

Postdoctoral Research Fellowships in Biology (PRFB)

PROGRAM SOLICITATION

NSF 23-620

REPLACES DOCUMENT(S):

NSF 22-623



National Science Foundation
Directorate for Biological Sciences

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

November 29, 2023

November 07, 2024

IMPORTANT INFORMATION AND REVISION NOTES

Proposals must be prepared and submitted through Research.gov. The proposal preparation instructions have been revised significantly. Please read them carefully as some requirements have changed.

It is anticipated that Competitive Area 2, Integrative Research Investigating the Rules of Life Governing Interactions Between Genomes, Environment and Phenotypes will run for another 2 years, and the last year will be FY2025. It is anticipated there will be a new area for submission in late fall of 2025 (FY 2026). In future years, it is expected that research incorporating the rules of life criteria could be proposed under other Competitive Areas.

Reference letter authors must have an NSF account in Research.gov to access the Reference Letter Submission module and submit a reference letter. See Section V.A for additional information.

Any proposal submitted in response to this solicitation should be submitted in accordance with the *NSF Proposal & Award Policies & Procedures Guide* (PAPPG) that is in effect for the relevant due date to which the proposal is being submitted. The NSF PAPPG is regularly revised and it is the responsibility of the proposer to ensure that the proposal meets the requirements specified in this solicitation and the applicable version of the PAPPG. Submitting a proposal prior to a specified deadline does not negate this requirement.

SUMMARY OF PROGRAM REQUIREMENTS

General Information

Program Title:

Postdoctoral Research Fellowships in Biology (PRFB)

Synopsis of Program:

The Directorate for Biological Sciences (BIO) awards Postdoctoral Research Fellowships in Biology (PRFB) to recent recipients of the doctoral degree for research and training in *selected* areas supported by BIO and with special goals for human resource development in biology. For proposals under this solicitation, these areas are **(1) Broadening Participation of Groups Underrepresented in Biology, (2) Integrative Research Investigating the Rules of Life Governing Interactions Between Genomes, Environment and Phenotypes, and (3) Plant Genome Postdoctoral Research Fellowships.**

The fellowships encourage independence at an early stage of the research career to permit Fellows to pursue their research and training goals in the most appropriate research locations in collaboration with sponsoring scientists. It is expected that the sponsoring scientists will actively mentor the Fellows and will greatly benefit from collaborating with these talented early-career scientists and incorporating them into their research groups. The research and training plan of each fellowship must address important scientific questions within the scope of BIO and the specific guidelines in this fellowship program solicitation. Because

the fellowships are offered to postdoctoral scientists only early in their careers, NSF encourages doctoral students to discuss the availability of these postdoctoral fellowships with their doctoral mentors and potential postdoctoral sponsors early in their doctoral programs to take full advantage of this funding opportunity. Fellowships are awards to individuals, not institutions, and are administered by the Fellows.

Cognizant Program Officer(s):

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

- Daniel R. Marendia (Areas 1 & 2), telephone: (703) 292-2157, email: bio-dbi-prfb@nsf.gov
- Amanda A. Simcox (Areas 1 & 2), telephone: (703) 292-8165, email: bio-dbi-prfb@nsf.gov
- Deana Erdner (Areas 1 & 2), telephone: (703) 292-2053, email: bio-dbi-prfb@nsf.gov
- Andrea Holgado (Areas 1 & 2), telephone: (703) 292-7076, email: bio-dbi-prfb@nsf.gov
- Joel K. Abraham (Areas 1 & 2), telephone: (703) 292-4694, email: bio-dbi-prfb@nsf.gov
- Diane Jofuku Okamuro (Area 3), telephone: (703) 292-8420, email: dbipgr@nsf.gov

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

- 47.074 --- Biological Sciences

Award Information

Anticipated Type of Award: Fellowship

Estimated Number of Awards: 60

Fellowships per year; the number of awards in each Competitive Area is contingent upon availability of funds.

Anticipated Funding Amount: \$15,000,000

Approximately \$12 million for Competitive Areas 1 and 2; and up to \$3 million for Competitive Area 3, from the Plant Genome Research Program in the Division of Integrative Organismal Systems (IOS). Funding is contingent upon availability of funds.

Eligibility Information

Who May Submit Proposals:

Proposals may only be submitted by the following:

- Proposals must be submitted by the individual and not the host institution.

NSF Postdoctoral Research Fellowships in Biology proposals are submitted directly by the fellow to NSF and the award is made directly to the postdoctoral fellow. Each postdoctoral fellow must identify a sponsoring scientist(s) and must affiliate with an appropriate U.S. or international host institution(s) at the time of proposal submission e.g., U.S. Institutions of Higher Education (IHEs), private nonprofit institutes and museums, government agencies and laboratories, and, under special conditions and with prior approval from a Program Officer, for-profit organizations. Appropriate international institutions include institutions of higher education.

Who May Serve as PI:

The PRFB awards are intended primarily for graduate students who are seeking independent support for their first postdoctoral position, or postdoctoral Fellows early in their careers. Proposers are not eligible for this award if they have worked in any position that requires the doctoral degree for a combined total of more than 15 full time months prior to the deadline.

An individual is eligible to submit a proposal to any Competitive Area if all of the following criteria are met:

- Must be a U.S. citizen, U.S. national or U.S. permanent resident, *i.e.*, have a "green card," at the time of submission ;
- Must present a research plan that falls within the purview of BIO and the focus for each of the selected areas, as described in this solicitation;
- Must earn the doctoral degree in an appropriate field prior to beginning the fellowship;
- Must select sponsoring scientists, departments, and institutions that offer a significant opportunity to broaden your

- research focus and training; and
- Must not have submitted the same research to another NSF postdoctoral fellowship program.

Proposals that fail to meet the above eligibility requirements will be returned without review.

By signing and submitting the proposal, the fellowship candidate is certifying that they meet the eligibility criteria specified in this program solicitation. Willful provision of false information in this request and its supporting documents or in reports required under an ensuing award is a criminal offense (U.S. Code, Title 18, Section 1001).

Limit on Number of Proposals per Organization:

Only individuals may submit proposals. There is no limit on the number of fellows that an institution may host.

