# Collections in Support of Biological Research (CSBR)

# **PROGRAM SOLICITATION**

NSF 11-558

# REPLACES DOCUMENT(S): NSF 09-548, NSF 09-550



#### **National Science Foundation**

Directorate for Biological Sciences
Division of Biological Infrastructure

#### Full Proposal Target Date(s):

October 16, 2011

July 27, 2012

Fourth Friday in July, Annually Thereafter

#### **IMPORTANT INFORMATION AND REVISION NOTES**

A revised version of the *NSF Proposal & Award Policies & Procedures Guide* (PAPPG), *NSF* 11-1, was issued on October 1, 2010 and is effective for proposals submitted, or due, on or after January 18, 2011. Please be advised that the guidelines contained in *NSF* 11-1 apply to proposals submitted in response to this funding opportunity. Proposers who opt to submit prior to January 18, 2011, must also follow the guidelines contained in *NSF* 11-1.

Cost Sharing: The PAPPG has been revised to implement the National Science Board's recommendations regarding cost sharing. Inclusion of voluntary committed cost sharing is prohibited. In order to assess the scope of the project, all organizational resources necessary for the project must be described in the Facilities, Equipment and Other Resources section of the proposal. The description should be narrative in nature and must not include any quantifiable financial information. Mandatory cost sharing will only be required when explicitly authorized by the NSF Director. See the PAPP Guide Part I: *Grant Proposal Guide (GPG)* Chapter II.C.2.g(xi) for further information about the implementation of these recommendations.

Data Management Plan: The PAPPG contains a clarification of NSF's long standing data policy. All proposals must describe plans for data management and sharing of the products of research, or assert the absence of the need for such plans. FastLane will not permit submission of a proposal that is missing a Data Management Plan. The Data Management Plan will be reviewed as part of the intellectual merit or broader impacts of the proposal, or both, as appropriate. Links to data management requirements and plans relevant to specific Directorates, Offices, Divisions, Programs, or other NSF units are available on the NSF website at: <a href="http://www.nsf.gov/bfa/dias/policy/dmp.jsp.">http://www.nsf.gov/bfa/dias/policy/dmp.jsp.</a> See Chapter II.C.2.j of the GPG for further information about the implementation of this requirement.

#### **Revision Notes:**

This version of the solicitation has been revised with the following changes:

- Beginning in FY2012, two former programs, Biological Research Collections (BRC) and Livings Stock Collections for Biological Research (LSCBR), have been combined into this single CSBR program with three Competitive Areas: (1) Natural History Collections, (2) Living Stock Collections, and (3) Supplemental Funding to Transfer Ownership of Collections.
- · Greater emphasis on demonstrating the urgency of activities.
- Emphasis on established collections that can demonstrate recent involvement in support of research activities relevant to the NSF-funded research community.
- Recognition of the importance of digitization by encouraging digitization and open data access to be integrated into all
  activities that secure collections.

# **SUMMARY OF PROGRAM REQUIREMENTS**

#### **General Information**

#### Program Title:

Collections in Support of Biological Research (CSBR)

#### Synopsis of Program:

The Collections in Support of Biological Research (CSBR) Program provides funds for improvements to secure, improve, and organize collections that are significant to the NSF/BIO-funded research community. Support is also provided to secure collections-related data for sustained, accurate, and efficient accessibility of the collection to the

biological research community. Supplemental funding is also available to transfer collection ownership responsibilities or consolidate or combine existing collections.

The CSBR program provides for enhancements that secure and improve existing collections, result in accessible digitized specimen-related data, and develop better methods for specimen curation and collection management. Requests should demonstrate a clear and urgent need to secure the collection, and the proposed activities should address that need. Biological collections supported include established living stocks/culture collections, vouchered non-living natural history collections, and jointly-curated ancillary collections such as preserved tissues and DNA libraries.

#### Cognizant Program Officer(s):

Please note that the following information is current at the time of publishing. See program website for any updates to the points of contact

- Daphne G. Fautin, Program Director, Directorate for Biological Sciences, Division of Biological Infrastructure, telephone: (703) 292-8470, fax: (703) 292-9063, email: dbibrc@nsf.gov
- Anne M. Maglia, Program Director, Directorate of Biological Sciences, Division of Biological Infrastructure, telephone: (703) 292-8470, fax: (703) 292-9063, email: dbibrc@nsf.gov

#### Applicable Catalog of Federal Domestic Assistance (CFDA) Number(s):

• 47.074 --- Biological Sciences

#### **Award Information**

Anticipated Type of Award: Standard Grant or Continuing Grant

Estimated Number of Awards: 10 to 20 per year pending availability of funds.

Anticipated Funding Amount: \$6,500,000 Annually pending availability of funds.

# **Eligibility Information**

#### Organization Limit:

Proposals may only be submitted by the following:

Proposals are accepted from U.S. organizations, including colleges and universities that maintain research
collections, natural history museums including herbaria, and other collections administered by independent
organizations or by state, county, or local governments; non-federal and non-profit research organizations
that maintain collections; and field stations, marine laboratories, botanical gardens, zoological parks, and
aquaria that maintain living or vouchered research collections significant to the NSF BIO-funded research
community. The size of an organization is not a factor in determining eligibility.

Potential proposers for any of the Competitive Areas are strongly encouraged to contact one of the CSBR Program Directors if they have any questions concerning eligibility.

## PI Limit:

None Specified

Limit on Number of Proposals per Organization: 3

#### Limit on Number of Proposals per PI:

See Solicitation section IV. Eligibility Information for details

# **Proposal Preparation and Submission Instructions**

#### A. Proposal Preparation Instructions

• Letters of Intent: Not Applicable

• Preliminary Proposal Submission: Not Applicable

- Full Proposals:
  - Full Proposals submitted via FastLane: NSF Proposal and Award Policies and Procedures Guide, Part I: Grant Proposal Guide (GPG) Guidelines apply. The complete text of the GPG is available electronically on the NSF website at: http://www.nsf.gov/publications/pub\_summ.jsp?ods\_key=gpg.
     Full Proposals submitted via Grants.gov: NSF Grants.gov Application Guide: A Guide for the Preparation and
  - Full Proposals submitted via Grants.gov: NSF Grants.gov Application Guide: A Guide for the Preparation and Submission of NSF Applications via Grants.gov Guidelines apply (Note: The NSF Grants.gov Application Guide is available on the Grants.gov website and on the NSF website at: http://www.nsf.gov/publications/pub\_summ.jsp? ods\_key=grantsgovguide)

# B. Budgetary Information

· Cost Sharing Requirements: Inclusion of voluntary committed cost sharing is prohibited.

• Indirect Cost (F&A) Limitations: Not Applicable

· Other Budgetary Limitations: Not Applicable

### C. Due Dates

# • Full Proposal Target Date(s):

October 16, 2011

July 27, 2012

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# **Proposal Review Information Criteria**

Merit Review Criteria: National Science Board approved criteria. Additional merit review considerations apply. Please see the full text of this solicitation for further information.

