

Biological Research Collections (BRC)

Program Solicitation

NSF 04-571

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National Science Foundation
Directorate for Biological Sciences
Division of Biological Infrastructure

Full Proposal Target Date(s):

July 16, 2004

THIRD FRIDAY IN JULY THEREAFTER

SUMMARY OF PROGRAM REQUIREMENTS

General Information

Program Title:

Biological Research Collections (BRC)

Synopsis of Program:

The Biological Research Collections Program provides support for biological collection enhancement, computerization of specimen-related data, research to develop better methods for specimen curation and collection management, and activities such as symposia and workshops to investigate support and management of biological collections. Biological collections supported include those housing natural history specimens and jointly curated collections such as frozen tissues and other physical samples, e.g. DNA libraries and digital images. Such collections provide the materials necessary for research in a broad area of biological sciences.

Cognizant Program Officer(s):

- Mark A. Farmer, Program Director, Directorate for Biological Sciences, Division of Biological Infrastructure, 615 N, telephone: (703) 292-8470, fax: (703) 292-9063, email: mfarmer@nsf.gov

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

- 47.074 --- Biological Sciences

Eligibility Information

- **Organization Limit:** Proposals are invited from U.S. academic institutions, independent U.S. non-profit research organizations and museums with appropriate research and educational facilities. Please see the full program solicitation for additional eligibility information.
- **PI Eligibility Limit:** None Specified.
- **Limit on Number of Proposals:** None Specified.

Award Information

- **Anticipated Type of Award:** Standard or Continuing Grant
- **Estimated Number of Awards:** 20 to 25 - per year.
- **Anticipated Funding Amount:** \$6,000,000 Approximately \$6 million annually contingent upon availability of funds. The maximum that may be requested in a proposal is \$500,000

Proposal Preparation and Submission Instructions

A. Proposal Preparation Instructions

- **Full Proposal Preparation Instructions:** This solicitation contains information that deviates from the standard Grant Proposal Guide (GPG) proposal preparation guidelines. Please see the full text of this solicitation for further information.

B. Budgetary Information

- **Cost Sharing Requirements:** Cost Sharing is not required.
- **Indirect Cost (F&A) Limitations:** Not Applicable.
- **Other Budgetary Limitations:** Other budgetary limitations apply. Please see the full text of this solicitation for further information.

C. Due Dates

- **Full Proposal Target Date(s):**
July 16, 2004
THIRD FRIDAY IN JULY THEREAFTER

Proposal Review Information

- **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

Collections of biological specimens are necessary for many types of research in biological sciences, including one of the most essential activities, the identification of species. The Biological Research Collections Program (BRC) is the principal source of federal support for enhancement of these collections. Of particular importance is the contribution that BRC provides in meeting needs for improvements in infrastructure and computerization of large and disparate datasets. Typically, collections are housed at institutions with programs in systematics and other biodiversity-related research. These institutions have collections that have been built over many years and contain thousands or even millions of specimens. 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.

In addition to the natural history collections, recent advances in biological sciences have created new kinds of research materials that are collected or created by researchers, deposited at a public site, and distributed to the research community. Examples would include genome samples such as arrayed BAC (Bacterial Artificial Chromosome) libraries or a collection of DNAs from endangered species linked to voucher specimens. The BRC will support improvement of these new types of collections as well.

Our planet is rapidly being modified by human development, and natural history collections are an enormously valuable source of biological information. The Biological Research Collections Program is a critical component in the rapidly expanding research activities related to biodiversity in particular, and to biological sciences in general.

II. PROGRAM DESCRIPTION

The Biological Research Collections Program provides support for biological collection enhancement, computerization of specimen-related data, research to develop better methods for specimen curation and collection management, and activities such as symposia and workshops to discuss management of biological collections and other subjects designed to improve service to the research community. Biological collections supported include those housing natural history specimens and

jointly curated collections such as, frozen tissues, other physical samples (e.g. digital images) and DNA samples (e.g., BAC libraries). Such collections provide the materials necessary for a substantial amount of research on biodiversity, including that on evolutionary relationships, comparative genomics, ecosystem functioning, and biological conservation.

Voucher collections, such as those maintained by some academic departments, field stations, and marine laboratories are also eligible if it is shown that use of the collections justify the investment, there is a long-term commitment to maintain the collection, and curatorial support is adequate. BRC supported projects include those that deal directly with 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 associated specimens and data documenting the environmental context of the primary organism (e.g. soil and water samples, temperature and precipitation records, specimen-based geographic information) or the genomic context of the organism (e.g. frozen tissue, DNA). Collection portions of organisms must be properly vouchered. Projects to computerize card files of observational records or literature sources (that is, the computerization of existing card files of literature sources, observation records, or other library items) are not eligible for support. Please note that BIO does not normally provide support for disease-oriented research, including work on the etiology, diagnosis or treatment of physical or mental disease, abnormality, or malfunction in human beings or animals.

