

# **Minority Postdoctoral Research Fellowships and Supporting Activities**

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## **Program Solicitation**

**NSF 06-586**

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*Replaces Document(s):*

**NSF 00-139**

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**National Science Foundation**

Directorate for Social, Behavioral & Economic Sciences

Directorate for Biological Sciences

**Full Proposal Deadline(s)** (due by 5 p.m. proposer's local time):

November 06, 2006

First Monday in November, Annually Thereafter

Fellowship

**Full Proposal Deadline(s)** (due by 5 p.m. proposer's local time):

Proposals Accepted Anytime

Travel Awards: 3 months in advance of travel date

**Submission Window Date(s)** (due by 5 p.m. proposer's local time):

October 01, 2006 - March 01, 2007

October 1 - March 1, Annually Thereafter

Research Starter Grants

## **SUMMARY OF PROGRAM REQUIREMENTS**

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### **General Information**

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**Program Title:**

Minority Postdoctoral Research Fellowships and Supporting Activities

**Synopsis of Program:**

The Directorate for Biological Sciences (BIO) and the Directorate for Social, Behavioral and Economic Sciences (SBE) offer Minority Postdoctoral Research Fellowships and related supporting activities in an

effort to increase the participation of underrepresented groups in selected areas of science in the U.S. These fellowships support training and research in science, technology, engineering and mathematics (STEM) fields in a host institution only in the areas of biology and social, behavioral, and economic sciences within the purview of NSF. Supporting activities are travel grants to graduate students to visit prospective sponsors and starter research grants for Fellows.

**Cognizant Program Officer(s):**

- Carter Kimsey, Program Director, 615N, telephone: (703) 292-8470, email: [ckimsey@nsf.gov](mailto:ckimsey@nsf.gov)
- Fahmida Chowdhury, 905N, telephone: (703) 292-4672, email: [FChowdhu@nsf.gov](mailto:FChowdhu@nsf.gov)

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

- 47.074 --- Biological Sciences
- 47.075 --- Social Behavioral and Economic Sciences

**Award Information**

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**Anticipated Type of Award:** Other Grant Fellowships, Travel Awards and Reserach Starter Grants

**Estimated Number of Awards:** 36 25 Fellowships, 5 travel awards, 6 research starter grants

**Anticipated Funding Amount:** \$3,000,000 contingent upon the quality of applications and availability of funds.

**Eligibility Information**

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**Organization Limit:**

Proposals may only be submitted by the following:

- NSF postdoctoral fellowships and graduate student travel awards are awards to individuals and applications are submitted directly by the applicant to the NSF. Applicants must be U.S. citizens, nationals or legally admitted permanent resident aliens of the United States. Fellows must affiliate with institutions (e.g. colleges and universities, most government and national laboratories and facilities, and privately-sponsored nonprofit institutes and museums, and, under special conditions, for-profit organizations). U.S. academic institutions may apply for research starter grants on behalf of fellowship awardees.

**PI Limit:**

Fellowships and graduate student travel awards: Applicants must be U.S. citizens, nationals, or legally admitted permanent resident aliens of the United States. Research starter grants: U.S. Academic institutions may apply on behalf of Fellowship awardees in tenure track positions at the institution within 1 year of conclusion of the Fellowship.

**Limit on Number of Proposals per Organization:**

None Specified

**Limit on Number of Proposals per PI: 1**

Applicants may submit only one fellowship application per year. Travel awards and research starter grants are one-time awards.

**Proposal Preparation and Submission Instructions**

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**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:**  
  
Fellowships are awarded to individuals and have an institutional allowance in lieu of indirect costs. Graduate Student Travel Awards and Research Starter grants allow no indirect costs.
- **Other Budgetary Limitations:** Other budgetary limitations apply. Please see the full text of this solicitation for further information.

## C. Due Dates

- **Full Proposal Deadline(s)** (due by 5 p.m. proposer's local time):

November 06, 2006

First Monday in November, Annually Thereafter

Fellowships

- **Full Proposal Deadline(s)** (due by 5 p.m. proposer's local time):

Proposals Accepted Anytime

Travel Awards: 3 months in advance of travel dates

- **Submission Window Date(s)** (due by 5 p.m. proposer's local time):

October 01, 2006 - March 01, 2007

October 1 - March 1, Annually Thereafter

Research Starter Grants

## Proposal Review Information Criteria

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**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

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**Award Conditions:** Additional award conditions apply. Please see the full text of this solicitation for further information.

