

# Department of Health and Human Services

## Part 1. Overview Information

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**Participating Organization(s)**

National Institutes of Health ([NIH \(http://www.nih.gov\)](http://www.nih.gov))

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**Components of Participating Organizations**

National Institute of General Medical Sciences ([NIGMS \(http://www.nigms.nih.gov\)](http://www.nigms.nih.gov))

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**Funding Opportunity Title**

**Bridges to the Baccalaureate Research Training Program (T34)**

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**Activity Code**

[T34 \(//grants.nih.gov/grants/funding/ac\\_search\\_results.htm?text\\_curr=t34&Search.x=0&Search.y=0&Search\\_Type=Activity\)](http://grants.nih.gov/grants/funding/ac_search_results.htm?text_curr=t34&Search.x=0&Search.y=0&Search_Type=Activity) Undergraduate NRSA Institutional Research Training Grants

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**Announcement Type**

New

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**Related Notices**

None

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**Funding Opportunity Announcement (FOA) Number**

**PAR-19-299**

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**Companion Funding Opportunity**

None

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**Number of Applications**

See [Section III. 3. Additional Information on Eligibility](#).

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

93.859

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**Funding Opportunity Purpose**

The goal of the Bridges to the Baccalaureate Research Training Program is to provide structured activities to prepare a diverse cohort of community college students to transfer to and complete a bachelor's degree in biomedical research fields. This funding opportunity announcement (FOA) provides support to eligible, domestic institutions to develop and implement effective, evidence-based approaches to biomedical training and mentoring that will keep pace with the rapid evolution of the research enterprise. NIGMS expects that the proposed research training programs will incorporate didactic, research, mentoring, and career development elements to prepare trainees to bridge from the community college and complete the bachelor's degree in biomedical fields.

This program requires partnerships between two-year post-secondary educational institutions granting the associate degree with four-year colleges or universities that offer the baccalaureate degree.

This FOA does not allow appointed trainees to lead an independent clinical trial but does allow them to obtain research experience in a clinical trial led by a mentor or co-mentor.

## Key Dates

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### Posted Date

June 17, 2019

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### Open Date (Earliest Submission Date)

August 25, 2019

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### Letter of Intent Due Date(s)

Not Applicable

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### Application Due Date(s)

September 25, 2019; September 25, 2020; September 27, 2021, by 5:00 PM local time of applicant organization. All [types of non-AIDS applications](#) allowed for this funding opportunity announcement are due on these dates.

Applicants are encouraged to apply early to allow adequate time to make any corrections to errors found in the application during the submission process by the due date.

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### AIDS Application Due Date(s)

Not Applicable

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### Scientific Merit Review

February/March 2020, February/March 2021, February/March 2022

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### Advisory Council Review

May 2020, May 2021, May 2022

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### Earliest Start Date

July 2020, July 2021, July 2022

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**Expiration Date**

September 28, 2021

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**Due Dates for E.O. 12372**

Not Applicable

**Required Application Instructions**

It is critical that applicants follow the Training (T) Instructions in the [SF424 \(R&R\) Application Guide \(//grants.nih.gov/grants/guide/url\\_redirect.htm?id=12000\)](https://grants.nih.gov/grants/guide/url_redirect.htm?id=12000), except where instructed to do otherwise (in this FOA or in a Notice from the [NIH Guide for Grants and Contracts \(//grants.nih.gov/grants/guide/\)](https://grants.nih.gov/grants/guide/)). Conformance to all requirements (both in the Application Guide and the FOA) is required and strictly enforced. Applicants must read and follow all application instructions in the Application Guide as well as any program-specific instructions noted in [Section IV](#). When the program-specific instructions deviate from those in the Application Guide, follow the program-specific instructions. **Applications that do not comply with these instructions may be delayed or not accepted for review.**

There are several options available to submit your application through Grants.gov to NIH and Department of Health and Human Services partners. You **must** use one of these submission options to access the application forms for this opportunity.

1. Use the NIH ASSIST system to prepare, submit and track your application online.

[Apply Online Using ASSIST](#)

2. Use an institutional system-to-system (S2S) solution to prepare and submit your application to Grants.gov and [eRA Commons \(http://public.era.nih.gov/commons/\)](#) to track your application. Check with your institutional officials regarding availability.
3. Use [Grants.gov \(http://www.grants.gov/web/grants/applicants/download-application-package.html#search=true&oppNum=PAR-19-299\)](http://www.grants.gov/web/grants/applicants/download-application-package.html#search=true&oppNum=PAR-19-299) Workspace to prepare and submit your application and [eRA Commons \(http://public.era.nih.gov/commons/\)](#) to track your application.

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## Part 2. Full Text of Announcement

### Section I. Funding Opportunity Description

The overall goal of the NIH Ruth L. Kirschstein National Research Service Award (NRSA) program is to help ensure that a diverse pool of highly trained scientists is available in appropriate scientific disciplines to address the

Nation's biomedical, behavioral, and clinical research needs. In order to accomplish this goal, NRSA training programs are designed to train individuals to conduct research and to prepare for research careers. More information about NRSA programs may be found at the [Ruth L. Kirschstein National Research Service Award \(NRSA\) \(//grants.nih.gov/grants/guide/url\\_redirect.htm?id=41125\)](https://grants.nih.gov/grants/guide/url_redirect.htm?id=41125) website.

## Purpose and Background Information

The National Institutes of Health (NIH) recognizes the need to diversify the scientific workforce by enhancing the participation of individuals from diverse backgrounds, including those from groups identified as [underrepresented \(https://grants.nih.gov/grants/guide/notice-files/NOT-OD-18-210.html\)](https://grants.nih.gov/grants/guide/notice-files/NOT-OD-18-210.html) in the biomedical, clinical, behavioral and social sciences (collectively termed "biomedical") research workforce. Research shows that diverse teams working together and capitalizing on innovative ideas and distinct perspectives outperform homogenous teams. Scientists and trainees from diverse backgrounds and life experiences bring different perspectives, creativity, and individual interests to address complex scientific problems. There are many benefits that flow from a diverse NIH-supported scientific workforce, including fostering scientific innovation, enhancing global competitiveness, contributing to robust learning environments, improving the quality of research, enhancing public trust, and increasing the likelihood that health disparities and the needs of underserved populations are addressed in biomedical research.

NIGMS strives to ensure that future generations of researchers will be drawn from the entire pool of talented individuals, bringing different aptitudes, perspectives, interests, and experiences to address complex scientific problems. NIGMS seeks to enhance the diversity of the biomedical research workforce by supporting individuals from a variety of backgrounds at multiple training and career stages in a variety of institutions and educational settings across the country.

The Bridges to the Baccalaureate Research Training Program provides an opportunity to develop new, or expand existing, effective institutional programs aimed at a key juncture within higher education, namely the transition from two-year institution(s) to four-year baccalaureate granting institution(s) that offer degrees in science, technology, engineering and mathematics (STEM) fields.

## Need for the Program

In spite of recent advances, individuals from certain groups and backgrounds are underrepresented in the biomedical sciences research workforce as described in [NIH's Interest in Diversity \(https://grants.nih.gov/grants/guide/notice-files/NOT-OD-18-210.html\)](https://grants.nih.gov/grants/guide/notice-files/NOT-OD-18-210.html). The severity of the underrepresentation of these groups increases throughout the training stages. For example, students from certain racial and ethnic groups, including Blacks or African Americans, Hispanics or Latinos, American Indians or Alaska Natives, Native Hawaiians and other Pacific Islanders comprise ~39 percent of the college age population ([Census Bureau \(http://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml\)](http://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml) data), but earn only ~17 percent of bachelor's degrees and ~13 percent of Ph.D. degrees in the life sciences ([National Center for Science and Engineering Statistics \(https://www.nsf.gov/statistics/data-tools.cfm\)](https://www.nsf.gov/statistics/data-tools.cfm)). Additionally, while the United States has seen a significant increase in the number of Ph.D. degrees in the biomedical sciences earned by scientists from groups underrepresented in the biomedical research workforce, a corresponding increase in the ranks of the faculty in basic science departments at medical schools has not occurred (Gibbs, et al., 2016, eLife 2016, 5:e21393; Valantine, Lund & Gammie, CBE-Life Sciences Education, 2016, 15:fe4).

Several reports (see for example, [ACD Working Group on Diversity in the Biomedical Workforce, 2012 \(https://acd.od.nih.gov/documents/reports/DiversityBiomedicalResearchWorkforceReport.pdf\)](https://acd.od.nih.gov/documents/reports/DiversityBiomedicalResearchWorkforceReport.pdf); [PCAST Report, 2012 \(https://obamawhitehouse.archives.gov/sites/default/files/microsites/ostp/pcast-engage-to-excel-final\\_2-25-12.pdf\)](https://obamawhitehouse.archives.gov/sites/default/files/microsites/ostp/pcast-engage-to-excel-final_2-25-12.pdf); [From College to Careers: Fostering Inclusion of Persons with Disabilities in STEM, 2014 \(http://www.sciencemag.org/booklets/college-careers\)](http://www.sciencemag.org/booklets/college-careers); and [Increasing College Opportunity for Low Income Students, 2014 \(https://www.whitehouse.gov/sites/default/files/docs/white\\_house\\_report\\_on\\_increasing\\_college\\_opportunity\\_for\\_low-income\\_students.pdf\)](https://www.whitehouse.gov/sites/default/files/docs/white_house_report_on_increasing_college_opportunity_for_low-income_students.pdf)) recommend supporting programs that strive to recruit, train, and mentor students from nationally underrepresented groups who have an interest in STEM as a means to effectively build a diverse and competitive scientific workforce.

## Programmatic Approach

This FOA is intended to enable the community to develop and implement evidence-based approaches to biomedical research training and mentoring to enhance diversity in the biomedical research workforce. The President's Council of Advisors on Science and Technology (PCAST) report provided evidence that financial concerns and a deficit of peers from similar backgrounds can erode self-confidence and the will to remain in STEM majors ([PCAST Report, 2012 \(https://obamawhitehouse.archives.gov/sites/default/files/microsites/ostp/pcast-engage-to-excel-final\\_2-25-12.pdf\)](https://obamawhitehouse.archives.gov/sites/default/files/microsites/ostp/pcast-engage-to-excel-final_2-25-12.pdf)). NIGMS diversity enhancing institutional training grants offset the cost of appointed trainee stipends, tuition and fees, and training related expenses, including health insurance, in accordance with the approved NIH support levels. Additionally, funded programs are expected to provide activities that will build a strong cohort of research-oriented individuals while enhancing the science identity, self-efficacy, and a sense of belonging among the cohort members. Programmatic activities include, but are not limited to, providing authentic research experiences, academic enhancements, skills development, and additional mentoring - activities proven to increase persistence in STEM fields (cited in [PCAST Report, 2012 \(https://www.whitehouse.gov/sites/default/files/microsites/ostp/pcast-engage-to-excel-final\\_feb.pdf\)](https://www.whitehouse.gov/sites/default/files/microsites/ostp/pcast-engage-to-excel-final_feb.pdf) and [Graduate STEM Education for the 21st Century, 2018 \(https://www.nap.edu/catalog/25038/graduate-stem-education-for-the-21st-century\)](https://www.nap.edu/catalog/25038/graduate-stem-education-for-the-21st-century)).

