

November 30, 2011

**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:** 2012-NIST-PMGP-01
- **Catalog of Federal Domestic Assistance (CFDA) Number:** 11.609, Measurement and Engineering Research and Standards
- **Dates:** Abbreviated Proposals must be received no later than 5:00 p.m. Eastern Time on Thursday, February 2, 2012. Abbreviated proposals received after this deadline will not be reviewed or considered. Review of abbreviated proposals and selection of finalists is expected to be completed by Friday, March 23, 2012. Full proposals must be received no later than 5:00 p.m. Eastern Time, on Thursday, May 3, 2012. Full proposals received after this deadline will not be reviewed or considered. Review of full proposals, selection of successful proposers, and award processing is expected to be completed in August 2012. The earliest anticipated start date for awards under this FFO is expected to be October 1, 2012.
- **Proposal Submission Address:**
 - a. **Abbreviated Proposals:** Abbreviated Proposals 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 Proposals:** Proposers whose abbreviated proposals are selected as finalists and who are invited by NIST to submit full proposals may submit them in paper format or electronically 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

Electronic Submission: pmg@nist.gov

Or

www.grants.gov

- **Funding Opportunity Description:** NIST is soliciting proposals from eligible proposers to support significant research in the field of fundamental measurement or the determination of fundamental constants.
- **Total Amount to be Awarded:** Approximately \$100,000 to fund the first year of new multi-year awards.
- **Anticipated Amounts:** NIST anticipates funding two (2) projects for up to three (3) years at \$50,000 per year, consistent with the multi-year funding policy described in Section II. Award Information, 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 PMGP is 15 U.S.C. § 272(b) and (c).

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 is also 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. 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 its progress and approving changes in the statement of work. Additional forms of substantial involvement that may arise are described in the DoC Grants and Cooperative Agreements Interim Manual, which is available at

http://www.osec.doc.gov/oam/grants_management/policy/doc_grants_manual/default.htm.

2. Multi-Year Funding Policy

When a proposal 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

NIST plans that a total of \$100,000 may be made available in FY 2012 to award two (2) multi-year awards to eligible proposers for the first year. New awards are expected to be \$150,000 each with project performance periods of up to three (3) years, consistent with the multi-year funding policy described in Section II. Award Information of this FFO. Therefore, proposers may propose multi-year projects for up to three (3) years at no more than \$50,000 per year.

III. Eligibility Information

1. Eligible Proposers

Eligible proposers 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

The PMGP does not require cost sharing.

3. Other

Abbreviated Proposals. NIST requires abbreviated proposals under the PMGP.

IV. Application/Proposal 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.

For proposers without Internet access, the standard application package may be requested by contacting:

Ms. Gail Newrock
National Institute of Standards and Technology
PMGP
100 Bureau Drive, Mail Stop 8420
Gaithersburg, MD 20899-8420

Phone: 301-975-3200

2. Content and Format of Application/Proposal Submission

a. Required Abbreviated Proposal Form and Document

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

- (1) SF-424, Application for Federal Assistance. The SF-424 must be signed by an authorized representative of the proposer organization. The list of certifications and assurances referenced in item 21 of the SF-424 is contained in the SF-424B.
- (2) A word-processed document written by the proposer 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 Proposal Forms and Documents

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

- (1) SF-424, Application for Federal Assistance. The SF-424 must be signed by an authorized representative of the proposer organization. The FFO number 2012-NIST-PMGP-01 must 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.
- (2) SF-424A, Budget Information - Non-Construction Programs (The budget should reflect anticipated expenses for each year of the project in \$50,000 increments 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). It should contain the following sections:

(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) Other Support.** Indicate if supported by other sources of funding and make clear what NIST funds will enable the proposer to achieve that could not be achieved with the other sources of funds.
- (e) Similar Research Proposals.** Provide a list of all current and pending proposals for similar research, including the amounts requested and the source that was or is considering it.

- (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 proposers will be required to obtain such a rate.

If submitting the proposal 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. Proposers 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 a proposal is received does not provide information about whether attachments have been received.