**Reporting Requirements:** Additional reporting requirements apply. Please see the full text of this solicitation for further information.

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## I. INTRODUCTION

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The National Science Foundation offers postdoctoral research fellowships in selected areas to provide opportunities for recent doctoral scientists to obtain additional training, to gain research experience under the sponsorship of established scientists, and to broaden their scientific horizons beyond their research experiences during their undergraduate or graduate training. Postdoctoral fellowships are further designed to assist new scientists to direct their research efforts across traditional disciplinary lines and to avail themselves of unique research resources, sites, and facilities, including foreign locations.

## II. PROGRAM DESCRIPTION

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The Directorates for Biological Sciences (BIO) and Social, Behavioral, and Economic Sciences (SBE) of the National Science Foundation (NSF) jointly sponsor this program of Minority Postdoctoral Research Fellowships and related supporting activities. The term "minority" as used in this solicitation refers to those ethnic groups that are significantly underrepresented at advanced levels of science and engineering in the U.S., i.e., Native Americans (including American Indians and Alaskan Natives), African-Americans, Hispanics, and Native Pacific Islanders. This program is an effort by the NSF to encourage underrepresented minority or other doctoral scientists to apply for postdoctoral studies, thereby contributing to the future vitality of the Nation's scientific enterprise. Approximately 25 fellowships are awarded each year. There is one deadline per year for the fellowship applications. Graduate Student Travel Award applications may be submitted up to 3 months before the proposed travel. Proposals for research starter grants may be submitted between October 1st and March 1st, following the termination of the fellowship. The goal of the program is to prepare minority scientists and others who support NSF's broadening participation goals for positions of scientific leadership in academia, industry, and government. To attain this goal, the program provides opportunities for postdoctoral training of the highest quality to recent minority doctoral recipients.

- Fellowships Applicants must propose a research and training plan that falls within the purview of the sponsor. Applicants are advised that this program does not support biomedical research. The program is centrally administered within BIO and SBE, and applicants must specify either BIO or SBE as the organization to which the application is being submitted. Applications are not submitted to individual divisions in BIO and SBE. For fellowships, applicants, at the time of application, must have earned the doctoral degree in an appropriate scientific field no more than four years before the deadline date of the application or plan to earn this degree no more than one year after

the deadline date; have completed no more than 12 months (or full time equivalent) in a post doctoral research position prior to the award; have proposed a research and training plan that both falls within the program areas of BIO or SBE; and have explained in the proposal how the fellowship award will broaden or encourage the broadening of participation of underrepresented minorities in science, technology, engineering and mathematics (STEM) fields in the US. Those who wish to apply from an already appointed academic position should contact the cognizant program officer prior to applying.

- Travel awards for graduate students to meet prospective sponsoring scientists prior to submitting a postdoctoral fellowship application. Travel awards are available to graduate students as they begin planning to apply for a postdoctoral fellowship and allow visits of up to three laboratories to meet prospective mentors, present seminars, discuss mutual research interests, and initiate a working relationship.
- Research starter grant. The Fellow may apply through an NSF eligible U.S. academic institution for a one-year research starter grant to initiate an independent research program. To qualify for the starter grant the Fellow must hold a tenure track position and be no more than one year since completion of the Fellowship.

## DESCRIPTIONS OF RESEARCH IN THE DIRECTORATE FOR BIOLOGICAL SCIENCES

The Directorate for Biological Sciences (BIO) promotes and advances scientific progress in biology by supporting research to understand the underlying principles and mechanisms governing life. Research ranges from the study of the structure and dynamics of biological molecules, such as proteins and nucleic acids, to cells, organs, and organisms, to studies of populations and ecosystems. It encompasses processes that are internal to the organism as well as those that are external, and includes temporal frameworks ranging from measurements in real time through individual life spans, to the full scope of evolutionary time. Short descriptions of BIO's research by organizational division follow; more information is available at <http://www.nsf.gov/dir/index.jsp?org=bio>.