Each Bridges to the Baccalaureate Research Training Program should provide high-quality training both at the associate's degree granting institution and the bachelor's degree-granting institution that equips individuals with the technical (e.g., appropriate methods, technologies, and quantitative/computational approaches), operational (e.g., independent knowledge acquisition, rigorous experimental design, and interpretation of data) and professional (e.g., management, leadership, communication, and teamwork) skills required for careers in the biomedical research workforce. Funded programs are expected to promote inclusive research training environments (i.e., institutional and departmental environments where trainees from all backgrounds feel integrated into and supported by the biomedical research community).

## Program Objective

The **Overarching Objective** of this Bridges to the Baccalaureate Research Training Program is to develop a diverse pool of research-oriented undergraduates who bridge from a community college or two-year institution and complete bachelor's degrees in STEM fields. Concurrently with the bridging and bachelor's degree completion goals, the Bridges to the Baccalaureate Research Training Program aims to develop a diverse pool of well-trained biomedical scientists, who have the following technical, operational, and professional skills:

- A broad understanding across biomedical disciplines and the skills to independently acquire the knowledge needed to advance their chosen fields;
- The ability to think critically and independently, and to identify important biomedical research questions and approaches that push forward the boundaries of their areas of study;
- A strong foundation in scientific reasoning, rigorous research design, experimental methods, quantitative and computational approaches, and data analysis and interpretation;
- A commitment to approaching and conducting biomedical research responsibly, ethically, and with integrity;
- Experience initiating, conducting, interpreting, and presenting rigorous and reproducible biomedical research with increasing self-direction;
- The ability to work effectively in teams with colleagues from a variety of cultural and scientific backgrounds, and to promote inclusive and supportive scientific research environments;
- The skills to teach and communicate scientific research methodologies and findings to a wide variety of audiences (e.g., discipline-specific, across disciplines, and the public); and
- The knowledge, professional skills and experiences required to identify and transition into careers in the biomedical research workforce (i.e., the breadth of careers that sustain biomedical research in areas that are relevant to the NIH mission).

Diversity at all levels—from the kinds of science to the regions in which it is conducted to the backgrounds of the people conducting it— contributes to excellence in research training environments and strengthens the research enterprise. This FOA is intended to support outstanding research training programs that will enhance diversity at all

levels. As part of a larger initiative to enhance diversity, the Bridges to the Baccalaureate Research Training Program supports trainees at a critical transition point in the biomedical research training pathway.

### **Program Considerations**

The Bridges to Baccalaureate Research Training Program requires strong partnerships between community colleges (or two-year colleges) and four-year baccalaureate degree granting institutions. One partner must be an institution that offers the associate degree as the highest science degree. The other institution must be a college or university granting baccalaureate degrees in disciplines relevant to the biomedical sciences. Two different scenarios are anticipated for these partnerships: (1) one baccalaureate degree granting institution as the lead applicant institution partnering with one or more associate degree granting institutions, or (2) one associate degree granting institution as the lead applicant institution partnering with one or more baccalaureate degree granting institutions. An eligible applicant or partner institution may participate in more than one Bridges to the Baccalaureate Research Training Program partnership if the multiple partnerships are strongly justified by the potential to magnify the programs' and institutions' outcomes. However, an institution may be the lead in only one Bridges to Baccalaureate Research Training Program at one time. To reinforce the strong partnerships, the Bridges to Baccalaureate Research Training Program requires the participation of at least one Program Director/Principal Investigator (PD/PI) from each partner institution. The program does not support single institutions offering both associate and baccalaureate degrees where graduates or transfers from the associate degree programs enter the baccalaureate programs, even if the students are moving to another department, school, or college.

Institutional commitment and support for the proposed training program are important elements of the application. The Bridges to the Baccalaureate Research Training Program may complement and synergize with other ongoing federally-supported research training programs at the applicant institution(s); however, the Bridges to the Baccalaureate Research Training Program goals and activities must be distinct from programs currently receiving federal support at the same institution(s). In cases where an institution has multiple NIGMS training grants, it is expected that these programs will seek to create administrative efficiencies to reduce costs and improve trainee services and outcomes.

Trainees are typically provided full-time support for two years of undergraduate studies. At institutions where other NIH undergraduate research training programs (e.g., [U-RISE](https://www.nigms.nih.gov/training/RISE/pages/RISESsampleTables.aspx) (<https://www.nigms.nih.gov/training/RISE/pages/RISESsampleTables.aspx>), [MARC](https://www.nigms.nih.gov/training/MARC/Pages/USTARAWards.aspx) (<https://www.nigms.nih.gov/training/MARC/Pages/USTARAWards.aspx>), [BUILD](https://www.nigms.nih.gov/training/dpc/Pages/build.aspx) (<https://www.nigms.nih.gov/training/dpc/Pages/build.aspx>)) exist, the Bridges to Baccalaureate trainees are expected to transition into or benefit from these training programs. For example, the trainees may receive up to two years of full-time support at the two-year institution, if the trainees bridge to an institution with other [NIH undergraduate training programs](https://www.nigms.nih.gov/training/Pages/Undergraduate-and-Predocutorial-Grant-Programs.aspx) (<https://www.nigms.nih.gov/training/Pages/Undergraduate-and-Predocutorial-Grant-Programs.aspx>). For partnerships where the baccalaureate degree granting institution does not have an NIH undergraduate diversity enhancing program, there is greater flexibility in how the two years of full-time support can be administered (e.g., one year of full-time support at the two-year institution and one year of full-time support at the baccalaureate granting institution).

NIGMS recognizes the heterogeneity of institutional settings and institutional missions. Therefore, each application must conduct a self-assessment of each participating institution that includes baseline data on enrollment, persistence, transfer rates, research experiences, and subsequent graduation rates. Specific aims and measurable objectives must be based on this institutional self-assessment and must align with the objective of the Bridges to Baccalaureate Research Training Program. The four-year partner institution must have the resources to support the trainees after transfer to facilitate successful baccalaureate degree completion in a timely fashion.

Funded programs are expected to implement evidence-based training and mentoring activities that are grounded in the literature and based on evaluations of existing relevant programs. Funded programs are expected to provide evidence of accomplishing the training objectives in progress reports and upon renewal, to make training and career outcomes publicly available, and are strongly encouraged to disseminate successful training practices to the broader community.

This FOA does not allow appointed trainees to lead an independent clinical trial but does allow them to obtain research experience in a clinical trial led by a mentor or co-mentor. NIH strongly supports training towards a career

in clinically relevant research and so gaining experience in clinical trials under the guidance of a mentor or co-mentor is encouraged.

See [Section VIII. Other Information](#) for award authorities and regulations.

## Section II. Award Information

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### Funding Instrument

Grant: A support mechanism providing money, property, or both to an eligible entity to carry out an approved project or activity.

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### Application Types Allowed

New

Resubmissions of applications submitted to this FOA

The [OER Glossary \(//grants.nih.gov/grants/guide/url\\_redirect.htm?id=11116\)](https://grants.nih.gov/grants/guide/url_redirect.htm?id=11116) and the SF424 (R&R) Application Guide provide details on these application types.

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### Clinical Trial?

Not Allowed: Only accepting applications that do not propose clinical trials

Note: Appointed trainees are permitted to obtain research experience in a clinical trial led by a mentor or co-mentor.

[Need help determining whether you are doing a clinical trial? \(https://grants.nih.gov/grants/guide/url\\_redirect.htm?id=82370\)](https://grants.nih.gov/grants/guide/url_redirect.htm?id=82370)

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### Funds Available and Anticipated Number of Awards

The number of awards is contingent upon NIH appropriations and the submission of a sufficient number of meritorious applications.

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### Award Budget

Application budgets are not limited but need to reflect the actual needs of the proposed project.

Grantees are expected to be familiar with and comply with applicable cost policies and the NRSA Guidelines ([NIH Grants Policy Statement - Institutional Research Training Grants \(//grants.nih.gov/grants/guide/url\\_redirect.htm?id=41126\)](https://grants.nih.gov/grants/guide/url_redirect.htm?id=41126)). Funds may be used only for those expenses that are directly related to and necessary for the research training and must be expended in conformance with OMB Cost Principles, the [NIH Grants Policy Statement \(//grants.nih.gov/grants/guide/url\\_redirect.htm?id=11120\)](https://grants.nih.gov/grants/guide/url_redirect.htm?id=11120), and the NRSA regulations, policies, guidelines, and conditions set forth in this document.

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### Award Project Period

The maximum project period is 5 years.

## Other Award Budget Information

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### Stipends, Tuition, and Fees

Kirschstein-NRSA awards provide stipends as a subsistence allowance to help defray living expenses during the research training experience.

NIH will contribute to the combined cost of tuition and fees at the rate in place at the time of award.

Stipend levels, as well as funding amounts for tuition and fees and the institutional allowance are announced annually in the *NIH Guide for Grants and Contracts*, and are also posted on the Ruth L. Kirschstein National Research Service Award (NRSA) [webpage \(https://researchtraining.nih.gov/resources/policy-notice\)](https://researchtraining.nih.gov/resources/policy-notice).

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### **Trainee Travel**

NIGMS recognizes the need of trainees to attend scientific meetings and/or training events, and to build professional networks. NIGMS will provide up to \$1,000 per trainee to travel to scientific meetings or research training experiences that will enhance scientific development, build science identity, create a sense of belonging in the scientific community, and build professional networks.

Trainees are required to spend at least one summer in a research training experience at the bachelor's granting institution.

Funds for the summer research experience will be provided as follows: \$3,000 per Bridges trainee, to be used in accordance with the institutional policies as a per diem for a period of up to ten weeks.

Plans for trainee travel should be well justified. Foreign travel is not allowed.

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### **Training Related Expenses**

NIGMS will provide funds to help defray other research training expenses directly related to the research training program.

The total amount of Training Related Expenses (TRE) that may be requested is limited to a maximum of \$10,000/trainee/year. The maximum cap for the TRE portion of the proposed budget is \$350,000/year.

#### **TRE funds may be used for:**

Costs associated with skills development training activities (e.g., focusing on quantitative and computational skills, problem-solving, critical thinking, scientific writing, effective communication, and project management); with curriculum or methods development (e.g., improve biomedical science education, develop novel instructional approaches, provide supplemental instruction for gateway courses; to develop course-based research experiences); with seminar speakers, who will serve as role models to the trainees; with training or mentoring interventions designed to increase persistence in research careers (e.g., those designed to increase science identity, self-efficacy and a sense of belonging in the scientific community).

In addition, funds may be used for personnel costs/staff salary. Typically, salary support for the PD/PI/co-Investigators (or in a combination of multiple PD(s)/PI(s)/co-Investigators) does not exceed 1.8 person months (i.e., 15% effort on a 12-month basis) in total, depending on the size and scope of the program.

Typically, the total combined salary support for other administrative personnel (e.g., program administrator/program coordinator and/or program assistant/clerical support) does not exceed 3.0 person months (i.e., 25% effort on a 12-month basis) depending on the size and scope of the program.

