

December 23, 2014

**ANNOUNCEMENT OF FEDERAL FUNDING OPPORTUNITY (FFO)
Precision Measurement Grant Program (PMGP)**

EXECUTIVE SUMMARY

- **Federal Agency Name:** National Institute of Standards and Technology (NIST), United States Department of Commerce (DoC)
- **Funding Opportunity Title:** Precision Measurement Grant Program (PMGP)
- **Announcement Type:** Initial
- **Funding Opportunity Number:** 2015-NIST-PMGP-01
- **Catalog of Federal Domestic Assistance (CFDA) Number:** 11.609, Measurement and Engineering Research and Standards
- **Dates:** Abbreviated applications must be received no later than 5:00 p.m. Eastern Time on Tuesday, February 3, 2015. Abbreviated applications received after this deadline will not be reviewed or considered. Review of abbreviated applications and selection of finalists is expected to be completed by Tuesday, March 24, 2015. Full applications submitted through Grants.gov must be received no later than 11:59 p.m. Eastern Time, on Tuesday, May 5, 2015. Paper or e-mailed full applications must be received no later than 5:00 p.m. Eastern Time, on Tuesday, May 5, 2015. Full applications received after the respective deadline will not be reviewed or considered. Review of full applications, selection of successful applicants, and award processing is expected to be completed in August 2015. The earliest anticipated start date for awards under this FFO is expected to be October 1, 2015.

If you have been invited to submit a full application, 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.4.b.) may take between three and five business days or as long as 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 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.
- **Funding Opportunity Description:** NIST is soliciting applications from eligible applicants to support significant research in the field of fundamental measurement or the determination of fundamental constants.

- **Anticipated Funding Amounts:** Approximately \$100,000 may be available to fund the first year of new multi-year awards, supporting at most two (2) projects, depending on the availability of funding, for up to three (3) years at \$50,000 per year, consistent with the multi-year funding policy described in Section II.2. of this FFO.
- **Funding Instrument:** Grant or cooperative agreement, as appropriate.
- **Who is Eligible:** Accredited institutions of higher education; hospitals; non-profit organizations; commercial organizations; state, local, and Indian tribal governments; foreign governments; organizations under the jurisdiction of foreign governments; international organizations; and Federal agencies with appropriate legal authority.
- **Cost Sharing Requirements:** This Program does not require cost sharing.

FULL ANNOUNCEMENT TEXT

I. Funding Opportunity Description

The statutory authority for the Precision Measurement Grant Program (PMGP) is 15 U.S.C. § 272(b)(2), (b)(4), (b)(6), (b)(7), (b)(8), (c)(1), (c)(3), (c)(10), (c)(11), and (c)(16).

Program Description: Since 1970, NIST, as part of its research program, has provided funding under the Precision Measurement Grant Program (PMGP) primarily to universities and colleges so that faculty may conduct significant research in the field of fundamental measurement or the determination of fundamental constants. NIST sponsors these research projects primarily to encourage basic, measurement-related research in universities and colleges and other research laboratories and to foster contacts between NIST scientists and those faculty members of academic institutions and other researchers who are actively engaged in such work. The PMGP also is intended to make it possible for researchers to pursue new ideas for which other sources of support may be difficult to find. There is some latitude in research topics that will be considered under the PMGP. The key requirement is that the proposed project is consistent with NIST's ongoing work in the field of basic measurement science (<http://pml.nist.gov>).

II. Award Information

1. **Funding Instrument.** The funding instrument that will be used is a grant or cooperative agreement. If a cooperative agreement is used, 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 Department of Commerce (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). Please note the DoC Grants and Cooperative Agreements Manual is expected to be updated after publication of this funding announcement and before October 1, 2015. Refer to Section VII. of this FFO, Agency Contacts, Grant Rules and Regulations, if you seek the information at this link and it is no longer working or you need more information.

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 selected for funding, 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 the PMGP, and the availability of funds.
3. **Funding Availability.** Approximately \$100,000 may be available to fund the first year of new multi-year awards, supporting at most two (2) projects, depending on the availability of funding, for up to three (3) years at \$50,000 per year, consistent with the multi-year funding policy described in Section II.2. of this FFO.

