

# A Science of Science Policy Approach to Analyzing and Innovating the Biomedical Research Enterprise (SCISIPBIO)

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## PROGRAM SOLICITATION NSF 19-547

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National Science Foundation

Directorate for Social, Behavioral & Economic Sciences  
SBE Office of Multidisciplinary Activities



National Institutes of Health

National Institute of General Medical Sciences

### Full Proposal Target Date(s):

May 08, 2019

September 09, 2019

February 10, 2020

February 9, Annually Thereafter

September 09, 2021

September 9, Annually Thereafter

## IMPORTANT INFORMATION AND REVISION NOTES

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Any proposal submitted in response to this solicitation should be submitted in accordance with the revised *NSF Proposal & Award Policies & Procedures Guide (PAPPG) (NSF 19-1)*.

## SUMMARY OF PROGRAM REQUIREMENTS

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### General Information

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#### Program Title:

A Science of Science Policy Approach to Analyzing and Innovating the Biomedical Research Enterprise (SCISIPBIO)

#### Synopsis of Program:

The National Science Foundation (NSF) and the National Institutes of Health (NIH) are interested in proposals that will propel our understanding of the biomedical research enterprise by drawing from the scientific expertise of the science of science policy research community.

NSF promotes the progress of science by maintaining the general health of research and education across all fields of science and engineering. The Social, Behavioral, and Economic Sciences (SBE) Directorate within the NSF supports basic research on people and society. The SBE sciences focus on human behavior and social organizations and how social, economic, political, cultural, and environmental forces affect the lives of people from birth to old age and how people in turn shape those forces. SBE's Science of Science and Innovation Policy (SciSIP) program supports research designed to advance the scientific basis of science and innovation policy.

The NIH is the U.S. Federal agency charged with supporting biomedical research in the U.S. The National Institute of General Medical Sciences (NIGMS) within the NIH supports basic biomedical research that increases understanding of biological processes and lays the foundation for advances in disease diagnosis, treatment, and prevention.

Both the NSF and NIH believe that there are opportunities and needs in building and supporting research projects



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 Target Date(s):**

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## Proposal Review Information Criteria

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### Merit Review Criteria:

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

## Award Administration Information

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### Award Conditions:

Standard NSF award conditions apply.

### Reporting Requirements:

Standard NSF reporting requirements apply.

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# I. INTRODUCTION

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The National Science Foundation (NSF) and the National Institutes of Health (NIH) seek proposals that will propel our understanding of the biomedical research enterprise by drawing from the scientific expertise of the science of science policy research community.

NSF promotes the progress of science by maintaining the general health of research and education across all fields of science and engineering. The Social, Behavioral, and Economic Sciences (SBE) Directorate within the NSF, supports basic research on people and society. The SBE sciences focus on human behavior and social organizations and how social, economic, political, cultural, and environmental forces affect the lives of people from birth to old age and how people in turn shape those forces. SBE's Science of Science and Innovation Policy (SciSIP) program supports research designed to advance the scientific basis of science and innovation policy.

The NIH is the U.S. Federal agency charged with supporting biomedical research in the U.S. The National Institute of General Medical Sciences (NIGMS) within the NIH supports basic biomedical research that increases understanding of biological processes and lays the foundation for advances in disease diagnosis, treatment, and prevention.

Both the NSF and NIH believe that there are opportunities and needs in building and supporting research projects with a focus on the scientific research enterprise. The two agencies also recognize that when programmatic goals are compatible, coordinated management and funding of a research program can have a positive synergistic effect on the level and scope of research and can leverage the investments of both agencies.

Therefore, NIGMS and SBE are partnering to enable collaboration in research between the SciSIP program and NIGMS. This partnership will result in a portfolio of high quality research to provide scientific analysis of important aspects of the biomedical research enterprise and efforts to foster a diverse, innovative, productive and efficient scientific workforce, from which future scientific leaders will emerge.

# II. PROGRAM DESCRIPTION

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The "Science of Science Policy Approach to Analyzing and Innovating the Biomedical Research Enterprise" (SCISIPBIO) is a joint program between the National Institute of General Medical Sciences (NIGMS) of the National Institutes of Health (NIH) and the Science of Science and Innovation Policy program (SciSIP) of the National Science Foundation (NSF). SCISIPBIO supports research that advances the scientific basis of science and innovation policy, with a focus on the biomedical sciences. Consistent with the SciSIP program, SCISIPBIO will fund the development of models, analytical tools, data and metrics that can inform science policy and the development of the scientific enterprise. SCISIPBIO welcomes individual and collaborative research projects and places a high priority on interdisciplinary research and on broadening participation.

# III. AWARD INFORMATION

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**Anticipated Type of Award:** Continuing Grant or Standard Grant or R01 project (if the proposal is selected to be funded by NIGMS).

**Estimated Number of Awards:** It is estimated that about 4-8 awards per year will be made.

**Anticipated Funding Amount:** \$2,000,000

NIGMS and SBE will each devote up to \$1.0 million in funding, subject to availability of funds and receipt of meritorious proposals.

Award sizes are expected to range from \$100,000 to \$250,000 (total costs) per year for up to 4 years.

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

Upon conclusion of the review process, meritorious proposals may be recommended for funding by either NIGMS or NSF, at the option of the agencies, not the grantee. Subsequent grant administration procedures will be in accordance with the individual policies of the awarding agency.

## IV. ELIGIBILITY INFORMATION

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### Who May Submit Proposals:

The categories of proposers eligible to submit proposals to the National Science Foundation are identified in the *NSF Proposal & Award Policies & Procedures Guide* (PAPPG), Chapter I.E.