Types of Support

The Biological Research Collections Program provides support for collection enhancement which may include improvements in storage units or the incorporation of specimens from other institutions, collection computerization projects that digitally capture specimen-related data or improve the usefulness of the collection (e.g., by georeferencing data), research on methods to improve curation of specimens or management of collections, and scientific conferences, symposia, and workshops that investigate the management and broader impacts of collections and associated data. Projects should be designed so that the most reasonable economy of scale and cost- and time-efficiency can be achieved.

Most awards are for enhancement of the infrastructure of a research collection such as the purchase of new specimen cases and installation costs, curatorial supplies, new curatorial and technical assistance specifically designed to effect the proposed improvements for the duration of the proposed project. Computerization projects generally include the 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. Research to develop improved curatorial practices or more efficient collection management practices may also be supported. It is expected that such projects will lead to improved, direct user access to collection data via standard Internet protocols. BRC does not provide support to defray ordinary operating expenses, or for the purchase of specimens, or for creating/establishing a new collection, or support related to the improvement of libraries or archives. Institutions receiving specimens collected through other research activities (e.g. Biodiversity Surveys & Inventories; Tree of Life; or PEET) should have an agreement with the researcher[s] to prepare the specimens and database them (including geo-referencing) in a format compatible with the receiving collection prior to deposit.

Information To Be Provided

1. Taxonomic breadth. When applicable, proposals must clearly specify the taxonomic groups housed in the collections for which support is being sought and provide 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.
2. Value of the collection for scientific research and resource management. 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 the specimens in the collection, the number of type specimens, age of the collection, and presence of extinct or rare species. Internet accessibility to collection data (including web hits), growth and use of the collection over at least the last five years should be described.

3. Urgency. Urgent needs for support should be clearly identified. Long-term protection of specimens with their associated data is the primary concern of the BRC Program. Of particular importance to the program is the ability to meet special needs that arise from rapid expansion or unique opportunities. Common sources of such needs are biotic surveys of endangered habitats that produce large numbers of specimens, opportunities to salvage a collection that otherwise would be lost, and the creation of new types of collections (such as frozen tissues) that accompany other areas of growth in science (such as genomics).
4. Education and outreach. Biological collections contribute to our understanding and appreciation of the diversity of life, and serve many functions in addition to providing materials essential to biological research. They provide resources for the training of biologists working on extant and fossil taxa, as well as materials for classroom displays, museum exhibits and other outreach programs for the general public. Contributions of the collections to education and outreach activities should be clearly identified in the proposal.
5. Institution policy and support.

All proposals must include a description of the collection's policies, protocols and user charges or fees that govern acquisitions, loans, and access to the specimens and the Internet-based availability of the information associated with them. 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 BRC Program may not be requested to defray these ordinary operating costs.

Support provided by the BRC program is restricted to costs for the proposed project which are above the financial capabilities of the collection, based on the normal operating expenses received from the institution. Projects proposed for BRC support should be clearly focused, have a strong scientific rationale, and be designed to be completed within the time frame proposed. BRC does not support the acquisition of specimens through purchase, nor does it fund collecting expeditions, nor the improvement of libraries or archives. Building renovation associated with collection improvement will not be supported by BRC, but may be provided by the submitting organization as a demonstration of institutional commitment to the long-term housing of the collections.

In any single round of the BRC competition, only one proposal may be submitted from any individual collection within an institution. Institutions that house multiple collections, submitting proposals from more than one collection, should engage in internal planning activities in order to prioritize the needs of the several collections such that the institution does not submit a multiplicity of proposals to any one BRC competition (See V. A. 4).

III. ELIGIBILITY INFORMATION

Proposals are invited from U.S. academic institutions, independent U.S. non-profit research organizations and museums with appropriate research and educational facilities. Proposals are accepted from U.S. institutions, 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 botanical gardens, zoological parks, and aquaria that maintain research collections that document biological diversity. The size of an institution is not a factor in determining eligibility.

IV. AWARD INFORMATION

Proposals submitted to the BRC Program typically are for projects that range from one to three years. The BRC program expects approximately \$6 million annually contingent upon availability of funds. The maximum that may be requested in a proposal is \$500,000. 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 <http://www.nsf.gov/bio/dbi/dbiresearch.htm#brc> for a current listings of awards and examples of the range and scope of projects supported.