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

c. Proposal Format

- (1) **Double-sided copy.** For paper submissions, print on both sides of the paper (front to back counts as two (2) pages).
- (2) **Facsimile submissions (fax).** Will not be accepted.
- (3) **Figures, graphs, images, and pictures.** Should be of a size that is easily readable or viewable and may be landscape orientation.
- (4) **Font.** Easy to read font (10-point minimum). Smaller type may be used in figures and tables but must be clearly legible.
- (5) **Line spacing.** Double-spaced except for the forms and Budget Narrative, which should be single-spaced.
- (6) **Margins.** One (1) inch top, bottom, left, and right.

- (7) **Number of paper copies.** For paper submissions, one (1) signed stapled original and two (2) stapled copies. If original proposal is in color, the two (2) copies must also be in color. If submitting electronically via e-mail or through Grants.gov, paper copies are not required. Although proposers submitting paper proposals are not required to submit more than three (3) copies of the proposal, the normal review process for the PMGP utilizes ten (10) copies. Therefore, proposers may submit sufficient proposal copies for the full review process if they wish. As with the required three (3) copies, if the original proposal is in color, the additional copies must also be in color.
- (8) **Page layout.** Portrait orientation only (except figures, graphs, and pictures (see Section IV.2.c.(3))).
- (9) **Page Limit.** Abbreviated proposals are limited to five (5) pages and full proposals are limited to ten (10) pages.
- Page limit includes:** Table of contents (if included), Technical Proposal with all required sections, including resumes, figures, graphs, tables, images, and pictures.
- 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.
- (10) **Page numbering.** Number pages sequentially.
- (11) **Paper size.** 21.6 by 27.9 centimeters (8 ½ by 11 inches).
- (12) **Proposal language.** English.
- (13) **Staple paper submission.** For paper submissions, staple the original signed proposal and each of the two (2) copies securely with one (1) staple in the upper left-hand corner.
- (14) **Typed document.** All proposals, including forms, must be typed.

3. Submission Dates and Times

Abbreviated proposals must be received by NIST no later than 5:00 p.m. Eastern Time on Thursday, February 2, 2012. This deadline applies to all modes of abbreviated proposal submission, including courier services and express mailing.

Full proposals from proposers whose abbreviated proposals are selected as finalists must be received no later than 5:00 p.m. Eastern Time on Thursday, May 3, 2012. This deadline applies to all modes of full proposal submission, including courier services, express mailing, and electronic.

Abbreviated and full proposals 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 proposals 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 electronic abbreviated and full proposal submissions via e-mail, NIST will consider the date and

time of the e-mail. For electronic full proposal 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 proposers do not wait until the last minute to submit a proposal. NIST will not make any allowances for late submissions, including but not limited to incomplete Grants.gov registration, delays in mail delivery caused by Federal Government security screening for U.S. Postal Service mail, or for delays by guaranteed express mailing and/or couriers. To avoid any potential processing backlogs due to last minute Grants.gov registrations, proposers are highly encouraged to start their Grants.gov registration process at least four (4) weeks prior to the proposal due date.

Important: All proposers, both electronic and paper submitters, should be aware that adequate time must be factored into proposers' schedules for delivery of their proposal. Submitters of electronic proposals are advised that volume on Grants.gov may be extremely heavy on the deadline date, and if Grants.gov is unable to accept proposals electronically in a timely fashion, proposers are encouraged to exercise their option to submit proposals in paper format. Submitters of paper proposals should allow adequate time to ensure a paper proposal 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.

In the event of a natural disaster that interferes with timely proposal submissions, NIST may issue an amendment to this FFO to change the proposal submission due date.

4. Executive Order 12372 (Intergovernmental Review of Federal Programs)

Proposals under this Program are not subject to Executive Order 12372.

5. Funding Restrictions

No special restrictions apply.

6. Other Submission Requirements

- a. Abbreviated Proposals.** Abbreviated Proposals 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 Proposals.** Proposers whose abbreviated proposals are selected as finalists and who are invited by NIST to submit full proposals may submit them by paper or electronically.