Limit on Number of Proposals per PI or co-PI: 1

Individuals may submit only one fellowship proposal to BIO per fiscal year and may submit no more than twice for all Postdoctoral Fellowships in Biology.

Proposal Preparation and Submission Instructions

A. Proposal Preparation Instructions

- **Letters of Intent:** Not required
- **Preliminary Proposal Submission:** Not required
- **Full Proposals:**
 - Full Proposals submitted via Research.gov: *NSF Proposal and Award Policies and Procedures Guide* (PAPPG) guidelines apply. The complete text of the PAPPG is available electronically on the NSF website at: https://www.nsf.gov/publications/pub_summ.jsp?ods_key=pappg.

B. Budgetary Information

- **Cost Sharing Requirements:**

Inclusion of voluntary committed cost sharing is prohibited.
- **Indirect Cost (F&A) Limitations:**

Not Applicable
- **Other Budgetary Limitations:**

Other budgetary limitations apply. Please see the full text of this solicitation for further information.

C. Due Dates

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

November 29, 2023

November 07, 2024

Proposal Review Information Criteria

Merit Review Criteria:

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

Award Administration Information

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

BIO offers Postdoctoral Research Fellowships in Biology to provide opportunities for scientists early in their careers who are ready to assume independence in their research efforts and to obtain training beyond their graduate education in preparation for scientific careers, to gain research experience in collaboration with established scientists, and to broaden their scientific horizons. Fellowships are further designed to assist new scientists to direct their research efforts beyond traditional disciplinary lines and to avail themselves of unique research resources, sites, and facilities, including international locations. Fellows must affiliate with appropriate research institutions and are expected to devote themselves full time to the fellowship activities for the duration of the fellowship. The fellowships have both research and training goals. BIO is particularly interested in increasing the participation of those that have been underrepresented to better posture NSF to leverage the full spectrum of diverse talent in STEM.

Currently, BIO offers Postdoctoral Research Fellowships in Biology in the following three areas:

Competitive Area 1. Broadening Participation of Groups Underrepresented in Biology

These fellowships have been offered since 1990, originally as the NSF Minority Postdoctoral Research Fellowships, to increase the participation of underrepresented groups in biology. Through this Competitive Area BIO seeks to increase the diversity of scientists explicitly at the postdoctoral level in biology. The program supports a wide range of biological research and training across the full range of BIO's research programs.

Competitive Area 2. Integrative Research Investigating the Rules of Life Governing Interactions Between Genomes, Environment and Phenotypes

Through this Competitive Area, BIO aims to stimulate creative integration of diverse subdisciplines of biology using combinations of observational, experimental, theoretical, and computational approaches to discover underlying principles operating across hierarchical levels of life, from biomolecules to organisms to ecosystems. Research activities under this Competitive Area should lead to new understanding of how higher-order structures and functions of biological systems result from the interactions of heterogeneous biological components, as shaped by the environment and evolutionary processes furthering predictive capability of how key properties and mechanisms of living systems emerge from the interactions of genomes, environments, and phenotypes.

Competitive Area 3. Plant Genome Postdoctoral Research Fellowships

This Competitive Area allows recipients to focus their studies on genome-scale research at the frontier of plant biology and of broad societal importance. The research and training plan of each fellowship must address important scientific questions within the scope of the goals of the [Plant Genome Research Program](#) - to provide tools and knowledge to solve intractable, challenging biological questions, revolutionize agriculture, address fundamental societal issues, advance the bioeconomy and build a scientifically engaged population. The program has a broad scope and supports studies of plants across the kingdom. Highly competitive proposals will describe interdisciplinary training and research on a genome-wide scale to provide new insights into plant processes.

II. PROGRAM DESCRIPTION

Fellowship Competitive Area 1: Broadening Participation of Groups Underrepresented in Biology

Through this Competitive Area, BIO seeks to increase the diversity of scientists explicitly at the postdoctoral level in biology and, thereby, contribute to the future vitality of the Nation's scientific enterprise. Enhancing diversity at the postdoctoral level will depend on including the participation of the full spectrum of diverse talent in STEM. The goal of the program is to prepare biologists who are underrepresented in their fields and others who share NSF's diversity goals at the post-doctoral level for positions of scientific leadership in academia, industry, and government. The research and training plan in these proposals must fall within the purview of BIO and explain how the fellowship award will broaden or effectively encourage broadening the participation of underrepresented individuals at the postdoctoral level in any area of biological research supported by BIO. The broadening participation component in Area 1 could involve activities at other educational or training levels provided some aspect of the project will promote postdoctoral diversity.

Fellowship Competitive Area 2: Integrative Research Investigating the Rules of Life Governing Interactions Between Genomes, Environment and Phenotypes

Research activities under this Rules of Life Competitive Area should lead to new understanding of how higher-order structures and functions of biological systems result from the interactions of heterogeneous biological components, as shaped by the environment and evolutionary processes. Understanding how these key properties and mechanisms of living systems emerge from the interactions of genomes, environments, and phenotypes is also expected to produce theories or models with predictive capability.

Proposals submitted to this Competitive Area must use combinations of computational, observational, experimental, or conceptual approaches to elucidate the mechanistic relationships between genomes and phenomes in an environmental context. The research must also span hierarchical levels of analysis, across part or all of the continuum from biomolecules to organisms to ecosystems. Proposals should translate observational and experimental data sets into novel models and/or theories to address phenomena across multiple levels of biological organization by posing compelling research questions with well supported expectations or testable hypotheses.

It is likely successful proposers will need to choose a research environment for their fellowship that includes expertise in multiple disciplines and/or approaches. Therefore, candidates for this Competitive Area are encouraged to describe in the project description how the attributes of the proposed environment and/or other collaborating investigators, including potential co-mentor(s) if applicable, will contribute to the specific goals of the proposed project and training.

Fellowship Competitive Area 3: Plant Genome Postdoctoral Research Fellowships

Plant research is undergoing a revolution through the application of new tools for genotyping and phenotyping, and in the quantitative theory used for selection. In addition, the flood of data being generated requires new computational tools to provide an effective framework for basic plant biology research and plant improvement. The purpose of these fellowships is to provide postdoctoral training opportunities that target interdisciplinary research in plant improvement and associated sciences such as physiology and pathology, quantitative genetics, computational and plant synthetic biology. Proposers with strong backgrounds in a single disciplinary area should consider expanding their expertise through research and training in associated fields.