#### Award Administration Information

Award Conditions: Standard NSF award conditions apply.

Reporting Requirements: Standard NSF reporting requirements apply.

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# I. INTRODUCTION

Biological research collections, including living stock/culture collections and non-living vouchered natural history collections, support many essential research activities in the Biological Sciences. Collections are used to document biodiversity, identify species, recognize climatic shifts, explore alternate energy sources, and improve agricultural, biomedical, and manufacturing applications.

Natural history collections contain records of life on earth that are unique and irreplaceable, including specimens of extinct species and temporal information on changes in the ranges of native and introduced species. Living collections play a key role in the advancement and preservation of biological knowledge by providing well-characterized and documented experimental organisms to researchers at modest cost. Vouchered collections contain the specimen-linked ancillary materials that are created as research techniques advance (including DNA samples, digital images, audio and video files, and frozen tissues). The CSBR program plays an important role in contributing to the security, digitization, and improvements in infrastructure of these biological collections.

The CSBR program is administered by the Division of Biological Infrastructure with the goal of strengthening the infrastructure critical to conducting basic research in areas within the purview of the NSF Directorate for Biological Sciences (BIO). In addition to providing support for securing the collections themselves, a high priority is placed on digitizing and integrating collection information and developing innovative methods of improving the safekeeping of scientifically-important collections.

# II. PROGRAM DESCRIPTION

The Collections in Support of Biological Research (CSBR) Program funds activities that improve infrastructure for existing living

stock/culture collections and specimen-based vouchered natural history collections that serve a broad community of biological researchers. Activities involving the application of new and improved curatorial techniques and tools related to the maintenance, provision, care, preservation, storage, and data management of collections are encouraged. The program will also consider digitizing activities such as databasing, geo-referencing, and imaging activities that are associated with securing and improving access to collections. Proposals concerning the preservation and organization of tissues, DNA, images, and collection data that can be linked to voucher specimens will be considered, as will proposals for innovative enhancements for diverse collections and workshops/symposia that will lead to improvements in the security, access, and maintenance of biological collections. As a part of the improvements to collections, all specimens handled---if not already digitized--- should be digitized and the data linked to the national resource for digitized biocollections. This program does not support building a new collection, single-taxon natural history collections devoted to a narrow research focus, or collecting new specimens to augment collections; these are integral activities of research projects supported by other programs in the biological sciences.

Please note that federally held collections cannot be supported with NSF funds. As outlined in HR 5116, the America COMPETES Reauthorization Act of 2010 (Sec. 105.), the Office of Science and Technology Policy is developing guidelines for the management and preservation of federally owned collections.

#### Competitive Area 1. Natural History Collections

Funds are provided to make improvements in established vouchered natural history collections for sustained, accurate, and efficient accessibility of the collection to the biological research community. Such improvements include, but are not limited to, securing and organizing specimens and related data and developing methods to improve specimen curation and collection management. Collections supported include those housing natural history specimens and their ancillary data such as preserved tissues, and/or other physical samples (e.g., DNA libraries and digital images). The CSBR Program encourages collections digitization activities that help to secure collections, and requires that the activities funded through this Program interface with the soon to be announced national Home Uniting Biocollections (HUB) established and supported by the Advancing Digitization of Biological Collections (ADBC) Program. The recent awards link on the ADBC website <a href="http://www.nsf.gov/funding/ppg\_summ.jsp?">http://www.nsf.gov/funding/ppg\_summ.jsp?</a><a href="https://www.nsf.gov/funding/ppg\_summ.jsp?">pims\_id=503559&org=&from\_org=NSF</a> will provide further details about the HUB award when available.

Voucher collections, such as those maintained by some academic departments, field stations, and marine laboratories may be eligible for funding if it is shown that use of the collections justify the investment, there is a long-term commitment to maintain the collections, and curatorial support is adequate. CSBR-supported projects include those that deal with complete specimens of organisms, parts of organisms, or direct artifacts of organisms (e.g., recorded sounds, fossilized footprints). Also eligible are organism-based collections that maintain ancillary material documenting the environmental context of the primary organism (e.g., soil and water samples, temperature and precipitation records, specimen-based geographic information, field notes) or materials (e.g., frozen tissue, DNA) from which the genome can be determined. Such ancillary collections must be properly vouchered by specimens to be eligible. Single organism collections are not supported through this competitive area. Nor are projects to computerize card files of literature sources, observation records, or other library items eligible. Please note that NSF does not normally provide support for research with disease-related goals, including work on the etiology, diagnosis, or treatment of physical or mental disease, abnormality, or malfunction in human beings or animals, and therefore does not provide support for collections of materials used in these research areas.

#### Competitive Area 2. Living Stock Collections

Funds are provided to secure and improve existing collections of living organisms (including viruses and bacteriophages) used in the basic biological research funded by the NSF BIO Directorate. Awards will be made that lead to innovative handling of living stocks or to well-defined improvements in existing collections. The program may use a portion of its funds to help support the costs of operating facilities that have an established history of providing resources to the NSF BIO-supported research community. A strategic plan for the long-term financial support of the collection should be submitted. Support for establishing new collections, collecting specimens, or growing existing collections is not allowable.

Requests for support for living stocks resources are expected to describe stock collection activities that emphasize the security, maintenance, and provision of living organisms and, when appropriate, derivatives (such as isolated DNA, DNA libraries) or other materials (such as antibodies) relevant to their study. While the program encourages the incorporation of compounds into collections, it does not provide significant direct support for the development of them, and only limited support for their storage and distribution. Support for development of derivative or other materials for original research by collection staff should be sought from appropriate research programs at NSF and at other public and private agencies. Funds may be requested for support to develop innovative approaches to handling living stocks and for one-time improvements in operations of established collections.

To facilitate public access to stock collections supported by the CSBR Program, all such collections must have an up-to-date web site that provides information about the contents of the collection and about procedures for ordering strains. When appropriate, the collection should interface with relevant national efforts to integrate digitized collections data.

In identifying requests that deserve highest priority for funding in the Living Stock Collections competitive area, the Program will consider the following general characteristics:

- The importance of the organism(s) in the collection to NSF BIO-supported research community, and the relevance of the
  collection's usage to the goals of the Directorate for Biological Sciences. Collections of organisms whose principal users are
  NSF BIO-supported researchers will be given priority for support.
- The breadth of usage of the collection by the potential user community. Both the types of use and numbers of users are
  considered to reflect the value of the collection to the research community
- The uniqueness of the collection, both within and outside the US.
- The active involvement of a scientifically-qualified collections manager with expertise in handling of the subjects of the collection.
- The location of the collection in an active research environment.
- The availability of all relevant information about the collection via the internet.
- The participation of an active external advisory group whose membership includes current or potential users drawn from areas of research under the purview of the NSF Directorate for Biological Sciences. Such groups play an important role in advising managers of the collection on matters of policy and practice including, for example, user fees and acquisition policies
- A long-term strategic plan for the collection facility support or disposition, including a financial plan for the long term maintenance of the collection.

