

Undergraduate Mentoring in Environmental Biology (UMEB)

Program Solicitation

NSF 05-558

Replaces Document NSF 03-585



National Science Foundation
Directorate for Biological Sciences
Division of Biological Infrastructure

Preliminary Proposal Deadline (*required*):

May 18, 2005

Full Proposal Target Date(s):

October 17, 2005

REVISIONS AND UPDATES

The major changes include a new target date, requirement of a preliminary proposal, and an increase in award size to \$600,000 (max.) over 4 years, contingent on the availability of funds. Conference and workshop proposals will be accepted according to the Grant Proposal Guide.

SUMMARY OF PROGRAM REQUIREMENTS

General Information

Program Title:

Undergraduate Mentoring in Environmental Biology (UMEB)

Synopsis of Program:

The Undergraduate Mentoring in Environmental Biology (UMEB) Program is designed to enable institutions to create programs that will encourage undergraduate students, especially those from under-represented groups, to pursue a career in environmental biology. The UMEB Program supports projects that provide year-round support for undergraduate students to gain research experience in environmental biology. Environmental biology is broadly defined to include areas of research focusing on organisms as they evolve, interact with each other, and/or interact with their environment, from perspectives that range from molecular to ecosystem levels. Environmental biology also includes molecular studies of environment-organism interactions and environmental genomics. Field experience must be part of the research experience. Projects should emphasize factors that encourage and enable members of under-represented groups to enter, and remain in, environmental biology. The UMEB Program now requires submission of a preliminary proposal.

Cognizant Program Officer(s):

- Sally E. O'Connor, Program Director, Directorate for Biological Sciences, Division of Biological Infrastructure, 615 N, telephone: (703) 292-8470, email: soconnor@nsf.gov

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

- 47.074 --- Biological Sciences

Eligibility Information

- **Organization Limit:** US academic institutions, including universities, colleges and community colleges.
- **PI Eligibility Limit:** Although there are no PI Eligibility Limits, please see Section III of this Solicitation for Student Eligibility Limits.
- **Limit on Number of Proposals:** None Specified.

Award Information

- **Anticipated Type of Award:** Standard or Continuing Grant
- **Estimated Number of Awards:** 5 The UMEB Program expects to make at least 5 awards.
- **Anticipated Funding Amount:** \$2,000,000 for new awards in FY 2006 subject to the availability of funds.

Proposal Preparation and Submission Instructions

A. Proposal Preparation Instructions

- **Preliminary Proposals:** Submission of Preliminary Proposals is required. Please see the full text of this solicitation for further information.
- **Full Proposal Preparation Instructions:** This solicitation contains information that supplements 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:** Indirect costs are limited to 25% of the Participant Support stipend amount only (Line F1 on the proposal budget).
- **Other Budgetary Limitations:** Not Applicable.

C. Due Dates

- **Preliminary Proposals (required) :**
May 18, 2005
- **Full Proposal Target Date(s):**
October 17, 2005

Proposal Review Information

- **Merit Review Criteria:** National Science Board approved criteria apply.

Award Administration Information

- **Award Conditions:** Standard NSF award conditions apply.
- **Reporting Requirements:** Additional reporting requirements apply. Please see the full text of this solicitation for further information.

TABLE OF CONTENTS

Summary of Program Requirements

I. Introduction

II. Program Description

III. Eligibility Information

IV. Award Information

V. Proposal Preparation and Submission Instructions

- A. Proposal Preparation Instructions
- B. Budgetary Information
- C. Due Dates
- D. FastLane Requirements

VI. Proposal Review Information

- A. NSF Proposal Review Process
- B. Review Protocol and Associated Customer Service Standard

VII. Award Administration Information

- A. Notification of the Award
- B. Award Conditions
- C. Reporting Requirements

VIII. Contacts for Additional Information

IX. Other Programs of Interest

I. INTRODUCTION

The National Science Foundation (NSF) is charged with ensuring the vitality of the nation's scientific and technological enterprise. NSF's mandate requires a focus on the quality, distribution and effectiveness of the human-resource base in science and engineering, including full utilization of all potentially interested and qualified persons. Because members of certain groups are under-represented in the science, mathematics and engineering workforce, the Foundation and its Directorate for Biological Sciences (BIO) support efforts directed toward increasing their numbers as full participants in the scientific workforce.

