

February 3, 2015

**ANNOUNCEMENT OF FEDERAL FUNDING OPPORTUNITY (FFO)
National Institute of Standards and Technology (NIST), NIST Center for Neutron
Research (NCNR) Comprehensive Grant Program**

EXECUTIVE SUMMARY

- **Federal Agency Name:** National Institute of Standards and Technology (NIST), United States Department of Commerce (DoC)
- **Funding Opportunity Title:** NIST Center for Neutron Research (NCNR) Comprehensive Grant Program.
- **Announcement Type:** Initial
- **Funding Opportunity Number:** 2015-NIST-NCNR-01
- **Catalog of Federal Domestic Assistance (CFDA) Number:** 11.609, Measurement and Engineering Research and Standards
- **Dates:** Electronic applications must be received no later than 11:59 p.m. Eastern Time, Friday, April 17, 2015. Paper applications must be received by NIST by 5:00 p.m. Eastern Time, Friday, April 17, 2015. Applications received after the respective deadline will not be reviewed or considered. The earliest anticipated start date for awards under this FFO is expected to be September 1, 2015.

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 to support research involving neutron scattering and spectroscopy specifically aimed at developing new instrumentation for neutron research, conducting collaborative research with NIST and visiting scientists, and to conduct other outreach and educational activities that advance the use of neutrons by U.S. academia and industrial scientists. This will entail awardee(s) stationing scientific staff at the

NCNR to collaborate with NIST and other visiting scientists to advance these objectives.

- **Anticipated Funding Amounts:** NIST anticipates approximately \$3,000,000 may be available to fund the first year for new, multi-year awards. NIST anticipates funding one (1) to three (3) multi-year awards to eligible applicants for the first year. New awards are expected to range from approximately \$1,000,000 to \$3,000,000 per year with project performance periods of up to five (5) years, consistent with the multi-year funding policy described in Section II. 2. of this FFO. Therefore, applicants may propose multi-year projects for up to five (5) years at no more than \$3,000,000 per year.
- **Funding Instrument:** Cooperative Agreement.
- **Who Is Eligible:** Institutions of higher education; hospitals; non-profit organizations; commercial organizations; State, Tribal and local governments; foreign governments; organizations under the jurisdiction of foreign governments; and international organizations.
- **Cost Sharing Requirements:** This Program does not require cost sharing.

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FULL ANNOUNCEMENT TEXT

I. Program Description

The NCNR Comprehensive Grant Program provides funding to support research involving neutron scattering and spectroscopy specifically aimed at developing new instrumentation for neutron research, conducting collaborative research with NIST and

visiting scientists, and conducting other outreach and educational activities that advance the use of neutrons by U.S. academia and industrial scientists. This will entail awardee(s) stationing scientific staff at the NCNR to collaborate with NIST and other visiting scientists to advance these objectives.

Applicants' staff must possess the education, experience, and training to pursue and advance the field of neutron scattering efficiently. In addition, the applicants' staff must possess a demonstrated record of excellence in research involving neutron scattering methods.

Examples of jointly-pursued activities under previous cooperative agreements include the integration of expert academia research and technical staff to perform neutron scattering research in collaboration with NIST and visiting scientists on various neutron instruments, the design and development of a state-of-the-art double-focusing neutron monochromator for use on the Multi-Analyzer Crystal Spectrometer (MACS), studies of advanced applications of neutron residual stress methods, the design and development of a neutron phase space transformation chopper for use on the High-Flux Backscattering Spectrometer (HFBS), and computer modeling studies of neutron scattering measurements from biomolecular systems. For more information see www.ncnr.nist.gov.

The statutory authority for the NCNR Comprehensive Grant Program is 15 U.S.C. § 272 (b) and (c).

II. Federal Award Information

- 1. Funding Instrument.** The funding instrument that will be used is a cooperative agreement. The nature of NIST's "substantial involvement" will generally be collaboration with the recipients in the scope of work and working jointly with the recipient(s) in carrying out 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.osec.doc.gov/oam/grants_management/policy/documents/FINAL%20Master%20DOC%20Grants%20Manual%202013%20\(03.01.13\)_b.pdf](http://www.osec.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, Federal Awarding 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 awarded, NIST has no obligation to provide any additional funding in connection with that award. Continuation of an award to increase funding or extend

the period of performance is at the sole discretion of NIST. Continued funding will be contingent upon satisfactory performance, continued relevance to the mission and priorities of NIST, and the availability of funds.