#### Competitive Area 3. Supplemental Funding to Transfer Ownership of Collections

Supplemental funding to existing awards may be requested to move valuable established collections to a new institutional home, or to consolidate or combine collections. Requests for moving or consolidating must include an explicit plan for the activity.

#### **General Information**

Potential proposers for any of the Competitive Areas are strongly encouraged to contact one of the CSBR Program Directors before beginning the effort of preparing a proposal.

#### Types of Support

Funds may be provided for digitization efforts in association with other activities that secure a collection, such as curation improvement and infrastructure enhancement. Computerization support generally includes equipment (hardware, software) and supplies (storage media), as well as salary for new personnel specifically required to complete a scientifically sound and well-circumscribed project. It is expected that such projects will lead to improved, direct user access to collection data via standard internet protocols and interactions with the national digitization HUB. Awards may also be made for the enhancement of infrastructure such as the purchase of specimen cases and installation costs, and new curatorial and technical assistance specifically designed to effect the proposed improvements for the duration of the proposed project. Part of these improvements must include the digitization of all specimens handled during the project and the resulting data must be linked to the national HUB for digitized collection information; if specimens to be handled during the improvement project have already been digitized, plans for linking the data to the HUB should be part of the proposal or evidence that the data are already so linked should be provided. Specialized items that are components of a large system (e.g., specimen cabinets and compactors) are considered as equipment under the CSBR program guidelines. Research to develop improved curatorial practices or more efficient collection management practices may also be supported.

CSBR does not provide support to: 1) defray ordinary operating expenses of natural history collections, 2) purchase specimens, 3) conduct field work, collect specimens, or increase the size of collections, 4) create or establish a new collection, or 5) improve libraries or archives. Organizations receiving specimens collected through other research activities (e.g., Biodiversity Surveys & Inventories; Tree of Life; Dimensions of Biodiversity) should reach an agreement with the researcher(s) prior to deposit so that specimens are prepared and digitized (including geo-referencing) in a format compatible with the receiving collection.

Support provided by the CSBR program is restricted to costs for the proposed project above the normal operating budget received from the organization responsible for the collection. Projects proposed for CSBR support should be innovative, be clearly focused, have a strong scientific rationale, demonstrate urgent need, and be designed to be completed within the time frame proposed. Collaborative proposals that link collection information among institutions and enhance accessibility will be considered, but should clearly focus on securing collections as a motivation for data integration, and should be interoperable with other online resources, including the national HUB. Plans for long-term maintenance of the collection should be addressed in the project description. Building or facilities renovation associated with collection improvement will not be supported by CSBR, but may be provided by the submitting organization as an indication of organizational commitment to the long-term housing of the collections. This should be included in the Facilities, Equipment and Other Resources section of the proposal. The description should be narrative in nature and must not include any quantifiable financial information. See the Grant Proposal Guide, Chapter II.C.2.i for additional guidance on this section.

#### III. AWARD INFORMATION

Proposals submitted to the CSBR Program typically are for projects that range from one to five years. The CSBR program expects approximately \$6.5 million annually pending availability of funds. Up to \$500,000 total for individual awards of 1 to 3 years; up to \$2,000,000 total for collaborative awards of 1 to 5 years. Numbers of awards and average award size/duration are subject to the availability of funds. Also, please see the NSF website for the Biological Research Collection program at <a href="http://www.nsf.gov/funding/pgm\_summ.jsp?pims\_id=5448&org=DBI">http://www.nsf.gov/funding/pgm\_summ.jsp?pims\_id=5448&org=DBI</a> and the Living Stocks Collections for Biological Research at <a href="http://www.nsf.gov/funding/pgm\_summ.jsp?pims\_id=9189&org=DBI&from=home">http://www.nsf.gov/funding/pgm\_summ.jsp?pims\_id=9189&org=DBI&from=home</a> for a current listing of awards and examples of the range and scope of projects supported.

### IV. ELIGIBILITY INFORMATION

# Organization Limit:

Proposals may only be submitted by the following:

Proposals are accepted from U.S. organizations, including colleges and universities that maintain research
collections, natural history museums including herbaria, and other collections administered by independent
organizations or by state, county, or local governments; non-federal and non-profit research organizations
that maintain collections; and field stations, marine laboratories, botanical gardens, zoological parks, and
aquaria that maintain living or vouchered research collections significant to the NSF BIO-funded research
community. The size of an organization is not a factor in determining eligibility.

Potential proposers for any of the Competitive Areas are strongly encouraged to contact one of the CSBR Program Directors if they have any questions concerning eligibility.

#### PI Limit:

None Specified

Limit on Number of Proposals per Organization: 3

#### Limit on Number of Proposals per PI:

See Solicitation section IV. Eligibility Information for details

# Additional Eligibility Info:

In a single round of the CSBR competition, only one proposal may be submitted from any individual collection within an organization. Organizations that house multiple collections and submit proposals from more than one collection must demonstrate strategic planning activities and clearly articulate their prioritization of the needs outlined in the proposals. One organization may not submit more than three proposals to any one CSBR competition.

# A. Proposal Preparation Instructions

**Full Proposal Preparation Instructions:** Proposers may opt to submit proposals in response to this Program Solicitation via Grants.gov or via the NSF FastLane system.

- Full proposals submitted via FastLane: Proposals submitted in response to this program solicitation should be prepared and submitted in accordance with the general guidelines contained in the NSF Grant Proposal Guide (GPG). The complete text of the GPG is available electronically on the NSF website at: <a href="http://www.nsf.gov/publications/pub\_summ.jsp?ods\_key=gpg">http://www.nsf.gov/publications/pub\_summ.jsp?ods\_key=gpg</a>. Paper copies of the GPG may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-7827 or by email from nsfpubs@nsf.gov. Proposers are reminded to identify this program solicitation number in the program solicitation block on the NSF Cover Sheet For Proposal to the National Science Foundation. Compliance with this requirement is critical to determining the relevant proposal processing guidelines. Failure to submit this information may delay processing.
- Full proposals submitted via Grants.gov: Proposals submitted in response to this program solicitation via Grants.gov should be prepared and submitted in accordance with the NSF Grants.gov Application Guide: A Guide for the Preparation and Submission of NSF Applications via Grants.gov. The complete text of the NSF Grants.gov Application Guide is available on the Grants.gov website and on the NSF website at: (http://www.nsf.gov/publications/pub\_summ.jsp? ods\_key=grantsgovguide). To obtain copies of the Application Guide and Application Forms Package, click on the Apply tab on the Grants.gov site, then click on the Apply Step 1: Download a Grant Application Package and Application Instructions link and enter the funding opportunity number, (the program solicitation number without the NSF prefix) and press the Download Package button. Paper copies of the Grants.gov Application Guide also may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-7827 or by e-mail from nsfpubs@nsf.gov.