III. Eligibility Information

1. **Eligible Applicants.** Eligible applicants are accredited institutions of higher education; hospitals; non-profit organizations; commercial organizations; state, local and Indian tribal governments; foreign governments; organizations under the jurisdiction of foreign governments; international organizations; and Federal agencies with appropriate legal authority.
2. **Cost Sharing or Matching.** This Program does not require cost sharing.
3. **Other.**

Abbreviated Applications. NIST requires abbreviated applications under the PMGP (see Section IV.2.a. of this FFO).

IV. Application and Submission Information

1. **Address to Request Application Package.** The application form for the abbreviated application, the SF-424, is available at www.grants.gov. The SF-424 may also be requested by contacting the NIST personnel listed below:

Ms. Gail Newrock, National Institute of Standards and Technology, PMGP, 100 Bureau Drive, Mail Stop 8420, Gaithersburg, MD 20899-8420. Phone: (301) 975-3200; e-mail pmg@nist.gov)

2. Content and Format of Application Submission

a. Required Abbreviated Application Form and Document

Abbreviated applications must be submitted under the PMGP in order to be considered for funding. The abbreviated application must contain the following:

(1) SF-424, Application for Federal Assistance. The SF-424 must be signed by an authorized representative of the applicant organization. SF-424, Item 12, must list the FFO number 2015-NIST-PMGP-01. The list of certifications and assurances referenced in Item 21 of the SF-424 is not needed for the abbreviated application.

(2) A word-processed document written by the applicant of no more than five (5) double-spaced pages describing the proposed project that includes sufficient information to address the evaluation criteria (see Section V.1. of this FFO).

b. Required Full Application Forms and Documents

Only applicants whose abbreviated applications have been selected by NIST as “finalists” and who have been requested by NIST to submit a full application are permitted to submit full applications to NIST for the PMGP. Full applications submitted by applicants that have not been selected as finalists will be returned to the applicant without review. The full application must contain the following:

(1) SF-424, Application for Federal Assistance. The SF-424 must be signed by an authorized representative of the applicant organization.

SF-424, Item 12, must list the FFO number 2015-NIST-PMGP-01.

For SF-424, Item 21, the list of certifications and assurances is contained in the SF-424B.

(2) SF-424A, Budget Information - Non-Construction Programs. The budget should reflect anticipated expenses for each year of the project in \$50,000 increments for up to three (3) years, considering all potential cost increases, including cost of living adjustments.

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

(4) CD-511, Certification Regarding Lobbying

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

(6) Technical Proposal. The Technical Proposal is a word-processed document of no more than ten (10) double-spaced pages responsive to the program description (see Section I. of this FFO) and the evaluation criteria (see Section V.1. of this FFO). A suggested format is:

- (a) **Abstract.** Provide a concise title and a 100-200 word abstract.
 - (b) **Project Narrative.** Address each of the four (4) evaluation criteria (see Section V.1. of this FFO).
 - (c) **Curriculum Vitae (CV).** Provide a CV of the principal investigator, including a list of his/her most recent and relevant publications.
 - (d) **Current Support.** Indicate if your research is supported by other sources of funding and make clear what NIST funds will enable the applicant to achieve that could not be achieved with the other sources of funds.
 - (e) **Similar Research Applications.** Provide a list of all current and pending applications for similar research, including the amounts requested and the source that was or is considering them.
- (7) Budget Narrative.** There is no set format for the Budget Narrative; however, it should provide a breakdown of each of the object class categories as reflected on the SF-424A for each year.

(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 audit agency. If the rate was not established by a cognizant Federal audit agency, provide a statement to this effect. Successful applicants will be required to obtain such a rate.

If submitting the application electronically via Grants.gov, items IV.2.b.(1) through IV.2.b.(5) above are part of the standard application package in Grants.gov and can be completed through the download application process. Items IV.2.b.(6) through IV.2.b.(8) 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 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. 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.

If submitting an application by paper or e-mail, all of the required application documents should be submitted in the order listed above.

c. Application Format

- (1) Application language.** English.
- (2) Double-sided copy.** For paper submissions, print on both sides of the paper (front to back counts as two (2) pages).
- (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.** Double-spaced except for the forms and Budget Narrative, which should be single-spaced.
- (7) Margins.** One (1) inch top, bottom, left, and right.
- (8) Number of paper copies.** For paper submissions, one (1) signed stapled original. If submitting electronically via e-mail or through Grants.gov, paper copies are not required. Although applicants submitting paper applications are not required to submit more than one (1) copy of the application, the normal review process for the PMGP utilizes ten (10) copies. Therefore, applicants may submit sufficient application copies for the full review process if they wish. If the original application is in color, the additional copies must also be in color.
- (9) Page layout.** Portrait orientation only (except figures, graphs, and pictures (see Section IV.2.c.(4))).
- (10) Page Limit.** Abbreviated applications are limited to five (5) pages, and full applications are limited to ten (10) pages.