Within BIO, the Division of Biological Infrastructure (DBI) supports new approaches to the management of biological knowledge that render the collection, maintenance, dissemination, and query of the data and information therein of greater utility to the scientific community, development of new instrumentation for biological research, development of bioinformatic tools, and an understanding of the structure, organization, and function of plant genomes important to agriculture, the environment, energy, and health.

The Division of Environmental Biology (DEB) supports fundamental research on the origins, functions, relationships, interactions, and evolutionary history of populations, species, communities, and ecosystems, including research on the patterns and causes of diversity within and among populations and species involving any group of organisms (including terrestrial, freshwater, and marine taxa, and range in subject from microbes to multicellular plants, animals, and fungi) and research on natural and managed ecological systems, primarily in terrestrial, wetland, and freshwater habitats (including experimental, theoretical, and modeling studies on the structure and function of complex biotic/abiotic associations and the coupling of small-scale systems to each other and to large-scale systems).

The Division of Integrative Organismal Biology (IOB) supports research aimed at integrative understanding of organisms as units of biological organization, with particular emphasis on their development, form, function, and evolution. An underlying theme in IOB is the use of a wide diversity of organisms both in identifying unifying principles common to all organisms and in understanding the variety of mechanisms that have evolved in specific organisms. Understanding development, form, function, and evolution requires integrative approaches. These can include analyses from the molecular through the ecosystem levels, including advanced computational techniques and interdisciplinary perspectives involving other areas of biology, behavioral science, physical science, mathematics, engineering, and computer science. Multidisciplinary collaborative research projects are encouraged so that different types of research techniques may be applied to single-focused problems.

The Division of Molecular & Cellular Biosciences (MCB) supports research aimed at understanding the structure and function of biological macromolecules, including proteins, nucleic acids, polysaccharides, and lipid assemblies and research that contributes to a fundamental understanding of life processes at the molecular, subcellular, and cellular levels, including the molecular mechanisms by which genetic and metabolic processes occur in plant, animal, and microbial organisms and the structure, function, and regulation of plant, animal, and microbial cells.

**Please note** that research with disease-related goals, including work on the etiology, diagnosis, or treatment of physical or mental disease, abnormality, or malfunction in human beings or animals is not supported. Animal models of such conditions or the development or testing of drugs or other procedures for their treatment also are not eligible for support.

## DESCRIPTIONS OF RESEARCH IN THE DIRECTORATE FOR SOCIAL, BEHAVIORAL AND ECONOMIC SCIENCES

The Directorate for Social, Behavioral and Economic Sciences supports research in a broad range of disciplines and in interdisciplinary areas. Research is supported primarily through two divisions, namely, the Division of Behavioral and Cognitive Sciences (BCS), and the Division of Social and Economic Sciences (SES).

The Division of Behavioral and Cognitive Sciences (BCS) supports research to develop and advance scientific knowledge on human cognition, language, social behavior and culture, as well as research on the interactions between human societies and the physical environment. The Division of Behavioral and Cognitive Sciences supports research to develop and advance scientific knowledge on human cognition, language, social behavior and culture, as well as research on the interactions between human societies and the physical environment. The programs include Archaeology, Cognitive Neuroscience, Cultural Anthropology, Developmental and Learning Sciences, Geography and Regional Science, Linguistics, Perception, Action and Cognition, Physical Anthropology, and Social Psychology.

The Division of Social and Economic Sciences (SES) seeks to enhance our understanding of human, social and organizational behavior by building social science infrastructure, by advancing social science methods, and by supporting disciplinary and interdisciplinary research projects that advance knowledge in the social and economic sciences. SES programs include Decision, Risk and Management Sciences, Economics, Innovation and Organizational Change, Law and Social Science, Methodology, Measurement, and Statistics, Political Science, and Science and Society.

Additional detail on specific programs within the two divisions is found on the Social, Behavioral and Economic Sciences Directorate home page (<http://www.nsf.gov/dir/index.jsp?org=SBE>).

#### A. Location of Work

Research and training supported by Minority Postdoctoral Research Fellowships may be conducted at any appropriate U.S. or foreign host institution. Appropriate institutions include colleges and universities, most government (except the National Institutes of Health) and national laboratories and facilities, and privately-sponsored nonprofit institutes and museums, and, under special conditions, for-profit organizations.

