

# NSF 24-544: Developmental Sciences

## Program Solicitation

### Document Information

#### Document History

- **Posted:** February 14, 2024

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#### National Science Foundation

Directorate for Social, Behavioral and Economic Sciences

Division of Behavioral and Cognitive Sciences

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

July 30, 2024

January 30, 2025

January 30, Annually Thereafter

July 30, 2025

July 30, Annually Thereafter



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## **Important Information And Revision Notes**

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:**

Developmental Sciences (DS)

#### **Synopsis of Program:**

Developmental Sciences supports basic research that increases our understanding of perceptual, cognitive, linguistic, social, cultural, and biological processes related to human development across the lifespan. Research supported by this program will add to our knowledge of the underlying developmental processes that support social, cognitive, and behavioral functioning, thereby illuminating ways for individuals to live productive lives as members of society.


The Developmental Sciences program supports research that addresses developmental processes within the domains of perceptual, cognitive, social, emotional, language, and motor development across the lifespan by working with any appropriate populations for the topics of interest including infants, children, adolescents, adults (including aging populations), and non-human animals. The program also supports research investigating factors that affect developmental change, including family, peers, school, community, culture, media, physical, genetic, and epigenetic influences. The program funds research that incorporates multidisciplinary, multi-method, and/or longitudinal approaches; develops new methods, models, and theories for studying development; and integrates different processes (e.g., memory, emotion, perception, cognition), levels of analysis (e.g., behavioral, social, neural) and time scales. The program funds basic research that advances our understanding of developmental processes and mechanisms; the program does not fund clinical trials and research focused primarily on health outcomes.

The budgets and durations of supported projects vary widely and are greatly influenced by the nature of the project. Investigators should focus on innovative, potentially transformative research plans and then develop a budget to support those activities, rather than starting with a budget number and working up to that value.

While there are no specific rules about budget limitations, a typical project funded through the Developmental Sciences program is approximately three years in duration with a total cost budget, including both direct and indirect costs, between \$100,000 and \$200,000 per year. Interested proposers are urged to explore the NSF awards database for the Developmental Sciences program to review examples of awards that have been made. Proposals that contain budgets significantly beyond this range may be returned without review.

The Developmental Sciences program also considers proposals for workshops and small conferences on a case-by-case basis. These typically have total cost budgets, including direct and indirect costs, of approximately \$35,000. Conference proposals may only be submitted following an invitation from the Program Directors.

In addition to consulting the NSF awards database, it is often useful for interested proposers to submit (via email) a summary of no more than one page so that a program director can advise the investigator on the fit of the project for DS before the preparation of a full proposal. New investigators are encouraged to solicit assistance in the preparation of their project proposals via consultation with senior researchers in their area, pre-submission review by colleagues, and attendance at symposia and events at professional conferences geared towards educating investigators seeking federal funding.

The Developmental Sciences Program is always interested in identifying new reviewers. Potential reviewers should have a Ph.D. in psychology or a related field and have a demonstrated area of expertise relevant to developmental science. Individuals interested in reviewing for the program should complete an [expression of interest form](#) .

SBE/BCS welcomes the submission of proposals to this funding opportunity that include the participation of the full spectrum of diverse talent in STEM, e.g., as PI, co-PI, senior/key personnel, postdoctoral scholars, graduate or undergraduate students, or trainees. This includes historically under-represented or under-served populations, diverse institutions including Minority Serving Institutions (MSIs), Primarily Undergraduate Institutions (PUIs), and two-year colleges, as well as major research institutions. Proposals from EPSCoR jurisdictions are especially encouraged.

### **Broadening Participation in STEM:**

NSF recognizes the unique lived experiences of individuals from communities that are underrepresented and/or underserved in science, technology, engineering, and mathematics (STEM) and the barriers to inclusion and access to STEM education and careers. NSF highly encourages the leadership, partnership, and contributions in all NSF opportunities of individuals who are members of such communities supported by NSF. This includes leading and designing STEM research and education proposals for funding; serving as peer reviewers, advisory committee members, and/or committee of visitor members; and serving as NSF leadership, program, and/or administrative staff. NSF also highly encourages demographically diverse institutions of higher education (IHEs) to lead, partner, and contribute to NSF opportunities on behalf of their research and education communities. NSF expects that all individuals, including those who are members of groups that are underrepresented and/or underserved in STEM, are treated equitably and inclusively in the Foundation's proposal and award process.

NSF encourages IHEs that enroll, educate, graduate, and employ individuals who are members of groups underrepresented and/or underserved in STEM education programs and careers to lead, partner, and contribute to NSF opportunities, including leading and designing STEM research and education proposals for funding. Such IHEs include, but may not be limited to, community colleges and two-year institutions, mission-based institutions such as Historically Black Colleges and Universities (HBCUs), Tribal Colleges and Universities (TCUs), women's colleges, and institutions that

primarily serve persons with disabilities, as well as institutions defined by enrollment such as Predominantly Undergraduate Institutions (PUIs), Minority-Serving Institutions (MSIs), and Hispanic Serving Institutions (HSIs).