(1) Paper proposals must be submitted in triplicate (an original and two copies) and 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 proposals may be submitted either by e-mail or through Grants.gov as follows:

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

Or

(b) Grants.gov at www.grants.gov

Submitters of electronic full proposals through Grants.gov (www.grants.gov) 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 a full proposal is received does not provide information about whether attachments have been received. For further information or questions regarding applying electronically for the 2012-NIST-PMGP-01 announcement, contact Christopher Hunton by phone at 301-975-5718 or by e-mail at christopher.hunton@nist.gov

Proposers are strongly encouraged to start early and not wait until the approaching due date before logging on and reviewing the instructions for submitting a full proposal 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. Proposers must have a Dun and Bradstreet Data Universal Numbering System (DUNS) number and must be registered with the Federal Central Contractor Registry and with a Credential Provider, 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 a proposal. Only authorized individual(s) will be able to submit the proposal, and the system may need time to process a submitted proposal. Proposers should save and print the proof of submission they receive from Grants.gov. If problems occur while using Grants.gov, the proposer 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.

Information essential to successful submission of proposals on the Grants.gov system is detailed in the For Applicants section found in red on the left side of the

www.grants.gov home page, and all potential proposers should pay close attention to the information contained therein. The All About Grants, Applicant FAQs, and Submit Application FAQs sections found under the Applicant Resources option are particularly important.

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

- c. **FFO Amendments.** Any amendments to this FFO will be announced through Grants.gov. Proposers can sign up for Grants.gov FFO amendments, while proposers without access to the Internet may call Gail Newrock at (301) 975-3200, to request copies.

V. Application/Proposal Review Information

1. Evaluation Criteria

The evaluation criteria that will be used in evaluating abbreviated proposals and full proposals are as follows:

- a. The importance of the proposed research - Does it have the potential of 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 - Will it 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 (<http://pml.nist.gov>)?
- c. The feasibility of the research and the potential impact of the project/award - Is it likely 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 proposer - Does the educational and employment background and the quality of the research, based on recent publications, of the proposer 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 proposals for award taking into consideration the rank order of the proposals, and may select a proposal 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. Proposer's performance under current or previous Federal financial assistance awards.
- d. Relevance to the funding program description (see Section I. of this FFO).

3. Review and Selection Process

a. Initial Administrative Review of Abbreviated and Full Proposals. An initial review of timely received abbreviated and full proposals will be conducted to determine eligibility, e.g., submitted by proposers who did not submit the required abbreviated proposal or submitted by proposers whose abbreviated proposals have not selected by NIST as finalists; completeness; and responsiveness to this FFO and the scope of the stated program objectives. Proposals 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 Proposals. Abbreviated and full proposals determined to be eligible, complete, and responsive will proceed for full reviews in accordance with the review and selection process below:

(1) Abbreviated Proposals. Each abbreviated proposal 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 proposals 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 proposals 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 and the selection factors (see Section V.2. of this FFO).

(2) Full Proposals. Each full proposal submitted by a proposer whose abbreviated proposal was selected as a finalist will be reviewed by the same eight (8) independent reviewers that reviewed the abbreviated proposals. If non-Federal reviewers are used, the reviewers may discuss the proposals 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 proposals 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 and the selection factors (see Section V.2. of this FFO).

NIST reserves the right to negotiate the budget costs with the proposers that have been selected to receive awards, which may include requesting that the proposer remove certain costs. Additionally, NIST may request that the proposer modify objectives or work plans and provide supplemental information required by the agency prior to award. NIST also reserves the right to reject a proposal where information is uncovered that raises a reasonable doubt as to the responsibility of the proposer. NIST may select part, some, all, or none of the proposals. The final approval of selected proposals and issuance of award will be by the NIST Grants Officer. The award decisions of the NIST Grants Officer are final.

4. Anticipated Announcement and Award Dates. Review of abbreviated proposals and selection of finalists is expected to be completed by Friday, March 23, 2012. Review of full proposals, selection of successful proposers, and award processing is expected to be completed in August 2012. The earliest anticipated start date for awards made under this FFO is expected to be October 1, 2012.