In determining which method to utilize in the electronic preparation and submission of the proposal, please note the following:

Collaborative Proposals. All collaborative proposals submitted as separate submissions from multiple organizations must be submitted via the NSF FastLane system. Chapter II, Section D.4 of the Grant Proposal Guide provides additional information on collaborative proposals.

The following information provides instructions that supplement the GPG and NSF Grants.gov Application Guide.

Project Summary (maximum: one page)

*Titles of Proposal:* The project title should be prefixed with either "CSBR: Living Stocks Collections:" or "CSBR: Natural History Collections:". The title should be descriptive of the project and avoid acronyms or proper names that merely identify, rather than describe, the proposed activities.

**Project Summary:** The summary should describe the collection, including the number of species or strains in the collection. For the living stocks competitive area, include the number of samples provided annually, the approximate number of users, and any interesting aspects of the collection or its use. Indicate if the request is for innovations or operating costs. For the natural history competitive area, summarize the proposed collection improvement, computerization, innovation, or other activity, address the urgency of the need, outline the impact of the use of the collection and its information resources on science and society, and summarize the long-term management and public outreach capabilities of the collection. The project summary must clearly address in separate statements: (1) the intellectual merit of the proposed collections activities, and (2) the broader impacts of these activities. Proposals that do not address both aspects in the project summary will be returned without review.

Project Description (maximum: 15 pages, inclusive of tables and illustrations) must address the following points:

- A. For proposals in the Natural History Collections competitive area:
  - 1. Results of Prior Research should summarize results of the most recent collection improvement award that the collection has received from NSF in the preceding 5 years (maximum: 5 pages), even if the current Principal Investigator (PI) was not associated with the collection at that time. If the collection has not received an award in the previous 5 years, then an award to the PI within the past 5 years that was not collection-related, but that is most closely allied to the current proposal, should be described.
  - 2. Provide Evidence of the Collection's Importance to BIO/NSF funded research or biological conservation on a regional, national, or international scale. All proposals must demonstrate an organizational commitment to adequate staffing and operating support that will result in long-term maintenance of the specimens, collections, and associated data. Support from CSBR will not be provided to defray ordinary operating expenses of natural history collections. The proposal should state how the value of the collection will be enhanced by support from the CSBR Program and how its contributions will further advances in the biological sciences.
  - 3. Urgency for support should be clear. Long-term security of specimens and their associated data is the primary concern of the CSBR program. The program is also concerned with the host institution's ability to meet special needs that arise from rapid expansion or unique opportunities. Common sources of such needs are collections resulting from biotic surveys of endangered habitats, opportunities to salvage a significant collection that otherwise would be lost, and the preservation of collections that facilitate critical knowledge discovery or enable substantial growth in a scientific discipline.
  - 4. Taxonomic Breadth, when applicable, should be clearly specified, including the taxonomic groups housed in the collections for which support is being sought and estimates of the numbers of specimens or lots, numbers of species, and information on the geographic areas, oceanographic regions, or stratigraphic horizons from which specimens were collected.
  - 5. Value of the Collection for Scientific Research and Resource Management should be provided. Indicators of value, in addition to taxonomic breadth, include measures of use by the scientific community such as numbers of specimen loans, visitors to the collection, data requests, and publications based on specimens in the collection, number of type specimens, age of the collection, and presence of extinct or rare species. Internet accessibility to collection data (including web analytics and integration with regional, national, and international collections network-building efforts) and growth and use of the collection over at least the last five years should be described.
  - 6. Education and Outreach contributions of the collections activities should be clearly identified in the

proposal. Include descriptions of plans and activities demonstrating how the collection contributes to the public understanding and appreciation of science and the diversity of life.

- 7. The following supporting data should be included concisely in tabular format:
- · size, composition, and areas of taxonomic, geographic and/or geologic concentration of the collection;
- · rate of growth over the past five years;
- degree and range of use in research, education, and other activities over the past five years (e.g. number and type of loans, number of visitors, data requests and other pertinent statistics, arranged according to professional or student use);
- research impact over the past five years (e.g. tabulate the number of publications or other products, arranged by professional or student, that are based on specimens in the collection, and provide up to five particularly significant examples).
- 8. A Management Plan must be included within the project description of the proposal. The plan must delineate tasks and responsibilities, and outline a timetable for completion of the project. If a collection is being relocated due to new facility construction or renovation of an existing facility, a construction timeline, including the expected date of construction completion, must be included. Letters of support from appropriate organizational representatives are encouraged. For supplemental support related to the acquisition of orphaned collections, clearly describe a sound, scientific rationale for incorporating a particular collection, providing evidence of how the addition will strengthen the existing collection. Letters documenting ownership of the orphaned collections must be provided; these can be provided in the Special Information and Supplementary Documentation section.
- Requests for Personnel Support should include a detailed task analysis to justify the funding requested for the duration of the proposed project.
- 10. All Proposals Must Address the Anticipated Broader Impacts of the proposed activities; examples include education, importance to groups outside the scientific community, such as the public or land use managers, increased outreach to underrepresented groups in the field, and others found on the NSF web site at: http://www.nsf.gov/pubs/gpg/broaderimpacts.pdf. Use by the scientific community is part of the intellectual merit of the proposal.
- 11. All Proposals Must Include a Description of the Collection's Policies (including those concerning loans, accessions, deaccessions, and collecting permits), protocols and user charges or fees that govern acquisitions, loans, and access to the specimens and Internet-based information associated with them. All collections supported by CSBR funds must be open to access by the research community.
- 12. Description of the Plans for Advising the Biological Research Community and the general public of the avenues of access to a collection and its associated data, publication of a new curatorial or collection management practice, or the outcome of discipline-wide workshops should be included as appropriate.
- 13. All Submitting Organizations Must Demonstrate their Commitment to Collection Staffing and Normal Operating Support that are adequate for the regular use, growth, care, and management of the collection. Normal collection operations include specimen acquisition resulting from the research activities of the collection's curators and other associated staff or from the acceptance of donated materials, maintenance of those collections, answering loan and data requests, pursuing specimen-based research, and accommodating visiting researchers. Support from the CSBR Program may not be requested to defray these ordinary operating costs. Such documentation should be presented in the form of a letter (one page maximum) documenting the organization's long-term commitment to care and maintenance of the collection. This letter should be included in the Special Information and Supplementary Documentation section.
- B. For proposals in the Living Stock Collections competitive area:

Projects aimed at improving the methodology or technology of stock collection operations should be presented in a manner consistent with that in a research proposal, including specific aims and sufficient technical detail to assess the need for and likely success of the project, and its expected impact on operation of stock collections. Short-term projects can also include technique development for producing back-up stocks to be stored at secondary sites. The anticipated timeline, with milestones as appropriate, should be included.