#### B. Sponsoring Scientist(s)

The Fellow must affiliate with a host institution during the entire tenure of the fellowship. The applicant is responsible for making prior arrangements with the host institution and Sponsoring Scientist(s). Regardless of the number of sponsors or locations, the fellowship application requires a single Sponsoring Scientist statement. If more than one sponsor is proposed, one must be named lead sponsor and information from all must be integrated into a single Sponsoring Scientist statement. Likewise, if more than one site is proposed, the Sponsoring Scientist statement must integrate all sponsors and locations in a single statement. Because of the increasingly multidisciplinary nature of all fields of science, it is expected that dual sponsorship will be common.

If a fellowship is offered, the applicant may be requested to provide documentation from the host institution that the terms and conditions of the fellowship are acceptable and that the Fellow will be provided adequate space, basic services, and supplies.

Any changes in location or sponsorship after an award is made must be approved in advance in writing by the appropriate NSF Postdoctoral Fellowship Program Officer.

### III. AWARD INFORMATION

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The NSF expects to make approximately 25 Minority Postdoctoral Research Fellowships per year, from a budget of approximately \$3 million per year, depending on the quality of submissions and the availability of funds. Approximately 5 travel awards and 6 research starter awards are made each year, depending upon the quality of proposals and the availability of funds.

**Duration and Tenure:** The fellowship is normally for 24 continuous months. For the BIO sciences, a third year extension may be requested no later than March 1 prior to the expiration of the fellowship. A three-year tenure may be granted at the time of award if the Fellow spends more than a year abroad. For the SBE sciences, proposers must contact the program officer before proposing either an extension or a three year fellowship. Tenure begins on the first of the month only and may commence at the Fellow's request between July of the initial award year and January of the following year. Interruptions in tenure or extensions without additional cost to NSF are permitted only for extenuating circumstances beyond the control of the Fellow. Fellowships cannot be renewed or supplemented. Travel awards and research starter grants are for a maximum of 12 months.

**Stipend and Allowances for Fellowships:** The total fellowship amount is \$60,000 per year and consists of three separate types of payments. The annual stipend of \$45,000 is paid monthly in installments of \$3,750 directly to the post-doctoral fellow as an electronic funds transfer into a personal account at a financial institution. A research allowance of \$10,000 per year is

paid as a lump sum to the Fellow in the same manner for expenses directly related to the conduct of the research, such as materials and supplies, subscription fees and recovery costs for databases, travel, and publication expenses. An institutional allowance of \$5,000 per year is paid to the host institution for fringe benefits, including health insurance payments for the Fellow, and for expenses incurred in support of the Fellow, such as space, equipment, and general-purpose supplies. There are no allowances for dependents or travel allowances separate from the research allowance

#### IV. ELIGIBILITY INFORMATION

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##### Organization Limit:

Proposals may only be submitted by the following:

- NSF postdoctoral fellowships and graduate student travel awards are awards to individuals and applications are submitted directly by the applicant to the NSF. Applicants must be U.S. citizens, nationals or legally admitted permanent resident aliens of the United States. Fellows must affiliate with institutions (e.g. colleges and universities, most government and national laboratories and facilities, and privately-sponsored nonprofit institutes and museums, and, under special conditions, for-profit organizations). U.S. academic institutions may apply for research starter grants on behalf of fellowship awardees.

##### PI Limit:

Fellowships and graduate student travel awards: Applicants must be U.S. citizens, nationals, or legally admitted permanent resident aliens of the United States. Research starter grants: U.S. Academic institutions may apply on behalf of Fellowship awardees in tenure track positions at the institution within 1 year of conclusion of the Fellowship.

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

None Specified

##### Limit on Number of Proposals per PI: 1

Applicants may submit only one fellowship application per year. Travel awards and research starter grants are one-time awards.

