

Mathematical and Physical Sciences Ascending Postdoctoral Research Fellowships (MPS-Ascend)

PROGRAM SOLICITATION NSF 23-501

REPLACES DOCUMENT(S): NSF 22-501



National Science Foundation

Directorate for Mathematical and Physical Sciences
Division of Astronomical Sciences
Division of Chemistry
Division of Materials Research
Division of Mathematical Sciences
Division of Physics
Office of Multidisciplinary Activities

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

January 25, 2023

October 18, 2023

Third Wednesday in October, Annually Thereafter

IMPORTANT INFORMATION AND REVISION NOTES

There are two MPS-Ascend deadlines in 2023. One is in January and the other is in October. In subsequent years the annual deadline will be in October.

Restrictions against simultaneous submission of proposals with similar research plans is emphasized.

The term scientific mentor has replaced sponsoring scientist. The description is the same.

Scientific mentors are strongly discouraged from mentoring more than one Ascend Fellow at a time.

Fellowships must begin no later than September 1 following the submission deadline.

The requirement to identify a primary host institution is added.

Language is added to strengthen the need for justification if the proposer chooses to remain at the current institution.

Language on diversity is updated.

Duration and tenure restrictions are clarified. The default duration is 36 months. This can be shortened at the time an award recommendation is made.

Clarification is added that no additional appointment or fellowship may be held during the period of the fellowship, and that no other remuneration for any source may be accepted during the period of the fellowship without permission from the cognizant NSF Program Officer.

Important Information

Innovating and migrating proposal preparation and submission capabilities from FastLane to Research.gov is part of the ongoing NSF information technology modernization efforts, as described in Important [Notice No. 147](#). In support of these efforts, proposals submitted in response to this program solicitation must be prepared and submitted via Research.gov or via Grants.gov and may not be prepared or submitted via FastLane. **Proposal preparation and submission through Research.gov is strongly encouraged because these Fellowships contain unique requirements.**

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:

Mathematical and Physical Sciences Ascending Postdoctoral Research Fellowships (MPS-Ascend)

Synopsis of Program:

The purpose of the Mathematical and Physical Sciences Ascending Postdoctoral Research Fellowship (MPS-Ascend) program is to support postdoctoral Fellows who will broaden the participation of members of groups that are historically excluded and currently underrepresented in MPS fields in the U.S., defined in this solicitation as Blacks or African Americans, Hispanics, Latinos, Indigenous and Native Americans, Alaska Natives, Native Hawaiians and other Native Pacific Islanders, as future leaders in MPS fields. The program is intended to recognize beginning investigators of significant potential and provide them with experience in research that will broaden perspectives, facilitate interdisciplinary interactions, and help broaden participation within MPS fields. The program funds postdoctoral Fellows in research environments that will have maximal impact on their future scientific development and facilitates their transition into a faculty appointment. Awards will support research in any scientific area within the purview of the five MPS Divisions: the Divisions of Astronomical Sciences (AST), Chemistry (CHE), Materials Research (DMR), Mathematical Sciences (DMS), and Physics (PHY). Fellowships are awards to individuals, not institutions, and are administered by the Fellows.

Cognizant Program Officer(s):

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

- Andrea Prestwich, AST, telephone: (703) 292-2210, email: aprestwi@nsf.gov
- Anne-Marie Schmoltner, CHE, telephone: (703) 292-4716, email: aschmolt@nsf.gov
- Nitsa Rosenzweig, DMR, telephone: (703) 292-7256, email: nirosenz@nsf.gov
- Swatee Naik, DMS, telephone: (703) 292-4876, email: DMS-Ascend@nsf.gov
- Kathleen V. McCloud, PHY, telephone: (703) 292-8236, email: kmcccloud@nsf.gov
- Michelle Bushey, OMA, telephone: (703) 292-4938, email: mbushey@nsf.gov

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

- 47.049 --- Mathematical and Physical Sciences

Award Information

Anticipated Type of Award: Fellowship

Estimated Number of Awards: 20 to 50

Twenty to fifty awards per year, contingent upon availability of funds and receipt of competitive proposals.

Anticipated Funding Amount: \$6,000,000 to \$10,000,000

Subject to the availability of funds.

Eligibility Information

Who May Submit Proposals:

Proposals may only be submitted by the following:

- MPS-Ascend Postdoctoral Research Fellowships are awards to individuals; proposals are submitted directly by the fellowship candidate to NSF. Each candidate must identify one or more scientific mentor(s) and host institution(s) in the proposal. Activities supported by the MPS-Ascend Fellowship program may be conducted at any appropriate U.S. host institution as defined in Section II, "Program Description."