For projects requesting support for operating costs, the project description should describe the current and future operation of the collection in detail, including plans for long-term sustainability. Required lists and tables should be presented in the Supplementary Documents section of the proposal (see below). The project description should include the following:

- Historical perspective and statement of goals. Describe the origins of the collection, the goals of its
  operation, and the areas of BIO/NSF funded research that benefit from use of organisms in the collection.
- Description of the collection. Provide a general summary, including number of stocks and, where
  appropriate, number of mutant strains, species, genera, etc. Describe types of services and products other
  than stocks, if any. Because the collection must be web-accessible, provide the Uniform Resource Locator
  (URL) for the collection's homepage.
- 3. Use of the collection. Provide summary comments on use of the collection by BIO NSF funded researchers in the last five years, with attention to changing patterns of use, new types of uses and users, etc. Include a table of detailed quantitative information in the supplementary documents section (below). Address any significant improvements made in the last five years, for example, to procedures for ordering, data capture, user identification, etc.
- 4. **Management structure**. Describe the roles, qualifications and responsibilities of the Director of the collection, the collection manager, and any other key personnel. NSF expects that the manager will have a Ph.D. or equivalent research experience. Identify the academic department or other organizational unit in which the collection is located and the organizational official(s) to whom the Director of the collection reports. If extensive, this may be provided as an organizational diagram.
- 5. Acquisition policy. Describe the policies for addition and removal of stocks; indicate how these reflect the statement of goals in item 1. Estimate the number of stocks added to, or removed from, the collection in each of the last three years. Indicate the number of duplicate or unidentified stocks at the current time. Justify the presence of duplicates, and describe plans to identify any unknown stocks. Describe the protocol for identifying dead stocks and the procedure for their removal.

- 6. Relationship to similar collections. Identify other national or foreign collections of the same taxa, if any, and estimate overlap in collection contents. Describe how this collection interfaces with other similar collections worldwide. Include methods for communications between these organizations. StrainInfo.net is an example of a portal to microbial culture collections worldwide (http://www.straininfo.net/). Similar portals for other taxa should be included in the collection website. It is strongly encouraged that the collection be registered with StrainInfo.net or a similar registry. The World Federation of Culture Collections (http://www.wfcc.info/index.html) is an example of an international federation that serves as an information network among collections. Similar federations for other relevant taxa should be consulted when developing coordination and communication plans with related collections.
- 7. Documentation and ordering. Describe the use of electronic databases in operation of the collection and in provision of public access to information about the collection, including the frequency with which such public information is updated. Describe the procedure for ordering specimens.
- 8. Quality control practices. Describe procedures and practices intended to assure integrity of the individual stocks and other resources, including reducing or eliminating contamination, and steps being taken to assess the quality of service provided to the community. Describe plans to develop a back-up stock protocol (whether as frozen stocks at a secondary location or in another procedure) to ensure stock integrity.
- Future goals. Describe any expected changes in the scope of the collection, in its manner of operation, in staffing, or in facilities. Describe short- and long-term plans for the collection in the event of unanticipated changes in participation by the key personnel.
- 10. Cost analysis. Estimate the staff time and other costs (pro-rata cost of glassware, growth media, cage charges, etc.) required for accession and for yearly maintenance of a typical stock. List the fraction of the annual cost of operation of the collection currently provided by: 1) NSF; 2) Other Federal agencies; 3) User charges; 4) Other sources, such as private foundations, endowments, and personal contributions. Estimate the expected change, if any, in this total cost of operation over the period for which funding is requested. Proposers should anticipate that the fraction of total cost borne by NSF will decrease over time, and that the actual amount of direct NSF support may itself decrease. Thus, a strategic plan for long-term sustainability or disposition of the collection must be included.
- 11. User charges. Describe the accounting basis or other strategy for establishment of user fees and use of fees to offset operational costs of the collection. Collections with long-term CSBR support are expected to recover a significant fraction of the cost of operation through user fees. The fees for any additional services or products (i.e. those provided in addition to samples of living stocks from the collection) are expected to reflect the cost to the collection of providing the services or products. In the Supplementary Documents section (see below), provide as part of Table 1 a current list of all user fees and the date on which these were last changed.
- 12. External advisory committee. All collections supported on a long-term basis are required to have an external advisory committee that provides guidance for the collection and to the host organization with respect to collection operations and policies, including user fees, new acquisitions, other improvements, and long-term plans. The committee should also serve as a resource for user community input into assessment of the quality of services and products. The committee is expected to meet annually, and to provide a written report to the collection's Director following the meeting. The PI should include a summary of the report as part of the collection's annual progress report to NSF. In this section of the project description, outline the functions of the advisory committee and the mechanisms for assuring that the committee broadly represents the research community that uses the collection. The term of service of members and the mechanism for their selection should be described. Current members of the advisory committee should be listed in the Supplementary Documents section as Table 5 (see below). In selecting committee members, the NSF goal for broadening participation should be considered.
- 13. Organizational role. Describe the host organization's long-term plans for maintaining the collection, including a view to the future beyond the period of requested support. Include a financial projection of support from all sources for the first year of operation following termination of the NSF support being requested. Strategic long-term plans are strongly encouraged.
- 14. Prior Support (maximum 5 pages). Briefly describe the outcome of any support of the collection by the NSF in the last five years, irrespective of the PI or organization that received the support, and list all publications that resulted. If this is a renewal proposal, state the title, amount of funds received and duration of the award for which renewal is sought. Describe any accomplishments that are not included in the narrative section. Do not describe the results of other prior support received by the current PI, unless the support was intended to improve operation of the collection.
- Security of Stocks. Where appropriate, include the institution's policy on security and safety of stock collections.
- C. For Supplement proposals to Transfer Ownership of Collections competitive area:

For projects to relocate or consolidate collections, present sufficient detail to assess the need for the activity and the likely outcome if an award is not made. The content of such short-term requests should address the relevant elements of A or B above, emphasizing the importance of both the collection(s) to be moved and the recipient collection(s), and the urgency of the project.

**Special Information and Supplementary Documentation:** Provide information such as letters of collaboration, and other allowed items as noted in the current issuance of the GPG. Include letters of commitment and other materials, such as MOUs with existing collections when these collections are not part of the collaborative proposal. For Grants.gov users, supplementary documents should be attached in Field 12 of the R&R Other Project Information Form.