5. Additional Information

- a. Proposal Replacement Pages.** Proposers may not submit replacement pages and/or missing documents once a proposal has been submitted. Any revisions must be made by submission of a new proposal that must be received by NIST by the submission deadline.
- b. Notification to Unsuccessful Proposers.** Unsuccessful proposers will be notified in writing.
- c. Notification to Finalists.** Proposers whose abbreviated proposals are selected by NIST as “finalists” will be notified in writing and invited by NIST to submit full proposals.
- d. Retention of Unsuccessful Proposals.** One (1) of each non-selected proposal will be retained for three (3) years for record keeping purposes and the other two (2) copies will be destroyed. After three (3) years the remaining copy will be destroyed.

VI. Award Administration Information

1. Award Notices. Successful proposers 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/dev01002513.pdf> and the DoC Financial Assistance Standard Terms and Conditions (March 2008), which may be updated by the time of award, are available at <http://www.osec.doc.gov/oam/archive/docs/GRANTS/DOC%20STCsMAR08Rev.pdf>.

2. Administrative and National Policy Requirements

- a. DoC Pre-Award Notification Requirements.** The DoC Pre-Award Notification Requirements for Grants and Cooperative Agreements, which are contained in the *Federal Register* notice of February 11, 2008 (73 FR 7696), are applicable to this FFO and are available at http://www2.ntia.doc.gov/files/DOC_pre-award_notification_requirements_73_FR_7696.pdf.
- b. Employer/Taxpayer Identification Number (EIN/TIN), Dun and Bradstreet Data Universal Numbering System (DUNS), and Central Contractor Registration (CCR).** All proposers for Federal financial assistance are required to obtain a universal identifier in the form of DUNS number and maintain a current registration in the CCR database. On the form SF-424 items 8.b. and 8.c., the proposer’s 9-digit EIN/TIN and 9-digit DUNS number must be consistent with the information in CCR (www.ccr.gov) and Automated Standard Application for Payment System (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 proposal is selected for funding. Confirm that the EIN/TIN and DUNS number are consistent with the information on

the CCR and ASAP.

Per the requirements of 2 C.F.R. Part 25, each proposer must:

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

See also the *Federal Register* notice published on September 14, 2010, at 75 FR 55671.

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

If a proposer 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 proposal prior to the merit review.

- d. Use of NIST Intellectual Property.** If the proposer anticipates using any NIST-owned intellectual property to carry out the work proposed, the proposer 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 proposer intends to use NIST-owned intellectual property, the proposer 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, 73 FR 7696 (February 11, 2008). Questions about these requirements may be directed to the Chief Counsel for NIST, (301) 975-2803.

Any use of NIST-owned intellectual property by a proposer is at the sole discretion of NIST and will be negotiated on a case-by-case basis if a project is deemed meritorious. The proposer 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 Projects Involving Human Subjects, Human Tissue, Data or Recordings Involving Human Subjects.** Any application that includes research involving human subjects, human tissue/cells, data or recordings involving human subjects 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 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 involves human subjects. If NIST determines that your research project 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 research activities involving human subjects that have been or will be approved by an Institutional Review Board (IRB) currently registered with the Office for Human Research Protections (OHRP) within the DHHS and that will be performed by entities possessing a currently valid Federal wide Assurance (FWA) on file from OHRP that is appropriately linked to the cognizant IRB for the protocol. NIST will not issue a single project assurance (SPA) for any IRB reviewing any human subjects protocol proposed to NIST. 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>.

Generally, NIST does not fund research involving human subjects in foreign countries. NIST will consider, however, the use of **preexisting** tissue, cells, or data from a foreign source on a limited basis if all of the following criteria are satisfied:

- (1) the scientific source is considered unique,
- (2) an equivalent source is unavailable within the United States,
- (3) an alternative approach is not scientifically of equivalent merit, and
- (4) the specific use qualifies for an exemption under the Common Rule.

Any award issued by NIST is required to adhere to all Presidential policies, statutes, guidelines and regulations regarding the use of human embryonic stem cells. The DoC follows the NIH Guidelines by supporting and conducting research using only human embryonic stem cell lines that have been approved by NIH in accordance with the NIH Guidelines. Detailed information regarding NIH Guidelines for stem cells is located on the NIH Stem Cell Information website: <http://stemcells.nih.gov>. The DoC will not support or conduct any type of research that the NIH Guidelines prohibit NIH from funding. The DoC will review research using human embryonic stem cell lines that it supports and conducts in accordance with the Common Rule and NIST implementing procedures, as appropriate.