Who May Serve as PI:

Proposers must self-certify that they are eligible to receive the Fellowship. An individual (also referred to as a Fellow or proposer) is eligible to submit a proposal to the MPS-Ascend Postdoctoral Research Fellowship program if all the following criteria are met:

- Must be a U.S. citizen (or national) or legally admitted permanent resident of the United States (i.e., have a "green card") at the time the proposal is submitted;
- Presents research, professional development, and broadening participation plans that fall within the purview of one of the Divisions (Astronomical Sciences, Chemistry, Materials Research, Mathematical Sciences, or Physics) within the Directorate for Mathematical and Physical Sciences;
- May not have previously been a principal investigator or co-principal investigator of an NSF award (other than a graduate research fellowship or an award in support of a conference or workshop);
- May not submit a research plan duplicated in another NSF proposal currently under consideration;
- Must have completed all the requirements for a doctoral degree before the postdoctoral appointment start date;
- It is anticipated that the research will be conducted at an institution other than the Fellowship candidate's doctoral-granting or current postdoctoral fellowship institution. However, if the Fellowship candidate chooses to remain at their current institution, the Project Description should include a strong justification of how this choice benefits their research and career development.

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

Proposers uncertain about the eligibility requirements are strongly encouraged to contact a cognizant NSF program officer listed in this solicitation before preparing the proposal. Fellowships must begin no later than September 1, following the submission deadline.

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

Limit on Number of Proposals per Organization:

Only individuals may submit proposals. There is no limit on the number of candidates or Fellows that an organization may host. Scientific mentors are strongly discouraged from serving as the primary scientific mentor of more than one Ascend Fellow at a time.

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

Individuals may submit only one fellowship proposal per deadline to this program. Co-PIs are not allowed.

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.
 - 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).

B. Budgetary Information

- **Cost Sharing Requirements:**

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

Not Applicable
- **Other Budgetary Limitations:**

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

C. Due Dates

- **Full Proposal Deadline(s)** (due by 5 p.m. submitter's local time):
 - January 25, 2023
 - October 18, 2023
 - Third Wednesday in October, Annually Thereafter

Proposal Review Information Criteria

Merit Review Criteria:

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

Award Administration Information

Award Conditions:

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

Reporting Requirements:

Standard NSF reporting requirements apply.

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I. INTRODUCTION

The future of the Nation's scientific enterprise depends on including the best and most highly trained minds in the pursuit of cutting-edge scientific problems. This solicitation aims to support outstanding future scientists with a focus on achieving excellence through diversity and supporting postdoctoral Fellows who are committed to help broaden the participation of members of historically excluded and currently underrepresented groups, defined in this solicitation as Blacks or African Americans, Hispanics, Latinos, Indigenous or Native Americans, Alaska Natives, Native Hawaiians and other Native Pacific Islanders, in academia as well as across the Nation's scientific enterprise. The intent is to support and prepare postdoctoral Fellows to transition from a postdoctoral position into the first few years of an academic faculty position. The proposed research must be in an area within the purview of one of the Divisions within the Directorate for Mathematical and Physical Sciences (MPS).

Fellows must affiliate with appropriate research institutions, as defined below, and are expected to devote themselves full time to the Fellowship activities during its term.

II. PROGRAM DESCRIPTION

The twofold purpose of the MPS-Ascend program is to support future scientific leaders in MPS fields by facilitating their participation in postdoctoral research environments that will have maximal impact on their future scientific development, and to broaden the participation of members of groups that are historically excluded and currently underrepresented (defined in this solicitation as Blacks or African Americans, Hispanics, Latinos, Indigenous or Native Americans, Alaska Natives, Native Hawaiians and other Native Pacific Islanders) in science areas supported by MPS. MPS recognizes a gap in the participation of members of these underrepresented groups in academia in MPS fields¹. It is anticipated that Fellows will eventually transition into academic tenure track positions where in addition to their further development as leaders in their scientific fields, they will become key leaders in the efforts to bridge the participation gap as strong proponents of diversity, equity, and inclusion, both locally and nationally.

Fellows supported through this program will affiliate at all times with a host institution(s) during the postdoctoral appointment component of the Fellowship and select a scientific mentor who will provide mentoring and guidance for the research proposed by the proposer. If more than one host institution is identified, one must be designated as the primary host institution. In addition, the scientific mentor must design a mentoring plan for the Fellow. The proposer is responsible for making prior arrangements with the host institution and scientific mentor(s). If more than one mentor is proposed, one must be named lead mentor and the roles of the other secondary mentors must be clearly stated in the Project Description. An important basis for judging the suitability of the host institution is the degree to which the scientific mentor's statement describes and offers a research, education, and mentoring plan that could not be provided without Fellowship support. (See Section V. Proposal Preparation Instructions for additional information about the scientific mentor statement.) Scientific mentors are strongly discouraged from serving as the primary scientific mentor of more than one Ascend Fellow at a time.