##### Additional Eligibility Info:

You are eligible to apply for a NSF Minority Postdoctoral Research Fellowship if you meet all the following criteria:

1. You are a citizen, national, or lawfully admitted permanent resident alien of the United States.
2. You have earned the doctoral degree in an appropriate scientific field no more than four years before the deadline date of your application or you will earn this degree no more than one year after the deadline date prior to receiving a NSF post doctoral award.
3. You have no more than 12 months of full time equivalent post-doc research experience at the time of award.
4. Your proposed research falls within the program areas of BIO or SBE (see descriptions above or the most recent NSF Guide to Programs). **Please note** that research with disease-related goals, including work on the etiology, diagnosis, or treatment of physical or mental disease, abnormality, or malfunction in human beings or animals is not supported. Animal models of such conditions or the development or testing of drugs or other procedures for their treatment also are not eligible for support.
5. Your research and training plan explains how the fellowship award will broaden or encourage the broadening of participation in science, technology, engineering and mathematics (STEM) fields in US science.
6. You are proposing a sponsoring institution that is different from your doctoral institution, except in extraordinary circumstances. Specific justification for not proposing this change is required in your research and training plan.
7. You have not yet taken an academic position. Those that are planning to apply from an already established academic position and are still within four years of receiving their Ph.D. should contact the NSF program officer prior to applying. Applicants that fail to meet the above eligibility

requirements will be returned without review. Applications proposing research deemed by NSF to be inappropriate to NSF will be returned without review.

You are eligible to apply for a Minority Graduate Student Travel Award if you meet criteria (1) and (2) above and are a graduate student within 18 months of degree.

You are eligible to apply for a Research Starter Grant if you are an NSF Minority Postdoctoral Research Fellow, within one year of finishing your NSF fellowship, you have accepted a tenure-track position at an institution eligible to receive NSF funds; and your research area falls within the purview of BIO and SBE. U. S. Academic institutions apply on behalf of the Fellowship awardee.

## V. PROPOSAL PREPARATION AND SUBMISSION INSTRUCTIONS

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### A. Proposal Preparation Instructions

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**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: [http://www.nsf.gov/publications/pub\\_summ.jsp?ods\\_key=gpg](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-PUBS (7827) or by e-mail from [pubs@nsf.gov](mailto:pubs@nsf.gov).

#### Application Preparation Instructions:

Applicants must use FastLane for new fellowships, fellowship extensions, travel awards, and research starter grants. Specific instructions are found in FastLane and differ from the standard Grant Proposal Guide (GPG) proposal preparation guidelines.

All page limits include pictures, figures, tables, etc. Applicants are urged to take special care to strictly adhere to page limitations, font size (no smaller than Courier New 10), and margins (minimum of 2.5 cm). Proposals that do not conform to the requirements are returned without review.

#### 1. Fellowships

Fellowship applications must be submitted electronically via the NSF FastLane system. Only one application is permitted per person. The fellowship application consists of many parts, requiring input from Sponsoring Scientist(s) and references. Applicants are advised to begin the application procedures well in advance of the deadline and to submit the application as early as possible. FastLane procedures allow applicants to work on parts of the application and save them for future completion.

Only complete and timely applications will be accepted. A complete submission requires coordination between the applicant, the applicant's sponsoring scientist(s), and the references and includes all of the following items.

1. From the applicant, a complete FastLane postdoctoral fellowship application consisting of:
  - Cover Page
  - 
  - The application form;
  - 
  - Curriculum Vitae (limited to two pages);
  - 
  - An abstract of the applicant's thesis research (limited to one page);
  - 
  - An abstract of the proposed research and training (limited to one page - must address both intellectual merit and broader impacts of research); and
  - 
  - The research and training plan (see requirements detailed below) including a bibliography of cited references.
2. Sponsoring Scientist Statement. A single statement must be uploaded into FastLane regardless of the number of sponsors and research sites.
3. Two reference reports (one from the doctoral advisor and another from a scientist who knows the applicant well). FastLane submission of the reference reports by the authors is required.

The references should include the doctoral advisor but not the proposed sponsoring scientist. The referees should be provided a copy of the research and training plan so they can comment specifically on the proposed fellowship activities in addition to their personal knowledge of the applicant. *NOTE: An assigned access code is used to provide secure access to FastLane for preparing and submitting the reference reports. It limits access to only those to whom the applicant gives the access code and links the reference reports to the application.*

### **Additional Instructions for Research and Training Plan**

The research and training plan addresses what the applicant hopes to accomplish during the fellowship period, how it relates to her/his career goals, and how participation of underrepresented minorities will be increased. The plan should be developed in collaboration with the sponsoring scientist, and should be the independent work of the applicant, not part of ongoing work of the sponsor. The plan must not exceed five pages. A list of cited literature should be included and is not counted as part of the 5-page limit.