- For organizations housing multiple collections and submitting more than one proposal, the plan for
  prioritizing the needs of the several collections and the longer term commitments must be included. This
  information can be provided in the Special Information and Supplementary Documentation section.
- Individuals whose role is discussed in the project description as providing assistance or collaboration to the project (but not included in the budget) must verify their participation with a document placed in Special Information and Supplementary Documentation section using the following format only.

To: CSBR Program Director(s),

By signing below, I acknowledge that I will provide the assistance or am listed as a collaborator as indicated in the proposal, entitled "\_\_\_\_\_ " with \_\_\_\_\_ as the Principal Investigator. I agree to undertake the tasks assigned to me, as described in the proposal, and I commit to provide or make available the resources therein designated to me.

Signed: \_\_\_\_\_ Print Name: \_\_\_\_\_

Date: \_\_\_\_\_ Institution: \_\_\_\_\_

- 3. For projects involving the installation of major storage systems or other major pieces of equipment, a timetable for installation, floor plans, and floor loading analyses must be provided. This information can be provided in the Special Information and Supplementary Documentation section.
- 4. Postdoc Mentoring Plan. Each proposal that requests funding to support postdoctoral researchers must include, as a supplementary document, a description of the mentoring activities that will be provided for such individuals. This plan should include a discussion of training in curatorial and stewardship best practices. The mentoring plan must not exceed one page.
- 5. Data Management Plan. In addition to criteria required by the GPG, these proposals should provide a clear statement of how the project will manage data, software tools and other digital resources that result from the activities supported by the NSF award. All data entered during a CSBR-funded project must be made available over the internet during the course of the project (exceptions may include sensitive data such as localities for endangered species). Proposals in the Natural History Collections competitive area must provide a plan to interface with the national HUB funded by the Advancing Digitization of Biological Collections (ADBC) program; proposals in the Living Stock Collections competitive area should include a plan to interface with other similar collections worldwide (via an appropriate avenue). The data management plan must show strong evidence of awareness of community information management standards, and describe the hardware and software to be used, the data model and elements of the database, mechanisms for quality control of data entry, capacity for expansion, internet accessibility, computerization and interoperability approaches, and plans for permanent maintenance of the database. Quality assurance for species identifications, testing the accuracy of data entry, statements on georeferencing protocols, and a searchable database or metadata format should be included in the description. When appropriate, these activities may be described in further detail in the project description.

Single Copy Documents include correspondence to the program not intended to be sent to reviewers. These should include:

A list of potential reviewers for the proposal.

A conflict of interest document should be provided in the form of a single alphabetized table, consisting of the full name (last, first, MI) of all people having a conflict of interest with any senior personnel and others whose biographical sketches are included in the proposal. Conflicts to be identified are (1) Ph.D. thesis advisors or advisees, (2) collaborators or co-authors for the past 48 months including postdoctoral mentors and mentees, and (3) other individuals or institutions with which the senior personnel has financial ties.

# **B. Budgetary Information**

Cost Sharing: Inclusion of voluntary committed cost sharing is prohibited

#### **Budget Preparation Instructions:**

Provide a cost-breakdown and narrative justification for budgeted items. At least two vendor quotes for items of equipment and supplies that total more than \$10,000 should have been obtained. Reasons for choosing a particular vendor should be described in this section. Present discrete task analyses to justify the number, duration, and percent effort of current personnel, and for additional personnel specifically required for the duration of the proposed project. Other costs should be related to the proposed project. Specialized items that are components of a larger system (e.g. specimen cabinets and compactors) are considered as equipment under the CSBR program guidelines.

#### C. Due Dates

• Full Proposal Target Date(s):

October 16, 2011

July 27, 2012

Fourth Friday in July, Annually Thereafter

# D. FastLane/Grants.gov Requirements

• For Proposals Submitted Via FastLane:

Detailed technical instructions regarding the technical aspects of preparation and submission via FastLane are available at: <a href="https://www.fastlane.nsf.gov/a1/newstan.htm">https://www.fastlane.nsf.gov/a1/newstan.htm</a>. For FastLane user support, call the FastLane Help Desk at 1-800-673-6188 or e-mail fastlane@nsf.gov. The FastLane Help Desk answers general technical questions related to the use of the FastLane system. Specific questions related to this program solicitation should be referred to the NSF program staff contact(s) listed in Section VIII of this funding opportunity.

Submission of Electronically Signed Cover Sheets. The Authorized Organizational Representative (AOR) must electronically sign the proposal Cover Sheet to submit the required proposal certifications (see Chapter II, Section C of the Grant Proposal Guide for a listing of the certifications). The AOR must provide the required electronic certifications within five working days following the electronic submission of the proposal. Further instructions regarding this process are available on the FastLane Website at: <a href="https://www.fastlane.nsf.gov/fastlane.jsp">https://www.fastlane.nsf.gov/fastlane.jsp</a>.

#### · For Proposals Submitted Via Grants.gov:

Before using Grants.gov for the first time, each organization must register to create an institutional profile. Once registered, the applicant's organization can then apply for any federal grant on the Grants.gov website. Comprehensive information about using Grants.gov is available on the Grants.gov Applicant Resources webpage: <a href="http://www07.grants.gov/applicants/app\_help\_reso.jsp">http://www07.grants.gov/applicants/app\_help\_reso.jsp</a>. In addition, the NSF Grants.gov Application Guide provides additional technical guidance regarding preparation of proposals via Grants.gov. For Grants.gov user support, contact the Grants.gov Contact Center at 1-800-518-4726 or by email: <a href="mailto:support@grants.gov">support@grants.gov</a>. The Grants.gov Contact Center answers general technical questions related to the use of Grants.gov. Specific questions related to this program solicitation should be referred to the NSF program staff contact(s) listed in Section VIII of this solicitation.

**Submitting the Proposal:** Once all documents have been completed, the Authorized Organizational Representative (AOR) must submit the application to Grants.gov and verify the desired funding opportunity and agency to which the application is submitted. The AOR must then sign and submit the application to Grants.gov. The completed application will be transferred to the NSF FastLane system for further processing.

#### VI. NSF PROPOSAL PROCESSING AND REVIEW PROCEDURES

Proposals received by NSF are assigned to the appropriate NSF program where they will be reviewed if they meet NSF proposal preparation requirements. All proposals are carefully reviewed by a scientist, engineer, or educator serving as an NSF Program Officer, and usually by three to ten other persons outside NSF who are experts in the particular fields represented by the proposal. These reviewers are selected by Program Officers charged with the oversight of the review process. Proposers are invited to suggest names of persons they believe are especially well qualified to review the proposal and/or persons they would prefer not review the proposal. These suggestions may serve as one source in the reviewer selection process at the Program Officer's discretion. Submission of such names, however, is optional. Care is taken to ensure that reviewers have no conflicts of interest with the proposal.

# A. NSF Merit Review Criteria

All NSF proposals are evaluated through use of the two National Science Board (NSB)-approved merit review criteria: intellectual merit and the broader impacts of the proposed effort. In some instances, however, NSF will employ additional criteria as required to highlight the specific objectives of certain programs and activities.