V. PROPOSAL PREPARATION AND SUBMISSION INSTRUCTIONS

A. Proposal Preparation Instructions

Full Proposal Instructions:

Proposals submitted in response to this program announcement/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: <http://www.nsf.gov/cgi-bin/getpub?gpg>. Paper copies of the GPG may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-7827 or by e-mail from pubs@nsf.gov.

The following information provides instructions that deviate and/or supplement the Grant Proposal Guide.

Project Summary (maximum: one page)

Summarize the proposed collection improvement, computerization, techniques research, or other activity and its impact on the use of the collection and its information resources by science and other sectors of society, long-term management, and public outreach capabilities of the collection. A separate statement must be included in the project summary addressing the broader impacts of the proposed project to society as a whole and not just the scientific community. Examples of broader impacts may be found on the NSF web site at: <http://www.nsf.gov/pubs/2003/nsf032/bicexamples.pdf>. Proposals lacking this statement will be returned without review.

Project Description (maximum: 15 pages, inclusive of tables and illustrations)

1. Results from Prior NSF Support (maximum: 5 of the 15 pages of text): Summarize the results of the most recent collection improvement award that the collection has received from NSF in the preceding 5 years, even if the current Principle 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 a previous 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. Special requirements for BRC projects include evidence of the collection's importance to research or biological conservation on a regional, national, or international scale, long-term commitment by the home institution to the collection in terms of staffing and operational support, and information related to the management of the collection. All proposals must demonstrate an institutional commitment to adequate staffing and operating support that will result in long-term maintenance of the specimens, collections and associated data. Support from BRC will not be provided to defray ordinary operating expenses. The proposal should state how the value of the collection will be enhanced by support from the BRC Program and how its contributions will further advances in the biological sciences.

Include the following supporting data in a concise tabular format:

- (a) size, composition, and areas of taxonomic, geographic and/or geologic concentration;
- (b) rate of growth over the past five years;
- (c) 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);
- (d) 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).

3. A management plan must be included within the project description of the proposal. The plan must delineate the 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 in the management plan. Letters of support from appropriate institutional representatives are encouraged. For support related to the acquisition of orphaned collections, documentation of ownership must be provided. This information can be provided in the FastLane Supplementary Documentation Section. Also, clearly describe a sound, scientific rationale for incorporating the particular collection, providing evidence of how the addition will strengthen the existing collection.
4. In Institutions that house multiple collections, submitting more than one proposal, the plan for prioritizing the needs of the several collections (Section II. 5.) and the longer term commitments should be included. This information can be provided in the FastLane Supplementary Documentation Section.
5. Requests for personnel support should include a detailed task analysis to justify the personnel funding required for the duration of the proposed project. For those 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 FastLane Supplementary Documentation Section.
6. Proposals related to development of electronic databases must 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, strong evidence of awareness of community information management standards, computerization and interoperability approaches, and plans for permanent maintenance of the database. All data entered during a BRC-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). 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.
7. Proposals must address the anticipated broader impacts of the proposed activities beyond the scientific community use. Use by the scientific community is part of the intellectual merit of the proposal. Broader impacts should address education, importance to groups outside the scientific community, such as the public or land use managers, increased outreach to underrepresented groups in the field, etc. Examples of broader impacts can be found on the

NSF web site at: <http://www.nsf.gov/pubs/2003/nsf032/bicexamples.pdf> .

8. All proposals must include a description of the institution's policies related to collections (including those concerning loans, accessions, deaccessions, and collecting permits) and information on protocols and user fees that govern acquisitions, loans, or access to specimens. Such documentation and letters of support may be included in the FastLane Supplementary Documentation Section.

9. Dissemination of Results: 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.

Proposers are reminded to identify the program announcement/solicitation number (04-571) in the program announcement/solicitation block on the proposal Cover Sheet. Compliance with this requirement is critical to determining the relevant proposal processing guidelines. Failure to submit this information may delay processing.

B. Budgetary Information

Cost Sharing:

Cost sharing is not required in proposals submitted under this Program Solicitation.

Other Budgetary Limitations:

Maximum budget that can be requested from NSF is \$500,000 per award.

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 those additional personnel specifically required for the duration of the proposed project. Other costs should be related to the proposed project.

C. Due Dates

Proposals must be submitted by the following date(s):

Full Proposal Target Date(s):

July 16, 2004
THIRD FRIDAY IN JULY THEREAFTER

D. FastLane Requirements

Proposers are required to prepare and submit all proposals for this announcement/solicitation through the FastLane system. Detailed instructions for proposal preparation and submission via FastLane are available at: <https://www.fastlane.nsf.gov/a1/newstan.htm>. 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 announcement/solicitation should be referred to the NSF program staff contact(s) listed in Section VIII of this announcement/solicitation.