In the area of environmental biology, the under-representation of certain groups is especially severe. In order to address this issue, BIO has established the Undergraduate Mentoring in Environmental Biology (UMEB) program. The UMEB program is designed to enhance research participation, and access to careers, in environmental biology (as broadly defined below) by undergraduate students, particularly those from under-represented groups. For the purpose of this solicitation, these groups include persons with disabilities, and members of those racial and ethnic groups under-represented in science, mathematics and engineering: Native Americans (American Indians and Alaskan Natives), African Americans, Native Pacific Islanders including Polynesians or Micronesians, and Hispanics. Note that women are not under-represented in undergraduate biology programs.

For the purpose of this solicitation, "environmental biology" is broadly defined to include areas of research focusing on organisms as they evolve, interact with each other, and/or interact with their environment, from perspectives that range from molecular to ecosystem levels. Environmental biology also includes molecular studies of environment-organism interactions and environmental genomics. BIO encourages proposals that include research themes in behavior, ecology, ecosystems, ecological physiology, evolutionary biology, population biology, and/or systematics, as well as proposals in other areas that address themes in animal, plant, or microbial biology with environmental emphasis. For example, studies of how an organism perceives and responds to environmental cues, or symbiotic interactions in a microenvironment, would be included in the UMEB definition of "environmental biology". Proposed projects must include some aspect of field research. The theme of the project should be in areas typically funded by NSF's Directorate for Biological Sciences. The proposed research and training activities should not have biomedical or veterinary medicine goals.

Information about UMEB projects and related topics can be found on the website of NSF's Directorate for Biological Sciences at: http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5450. This information is updated each year, and proposers are encouraged to consult it before preparing UMEB proposals.

II. PROGRAM DESCRIPTION

UMEB proposals are invited under this program solicitation. The intent of this activity is to provide support to enable institutions to create innovative programs that will encourage students to pursue a career in environmental biology. Activities

supported by the UMEB program include research and field experiences in environmental biology (as broadly defined in this solicitation), enhancement activities that will prepare students for a scientific career including graduate studies, and mentoring activities that will ensure the successful completion of students in the program. The proposing institution is expected to foster an enriched and intellectually stimulating research and educational environment. UMEB proposals should involve year-round mentoring and include a major emphasis on direct student participation in research. Student participants will receive an annual stipend and funds for travel and research supplies.

Research activities should span the academic year and summer, with individual students continuing in the program for more than one year. Projects should emphasize factors that encourage and enable members of under-represented groups to enter, and remain in, environmental biology. The Directorate for Biological Sciences (BIO) particularly encourages UMEB proposals from minority-serving institutions such as Historically Black Colleges and Universities (HBCU), Tribal Colleges, Hispanic-Serving Institutions (HSI), and community colleges. Collaborations between these institutions and research universities and/or organizations are also encouraged, in order to enhance the research environment for the students. Projects may include international research activities in which students would conduct research at field sites or at institutions abroad and benefit from collaborations with international scientists. Activities that involve UMEB students in K-12 classrooms, or that involve K-12 science teachers in some aspects of the UMEB program, are allowed, if appropriate.

III. ELIGIBILITY INFORMATION

Undergraduate student participants supported with NSF funds must be citizens or permanent residents of the United States or its possessions. An undergraduate student is one who is enrolled in a degree program (part-time or full-time) leading to a baccalaureate or associates degree. Students who are transferring from one institution to another, and are enrolled at neither institution, during the intervening summer may participate. High school graduates who have not yet enrolled, and students who have received their bachelor's degrees and are no longer enrolled as undergraduates, are not eligible.

Proposals may be submitted by US academic institutions, including universities, colleges and community colleges. There are no PI eligibility limits or limits on the number of proposals.

IV. AWARD INFORMATION

Up to \$2,000,000 will be available for this solicitation for new awards in FY 2006, subject to the availability of funds. Under this solicitation, new or renewal proposals may be submitted for funding amounts up to a total of \$600,000 for up to 4 years. The program expects to make at least five awards, depending upon the quality of submissions and the availability of funds.

V. PROPOSAL PREPARATION AND SUBMISSION INSTRUCTIONS

A. Proposal Preparation Instructions

Proposals that are not compliant with the guidelines may not be reviewed. It is the submitting organization's responsibility to ensure that the proposal is compliant with all applicable guidelines.

Preliminary Proposals (required):

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: <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.