Appropriate host institutions include U.S. institutions of higher education (IHEs), private nonprofit institutes and museums, government installations and laboratories, and scientific facilities such as observatories. For applicants to AST, NASA or Department of Energy (DOE) supported centers are not eligible host institutions. Fellows are expected to be fully integrated into the research and educational activities of their host institution. The postdoctoral support can be requested for between 12 and 36 months, depending on the research plan and the nature of the science. It is allowable to spend all or portions of the Fellowship tenure at international sites that are operated by U.S. organizations eligible for NSF funding, such as the Atacama Large Millimeter/submillimeter Array, Gemini South, or the Large Hadron Collider, among others, provided the scientific mentor at the host institution addresses this in the documentation (see preparation instructions).

As these awards will collectively span multiple scientific disciplines, NSF anticipates additional cohort building and professional development support for the Fellows through an external institution (herein referred to as the External Mentoring Institution) supported through a separate solicitation. Postdocs supported through this program will be prepared for success in their choice of career paths.

Proposals to this program must demonstrate the context of the work within or across disciplines supported by MPS. Please contact the cognizant program officer identified for the appropriate division if you have any questions about the suitability of your proposal for the MPS-Ascend program². Some topics may be most

appropriate for consideration by other NSF programs or by other federal agencies.

¹ National Center for Science and Engineering Statistics, Women, Minorities, and Persons with Disabilities in Science and Engineering: 2019. Alexandria, VA: Special Report NSF 19-304, 2019. Available at <https://www.nsf.gov/statistics/wmpd>.

² Proposals for consideration by the Division of Astronomy with extensive work to model or analyze data from NASA missions must include a section describing how this uniquely advances the science goals of the proposal, and synergies with data or methods beyond NASA.

III. AWARD INFORMATION

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

DURATION/TENURE AND STIPEND/ALLOWANCES

A. Duration and Tenure

The duration of support for a Fellowship award is for between 12 and 36 months. Extensions beyond 36 months are not anticipated, are rare, and must be agreed upon by the Program Officer managing the award. Note that the submission process has a preset of 36 months. This can be shortened to 12 or 24 months at the time an award recommendation is made as described in the proposal preparation section of this solicitation.

Within the Fellowship period, paid leave, including parental or family leave, can be accumulated up to one day of paid leave earned per month. Paid leave cannot be used to increase the level of NSF support beyond that requested in the proposal, or beyond the allowed maximum of 36 months.

Interruptions may be approved with written justification for a period or periods of up to 12 months in total. The cognizant Program Officer must be consulted as soon as possible before planning such an interruption. The leave cannot be used to increase the level of Fellow salary support beyond the originally approved length of tenure. A no cost extension may be requested to extend the fellowship award in order to complete the research and broadening participation goals, but no supplemental funds will be provided for this purpose.

Fellowships may not be renewed.

The postdoctoral appointment must start no later than September 1 following the submission deadline. All requirements for a doctoral degree must be completed before the start date of the appointment.

Those proposers selected to receive Fellowships will be contacted by NSF and asked to provide additional information, such as completing acceptance forms and starting certificates, before starting their Fellowships. Successful proposers who have not completed the PhD at the time of proposal submission must provide certification that all requirements for a PhD have been completed before receiving their Fellowship award. Normally Fellowships will be held at institutions specified in the proposal, but under certain circumstances and with suitable justification, Fellows may transfer during the tenure of the Fellowship to a new institution upon approval by NSF.

Fellowships may end before the anticipated end date at the request of the Fellow (for example, if the Fellow accepts a different job offer during the expected duration of the postdoctoral appointment). If a Fellow chooses to accept employment (i.e. a tenure-track position or other full time employment) during a Fellowship year, the Fellow stipend will be terminated upon the start of the new position, no further funds will be dispensed, and any remaining funds will be returned.

B. Stipend and Allowances

The Fellowship amount of \$100,000 per year for up to three years consists of two separate payments:

1. A monthly stipend of \$5,833 (up to \$70,000 annually) for full-time support is paid directly to the Fellow as an electronic funds transfer into a personal account at a financial institution.

2. A total allowance of \$30,000 annually is paid to the Fellow in the same manner for:

a) expenses directly related to the conduct of the research, above and beyond what is normally provided by the host institution, such as some materials and supplies, subscription fees and recovery costs for databases, travel, and publication expenses and/or

b) support of fringe benefits, including health insurance provided through either a group plan offered by the host organization or an individual plan secured by the Fellow, dental and/or vision insurance, disability insurance, retirement, dependent care, and moving expenses.