The two NSB-approved merit review criteria are listed below. The criteria include considerations that help define them. These considerations are suggestions and not all will apply to any given proposal. While proposers must address both merit review criteria, reviewers will be asked to address only those considerations that are relevant to the proposal being considered and for which the reviewer is qualified to make judgements.

#### What is the intellectual merit of the proposed activity?

How important is the proposed activity to advancing knowledge and understanding within its own field or across different fields? How well qualified is the proposer (individual or team) to conduct the project? (If appropriate, the reviewer will comment on the quality of the prior work.) To what extent does the proposed activity suggest and explore creative, original, or potentially transformative concepts? How well conceived and organized is the proposed activity? Is there sufficient access to resources?

#### What are the broader impacts of the proposed activity?

How well does the activity advance discovery and understanding while promoting teaching, training, and learning? How well does the proposed activity broaden the participation of underrepresented groups (e.g., gender, ethnicity, disability, geographic, etc.)? To what extent will it enhance the infrastructure for research and education, such as facilities, instrumentation, networks, and partnerships? Will the results be disseminated broadly to enhance scientific and technological understanding? What may be the benefits of the proposed activity to society?

Examples illustrating activities likely to demonstrate broader impacts are available electronically on the NSF website at: http://www.nsf.gov/pubs/gpg/broaderimpacts.pdf.

Mentoring activities provided to postdoctoral researchers supported on the project, as described in a one-page supplementary document, will be evaluated under the Broader Impacts criterion.

NSF staff also will give careful consideration to the following in making funding decisions:

#### Integration of Research and Education

One of the principal strategies in support of NSF's goals is to foster integration of research and education through the programs, projects, and activities it supports at academic and research institutions. These institutions provide abundant opportunities where individuals may concurrently assume responsibilities as researchers, educators, and students and where all can engage in joint efforts that infuse education with the excitement of discovery and enrich research through the diversity of learning perspectives.

### Integrating Diversity into NSF Programs, Projects, and Activities

Broadening opportunities and enabling the participation of all citizens -- women and men, underrepresented minorities, and persons with disabilities -- is essential to the health and vitality of science and engineering. NSF is committed to this principle of diversity and deems it central to the programs, projects, and activities it considers and supports.

# Additional Review Criteria:

Please see the full text of this solicitation for further information.

In addition to the standard NSF review criteria, the following will be considered:

- Urgency of the request
- · Scientific importance and value of the collection for basic biological research supported by NSF BIO programs
- Usage of the collection by the scientific community
- Size, quality, taxonomic breadth, and uniqueness of the collection
- Education and outreach plans
- Management plan and task analyses

- · Attention to standard protocols of the field
- Interoperability, openness and long-term preservation of digitized data Capability and qualifications of the PI, collections manager, and other staff
- Long-term maintenance and strategic plans for the collection
  Management provisions, including acquisitions policy, loan policies, user fee structure, and external advisory committee (when required)
- Evidence of planning by, and priorities of, the parent organization
- Long-term commitment of the host organization to the collection's maintenance

#### **B. Review and Selection Process**

Proposals submitted in response to this program solicitation will be reviewed by Ad hoc Review and/or Panel Review.

Reviewers will be asked to formulate a recommendation to either support or decline each proposal. The Program Officer assigned to manage the proposal's review will consider the advice of reviewers and will formulate a recommendation.

After scientific, technical and programmatic review and consideration of appropriate factors, the NSF Program Officer recommends to the cognizant Division Director whether the proposal should be declined or recommended for award. NSF is striving to be able to tell applicants whether their proposals have been declined or recommended for funding within six months. The time interval begins on the deadline or target date, or receipt date, whichever is later. The interval ends when the Division Director accepts the Program Officer's recommendation.

A summary rating and accompanying narrative will be completed and submitted by each reviewer. In all cases, reviews are treated as confidential documents. Verbatim copies of reviews, excluding the names of the reviewers, are sent to the Principal Investigator/Project Director by the Program Officer. In addition, the proposer will receive an explanation of the decision to award or decline funding.

In all cases, after programmatic approval has been obtained, the proposals recommended for funding will be forwarded to the Division of Grants and Agreements for review of business, financial, and policy implications and the processing and issuance of a grant or other agreement. Proposers are cautioned that only a Grants and Agreements Officer may make commitments, obligations or awards on behalf of NSF or authorize the expenditure of funds. No commitment on the part of NSF should be inferred from technical or budgetary discussions with a NSF Program Officer. A Principal Investigator or organization that makes financial or personnel commitments in the absence of a grant or cooperative agreement signed by the NSF Grants and Agreements Officer does so at their own risk.

#### VII. AWARD ADMINISTRATION INFORMATION

# A. Notification of the Award

Notification of the award is made to *the submitting organization* by a Grants Officer in the Division of Grants and Agreements. Organizations whose proposals are declined will be advised as promptly as possible by the cognizant NSF Program administering the program. Verbatim copies of reviews, not including the identity of the reviewer, will be provided automatically to the Principal Investigator. (See Section VI.B. for additional information on the review process.)

#### **B.** Award Conditions

An NSF award consists of: (1) the award letter, which includes any special provisions applicable to the award and any numbered amendments thereto; (2) the budget, which indicates the amounts, by categories of expense, on which NSF has based its support (or otherwise communicates any specific approvals or disapprovals of proposed expenditures); (3) the proposal referenced in the award letter; (4) the applicable award conditions, such as Grant General Conditions (GC-1); \* or Research Terms and Conditions and (5) any announcement or other NSF issuance that may be incorporated by reference in the award letter. Cooperative agreements also are administered in accordance with NSF Cooperative Agreement Financial and Administrative Terms and Conditions (CA-FATC) and the applicable Programmatic Terms and Conditions. NSF awards are electronically signed by an NSF Grants and Agreements Officer and transmitted electronically to the organization via e-mail.

\*These documents may be accessed electronically on NSF's Website at http://www.nsf.gov/awards/managing/award conditions.jsp? org=NSF. Paper copies may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-7827 or by e-mail from

More comprehensive information on NSF Award Conditions and other important information on the administration of NSF awards is contained in the NSF Award & Administration Guide (AAG) Chapter II, available electronically on the NSF Website at http://www.nsf.gov/publications/pub\_summ.jsp?ods\_key=aag.

# C. Reporting Requirements

For all multi-year grants (including both standard and continuing grants), the Principal Investigator must submit an annual project report to the cognizant Program Officer at least 90 days before the end of the current budget period. (Some programs or awards require more frequent project reports). Within 90 days after expiration of a grant, the PI also is required to submit a final project report, and a project outcomes report for the general public.