The research and training plan consists of:

1. An introduction or background section;
2. A statement of research objectives, methods, and significance;
3. A statement of training objectives and a personal statement of career goals;
4. An explanation of how the fellowship activities will enhance the applicant's career development;
5. A justification of the choice of Sponsoring Scientist(s) and host institution(s); and
6. A statement of how the participation of underrepresented groups at the post doctoral level will be increased.

Where experiments are proposed, explicit experimental details need not be given, but the plan should provide a clear statement of objectives and approaches to accomplish them, and the specification of hypotheses and ways to test them. In presenting the training plan, the applicant should set clear training goals and explain how the proposed research and training will help achieve these goals. This can be done by explaining why the proposed fellowship institution and sponsoring scientist were chosen, and what role the chosen research, sponsoring senior scientist and host institution will play in enhancing the applicant's conceptual approaches and technical skills. NSF encourages Fellows who choose U.S. institutions as hosts to include research experience of 6 months or longer in a foreign laboratory or site. If a foreign activity is proposed, the plan should include details of the visit (where, when, how long), the unique opportunities, and the expected outcome. Tenure of 36 months may be requested if at least 12 months will be spent at a foreign institution. If the research is to be conducted at an institution with which the applicant is or has been associated, a justification must be given for not selecting a new institution. Applicants not changing institution are encouraged to develop training goals and short term visits elsewhere to provide new research environments.

Applicants whose research involves human subjects and /or vertebrate animals must indicate in the plan their awareness of regulations and guidelines pertaining to these types of research. Successful applicants must provide NSF with documentation that the research has been reviewed and approved by the appropriate institutional committees, giving assurance of compliance with all Federal policies on research using humans and the care and use of animals. These requirements are relevant to both laboratory and field projects. Documentation is to be provided on the cover sheet in FastLane.

Special certifications and permits must be provided when projects involve collecting in foreign countries, endangered species, or hazardous materials. Some applications may require other documentation before the final decision can be made, e.g., government permits, letters of collaboration, and commitments from private sources. The research and training plan should provide general information on these matters and address the availability of these documents. Applicants must submit the information when requested by the Postdoctoral Fellowship Program Officer.

## **2. Graduate Student Travel Awards**

Graduate students who are within 18 months of earning their doctoral degrees and who otherwise meet the eligibility requirements for a Fellowship may apply for a travel award. Travel awards are made directly to the individual, not the institution. The purpose of the travel award is to assist the candidate in the selection of a postdoctoral mentor and in the development of an application for an NSF Minority Postdoctoral Research Fellowship. The award may be used to cover airfare and per diem expenses while visiting the host scientist's institution. Graduate students can apply for travel funds to cover a maximum of three such visits; the total amount of the travel award shall not exceed \$4,000 per student. Payment is made directly to the student. Indirect costs are not allowed.

Graduate students should discuss the selection of potential postdoctoral mentors with their thesis advisors and obtain a letter of recommendation from the advisor including a statement of their concurrence with the selections. A letter from each host scientist is required also.

Travel awards and fellowships are independent in that the granting of a travel award provides no assurance of a fellowship. Applications for travel awards are not a precondition for Fellowship applications. Fellowship applications will be received regardless of whether a travel award has been sought. To be eligible for consideration for a travel award, an application must be complete. Incomplete applications will be returned without review.

### 3. Research Starter Grants

Fellows who elect to pursue an academic career immediately following their fellowships and who accept a tenure-track position at a U.S. academic institution eligible to receive NSF funding immediately following their fellowships, may apply for a special one-year, nonrenewable starter grant to assist in establishing an independent research program. Starter grants are not fellowships but research grants made to the employing U.S. academic institution. Proposals for starter grants must be submitted through FastLane and are then assigned to the appropriate research programs for scientific review and decision by the cognizant NSF Program Officer. The cognizant Program Officer may also require further discussion of the project in order to properly evaluate the proposed study as it relates to the NSF program. The project description should describe in detail the scope of the research to be conducted and its relationship with the postdoctoral research. The maximum is \$50,000 total costs. Funds provided by NSF cannot be used for PI salary, renovations of laboratory or office space, or indirect costs. The funds are to be used for expenses directly related to the conduct of research that falls under the purview of the Directorates for Biological Sciences or Social, Behavior, and Economic Sciences at NSF. A letter of support from the Department Chair should be provided. The letter should outline research expectations for the faculty member and confirm the tenure track position.