Page limit includes: Table of contents (if included), Technical Proposal with all required information included, including CVs, figures, graphs, tables, images, pictures, and references.

Page limit excludes: SF-424, Application for Federal Assistance; SF-424A, Budget Information – Non-Construction Programs; SF-424B, Assurances – Non-Construction Programs; SF-LLL, Disclosure of Lobbying Activities; CD-

511, Certification Regarding Lobbying; Budget Narrative; and Indirect Cost Rate Agreement.

(11) Page numbering. Number pages sequentially.

(12) Paper size. 21.6 by 27.9 centimeters (8 ½ by 11 inches).

(13) Application language. English.

(14) Staple paper submission. For paper submissions, staple the original signed application securely with one (1) staple in the upper left-hand corner.

(15) Typed document. All applications, including forms, must be typed.

3. Submission Dates and Times.

a. Abbreviated Applications. Abbreviated applications must be received by NIST no later than 5:00 p.m. Eastern Time on Tuesday, February 3, 2015. This deadline applies to all modes of abbreviated application submission, including e-mail, U.S. Postal Service standard delivery, courier services, and express mailing.

b. Full Applications. Full applications submitted through Grants.gov must be received no later than 11:59 p.m. Eastern Time, on Tuesday, May 5, 2015. Otherwise, full applications must be received no later than 5:00 p.m. Eastern Time, on Tuesday, May 5, 2015. This latter deadline applies to all modes of full application submission, including e-mail, U.S. Postal Service standard delivery, courier services, and express mailing.

Abbreviated and full applications not received by the specified due dates and times will not be considered and will be returned without review. NIST determines whether the abbreviated and full applications submitted by paper have been timely received by the deadline by the date and time receipt they are physically received by NIST at its Gaithersburg, Maryland campus. For abbreviated and full application submissions via e-mail, NIST will consider the date and time of the e-mail. For full application submissions via Grants.gov, NIST will consider the date and time stamped on the validation generated by 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. 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.

If you have been invited to submit a full application, 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.4.b.) may take between three and five business days or as long as 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 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. Abbreviated Applications. Abbreviated Applications may be submitted in paper format or electronically by e-mail as follows:

Paper Submission: Dr. Peter J. Mohr
National Institute of Standards and Technology
NIST Precision Measurement Grant Program
100 Bureau Drive, Mail Stop 8420
Gaithersburg, MD 20899-8420

Phone: (301) 975-3217

E-mail Submission: pmg@nist.gov

b. Full Applications. Applicants whose abbreviated applications are selected as finalists and who are invited by NIST to submit full applications may submit them by paper or electronically.

(1) Paper applications must be sent to:

Dr. Peter J. Mohr
National Institute of Standards and Technology
NIST Precision Measurement Grant Program
100 Bureau Drive, Mail Stop 8420
Gaithersburg, MD 20899-8420

Phone: (301) 975-3217

(2) Electronic applications may be submitted either by e-mail or through Grants.gov as follows:

(a) **E-mail.** E-mail to pmg@nist.gov,

Or

(b) **Grants.gov.** Grants.gov at www.grants.gov, announcement 2015-NIST-PMGP-01.

- i. 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 2015-NIST-PMGP-01 announcement, contact Christopher Hunton by phone at 301-975-5718 or by e-mail at christopher.hunton@nist.gov.
- ii. 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.4.b) 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.
- iii. 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 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, both electronic and paper submitters, should be aware that adequate time must be factored into applicants’ schedules for delivery of their application. Submitters of electronic applications are advised that volume on Grants.gov may be extremely heavy on the deadline date, and if Grants.gov is unable to accept applications electronically in a timely fashion, applicants are encouraged to exercise their option to submit applications in paper format. Submitters of paper applications should allow adequate time to ensure a paper application will be received on time, taking into account that Federal Government security screening for U.S. Postal Service mail may delay receipt of mail for up to two (2) weeks and that guaranteed express mailings and/or couriers are not always able to fulfill their guarantees.