"Broadening participation in STEM" is the comprehensive phrase used by NSF to refer to the Foundation's goal of increasing the representation and diversity of individuals, organizations, and geographic regions that contribute to STEM teaching, research, and innovation. To broaden participation in STEM, it is necessary to address issues of equity, inclusion, and access in STEM education, training, and careers. Whereas all NSF programs might support broadening participation components, some programs primarily focus on supporting broadening participation research and projects. Examples can be found on the NSF [Broadening Participation in STEM](#) website.

**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.*

- Anna V. Fisher, Program Director, SBE/BCS, telephone: (703) 292-8451, email: [avfisher@nsf.gov](mailto:avfisher@nsf.gov)
- Joseph C. Toscano, Program Director, SBE/BCS, W13154, telephone: (703) 292-7220, email: [jctoscan@nsf.gov](mailto:jctoscan@nsf.gov)
- Tanika M. Malloy, Business Operations Specialist, SBE/BCS, telephone: (703) 292-2484, email: [tmalloy@nsf.gov](mailto:tmalloy@nsf.gov)

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

- 47.075 --- Social Behavioral and Economic Sciences

**Award Information**

**Anticipated Type of Award:** Standard Grant or Continuing Grant

**Estimated Number of Awards:** 12

**Anticipated Funding Amount:** \$6,500,000

Estimated program budget, number of awards and average award size/duration are subject to the availability of funds.

**Eligibility Information**

**Who May Submit Proposals:**

Proposals may only be submitted by the following:

- Institutions of Higher Education (IHEs) - Two- and four-year IHEs (including community colleges) accredited in, and having a campus located in the US, acting on behalf of their faculty members. Special Instructions for International Branch Campuses of US IHEs: If the proposal includes funding to be provided to an international branch campus of a US institution of higher education (including through use of subawards and consultant arrangements), the proposer must explain the benefit(s) to the project of performance at the international branch campus, and justify why the project activities cannot be performed at the US campus.
- Non-profit, non-academic organizations: Independent museums, observatories, research laboratories, professional societies and similar organizations located in the U.S. that are directly associated with educational or research activities.
- For-profit organizations: U.S.-based commercial organizations, including small businesses, with strong capabilities in scientific or engineering research or education and a passion for innovation.
- State and Local Governments: State educational offices or organizations and local school districts.
- Tribal Nations: An American Indian or Alaska Native tribe, band, nation, pueblo, village, or community that the Secretary of the Interior acknowledges as a federally recognized tribe

pursuant to the Federally Recognized Indian Tribe List Act of 1994, 25 U.S.C. §§ 5130-5131.

- Foreign organizations: For cooperative projects involving U.S. and foreign organizations, support will only be provided for the U.S. portion.
- Other Federal Agencies and Federally Funded Research and Development Centers (FFRDCs): Contact the appropriate program before preparing a proposal for submission.

#### **Who May Serve as PI:**

PIs and co-PIs must be researchers who have a Ph.D. or equivalent education and experience, sufficient to allow them to carry out independent basic research. PIs are encouraged to include undergraduate and graduate students in their research projects, but not as PI/co-PI or senior/key personnel.

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

There are no restrictions or limits.

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

For a given Developmental Sciences proposal submission deadline, an individual may only be listed as a PI, co-PI, faculty associate or subaward lead on one proposal. Researchers may be listed in other capacities (e.g., collaborator, consultant) on one additional proposal. Exceeding the limit of submissions per PI will result in a proposal returned without review in the reverse order received. Based on a need for portfolio diversity, we encourage recent recipients to explore alternative funding opportunities rather than seek additional funding from Developmental Sciences.

Given the timeline of the submission and review process for each review cycle, proposals that have been declined must be substantially revised to be considered. Exceptions to this policy require prior approval by a cognizant program officer. A proposal that has not been substantially revised will be returned without review as per the PAPPG.

### **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](https://www.nsf.gov/publications/pub_summ.jsp?ods_key=pappg).
  - Full Proposals submitted via Grants.gov: *NSF Grants.gov Application Guide: A Guide for the Preparation and Submission of NSF Applications via Grants.gov* guidelines apply (Note: The *NSF Grants.gov Application Guide* is available on the Grants.gov website and on the NSF website at: [https://www.nsf.gov/publications/pub\\_summ.jsp?ods\\_key=grantsgovguide](https://www.nsf.gov/publications/pub_summ.jsp?ods_key=grantsgovguide)).

#### **B. Budgetary Information**

- **Cost Sharing Requirements:**

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

Not Applicable

- **Other Budgetary Limitations:**

Not Applicable

**C. Due Dates**

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

July 30, 2024

January 30, 2025

January 30, Annually Thereafter

July 30, 2025

July 30, Annually Thereafter

**Proposal Review Information Criteria**

**Merit Review Criteria:**

National Science Board approved criteria apply.