Limited program evaluation costs (typically up to \$3,000 for the 5-year training grant period) and other program-related expenses may be included with the budget for training-related expenses.

Other program-related expenses may be included within the budget for training-related expenses. These expenses must be justified as specifically required by the proposed program and must not duplicate items generally available at the applicant institutions.

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### **Indirect Costs**

Indirect Costs (also known as Facilities & Administrative [F&A] Costs) are reimbursed at 8% of modified total direct costs (exclusive of tuition and fees, consortium costs in excess of \$25,000, and expenditures for equipment), rather than on the basis of a negotiated rate agreement.

NIH grants policies as described in the [NIH Grants Policy Statement](http://grants.nih.gov/grants/guide/url_redirect.htm?id=11120) ([//grants.nih.gov/grants/guide/url\\_redirect.htm?id=11120](http://grants.nih.gov/grants/guide/url_redirect.htm?id=11120)) will apply to the applications submitted and awards made from this FOA.

## Section III. Eligibility Information

### 1. Eligible Applicants

#### Eligible Organizations

##### Higher Education Institutions

- Public/State Controlled Institutions of Higher Education
- Private Institutions of Higher Education

The following types of Higher Education Institutions are always encouraged to apply for NIH support as Public or Private Institutions of Higher Education:

- Hispanic-serving Institutions
- Historically Black Colleges and Universities (HBCUs)
- Tribally Controlled Colleges and Universities (TCCUs)
- Alaska Native and Native Hawaiian Serving Institutions
- Asian American Native American Pacific Islander Serving Institutions (AANAPISIs)

The Bridges to Baccalaureate Research Training Program requires strong partnerships between at least one community college (or two-year college) that offers the associate degree as the highest science degree and a distinct four-year baccalaureate degree granting institution.

An institution may be the lead in only one Bridges to Baccalaureate Research Training Program at one time.

A signed letter is required from the Provost or similar official with institution-wide responsibility verifying the eligibility of the applicant institution(s) at the time of application submission according to the eligibility criteria indicated above. See the application instructions for the required “Letters of Support” attachment in [Section IV.2](#).

The sponsoring institution must assure support for the proposed program.

#### Foreign Institutions

Non-domestic (non-U.S.) Entities (Foreign Institutions) **are not** eligible to apply.

Non-domestic (non-U.S.) components of U.S. Organizations **are not** eligible to apply.

#### Required Registrations

##### Applicant Organizations

Applicant organizations must complete and maintain the following registrations as described in the SF 424 (R&R) Application Guide to be eligible to apply for or receive an award. All registrations must be completed prior to the application being submitted. Registration can take 6 weeks or more, so applicants should begin the registration process as soon as possible. The [NIH Policy on Late Submission of Grant Applications](http://grants.nih.gov/grants/guide/notice-files/NOT-OD-15-039.html) ([//grants.nih.gov/grants/guide/notice-files/NOT-OD-15-039.html](http://grants.nih.gov/grants/guide/notice-files/NOT-OD-15-039.html)) states that failure to complete registrations in advance of a due date is not a valid reason for a late submission.

- [Dun and Bradstreet Universal Numbering System \(DUNS\)](http://fedgov.dnb.com/webform) (<http://fedgov.dnb.com/webform>) - All registrations require that applicants be issued a DUNS number. After obtaining a DUNS number, applicants can begin

both SAM and eRA Commons registrations. The same DUNS number must be used for all registrations, as well as on the grant application.

- [System for Award Management \(SAM\)](https://www.sam.gov/portal/public/SAM/) (<https://www.sam.gov/portal/public/SAM/>) – Applicants must complete and maintain an active registration, **which requires renewal at least annually**. The renewal process may require as much time as the initial registration. SAM registration includes the assignment of a Commercial and Government Entity (CAGE) Code for domestic organizations which have not already been assigned a CAGE Code.
  - [NATO Commercial and Government Entity \(NCAGE\) Code](https://grants.nih.gov/grants/guide/url_redirect.htm?id=11176) ([https://grants.nih.gov/grants/guide/url\\_redirect.htm?id=11176](https://grants.nih.gov/grants/guide/url_redirect.htm?id=11176)) – Foreign organizations must obtain an NCAGE code (in lieu of a CAGE code) in order to register in SAM.
- [eRA Commons](https://grants.nih.gov/grants/guide/url_redirect.htm?id=11123) ([https://grants.nih.gov/grants/guide/url\\_redirect.htm?id=11123](https://grants.nih.gov/grants/guide/url_redirect.htm?id=11123)) - Applicants must have an active DUNS number to register in eRA Commons. Organizations can register with the eRA Commons as they are working through their SAM or Grants.gov registration, but all registrations must be in place by time of submission. eRA Commons requires organizations to identify at least one Signing Official (SO) and at least one Program Director/Principal Investigator (PD/PI) account in order to submit an application.
- [Grants.gov](https://grants.nih.gov/grants/guide/url_redirect.htm?id=82300) ([https://grants.nih.gov/grants/guide/url\\_redirect.htm?id=82300](https://grants.nih.gov/grants/guide/url_redirect.htm?id=82300)) – Applicants must have an active DUNS number and SAM registration in order to complete the Grants.gov registration.

### **Program Directors/Principal Investigators (PD(s)/PI(s))**

All PD(s)/PI(s) must have an eRA Commons account. PD(s)/PI(s) should work with their organizational officials to either create a new account or to affiliate their existing account with the applicant organization in eRA Commons. If the PD/PI is also the organizational Signing Official, they must have two distinct eRA Commons accounts, one for each role. Obtaining an eRA Commons account can take up to 2 weeks.

### **Eligible Individuals (Program Director/Principal Investigator)**

Any individual(s) with the skills, knowledge, and resources necessary to carry out the proposed research training program as the Training Program Director/Principal Investigator (Training PD/PI) is invited to work with his/her organization to develop an application for support. Individuals from underrepresented racial and ethnic groups as well as individuals with disabilities are always encouraged to apply for NIH support.

Applicants should visit the [Multiple Program Director/Principal Investigator Policy](https://grants.nih.gov/grants/multi_pi/index.htm) ([https://grants.nih.gov/grants/multi\\_pi/index.htm](https://grants.nih.gov/grants/multi_pi/index.htm)) and submission details in the Senior/Key Person Profile (Expanded) Component of the SF 424 (R&R) Application Guide.

As described in the instructions for the Training Program Director(s)/Principal Investigator(s) (PD(s)/PI(s)) in [Section IV.2](#) below, applicants to the Bridges to the Baccalaureate Research Training Program must designate a PD/PI from each participating institution (lead grantee and partner institutions). The PD/PI of the lead institution must be designated as the contact PD/PI. Applications that do not meet these requirements will be considered noncompliant and will not be reviewed.

The contact PD/PI is expected to have a full-time appointment at the applicant institution unless extremely well-justified. If the full-time status of the contact PD/PI changes after the award, the institution must obtain prior program approval to appoint a new PD/PI or request a deviation from the full-time rule. The ideal Bridges to the Baccalaureate Research Training Program leadership team should have an established investigator in the biomedical sciences who can provide both administrative and scientific leadership to the development and implementation of the proposed program. Additionally, the team should consider including individuals with experience in student counseling, science of education, program evaluation, mentoring, and university administration.

The PDs/PIs will be responsible for the selection and appointment of trainees to the approved research training program, and for the overall direction, management, administration, and evaluation of the program. The PDs/PIs will be expected to monitor and assess the program and submit all documents and reports as required. The PDs/PIs have responsibility for the day-to-day administration of the program and are responsible for appointing members of the Advisory Committee (when applicable) and using their recommendations to determine the appropriate allotment of funds.

## 2. Cost Sharing

This FOA does not require cost sharing as defined in the [NIH Grants Policy Statement](https://grants.nih.gov/grants/guide/notice-files/NOT-OD-11-101.html). ([//grants.nih.gov/grants/guide/url\\_redirect.htm?id=11126](https://grants.nih.gov/grants/guide/url_redirect.htm?id=11126))

## 3. Additional Information on Eligibility

### Number of Applications

The NIH will not accept duplicate or highly overlapping applications under review at the same time. This means that the NIH will not accept:

- A new (A0) application that is submitted before issuance of the summary statement from the review of an overlapping new (A0) or resubmission (A1) application.
- A resubmission (A1) application that is submitted before issuance of the summary statement from the review of the previous new (A0) application.
- An application that has substantial overlap with another application pending appeal of initial peer review (see [NOT-OD-11-101](https://grants.nih.gov/grants/guide/notice-files/NOT-OD-11-101.html) ([//grants.nih.gov/grants/guide/notice-files/NOT-OD-11-101.html](https://grants.nih.gov/grants/guide/notice-files/NOT-OD-11-101.html))).

### Preceptors/Mentors (Participating Faculty)

The selected faculty should be trained researchers in the biomedical sciences. When building a training team, programs should include faculty who are committed to training, mentoring, and providing supportive and inclusive research environments. Programs are encouraged to build a diverse team of preceptors/mentors that includes, for example, faculty from underrepresented groups ([NIH's Interest in Diversity](https://grants.nih.gov/grants/guide/notice-files/NOT-OD-18-210.html) (<https://grants.nih.gov/grants/guide/notice-files/NOT-OD-18-210.html>)), women, and faculty at different career stages (i.e., early stage as well as senior faculty).

### Trainees

Trainees must be a citizen or a noncitizen national of the United States or have been lawfully admitted for permanent residence at the time of appointment. Additional details on citizenship, training period, and aggregate duration of support are available in the [NIH Grants Policy Statement](https://grants.nih.gov/grants/guide/notice-files/NOT-OD-18-210.html) ([//grants.nih.gov/grants/guide/url\\_redirect.htm?id=61131](https://grants.nih.gov/grants/guide/url_redirect.htm?id=61131)).

Trainees should be research-oriented individuals enrolled in a major leading to a baccalaureate degree in a STEM discipline that will prepare the trainee for a biomedical career. All trainees are required to pursue their training full time, as specified by the sponsoring institution in accordance with its own policies. Appointments are normally made in 12-month increments for 1-2 years, and no trainee may be appointed for less than nine months, except with prior approval of the NIH awarding unit.

## Section IV. Application and Submission Information

### 1. Requesting an Application Package

The application forms package specific to this opportunity must be accessed through ASSIST, Grants.gov Workspace or an institutional system-to-system solution. Links to apply using ASSIST or Grants.gov Workspace are available in [Part 1](#) of this FOA. See your administrative office for instructions if you plan to use an institutional system-to-system solution.

### 2. Content and Form of Application Submission

It is critical that applicants follow the Training (T) Instructions in the [SF424 \(R&R\) Application Guide](https://grants.nih.gov/grants/guide/notice-files/NOT-OD-18-210.html) ([//grants.nih.gov/grants/guide/url\\_redirect.htm?id=12000](https://grants.nih.gov/grants/guide/url_redirect.htm?id=12000)) except where instructed in this funding opportunity announcement to do otherwise. Conformance to the requirements in the Application Guide is required and strictly enforced. Applications that are out of compliance with these instructions may be delayed or not accepted for review.