3. **Funding Availability.** NIST anticipates approximately \$3,000,000 may be available to fund the first year for new, multi-year awards. NIST anticipates funding one (1) to three (3) multi-year awards to eligible applicants for the first year. New awards are expected to range from approximately \$1,000,000 to \$3,000,000 per year with project performance periods of up to five (5) years, consistent with the multi-year funding policy described in Section II. 2. of this FFO. Therefore, applicants may propose multi-year projects for up to five (5) years at no more than \$3,000,000 per year. Applications for renewal or supplementation of existing projects may compete with applications for new Federal awards.

III. Eligibility Information

1. **Eligible Applicants.** Institutions of higher education; hospitals; non-profit organizations; commercial organizations; State, Tribal and local governments; foreign governments; organizations under the jurisdiction of foreign governments; and international organizations.
2. **Cost Sharing or Matching.** This Program does not require cost sharing.

IV. Application and Submission Information

1. **Address to Request Application Package.** The standard application package, consisting of the standard forms, i.e., SF-424, SF-424A, SF-424B, SF-LLL, and the CD-511, is available at www.grants.gov. The application package provides only one SF-424A form. For five-year projects, an additional SF-424A form will be needed, as described in Section IV.2.a.(2), and must be retrieved from the internet, outside of www.grants.gov as described in Section IV.2.a.(9). The standard application package and additional SF-424A form, if applicable, may be requested by contacting the NIST personnel listed below:

Tanya Burke, National Institute of Standards and Technology, NIST Center for Neutron Research, 100 Bureau Drive, Stop 6100, Gaithersburg, MD 20899-6100, Phone (301) 975-4711; e-mail: tanya.burke@nist.gov.

2. **Content and Form of Application Submission**
 - a. **Required Forms and Documents**

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

SF-424, Item 12, should list the FFO number 2015-NIST-NCNR-01.

SF-424, Item 18, should list the total budget information for the duration of the project.

(2) SF-424A, Budget Information – Non-Construction Programs. The budget should reflect anticipated expenses for each year of the project, considering all potential cost increases, including cost of living adjustments. For five-year projects, the applicant should submit two SF-424A forms. The first SF-424A form should cover the first four (4) years of the project and is the SF-424A form that appears as part of the mandatory forms in the Grants.gov application package. Details of where to find the second SF-424A form, and how to submit it, are found in Section IV.2.a.(9) of this FFO.

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

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

(5) CD-511, Certification Regarding Lobbying

(6) Technical Proposal. This is a word-processed document, not to exceed fifty (50) pages, and must be responsive to the program description (see Section I. of this FFO) and the evaluation criteria (see Section V.1. of this FFO). The Technical Proposal should describe in depth the scope of the proposed project, its goals, the methods and equipment to be used, its schedule, and the institutional capabilities of the applicant. Information on the personnel working on the project and their qualifications should be included in the Technical Proposal. Resumes for the Principal Investigator and the applicant's proposed staff may be included; the resumes do not count toward the page limit.

(7) Budget Narrative. Applicants should use the SF-424A(s) to complete the budget submission (see Section IV.2.a.(2) of this FFO). In addition to the SF-424A(s), applicants must provide a detailed budget narrative to explain fully and justify all proposed project funding for all years in accordance with applicable federal cost principles set forth in 2. C.F.R. part 200 Subpart E. In this narrative, the recipient should provide adequate information to support the costs identified in each budget category for each year of the project.

(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. If the

successful applicant includes indirect costs in the budget and has not established an indirect cost rate with a cognizant Federal audit agency, the applicant will be required to obtain such a rate in accordance with the Department of Commerce Financial Assistance Standard Terms and Conditions, December 26, 2014, available at

http://www.osec.doc.gov/oam/grants_management/policy/documents/DOC_Standard_Terms_12_26_2014.pdf.