Proposers are reminded to identify the program solicitation number (NSF 06-586) 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

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

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

Fellowships are awarded to individuals and have an institutional allowance in lieu of indirect costs. Graduate Student Travel Awards and Research Starter grants allow no indirect costs.

### Other Budgetary Limitations:

The fellowship award amount is \$60,000 per year for two or three years (\$45,000 stipend, \$10,000 research allowance, \$5000 institutional allowance). Travel awards are for up to \$4,000. For research starter grants, NSF provides up to \$50,000.

## C. Due Dates

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- **Full Proposal Deadline(s)** (due by 5 p.m. proposer's local time):

November 06, 2006

First Monday in November, Annually Thereafter

Fellowships

- **Full Proposal Deadline(s)** (due by 5 p.m. proposer's local time):

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October 1 - March 1, Annually Thereafter

Research Starter Grants

*Graduate Student Travel award requests must be received no later than 3 months prior to the proposed travel. Fellows may submit Research Starter Grant proposals between October 1 and March 1 following the expiration of the fellowship.*

## D. FastLane Requirements

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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: <http://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](mailto: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

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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

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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.

#### **Additional Review Criteria:**

Because one of the objectives of the program is to broaden the perspectives and experiences of the Fellows, careful consideration should be given to the selection of the Sponsoring Scientists and host institutions. The NSF encourages Fellows to gain international experience by selecting foreign hosts for at least part of the tenure of the fellowship. An important basis for judging the suitability of the host institution is the degree to which the Sponsoring Scientist statement describes and offers a research environment and mentoring opportunity that could be difficult to achieve without fellowship support.

Applicants are evaluated on their ability, accomplishments, and potential as evidenced by the Curriculum Vitae and reference reports. The research and training plan is evaluated on its scientific merit, its feasibility, its significance in generating new knowledge, and its impact on the career development of the applicant and its potential to increase participation of underrepresented groups. Other important evaluative factors are the suitability and availability of the Sponsoring Scientist(s) and host institution(s), including colleagues and facilities.

The Postdoctoral Fellowship Program Officers manage the selection process and will consider the advice of reviewers in formulating a program recommendation. The NSF will select the Fellows on the basis of the panel's recommendations, staff review, program priorities, a consideration of the effect of the selections on the infrastructure of science in the U.S., and the NSF's education and human resource goals. Priority will be given to applicants who are graduate students at the time they apply, to those who choose foreign locations, and those moving to new institutions and research environments with which they have had no prior affiliation.

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

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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

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### A. Notification of the Award

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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

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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](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](mailto: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 [http://www.nsf.gov/publications/pub\\_summ.jsp?ods\\_key=aag](http://www.nsf.gov/publications/pub_summ.jsp?ods_key=aag).

#### Special Award Conditions:

**Notification of the Award:** A Grants Officer in the Division of Grants and Agreements notifies the applicant of the fellowship award by email letter.

**Grant Award Conditions:** An NSF fellowship consists of: (1) the award letter, which includes any special provisions applicable to the grant and any numbered amendments thereto; (2) the application; (3) the applicable grant conditions, see below; (4) this NSF program solicitation incorporated by reference in the award letter; (5) and an information booklet sent to successful applicants with the offer.

NSF claims no rights to any inventions or writings that may result from its fellowship awards. However, Fellows should be aware that NSF, other Federal agencies, or private parties may acquire such rights through other grant support. Applicants are encouraged to discuss institutional policies on intellectual property rights with the host institution before submitting an application. Applicants should also discuss the policies of the Sponsoring Scientist regarding which materials and projects must remain with the host institution, and which can be released to the Fellow at the end of the fellowship. Before commencing work, Fellows at foreign institutions should be aware that specific provisions regarding allocations of intellectual property rights apply to particular countries.