Submission of Preliminary Proposals is required for Full Proposals. Preliminary proposals must include all of the information stated below, must be submitted on or before the target date for preliminary proposals, and must strictly adhere to the specified page limitations. No additional information may be provided as an appendix. Figures and tables must be included within the applicable page limit.

Based on evaluation by a panel of outside experts, the Program expects to encourage approximately 20 to 25 Principal Investigators (PIs) to submit full proposals. By August 15, 2005, the Program will notify PIs by e-mail whether or not their preliminary proposals are encouraged for full proposal submission. PIs will have access to the reviews of their preliminary

proposal through FastLane.

FastLane Cover Sheet. Select the program solicitation number from the pull down list. The UMEB program will automatically be selected. An informative title for the proposed UMEB project, that begins with "**UMEB Preliminary Proposal:**", must be provided. Check the box indicated for preliminary proposal. Entries on the FastLane Cover Sheet are limited to the principal investigator and a co-principal investigator, if one is named. Other research mentors 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 V. D. below.

Project Summary. For this solicitation, the project summary may not be more than one page in length and must consist of three parts: (1) A heading at the top of the page that includes the title of the project, the name of the PI and his/her institution, and the name of any Co-PI along with his/her institution; (2) A brief paragraph describing the **Intellectual Merit** of the proposed project. This should include the goal of the proposed project, a clear and concise description of the targeted audience, the extent and source of the applicant pool, the recruitment plan, the mentoring model to be used, and the theme of projects to be assigned to students; and (3) A brief paragraph describing the **Anticipated Broader Impacts** of the proposed work. Proposals that do not separately address in the project summary both intellectual merit and broader impacts will be returned without review.

Project Description. (Maximum 5 pages). The preliminary proposal narrative must include the following sections: (1) Statement of project goals and strategies to be used to achieve the goals; (2) List of program elements and brief rationale; (3) Nature of the research environment and sample research project(s) that students will be engaged in; (4) Description of field experience and its relationship to the research projects; (5) Recruitment and selection plans, specifically noting the audience targeted for participation and the estimated number eligible to participate; and (6) Description of the broader impacts of the proposal.

References Cited. A list of references to pertinent literature for the UMEB project must be included, if appropriate. Indicate with an asterisk any undergraduate student co-authors cited.

Biographical sketches (2 pages each). Biographical sketches must be listed for the PI, Co-PI (if one is named), and other research mentors listed on the Project Summary page.

Current and Pending Support for the PI, Co-PI, and Senior Personnel must be included.

Budget. No budget is required. However, please enter \$600,000 in the Requested Amount box on the FastLane Cover Sheet. This entry allows correct FastLane processing.

Supplementary Documentation section must include a list, in a single alphabetized table, of the full names of all individuals with conflicts of interest for all senior personnel (PI, Co-PI and research mentors included) 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).

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/publications/pub_summ.jsp?ods_key=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 supplement the Grant Proposal Guide.

(1) **FastLane Cover Sheet.** The title of the project must include the acronym "**UMEB: ...**". The title should be indicative of the research theme of the project. For more FastLane instructions, see section V.D. below.

(2) **Information about Principal Investigators.** A single individual should be designated clearly as Principal Investigator. This individual will be responsible for overseeing all aspects of the UMEB award. However, the institution may designate one additional person as co-principal investigator, should developing and operating the UMEB project involve such shared responsibility. Other anticipated research mentors are listed as Senior Personnel.

(3) **Project Summary** (1-page limit). This summary should be intelligible to a general audience. The **intellectual merit** and **anticipated broader impacts** must be addressed separately. **If the intellectual merit and anticipated broader impacts are not addressed separately, the proposal will be returned without review.** Provide a statement of the program goals, a

brief description of the research projects and the central theme encompassing the projects, and a brief description of program activities including recruitment, selection and retention of students. The project summary should include a heading at the top of the page with the following information: name of PI and institution; other institutions and/or organizations involved; the major field/subfields that describe the research area; and the number of students that will be involved for each year of request.

(4) Project Description. The project description contains the following items "a" through "g" and is not to exceed 15 pages in length.