NSF anticipates allowing Postdoctoral Fellows who choose an academic career to apply for further support through this program upon acceptance of a tenure track position at a U.S. IHE, and successful completion of at least 12 months as an Ascend Fellow. This intended support is envisioned to be administered separately from the MPS-Ascend award and would be available for the Fellow for items such as travel, postdoctoral, graduate or undergraduate student support, materials and supplies, services, equipment and summer salary for the Fellow (academic year salary for the Fellow is not intended to be allowed), along with the associated indirect costs. NSF intends to provide more details through a future solicitation. These awards would be made the U.S IHE offering the tenure track position.

No additional appointment or fellowship may be held during the period of the fellowship. No other remuneration for any source may be accepted during the period of the fellowship without permission from the cognizant NSF Program Officer.

IV. ELIGIBILITY INFORMATION

Who May Submit Proposals:

Proposals may only be submitted by the following:

- MPS-Ascend Postdoctoral Research Fellowships are awards to individuals; proposals are submitted directly by the fellowship candidate to NSF. Each candidate must identify one or more scientific mentor(s) and host institution(s) in the proposal. Activities supported by the MPS-Ascend Fellowship program may be conducted at any appropriate U.S. host institution as defined in Section II, "Program Description."

Who May Serve as PI:

Proposers must self-certify that they are eligible to receive the Fellowship. An individual (also referred to as a Fellow or proposer) is eligible to submit a proposal to the MPS-Ascend Postdoctoral Research Fellowship program if all the following criteria are met:

- Must be a U.S. citizen (or national) or legally admitted permanent resident of the United States (i.e., have a "green card") at the time the proposal is submitted;
- Presents research, professional development, and broadening participation plans that fall within the purview of one of the Divisions (Astronomical Sciences, Chemistry, Materials Research, Mathematical Sciences, or Physics) within the Directorate for Mathematical and Physical Sciences;
- May not have previously been a principal investigator or co-principal investigator of an NSF award (other than a graduate research fellowship or an award in support of a conference or workshop);
- May not submit a research plan duplicated in another NSF proposal currently under consideration;
- Must have completed all the requirements for a doctoral degree before the postdoctoral appointment start date;
- It is anticipated that the research will be conducted at an institution other than the Fellowship candidate's doctoral-granting or current postdoctoral fellowship institution. However, if the Fellowship candidate chooses to remain at their current institution, the Project Description should include a strong justification of how this choice benefits their research and career development.

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

Proposers uncertain about the eligibility requirements are strongly encouraged to contact a cognizant NSF program officer listed in this solicitation before preparing the proposal. Fellowships must begin no later than September 1, following the submission deadline.

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

Limit on Number of Proposals per Organization:

Only individuals may submit proposals. There is no limit on the number of candidates or Fellows that an organization may host. Scientific mentors are strongly discouraged from serving as the primary scientific mentor of more than one Ascend Fellow at a time.

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

Individuals may submit only one fellowship proposal per deadline to this program. Co-PIs are not allowed.

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. 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. 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). 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.

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.

Proposals submitted to the MPS-Ascend Postdoctoral Fellowships program must be submitted electronically through either Research.gov or Grants.gov. Only one proposal is permitted per individual per deadline. A full proposal consists of many parts and requires input from the fellowship candidate, the proposed scientific mentor, the authors of reference letters, and the proposed host institution(s). Proposers are advised to begin the proposal well in advance of the submission deadline and to submit as early as possible. Partially completed proposals may be saved for future completion and submission. The submission of incomplete or late proposals is not permitted.

Proposal preparation and submission through Research.gov is strongly encouraged because these Fellowships contain unique requirements. If the proposer elects to submit through Grants.gov, confirmation that ALL required documents have been successfully uploaded into NSF systems by the deadline date is recommended. Otherwise, the proposal will be considered incomplete or late and will be returned without review.

Before starting proposal preparation, the proposer must be registered as an individual. To register as a new individual in Research.gov, access the [Research.gov New Account Management System](#). To register as a new individual in Grants.gov, access [Grants.gov Applicant Registration](#). Please note that if submitting via Grants.gov, you must also obtain an NSF ID in Research.gov.

Fellowship proposals must be submitted by the Fellowship candidate, not by the Fellowship candidate's current or proposed organizational Sponsored Projects Office (SPO). The Fellowship candidate serves as their own SPO and Authorized Organizational Representative (AOR) for the purposes of any research administration functions in Research.gov or Grants.gov.

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

Proposal Set-Up: Select "Prepare New Full Proposal" in Research.gov. The Fellowship Candidate/PI must select the "I am a Postdoctoral Scholar (Postdoctoral Fellowship Proposals)" option to initiate a postdoctoral fellowship proposal.

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

Personnel Documents: The fellowship candidate is automatically designated as the PI in Research.gov.