Successful proposers will propose research and training plans that are significantly different from their graduate research and training. By bridging basic research and plant performance in the field, the Plant Genome Research Program aims to accelerate basic discovery and innovation in economically important plants and enable enhanced management of agriculture, natural resources, and the environment to meet societal needs.

General description of BIO Postdoctoral Fellowships

A. Appropriateness for BIO and Program Priorities

For Competitive Area 1, a research and training plan with a focus within the scope of any of the core programs in BIO is eligible for support. Further restrictions apply for Competitive Areas 2 and 3 (see details in the descriptions of those competitive areas). Be aware 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, is normally 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. While it is expected that research of fundamental biological significance may often have broader impacts to medicine and human health, proposals determined to have a clear biomedical focus will be returned without review. **If your proposal mentions human disease**, you should discuss its appropriateness with one of the listed Program Officers. Priority is given to research areas where BIO plays a unique or special role among NSF programs and total Federal funding. If your research is in an area of biology not primarily funded by BIO or if you are uncertain, you are strongly encouraged to contact one of the BIO Program Officers to discuss the appropriateness of the research and training.

B. Location of Work

Research and training supported by these fellowships may be conducted at any appropriate U.S. or international host institution. Appropriate U.S. organizations include IHEs, private nonprofit institutes and museums, government agencies and laboratories, and, under special conditions and with prior approval from a Program Officer, for-profit organizations. Appropriate international institutions include institutions of higher education.

Because the objectives of the fellowships include broadening the perspectives and experiences of the Fellows and promoting interdisciplinary research careers, careful consideration and justification should be given to the selection of the sponsoring scientists and host institutions. Fellows who propose remaining in their current locations or positions must provide justification for this in terms of broadening the proposer's training, perspectives, and experiences.

BIO encourages Fellows to gain international experience by selecting international hosts for at least part of the tenure of the fellowship when applying to all competitive areas. Proposers to all Competitive Areas may consider conducting research in Europe with colleagues supported through EU-funded European Research Council (ERC) grants. Dear Colleague Letter [NSF 23-085](#) provides details on how to apply and requirements.

C. The Sponsoring Scientist(s)

The Fellow must affiliate with a host institution(s) at all times during the entire tenure of the fellowship and select a sponsoring scientist(s) whom the Fellow will collaborate with and who will provide mentoring for both the research and training proposed by the fellow. The proposer is responsible for making prior arrangements with the host institution and sponsoring scientist(s). Regardless of the number of sponsors or locations, the fellowship proposal requires a single sponsoring scientist statement. When more than one sponsor is proposed, one must be named lead sponsor and information from all sponsors must be integrated into a single statement. Likewise, if more than one site is proposed, the sponsoring scientist statement must integrate all sponsors and locations in a single statement.

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 plan that will support the fellowship activities.

If a fellowship is offered, the proposer 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 mentoring, space, basic services, needed resources, and supplies. Once an proposal is submitted, any changes in location or sponsorship for the fellowship must be approved in advance by a cognizant Program Officer.

III. AWARD INFORMATION

Estimated program budget and number of awards are subject to the availability of funds.

A. Duration and Tenure

Awards are made in the Spring following the deadline, with start dates on the first of the month from June 1 through March 1. Interruptions in tenure or extensions without additional cost to NSF are permitted only in special circumstances, such as family or medical leave, and require NSF approval. Fellowships are not renewable.

The fellowship tenure for all areas is 36 continuous months.

B. Stipend and Allowances

For the basic fellowship, the total fellowship amount is \$80,000 per year and consists of two types of payments: a stipend (\$60,000) and a research and training allowance (\$20,000). The stipend is paid directly to the Fellow at \$5000 per month. The fellowship allowance is disbursed at the Fellow's discretion for allowable expenses, except foreign travel, which requires prior NSF approval. The allowance is intended to cover research- and training-related costs and fringe benefits. Allowable research and training costs include travel, such as short-term visits to other institutions or laboratories, field work, and attendance at scientific meetings; training; special equipment; IT equipment and software; supplies; publication costs; access fees for databases; and other research-related expenses. The Fellow should keep records to document expenditures. Allowable costs for fringe benefits include individual or family health insurance (any combination of medical, vision, and/or dental) whether purchased as a group or individual plan, disability insurance, retirement savings, dependent care, and moving expenses. All payments are made directly to the Fellow as an electronic funds transfer into a personal account at a U.S. financial institution.

Within the fellowship period, one month per year of fellowship duration may be used for paid leave, including parental or family leave. The paid leave cannot be used to increase the level of NSF support beyond the duration of the fellowship.

The fellowship amount can be increased to include a Facilitation Award for Scientists and Engineers with Disabilities (FASSED). When requesting FASSED funding, proposers should contact the Postdoctoral Research Fellowships in Biology program prior to submission.

Fellowships may be supplemented by host scientists and host institutions with non-Federal funds but only if the additional funds do not carry additional responsibilities beyond the research and training supported by the fellowship.

IV. ELIGIBILITY INFORMATION

Who May Submit Proposals:

Proposals may only be submitted by the following:

- Proposals must be submitted by the individual and not the host institution.

NSF Postdoctoral Research Fellowships in Biology proposals are submitted directly by the fellow to NSF and the award is made directly to the postdoctoral fellow. Each postdoctoral fellow must identify a sponsoring scientist(s) and must affiliate with an appropriate U.S. or international host institution(s) at the time of proposal submission e.g., U.S. Institutions of Higher Education (IHEs), private nonprofit institutes and museums, government agencies and laboratories, and, under special conditions and with prior approval from a Program Officer, for-profit organizations. Appropriate international institutions include institutions of higher education.

Who May Serve as PI:

The PRFB awards are intended primarily for graduate students who are seeking independent support for their first postdoctoral position, or postdoctoral Fellows early in their careers. Proposers are not eligible for this award if they have worked in any position that requires the doctoral degree for a combined total of more than 15 full time months prior to the deadline.

