# **Research Coordination Networks in Biological Sciences** (RCN)

# **PROGRAM SOLICITATION**

NSF 09-554

REPLACES DOCUMENT(S): NSF 06-567



### National Science Foundation

Directorate for Biological Sciences

Directorate for Education & Human Resources Division of Undergraduate Education

Full Proposal Target Date(s):

July 23, 2009

July 05, 2010

First Monday in July, Annually Thereafter

# **REVISION NOTES**

Please be advised that the NSF Proposal & Award Policies & Procedures Guide (PAPPG) includes revised guidelines to implement the mentoring provisions of the America COMPETES Act (ACA) (Pub. L. No. 110-69, Aug. 9, 2007.) As specified in the ACA, each proposal that requests funding to support postdoctoral researchers must include a description of the mentoring activities that will be provided for such individuals. Proposals that do not comply with this requirement will be returned without review (see the PAPP Guide Part I: Grant Proposal Guide Chapter II for further information about the implementation of this new requirement).

Added description of Undergraduate Biology Education track and associated review and funding information.

Clarified description of average award amounts

Included allowable travel expenses for foreign participants

Change target date to first Monday in July for future competitions

# SUMMARY OF PROGRAM REQUIREMENTS

### **General Information**

#### **Program Title:**

Research Coordination Networks in Biological Sciences (RCN)

#### Synopsis of Program:

The goal of this program is to advance a field or create new directions in research or education. Innovative ideas for implementing novel networking strategies are especially encouraged. Groups of investigators will be supported to communicate and coordinate their research, training and educational activities across disciplinary, organizational, institutional, and geographical boundaries.

There are two tracks in the RCN program, the research coordination network track (RCN), the original target of the program, and the undergraduate biology education track (RCN-UBE), which was added in 2008. The proposed networking activities should focus on a theme to give coherence to the collaboration. For a research track RCN, the focus could be on a broad research question, a specific group of organisms, or particular technologies or approaches. For an education track RCN, the focus could be on any topic that is likely to lead to improved participation, learning, or assessment in undergraduate biology curricula.

#### Cognizant Program Officer(s):

Michael Mishkind, IOS, telephone: (703) 292-8413, email: biorcn@nsf.gov

- Peter McCartney, DBI, telephone: (703) 292-8470, email: biorcn@nsf.gov
- Todd A. Crowl, DEB, telephone: (703) 292-7870, email: biorcn@nsf.gov
- Richard Inouye, DEB, telephone: (703) 292-4974, email: rcn-ube@nsf.gov
- Deborah E. Allen, DUE, telephone: (703) 292-4653, email: rcn-ube@nsf.gov
- Karen C. Cone, MCB, telephone: (703) 292-4967, email: biorcn@nsf.gov

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

47.074 --- Biological Sciences
47.076 --- Education and Human Resources

### Award Information

Anticipated Type of Award: Continuing Grant

Estimated Number of Awards: 6 to 13 awards in FY 2010.

Anticipated Funding Amount: \$1,700,000 will be available for new RCN awards in FY 2010, pending availability of funds.

### **Eligibility Information**

### Organization Limit:

Proposals may only be submitted by the following:

- Non-profit, non-academic organizations: Independent museums, observatories, research labs, professional societies and similar organizations in the U.S. associated with educational or research activities.
- Universities and Colleges Universities and two- and four-year colleges (including community colleges) accredited in, and having a campus located in the US, acting on behalf of their faculty members. Such organizations also are referred to as academic institutions.

#### PI Limit:

None Specified

Limit on Number of Proposals per Organization:

None Specified

Limit on Number of Proposals per PI:

None Specified

### **Proposal Preparation and Submission Instructions**

#### **A. Proposal Preparation Instructions**

- Letters of Intent: Not Applicable
- Preliminary Proposal Submission: Not Applicable
- Full Proposal Preparation Instructions: This solicitation contains information that deviates from the standard NSF Proposal and Award Policies and Procedures Guide, Part I: 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 under this solicitation.
- Indirect Cost (F&A) Limitations:

Full negotiated indirect cost rates will apply for awards under this Program. Note that funds requested to support activities of the network participants, such as participants travel, materials and supplies for the network projects, and network retreats should be listed on Line F "participant support" in the proposed budget, and managed by the submitting organization. Under this solicitation, indirect costs (F&A) are not allowed on participant support costs.

 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 23, 2009

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Merit Review Criteria: National Science Board approved criteria apply.

# **Award Administration Information**

Award Conditions: Standard NSF award conditions apply.

Reporting Requirements: Standard NSF reporting requirements apply.