**Award Administration Information**

**Award Conditions:**

Standard NSF award conditions apply.

**Reporting Requirements:**

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

**I. Introduction**

The Developmental Sciences program is housed in the Division of Behavioral and Cognitive Sciences, part of NSF's Social, Behavioral, and Economic Sciences Directorate. This program supports basic research that advances our understanding of perceptual, cognitive, linguistic, social, cultural, and biological processes related to human development across the lifespan. This solicitation provides instructions and details (supplementary to the PAPPG) for the preparation of proposals submitted to the Developmental Sciences Program.

**II. Program Description**

The Developmental Sciences program supports basic research that advances our understanding of perceptual, cognitive, linguistic, social, cultural, and biological processes related to human development across the lifespan. Research supported by this program will expand our knowledge of the underlying developmental processes that support social, cognitive, and behavioral functioning, thereby illuminating ways for individuals to live productive lives as members of society.

The Developmental Sciences program supports research that addresses developmental processes within the domains of perceptual, cognitive, social, emotional, language, and motor development across the lifespan by working with any appropriate populations for the topics of interest including infants, children, adolescents, adults (including aging populations), and non-human animals. The program also supports research investigating factors that affect developmental change, including family, peers, school, community, culture, media, physical, genetic, and epigenetic influences. The program funds research that incorporates multidisciplinary, multi-method, and/or longitudinal approaches; develops new methods, models, and theories for studying development; and integrates different processes (e.g., memory, emotion, perception, cognition), levels of analysis (e.g., behavioral, social, neural) and time scales. The

program funds basic research that advances our understanding of developmental processes and mechanisms; the program does not fund clinical trials and/or research focused primarily on health outcomes.

The program seeks to support research that (1) involves diverse methodologies and theoretical perspectives; (2) includes participants from a range of communities, ethnicities, socioeconomic backgrounds, and cultures; and (3) helps diversify research project leadership (PIs and co-PIs), ideas, and approaches via equity-centered collaborative models. Proposals that include participants from historically marginalized groups and/or groups underrepresented in developmental science research should demonstrate cultural competence within the research team to conduct research with these communities. PIs should provide clear evidence of equity-centered collaborative practices with community members.

Multidisciplinary and/or multi-method projects often call for the expertise of multiple team members. Proposals submitted to the Developmental Sciences program are encouraged to describe how the research team structure will ensure equitable participation and engagement within research teams with respect to the conceptualization of research, decision-making processes, and interpretation of research results.

PIs should explicitly describe and motivate sampling choices. This includes sample size and sample composition. Sample size justification should be provided in the context of a range of independent and interacting factors that drive sample size estimates. The sample composition should also be explicitly motivated. This includes demographic descriptions of participants using identity markers that are relevant in context. PIs are encouraged to consider demographic markers, as appropriate, in their analytic plan. Representativeness of samples relative to the underlying population to which findings are expected to generalize should be explicitly addressed.

We also encourage PIs to address the boundary conditions of expected effects. As such, PIs are required to clearly and explicitly address anticipated constraints on the generalizability of the proposed studies. In doing so, PIs should align sampling, methodological, and analytic decisions with the anticipated scale of inference (i.e., generalizability) of empirical findings. For guidance on writing constraints on generalizability statements, PIs should consult relevant resources available to psychological researchers.

A list of [recent awards made by the program](#) demonstrates the range of sub-fields, methods, and topics typically supported by the program. If a researcher is unsure whether the Developmental Sciences Program and NSF more broadly are appropriate for a proposal topic, they are encouraged to email a one-page summary of their project to the program officer(s) before a proposal submission.

### **Additional Relevant Funding Opportunities**

The NSF Developmental Sciences Program supports multiple types of proposals:

- Standard Research Proposals
- Conference/Workshop Proposals
- Research Experiences for Undergraduates (REU) Supplemental Funding Requests
- Non-Academic Research Internships for Graduate Students (INTERN) Supplemental Funding Requests
- Faculty Early Career Development (CAREER) Program Proposals
- Mid-career Advancement (MCA) program supplemental funding
- Career-life balance supplemental funding
- Facilitating Research at Primarily Undergraduate Institutions: Research in Undergraduate Institutions (RUI) and Research Opportunity Awards (ROA) Proposals and Supplemental Funding Requests
- Research Coordination Network (RCN) Proposals
- Rapid Response Research (RAPID) Proposals
- Early-concept Grants for Exploratory Research (EAGER) Proposals
- Research Advanced by Interdisciplinary Science & Engineering (RAISE) Proposals.

This list does not exhaust the full range of types of proposals described in Chapter II of the [PAPPG](#). Rather, these are the types that may be most relevant for proposals submitted to the Developmental Sciences Program. Researchers are always welcome to consult with program officers about which NSF mechanisms and programs might best serve their research needs. Any requests for supplemental funding should be discussed with Program Officers before submission.