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. Proposers are no longer required to provide a paper copy of the signed Proposal Cover Sheet to NSF. Further instructions regarding this process are available on the FastLane Website at: <http://www.fastlane.nsf.gov>

VI. PROPOSAL REVIEW INFORMATION

A. NSF Proposal Review Process

Reviews of proposals submitted to NSF are solicited from peers with expertise in the substantive area of the proposed research or education project. These reviewers are selected by Program Officers charged with the oversight of the review process. NSF invites the proposer to suggest, at the time of submission, the names of appropriate or inappropriate reviewers. Care is taken to ensure that reviewers have no conflicts with the proposer. Special efforts are made to recruit reviewers from non-academic institutions, minority-serving institutions, or adjacent disciplines to that principally addressed in the proposal.

The National Science Board approved revised criteria for evaluating proposals at its meeting on March 28, 1997 ([NSB 97-72](#)). All NSF proposals are evaluated through use of the two merit review criteria. In some instances, however, NSF will employ additional criteria as required to highlight the specific objectives of certain programs and activities.

On July 8, 2002, the NSF Director issued [Important Notice 127](#), Implementation of new Grant Proposal Guide Requirements Related to the Broader Impacts Criterion. This Important Notice reinforces the importance of addressing both criteria in the preparation and review of all proposals submitted to NSF. NSF continues to strengthen its internal processes to ensure that both of the merit review criteria are addressed when making funding decisions.

In an effort to increase compliance with these requirements, the January 2002 issuance of the GPG incorporated revised proposal preparation guidelines relating to the development of the Project Summary and Project Description. Chapter II of the GPG specifies that Principal Investigators (PIs) must address both merit review criteria in separate statements within the one-page Project Summary. This chapter also reiterates that broader impacts resulting from the proposed project must be addressed in the Project Description and described as an integral part of the narrative.

Effective October 1, 2002, NSF will return without review proposals that do not separately address both merit review criteria within the Project Summary. It is believed that these changes to NSF proposal preparation and processing guidelines will more clearly articulate the importance of broader impacts to NSF-funded projects.

The two National Science Board approved merit review criteria are listed below (see the [Grant Proposal Guide](#) Chapter III.A for further information). 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 he/she is qualified to make judgments.

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 and original 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?

NSF staff 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:

Key Review Criteria:

- Taxonomic breadth (if applicable)
- Value of the collection
- Urgency
- Evidence of planning by, and priorities of, the parent institution
- Education and outreach
- Interoperability and openness of electronic databases
- Attention to standard protocols of the field
- Management plan and task analyses
- Long-term maintenance of the collection

B. Review Protocol and Associated Customer Service Standard

All proposals are carefully reviewed by at least three other persons outside NSF who are experts in the particular field represented by the proposal. Proposals submitted in response to this announcement/solicitation will be reviewed by Ad Hoc and Panel review. Site visits may be conducted if necessary .

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.

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 Director. In addition, the proposer will receive an explanation of the decision to award or decline funding.

NSF is striving to be able to tell proposers whether their proposals have been declined or recommended for funding within six months. The time interval begins on the closing date of an announcement/solicitation, or the date of proposal receipt, whichever is later. The interval ends when the Division Director accepts the Program Officer's recommendation.

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 Division 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.A. 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 (NSF-GC-1); * or Federal Demonstration Partnership (FDP) Terms and Conditions * and (5) any announcement or other NSF issuance that may be incorporated by reference in the award letter. Cooperative agreement awards also are administered in accordance with NSF Cooperative Agreement Terms and Conditions (CA-1). Electronic mail notification is the preferred way to transmit NSF awards to organizations that have electronic mail capabilities and have requested such notification from the Division of Grants and Agreements.

*These documents may be accessed electronically on NSF's Website at http://www.nsf.gov/home/grants/grants_gac.htm. Paper copies may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-7827 or by e-mail from pubs@nsf.gov.

More comprehensive information on NSF Award Conditions is contained in the NSF *Grant Policy Manual* (GPM) Chapter II, available electronically on the NSF Website at <http://www.nsf.gov/cgi-bin/getpub?gpm>. The GPM is also for sale through the Superintendent of Documents, Government Printing Office (GPO), Washington, DC 20402. The telephone number at GPO for subscription information is (202) 512-1800. The GPM may be ordered through the GPO Website at <http://www.gpo.gov>.