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

If submitting the application electronically via Grants.gov, items IV.2.a.(1) through IV.2.a.(5) above are part of the standard application package in Grants.gov and can be completed through the download application process. **Item IV.2.a. (6) through Item IV.2.a.(9) 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 enable attachments to 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, all of the required application documents should be submitted in the order listed above.

b. 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 pages).
- (3) Facsimile submissions (fax).** Will not be accepted.

- (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.** Single.
 - (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 application is in color, the two (2) copies must also be in color. If submitting electronically via Grants.gov, paper copies are not required.
 - (8) **Page layout.** Portrait orientation only.
 - (9) **Page limit.** Fifty (50) pages for the Technical Proposal (see Section IV.2.a.(6) of this FFO).
 - (10) **Page limit excludes:** SF-424, Application for Federal Assistance; SF-424A, Budget Information – Non-Construction Programs and a second SF-424A, if applicable (see Section IV.2.a.(9) of this FFO); SF-424B, Assurances – Non-Construction Programs; SF-LLL, Disclosure of Lobbying Activities; CD-511, Certification Regarding Lobbying; Resumes (if included); 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) **Stapled paper submission.** For paper submissions, staple the original signed application and each of the two (2) copies securely with one staple in the upper left-hand corner.
 - (14) **Table of contents.** Do not include; not required. If included, will count toward page limit.
 - (15) **Typed document.** All applications, including forms, must be typed.
- c. **Pre-Applications.** NIST is not accepting pre-applications or white papers under this FFO.
3. **Dun and Bradstreet Universal Numbering System (DUNS) Number and System for Award Management (SAM).** Applicants must have a Dun and Bradstreet Data Universal Numbering System (DUNS) number 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. See also Sections IV.7.a.(2).b. and VI.4.b of this FFO for more details.

- 4. Submission Dates and Times.** Electronic applications must be received no later than 11:59 p.m. Eastern Time, Friday, April 17, 2015. Paper applications must be received by NIST by 5:00 p.m. Eastern Time, Friday, April 17, 2015. Applications received after the respective deadline will not be reviewed or considered.

NIST determines whether paper applications have been timely received by the deadline by the date and time they are physically received by NIST at its Gaithersburg, Maryland campus. For electronic applications, 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.

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.

- 5. Intergovernmental Review.** Applications under this Program are not subject to Executive Order 12372.
- 6. Funding Restrictions.** Profit or fee is not an allowable cost.
- 7. Other Submission Requirements.**
 - a. Applications may be submitted by paper or electronically.**

- (1) Paper applications must be submitted in triplicate (an original and two copies) to the NIST personnel identified below.

Tanya Burke, National Institute of Standards and Technology, NIST Center for Neutron Research, 100 Bureau Drive, Stop 6100, Gaithersburg, MD 20899-6100, Phone (301-975-4711).

- (2) Electronic applications must be submitted via Grants.gov at www.grants.gov, under announcement 2015-NIST-NCNR-01.

- a) 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-NCNR-01 announcement, contact Christopher Hunton by phone at 301-975-5718 or by e-mail at christopher.hunton@nist.gov.
- b) 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.
- c) 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 mail carriers and/or couriers are not always able to fulfill their guarantees.

Refer to important information in Section IV.4. Submission Dates and Times, to help ensure your application is received on time.

b. Amendments. Any amendments to this FFO will be announced through Grants.gov and posted on the NIST Web site <http://www.ncnr.nist.gov>. Applicants may sign up for Grants.gov FFO amendments or may request copies from Tanya Burke by telephone at (301) 975-4711, or by e-mail to tanya.burke@nist.gov.

V. Application Review Information

1. Evaluation Criteria. The evaluation criteria that will be used in evaluating the applications are as follows:

a. Qualifications and experience of the Principal Investigator in neutron

scattering research, as demonstrated by, including but not limited to, extensive publications and invited lectures in condensed matter physics, chemistry, material science, macromolecular science or related fields and the impact of the research as demonstrated by citations, other public references and awards. Reviewers can only consider publications, lectures, citations, other public references and awards that are referenced in the proposal; reviewers will not conduct research to find such information. (0-10 percent)

