-110), into one consolidated set of guidance applicable to federal assistance awards. Once adopted by the Department of Commerce through the promulgation of updated financial assistance regulations, the OMB Uniform Guidance will supersede DOC's uniform administrative requirements for financial assistance awards, currently set forth in 15 C.F.R. parts 14 and 24. The DOC expects to adopt the OMB Uniform Guidance by December 26, 2014, meaning that the OMB Uniform Guidance will apply to all new awards and to additional funding to existing awards made after December 26, 2014. In addition, the audit requirements of the OMB Uniform Guidance will apply to audits of non-Federal entities beginning on or after December 26, 2014. Therefore, applicants should familiarize themselves with

the OMB Uniform Guidance. Additional information on the substance of and transition to the OMB Uniform Guidance may be found at <https://cfo.gov/cofar/>.

- j. **Accounting Systems Certification.** If an applicant has never received Federal funding or if an applicant has an audit or other history of financial management issues, a certification may be required from a CPA to provide information about whether the applicant has a functioning financial management system that meets the provisions of 15 C.F.R. § 14.21 or 15 C.F.R. § 24.30 (as applicable). As part of the proposed project budget, such applicants may wish to include costs for an accounting systems assessment and certification.

### 3. Reporting

- a. **Reporting Requirements.** Per the reporting requirements described in Sections A.01 Financial Reports and B.01 Performance (Technical) Reports of the DoC Financial Assistance Standard Terms and Conditions dated January 2013 ([http://www.osec.doc.gov/oam/grants\\_management/policy/documents/DOC\\_Standard\\_Terms\\_and\\_Conditions\\_01\\_10\\_2013.pdf](http://www.osec.doc.gov/oam/grants_management/policy/documents/DOC_Standard_Terms_and_Conditions_01_10_2013.pdf)), the following reporting requirements shall apply:
  - (1) Each award recipient will be required to submit an SF-425, Federal Financial Report in triplicate (an original and two (2) copies), on a quarterly basis for the periods ending March 31, June 30, September 30, and December 31 of each year. Reports will be due within 30 days after the end of the reporting period.
  - (2) Performance (Technical) Reports. Each award recipient will be required to submit a technical progress report in triplicate (an original and two (2) copies), on an annual basis for each year. Reports will be due 90 days after the grant year. A final technical progress report shall be submitted within 90 days after the expiration date of the award. Two (2) copies of the technical progress report shall be submitted to the Project Manager and the original report to the NIST Grants Officer. Technical progress reports shall contain information as prescribed in 15 C.F.R. § 14.51.
  - (3) Patent and Property Reports. From time to time, and in accordance with the Uniform Administrative Requirements and other terms and conditions governing the award, the recipient may need to submit property and patent reports.
- b. **OMB Circular A-133 Audit Requirements.** Single or program-specific audits shall be performed in accordance with the requirements contained in OMB Circular A-133, “*Audits of States, Local Governments, and Non-Profit Organizations*,” and the related *Compliance Supplement*. OMB Circular A-133 requires any non-Federal entity (*i.e.*, including non-profit institutions of higher education and other non-profit organizations) that expends Federal awards of \$500,000 or more in the recipient’s fiscal year to conduct a single or program-specific audit in accordance with the requirements set out in the Circular. Applicants are reminded that NIST, the DoC Office of Inspector General or another authorized Federal agency may conduct an audit of an award at any time. Additionally, applicants should take note of the new financial assistance audit requirements set forth in the recently published OMB Uniform Administrative Requirements, Cost Principles, and Audit Requirements, which is cited and discussed above in Section VI.2.i. of this FFO.
- c. **Federal Funding Accountability and Transparency Act of 2006.** In accordance with 2 C.F.R. Part 170, all recipients of a Federal award made on or after October 1, 2010, are required to comply with reporting requirements under the Federal Funding Accountability and Transparency Act of 2006 (Pub. L. No. 109-282). In general, all recipients are responsible for reporting sub-awards of \$25,000 or more. In addition, recipients that meet certain criteria are responsible for reporting executive compensation. Applicants must ensure they have the necessary processes and systems in place to comply with the reporting requirements should they receive funding. Also see the *Federal Register* notice published September 14, 2010, at 75 FR 55663.

## VII. Agency Contact(s)

Questions should be directed to the following contact persons:

| Subject Area                                         | Point of Contact                                                                                                                                                                                                                                                                                                                            |
|------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Programmatic and technical questions                 | Dave Holbrook<br>National Institute of Standards and Technology<br>Phone: (301) 975-4462<br>Fax: (301) 216-0529<br>E-mail: <a href="mailto:dave.holbrook@nist.gov">dave.holbrook@nist.gov</a>                                                                                                                                               |
| Electronic application submission through Grants.gov | Christopher Hunton<br>Administrative Support & Document Control Office<br>NIST<br>Phone: 301-975-5718<br>Fax: 301-975-8884<br>E-mail: <a href="mailto:christopher.hunton@nist.gov">christopher.hunton@nist.gov</a><br><br>Or<br><br>Grants.gov<br>Phone: 800-518-4726<br>E-mail: <a href="mailto:support@grants.gov">support@grants.gov</a> |
| Grant rules and regulations                          | Scott McNichol<br>Grants Management Division<br>NIST<br>Phone: 301-975-5603<br>Fax: 301-975-5976<br>E-mail: <a href="mailto:scott.mcnichol@nist.gov">scott.mcnichol@nist.gov</a>                                                                                                                                                            |

## VIII. Other Information

- **Webinar and Website:** NIST plans to hold a webinar to offer information on the Forensic Science Center of Excellence program. The webinar will be held approximately 30 days after posting of this FFO. The webinar will provide general guidance on preparing applications and provide an opportunity for the public to ask questions about the program. Proprietary technical discussions about specific project ideas will not be permitted, and NIST will not critique or provide feedback on any project ideas during the webinar or at any time before submission of an application to NIST. There is no cost for the webinar, but participants must register in advance. Participation in the webinar is not required for the submission of an application. The webinar will be recorded, and a link to the recording will be available for public access. Additional, information concerning, and registration for, the webinar is available at: [www.nist.gov/coe/forensics](http://www.nist.gov/coe/forensics).

A NIST Forensic Science COE public website exists ([www.nist.gov/coe/forensics](http://www.nist.gov/coe/forensics)) that provides information about NIST's involvement in forensic science, including this Forensic Science Center of Excellence Federal Funding Opportunity. NIST anticipates that a "Frequently Asked Questions" section will be maintained and updated as needed to provide additional guidance and clarifying information that may arise related to this Funding Opportunity. Questions regarding this FFO should be submitted in writing and may be posted in the "Frequently Asked Questions" section. Any amendments to this FFO will be announced through [www.grants.gov](http://www.grants.gov).