### Page Limitations

All page limitations described in the SF424 (R&R) Application Guide and the [Table of Page Limits](https://grants.nih.gov/grants/guide/notice-files/NOT-OD-18-210.html) ([//grants.nih.gov/grants/guide/url\\_redirect.htm?id=61134](https://grants.nih.gov/grants/guide/url_redirect.htm?id=61134)) must be followed.

## Instructions for Application Submission

The following section supplements the instructions found in the SF424 (R&R) Application Guide and should be used for preparing an application to this FOA.

### SF424(R&R) Cover

Follow all instructions provided in the SF424 (R&R) Application Guide, with the following modifications:

**Descriptive Title of Applicant's Project:** Use the format "Bridges to the Baccalaureate Research Training Program at (Name of Institution)".

### SF424(R&R) Project/Performance Site Locations

Follow all instructions provided in the SF424 (R&R) Application.

### SF424 (R&R) Other Project Information

Follow all instructions provided in the SF424 (R&R) Application, with the following additional modifications:

**Are Human Subjects Involved:** Check "No" unless the training program itself requires the trainees to take a workshop or course that will involve human subjects.

**Are Vertebrate Animals Used:** Check "No" unless the training program itself requires the trainees to take a workshop or course that will involve vertebrate animals.

**Project Summary/Abstract.** Provide an overview of the entire program. Include the mission, objectives, rationale and design of the research training program. Highlight key activities in the training plan that promote skills development and the successful transition from a two-year into a four-year institution and completion of a bachelor's degree in a biomedical field. Indicate the intended trainee outcomes.

**Other Attachments. Advisory Committee (1-page maximum).** An advisory committee is not a required component of a training program. However, if an Advisory Committee is intended, provide a plan for the appointment of an Advisory Committee to monitor progress of the training program. The roles, responsibilities, and desired expertise of committee members, frequency of committee meetings, and other relevant information should be included. Describe how the Advisory Committee will assess the overall effectiveness of the program. Advisory Committee members should not be identified or contacted prior to receiving an award. Please name your file "Advisory\_Committee.pdf".

**Recruitment Plan to Enhance Diversity (3-page maximum).** The applicant must provide the recruitment plan to enhance diversity. The application should include outreach strategies and activities designed to recruit potential training program candidates who are from diverse backgrounds, including underrepresented racial and ethnic groups, students from low socio-economic backgrounds, and individuals with disabilities (see [NIH's Interest in Diversity \(https://grants.nih.gov/grants/guide/notice-files/NOT-OD-18-210.html\)](https://grants.nih.gov/grants/guide/notice-files/NOT-OD-18-210.html)). Applicants are encouraged to consult the NIGMS webpage for strategies to [enhance diversity in training programs \(https://www.nigms.nih.gov/training/diversity/pages/approaches.aspx\)](https://www.nigms.nih.gov/training/diversity/pages/approaches.aspx) when designing their plans. Describe the specific efforts to be undertaken by the training program and how these might coordinate with trainee recruitment efforts of the institution(s). Centralized institutional efforts alone will not satisfy the requirement to recruit individuals from underrepresented groups. Participating faculty are expected to be actively involved in recruitment efforts. Please name the file "Recruitment\_Plan.pdf". If this attachment is not included, the application will be considered incomplete and will not be reviewed.

**Trainee Retention Plan (3-page maximum).** The applicant must provide a *Trainee Retention Plan*. The trainee retention plan must describe efforts to sustain the scientific interests as well as the academic and research progress of trainees from all backgrounds within a program (i.e., retention). Applicants are encouraged to consult the NIH's extramural diversity website to identify [promising retention practices \(https://extramural-diversity.nih.gov/building-participation/recruitment-retention\)](https://extramural-diversity.nih.gov/building-participation/recruitment-retention) and to use evidence-based practices for retention with the recognition that the variety of trainee backgrounds and experiences may necessitate the need to tailor retention approaches. Describe the specific efforts to be undertaken by the training program and how these might coordinate with trainee retention efforts of the institutions. Centralized institutional efforts alone will not satisfy the requirement to implement robust and successful mechanisms to retain all trainees (e.g., participating

faculty are expected to be actively involved in trainee retention efforts). Please name the file "Retention\_Plan.pdf". If this attachment is not included, the application will be considered incomplete and will not be reviewed.

*Outcomes Data Collection and Storage Plan (2-page maximum).* The applicant must provide a plan to track the outcomes for all supported trainees for a minimum of 15 years beyond the trainee's participation in the program. Programs are encouraged to make the aggregate outcome data available on the grantee institution's website. If the applicant intends to make the data available, describe how the aggregate data will be de-identified before public posting. The applicant must include a strategy to ensure the secure storage and preservation of program data and outcomes. Describe how the data will be centralized, safeguarded, and retrievable during leadership changes. Please name the file "Data\_Collection\_Storage\_Plan.pdf". If this attachment is not included, the application will be considered incomplete and will not be reviewed.

*Dissemination Plan (1-page maximum).* The application must provide a specific plan to disseminate nationally any findings or materials developed under the auspices of the program. Examples of dissemination may include data or materials from successful training or mentoring interventions via web postings, presentations at scientific meetings, and/or workshops. Please name the file "Dissemination\_Plan.pdf". If this attachment is not included, the application will be considered incomplete and will not be reviewed.

*Articulation Agreement(s).* The application must provide specific and detailed information regarding articulation agreements for the Bridges to Baccalaureate Research Training Program. The articulation agreements attachment is to provide evidence that there is synergy between the participating institutions in terms of transfer of courses and credits from these institution(s). Please name the file "Articulation\_Agreement.pdf". If this attachment is not included, the application will be considered incomplete and will not be reviewed.

*The filename provided for each "Other Attachment" will be the name used for the bookmark in the electronic application in eRA Commons.*

## **SF424(R&R) Senior/Key Person Profile Expanded**

Follow all instructions provided in the SF424 (R&R) Application, with the following modifications:

**Biographical sketch.** The personal statement should describe a commitment to scientific rigor, research training, mentoring, as well as to promoting inclusive and supportive scientific environments.

## **PHS 398 Cover Page Supplement**

Follow all instructions provided in the SF424 (R&R) Application.

## **PHS 398 Training Subaward Budget Attachment(s)**

Follow all instructions provided in the SF424 (R&R) Application Guide.

## **Training Budget**

Follow all instructions provided in the SF424 (R&R) Application Guide.

## **PHS 398 Research Training Program Plan**

The PHS 398 Research Training Program Plan Form is comprised of the following sections:

- Training Program
- Faculty, Trainees, and Training Record
- Other Training Program Sections
- Appendix- Note that the Appendix should only be used in circumstances covered in the NIH policy on appendix materials or if the FOA specifically instructs applicants to do so.

Follow all instructions provided in the SF424 (R&R) Application Guide with the following additional modifications:

Particular attention must be given to the required [Training Data Tables](https://grants.nih.gov/grants/guide/url_redirect.htm?id=61169) ([//grants.nih.gov/grants/guide/url\\_redirect.htm?id=61169](https://grants.nih.gov/grants/guide/url_redirect.htm?id=61169)) for new undergraduate programs ([Training Tables 2, 3, 4, 5C, and 8D Part II](https://grants.nih.gov/grants/forms/data-tables.htm) (<https://grants.nih.gov/grants/forms/data-tables.htm>)). In the Program Plan, the application should summarize key data from the tables that highlight the characteristics of the applicant pool,

participating faculty, institutional support, student outcomes, and other factors that contribute to the overall training environment of the program.

## Training Program

The “Program Plan” attachment is required and must adhere to the NIH Table of Page Limits, as well as the organization and instructions provided below. Do not follow the organization and instructions provided in the SF424 (R&R) application guide for the Program Plan attachment; instead applicants must use the instructions below. Start each section with the appropriate heading.

### Program Plan

#### *Rationale, Mission, Objectives, and Overall Training Plan*

Applications must include the rationale for the proposed diversity enhancing training program as well as the feasibility of success in the context of the trainee pool and institutional setting. The application should describe how the Bridges to the Baccalaureate Research Training Program will develop a diverse pool of research-oriented undergraduates who bridge from a community college or two-year institution and complete bachelor's degrees in STEM fields as delineated in the [Program Objective](#). Specifically, the application should describe the following:

- The rationale for the proposed Bridges to the Baccalaureate program diversity enhancing research training program. Provide a justification for the selection of the partnering institutions. Describe the proximity of the institutions and any ongoing collaborations. The application should describe the current institutional efforts among the proposed consortium members to promote diversity and to create inclusive training environments. Explain how the Bridges to the Baccalaureate Research Training Program will enhance, but not duplicate, these efforts. The application should describe how the program will improve the training environment and not simply provide financial support to trainees from diverse backgrounds.
- Institutional self-assessment. The application must demonstrate the presence across the Bridges consortium of a sufficient number of STEM-focused trainees from diverse backgrounds, including those from underrepresented groups (applicants are encouraged to use the [Suggested Table Formats A.1, A.2, and A.3](https://www.nigms.nih.gov/training/RISE/Pages/U-RISE-Sample-Format-Tables-for-Competing-New-Type-1-Applications.aspx) (<https://www.nigms.nih.gov/training/RISE/Pages/U-RISE-Sample-Format-Tables-for-Competing-New-Type-1-Applications.aspx>)), and of faculty mentors/participating faculty in the appropriate biomedical fields ([Table 2](https://grants.nih.gov/grants/forms/data-tables.htm) (<https://grants.nih.gov/grants/forms/data-tables.htm>)). The application should also demonstrate the existence of sufficient resources to achieve the training objectives ([Table 3 and 4](https://grants.nih.gov/grants/forms/data-tables.htm) (<https://grants.nih.gov/grants/forms/data-tables.htm>)).
- The consortium's current bridging and bachelor's completion baseline data. Applicants should indicate the number of students pursuing relevant STEM degrees who currently transfer from the two-year to the four-year institution(s) for the institutions within the proposed Bridges consortium. Applicants must provide baseline baccalaureate completion rates of transfer students from participating institutions in the relevant biomedical disciplines ([Suggest Table Format A.3](https://www.nigms.nih.gov/training/RISE/Pages/U-RISE-Sample-Format-Tables-for-Competing-New-Type-1-Applications.aspx) (<https://www.nigms.nih.gov/training/RISE/Pages/U-RISE-Sample-Format-Tables-for-Competing-New-Type-1-Applications.aspx>)).
- The training mission (i.e., broad statement of purpose of the program) and objectives (i.e., specific measurable outcomes the program intends to achieve). The program-specific mission and objectives should align with the [Overarching Objective](#) described above. The baseline data, the trainee pool, and institutional context should inform the short-, medium-, and long-term objectives and the design of the proposed program activities. The objectives should build on the outcome data by describing the anticipated increase in the upcoming funding cycle in the rate of bridging of its trainees from the two-year to the four-year institution and in bachelor's completion in a biomedical field.
- How the courses, structured activities, and research experiences at the two-year and four-year institution will accomplish the specific training mission and objectives. Explain how these training activities are designed to develop the technical, operational, and professional skills of trainees. The application must include the “Required Training Activities” appendix to provide material for required training activities and may use the “Elective Activities” appendix for up to four additional activities;
- The mechanisms to ensure that trainees participate in authentic research experiences throughout the training period. Applications that propose classroom-centered research training activities should describe the

learning objectives, course attributes, participating faculty, training frequency, and expected trainee outcomes. If trainee research experiences are proposed to include other institutions, describe how the PD(s)/PI(s) will interact with the research mentors to promote trainee success;