Failure to provide the required annual or final project reports, or the project outcomes report will delay NSF review and processing of any future funding increments as well as any pending proposals for that PI. PIs should examine the formats of the required reports in advance to assure availability of required data.

Pls are required to use NSF's electronic project-reporting system, available through FastLane, for preparation and submission of annual and final project reports. Such reports provide information on activities and findings, project participants (individual and

organizational), publications, and other specific products and contributions. Pls will not be required to re-enter information previously provided, either with a proposal or in earlier updates using the electronic system. Submission of the report via FastLane constitutes certification by the PI that the contents of the report are accurate and complete. The project outcomes report must be prepared and submitted using Research.gov. This report serves as a brief summary, prepared specifically for the public, of the nature and outcomes of the project. This report will be posted on the NSF website exactly as it is submitted by the PI.

#### VIII. AGENCY CONTACTS

Please note that the program contact information is current at the time of publishing. See program website for any updates to the points of contact.

General inquiries regarding this program should be made to:

- Daphne G. Fautin, Program Director, Directorate for Biological Sciences, Division of Biological Infrastructure, telephone: (703) 292-8470, fax: (703) 292-9063, email: dbibrc@nsf.gov
- Anne M. Maglia, Program Director, Directorate of Biological Sciences, Division of Biological Infrastructure, telephone: (703) 292-8470, fax: (703) 292-9063, email: dbibrc@nsf.gov

For questions related to the use of FastLane, contact:

• FastLane Help Desk, telephone: 1-800-673-6188; e-mail: fastlane@nsf.gov.

For questions relating to Grants.gov contact:

Grants.gov Contact Center: If the Authorized Organizational Representatives (AOR) has not received a confirmation
message from Grants.gov within 48 hours of submission of application, please contact via telephone: 1-800-518-4726; email: support@grants.gov.

#### IX. OTHER INFORMATION

The NSF Website provides the most comprehensive source of information on NSF Directorates (including contact information), programs and funding opportunities. Use of this Website by potential proposers is strongly encouraged. In addition, National Science Foundation Update is a free e-mail subscription service designed to keep potential proposers and other interested parties apprised of new NSF funding opportunities and publications, important changes in proposal and award policies and procedures, and upcoming NSF Regional Grants Conferences. Subscribers are informed through e-mail when new publications are issued that match their identified interests. Users can subscribe to this service by clicking the "Get NSF Updates by Email" link on the NSF web site.

Grants.gov provides an additional electronic capability to search for Federal government-wide grant opportunities. NSF funding opportunities may be accessed via this new mechanism. Further information on Grants.gov may be obtained at <a href="http://www.grants.gov">http://www.grants.gov</a>.

#### ABOUT THE NATIONAL SCIENCE FOUNDATION

The National Science Foundation (NSF) is an independent Federal agency created by the National Science Foundation Act of 1950, as amended (42 USC 1861-75). The Act states the purpose of the NSF is "to promote the progress of science; [and] to advance the national health, prosperity, and welfare by supporting research and education in all fields of science and engineering."

NSF funds research and education in most fields of science and engineering. It does this through grants and cooperative agreements to more than 2,000 colleges, universities, K-12 school systems, businesses, informal science organizations and other research organizations throughout the US. The Foundation accounts for about one-fourth of Federal support to academic institutions for basic research.

NSF receives approximately 40,000 proposals each year for research, education and training projects, of which approximately 11,000 are funded. In addition, the Foundation receives several thousand applications for graduate and postdoctoral fellowships. The agency operates no laboratories itself but does support National Research Centers, user facilities, certain oceanographic vessels and Antarctic research stations. The Foundation also supports cooperative research between universities and industry, US participation in international scientific and engineering efforts, and educational activities at every academic level.

Facilitation Awards for Scientists and Engineers with Disabilities provide funding for special assistance or equipment to enable persons with disabilities to work on NSF-supported projects. See Grant Proposal Guide Chapter II, Section D.2 for instructions regarding preparation of these types of proposals.

The National Science Foundation has Telephonic Device for the Deaf (TDD) and Federal Information Relay Service (FIRS) capabilities that enable individuals with hearing impairments to communicate with the Foundation about NSF programs, employment or general information. TDD may be accessed at (703) 292-5090 and (800) 281-8749, FIRS at (800) 877-8339.

The National Science Foundation Information Center may be reached at (703) 292-5111.

The National Science Foundation promotes and advances scientific progress in the United States by competitively awarding grants and cooperative agreements for research and education in the sciences, mathematics, and engineering.

To get the latest information about program deadlines, to download copies of NSF publications, and to access abstracts of awards, visit the NSF Website at <a href="http://www.nsf.gov">http://www.nsf.gov</a>

Location: 4201 Wilson Blvd. Arlington, VA 22230

• For General Information (703) 292-5111

(NSF Information Center):

TDD (for the hearing-impaired):

(703) 292-5090

• To Order Publications or Forms:

Send an e-mail to: nsfpubs@nsf.gov

or telephone: (703) 292-7827

• To Locate NSF Employees: (703) 292-5111

#### PRIVACY ACT AND PUBLIC BURDEN STATEMENTS

The information requested on proposal forms and project reports is solicited under the authority of the National Science Foundation Act of 1950, as amended. The information on proposal forms will be used in connection with the selection of qualified proposals; and project reports submitted by awardees will be used for program evaluation and reporting within the Executive Branch and to Congress. The information requested may be disclosed to qualified reviewers and staff assistants as part of the proposal review process; to proposer institutions/grantees to provide or obtain data regarding the proposal review process, award decisions, or the administration of awards; to government contractors, experts, volunteers and researchers and educators as necessary to complete assigned work; to other government agencies or other entities needing information regarding applicants or nominees as part of a joint application review process, or in order to coordinate programs or policy; and to another Federal agency, court, or party in a court or Federal administrative proceeding if the government is a party. Information about Principal Investigators may be added to the Reviewer file and used to select potential candidates to serve as peer reviewers or advisory committee members. See Systems of Records, NSF-50, "Principal Investigator/Proposal File and Associated Records," 69 Federal Register 26410 (May 12, 2004). Submission of the information is voluntary. Failure to provide full and complete information, however, may reduce the possibility of receiving an award.

An agency may not conduct or sponsor, and a person is not required to respond to, an information collection unless it displays a valid Office of Management and Budget (OMB) control number. The OMB control number for this collection is 3145-0058. Public reporting burden for this collection of information is estimated to average 120 hours per response, including the time for reviewing instructions. Send comments regarding the burden estimate and any other aspect of this collection of information, including suggestions for reducing this burden, to:

Suzanne H. Plimpton Reports Clearance Officer Division of Administrative Services National Science Foundation Arlington, VA 22230

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The National Science Foundation, 4201 Wilson Boulevard, Arlington, Virginia 22230, USA Tel: (703) 292-5111, FIRS: (800) 877-8339 | TDD: (800) 281-8749

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