An individual is eligible to submit a proposal to any Competitive Area if all of the following criteria are met:

- Must be a U.S. citizen, U.S. national or U.S. permanent resident, *i.e.*, have a "green card," at the time of submission ;
- Must present a research plan that falls within the purview of BIO and the focus for each of the selected areas, as described in this solicitation;
- Must earn the doctoral degree in an appropriate field prior to beginning the fellowship;
- Must select sponsoring scientists, departments, and institutions that offer a significant opportunity to broaden your research focus and training; and
- Must not have submitted the same research to another NSF postdoctoral fellowship program.

Proposals that fail to meet the above eligibility requirements will be returned without review.

By signing and submitting the proposal, the fellowship candidate is certifying that they meet the eligibility criteria specified in this program solicitation. Willful provision of false information in this request and its supporting documents or in reports required under an ensuing award is a criminal offense (U.S. Code, Title 18, Section 1001).

Limit on Number of Proposals per Organization:

Only individuals may submit proposals. There is no limit on the number of fellows that an institution may host.

Limit on Number of Proposals per PI or co-PI: 1

Individuals may submit only one fellowship proposal to BIO per fiscal year and may submit no more than twice for all Postdoctoral Fellowships in Biology.

V. PROPOSAL PREPARATION AND SUBMISSION INSTRUCTIONS

A. Proposal Preparation Instructions

Full Proposal Instructions: Proposers must submit proposals in response to this Program Solicitation via Research.gov.

Proposals submitted in response to this program solicitation should be prepared and submitted in accordance with the general guidelines contained in the NSF Proposal & Award Policies & Procedures Guide (PAPPG). The complete text of the PAPPG is available electronically on the NSF website at: https://www.nsf.gov/publications/pub_summ.jsp?ods_key=pappg

Paper copies of the PAPPG may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-8134 or by e-mail from nsfpubs@nsf.gov

Proposers are reminded to identify this program solicitation number in the program solicitation block on the NSF Cover Sheet For Proposal to the National Science Foundation. The Prepare New Proposal setup will prompt you for the program solicitation number. Compliance with this requirement is critical to determining the relevant proposal processing guidelines. Failure to submit this information may delay processing.

See PAPPG Chapter II.D.2 for guidance on the required sections of a full research proposal submitted to NSF. Please note that the proposal preparation instructions provided in this program solicitation may deviate from the PAPPG instructions.

Preparation Instructions that Deviate from or Supplement the PAPPG

Include all the requested information and documentation and include **only** what is specifically requested. Page limits include pictures, figures, tables, graphics, etc. Proposals that do not conform to these requirements and all page limitations will be **returned without review**. You will not be given a chance to correct, shorten, or resubmit the proposal after the deadline. Proposals must be submitted electronically via Research.gov. Only complete and timely proposals will be accepted; non-compliant proposals will be **returned without review** as will those that are incomplete or late. A complete Research.gov proposal requires materials from you (the fellow), a statement and Biographical Sketch from your sponsoring scientist(s), and 2 reference letters.

Preparing your fellowship proposal is different in several ways from preparing a research proposal:

Registration for Fellowship Proposers

Before starting proposal preparation, a proposer must register as a [new individual in Research.gov](#). **Fellowship proposals must be submitted by the fellowship candidate, not by the fellowship candidate's current or proposed organizational Sponsored Projects Office (SPO)**. The fellowship candidate serves as his/her own SPO and Authorized Organizational Representative (AOR) for the purposes of any research administration functions in Research.gov.

Fellowship Proposal Instructions

Proposals must include all of the required sections of a full research proposal submitted to NSF as specified in Chapter II.D.2 of the PAPPG. In cases where requirements given in this document supplement or deviate from the instructions provided in the PAPPG, this solicitation takes precedence. All page limitations include pictures, figures, tables, graphics, etc. Proposers are urged to take special care to strictly adhere to page limitations. *Proposals that do not conform to the requirements will not be accepted or will be returned without review.*

Proposal Set-Up: Select "Prepare New Full Proposal" in Research.gov. The postdoctoral fellow/PI must select the "I am a Proposed Postdoctoral Fellow (Postdoctoral Fellowship Proposal)" option to initiate a postdoctoral fellowship proposal. If you do not see an option to apply as a Proposed Postdoctoral Fellow, this means you do not have the Proposed Postdoctoral Fellow role. Please add this role under "My Profile" and allow up to 30 minutes for the role to take effect.

Search for and select this solicitation title in Step 1 of the Full Proposal wizard. The information in Step 2 and Step 3 is pre-populated by the system. In Step 4, add a descriptive title of the research following the prepended text "Postdoctoral Fellowship: PRFB".

Personnel Documents: The postdoctoral fellow is automatically designated as the PI in Research.gov. For Current and Pending Support, make sure to include current and planned applications or proposals to other fellowship programs.

The lead sponsoring scientist must be identified on the proposal. This is done by going to the **Personnel Documents section**, clicking on the "Add Sponsoring Scientist" tab and entering the individual's NSF ID or Email or Personnel name and Organization. The sponsoring scientist's Biographical Sketch, Current & Pending Support, and Collaborators and Other Affiliations (COA) information are required and must be included in the proposal. Please upload the COA document in "Additional Single Copy Documents".

Biographical sketches are also required for any additional sponsoring scientists and are uploaded into the "Other Supplementary Documents" section in Research.gov (see additional information in the instructions for the Sponsoring Scientist(s) Statement below).

The following instructions supplement or deviate from the guidance in the NSF PAPPG.

A complete postdoctoral fellowship proposal consists of the following (Note: *The entire proposal, with the exception of the letters of reference, must be submitted by the fellowship proposer in Research.gov*):

1. NSF Cover Sheet: A requested start date must be entered. The proposed duration for a postdoctoral fellowship proposal is pre-populated, read-only (i.e., not editable), and aligns with the program solicitation selected when initiating the proposal in Research.gov. In the Primary Place of Performance section enter primary host institution information. Complete any other sections as appropriate/applicable.
2. Application Forms: These forms are available in the Research.gov module for this solicitation and collect information on, among other things, the sponsoring scientist, host institution, biology subject classification, etc. Proposals in which the form is incomplete will be returned without review. Write in None or N/A if you have no information to provide for some of the items.
3. Project Summary (limited to one page). The Project Summary must include an overview and separate statements on intellectual merit and broader impacts. The fellowship consists of research, training goals for the Fellow, and career development activities; therefore, all must be presented in the overview. The research plans and goals should be described in the section on **intellectual merit**; training, career development, educational or public outreach and broadening participation plans should be described in the section on **broader impacts**. See Section VI. A. below for guidance from the National Science Board on additional broader impacts which you may wish to include. If the project summary fails to clearly address in separate statements the intellectual merit and broader impacts of the fellowship, the proposal will be returned without review.