### **Research Proposals**

Most faculty-level proposals submitted to the Developmental Sciences Program are "standard" research proposals. A project can be proposed to be carried out by a single researcher or a research team comprising a principal investigator along with co-principal investigators, other senior/key personnel, postdoctoral researchers, or other personnel (including specialists from other disciplines and other countries) as needed for the conduct of the research.

Specific guidelines on proposal preparation are described in the PAPPG. Note that for collaborative projects across institutions, the Developmental Sciences program allows researchers to submit a single proposal with subawards or a collaborative proposal submitted as separate submissions from multiple organizations.

Typical award sizes for the program are included in [descriptions of recent awards](#). There is no award ceiling, but please be advised that a typical research award in the Developmental Science Program is in the range of \$200,000-\$600,000 total budget, inclusive of indirect costs. Most projects are scoped to a three-year duration and related expenses. Requested costs must relate directly to the aims of the research; the PAPPG describes allowable and unallowable costs. Proposals that contain budgets significantly beyond this range may be returned without review.

### **Conference Proposals**

The Developmental Sciences Program supports thematic conferences or workshops designed to highlight broadly relevant disciplinary or interdisciplinary research gaps and needs, future research priorities, innovations, and grand challenges. The program does not support standing conferences hosted by professional societies. The program does not support gatherings whose purpose is primarily to convey the results of completed research. The program encourages hybrid or virtual conferences when appropriate, as well as the inclusion of postdoctoral researchers, graduate students, and members of groups underrepresented in developmental science and STEM as active conference participants. These typically have total cost budgets, including direct and indirect costs, of approximately \$35,000. Conference proposals may only be submitted following an invitation from the Program Directors.

Conference proposals should generally be submitted at least 1 year in advance of the proposed event. While conference proposals may be submitted at any time, the program may elect to have them reviewed by review panels along with research proposals submitted to the regular proposal deadline. Please consult Chapter II.F of the PAPPG for information about preparing and submitting conference proposals, including a list of required elements and budget exclusions, while keeping in mind the Developmental Science Program's specific interests and limitations.

### **Research Experiences for Undergraduates (REU) Supplemental Funding Requests**

An [REU supplement](#) usually provides support for one or two undergraduate students to participate in research as a part of a new or ongoing NSF-funded research project. For REU requests submitted to the Developmental Sciences Program, proposers are advised that the PI should be a post-PhD developmental scientist who holds existing NSF award(s).

REU requests generally should be submitted as part of a standard research proposal; post-award supplemental funding is intended only for unanticipated opportunities that arise during the course of the project. Researchers must contact the Developmental Sciences program officers prior to submitting a supplemental funding request. See the [REU Sites and Supplements guidelines](#) for additional details. Supplemental funding requests can be submitted at any time.

The Developmental Sciences Program will consider REU funding requests for up to \$6000 per student and no more than two students per year, to support the cost of the student's research training.

### **Faculty Early Career Development (CAREER) Program Proposals**



The NSF Developmental Sciences Program participates in the NSF-wide [CAREER Program](#) for junior faculty (untenured but tenure-track or equivalent). CAREER proposals have a maximum duration of five years. In addition to research costs, proposers may include expenses for specialized training to enhance the research and their future professional trajectory. CAREER proposals also must have an educational component.

Researchers who want to submit CAREER proposals should consult the [CAREER-specific guidelines](#) for eligibility information, allowable costs, submission deadlines (which are different than Developmental Sciences proposals), and other CAREER Program requirements. CAREER proposals that are submitted to the Developmental Sciences Program will be reviewed during the fall review cycle; a PI may not submit both a CAREER and a standard research proposal in the same cycle.

Unlike standard research proposals, the minimum CAREER award is \$400,000. CAREER award sizes in Developmental Sciences typically range from \$400,000-\$600,000.

### **Facilitating Research at Primarily Undergraduate Institutions: Research in Undergraduate Institutions (RUI) and Research Opportunity Awards (ROA)**

The [Research in Undergraduate Institutions \(RUI\) and Research Opportunity Awards \(ROA\)](#) funding opportunities support research by faculty members at predominantly undergraduate institutions (PUIs). RUI proposals support PUI faculty in research that engages them in their professional field(s), builds capacity for research at their home institution, and supports the integration of research and undergraduate education. ROAs similarly support PUI faculty research, but these awards typically allow faculty to work as visiting scientists at research-intensive organizations where they collaborate with other NSF-supported investigators. RUI proposals are reviewed alongside other standard proposals in the Developmental Sciences program and must be submitted by the deadline specified in this solicitation.