- b. Qualifications and experience of the applicant's proposed staff in neutron scattering research or in related scientific or engineering areas that are key to the activities in the proposed project, as demonstrated by, including but not limited to, publications and invited lectures in condensed matter physics, chemistry, material science, macromolecular science or related fields and the impact of the research as demonstrated by citations, other public references and awards. Reviewers can only consider publications, lectures, citations, other public references and awards that are referenced in the proposal; reviewers will not conduct research to find such information. (0-30 percent)
 - c. Quality of the proposed research and development plan and its potential impact on neutron scattering science, particularly in the areas of macromolecular science, condensed matter physics, and chemistry (0-20 percent)
 - d. Quality of the proposed plan in terms of performing collaborative research with NIST and visiting scientists. (0-30 percent)
 - e. Quality of the plan to integrate the applicant's staff effectively into the activities of the NCNR facility, including establishing robust communications between the applicant and the NCNR. (0-10 percent)
- 2. Selection Factors.** The Selecting Official will select applications for award based upon the rank order of the applications (see Section V.3.b. 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, and
 - c. relevance to the program description (see Section I. of this FFO).

3. Review and Selection Process

- a. **Initial Administrative Review of Applications.** An initial administrative review of timely received applications will be conducted to determine applicant eligibility, completeness, and responsiveness to this FFO and the scope of the stated program objectives. Applications determined to be ineligible, incomplete, or non-responsive based on this FFO may be eliminated from further review. However, NIST, in its sole discretion, may continue the review process for an application that is missing non-substantive information which may easily be rectified or cured in a Full Application.
- b. **Full Review of Eligible, Complete, and Responsive Applications.** Each NCNR Comprehensive Grant Program application will be reviewed by at least four (4) independent, objective NIST scientists and in some cases other Federal employees, who are knowledgeable in the subject matter of this FFO and its objectives and who are able to conduct a review based on the evaluation criteria (see Section V.1. of this FFO). Based on the average of the reviewers' scores, a rank order will be prepared and provided to the Selecting Official for further consideration.

The Selecting Official, who is the Director of the NCNR, 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.

- c. **Federal Awarding Agency Review of Risk Posed by Applicants.** After applications are proposed for funding by the selecting official, the NIST Grants Management Division performs administration reviews, which may include a review of the financial stability of an applicant, the quality of the applicant's management systems, the history of performance, and/or the applicant's ability to effectively implement statutory, regulatory, or other requirements imposed on non-Federal entities. Upon review of these factors, if appropriate, special conditions that correspond to the degree of risk may be applied.
4. **Anticipated Announcement and Award Date.** Review, selection, and award processing is expected to be completed in July 2015. The earliest anticipated start date for awards made under this FFO is expected to be September 1, 2015.

5. Additional Information

- a. **Application Replacement Pages.** Applicants may not submit replacement pages and/or missing documents once an application has been submitted. Any revisions must be made by submission of a new application that must be received by NIST by the submission deadline.
- b. **Notification to Unsuccessful Applicants.** Unsuccessful applicants will be notified in writing.
- c. **Retention of Unsuccessful Applications.** For paper applications, one copy (1) of each non-selected application 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. For electronic copies, one copy (1) 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. Federal Award Administration Information

1. **Federal 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.
2. **Uniform Administrative Requirements, Cost Principles and Audit Requirements.** Through 2 C.F.R. § 1327.101, the Department of Commerce adopted Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards at 2 C.F.R. Part 200, which apply to awards in this program. Refer to <http://www.ecfr.gov/cgi-bin/text-idx?SID=bd58a13de66200ce25c4fa5f6fdbf197&node=pt2.1.200&rgn=div5> and <http://www.ecfr.gov/cgi-bin/text-idx?SID=bd58a13de66200ce25c4fa5f6fdbf197&node=pt2.1.1327&rgn=div5>.
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, dated December 2014, is available at http://www.osec.doc.gov/oam/grants_management/policy/default%20p2.htm.
4. **Administrative and National Policy Requirements**

- a. **DoC Pre-Award Notification Requirements.** The DoC Pre-Award Notification Requirements for Grants and Cooperative Agreements, 79 FR 78390 (December 30, 2014), are applicable to this FFO and are available at <http://www.gpo.gov/fdsys/pkg/FR-2014-12-30/pdf/2014-30297.pdf>.
- 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, available here <http://www.gpo.gov/fdsys/pkg/FR-2010-09-14/pdf/2010-22706.pdf>.