4. Project Description (Research and Training Plan) (limited to 6 pages, including all figures, tables, etc.) including a timetable with yearly goals with benchmarks for major anticipated outcomes and a description of future research and career directions. You must identify and present goals for both the research and the training components you will undertake as part of the fellowship. You must also address the broader impacts of the fellowship beyond your own training in a separate section labeled "Broader Impacts" (label on a separate line with no other text); it is not adequate to address broader impacts only in the project summary. This should include a plan for broader impacts with milestones and an approximate timeline. In addition, each proposal is expected to have a description of plans to increase broadening participation in science. Your proposal will be reviewed by an interdisciplinary panel and the research portion should not contain jargon and acronyms that are not understandable to a wide range of scientists. Do not cut and past the project summary into the project description. Space is very limited and repeating text robs you of valuable space to present your ideas and fully develop them. The research and training plan should present the research that you will conduct and the training that you will receive during the fellowship period and describe how these relate to your career goals. Include in the research and training plan: 1) a very **brief** and informative introduction or background section; 2) a statement of research questions with expectations and significance, research approaches, and methods; 3) training objectives and plan for achieving them (these may include scientific as well as other career preparation activities, such as teaching); 4) an explanation of how the fellowship activities will enhance your career development and future research directions as well as describing how this research differs from your dissertation research; 5) a justification of the choice of sponsoring scientist(s) and host institution(s); 6) a timetable with yearly goals with benchmarks for major anticipated outcomes; and 7) as with all NSF proposals, broader impacts must also be addressed in a separate section headed 'Broader Impacts'. The label should be on a separate line with no other text. In Competitive Area 1, these plans must include a focus on how diversity at the **postdoctoral level** will be enhanced. Some proposals may require other documentation before the final decision can be made, *e.g.*, Institutional Animal Care and Use Committees (IACUC) approval, Institutional Review Board (IRB) approval for research involving human subjects, government permits, letters of collaboration, and commitments from private sources. Their existence should be noted in the research and training plan, but they should **not** be included in the proposal. NSF may request them later.
5. Budget: In Research.gov, the budget section includes the prepopulated stipend and fellowship allowance based on the requirements of this solicitation. The budget section does not display on the proposal main page after the proposal has been created but can be viewed by clicking Print Proposal. When the proposal is submitted, the budget will display as read-only and will be accessible from the proposal main page. The budget section is editable during a proposal file update/budget revision; do not edit the budget unless instructed to do so by NSF.
6. PhD Abstract: An abstract of your dissertation research (limited to one page);
7. Reference Letters: Two letters of reference submitted directly in Research.gov by the reference writers. References may, but are not required to, include your thesis advisor. Do **not** use your sponsoring scientist as a reference. The proposer will add each nominated reference letter author in the section labeled "Reference Letter Request(s)" in Research.gov. Each nominated reference letter author will receive a system-generated email with an Invitation Code to access the Reference Letter Submission module in [Research.gov](https://www.research.gov). Reference letters are submitted directly in the Reference Letter Submission module by the authors and are not uploaded in the proposal by the proposer. Nominated reference letter authors without an NSF account can use the "Register" feature at the top of Research.gov to create an NSF account. Reference letter authors can refer to the "[Register for a New NSF Account](#)" video tutorial (3:36 minutes) or "[Register for a NEW NSF Account](#)" job aid for step-by-step registration instructions and associated screenshots. Additional guidance for reference letter authors will be available on the [Research.gov About Proposal Preparation and Submission page](#).
8. Sponsoring Scientist(s) Statement (limited to 3 pages). The sponsoring scientist(s) statement is meant to show how the proposed host(s) and host institution(s) provide a strong environment for the Fellow's proposed research and training plan and form the basis for a future independent research career. Therefore, it should include a specific mentorship plan and a description of how the Fellow's independence will be nurtured, including, as appropriate to the career goals, how the project could continue as an independent research focus for the Fellow in a next position. Regardless of the number of sponsors, one integrated statement must be developed and submitted. If the Fellow plans to teach as part of career development activities, the Fellow is limited to teaching lectures or sub-topics within an existing course taught by the sponsoring scientist(s) or as part of a course directly related to the Fellow's doctoral or fellowship research project; the Fellow is not allowed to be the instructor of record for an entire course unless other mechanism of support are provided and prior NSF approval is obtained. The sponsoring scientist(s) statement must detail the mentoring that the Fellow will receive on teaching if applicable. Sponsors are not expected to provide all the mentoring themselves and may call on all resources available on campus or through other organizations, *e.g.*, professional societies, postdoctoral offices, etc.

Reminder: a complete sponsoring scientist statement consists of two parts - a biographical sketch for each sponsor and a single discussion (no more than 3 pages) of the following items:

1. A brief description of the research projects in the host research group(s), including a statement of current and pending research support, both private and public, for each sponsor. If any sponsor has submitted similar research for funding, the degree of overlap must be addressed.
2. A description of how the research and training plan for the fellow would fit into and complement ongoing research of the sponsor(s) as well as an indication of the personnel with whom the Fellow would work.
3. An explanation of how the sponsor(s) will determine what mentoring the fellow needs in research, teaching, and career development skills and how these would be translated into a specific plan that fosters the development of the fellow's future independent research career.

4. A description of the role the sponsor(s) will play in the proposed research and training and the other resources that will be available to the Fellow to complete their training plan during the fellowship.
5. A description of any limitations that may be placed on the Fellow for continuing the research project in an independent capacity following the fellowship. The sponsoring scientist statement should be uploaded to the "Sponsoring Scientist Statement" section in Research.gov.

The biographical sketch(es) for each sponsoring scientist other than the lead sponsoring scientist should be provided in the format specified in the PAPPG and uploaded into the "Other Supplementary Documents" section in Research.gov.

B. Budgetary Information

Cost Sharing:

Inclusion of voluntary committed cost sharing is prohibited.