### **Rapid Response Research (RAPID) Proposals**

RAPID awards are to support urgent research. The urgency is that unanticipated research data would be lost if the researchers had to wait for the completion of a normal review cycle. This might be because of the unanticipated availability of access to rarely available phenomena, specialized equipment, research sites, or specialized informants. RAPID support is often requested for quick-response research on natural or anthropogenic disasters and other unanticipated events. To be successful in obtaining RAPID support, investigators must convincingly argue that the particular situation to be investigated will produce data that are unlikely to be found in any other situation and that are essential for identified and important research questions. If the research is routine, failure to plan ahead is not a sufficient rationale for RAPID support.

Proposals are accepted anytime however, researchers must have prior approval from a Developmental Sciences program officer to submit a RAPID proposal to the program. In this initial email, proposers should briefly explain the data to be collected, why these data are scientifically important, an estimate of the needed budget, and a timeline for the research. The Project Description for RAPID proposals are limited to 5 pages and only internal NSF review is required so funding can be made available relatively quickly. Please consult Chapter II.F of the PAPPG for further instructions on the preparation and submission of RAPID proposals.

### **Early-Concept Grants for Exploratory Research (EAGER) Proposals**

The Developmental Sciences Program supports EAGER proposals for funding research on untested but potentially transformative research ideas and approaches.

Proposals are accepted at anytime, however researchers must have prior approval from a Developmental Sciences program officer to submit an EAGER proposal. The EAGER proposal type should not be used for proposals that could be submitted to a regular competition, so the initial inquiry should explain carefully why the anticipated project fits the EAGER criteria. The Project Description is limited to no more than 8 pages, and only an internal NSF review is required. Please consult Chapter II.F of the PAPPG for further instructions on the preparation and submission of EAGER proposals.

The Developmental Sciences Program rarely supports EAGER budgets over \$200,000, which is less than the maximum allowed by the PAPPG. The maximum duration is 24 months.

## **Additional Program Considerations**

### **Broader Impact Activities**

The program supports a wide range of broader impact activities, and successful projects will include creative, well-integrated, effective, evidence-based broader impact activities developed within the context of the mission, goals, and resources of the organizations and people involved. The expertise of collaborators, the proposal budget, and the budget justification should reflect this integration. Example activities include but are not limited to those that create effective methods of science outreach and engagement with local communities or the public at large; translate research to benefit broader societal needs; involve early career researchers and students who are veterans, persons with disabilities, or from other groups that are underrepresented in science, technology, engineering and mathematics (STEM); or foster new partnerships, including if focused on capacity building (e.g., with Minority Serving Institutions, two-year colleges or internationally). Additional guidance for broader impacts may be found in the PAPPG and the [Dear Colleague Letter: A Broader Impacts Framework for Proposals Submitted to NSF's Social, Behavioral, and Economic Sciences Directorate](#).

### **Community Engagement in Research**

Community engagement refers to substantive interaction with community partner organizations and anchor institutions such as governments; federal, state, and local agencies; schools, libraries, health, and social service providers; tribes and Indigenous-serving organizations; nonprofits; cultural organizations; and businesses. Co-production of knowledge includes the integration of different knowledge systems and methodologies to systematically understand the phenomena, systems, and processes being studied in a research project. A co-produced approach includes research in which local partners and organizations fully engage in the complete research process cycle from the development of research questions to the collection, use, and stewardship of data and the interpretation, application, and dissemination of results.

Proposals that include community engagement, partnerships with communities and international collaboration should either (1) have already established agreed-upon partnerships, documented with the appropriate letters of collaboration and budget allocations, or (2) provide a clear plan for community engagement and partnership-building as part of the first year of the grant. Both options must follow best practices in community partnerships, especially if partnerships are to be established with underrepresented communities. Successful proposals will have the appropriate expertise on the PI's team to conduct community-based research, participatory research, or place-based research. Sufficient funding should be allocated in the budget to support mutually beneficial and respectful interactions that not only produce meaningful research and education or outreach outcomes but also focus on the concerns of partnering communities, including questions of data sovereignty, co-authorship, or co-review of project outcomes.

### **Projects Involving Collaboration with Foreign Organizations or Work in Foreign Countries**

As stated in the PAPPG, NSF rarely provides direct funding to support foreign organizations and only provides support for the U.S. portion of collaborative projects. If foreign organization involvement is essential to the project, subawards or consultant arrangements may be considered if the foreign organization contributes unique resources not otherwise available, or significant education, training, and/or research opportunities to the U.S. Such information must be provided in the project description section of the proposal. For studies in countries other than the United States, the project description should discuss, where appropriate, collaborations with scientists and students from the host country, and how these individuals will be involved in the project.

Collaborations should be well justified, in that they represent true intellectual collaboration and use the expertise and specialized skills, facilities, and resources of the foreign collaborator. The structure of the collaboration should be fair and equitable with evidence of local participation and co-leadership across testing sites. Letters of collaboration must be included in the other supplementary documents section of the proposal. Where relevant, arrangements to allocate samples and data between host country organizations or institutions and U.S. organizations or institutions should be discussed in the proposal. Investigators are encouraged to include any such permits (including legally required collecting, import, and export permits for samples, instrumentation, and data), authorizations, and agreements, in the other supplementary documents section of the proposal.