The primary scientific mentor must be identified on the proposal. If using Research.gov, this is done by going to the **Personnel Documents** section, clicking on the "Add Mentor/Advisor" tab and entering the individual's NSF ID or Email or Personnel name and Organization.

The following instructions supplement or deviate from the guidance in the NSF PAPPG or the NSF Grants.gov Application Guide:

For the purposes of this solicitation, NSF expects that the Fellow and the scientific mentor will collaborate on most sections of the proposal.

Cover Sheet: A requested start date must be entered. It can be no later than Sept. 1 following the deadline. The proposed duration is preset to 36 months. See instructions below on how to indicate a shorter duration.

In the Primary Place of Performance section enter the primary host institution information. Complete any other sections as appropriate and applicable.

Project Summary: (1 page limit). The "Overview" section of the Project Summary should begin with the following:

Doctoral Granting Institution and state:
Current position:
Current Institution and state:
Proposed Host Institution and state: Proposed Scientific Mentor:
Proposed Duration (enter one of the following): 12, 24 or 36 months
Secondary unit of Consideration (list one of the following five):
 Division of Astronomical Sciences
 Division of Chemistry
 Division of Materials Research
 Division of Mathematical Sciences
 Division of Physics

The remainder of the Project Summary outlines the proposed research and training activities, including specific and separate statements in the Overview, Intellectual Merit, and Broader Impacts sections, and including a justification of how the applicant and project will serve to broaden the participation of members of historically excluded and currently underrepresented groups (to include Blacks or African Americans, Hispanics, Latinos, Indigenous or Native Americans, Alaska Natives, Native Hawaiians or other Native Pacific Islanders) in MPS fields

Project Description: (10 page limit), which addresses what the postdoctoral Fellow proposes to accomplish during the fellowship period and how it relates to the Fellow's career goals, as well as a more detailed description of how the proposer and project will serve to broaden the participation of members of historically excluded and currently underrepresented groups, as defined in this solicitation, in MPS fields. The Project Description should be written with both specialists and non-specialists in mind. The Project Description consists of: an introduction or background section; a description of the applicant's past accomplishments, including those aimed at broadening participation; a statement of research objectives, methods, and significance; an explanation of how the Fellowship activities will enhance the applicant's career development; a justification of the choice of scientific mentor and institution; and a separate section header labeled "Broader Impacts" (heading must be on its own line with no other text on that line) that discusses the broader impacts of the proposed activities which includes the justification describing how the applicant and project will serve to broaden the participation of members of historically excluded and currently underrepresented groups as defined in this solicitation in MPS fields, and the applicant's past experience in such or similar broadening participation efforts (this justification should be at least one page). If the proposer chooses to remain at their current institution, the Project Description should include a strong justification of how this choice benefits their research and career development. Results from Prior Support (if any). Suggested maximum of 2 pages describing the intellectual merit and broader impacts of prior NSF fellowship funding such as GRFP or AGEP-GRS fellowships (if any). See PAPPG for guidance.

Budget: See instructions in Section V.B, Budgetary Information.

In Research.gov, the budget section includes the pre-populated stipend and fellowship allowance based on the requirements of this solicitation. The budget section does not display on the proposal main page after the proposal has been created but can be viewed by clicking Print Proposal. When the proposal is submitted, the budget will display as read-only and will be accessible from the proposal main page. The budget section is editable during a proposal file update/budget revision.

Grants.gov users: The stipend and fellowship allowance should be entered in Participant Support Costs (enter the \$70,000 stipend on line E.2 and the \$30,000 fellowship allowance on line E.5). Enter (1) as the total number of participants. No other budget lines should be used for fellowship proposals. An annual budget must be submitted for all three years and the budgets must be identical.

Budget Justification: Upload a document that states "The requested duration is ___ months. A Budget Justification is not required for a MPS-Ascend proposal." A specific requested duration of 12, 24 or 36 months should be indicated. The system is preset to 36 months. This preset duration will be changed if necessary at the time an award is recommended.

Facilities, Equipment and Other Resources: Please note that this section is a required part of the proposal. The proposer should upload a document that states: "See Letters of Collaboration" in the Facilities, Equipment, and Other Resources section of the proposal.

Supplementary Documentation consisting of:

1. The scientific mentor statement (3 page limit). The scientific mentor's statement should provide the information requested in the Instructions for Scientific mentors section below. The scientific mentor will send the statement to the Fellow who will then upload the statement into the application. The statement should be signed by both the scientific mentor and the Department Chair (or equivalent) at the sponsoring institution.

2. Plan for long-term absence (if applicable; 1 page limit). If the Fellow plans a scientifically based absence from the host institution of duration longer than one month during the first year of the Fellowship, fully describe the rationale and plans for such an absence. Other long-term absences (such as family leave, or opportunities for intensive non-research based professional development opportunities) should be made known to the cognizant Program Officer whenever a need for such an absence becomes clear.