Other Budgetary Limitations:

The award amount is set for postdoctoral fellowships at \$240,000 for 36 months. Research.gov generates the budget; proposers do not need to enter any budget information.

A budget justification is not required. Because the budget justification is a required section in an NSF proposal, please upload a document that states "Not Required for PRFB proposals." in the Budget Justification in Research.gov.

C. Due Dates

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

November 29, 2023

November 07, 2024

D. Research.gov Requirements

Proposers are required to prepare and submit all proposals for this program solicitation through use of the NSF Research.gov system.

Before starting proposal preparation, the proposer must be registered as an individual. To register as a new individual in Research.gov, access the [Research.gov New Account Management System](#). To prepare and submit a proposal via Research.gov, see detailed technical instructions available at: https://www.research.gov/research-portal/appmanager/base/desktop?_nfpb=true&_pageLabel=research_node_display&_nodePath=/researchGov/Service/Desktop/ProposalPreparationandSubmission.html. For Research.gov user support, call the Research.gov Help Desk at 1-800-673-6188 or e-mail rgov@nsf.gov. The Research.gov Help Desk answers general technical questions related to the use of the Research.gov 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.

Submitting the Proposal: Fellowship proposals must be submitted by the Fellowship candidate, not by the Fellowship candidate's current or proposed organizational Sponsored Projects Office (SPO). The Fellowship candidate serves as his/her own SPO and Authorized Organizational Representative (AOR) for the purposes of any research administration functions in Research.gov. As such, the Fellowship candidate, serving as the SPO/AOR must electronically sign and submit the proposal using the Sign and Submit button in Research.gov. The Fellowship candidate is signing on his/her own behalf and by signing the proposal NSF is in no way inferring that the proposer has assumed organizational status. Further instructions regarding this process are available on the Research.gov website: <https://www.research.gov/research-web/>

VI. NSF PROPOSAL PROCESSING AND REVIEW PROCEDURES

Proposals received by NSF are assigned to the appropriate NSF program for acknowledgement and, if they meet NSF requirements, for review. 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 either as *ad hoc* reviewers, panelists, or both, who are experts in the particular fields represented by the proposal. These reviewers are selected by Program Officers charged with 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. In addition, Program Officers may obtain comments from site visits before recommending final action on proposals. Senior NSF staff further review recommendations for awards. A flowchart that depicts the entire NSF proposal and award process (and associated timeline) is included in PAPPG Exhibit III-1.

A comprehensive description of the Foundation's merit review process is available on the NSF website at: https://www.nsf.gov/bfa/dias/policy/merit_review/.

Proposers should also be aware of core strategies that are essential to the fulfillment of NSF's mission, as articulated in [Leading the World in Discovery and Innovation, STEM Talent Development and the Delivery of Benefits from Research - NSF Strategic Plan for Fiscal Years \(FY\) 2022 - 2026](#). These strategies are integrated in the program planning and implementation process, of which proposal review is one part. NSF's mission is particularly well-implemented through the integration of research and education and broadening participation in NSF programs, projects, and activities.

One of the strategic objectives in support of NSF's mission is to foster integration of research and education through the programs, projects, and activities it supports at academic and research institutions. These institutions must recruit, train, and prepare a diverse STEM workforce to advance the frontiers of science and participate in the U.S. technology-based economy. NSF's contribution to the national innovation ecosystem is to provide cutting-edge research under the guidance of the Nation's most creative scientists and engineers. NSF also supports development of a strong science, technology, engineering, and mathematics (STEM) workforce by investing in building the knowledge that informs improvements in STEM teaching and learning.

NSF's mission calls for the broadening of opportunities and expanding participation of groups, institutions, and geographic regions that are underrepresented in STEM disciplines, which 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.

A. Merit Review Principles and Criteria

The National Science Foundation strives to invest in a robust and diverse portfolio of projects that creates new knowledge and enables breakthroughs in understanding across all areas of science and engineering research and education. To identify which projects to support, NSF relies on a merit review process that incorporates consideration of both the technical aspects of a proposed project and its potential to contribute more broadly to advancing NSF's mission "to promote the progress of science; to advance the national health, prosperity, and welfare; to secure the national defense; and for other purposes." NSF makes every effort to conduct a fair, competitive, transparent merit review process for the selection of projects.

1. Merit Review Principles

These principles are to be given due diligence by PIs and organizations when preparing proposals and managing projects, by reviewers when reading and evaluating proposals, and by NSF program staff when determining whether or not to recommend proposals for funding and while overseeing awards. Given that NSF is the primary federal agency charged with nurturing and supporting excellence in basic research and education, the following three principles apply:

- All NSF projects should be of the highest quality and have the potential to advance, if not transform, the frontiers of knowledge.
- NSF projects, in the aggregate, should contribute more broadly to achieving societal goals. These "Broader Impacts" may be accomplished through the research itself, through activities that are directly related to specific research projects, or through activities that are supported by, but are complementary to, the project. The project activities may be based on previously established and/or innovative methods and approaches, but in either case must be well justified.
- Meaningful assessment and evaluation of NSF funded projects should be based on appropriate metrics, keeping in mind the likely correlation between the effect of broader impacts and the resources provided to implement projects. If the size of the activity is limited, evaluation of that activity in isolation is not likely to be meaningful. Thus, assessing the effectiveness of these activities may best be done at a higher, more aggregated, level than the individual project.

With respect to the third principle, even if assessment of Broader Impacts outcomes for particular projects is done at an aggregated level, PIs are expected to be accountable for carrying out the activities described in the funded project. Thus, individual projects should include clearly stated goals, specific descriptions of the activities that the PI intends to do, and a plan in place to document the outputs of those activities.

These three merit review principles provide the basis for the merit review criteria, as well as a context within which the users of the criteria can better understand their intent.

2. Merit Review Criteria

All NSF proposals are evaluated through use of the two National Science Board approved merit review criteria. In some instances, however, NSF will employ additional criteria as required to highlight the specific objectives of certain programs and activities.

The two merit review criteria are listed below. **Both** criteria are to be given **full consideration** during the review and decision-making processes; each criterion is necessary but neither, by itself, is sufficient. Therefore, proposers must fully address both criteria. (PAPPG Chapter II.C.2.d(i) contains additional information for use by proposers in development of the Project Description section of the proposal). Reviewers are strongly encouraged to review the criteria, including PAPPG Chapter II.C.2.d(i), prior to the review of a proposal.