## Data Management

As stated in the [PAPPG](#), principal investigators (PIs) are expected to share with other researchers, at no more than incremental cost and within a reasonable time, the data, samples, physical collections, and other supporting materials created or gathered in the course of work under NSF grants. The Developmental Sciences Program is committed to the establishment, maintenance, validation, description, and distribution of high-quality data sets generated by program-funded projects. Proposals should generate data products that are findable, accessible, interoperable, and reusable (FAIR). The Developmental Sciences data should be shared (barring ethical limitations on sharing) upon publication according to requirements stated in the PAPPG.

Plans for the dissemination and sharing of research results should be traceable from the beginning to the end of a project (proposal, review, and annual/final report). PIs are required to provide updates on the status of metadata and data archiving in annual and final annual project reports.

## Permits, Permissions, and Collaborations

PIs are responsible for obtaining the required authorizations from federal, state, or local authorities for any collecting or other activities and for advising NSF that they have been obtained or requested. The proposal should briefly list the permits that are required and the timeline for approvals in the supplementary figures and tables document. For proposals that require support from centrally supported facilities, investigators must obtain letters of collaboration from the managing organization that follow the standard text recommended in Chapter II.D.2 of the PAPPG, and those letters should be included as a supplementary document.

## Human Subjects Research

Projects involving human subjects must indicate this on the cover sheet, including the status of IRB approval and federal-wide assurance, and will need to provide Institutional Review Board approval before any award is processed (see Chapter II.E.5. of the PAPPG). Though IRB approval is not required at the time of proposal submission, the program encourages PIs to briefly address the status of approval or the plan for IRB approval in the project description and provide any additional ethical considerations related to human subjects research in the ethics statement supplementary document.

## Vertebrate Animal Research

Projects involving vertebrate animals must indicate this on the cover sheet, including the status of IACUC approval and PHS Assurance, and must provide IACUC approval and current PHS Assurance information before any award is processed (see Chapter II.E.4 of the PAPPG). Though IACUC approval and PHS Assurance are not required at the time of proposal submission, the program encourages PIs to briefly address the status of approval or plan for vertebrate animals approvals in the project description and discuss any additional ethical considerations related to vertebrate animal research in the ethics statement supplementary document. For proposals with plans for primary data analysis in captive or laboratory animals, PIs are encouraged to discuss in the project description or ethics statement: 1) the Essential 10 items in the [ARRIVE Guidelines 2.0](#) [🔗](#) (Animal Research: Reporting of In Vivo Experiments) and 2) the 3R principles of Replacement, Reduction and Refinement and how the proposed study can accelerate progress toward meeting these goals.

## III. Award Information

**Anticipated Type of Award:** Standard Grant or Continuing Grant

**Estimated Number of Awards:** 12

**Anticipated Funding Amount:** \$6,500,000

Estimated program budget, number of awards and average award size/duration are subject to the availability of funds.

## IV. Eligibility Information

## **Who May Submit Proposals:**

Proposals may only be submitted by the following:

- Institutions of Higher Education (IHEs) - Two- and four-year IHEs (including community colleges) accredited in, and having a campus located in the US, acting on behalf of their faculty members. Special Instructions for International Branch Campuses of US IHEs: If the proposal includes funding to be provided to an international branch campus of a US institution of higher education (including through use of subawards and consultant arrangements), the proposer must explain the benefit(s) to the project of performance at the international branch campus, and justify why the project activities cannot be performed at the US campus.
- Non-profit, non-academic organizations: Independent museums, observatories, research laboratories, professional societies and similar organizations located in the U.S. that are directly associated with educational or research activities.
- For-profit organizations: U.S.-based commercial organizations, including small businesses, with strong capabilities in scientific or engineering research or education and a passion for innovation.
- State and Local Governments: State educational offices or organizations and local school districts.
- Tribal Nations: An American Indian or Alaska Native tribe, band, nation, pueblo, village, or community that the Secretary of the Interior acknowledges as a federally recognized tribe pursuant to the Federally Recognized Indian Tribe List Act of 1994, 25 U.S.C. §§ 5130-5131.
- Foreign organizations: For cooperative projects involving U.S. and foreign organizations, support will only be provided for the U.S. portion.
- Other Federal Agencies and Federally Funded Research and Development Centers (FFRDCs): Contact the appropriate program before preparing a proposal for submission.

## **Who May Serve as PI:**

PIs and co-PIs must be researchers who have a Ph.D. or equivalent education and experience, sufficient to allow them to carry out independent basic research. PIs are encouraged to include undergraduate and graduate students in their research projects, but not as PI/co-PI or senior/key personnel.

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

There are no restrictions or limits.