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### I. INTRODUCTION

The Directorate for Biological Sciences announces plans to continue its support of research coordination networks designed to foster communication and promote collaboration among scientists with common interests from a broad background across disciplinary, geographical, and organizational boundaries. The ultimate objective is to move a field forward or to create new research or education directions or opportunities through increased coordination and networking. It is anticipated that this program will contribute to further advances in all areas of biological sciences under the purview of the Directorate for Biological Sciences at the National Science Foundation. Past RCN awards can be found at http://www.nsf.gov/bio/pubs/awards/rcnactive.htm.

### **II. PROGRAM DESCRIPTION**

Support will be provided for groups of investigators to communicate and coordinate their efforts across disciplinary, organizational, institutional and geographical boundaries. The objectives are to facilitate open communication and exchange of information and resources, to integrate research and/or education activities of scientists working independently on topics of common interest, to nurture a sense of community among young scientists, and to minimize isolation and maximize cooperation so as to eliminate unnecessary duplication of efforts. Specific features of the program include:

1. Topic/focus of research coordination. For both tracks, the research coordination network/group will have a common theme as a focus of its activities. For example, for research track proposals the focus could be on a research question, a specific group of organisms, or particular technologies or approaches. All well-justified, cohesive proposals designed to advance a field of research under the purview of the Directorate for Biological Sciences (BIO) at NSF through research coordination will be considered. Please note that BIO does not support biomedical research. For education track proposals the focus could be on improving learning in "gateway" courses (e.g., exploring the use of methods that foster active learning or inquiry-based learning), improving learning through the use of emerging technologies in the biology curriculum, strategies and approaches for engaging biology faculty in professional development activities related to undergraduate education, incorporating emerging sub-disciplines into the biology curriculum (e.g., informatics research, proteomics, ecological stoichiometry), improving assessment of student learning, improving the transition of students from two-year to four-year institutions, or incorporating authentic research experiences in undergraduate laboratory courses, with an emphasis on

introductory and lower division courses.

- 2. Principal investigator (PI). Although the research coordination networks are expected to involve investigators from multiple sites, a single organization must serve as the submitting organization for each proposal. The PI is the designated contact person for the group and is expected to provide leadership in fully coordinating and integrating the activities of the group. Strong, central leadership and clear lines of responsibility are essential for successful networking.
- 3. Group members. The size of a group/network is expected to vary depending on the theme and the needs of the proposed activity. The group may be regional, national, or international. It is expected that a proposed group will involve investigators at diverse organizations. The inclusion of new researchers, post-docs, graduate students, and undergraduates is encouraged. Specific efforts to increase participation of underrepresented groups must be included. In the proposal, an initial, core group of participants should be identified. However, there should be clearly developed mechanisms to maintain openness, ensure access, and actively promote participation by interested parties outside of the initial core group of participants in the proposed network.
- 4. International participation. Biology in the 21<sup>st</sup> century is global in character and it is expected that many RCN projects may include international participants. In RCN projects with an international scope, NSF funds may be used for:
  - Travel expenses for US scientists and students participating in exchange visits integral to the RCN project
  - RCN-related expenses for international partners to travel to, and participate in, networking activities in the US.
  - RCN-related expenses for US participants to conduct networking activities in the international partner's home laboratory

NSF funds may not be used to support the expenses of the international scientists and students at their home organization. However, these are important activities and NSF encourages the international partners to secure support for their efforts from their own national programs.

- 5. Coordination/management mechanism. The proposal should include a clearly defined management plan. The plan should include a description of the specific roles and responsibilities of the Coordinator and other members of the group/network. Mechanisms for allocating funds, such as a steering committee, should be clearly articulated. The plan should include provisions for flexibility to allow the structure of the group to change over time as membership and the network's foci evolve. Mechanisms for assessing progress and the effectiveness of the networking activities should be part of the management plan.
- 6. Information and material sharing. The goals of this program are to promote effective communication and to enhance opportunities for collaboration. Proposers are expected to develop and present a clearly delineated understanding of individual members rights to ideas, information, data and materials produced as a result of the award that is consistent with the goals of the program. When the proposed activity involves generation of community resources such as databases or unique biological materials, a plan for their timely release and the mechanism of sharing must be described in the proposal. In addition, a plan for long-term maintenance of such resources must be described without assuming continued support from NSF.

### **III. AWARD INFORMATION**

It is anticipated that approximately \$1.7million will be available in FY 2010 for approximately 5-10 awards in the research track and 1 - 3 in the education track. Awards range in size from \$50,000 - \$100,000 per year and award duration is up to five years. Estimated program budget, number of awards and average award size/duration are subject to the quality of proposals received and the availability of funds.

# **IV. ELIGIBILITY INFORMATION**

### **Organization Limit:**

Proposals may only be submitted by the following:

- Non-profit, non-academic organizations: Independent museums, observatories, research labs, professional societies and similar organizations in the U.S. associated with educational or research activities.
- Universities and Colleges Universities and two- and four-year colleges (including community colleges) accredited in, and having a campus located in the US, acting on behalf of their faculty members. Such organizations also are referred to as academic institutions.