3. Two or three letters of reference. One reference letter should be from the doctoral adviser and the other letter(s) should be from scientists who know the proposer and/or the proposer's research well. The scientific mentor is not allowed to serve as an author of a reference letter, unless the scientific mentor is also the applicant's doctoral adviser. All reference letters must be sent to the Fellow who will then upload the letters as Supplementary Document.

4. Any needed letters of collaboration (such as those required for access to equipment at national labs or facilities, or access to a collaborator, or secondary mentors, etc.) must follow the NSF format:

"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 and Other Resources section of the proposal."

Scientific Mentor's Statement: The scientific mentor's statement is meant to show how the host and host institution will provide a vibrant and supportive environment for the Fellow's proposed research and training activities and provide a basis for the Fellow's future independent research career. The statement is limited to 3 pages. The statement should address the following: the mentoring plan for the Fellow, the scientific mentor's past experiences and track record in mentoring postdocs, especially the track record (if any) in mentoring people who are members of historically excluded and currently underrepresented groups in STEM, and broadening participation of members of historically excluded and currently underrepresented groups; the expected availability of the scientific mentor for consultation during the requested award period; the role that the scientific mentor will play in the professional development of the Fellow; the opportunities for training and research at the sponsoring institution that will be of particular benefit to the Fellow; the appropriateness of the match between the scientific mentor and the Fellow; an agreement that the scientific mentor will support the applicant's involvement in cohort building and professional development activities at the anticipated External Mentoring Institution, once operational, as well as planned activities aimed at broadening participation of people who are members of historically excluded and currently underrepresented groups as defined in this solicitation; and a description of how the scientific mentor expects to benefit from the experience of supervising the Fellow. The statement should describe how the Fellow's research achievements and future research goals align with those of the scientific mentor.

Mentors are not expected to provide all the mentoring themselves and may call on resources available on campus or through other organizations, as well as those provided by the External Mentoring Institution. If a significant portion (longer than 1 month) of the Fellowship tenure will take place at a site other than the host institution, plans for the mentoring and supervision of the Fellow at the secondary site should be addressed in the primary scientific mentor's statement. Mentoring and supervision contributions of any secondary mentor should be briefly described in the scientific mentor's statement and the secondary mentor should provide a collaboration letter as described in item 4 of supplementary documentation (see above). Scientific mentors are strongly discouraged from serving as the primary mentor of more than one Ascend Fellow at a time.

The scientific mentor's statement should also include the name, title, department, email address, and telephone number of the scientific mentor, as well as the address and phone number of the scientific mentor's department at the host institution. The scientific mentor should sign the statement before sending it to the Fellow. In addition, the Department Chair (or equivalent) should add the following statement and sign below:

"As Department Chair (or equivalent), I have reviewed the scientific mentor statement for (name of MPS-Ascend Fellow) and hereby state my overall support and commitment to provide the necessary Departmental resources described in the statement."

B. Budgetary Information

Cost Sharing:

Inclusion of voluntary committed cost sharing is prohibited.

Other Budgetary Limitations:

Other budgetary limitations apply.

Budget Preparation Instructions:

A budget justification is not required and should not be submitted. Upload a document that states the "The requested duration is ___ months. A Budget Justification is not required for a MPS-Ascend proposal" in the Budget Justification section of the proposal. A specific requested duration of 12, 24 or 36 months should be indicated. The system is preset to 36 months. This preset duration will be changed if necessary at the time an award is recommended.

The average total Fellowship amount is between \$100,000 and \$300,000 (depending on the length of support requested) and is limited to three main categories:

1. A monthly salary of \$5,833 (up to \$70,000 annually) for full-time support of the postdoctoral Fellow.

2. A total allowance of \$30,000 annually for:

a) expenses directly related to the conduct of the research, above and beyond what is normally provided by the host institution, such as some materials and

supplies, subscription fees and recovery costs for databases, travel, and publication expenses and/or

b) support of fringe benefits.

Fellows will be expected to devote full time to appropriate scientific research, broadening participation activities, and professional development activities either sponsored by the host institution or intended external mentoring institution during the appointment period of the fellowship, and to pursue the program for which the fellowship was awarded. One exception is opportunities for teaching, which are important for the professional development of the Fellow. Limited engagement in teaching responsibilities is encouraged. Such engagement can include no more than one one-semester course per year, with a limit of two such courses over the entirety of the postdoc fellowship. Since teaching opportunities are not covered by the Fellowship, the institution may hire the Fellow to teach such courses, but the Fellowship support must be reduced by the same amount. Institutional regulations and discipline specific practices may be more suitable a more intensive, limited duration teaching experience. This may be accommodated with an unpaid interruption in the MPS-Ascend support. Such arrangements must be discussed in advance with the cognizant Program Director.