- How the training activities will employ evidence-based approaches to trainee learning, mentorship, inclusion, and professional development;
- The activities that will build a strong cohort of research-oriented individuals while enhancing the science identity, self-efficacy, and a sense of belonging among the cohort members;
- The trainees' academic background needed to pursue the proposed research training and plans to accommodate differences in preparation among trainees;
- Representative examples of training programs for individual trainees. Examples may include degree requirements, didactic courses, laboratory experiences, and program specific training or mentoring activities. Describe how each trainee will be guided, and how the trainee's performance will be monitored and evaluated;
- Institutions with other funded training programs must justify the need for the Bridges to the Baccalaureate Research Training Program and explain the ways that the Bridges to the Baccalaureate Research Training Program plan is distinct from, but will share resources and synergize with, other training programs at the same institution (i.e., training programs listed in [Table 3 \(https://grants.nih.gov/grants/forms/data-tables.htm\)](https://grants.nih.gov/grants/forms/data-tables.htm)). See the "[Program Considerations](#)" Section I, above;
- How the training activities will be available to other trainees in the program(s), department(s) or institution(s) from which the supported trainees are drawn; and
- For multi-disciplinary and/or multi-departmental programs, indicate how the individual disciplinary and/or departmental components of the program are integrated and coordinated and how they will relate to an individual trainee's experience.
- Description of the steps taken to ensure timely attainment of the baccalaureate degree. Expand upon the articulation agreement(s) and other program activities designed for timely baccalaureate degree attainment.

#### *Career Development*

The application should describe the following:

- How trainees will be provided with support as well as adequate, appropriate, and timely information regarding the steps required to transition into the next phase of the biomedical research workforce pathway (e.g., bridge from two-year to four-year institution and complete a bachelor's degree in a biomedical field);
- How the trainees will be sponsored or mentored by individuals who will enhance their career opportunities (e.g., contacts at national meetings, contact with members of scientific societies, and the research community);
- What additional activities will take place in order to interest trainees in and equip them for careers in the biomedical research workforce;
- How the pool of potential applicants and trainees will be provided with information about the outcomes of former trainees of the program (e.g., on publicly accessible websites) and about the overall biomedical research workforce employment landscape.

#### *Program Oversight, Participating Faculty Selection, and Mentor Training*

- The application should include the planned strategy and administrative structure to oversee and monitor the program and to ensure appropriate and timely trainee progress (the application may include the "Evaluation and Assessment Instruments" Appendix to provide blank rubrics or forms). The application should describe how the participating faculty are trained to ensure the use of evidence-based teaching, research training, and mentoring practices that promote the development of trainees from all backgrounds, including trainees from underrepresented groups in the biomedical sciences ([NIH's Interest in Diversity \(https://grants.nih.gov/grants/guide/notice-files/NOT-OD-18-210.html\)](https://grants.nih.gov/grants/guide/notice-files/NOT-OD-18-210.html)). The application should describe the following:
  - How the program will ensure that participating faculty employ the highest standards of scientific rigor and impart those standards to their trainees;
  - How the program will ensure that participating faculty reinforce and augment the curricular material on responsible conduct of research and methods for enhancing reproducibility;
  - The mechanism for matching trainees with the appropriate participating faculty research mentors;

- The mechanism for onboarding research mentors;
- How the program will ensure that participating faculty engage in activities that promote trainee career development (including but not limited to the utilization of Individual Development Plans) and fulfill the need of the trainees to bridge and obtain the baccalaureate in a timely fashion with the skills, credentials, and experiences to contribute to the biomedical research workforce or to continue related academic pursuits;
- A mechanism to monitor mentoring, including oversight of the effectiveness of the trainee/participating faculty match, and a plan for removing faculty displaying unacceptable mentorship qualities from the training program (the application may include the Appendix labeled “Conflict Resolution Protocols” to provide details of the plan);
- If a program coordinator or administrator position is planned to enhance oversight, a description of the person's administrative capabilities that are essential to coordinate the program must be included in the application; and
- A mechanism for the coordination and communication among multiple sites to ensure timely trainee progress.

*Institutional and Departmental Commitment to the Program*

The application should describe how the level of institutional and departmental commitment to research and training excellence will promote the success of the trainees and training program. A letter providing assurances of the institutional commitment must be included in the Letters of Support section of the application. Detailed instructions on the types of support for NIGMS research training programs are found below in the *Letters of Support* section of the FOA.

Additional examples of institutional commitment specific to undergraduate biomedical research training may include, but are not limited to:

- Support of an Office of Undergraduate Research;
- Undergraduate biomedical research counting towards course credit hours and/or degree requirements;
- Funds and protected time for faculty to develop course-based undergraduate research experiences that will fulfill degree requirements;
- Faculty teaching models that support integrated/interdisciplinary STEM curricula and activities;
- Funds to sustain research-oriented courses;
- Support of research training administrators and coordinators;
- Supervised student access to research facilities during non-standard work hours; and
- Personnel dedicated to undergraduate student success and oversight (e.g., tutoring and academic support services, infrastructure to identify students in need) at the two-year and four-year institutions.

*Training Program Director(s)/Principal Investigator(s) (PD(s)/PI(s))*

The application should describe how the required multiple Training Program PD(s)/PI(s) will promote the success of the trainees and training program. The multiple PD(s)/PI(s) (MPI) approach is to bring a unique perspective and skill set that will enhance training as described in the [Eligible Individuals](#) section above. The application should expand on the information in the biosketch(es) to address how the multiple PD/PI team has:

- The administrative and training experience to provide strong leadership, direction, management, and administration of the proposed research training program;
- The time to commit sufficient effort to ensure the program's success given other professional obligations (the application should indicate the program director's effort in person months in the proposed program);
- At least one member who has scientific expertise in the biomedical sciences and who has a record of using rigorous and transparent methods in experimental design, data collection, analysis and reporting;
- A demonstrated commitment to training the next generation of the biomedical research workforce, leading recruitment efforts to enhance diversity, and fostering inclusive research environments. As with all participating faculty, the multiple PD(s)/PI(s) team should have received training on how to effectively mentor trainees from all backgrounds, e.g., trainees from groups underrepresented in the biomedical sciences ([NIH's Interest in Diversity \(https://grants.nih.gov/grants/guide/notice-files/NOT-OD-18-210.html\)](https://grants.nih.gov/grants/guide/notice-files/NOT-OD-18-210.html)); and
- The application must also describe the administrative structure and leadership succession plan for critical positions in this multiple PD(s)/PI(s) structure.

*Preceptors/Mentors (Participating Faculty)*

The application should describe how the participating faculty will promote the success of the trainees and training program. Describe how the program has or will build a diverse team of participating faculty (e.g., individuals from underrepresented backgrounds ([NIH's Interest in Diversity \(https://grants.nih.gov/grants/guide/notice-files/NOT-OD-18-210.html\)](https://grants.nih.gov/grants/guide/notice-files/NOT-OD-18-210.html)), women, and faculty at different career stages) to help trainees gain access to potential role models within the training program and to enhance the excellence of the training environment. Applicants should summarize and expand on the material presented in the [Training Table 2 and 4 \(https://grants.nih.gov/grants/forms/data-tables.htm\)](https://grants.nih.gov/grants/forms/data-tables.htm) and the biosketches. The application should indicate who among the participating faculty will be available to the trainees during the academic year and/or the summer months. The application should address how the participating faculty:

- Have sufficient time to commit to training given their other professional obligations;
- Receive training in effective, evidence-based mentoring and teaching practices;
- Cooperate, interact, and collaborate (which can include joint sponsorship of trainee research);
- Promote the development of trainee skills in approaches to rigorous experimental design, methods of data collection, data analysis and interpretation, and reporting;
- Provide opportunities for trainees to initiate, conduct, interpret, and present rigorous, reproducible, and responsible biomedical research with increasing self-direction;
- Demonstrate a commitment to effective mentoring and to promoting inclusive, safe, and supportive scientific and training environments; and
- Are evaluated as mentors and teachers.

#### Trainee Positions, Recruitment, Retention

Through the narrative and summaries of the information presented in the required [Training Tables \(https://grants.nih.gov/grants/forms/data-tables.htm\)](https://grants.nih.gov/grants/forms/data-tables.htm) and the attachments, the following areas relevant to trainees should be addressed:

- Expand upon the recruitment plan to enhance diversity (provided in Other Attachments) and explain how it will identify and recruit a diverse pool of potential candidates (with a focus on identifying effective recruitment strategies for individuals from underrepresented groups in the biomedical sciences, [NIH's Interest in Diversity \(https://grants.nih.gov/grants/guide/notice-files/NOT-OD-18-210.html\)](https://grants.nih.gov/grants/guide/notice-files/NOT-OD-18-210.html));
- Describe the plans for a holistic candidate review process to identify research-oriented undergraduates (i.e., a process that considers metrics beyond grade point average, and standardized test scores);
- Provide a strong justification for the number of requested trainee positions in the context of the training grant eligible pool and other training programs at the institution and specify the number from each participating two-year institution(s);
- Define and justify the selection and appointment criteria for trainees in the training program (appointment procedure protocols must be provided in the "Trainee Selection and Appointment Procedures" appendix); and
- Expand upon the trainee retention plan (provided in the Other Attachments) and describe how it will promote the progression and success of all trainees throughout their training.