#### PI Limit:

None Specified

### Limit on Number of Proposals per Organization:

None Specified

Limit on Number of Proposals per PI:

None Specified

### Additional Eligibility Info:

**Organization Limit:** Proposals are invited from U.S. academic institutions, U.S. non-profit research organizations including museums, research laboratories, professional societies and similar organizations in the U.S. that are directly associated with educational or research activities, and consortia of such organizations with appropriate research and educational facilities. Although the research coordination networks are expected to be multi-organizations insigle organization must serve as the lead and all other organizations as subawardees. Organizations ineligible to submit to this program solicitation may not receive subawards. If they are part of the proposed network, their participation is expected to be supported by non-NSF sources.

# **V. PROPOSAL PREPARATION AND SUBMISSION INSTRUCTIONS**

# **A. Proposal Preparation Instructions**

**Full Proposal Instructions:** Proposals submitted in response to this program solicitation should be prepared and submitted in accordance with the guidelines specified 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-PUBS (7827) or by e-mail from pubs@nsf.gov.

The following exceptions and additions apply to proposals submitted to this Program:

**FastLane Cover Sheet:** Select this program solicitation number from the pulldown list. The RCN program will automatically be selected. An informative title for the proposed project, that begins with "RCN:" or "RCN-UBE", as appropriate, must be provided. Entries on the FastLane Cover Sheet are limited to the principal investigator and a maximum of 4 co-principal investigators. Additional co-principal investigators should be listed on the Project Summary page and entered into FastLane as Senior Investigators (this latter provision allows their biographical sketches to be included in the FastLane proposal). For more FastLane instructions see section D below.

**Project Summary:** May not be more than one page in length, must consist of three parts: (1) a list of core network participants along with their home organizations; (2) a succinct summary of the intellectual merit of the proposed project including the goal of the proposed network, major planned networking activities, and mechanisms for actively promoting participation by all interested parties; and (3) the broader impacts of the proposed work. Proposals that do not separately address both intellectual merit and broader impacts will be returned without review.

Project Description (maximum 15 pages): The following exceptions and additional items should be noted.

- 1. "Results from Prior Support" need not be included unless the proposed activity is clearly a logical extension of an activity supported by NSF (see the Special Information and Supplementary Documentation section below). In the case of such an extension, describe (up to 5 pages to be counted within the 15-page limit) the prior activity and how it relates to the proposed activity. Please note that a renewal proposal to continue essentially the same activities of the original RCN project will receive a low priority.
- In addition to objectives, rationale, justification and research coordination activities, all special features outlined in Section II. Program Description above should be addressed including:

Management plan . Describe plans and procedures for the development and assessment of the proposed activity. Include formal mechanisms to ensure fair and equitable allocation of group resources. Clearly define the responsibilities for leadership and the role of the PI and clearly state the roles for all core participating scientists. Delineate the procedures used for the selection of initial core group members, and the plans for maintaining an appropriate degree of openness and for encouraging the involvement of additional interested parties. Means for self-evaluation of progress toward the network goals should be presented as an important part of the management plan.

Coordination plan . If the proposed network will work with an established network or group, or if there is a similar activity being planned or ongoing in other countries, describe the plans for coordination and cooperation among the relevant networks.

Information and material sharing . Give careful consideration to issues related to intellectual property rights and materials sharing in the management plan. For example, if the proposed activity is expected to result in community resources (such as databases or collections of biological materials), present a clear plan for sharing of these resources not only among the network participants but with the scientific community at large. Address in the proposal plans for determining authorship or proper attribution of credit for peer-reviewed or other publications, Internet resources, etc. that may be expected to result from the activity.

Increasing diversity . A research coordination network is an important opportunity for encouraging the involvement of underrepresented minority investigators and investigators located in a diverse range of organizations. Describe (1) a well designed plan to increase participation of members of under-represented groups that is specific to the proposed project; (2) a plan to involve investigators at a variety of organizational settings; (3) if applicable, a plan to include new researchers, post-docs, graduate students and undergraduates; and (4) how the plans for increasing diversity are integrated with the proposed project plan.

**Budget:** Provide yearly budgets for the duration of the proposed project. When subawards are involved yearly budgets are required for each subaward. FastLane will generate cumulative budgets for the primary and subaward organizations. Budget justification (of up to three pages) is required. Organizations ineligible to submit to this program solicitation may not receive subawards. If they are part of the proposed network, their participation is expected to be supported by non-NSF sources. Allowable costs for international collaboration are described in Section II. Program Description.