### Who May Serve as PI:

There are no restrictions or limits.

### Limit on Number of Proposals per Organization:

There are no restrictions or limits.

### Limit on Number of Proposals per PI or Co-PI:

There are no restrictions or limits.

## V. PROPOSAL PREPARATION AND SUBMISSION INSTRUCTIONS

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### A. Proposal Preparation Instructions

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

- Full proposals submitted via FastLane: 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](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) 292-8569 or by e-mail from [nsfpubs@nsf.gov](mailto: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. Compliance with this requirement is critical to determining the relevant proposal processing guidelines. Failure to submit this information may delay processing.
- 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) 292-8569 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 the NSF FastLane system. PAPPG Chapter II.D.3 provides additional information on collaborative proposals.

See PAPPG Chapter II.C.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.

**The following instructions deviate from guidelines in the PAPPG and NSF Grants.gov Application Guide.**

**Proposal Cover Sheet:** The title should begin with SCISIPBIO: followed by a descriptive title of the research project.

**Project Description:** The project description must contain, as a separate section within the narrative, a section labeled "Intellectual Merit". In addition to addressing the NSF criterion of Intellectual Merit, this should also correspond to the NIH criteria of Significance, Investigators, Innovation, Approach, and Environment. The section should also contain, as separate section within the narrative, a section labeled "Broader Impacts." The text of the description should not exceed 15 pages and should adhere to the specifications in the PAPPG (Chapter II.C.2.d).

**Results from Prior NSF and/or NIH Support:** If any Principal Investigator (PI) or co-PI identified on the project has received NSF or NIH funding with a start date in the past five years, information on the award(s) is required. Each PI and co-PI who has received more than one award (excluding amendments) must report on the award most closely related to the proposal. The following information must be provided:

- a. the NSF or NIH award number, amount and period of support;
- b. the title of the project;
- c. a summary of the results of the completed work, including accomplishments related to the Broader Impact activities supported by the award and, for a research project, any contribution to the development of human resources in science and engineering;
- d. publications resulting from the NSF or NIH award; and

- e. evidence of research products and their availability, including, but not limited to: data, publications, samples, physical collections, software, and models, as described in any Data Management Plan.

Reviewers will be asked to comment on the quality of the prior work described in this section of the proposal. Please note that the proposal may contain up to five pages to describe the results.

**Multiple Investigator Leadership Plan:** For proposals designating multiple lead investigators, a leadership plan should be described in no more than 3 pages. This description should discuss the role of each investigator, as well as the governance and organizational structure of the leadership team and the research project, including communication plans, process for making decisions on scientific direction, and procedures for resolving conflicts. The roles and administrative, technical, and scientific responsibilities for the project or program should be delineated for the lead investigators and other collaborators. If budget allocation is planned, the distribution of resources to specific components of the project or the individual investigators must be delineated in the Leadership Plan. In the event of an award from the NIH, the requested allocation may be reflected in a footnote on the Notice of Grant Award (NOGA). This information should be submitted separately as a Supplementary Document.

**Protection of Human Subjects/Use and Care of Vertebrate Animals:** Both NSF and NIH have rules regarding the use of human subjects and/or vertebrate animals in research. Proposals that involve human subjects or use vertebrate animals MUST INCLUDE the information required by both agencies. See the [NSF PAPPG](#) and the [NIH SF 424 \(R&R\) Application Guide](#) for additional information. Information on the use of human subjects and/or vertebrate animals is considered in the review of the proposals and should be submitted separately as a Supplementary Document.

**Letters of Collaboration:** Documentation of collaborative arrangements of significance to the proposal through letters of collaboration. (See PAPPG Chapter II.C.2.d(iv)). Letters of collaboration should be limited to stating the intent to collaborate and should not contain endorsements or evaluation of the proposed project. The recommended format for letters of collaboration is as follows:

"If the proposal submitted by Dr. [insert the full name of the Principal Investigator] entitled [insert the proposal title] is selected for funding by NSF, it is my intent to collaborate and/or commit resources as detailed in the Project Description or the Facilities, Equipment or Other Resources section of the proposal."

Departure from this format may result in the proposal being returned without review. The Project Description should document the need for and nature of collaborations, such as intellectual contributions to the project, permission to access a site, an instrument, or a facility, offer of data, samples and materials for research, logistical support to the research and education program, or mentoring of U.S. students at a foreign site. Requests for letters should be made by the PI well in advance of the proposal submission deadline, because they must be included at the time of submission. Please note that letters of support and/or letters of recommendation for the PI are not permitted. Letters of collaboration should be submitted as Supplementary Documents.

## B. Budgetary Information

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### Cost Sharing:

Inclusion of voluntary committed cost sharing is prohibited.

## C. Due Dates

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- **Full Proposal Target Date(s):**

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## D. FastLane/Grants.gov Requirements

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### For Proposals Submitted Via FastLane:

To prepare and submit a proposal via FastLane, see detailed technical instructions available at: <https://www.fastlane.nsf.gov/a1/newstan.htm>. For FastLane user support, call the FastLane Help Desk at 1-800-673-6188 or e-mail [fastlane@nsf.gov](mailto:fastlane@nsf.gov). The FastLane Help Desk answers general technical questions related to the use of the FastLane system. Specific questions related to this program solicitation should be referred to the NSF program staff contact(s) listed in Section VIII of this funding opportunity.

### 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













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

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

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