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

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

- d. Use of NIST Intellectual Property.** If the applicant anticipates using any NIST-owned intellectual property to carry out the work proposed, the applicant should identify such intellectual property. This information will be used to ensure that no NIST employee involved in the development of the intellectual property will participate in the review process for that competition. In addition, if the applicant intends to use NIST-owned intellectual property, the applicant must comply with all statutes and regulations governing the licensing of Federal government patents and inventions, described in 35 U.S.C. §§ 200-212, 37 C.F.R. Part 401, 2 C.F.R. §200.315, and in Section D.03 of the DoC Financial Assistance Terms and Conditions dated December 26, 2014, found at http://www.osec.doc.gov/oam/grants_management/policy/documents/DOC_Standard_Terms_12_26_2014.pdf. Questions about these requirements may be directed to the Chief Counsel for NIST, (301) 975-2803.

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

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

- e. Research Activities Involving Human Subjects, Human Tissue, Data or Recordings Involving Human Subjects Including Software Testing.** Any application that includes research activities involving human subjects, human tissue/cells, or data or recordings involving human subjects, including software

testing, must 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.

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.

For more information regarding research projects involving human subjects, contact Jason Boehm, Director, NIST Program Coordination Office (e-mail: jason.boehm@nist.gov; phone: (301) 975-8678).

- 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 research projects involving live vertebrate animals, contact Linda Beth Schilling, Senior Coordinator and Policy Advisor for Animal Subjects Research at NIST (e-mail: 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 obligate 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. Safety.** Safety is a top priority at NIST. Guest Researchers participating in the NIST Center for Neutron Research Comprehensive Grant Program will be expected to be safety-conscious, to attend NIST safety training, and to comply with all NIST safety policies and procedures, as required by their guest research agreement.
- j. NIST Guest Researcher Agreement.** Guest Researchers participating in the NIST Center for Neutron Research Comprehensive Grant Program will be expected to

sign a guest researcher agreement. Assistance with this process may be obtained by contacting Tanya Burke, National Institute of Standards and Technology, NIST Center for Neutron Research, 100 Bureau Drive, Stop 6100, Gaithersburg, MD 20899-6100, Phone (301) 975-4711; e-mail: tanya.burke@nist.gov.

5. Reporting

- a. Reporting Requirements.** The following reporting requirements described in Sections A.01 Performance (Technical) Reports and B.02 Financial Reports of the DoC Financial Assistance Standard Terms and Conditions dated December 26, 2014, http://www.osec.doc.gov/oam/grants_management/policy/documents/DOC_Standard_Terms_12_26_2014.pdf) apply to awards in this program:
- (1) Financial Requirements – Financial Report.** 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. Reports will be due within 30 days after the end of the reporting period to the NIST Grants Officer and Grants Specialist named in the award documents.
 - (2) Performance (Technical) Report.** Each award recipient will be required to submit a technical progress report in triplicate 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 2 C.F.R. § 200.328.
 - (3) Patent and Property Reports.** From time to time, and in accordance with the Uniform Administrative Requirements (see Section VI.2. of this FFO) and other terms and conditions governing the award, the recipient may need to submit property and patent reports.
- b. Audit Requirements.** 2 C.F.R. Subpart F, adopted by the Department of Commerce through 2 C.F.R. § 1327.101, requires any non-Federal entity (*i.e.*, including non-profit institutions of higher education and other non-profit organizations) that expends Federal awards of \$750,000 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 Subpart. 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.
- 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 available here <http://www.gpo.gov/fdsys/pkg/FR-2010-09-14/pdf/FR-2010-09-14.pdf>.

VII. Federal Awarding Agency Contact(s)

Questions should be directed to the following contact persons:

Subject Area	Point of Contact
Programmatic and Technical Questions	Dan Neumann Phone: (301) 975-5252 Fax: (301) 869-4770 E-mail: dan.neumann@nist.gov
Technical Assistance with Grants.gov Submissions	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	Jannet Cancino Phone: (301) 975-6544 Fax: (301) 975-6319 E-mail: jannet.cancino@nist.gov