C. Due Dates

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

January 25, 2023

October 18, 2023

Third Wednesday in October, Annually Thereafter

D. Research.gov/Grants.gov Requirements

For Proposals Submitted Via Research.gov:

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

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

For Proposals Submitted Via Grants.gov:

Before starting proposal preparation, the proposer must register as a new individual in Research.gov and Grants.gov. To register as a new individual in Research.gov go to: <https://www.research.gov/accountmgmt/assets/welcomeunaffiliated.html> and to register in Grants.gov go to: <https://www.grants.gov/web/grants/applicants/registration.html>. Once registered, the proposer can then apply for grant opportunities which indicate "Individual" eligibility 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 provides additional technical guidance regarding 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. 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: Fellowship proposals must be submitted by the Fellowship applicant, not by the applicant's current or proposed organizational Sponsored Projects Office (SPO). Once all documents have been completed, the applicant must submit the application to Grants.gov and verify the desired funding opportunity and agency to which the application is submitted. The applicant must then sign and submit the application to Grants.gov. The completed application will be transferred to Research.gov for further processing.

VI. NSF PROPOSAL PROCESSING AND REVIEW PROCEDURES

Proposals received by NSF are assigned to the appropriate NSF program for acknowledgement and, if they meet NSF requirements, for review. All proposals are carefully reviewed by a scientist, engineer, or educator serving as an NSF Program Officer, and usually by three to ten other persons outside NSF either as *ad hoc* reviewers, panelists, or both, who are experts in the particular fields represented by the proposal. These reviewers are selected by Program Officers charged with oversight of the review process. Proposers are invited to suggest names of persons they believe are especially well qualified to review the proposal and/or persons they would prefer not review the proposal. These suggestions may serve as one source in the reviewer selection process at the Program Officer's discretion. Submission of such names, however, is optional. Care is taken to ensure that reviewers have no conflicts of interest with the proposal. In addition, Program Officers may obtain comments from site visits before recommending final action on proposals. Senior NSF staff further review recommendations for awards. A flowchart that depicts the entire NSF proposal and award process (and associated timeline) is included in PAPPG Exhibit III-1.

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

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

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

NSF's mission calls for the broadening of opportunities and expanding participation of groups, institutions, and geographic regions that are underrepresented in STEM disciplines, which is essential to the health and vitality of science and engineering. NSF is committed to this principle of diversity and deems it central to the programs, projects, and activities it considers and supports.

A. Merit Review Principles and Criteria

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

1. Merit Review Principles

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

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

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

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

2. Merit Review Criteria

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

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

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

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

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

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

Broader impacts may be accomplished through the research itself, through the activities that are directly related to specific research projects, or through activities that are supported by, but are complementary to, the project. NSF values the advancement of scientific knowledge and activities that contribute to

achievement of societally relevant outcomes. Such outcomes include, but are not limited to: full participation of women, persons with disabilities, and other underrepresented groups in science, technology, engineering, and mathematics (STEM); improved STEM education and educator development at any level; increased public scientific literacy and public engagement with science and technology; improved well-being of individuals in society; development of a diverse, globally competitive STEM workforce; increased partnerships between academia, industry, and others; improved national security; increased economic competitiveness of the United States; and enhanced infrastructure for research and education.

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

Additional Solicitation Specific Review Criteria

Within the standard NSF review criteria, the evaluation of proposals will place special emphasis on:

- The scientific ability and potential of the proposed Fellow;
- the scientific quality of the research likely to emerge from the Fellowship experience;
- the likely impact of the Fellowship on the future career of the Fellow;
- the potential of the proposed Fellow and project to lead to increased representation of members of historically excluded and currently underrepresented groups (defined in this solicitation as Blacks or African Americans, Hispanics, Latinos, Indigenous or Native Americans, Alaska Natives, Native Hawaiians, or other Native Pacific Islanders) in MPS fields;
- the suitability and availability of the scientific mentor and other colleagues, as described in the scientific mentor's statement; and
- the likely impact of the scientific mentor and the host institution on the professional and scientific development of the Fellow, and if the proposer chooses to remain at their current institution, the justification of how this choice benefits the Fellow's research and career development.

B. Review and Selection Process

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

Reviewers will be asked to evaluate proposals using two National Science Board approved merit review criteria and, if applicable, additional program specific criteria. A summary rating and accompanying narrative will generally be completed and submitted by each reviewer and/or panel. The Program Officer assigned to manage the proposal's review will consider the advice of reviewers and will formulate a recommendation.