(a) Results from Prior Support (if applicable). If the proposing institution has received prior support through a UMEB award, the proposal must include a section entitled Results from Prior NSF Support within the 15-page project description. This section must describe the earlier UMEB project(s) and outcomes in sufficient detail to permit reviewers to reach an informed conclusion regarding the value of the results achieved. This will likely include results from the project evaluation, summary information on recruitment efforts including the number and demographic make-up of applicants, the number and demographic make-up of participants, participant home institutions, career choices of participants; and a list of publications or reports (if to be submitted for publication) resulting from the NSF award. For renewal proposals, results from prior support will be an important factor in proposal evaluation.

(b) Overview. Provide a brief description of the goals and objectives of the proposed UMEB project including the central theme of the research projects, the targeted student participants, innovative mentoring strategies to be used, the organizational structure, and institutional commitment to the UMEB activity.

(c) Nature of Student Activities. Proposals should address the approach to undergraduate research training to be used, and should provide detailed descriptions of examples of research projects that students will pursue. Enhancement activities that will develop the critical thinking and communication skills of the students should also be described in detail. Any other activities such as seminars, group discussions, lectures, workshops, etc. should be discussed, as well as activities that will provide a cohort experience for the group. The students should be expected to produce both written and oral presentations of their research project. A multi-year schedule of activities should be provided, clearly showing the set of activities each cohort of students is expected to do and accomplish in the UMEB program. UMEB students should be expected to spend a minimum of one year in the program.

(d) Field Experience. Provide a description of the field research experience in which the students will be involved. Explain how this field experience is related to the overall research project of the students and what the expected goals are for this activity. If the field experience is done at a non-lead institution, provide a letter of commitment from the institution and/or organization specifying the points of contact and their affiliation with the proposing institution. Include the letter of commitment in "Supplementary Documentation."

(e) The Research Environment and Mentoring Activities. This subsection should describe the experience and record of involvement with undergraduate research of the Principal Investigator, the Co-Principal Investigator and the faculty who may serve as research mentors. The subsection should also describe the proposing institution's commitment to undergraduate research. This should include information on the record of faculty mentors in publishing work involving undergraduate authors and in providing professional development opportunities for undergraduate student researchers. The facilities, equipment, and other resources available to support the proposed undergraduate research experiences should be described in relation to those activities. The FastLane form on Facilities, Equipment, and Other Resources should be marked "See the Project Description" and the information should be included in this subsection instead.

(f) Student Recruitment and Selection. The criteria for, and overall quality of, the student recruitment and selection processes will be an important element in proposal evaluation. The recruitment plan should be described with as much specificity as possible, including the type of students targeted for the program, the source and extent of the pool of applicants, and the means that will be employed to recruit and attract students to the program. Mention should be made specifically on how members of under-represented groups will be recruited. Only undergraduate students who are citizens or permanent residents of the United States or its possessions can be supported with NSF funds.

(g) Project Evaluation and Reporting. The objective of the evaluation process is to measure qualitatively and quantitatively the success of the project in achieving its goals and to provide a mechanism for making mid-program changes to more effectively achieve these goals. Evaluation may involve periodic measures throughout the project to ensure that it is progressing satisfactorily according to the project plan, and may involve pre- and post-project measures aimed at determining the degree to which UMEB activities are making a significant difference in the student's knowledge, skills, interest and career choices in environmental biology. Additionally, a detailed description of a student tracking plan should be included. The plan should include structured means of tracking participating students beyond graduation, with the aim of gauging the extent to which the UMEB experience has been a lasting influence on students' career paths.

(5) References Cited. A list of references to pertinent literature for the UMEB project must be included, if appropriate.

(6) Biographical Sketches. The basic GPG guidelines for biographical material apply; however, senior personnel are

encouraged to include publications with undergraduate co-authors (indicate student co-authors with an asterisk) and other activities or accomplishments relevant to a successful UMEB activity. Senior personnel are the principal investigator; the co-principal investigator, if one has been designated, and other faculty/professionals who are anticipated to serve as research mentors.

(7) **Project Budget.** Project costs must include student stipend as well as research supplies and/or laboratory use fees, housing (if appropriate during the summer months), and travel for student participants. The budget may also include items such as faculty salaries, support for coordination activities, and small equipment and/or supplies, as long as these are justified. Indirect costs are limited to 25% of the Participant Support stipend amount only (Line F1 on the proposal budget). As a guide to budget development, students are expected to be provided an annual stipend of \$12,000. Appropriate levels of supplies and travel (and housing) funds should be provided for each student participant. All student participant costs should be entered under proposal budget Line F, Participant Support costs.