Funds may be requested to promote collaborative activities, such as short visits among member laboratories, exchange visits of students, sharing of unique facilities, establishment of a public web site, network retreats, partial support of workshops uniquely tied to the network activities, etc. Any well-justified activity that fulfills the goals of the Program will be considered. Innovative ideas for implementing novel networking strategies to promote research collaborations and enable new research directions or advancement of a field are especially encouraged.

The PI's of the RCN awards will be asked to attend two meetings of the network coordinators to be held at the National Science Foundation every two years beginning in FY2009. Include the necessary travel costs for attendance at these meetings in the proposed budget.

Full negotiated indirect cost rates will apply for awards under this Program. Note that funds requested to support activities of the

network participants, such as participants travel, materials and supplies for the network projects, and network retreats should be listed on Line F "participant support" in the proposed budget, and managed by the submitting organization. Under this solicitation, indirect costs (F&A) are not allowed on participant support costs.

Funds from this program may not support independent, individual research projects of the participants; nor are they to be used as a mechanism for a mini-grant awarding program.

**Special Information and Supplementary Documentation**: In addition to the applicable items described in the Grant Proposal Guide (http://www.nsf.gov/publications/pub\_summ.jsp?ods\_key=gpg), include the following appendix information, clearly labeled, in the Supplementary Docs section of the FastLane Form Preparation system. (No other appendix material will be allowed.):

- 1. Current Activities: PI and the core participants listed in the project summary must provide a single-page (per investigator) description of the relationship between the proposed project and current research activities in his/her laboratory. This page replaces the "Results of Prior Support" section normally found in NSF proposals.
- 2. Conflicts of Interest list: Provide a list, in a single alphabetized table, with the full names of all people with conflicts of interest for all senior personnel (PI and Co-PIs if any) and any named personnel whose salary is requested in the project budget. Conflicts to be identified are (1) PhD thesis advisors or advisees, (2) collaborators or co-authors, including postdocs, for the past 48 months, and (3) any other individuals or organizations with which the investigator has financial ties (please specify type).
- 3. Letters of Collaboration: Include letters of collaboration from an entity that is an integral part of the proposed project (such as the international collaborator) in this section. However, general letters of endorsement will not be accepted.

Proposers are reminded to identify the program solicitation number (NSF 09-554) 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.

# **B. Budgetary Information**

Cost Sharing: Cost sharing is not required under this solicitation.

#### Indirect Cost (F&A) Limitations:

Full negotiated indirect cost rates will apply for awards under this Program. Note that funds requested to support activities of the network participants, such as participants travel, materials and supplies for the network projects, and network retreats should be listed on Line F "participant support" in the proposed budget, and managed by the submitting organization. Under this solicitation, indirect costs (F&A) are not allowed on participant support costs.

### **Other Budgetary Limitations:**

The PI's of the RCN awards will be asked to attend two meetings of the network coordinators to be held at the National Science Foundation every two years beginning in FY2009. Include the necessary travel costs for attendance at these meetings in the proposed budget.

Funds from this program may not support independent, individual research projects of the participants; nor are they to be used as a mechanism for a mini-grant awarding program.

# C. Due Dates

• Full Proposal Target Date(s):

July 23, 2009

July 05, 2010

First Monday in July, Annually Thereafter

# **D. FastLane Requirements**

Proposers are required to prepare and submit all proposals for this program solicitation through use of the NSF FastLane system. Detailed instructions regarding the technical aspects of proposal preparation and submission via FastLane are available at: <a href="http://www.fastlane.nsf.gov/a1/newstan.htm">http://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: https://www.fastlane.nsf.gov/fastlane.jsp.

### 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.

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.

### **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 pubs@nsf.gov.

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 <a href="http://www.nsf.gov/publications/pub\_summ.jsp?ods\_key=aag">http://www.nsf.gov/publications/pub\_summ.jsp?ods\_key=aag</a>.

# 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.

Failure to provide the required annual or final project reports 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.

# VIII. AGENCY CONTACTS

General inquiries regarding this program should be made to:

- Michael Mishkind, IOS, telephone: (703) 292-8413, email: biorcn@nsf.gov
- Peter McCartney, DBI, telephone: (703) 292-8470, email: biorcn@nsf.gov
- Todd A Crowl, DEB, telephone: (703) 292-7870, email: biorcn@nsf.gov
- Richard Inouye, DEB, telephone: (703) 292-4974, email: rcn-ube@nsf.gov
- Deborah E Allen, DUE, telephone: (703) 292-4653, email: rcn-ube@nsf.gov
- Karen C Cone, MCB, telephone: (703) 292-4967, email: biorcn@nsf.gov

For questions related to the use of FastLane, contact:

- FastLane Help Desk, telephone: 1-800-673-6188; e-mail: fastlane@nsf.gov.
- Erin (Liz) Lawrence, telephone: (703) 292-8400, email: biorcn@nsf.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

# 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.

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