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

- c. 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 Gail Newrock by telephone at (301) 975-3200 or by e-mail to pmg@nist.gov.

V. Application Review Information

- 1. Evaluation Criteria.** The evaluation criteria that will be used in evaluating both abbreviated applications and full applications are as follows:

- a. **The importance of the proposed research** - What is its potential for answering some currently pressing question or of opening up a whole new area of activity?
- b. **The relationship of the proposed research to NIST's ongoing work** - How well does the proposed research support one of NIST's current efforts to develop a new or improved fundamental measurement method or physical standard, test the basic laws of physics, or provide an improved value for a fundamental constant? (See <http://pml.nist.gov>)
- c. **The feasibility of the research and the potential impact of the project/award** - How likely is it that significant progress can be made in a three year time period with the funds and personnel available and that the funding will enable work that would otherwise not be done?
- d. **The qualifications of the applicant** - How strongly do the educational and employment background and the quality of the research, based on recent publications, of the applicant indicate that there is a high probability that the proposed research will be carried out successfully?

Each of these factors will be given equal weight in the evaluation process.

- 2. **Selection Factors.** The Selecting Official shall select applications for award based upon the rank order of the applications (see Section V.3.b.(2) of this FFO), and may select an application out of rank based on one or more of the following selection factors:

- a. The availability of Federal funds
- b. Whether the project duplicates other projects funded by DoC or by other Federal agencies.
- c. Relevance to the program description (see Section I. of this FFO).
- d. Variation of scientific or technical approaches or participants across funded projects.

3. Review and Selection Process

- a. **Initial Administrative Review of Abbreviated and Full Applications.** An initial review of timely received abbreviated and full applications will be conducted to determine eligibility, e.g., full applications submitted by applicants who did not submit the required abbreviated application or submitted by applicants whose abbreviated applications have not been selected by NIST as finalists; 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.

- b. Full Review of Eligible, Complete, and Responsive Abbreviated and Full Applications.** Abbreviated and full applications determined to be eligible, complete, and responsive will proceed for full reviews in accordance with the review and selection process below:

(1) Abbreviated Applications. Each abbreviated application will be reviewed by the same eight (8) independent, objective reviewers, which will include written evaluations and scores, based on the evaluation criteria (see Section V.1. of this FFO). If non-Federal reviewers are used, the reviewers may discuss the applications with each other, but scores will be determined on an individual basis, not as a consensus. The independent reviewers will be scientists knowledgeable in the scientific areas of the Program. Each reviewer will rank the abbreviated applications based on their assigned scores. An aggregated ranking will then be derived based on reviewers' rankings. This ranking will then be provided to the Selecting Official for further consideration.

The Selecting Official, who is the Chief of the Quantum Measurement Division of the Physical Measurement Laboratory, will then select approximately four (4) to six (6) finalists based upon the rank order. The Selecting Official may select an application out of rank order based upon the selection factors in Section V.2. of this FFO.

(2) Full Applications. Each full application submitted by an applicant whose abbreviated application was selected as a finalist will be reviewed by the same eight (8) independent reviewers that reviewed the abbreviated applications. If non-Federal reviewers are used, the reviewers may discuss the applications with each other, but scores will be determined on an individual basis, not as a consensus. The reviews will include written evaluations and scores based on the same evaluation criteria (see Section V.1. of this FFO). Each reviewer will rank the full applications based on their assigned scores. An aggregated ranking will then be derived based on reviewers' rankings. This ranking will then be provided to the Selecting Official for further consideration.

The Selecting Official, who is the Chief of the Quantum Measurement Division of the Physical Measurement Laboratory, will then select funding recipients based upon the rank order. The Selecting Official may select an application out of rank order based upon the selection factors in Section V.2. of this FFO.

NIST reserves the right to negotiate the budget costs with the applicants that have been selected to receive awards, which may include requesting that the applicant remove certain costs. Additionally, NIST may request that the applicant modify objectives or work plans and provide supplemental information required by the agency prior to award. For international applications, NIST will follow

applicable U.S. laws and policies. 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. 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.

4. **Anticipated Announcement and Award Dates.** Awards may be made approximately in the August 2015 time frame.