When evaluating NSF proposals, reviewers will be asked to consider what the proposers want to do, why they want to do it, how they plan to do it, how they will know if they succeed, and what benefits could accrue if the project is successful. These issues apply both to the technical aspects of the proposal and the way in which the project may make broader contributions. To that end, reviewers will be asked to evaluate all proposals against two criteria:

- **Intellectual Merit:** The Intellectual Merit criterion encompasses the potential to advance knowledge; and
- **Broader Impacts:** The Broader Impacts criterion encompasses the potential to benefit society and contribute to the achievement of specific, desired societal outcomes.

The following elements should be considered in the review for both criteria:

1. What is the potential for the proposed activity to
 - a. Advance knowledge and understanding within its own field or across different fields (Intellectual Merit); and
 - b. Benefit society or advance desired societal outcomes (Broader Impacts)?
2. To what extent do the proposed activities suggest and explore creative, original, or potentially transformative concepts?
3. Is the plan for carrying out the proposed activities well-reasoned, well-organized, and based on a sound rationale? Does the plan incorporate a mechanism to assess success?
4. How well qualified is the individual, team, or organization to conduct the proposed activities?
5. Are there adequate resources available to the PI (either at the home organization or through collaborations) to carry out the proposed activities?

Broader impacts may be accomplished through the research itself, through the activities that are directly related to specific research projects, or through activities that are supported by, but are complementary to, the project. NSF values the advancement of scientific knowledge and activities that contribute to achievement of societally relevant outcomes. Such outcomes include, but are not limited to: full participation of women, persons with disabilities, and other underrepresented groups in science, technology, engineering, and mathematics (STEM); improved STEM education and educator development at any level; increased public scientific literacy and public engagement with science and technology; improved well-being of individuals in society; development of a diverse, globally competitive STEM workforce; increased partnerships between academia, industry, and others; improved national security; increased economic competitiveness of the United States; and enhanced infrastructure for research and education.

Proposers are reminded that reviewers will also be asked to review the Data Management Plan and the Postdoctoral Researcher Mentoring Plan, as appropriate.

Additional Solicitation Specific Review Criteria

Proposers are evaluated on their ability and accomplishments as evidenced by the submitted Biographical Sketch. The research plan is evaluated on scientific merit, feasibility, potential to generate new biological knowledge, and for evidence of the proposer's strong independent scientific thinking and initiative. The training plan is evaluated for how distinct the proposed research is from the dissertation, the impact on the career development of the proposer, and the sponsor's expertise related to the proposed research and in mentoring trainees. Plans to increase diversity and broadening participation in science will also be evaluated by reviewers in all three Competitive Areas. Reviewers in all three competitive areas will also evaluate the quality of the mentorship plan (sponsoring scientist statement) for the research, professional development, and career goals of proposer. Other important evaluative factors are the suitability of the host institution(s), including colleagues and facilities.

Additional evaluation criteria specific for each Competitive Area:

For **Competitive Area 1, Broadening Participation of Groups Underrepresented in Biology**, reviewers will assess the potential impact of the proposal to enhance participation explicitly at the postdoctoral level of members of underrepresented groups.

For **Competitive Area 2, Integrative Research Investigating the Rules of Life Governing Interactions Between Genomes, Environment and Phenotypes**, reviewers will assess the potential for the proposed work to: 1) Lead to new understanding of how higher-order structures and functions of biological systems result from interactions of heterogeneous biological components, as shaped by the environment and evolutionary processes. 2) Produce theories or models with predictive capability of how key properties and mechanisms of living systems emerge from the interactions of genomes, environments, and phenotypes. 3) Combine observational, experimental, theoretical, or computational approaches to elucidate the mechanistic relationships between genomes and phenomes in an environmental context. 4) Span hierarchical levels of analysis and translate observational and experimental data sets into novel models and/or theories to address phenomena across multiple levels of biological organization.

For **Competitive Area 3, Plant Genome Postdoctoral Research Fellowships**, reviewers will consider how the proposed activities address the research goals of the Plant Genome Research Program, focusing on interdisciplinary research in one or more areas related to plant improvement, genomics, physiology, pathology, quantitative genetics, computational or plant synthetic biology that will provide new insights and the potential to advance food and national security and contribute to the bioeconomy.

B. Review and Selection Process

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

Reviewers will be asked to evaluate proposals using two National Science Board approved merit review criteria and, if applicable, additional program specific criteria. A summary rating and accompanying narrative will generally be completed and submitted by each reviewer and/or

panel. 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 strives to be able to tell applicants whether their proposals have been declined or recommended for funding within six months. Large or particularly complex proposals or proposals from new awardees may require additional review and processing time. The time interval begins on the deadline or target date, or receipt date, whichever is later. The interval ends when the Division Director acts upon the Program Officer's recommendation.

After programmatic approval has been obtained, the proposals recommended for funding will be forwarded to the Division of Grants and Agreements or the Division of Acquisition and Cooperative Support for review of business, financial, and policy implications. After an administrative review has occurred, Grants and Agreements Officers perform 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.

Once an award or declination decision has been made, Principal Investigators are provided feedback about their proposals. In all cases, reviews are treated as confidential documents. Verbatim copies of reviews, excluding the names of the reviewers or any reviewer-identifying information, 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.

VII. AWARD ADMINISTRATION INFORMATION

A. Notification of the Award

Notification of the award is made to the *individual* by a Grants Officer in the Division of Grants and Agreements. Individuals 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 individual. (See Section VI.B. for additional information on the review process).

B. Award Conditions

An NSF award consists of: (1) the award notice, which includes any special provisions applicable to the award and any numbered amendments thereto; (2) the budget; (3) the proposal referenced in the award notice; (4) the applicable award conditions, and (5) any announcement or other NSF issuance that may be incorporated by reference in the award notice. NSF awards are electronically signed by an NSF Grants and Agreements Officer and transmitted electronically to the organization via e-mail.

More comprehensive information on NSF Award Conditions and other important information on the administration of NSF awards is contained in the NSF *Proposal & Award Policies & Procedures Guide* (PAPPG) Chapter VII, available electronically on the NSF Website at https://www.nsf.gov/publications/pub_summ.jsp?ods_key=pappg.