Any request to support or conduct research using human embryonic stem cell lines not currently approved by the NIH, will require that the owner, deriver or licensee of the human embryonic stem cell line apply for and receive approval of the registration of the cell line through the established NIH application procedures:

http://hescregapp.od.nih.gov/NIH_Form_2890_Login.htm. Due to the timing uncertainty associated with establishing an embryonic stem cell line in the NIH registry, the use of existing human embryonic stem cell lines in the NIH Embryonic Stem Cell Registry may be preferred by applicants or current award recipients. The NIH Embryonic Stem Cell Registry is located at: http://grants.nih.gov/stem_cells/registry/current.htm.

An applicant or current award recipient proposing to use a registered embryonic stem cell line will be required to document an executed agreement for access to the cell line with the provider of the cell line, and acceptance of any established restrictions for use of the cell line, as may be noted in the NIH Embryonic Stem Cell Registry.

If the applicant's proposal includes exempt and/or non-exempt research activities involving human subjects the following information is required in the proposal:

- (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 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, as warranted, during review of the applicant's proposal, but 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 applicant's proposal submitted to NIST, if the protocol includes tasks not applicable to the proposal, or if the protocol is supported by multiple funding sources. For protocols with multiple funding sources, NIST will not approve the study without a nonduplication-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 issued, a draft of the proposed protocol may be requested.
- (6) Any additional clarifying documentation that NIST may request during review of proposals to perform the NIST administrative review of research involving human subjects.

- f. Research Projects Involving Vertebrate Animals.** Any application that includes research involving live vertebrate animals 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 5th 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 that are being cared for, euthanized, or used

by the project participants to accomplish research goals, teaching, or testing. These regulations also do not apply to obtaining animal materials from commercial processors of animal products or to animal cell lines or tissues from tissue banks.

NIST reserves the right to make an independent determination of whether your research involves live vertebrate animals. If NIST determines that your research project involves 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 proposal includes research activities involving live vertebrate animals the following information is required in the proposal:

- (1) The name(s) of the institution(s) where the animal research will be conducted;
- (2) The assurance type and number, as applicable, for the cognizant 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 Institutional Animal Care and Use Committee (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 will be requested, as warranted, during review of the proposal, but may include the following for research activities 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 Proposal (ASP);
- (2) Documentation of the IACUC approval indicating the approval and expiration dates of the ASP; and
- (3) If applicable, a nonduplication-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 proposals to perform the NIST administrative review of research involving live vertebrate animals.

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 proposal 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. Collaborations Making Use of Federal Facilities. All proposals should include a description of any work proposed to be performed using Federal facilities.

If a proposer 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 proposal prior to the merit review. Examples of some facilities that may be available for collaborations are listed on the NIST Technology Services Web site, <http://www.nist.gov/user-facilities.cfm>.

3. 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 March 2008 (<http://www.osec.doc.gov/oam/archive/docs/GRANTS/DOC%20STCsMAR08Rev.pdf>), the following reporting requirements shall apply:
- (1) Financial Reports.** Each award recipient will be required to submit an SF-425, Federal Financial Report in triplicate (an original and two (2) copies), 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.
- (2) Performance (Technical) Report.** Each award recipient will be required to submit a technical progress report in triplicate (an original and two (2) copies), 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. 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. Proposers 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.
- 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. Proposers 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)

Subject Area	Point of Contact
Programmatic and technical questions	Dr. Peter J. Mohr Phone: (301) 975-3217 E-mail: mohr@nist.gov
Electronic full proposal submission through Grants.gov	Christopher Hunton Phone: 301-975-5718 Fax: 301-840-5976 E-mail: christopher.hunton@nist.gov
Grant rules and regulations	James Browning Phone: 301-975-8088 Fax: 301-840-5976 E-mail: james.browning@nist.gov