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

For a given Developmental Sciences proposal submission deadline, an individual may only be listed as a PI, co-PI, faculty associate or subaward lead on one proposal. Researchers may be listed in other capacities (e.g., collaborator, consultant) on one additional proposal. Exceeding the limit of submissions per PI will result in a proposal returned without review in the reverse order received. Based on a need for portfolio diversity, we encourage recent recipients to explore alternative funding opportunities rather than seek additional funding from Developmental Sciences.

Given the timeline of the submission and review process for each review cycle, proposals that have been declined must be substantially revised to be considered. Exceptions to this policy require prior approval by a cognizant program officer. A proposal that has not been substantially revised will be returned without review as per the PAPPG.

## **V. Proposal Preparation And Submission Instructions**

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

**Full Proposal Preparation Instructions:** Proposers may opt to submit proposals in response to this Program Solicitation via Research.gov or Grants.gov.

- Full Proposals submitted 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 and Award Policies and 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](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](mailto:nsfpubs@nsf.gov). The Prepare New Proposal setup will prompt you for the program solicitation number.
- Full proposals submitted via Grants.gov: Proposals submitted in response to this program solicitation via Grants.gov should be prepared and submitted in accordance with the *NSF Grants.gov Application Guide: A Guide for the Preparation and Submission of NSF Applications via Grants.gov*. The complete text of the *NSF Grants.gov Application Guide* is available on the Grants.gov website and on the NSF website at: [https://www.nsf.gov/publications/pub\\_summ.jsp?ods\\_key=grantsgovguide](https://www.nsf.gov/publications/pub_summ.jsp?ods_key=grantsgovguide)). To obtain copies of the Application Guide and Application Forms Package, click on the Apply tab on the Grants.gov site, then click on the Apply Step 1: Download a Grant Application Package and Application Instructions link and enter the funding opportunity number, (the program solicitation number without the NSF prefix) and press the Download Package button. Paper copies of the Grants.gov Application Guide also may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-8134 or by e-mail from [nsfpubs@nsf.gov](mailto:nsfpubs@nsf.gov).

In determining which method to utilize in the electronic preparation and submission of the proposal, please note the following:

Collaborative Proposals. All collaborative proposals submitted as separate submissions from multiple organizations must be submitted via Research.gov. PAPPG Chapter II.E.3 provides additional information on collaborative proposals.

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.

## **B. Budgetary Information**

### **Cost Sharing:**

Inclusion of voluntary committed cost sharing is prohibited.

### **C. Due Dates**

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

July 30, 2024

January 30, 2025

January 30, Annually Thereafter

July 30, 2025

July 30, Annually Thereafter

## **D. Research.gov/Grants.gov Requirements**

### **For Proposals Submitted Via Research.gov:**

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/ProposalPreparation](https://www.research.gov/research-portal/appmanager/base/desktop?_nfpb=true&_pageLabel=research_node_display&_nodePath=/researchGov/Service/Desktop/ProposalPreparation)

For Research.gov user support, call the Research.gov Help Desk at 1-800-381-1532 or e-mail [rgov@nsf.gov](mailto: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.

#### **For Proposals Submitted Via Grants.gov:**

Before using Grants.gov for the first time, each organization must register to create an institutional profile. Once registered, the applicant's organization can then apply for any federal grant on the Grants.gov website. Comprehensive information about using Grants.gov is available on the Grants.gov Applicant Resources webpage: <https://www.grants.gov/web/grants/applicants.html>. In addition, the NSF Grants.gov Application Guide (see link in Section V.A) provides instructions regarding the technical preparation of proposals via Grants.gov. For Grants.gov user support, contact the Grants.gov Contact Center at 1-800-518-4726 or by email: [support@grants.gov](mailto:support@grants.gov). The Grants.gov Contact Center answers general technical questions related to the use of Grants.gov. Specific questions related to this program solicitation should be referred to the NSF program staff contact(s) listed in Section VIII of this solicitation.

**Submitting the Proposal:** Once all documents have been completed, the Authorized Organizational Representative (AOR) must submit the application to Grants.gov and verify the desired funding opportunity and agency to which the application is submitted. The AOR must then sign and submit the application to Grants.gov. The completed application will be transferred to Research.gov for further processing.

The NSF [Grants.gov Proposal Processing in Research.gov informational page](#) provides submission guidance to applicants and links to helpful resources including the NSF [Grants.gov Application Guide](#), [Grants.gov Proposal Processing in Research.gov how-to guide](#), and [Grants.gov Submitted Proposals Frequently Asked Questions](#). Grants.gov proposals must pass all NSF pre-check and post-check validations in order to be accepted by Research.gov at NSF.

When submitting via Grants.gov, NSF strongly recommends applicants initiate proposal submission at least five business days in advance of a deadline to allow adequate time to address NSF compliance errors and resubmissions by 5:00 p.m. submitting organization's local time on the deadline. Please note that some errors cannot be corrected in Grants.gov. Once a proposal passes pre-checks but fails any post-check, an applicant can only correct and submit the in-progress proposal in Research.gov.