#### Training Outcomes

This section is intended to provide previous outcomes of any prior activities involving bridging community college students to bachelor's degree institutions. The application should include information below recent outcomes through narrative descriptions and a summary of the data presented in the [Training Tables \(https://grants.nih.gov/grants/forms/data-tables.htm\)](https://grants.nih.gov/grants/forms/data-tables.htm). Although the training tables for new applications only allow for five years of recent graduate outcomes, when relevant, the application may describe up to 15 years of outcomes in the narrative. The application should describe the following:

- Aggregate data on the diversity of the training grant eligible student pool (see [NIH's Interest in Diversity \(https://grants.nih.gov/grants/guide/notice-files/NOT-OD-18-210.html\)](https://grants.nih.gov/grants/guide/notice-files/NOT-OD-18-210.html));
- The rate of bridging and baccalaureate degree attainment ([Suggested Table Formats B.1, B.2, or B.3 \(https://www.nigms.nih.gov/training/RISE/Pages/U-RISE-Sample-Format-Tables-for-Competing-New-Type-1-Applications.aspx\)](https://www.nigms.nih.gov/training/RISE/Pages/U-RISE-Sample-Format-Tables-for-Competing-New-Type-1-Applications.aspx)) at the participating institutions. The application should include outcome data regarding the number of training grant eligible students who (1) bridged to a four-year college and graduated with a baccalaureate degree in a STEM field (obtained goal), (2) are still enrolled and on track to graduate (in

training), or (3) did not bridge or obtain a baccalaureate degree (attrition). New programs should provide data for all training grant eligible students. For previous NIGMS Bridges to the Baccalaureate programs, the data may be provided for previous participants and for institutional comparator groups (e.g., students with similar demographics and aptitude metrics who did not participate in the program);

- o The time-to-degree for recent graduates ([Suggested Table Formats A.3 \(https://www.nigms.nih.gov/training/RISE/Pages/U-RISE-Sample-Format-Tables-for-Competing-New-Type-1-Applications.aspx\)](https://www.nigms.nih.gov/training/RISE/Pages/U-RISE-Sample-Format-Tables-for-Competing-New-Type-1-Applications.aspx)). In the narrative, clearly explain how the time-to-degree was calculated, including the start and endpoints. New programs should provide data for training grant eligible students. For previous NIGMS Bridges to the Baccalaureate programs, the data may be provided for previous participants and for institutional comparator groups (e.g., students with similar demographics and aptitude metrics who did not participate in the program); and
- o If the applicant institution had a research education program involving bridging community college students to bachelor's degree institutions, the applicant should provide evidence that former participants conducted rigorous research that advanced scientific knowledge and/or technologies and other measures of scientific accomplishment appropriate to the field, such as participating in summer research experiences ([Suggested Table Formats B.1, B.2, or B.3 \(https://www.nigms.nih.gov/training/RISE/Pages/U-RISE-Sample-Format-Tables-for-Competing-New-Type-1-Applications.aspx\)](https://www.nigms.nih.gov/training/RISE/Pages/U-RISE-Sample-Format-Tables-for-Competing-New-Type-1-Applications.aspx)), presentations at research symposia or national meetings (describe in the narrative), publications ([Training Table 5C \(https://grants.nih.gov/grants/funding/datatables/Instruc\\_New\\_Undergrad\\_Training.pdf\)](https://grants.nih.gov/grants/funding/datatables/Instruc_New_Undergrad_Training.pdf)), receiving fellowships, or matriculating into research-focused graduate programs ([Training Table 8D \(https://grants.nih.gov/grants/forms/data-tables.htm\)](https://grants.nih.gov/grants/forms/data-tables.htm) Part II and [Suggested Table Formats B.1, B.2, or B.3 \(https://www.nigms.nih.gov/training/RISE/Pages/U-RISE-Sample-Format-Tables-for-Competing-New-Type-1-Applications.aspx\)](https://www.nigms.nih.gov/training/RISE/Pages/U-RISE-Sample-Format-Tables-for-Competing-New-Type-1-Applications.aspx)).

#### *Program Evaluation and Dissemination*

NIGMS funded training programs must conduct ongoing evaluations to monitor the success of the activities. The application may include the "Evaluation and Assessment Instruments" appendix to provide blank survey instruments, rubrics or forms. The evaluation plan should describe the following:

- o The evaluation or assessment process to determine whether the overall program is effective in meeting its training mission and objectives;
- o The mechanism for determining whether the research training climate is inclusive, safe, and supportive of trainee development;
- o The methods, metrics, and timeline to determine whether the program is effective in meeting its objectives with respect to the trainees' development;
- o Characteristics of the data to be collected (e.g., demographics, intent to pursue a science degree, bridging to a four-year college, degree attainment, acceptance into a research focused graduate program, publications, grant attainment);
- o If possible, a comparator group (e.g., individuals with similar demographics and aptitude metrics who are at a similar training level and will not participate in program activities). If applicants are not able to identify a comparator group, provide the framework for determining whether the program activities were effective and did not simply recruit talented individuals on a successful trajectory;
- o The plans for being responsive to internal and external outcomes analyses, critiques, surveys and evaluations. Programs are expected to obtain feedback from the trainees about the effectiveness of the activities using confidential methods;
- o How the program will effectively track outcomes while ensuring the data collection and storage methods will be safeguarded and preserved by briefly expanding upon the "*Outcomes Data Collection and Storage Plan*" attachment; and
- o How the program will inform prospective trainees and the broader research training community about the program outcomes by expanding upon the information in the "*Dissemination Plan*" attachment.

#### *Plan for Instruction in the Responsible Conduct of Research*

Individuals are required to comply with the instructions for Plan for Instruction in the Responsible Conduct of Research as provided in the SF424 (R&R) Application Guide, with the following additional instructions:

Describe how the Responsible Conduct of Research (RCR) components are well integrated into the overall curriculum, i.e., how they are taught at multiple stages of trainee development and in a variety of formats and contexts. Explain how the teaching of RCR synergizes with elements of the curriculum designed to enhance the trainees' ability to conduct rigorous and reproducible research. Describe how all participating faculty will reiterate and augment key elements of responsible conduct when trainees are performing mentored research in their laboratories.

### **Plan for Instruction in Methods for Enhancing Reproducibility**

Applicants are required to provide a Plan for Instruction in Methods for Enhancing Reproducibility using the following instructions:

A "Plan for Instruction in Methods for Enhancing Reproducibility" attachment is required (not to exceed three pages). The plan must describe how trainees will be instructed in principles important for enhancing research reproducibility including, at a minimum, critical evaluation of foundational research underlying a project, rigorous experimental design and data interpretation, consideration of relevant biological variables such as sex, authentication of key biological and/or chemical resources, data and material sharing, record keeping, and transparency in reporting. Applicants are encouraged to consult the [NIGMS clearinghouse for training modules to enhance data reproducibility \(https://www.nigms.nih.gov/training/pages/clearinghouse-for-training-modules-to-enhance-data-reproducibility.aspx\)](https://www.nigms.nih.gov/training/pages/clearinghouse-for-training-modules-to-enhance-data-reproducibility.aspx) and other resources when developing the plans. Describe how instruction strategies are sufficiently well integrated into the overall curriculum, that is, how they are taught at multiple stages of trainee development and in a variety of formats and contexts. Describe how all participating faculty will reiterate and augment key elements of methods for enhancing scientific rigor and reproducibility when trainees are performing research in their laboratories.

Faculty, Trainees, And Training Record Section

### **Participating Faculty Biosketches**

Participating faculty should provide a personal statement within the biosketches that describes the appropriateness of their research background for the proposed training program, and their commitment to the following:

- Training, mentoring, and promoting inclusive, safe, and supportive research environments;
- Maintaining a record of, and providing training in, rigorous and unbiased experimental design, methodology, analysis, interpretation and reporting of results;
- Supporting trainees participating in activities required to identify and transition into careers in the biomedical research workforce that are consistent with the trainees' skills, interests, and values; and
- Fulfilling the need of the trainees to bridge and to complete the bachelor's degree in a timely fashion with the skills, credentials, and experiences to contribute to the biomedical research workforce.

**Letters of Support:** Combine all Letters of Support into a single PDF file.

*Institutional Support and Commitment Letter (10-page maximum).* The application must include a letter on the lead institution's institutional letterhead that is signed by **each** participating institution's central administration (e.g., President, Provost, Dean, or similar key institutional leader). The letter must describe the activities and resources provided by the institutions that will ensure the success of the planned training program. The letter must outline each institution's respective role in administering the program, and these roles must be consistent with the goals and objectives of the proposed Bridges to the Baccalaureate Research Training Program. Additionally, the letter must include the following language:

"The appropriate programmatic and administrative personnel of each organization involved in this grant application are aware of the NIH consortium agreement policy and are prepared to establish the necessary inter-institutional agreement(s) consistent with that policy."

Information on the NIH Policy regarding consortium agreements is available at:

<https://grants.nih.gov/grants/policy/nihgps/nihgps.pdf> (<https://grants.nih.gov/grants/policy/nihgps/nihgps.pdf>).

As applicable, the letter should also address how the institution: promotes a culture in which the highest standards of scientific rigor, reproducibility and responsible conduct are advanced; provides opportunities for early stage faculty and those with a hiatus in research support to participate in research training; supports core facilities and technology resources that can be used to enhance training; provides adequate staff, facilities, and educational resources to the planned program; supports the PDs/PIs and other key staff associated with the planned training program; ensures that the research facilities as well as the laboratory practices promote the safety of trainees; provides support for remediation or removal of Participating Faculty who are poorly performing mentors; promotes diversity and inclusion at all levels of the research training environment (trainees, staff, faculty, and leadership); ensures that the research facilities as well as the laboratory practices promote the safety of trainees; ensures that the research facilities are accessible to trainees with disabilities; promotes a positive, supportive and inclusive research and training environment for individuals from all backgrounds; ensures that proper policies, procedures, and oversight are in place to prevent discriminatory harassment and other discriminatory practices and to appropriately respond to allegations of such discriminatory practices, including providing any required notifications to NIH (e.g., requesting a change of PD/PI status; see [NOT-OD-19-029 \(https://grants.nih.gov/grants/guide/notice-files/NOT-OD-19-029.html\)](https://grants.nih.gov/grants/guide/notice-files/NOT-OD-19-029.html)); ensures trainees access to student support services, such as such as health care, counseling services, and housing; ensures that trainees will continue to be supported when they transition from the two-year institution to the four-year institution; and provides resources and expertise for evaluating the training outcomes of the program. For institutions that have multiple training programs, the letter should also explain how the programs will synergize and share resources when appropriate, and how the training faculty, pool of potential trainees, and resources are sufficiently robust to support both the proposed and existing programs. All information related to institutional support, as defined above, must be included within the 10-page limit of this letter. If this letter is not included, the application will be considered incomplete and will not be reviewed.

**Two-Year Institutional Eligibility Letter(s).** The Provost or similar official with institution-wide responsibility must certify the community college or two-year eligibility as described in Section III, "Eligible Organization". If this letter is not included, the application will be considered incomplete and will not be reviewed.

**Four-Year Institutional Eligibility Letter(s).** The Provost or similar official with institution-wide responsibility must certify the four-year baccalaureate degree granting institutional eligibility as described in Section III, "[Eligible Organization](#)". If this letter is not included, the application will be considered incomplete and will not be reviewed.

**Other Letters of Support.** Additional letters of support are permitted; however, these letters may not contain any information required in the Institutional Support Letter.

**Data Tables:** The application must include the required [Training Data Tables \(https://grants.nih.gov/grants/guide/url\\_redirect.htm?id=61169\)](https://grants.nih.gov/grants/guide/url_redirect.htm?id=61169) for new undergraduate programs ([Training Tables 2, 3, 4, 5C, 8D Part II \(https://grants.nih.gov/grants/forms/data-tables.htm\)](#)). Applications that do not contain these tables, or that submit any additional tables in this attachment, will be considered noncompliant and will not be reviewed.

## Appendix

Limited items are allowed in the Appendix. Follow all instructions for the Appendix as described in the SF424 (R&R) Application Guide; any instructions provided here are in addition to the SF424 (R&R) Application Guide instructions.

The Appendix is meant to provide additional details to the following topics, but not meant to substitute for clear descriptions in the body of the application. Do not include items other than the allowable materials described below, as doing so will result in administrative withdrawal of the application. A summary sheet listing all the items included in the Appendix may be included in the first page of the Appendix attachment.