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.
- b. **Notification to Unsuccessful Applicants.** Unsuccessful applicants will be notified in writing.
- c. **Notification to Finalists.** Applicants whose abbreviated applications are selected by NIST as “finalists” will be notified in writing and invited by NIST to submit full applications.
- d. **Retention of Unsuccessful Applications.** An electronic copy of each non-selected application 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. This award cover page may be updated between publication of this funding announcement and issuance of awards in this program. Refer to Section VII. Agency Contacts, Grant Rules and Regulations, if you seek the information at this link and it is no longer working or you need more information.
2. **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>. When it becomes available, Commerce implementation of the Uniform Guidance is expected to be posted at http://www.osec.doc.gov/oam/grants_management/policy/default.htm. Refer to Section VII. Agency Contacts, Grant rules and regulations, if you seek the information at this link and it is no longer working or you need more information.

- 3. Financial Assistance Standard Terms and Conditions.** The DoC will apply Financial Assistance Standard Terms and Conditions to this award. A current version of these terms, from January 2013, is 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). These Terms are expected to be updated between publication of this funding announcement and issuance of awards in this program to ensure consistency with Commerce implementation of the OMB Uniform Guidance referenced in the previous paragraph, Section VI.2. of this FFO. When they become available, updated terms are expected to be posted at http://www.osec.doc.gov/oam/grants_management/policy/default.htm. Refer to Section VII. Agency Contacts, Grant Rules and Regulations, if you seek the information at this link and it is no longer working or you need more information. To the extent applicable, Federal-wide Research Terms and Conditions at <http://www.nsf.gov/awards/managing/rtc.jsp> and Special Award Conditions necessary to implement the PMPG will apply to awards in this program.

4. 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](#). These Requirements may be updated between publication of this funding announcement and issuance of awards in this program to ensure consistency with Commerce implementation of the OMB Uniform Guidance referenced in Section VI.2. of this FFO. Updated information is expected to be posted at http://www.osec.doc.gov/oam/grants_management/policy/default.htm. Refer to Section VII. Agency Contacts, Grant Rules and Regulations, if you seek the information at this link and it is no longer working or you need more information.

- 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 if applicable, the U.S. Treasury's 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.

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

- (1) Be registered in the Central Contractor Registration (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 five or more 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 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.

If an applicant proposes collaboration with NIST, 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.

- 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. Please note that 15 C.F.R. Parts 14 and 24 and the DoC Pre-Award Notification Requirements are subject to revision prior to issuance of awards in this program, as described in Section VI.2. and Section VI.4.a. of this FFO.

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 satisfy 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. Research activities involving human subjects who fall within the classes of subjects found in 45 C.F.R. Part 46, Subparts B, C and D must satisfy the requirements of the applicable subpart. 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 activities include research involving 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 an application includes research activities which involve human subjects, the applicant 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 for those activities 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 research activities involving human subjects. 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. Both domestic and foreign organizations performing non-exempt research activities involving human subjects 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. All engaged organizations must possess a currently valid Federalwide Assurance (FWA) on file from OHRP. Information regarding how to apply for an FWA and register an 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, and which institutions are expected to be engaged in the research activities.

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 information may be requested for that activity/task:

- (1) 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 in the Common Rule. See 15 C.F.R. § 27.102 Definitions.

- (2) If the applicant participant(s) uses a cognizant IRB that provides a determination that the activity/task is not research, a copy of that determination 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/determination documentation will be required by NIST.

NIST will review the information submitted and may coordinate further with the applicant before determining whether the activity/task will be defined as research for purposes of implementing the Common Rule in the applicable NIST financial assistance program or project.

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 To what does this policy apply?).

- (1) 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.
- (2) A copy of the protocol for 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).
- (3) 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.
- (4) Any additional clarifying documentation that NIST may request during the review process in order to make a determination that the activity/task or use of biological materials or data from human subjects is exempt under the Common Rule (see 15 C.F.R. § 27.101 To what does this policy apply?).

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 registered with OHRP, 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 of the engaged organizations has applied for or will apply for an FWA or IRB registration, those details should be clearly provided for each engaged organization.

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.)

This clause reflects the existing NIST policy for Research Involving Human Subjects. Should the policy be revised prior to award, a clause reflecting the policy current at time of award may be incorporated into the award.

If the policy is revised after award, a clause reflecting the updated policy may

be incorporated into the award.