C. Reporting Requirements

For all multi-year grants (including both standard and continuing grants), the PI must submit an annual project report to the cognizant Program Officer at least 90 days before the end of the current budget period.

Within 90 days after the expiration of an award, the PI also is required to submit a final project report. Failure to provide final technical reports delays NSF review and processing of pending proposals for the PI and all Co-PIs. PIs should examine the formats of the required reports in advance to assure availability of required data.

PIs are required to use NSF's electronic project reporting system, available through FastLane, for preparation and submission of annual and final project reports. This system permits electronic submission and updating of project reports, including information on project participants (individual and organizational), activities and findings, publications, and other specific products and contributions. PIs will not be required to re-enter information previously provided, either with a proposal or in earlier updates using the electronic system.

VIII. CONTACTS FOR ADDITIONAL INFORMATION

General inquiries regarding this program should be made to:

- Mark A. Farmer, Program Director, Directorate for Biological Sciences, Division of Biological Infrastructure, 615 N, telephone: (703) 292-8470, fax: (703) 292-9063, email: mfarmer@nsf.gov
- The Divisional FastLane Contact answers policy/program announcement questions. Kristen E. Oberright, Science Assistant, Biological Sciences, Biological Infrastructure, 615 North, telephone: 703 292-8470, e-mail: biofl@nsf.gov.

For questions related to the use of FastLane, contact:

- FastLane Helpdesk answers general technical questions, telephone: 800-673-6188, email: fastlane@nsf.gov

IX. OTHER PROGRAMS OF INTEREST

The NSF *Guide to Programs* is a compilation of funding for research and education in science, mathematics, and engineering. The NSF *Guide to Programs* is available electronically at <http://www.nsf.gov/cgi-bin/getpub?gp>. General descriptions of NSF programs, research areas, and eligibility information for proposal submission are provided in each chapter.

Many NSF programs offer announcements or solicitations concerning specific proposal requirements. To obtain additional information about these requirements, contact the appropriate NSF program offices. Any changes in NSF's fiscal year programs occurring after press time for the *Guide to Programs* will be announced in the NSF *E-Bulletin*, which is updated daily on the NSF Website at <http://www.nsf.gov/home/ebulletin>, and in individual program announcements/solicitations. Subscribers can also sign up for NSF's *Custom News Service* (<http://www.nsf.gov/home/cns/start.htm>) to be notified of new funding opportunities that become available.

Programs at NSF related to BRC include Biodiversity Surveys & Inventories, Living Stock Collections, Systematic Biology, PEET, Tree of Life, and Biological Databases and Informatics. The Biodiversity Surveys & Inventories (BS&I) Program in the Division of Environmental Biology (DEB) supports basic collecting and identification activities that are designed to discover and document the species-level diversity of all forms of life on earth. BS&I requires that specimens and other biological samples collected be deposited at institutions with natural history collections and be available for scientific research. These collections should only be accepted if databased and georeferenced in the format required by the receiving collection. They should also be properly prepared. The Living Stock Collections Program supports repositories of research organisms, genetic stocks, and seeds as well as cell lines, and DNA clones that are associated with the whole organisms in the collection. The Systematic Biology Program supports research focused on understanding the phylogenetic relationships among organisms and the evolutionary patterns of genomic, morphological, ecological, and other characteristics of organisms. Much of the material for this research is housed in institutional collections. The Biological Databases and Informatics Program supports new approaches to the management of biological knowledge that render the collection, maintenance, dissemination and query of information of greater utility to the scientific community. Co-funding opportunities exist with these and other programs within the Foundation.

ABOUT THE NATIONAL SCIENCE FOUNDATION

The National Science Foundation (NSF) funds research and education in most fields of science and engineering. Awardees

are wholly responsible for conducting their project activities and preparing the results for publication. Thus, the Foundation does not assume responsibility for such findings or their interpretation.

NSF welcomes proposals from all qualified scientists, engineers and educators. The Foundation strongly encourages women, minorities and persons with disabilities to compete fully in its programs. In accordance with Federal statutes, regulations and NSF policies, no person on grounds of race, color, age, sex, national origin or disability shall be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving financial assistance from NSF, although some programs may have special requirements that limit eligibility.

Facilitation Awards for Scientists and Engineers with Disabilities (FASSED) provide funding for special assistance or equipment to enable persons with disabilities (investigators and other staff, including student research assistants) to work on NSF-supported projects. See the GPG Chapter II, Section D.2 for instructions regarding preparation of these types of proposals.

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 <http://www.nsf.gov>

- **Location:** 4201 Wilson Blvd. Arlington, VA 22230

- **For General Information** (NSF Information Center): (703) 292-5111

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