The following are required Appendix materials:

- **Required Training Activities.** To adequately assess the content of the didactic portion of the training program, the application must include syllabi/outlines of all required training activities (e.g., syllabi for courses, mentor

training materials, professional development workshops, career exploration opportunities, skills development activities).

- Responsible Conduct of Research Syllabi. In addition to the Plan for Instruction in the Responsible Conduct of Research, the application must provide syllabi/outlines of materials relating to Responsible Conduct of Research and descriptions of when in the trainees' career path the material is taught.
- Trainee Selection and Appointment Procedures (3 pages maximum). The application must outline the criteria for trainee selection from the training grant eligible pool and the process for trainee appointment. Materials may include, but not be limited to, appointment protocols and/or blank applications.

The following are allowable Appendix materials:

- Elective Activities. The application may include summary content from up to four additional elective courses and/or training activities (e.g., syllabi or summaries for courses, mentor training materials, outlines of professional development workshops, career exploration opportunities, or skills development activities).
- Evaluation and Assessment Instruments. The application may include blank surveys, rubrics, and/or forms used to (a) document and monitor trainee progress and (b) determine whether the training and research environment is effective, inclusive, safe, and supportive.
- Conflict Resolution Protocols (3-page maximum). The application may include detailed protocols for addressing problems with trainee and faculty matches, removal of faculty from the training program with unacceptable training/mentoring skills and for conflict resolutions for multi PD(s)/PI(s) and mentor/mentee relationships.

Applications that exceed the number of allowed appendices or the page limitation of any of the allowed materials will be considered noncompliant and will not be reviewed.

## PHS Assignment Request Form

All instructions in the SF424 (R&R) Application Guide must be followed.

## 3. Unique Entity Identifier and System for Award Management (SAM)

See Part 1. Section III.1 for information regarding the requirement for obtaining a unique entity identifier and for completing and maintaining active registrations in System for Award Management (SAM), NATO Commercial and Government Entity (NCAGE) Code (if applicable), eRA Commons, and Grants.gov

## 4. Submission Dates and Times

[Part I. Overview Information](#) contains information about Key Dates and times. Applicants are encouraged to submit applications before the due date to ensure they have time to make any application corrections that might be necessary for successful submission. When a submission date falls on a weekend or [Federal holiday](#) ([https://grants.nih.gov/grants/guide/url\\_redirect.htm?id=82380](https://grants.nih.gov/grants/guide/url_redirect.htm?id=82380)), the application deadline is automatically extended to the next business day.

Organizations must submit applications to [Grants.gov](https://grants.nih.gov/grants/guide/url_redirect.htm?id=11128) ([//grants.nih.gov/grants/guide/url\\_redirect.htm?id=11128](https://grants.nih.gov/grants/guide/url_redirect.htm?id=11128)) (the online portal to find and apply for grants across all Federal agencies). Applicants must then complete the submission process by tracking the status of the application in the [eRA Commons](https://grants.nih.gov/grants/guide/url_redirect.htm?id=11123) ([//grants.nih.gov/grants/guide/url\\_redirect.htm?id=11123](https://grants.nih.gov/grants/guide/url_redirect.htm?id=11123)), NIH's electronic system for grants administration. NIH and Grants.gov systems check the application against many of the application instructions upon submission. Errors must be corrected and a changed/corrected application must be submitted to Grants.gov on or before the application due date and time. If a Changed/Corrected application is submitted after the deadline, the application will be considered late. Applications that miss the due date and time are subjected to the NIH Policy on Late Application Submission.

**Applicants are responsible for viewing their application before the due date in the eRA Commons to ensure accurate and successful submission.**

Information on the submission process and a definition of on-time submission are provided in the SF424 (R&R)

Application Guide.

## 5. Intergovernmental Review (E.O. 12372)

This initiative is not subject to [intergovernmental review](https://grants.nih.gov/grants/guide/url_redirect.htm?id=11142). ([https://grants.nih.gov/grants/guide/url\\_redirect.htm?id=11142](https://grants.nih.gov/grants/guide/url_redirect.htm?id=11142))

## 6. Funding Restrictions

All NIH awards are subject to the terms and conditions, cost principles, and other considerations described in the [NIH Grants Policy Statement](https://grants.nih.gov/grants/guide/url_redirect.htm?id=11120) ([https://grants.nih.gov/grants/guide/url\\_redirect.htm?id=11120](https://grants.nih.gov/grants/guide/url_redirect.htm?id=11120)). The [National Research Service Award \(NRSA\) policies](https://grants.nih.gov/grants/guide/url_redirect.htm?id=41171) ([https://grants.nih.gov/grants/guide/url\\_redirect.htm?id=41171](https://grants.nih.gov/grants/guide/url_redirect.htm?id=41171)) apply to this program. An NRSA appointment may not be held concurrently with another Federally sponsored fellowship, traineeship, or similar Federal award that provides a stipend or otherwise duplicates provisions of the NRSA.

Pre-award costs are allowable only as described in the [NIH Grants Policy Statement](https://grants.nih.gov/grants/guide/url_redirect.htm?id=11143) ([https://grants.nih.gov/grants/guide/url\\_redirect.htm?id=11143](https://grants.nih.gov/grants/guide/url_redirect.htm?id=11143)). Note, however, that pre-award costs are not allowable charges for stipends or tuition/fees on institutional training grants because these costs may not be charged to the grant until a trainee has actually been appointed and the appropriate paperwork submitted to the NIH awarding component.

## 7. Other Submission Requirements and Information

Applications must be submitted electronically following the instructions described in the SF424 (R&R) Application Guide. Paper applications will not be accepted.

**Applicants must complete all required registrations before the application due date.** [Section III. Eligibility Information](#) contains information about registration.

For assistance with your electronic application or for more information on the electronic submission process, visit [How to Apply – Application Guide](https://grants.nih.gov/grants/how-to-apply-application-guide.html) (<https://grants.nih.gov/grants/how-to-apply-application-guide.html>). If you encounter a system issue beyond your control that threatens your ability to complete the submission process on-time, you must follow the [Dealing with System Issues](https://grants.nih.gov/grants/how-to-apply-application-guide/due-dates-and-submission-policies/dealing-with-system-issues.htm) (<https://grants.nih.gov/grants/how-to-apply-application-guide/due-dates-and-submission-policies/dealing-with-system-issues.htm>) guidance. For assistance with application submission, contact the Application Submission Contacts in [Section VII](#).

### Important reminders:

All PD(s)/PI(s) must include their eRA Commons ID in the Credential field of the Senior/Key Person Profile Component of the SF424(R&R) Application Package. Failure to register in the Commons and to include a valid PD/PI Commons ID in the credential field will prevent the successful submission of an electronic application to NIH.

The applicant organization must ensure that the DUNS number it provides on the application is the same number used in the organization's profile in the eRA Commons and for the System for Award Management (SAM). Additional information may be found in the SF424 (R&R) Application Guide.

See [more tips](https://grants.nih.gov/grants/guide/url_redirect.htm?id=11146) ([https://grants.nih.gov/grants/guide/url\\_redirect.htm?id=11146](https://grants.nih.gov/grants/guide/url_redirect.htm?id=11146)) for avoiding common errors.

Upon receipt, applications will be evaluated for completeness and compliance with application instructions by the Center for Scientific Review and NIGMS. Applications that are incomplete or non-compliant will not be reviewed.

### Requests of \$500,000 or more for direct costs (less consortium F&A) in any year

Applicants requesting \$500,000 or more in direct costs in any year **are not required** to contact a Scientific/Research Contact prior to submitting an application. The Policy on the Acceptance for Review of Unsolicited Applications that Request \$500,000 or More in Direct Costs as described in the SF424 (R&R) Application Guide **is not applicable** to this FOA.

## Post Submission Materials

Applicants are required to follow the instructions for post-submission materials, as described in [the policy \(//grants.nih.gov/grants/guide/url\\_redirect.htm?id=82299\)](https://grants.nih.gov/grants/guide/url_redirect.htm?id=82299).

# Section V. Application Review Information

## 1. Criteria

Only the review criteria described below will be considered in the review process.

Applications submitted to the NIH in support of the [NIH mission \(//grants.nih.gov/grants/guide/url\\_redirect.htm?id=11149\)](https://grants.nih.gov/grants/guide/url_redirect.htm?id=11149) are evaluated for scientific and technical merit through the NIH peer review system.

### Overall Impact

Reviewers will provide an overall impact score to reflect their assessment of the likelihood that the proposed training program will produce a diverse pool of well-trained scientists who will bridge from the two-year to the four-year institution and earn a bachelor's degree in a biomedically-relevant field. Is the program likely to promote a sustained interest in students in pursuing careers in the biomedical research enterprise? Will the program provide trainees with the technical (e.g., appropriate methods, technologies, and quantitative/computational approaches), operational (e.g., independent knowledge acquisition, rigorous experimental design, and interpretation of data), and professional (e.g., management, leadership, communication, and teamwork) skills necessary to conduct rigorous and reproducible research, in consideration of the following review criteria and additional review criteria (as applicable for the project proposed)?

Specifically, do the courses, structured training activities, mentoring, and research experiences equip the trainees with:

- A broad understanding across biomedical disciplines, and the skills to independently acquire the knowledge needed to advance their chosen field;
- The ability to think critically and independently and to identify important biomedical research questions and approaches that push forward the boundaries of their areas of study;
- A strong foundation in scientific reasoning, rigorous research design, experimental methods, quantitative and computational approaches, as well as data analysis and interpretation;
- A commitment to approaching and conducting biomedical research responsibly, ethically and with integrity;
- Experience initiating, conducting, interpreting, and presenting rigorous and reproducible biomedical research with increasing self-direction;
- The ability to work effectively in teams with colleagues from diverse backgrounds, and to promote an inclusive and supportive scientific research environment;
- The skills to teach and communicate scientific research methodologies and findings to a wide variety of audiences (e.g., discipline-specific, across disciplines, and the public); and

The knowledge, professional skills and experiences required to identify and transition into careers in the biomedical research workforce (i.e., the breadth of careers that sustain biomedical research in areas that are relevant to the NIH mission)?

### Scored Review Criteria

Reviewers will consider each of the review criteria below in the determination of the merit of the training program, and give a separate score for each. An application does not need to be strong in all categories to be judged likely to have major scientific impact.

#### Training Program and Environment

##### *Rationale, Mission, Objectives, and Overall Training Plan*

- Does the application provide a compelling rationale for the proposed research training program? Specifically, does the application describe a strong partnership among the participating institutions? Does the proposed program demonstrate the presence of a sufficient pool of potential trainees from diverse backgrounds,

including those from underrepresented groups, participating faculty with the appropriate scientific expertise (Tables 2), and resources to achieve the training objectives (Table 3)?