Fellows are obligated to include an acknowledgment of NSF support and a disclaimer in any publication arising from the fellowship-supported research. Fellows are expected to agree to complete, timely, and open sharing of data and material. By submitting an application, all participants agree to NSF guidelines on sharing of findings, data, and other research products.

**Workshop for Postdoctoral Fellows and Mentors:** All current Fellows and mentors will be invited to a workshop annually or bi-annually. The purpose of the workshop is to promote the career development and growth of Fellows and costs for Fellows' travel and registration will be paid for by the Foundation. The workshop will include scientific presentations by Fellows and mentors in the program. The workshop allows program participants to meet each other, share experiences, and get to know NSF Program Officers. Participation in the workshop is considered an important part of the Fellowship program

and new Fellows are expected to attend absent exigent circumstances.

## C. Reporting Requirements

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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.

PIs 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. PIs 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.

For all fellowships, the Fellow must submit an annual project report through FastLane to the Postdoctoral Fellowship Program Officer within 90 days following the anniversary of the start date.

Within 90 days after termination of the fellowship, the Fellow is required to submit a final project report through FastLane and a termination certificate (this form will be provided with the post doctoral offer). Fellows are requested to report in their annual and final reports on their educational activities during the fellowship tenure, including mentoring and guiding students at all educational levels.

Failure to provide final technical reports delays NSF review and processing of subsequent pending proposals for the Fellow.

Fellows are expected to maintain contact with the Postdoctoral Fellowship Program Officer after completing fellowship activities to permit evaluation of the success of the program in advancing scientific careers.

Graduate Student Travel Awards require a certificate of completed travel and a brief narrative report within 90 days of completing the travel.

Research starter grants require a final project report submitted through FastLane. 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.

## VIII. AGENCY CONTACTS

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General inquiries regarding this program should be made to:

- Carter Kimsey, Program Director, 615N, telephone: (703) 292-8470, email: [ckimsey@nsf.gov](mailto:ckimsey@nsf.gov)
- Fahmida Chowdhury, 905N, telephone: (703) 292-4672, email: [FChowdhu@nsf.gov](mailto:FChowdhu@nsf.gov)

For questions related to the use of FastLane, contact:

- FastLane Help Desk, telephone: 1-800-673-6188; e-mail: [fastlane@nsf.gov](mailto:fastlane@nsf.gov).

## IX. OTHER INFORMATION

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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, MyNSF (formerly the Custom News Service) is an information-delivery system 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 or the user's Web browser each time new publications are issued that match their identified interests. MyNSF also is available on NSF's Website at <http://www.nsf.gov/mynsf/>.

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 <http://www.grants.gov>.

## ABOUT THE NATIONAL SCIENCE FOUNDATION

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

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

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

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

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

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

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

To get the latest information about program deadlines, to download copies of NSF publications, and to access abstracts of awards, visit the NSF Website at <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](mailto:pubs@nsf.gov)

or telephone: (703) 292-7827

## PRIVACY ACT AND PUBLIC BURDEN STATEMENTS

The information requested on proposal forms and project reports is solicited under the authority of the National Science Foundation Act of 1950, as amended. The information on proposal forms will be used in connection with the selection of qualified proposals; and project reports submitted by awardees will be used for program evaluation and reporting within the Executive Branch and to Congress. The information requested may be disclosed to qualified reviewers and staff assistants as part of the proposal review process; to proposer institutions/grantees to provide or obtain data regarding the proposal review process, award decisions, or the administration of awards; to government contractors, experts, volunteers and researchers and educators as necessary to complete assigned work; to other government agencies or other entities needing information regarding applicants or nominees as part of a joint application review process, or in order to coordinate programs or policy; and to another Federal agency, court, or party in a court or Federal administrative proceeding if the government is a party. Information about Principal Investigators may be added to the Reviewer file and used to select potential candidates to serve as peer reviewers or advisory committee members. See Systems of Records, NSF-50, "Principal Investigator/Proposal File and Associated Records," 69 Federal Register 26410 (May 12, 2004), and NSF-51, "Reviewer/Proposal File and Associated Records," 69 Federal Register 26410 (May 12, 2004). Submission of the information is voluntary. Failure to provide full and complete information, however, may reduce the possibility of receiving an award.

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

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

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