Proposers that submitted via Research.gov may use Research.gov to verify the status of their submission to NSF. For proposers that submitted via Grants.gov, until an application has been received and validated by NSF, the Authorized Organizational Representative may check the status of an application on Grants.gov. After proposers have received an e-mail notification from NSF, Research.gov should be used to check the status of an application.

## **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/](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.D.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.D.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 and Sharing Plan and the Mentoring Plan, as appropriate.



## **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 proposers whether their proposals have been declined or recommended for funding within six months. Large or particularly complex proposals or proposals from new recipients 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 submitting organization* by an NSF Grants and Agreements Officer. Organizations whose proposals are declined will be advised as promptly as possible by the cognizant NSF Program administering the program. Verbatim copies of reviews, not including the identity of the reviewer, will be provided automatically to the Principal Investigator. (See Section VI.B. for additional information on the review process.)

### **B. Award Conditions**

An NSF award consists of: (1) the award notice, 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 notice; (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 notice. 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 [https://www.nsf.gov/awards/managing/award\\_conditions.jsp?org=NSF](https://www.nsf.gov/awards/managing/award_conditions.jsp?org=NSF). Paper copies may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-8134 or by e-mail from [nsfpubs@nsf.gov](mailto:nsfpubs@nsf.gov).

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](https://www.nsf.gov/publications/pub_summ.jsp?ods_key=pappg).

## **Administrative and National Policy Requirements**

### **Build America, Buy America**

As expressed in Executive Order 14005, [Ensuring the Future is Made in All of America by All of America's Workers](#) (86 FR 7475), it is the policy of the executive branch to use terms and conditions of Federal financial assistance awards to maximize, consistent with law, the use of goods, products, and materials produced in, and services offered in, the United States.

Consistent with the requirements of the Build America, Buy America Act (Pub. L. 117-58, Division G, Title IX, Subtitle A, November 15, 2021), no funding made available through this funding opportunity may be obligated for an award unless all iron, steel, manufactured products, and construction materials used in the project are produced in the United States. For additional information, visit NSF's [Build America, Buy America](#) webpage.

### **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 annual project report, and a project outcomes report for the general public.

Failure to provide the required annual or final annual 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 annual 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](https://www.nsf.gov/publications/pub_summ.jsp?ods_key=pappg).

### **Developmental Sciences Program Annual and Final Annual Project Reports**

Annual and final annual project reports should provide a succinct outline of the specific aims, broader impacts and data management and sharing plan as the first entry of the accomplishments section ("What are the major goals of the project?").

PIs are expected to specifically address progress on activities related to proposed broader impacts in annual and final annual project reports. Information should be provided in the accomplishments section under questions about opportunities for training and professional development and dissemination of results to communities of interest. The impacts of these activities should be described in the impacts section, under impacts on society beyond science and technology.

Compliance with the project data management and sharing plan must be documented in annual and final annual project reports. Identifiers for archived metadata and data, such as Digital Object Identifiers (DOIs) or persistent URLs, must be included in these reports in the section entitled "Products-Websites." Where the final report is due before the required date of sample or data submission, the PI must report plans for final data or sample submission in the impacts/information resources section. The PI should notify the program director by e-mail after final data and/or sample submission has occurred, even if this is after the end date of the award.

## 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:

- Anna V. Fisher, Program Director, SBE/BCS, telephone: (703) 292-8451, email: [avfisher@nsf.gov](mailto:avfisher@nsf.gov)
- Joseph C. Toscano, Program Director, SBE/BCS, W13154, telephone: (703) 292-7220, email: [jctoscan@nsf.gov](mailto:jctoscan@nsf.gov)
- Tanika M. Malloy, Business Operations Specialist, SBE/BCS, telephone: (703) 292-2484, email: [tmalloy@nsf.gov](mailto:tmalloy@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](mailto:rgov@nsf.gov)

For questions relating to Grants.gov contact:

- Grants.gov Contact Center: If the Authorized Organizational Representatives (AOR) has not received a confirmation message from Grants.gov within 48 hours of submission of application, please contact via telephone: 1-800-518-4726; e-mail: [support@grants.gov](mailto:support@grants.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** (NSF Information Center): (703) 292-5111
- **TDD (for the hearing-impaired):** (703) 292-5090
- **To Order Publications or Forms:**
  - Send an e-mail to: [nsfpubs@nsf.gov](mailto: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 proposers 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 proposers 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 3145-0058. 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  
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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[Vulnerability disclosure](#) | [Inspector General](#) | [Privacy](#) | [FOIA](#) | [No FEAR Act](#) | [USA.gov](#) | [Accessibility](#) |  
[Plain language](#) |



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Tel: [\(703\) 292-5111](tel:7032925111),