Special Note: A grantee may pay stipends as scholarships or wages as it determines appropriate. In either case, money received by individuals may be taxable income under the Internal Revenue Code of 1986 and may also be subject to state or local taxes.

(8) **Supplementary Documentation.** The following items are included in this section: Conflicts of Interest (required), Ethics component (optional), and Letter of Commitment (if appropriate).

Conflicts of Interests. All proposals must include a single list of Conflicts of Interests. The list, in a single alphabetized table, must contain the full names of all individuals with conflicts of interest, for all senior personnel (PI, Co-PI and research mentors) and any named personnel whose salary is requested in the 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).

Optional Ethics Component (limited to 2 pages). Proposals may apply for support of ethics in science or engineering activities in a UMEB project. The ethics component should describe the following: 1) ethics issues or topics that relate to the scientific content of the project and/or to issues of professional conduct of research; 2) participating faculty and other individuals with appropriate credentials in ethics, including outside ethicists as necessary; 3) activities that show how UMEB students and mentors will be engaged in ethics discussions designed to present ethics concepts and skills for resolution of ethical issues, using approaches such as seminars, student presentations and reports, role-playing, case studies, and outside speaker presentations; 4) products such as reports, presentations, and web-based materials; 5) a formative evaluation plan to be used to improve the component; and 6) results from any prior support for an ethics component.

Proposals may apply for up to \$4,000 each year in support of ethics activities. A separate budget sheet is not possible in FastLane. The total ethics budget should be placed on Line G6 (Other Direct Costs) on the proposal budget, but must be itemized in the budget justification, with a total shown for the items equal to the amount entered on Line G6 of the proposal budget.

Letters of Commitment. Signed letters of commitment documenting collaborative arrangements of significance to the proposal should be scanned and placed in Supplementary Documentation section. Letters may be relevant where the awardee and performing institutions are different, where faculty or facilities of more than one institution and/or organization are to be employed, or where international activities are arranged.

Proposers are reminded to identify the program announcement/solicitation number (05-558) 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.

Indirect Cost (F&A) Limitations:

Indirect costs are limited to 25% of the Participant Support stipend amount only (Line F1 on the proposal budget).

C. Due Dates

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

Preliminary Proposals Deadline (required):

May 18, 2005

Full Proposal Target Date(s):

October 17, 2005

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.

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/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.

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/awards/managing/>. 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/publications/pub_summ.jsp?ods_key=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.

The project report should include a list of student participants and their level of academic education, major field of study, title of research project, name of faculty mentor and a brief description of research accomplishments. Results of the recruitment and selection efforts should be described in detail, including detailed demographic information on the applicant and participant groups. Data for the project report should feed into the project evaluation plan, which in turn should address the project's success in meeting its goals.

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:

- Sally E. O'Connor, Program Director, Directorate for Biological Sciences, Division of Biological Infrastructure, 615 N, telephone: (703) 292-8470, email: soconnor@nsf.gov

For questions related to the use of FastLane, contact:

- Raphael V Brown, Science Assistant, Directorate for Biological Infrastructure, BIO/NSF, telephone: 703-292-8470, fax: 703-292-9063, email: biofl@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 *MyNSF News Service* (<http://www.nsf.gov/mynsf/>) to be notified of new funding opportunities that become available.

Examples of other programs at NSF that support undergraduate research experiences include the following: Research Experiences for Undergraduates (REU): http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5517.

Consult the NSF Guide to Programs (<http://www.nsf.gov/cgi-bin/getpub?gp>) for information about these and other activities.

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 (FASED) 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
- **TDD (for the hearing-impaired):** (703) 292-5090
- **To Order Publications or Forms:**
 - Send an e-mail to: pubs@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; 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 applicant 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 needing information as part of the review process or in order to coordinate programs; 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," 63 Federal Register 267 (January 5, 1998), and NSF-51, "Reviewer/Proposal File and Associated Records," 63 Federal Register 268 (January 5, 1998). 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 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 this burden estimate and any other aspect of this collection of information, including suggestions for reducing this burden, to: Suzanne Plimpton, Reports Clearance Officer, Division of Administrative Services, National Science Foundation, Arlington, VA 22230.

OMB control number: 3145-0058.

[Website Policies and Links](#)

[Privacy](#)

[FOIA](#)

[Help](#)

[Contact NSF](#)

[Contact Web Master](#)

[SiteMap](#)



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

Last Updated:
02/02/05
[Text Only](#)