Special Award Conditions:

The fellowship award is made to the individual, not the institution, and payments are made directly to the Fellow. Awards cannot be extended without prior NSF approval. Pre-award costs are not permitted. Federal supplements to this award are not permitted except through the EU-funded European Research Council (ERC) grants indicated above.

By accepting a fellowship award made pursuant to this solicitation, the Fellow agrees to abide by the affiliated institution's policies or codes of conduct. The Fellow further agrees to notify NSF's Office of Equity and Civil Rights (OECR) if, pursuant to a complaint made under federal or state law or the institution's policies or codes of conduct relating to sexual harassment, other forms of harassment, or sexual assault, the Fellow is subjected to any "administrative leave/administrative action," (defined below) or is the subject of any "finding/determination" (defined below). Failure to so notify NSF may result in termination of the fellowship.

"Administrative leave/administrative action" is defined as any temporary/interim suspension or permanent removal of the Fellow, or any administrative action imposed on the Fellow by the institution under the institution's policies or codes of conduct, federal or state statutes, regulations, or executive orders, relating to activities, including but not limited to the following: teaching, advising, mentoring, research, management/administrative duties, or presence on campus.

"Finding/determination" is defined as the final disposition of a matter involving sexual harassment or other form of harassment under the institution's policies and processes, to include the exhaustion of permissible appeals exercised by the Fellow, or a conviction of a sexual offense in a criminal court of law.

C. Reporting Requirements

For all multi-year grants (including both standard and continuing grants), the Principal Investigator must submit an annual project report to the cognizant Program Officer no later than 90 days prior to the end of the current budget period. (Some programs or awards require submission of more frequent project reports). No later than 120 days following expiration of a grant, the PI also is required to submit a final project report, and a project outcomes report for the general public.

Failure to provide the required annual or final project reports, or the project outcomes report, will delay NSF review and processing of any future funding increments as well as any pending proposals for all identified PIs and co-PIs on a given award. 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 Research.gov, for preparation and submission of annual and final project reports. Such reports provide information on accomplishments, project participants (individual and organizational), publications, and other specific products and impacts of the project. Submission of the report via Research.gov constitutes certification by the PI that the contents of the report are accurate and complete. The project outcomes report also must be prepared and submitted using Research.gov. This report serves as a brief summary, prepared specifically for the public, of the nature and outcomes of the project. This report will be posted on the NSF website exactly as it is submitted by the PI.

More comprehensive information on NSF Reporting Requirements and other important information on the administration of NSF awards is contained in the *NSF Proposal & Award Policies & Procedures Guide* (PAPPG) Chapter VII, available electronically on the NSF Website at https://www.nsf.gov/publications/pub_summ.jsp?ods_key=pappg.

Additional Reporting Requirements:

Fellows must file starting certificates in addition to annual and final technical reports.

VIII. AGENCY CONTACTS

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

General inquiries regarding this program should be made to:

- Daniel R. Marena (Areas 1 & 2), telephone: (703) 292-2157, email: bio-dbi-prfb@nsf.gov
- Amanda A. Simcox (Areas 1 & 2), telephone: (703) 292-8165, email: bio-dbi-prfb@nsf.gov
- Deana Erdner (Areas 1 & 2), telephone: (703) 292-2053, email: bio-dbi-prfb@nsf.gov
- Andrea Holgado (Areas 1 & 2), telephone: (703) 292-7076, email: bio-dbi-prfb@nsf.gov
- Joel K. Abraham (Areas 1 & 2), telephone: (703) 292-4694, email: bio-dbi-prfb@nsf.gov
- Diane Jofuku Okamuro (Area 3), telephone: (703) 292-8420, email: dbipgr@nsf.gov

For questions related to the use of NSF systems contact:

- NSF Help Desk: 1-800-381-1532
- Research.gov Help Desk e-mail: rgov@nsf.gov

IX. OTHER INFORMATION

The NSF website provides the most comprehensive source of information on NSF Directorates (including contact information), programs and funding opportunities. Use of this website by potential proposers is strongly encouraged. In addition, "NSF Update" 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 [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. "NSF Update" also is available on [NSF's website](#).

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

ABOUT THE NATIONAL SCIENCE FOUNDATION

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

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

NSF receives approximately 55,000 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 Arctic 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 (FASED) provide funding for special assistance or equipment to enable persons with disabilities to work on NSF-supported projects. See the *NSF Proposal & Award Policies & Procedures Guide* Chapter II.F.7 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 <https://www.nsf.gov>

- **Location:** 2415 Eisenhower Avenue, Alexandria, VA 22314
- **For General Information** (703) 292-5111
(NSF Information Center):
- **TDD (for the hearing-impaired):** (703) 292-5090
- **To Order Publications or Forms:**
Send an e-mail to: nsfpubs@nsf.gov
or telephone: (703) 292-8134
- **To Locate NSF Employees:** (703) 292-5111

PRIVACY ACT AND PUBLIC BURDEN STATEMENTS

The information requested on proposal forms and project reports is solicited under the authority of the National Science Foundation Act of 1950, as amended. The information on proposal forms will be used in connection with the selection of qualified proposals; and project reports submitted by awardees will be used for program evaluation and reporting within the Executive Branch and to Congress. The information requested may be disclosed to qualified reviewers and staff assistants as part of the proposal review process; to proposer institutions/grantees to provide or obtain data regarding the proposal review process, award decisions, or the administration of awards; to government contractors, experts, volunteers and researchers and educators as necessary to complete assigned work; to other government agencies or other entities needing information regarding applicants or nominees as part of a joint application review process, or in order to coordinate programs or policy; and to another Federal agency, court, or party in a court or Federal administrative proceeding if the government is a party. Information about Principal Investigators may be added to the Reviewer file and used to select potential candidates to serve as peer reviewers or advisory committee members. See [System of Record Notices](#), NSF-50, "Principal Investigator/Proposal File and Associated Records," and NSF-51, "Reviewer/Proposal File and Associated Records." 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 3145-0023. Public reporting burden for this collection of information is estimated to average 12 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
Policy Office, Division of Institution and Award Support
Office of Budget, Finance, and Award Management
National Science Foundation
Alexandria, VA 22314

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