- f. **Research Applications Involving Live Vertebrate Animals.** Any application that includes research activities involving live vertebrate animals, that will be cared for, euthanized, or used by participants in the research described in the application to accomplish research goals, teaching, or testing, 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. In addition, such applications should be in compliance with the National Research Council's "Guide for the Care and Use of Laboratory Animals (8th edition)," (the Guide) which can be obtained from National Academy Press, 500 5th Street, N.W., Department 285, Washington, DC 20055, or online at <http://grants.nih.gov/grants/olaw/Guide-for-the-Care-and-Use-of-Laboratory-Animals.pdf>.

The requirements described above do not apply to proposed research using preexisting images of animals or to research plans that do not include live animals. The requirements 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.

Some "field studies" of animals may be exempt under the Animal Welfare Act from full review and approval by an animal care and use committee, as determined by each institution. Field study is defined as "...a study conducted on free-living wild animals in their natural habitat." However, this term excludes any study that involves an invasive procedure or that harms or materially alters the behavior of an animal under study. Field studies, with or without invasive procedures, may also require obtaining appropriate federal or local government permits (e.g., marine mammals, endangered species etc.)

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

NIST reserves the right to make an independent determination of whether an applicant's research activities involve live vertebrate animals, custom samples from, or field studies with live vertebrate animals. If NIST determines that the application includes research activities, field studies or custom samples involving live vertebrate animals, the applicant 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 for those activities under the award until the NIST Grants Officer issues written approval.

If an application appears to include research activities, field studies or custom sample collections involving live vertebrate animals the following information may be requested from the applicant during the application review process:

- (1) The name(s) of the institution(s) where the research involving live vertebrate animals 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; a 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 for the Animal Study Protocol (ASP) (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 must be obtained or IACUCs must be established, those details should be clearly provided for each instance.
- (6) If any special permits are required for field studies, those details should be clearly provided for each instance.

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 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 (e.g., documentation of special permits).

This clause reflects the existing NIST policy for Research Involving Live Vertebrate Animals. Should the policy be revised prior to award, a clause reflecting the policy current at time of award may be incorporated into the award.

If the policy is revised after award, a clause reflecting the updated policy may be incorporated into the award.

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; 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 this 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. Collaborations Making Use of Federal Facilities.** All applications should include a description of any work proposed to be performed using Federal facilities.

If an applicant proposes use of NIST facilities, the statement of work should include a statement of this intention and a description of the facilities. Any use of NIST facilities 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 availability of the facilities and approval of the proposed usage. Any unapproved facility use will be stricken from the application prior to the merit review. Examples of some facilities that may be available for collaborations are listed on the following NIST Web site: <http://www.nist.gov/user-facilities.cfm>.

5. Reporting

- a. Reporting Requirements.** In lieu of 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), the following reporting requirements shall apply:

(1) Financial Reports. Each award recipient will be required to submit an SF-425, Federal Financial Report on a semi-annual basis for the periods ending March 31 and September 30 of each year to the NIST Grants Officer and Grants Specialist named in the award documents. Reports will be due within 30 days after the end of the reporting period.

(2) Performance (Technical) Report. Each award recipient will be required to submit a technical progress report on a semi-annual basis for the periods ending March 31 and September 30 of each year. Reports will be due within 30 days after the end of the reporting period. 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 and Grants Specialist named in the award documents. Technical progress reports shall contain information as prescribed in 2 C.F.R. § 200.328.

(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.

Please note that the DoC Financial Assistance Standard Terms and Conditions are subject to revision prior to issuance of awards in this program, as described in Section VI.3. of this FFO.

b. OMB Circular A-133 Audit Requirements. Single or program-specific audits shall be performed in accordance with the applicable audit requirements. At the time of publication of this FFO, those requirements are 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. 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	Dr. Peter J. Mohr Phone: (301) 975-3217 E-mail: mohr@nist.gov
Electronic full application submission through Grants.gov	Christopher Hunton Phone: (301) 975-5718 Fax: (301) 975-6319 E-mail: christopher.hunton@nist.gov Or Grants.gov Phone: (800) 518-4726 E-mail: support@grants.gov
Grant rules and regulations	Scott McNichol Phone: (301) 975-5603 Fax: (301) 975-6319 E-mail: scott.mcnichol@nist.gov