After scientific, technical and programmatic review and consideration of appropriate factors, the NSF Program Officer recommends to the cognizant Division Director whether the proposal should be declined or recommended for award. NSF strives to be able to tell applicants whether their proposals have been declined or recommended for funding within six months. Large or particularly complex proposals or proposals from new awardees may require additional review and processing time. The time interval begins on the deadline or target date, or receipt date, whichever is later. The interval ends when the Division Director acts upon the Program Officer's recommendation.

After programmatic approval has been obtained, the proposals recommended for funding will be forwarded to the Division of Grants and Agreements or the Division of Acquisition and Cooperative Support for review of business, financial, and policy implications. After an administrative review has occurred, Grants and Agreements Officers perform the processing and issuance of a grant or other agreement. Proposers are cautioned that only a Grants and Agreements Officer may make commitments, obligations or awards on behalf of NSF or authorize the expenditure of funds. No commitment on the part of NSF should be inferred from technical or budgetary discussions with a NSF Program Officer. A Principal Investigator or organization that makes financial or personnel commitments in the absence of a grant or cooperative agreement signed by the NSF Grants and Agreements Officer does so at their own risk.

Once an award or declination decision has been made, Principal Investigators are provided feedback about their proposals. In all cases, reviews are treated as confidential documents. Verbatim copies of reviews, excluding the names of the reviewers or any reviewer-identifying information, are sent to the Principal Investigator/Project Director by the Program Officer. In addition, the proposer will receive an explanation of the decision to award or decline funding.

VII. AWARD ADMINISTRATION INFORMATION

A. Notification of the Award

Notification of the award is made to the *individual* by a Grants Officer in the Division of Grants and Agreements. Individuals whose proposals are declined will be advised as promptly as possible by the cognizant NSF Program administering the program. Verbatim copies of reviews, not including the identity of the reviewer, will be provided automatically to the individual. (See Section VI.B. for additional information on the review process).

B. Award Conditions

An NSF award consists of: (1) the award notice, which includes any special provisions applicable to the award and any numbered amendments thereto; (2) the budget, 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. 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. Paper copies may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-8134 or by e-mail from 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.

Special Award Conditions:

The main purpose of this award is to support the identified postdoctoral Fellow. If the Fellow transfers at any time prior to or during the award period to another postdoctoral position that is eligible for a MPS Ascend award, the award may support the new postdoctoral experience with the agreement of the cognizant Program Officer. The Fellow must supply documentation, including a new scientific mentor's statement, in advance of the change in institution and project.

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

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

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

C. Reporting Requirements

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

Failure to provide the required annual or final project reports, or the project outcomes report, will delay NSF review and processing of any future funding increments as well as any pending proposals for all identified PIs and co-PIs on a given award. PIs should examine the formats of the required reports in advance to assure availability of required data.

PIs are required to use NSF's electronic project-reporting system, available through Research.gov, for preparation and submission of annual and final project reports. Such reports provide information on accomplishments, project participants (individual and organizational), publications, and other specific products and impacts of the project. Submission of the report via Research.gov constitutes certification by the PI that the contents of the report are accurate and complete. The project outcomes report also must be prepared and submitted using Research.gov. This report serves as a brief summary, prepared specifically for the public, of the nature and outcomes of the project. This report will be posted on the NSF website exactly as it is submitted by the PI.

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

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:

- Andrea Prestwich, AST, telephone: (703) 292-2210, email: aprestwi@nsf.gov
- Anne-Marie Schmoltnier, CHE, telephone: (703) 292-4716, email: aschmolt@nsf.gov
- Nitsa Rosenzweig, DMR, telephone: (703) 292-7256, email: nirosenz@nsf.gov
- Swatee Naik, DMS, telephone: (703) 292-4876, email: DMS-Ascend@nsf.gov
- Kathleen V. McCloud, PHY, telephone: (703) 292-8236, email: kmcccloud@nsf.gov
- Michelle Bushey, OMA, telephone: (703) 292-4938, email: mbushey@nsf.gov

For questions related to the use of Research.gov, contact:

- Research.gov Help Desk: 1-800-673-6188
- Research.gov Help Desk e-mail: 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.

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 (FASSED) 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.E.6 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
 - or telephone: (703) 292-8134
- **To Locate NSF Employees:** (703) 292-5111

PRIVACY ACT AND PUBLIC BURDEN STATEMENTS

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

An agency may not conduct or sponsor, and a person is not required to respond to, an information collection unless it displays a valid Office of Management and Budget (OMB) control number. The OMB control number for this collection is 3145-0023. Public reporting burden for this collection of information is estimated to

average 12 hours per response, including the time for reviewing instructions. Send comments regarding the burden estimate and any other aspect of this collection of information, including suggestions for reducing this burden, to:

Suzanne H. Plimpton
Reports Clearance Officer
Policy Office, Division of Institution and Award Support
Office of Budget, Finance, and Award Management
National Science Foundation
Alexandria, VA 22314

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