- Are the mission and objectives for the training program specific and measurable and in alignment with the goal of producing a diverse pool of well-trained scientists with the technical, operational, and professional skills necessary for the trainees to contribute to the biomedical workforce?
- Will the courses, structured training activities, mentoring, and research experiences achieve the stated mission and objectives of the training program (material provided in the "Required Training Activities" appendix)?
- Do the courses, structured training activities and mentoring take place across the various institutions involved?
- Does the application describe mechanisms to ensure that trainees participate in authentic research experiences throughout the training period?
- Does the application describe plans to ensure that the Bridges to the Baccalaureate Research Training Program trainees complete at least one summer research training experience at the partner four-year institution?
- Does the training program plan provide a compelling explanation of how the courses, structured training activities, mentoring, and research experiences are likely to enhance the success of the trainees?
- Does the program employ modern, evidence-based approaches to training, mentorship, inclusion, and professional development?
- Are the activities likely to build a strong cohort while enhancing the science identity, self-efficacy, and a sense of belonging among the cohort members?
- Are there plans to accommodate differences in preparation among trainees?
- Does the application provide examples of how each trainee's progress will be guided and how the trainee's performance and skills development will be monitored and evaluated?
- If the institution has multiple funded training programs, is there a strong justification for the need for the proposed Bridges to the Baccalaureate Research Training Program? Does the application describe how the Bridges to the Baccalaureate Research Training Program is distinct from, but planning to share resources and synergize with other funded training programs at the institution (listed in Training Table 3, and reinforced in the Institutional Support Letter in the Letters of Support section)?
- Is it clear how the proposed program will enhance the research training environment and not simply provide financial assistance for the trainees?
- Is it clear how the training activities will be available to other students in the program(s), department(s), or institution(s) from which the trainees are drawn?
- For multi-disciplinary and/or multi-departmental programs, is it clear how the individual disciplinary and/or departmental components of the program are integrated and coordinated and how each will relate to an individual trainee's experience?
- Are there clear and current articulation agreements for the transfer of courses and credits from the two-year institution(s) to the four-year institution(s) and other structures in place to ensure the timely completion of the baccalaureate degree?

#### *Career Development*

- Will the trainees be provided with support as well as adequate, appropriate, and timely information regarding the steps required to bridge and complete the bachelor's degree in a biomedically-relevant STEM field?
- Will the trainees be introduced to sponsors or mentors who will enhance their career opportunities (e.g., contacts at national meetings, contacts with members of scientific societies, and the research community)?
- Are adequate activities proposed to interest students in and equip them for careers in the biomedical research workforce?
- Is there a mechanism to ensure the pool of potential applicants and trainees will be provided with information about the outcomes of former trainees of the program (e.g., on publicly accessible websites) and about the overall biomedical research workforce employment landscape?

#### *Program Oversight, Participating Faculty Selection, and Mentor Training*

- Does the application describe an effective strategy and administrative structure to oversee and monitor the program to ensure appropriate and timely trainee progress at both the two-year and four-year institutions?

- Is selection of the participating faculty based on a commitment to training and mentoring, and not simply research productivity?
- Will the participating faculty be trained to ensure the use of evidence-based teaching and mentoring practices that promote the development of trainees from all backgrounds?
- Do the potential mentors have a record of employing the highest standards of rigor and transparency in their research and have plans to impart those standards to their trainees?
- Will the program ensure that participating faculty reinforce and augment the curricular material on responsible conduct of research and methods for enhancing rigor and reproducibility?
- Is there a clear mechanism for matching the trainees with appropriate participating faculty (e.g., interviews, presentations on science conducted in labs)?
- Is there a plan to ensure that faculty engage in activities that promote trainee career development (including but not limited to the utilization of Individual Development Plans) and fulfill the need of the trainees to bridge and obtain their degrees in a timely fashion with the skills, credentials, and experiences to contribute to the biomedical workforce?
- Is there a mechanism to monitor mentoring, including oversight of the effectiveness of the trainee/participating faculty match, and a plan for removing participating faculty displaying unacceptable mentorship qualities from the training program?
- If a program coordinator or administrator position is planned, is there a description of the person's administrative capabilities that are essential to coordinate the program?
- Is there an adequate plan for the coordination and communication among multiple sites to ensure timely trainee progress?
- *Institutional and Departmental Commitment to the Program*
- Will the inter-institutional commitment to research training excellence promote the success of the trainees and training program?
- Is there clear institutional commitment to develop and promote a culture in which the highest standards of scientific rigor, reproducibility, and responsible conduct of research are advanced?
- Does the institution provide opportunities for early stage faculty and those with a hiatus in research support to participate in research training?
- Are the core facilities and technology resources necessary for the success of the program well supported?
- Is there adequate support of the PD(s)/PI(s) and other key staff, facilities, and educational resources associated with the training program?
- Do faculty have sufficient protected time available to devote to the training and mentoring activities?
- Is there evidence that the institution fosters and rewards excellence in training and mentoring (for example, through institutional policies)?
- Are diversity and inclusion promoted at all levels of the research training environment (trainees, staff, faculty, and leadership)?
- Is there evidence that the research facilities and laboratory practices ensure the safety of trainees?
- Are the research facilities accessible to trainees with disabilities?
- Are appropriate policies and procedures in place to protect trainees from harassment and other prohibited practices?
- Is there evidence of an institutional commitment to providing the trainees access to student support services, such as health care, counseling services, and housing?
- Are there resources and the expertise for evaluating the training outcomes of the program?
- Does the application outline how the trainees will continue to be supported when they transition from the two-year institution to the four-year institution?
- Does the application adequately address how research training at the undergraduate level is supported?

### **Training Program Director(s)/Principal Investigator(s) (PD(s)/PI(s))**

- Does the PD(s)/PI(s) team have the administrative and training experience to provide strong leadership, direction, management, and administration of the proposed research training program?
- Is there evidence of a successful past training record of the PDs/Pis team, including the success of former trainees in completing the baccalaureate degree and establishing productive scientific in STEM careers?
- Does the PD(s)/PI(s) team have the time to commit sufficient effort to ensure the program's success, given their other professional obligations?

- Does at least one member of the PD/PI team have a demonstrated record of using rigorous and transparent methods in experimental design, data collection, analysis, and reporting in a biomedical field?
- Have the various PD(s)/PI(s) received training on how to effectively mentor trainees, including those from underrepresented groups, and promote inclusive, safe, and supportive research training environments?
- Do the various PD(s)/PI(s) demonstrate commitment to training the next generation of the biomedical research workforce, leading recruitment efforts to enhance diversity, and fostering inclusive research environments?
- Does the application describe the administrative structure and leadership succession plan for critical positions?
- Will the multiple PD/PI leadership approach benefit the trainees and enhance the ability of the program to achieve its training goals?
- Is there a clear leadership plan including the designated roles and responsibilities, governance, conflict resolution procedures, and organizational structure (see Multiple PD/PI Leadership Plan section)?

### **Preceptors/Mentors (Participating Faculty)**

- Do the preceptors/mentors have strong records as researchers in areas directly related to the proposed research training program?
- Do the participating faculty have a record of rigorous and unbiased experimental design, methodology, analysis, interpretation, and reporting of results?
- Do the participating faculty have a record of conducting ethically sound and responsible scientific research?
- Do the selected participating faculty come from diverse backgrounds, for example, individuals from groups underrepresented in the biomedical sciences, women, as well as faculty at different career stages (i.e., junior and senior faculty)? If not, are there plans to recruit faculty to enhance the diversity?
- Do the participating faculty have the time to commit sufficient effort to ensure trainee development and success, given their other professional obligations?
- Is there evidence that the participating faculty cooperate, interact, and collaborate (which can include joint sponsorship of trainee research)?
- Do the participating faculty provide opportunities for trainees to initiate, conduct, interpret, and present rigorous and reproducible biomedical research with increasing self-direction?
- Do the participating faculty have plans for ensuring their trainees develop skills in approaches to experimental design, as well as methods of data collection, analysis, interpretation, and reporting?
- Do the participating faculty demonstrate a commitment to effective mentoring and promoting inclusive and supportive scientific and training environments?
- Do the participating faculty express a willingness to engage in activities that promote trainee career development (including, but not limited to the utilization of Individual Development Plans)?
- Do the participating faculty have a commitment to fulfilling the need of the trainees to ensure the trainees bridge to the four-year institution and obtain their baccalaureate degrees in a timely fashion with the skills, credentials, and experiences to contribute to the biomedical research workforce?

### **Trainee Positions, Recruitment, and Retention**

- Does the application provide a strong justification for the number of positions given the pool of potential trainees?
- Is the program likely to attract a diverse pool of candidates?
- Is a holistic candidate review process proposed (i.e., a process that considers metrics beyond GPA, and standardized test scores) that is likely to identify trainees who are committed to contributing to the biomedical research enterprise?
- Are there well-defined and justified selection and appointment criteria for trainees in the training program?
- Is there an adequate, evidence-based retention plan to ensure the progression and success of all trainees throughout their training (see the "Trainee Retention Plan" attachment)?

### **Training Record**

#### *Trainee Outcomes*

- Does the application contain data about the current rate of bridging and degree attainment and time-to-degree for training grant eligible students?

- Are the former students transitioning to the next phase in the biomedical research workforce pathway (e.g., from two-year to four-year institution(s) and completing the bachelor's degree in a timely fashion; Training Table 8D, Part II)?
- For previously funded research education programs, does the application provide evidence that former students conducted rigorous research that advanced scientific knowledge and/or technologies?
- *Program Evaluation and Dissemination*
- Is there a well thought out evaluation or assessment process to determine whether the overall program is effective in meeting its training mission and short-, intermediate-, and long-term objectives, and whether the training and scientific research climates are inclusive and supportive of trainee development?
- Is there evidence that the program has been and/or will be responsive to internal and external critiques and evaluations?
- Are effective mechanisms in place for obtaining feedback from current and former trainees?
- Does the training program have a plan to track trainee outcomes and make the data available to potential applicants and trainees (narrative and "Outcomes Data Collection and Storage Plan" attachment)?
- Does the training program have a plan to ensure the preservation of and access to program data (narrative and "Outcomes Data Collection and Storage Plan" attachment)?
- Does the application provide an effective plan to share the outcomes of the training or mentoring interventions with the broader community (narrative and "Dissemination Plan" attachment)?

### **Additional Review Criteria**

As applicable for the project proposed, reviewers will evaluate the following additional items while determining scientific and technical merit, and in providing an overall impact score, but will not give separate scores for these items.

#### **Training in Methods for Enhancing Reproducibility**

Does the Instruction in Methods for Enhancing Reproducibility plan describe how trainees will be instructed in principles important for enhancing research reproducibility including, at a minimum, evaluation of foundational research underlying a project (i.e., scientific premise), rigorous experimental design, consideration of relevant biological variables such as sex, authentication of key biological and/or chemical resources, data and material sharing, record keeping, and transparency in reporting? Are the rigor and transparency components sufficiently well integrated into the overall curriculum? Are they taught at multiple stages of trainee development and in a variety of formats and contexts? Does the teaching synergize with elements of the curriculum designed to enhance trainees' abilities to conduct responsible research? Is there evidence that all program faculty reiterate and augment key elements of methods for enhancing reproducibility when trainees are performing mentored research their laboratories?

The plan will be rated as ACCEPTABLE or UNACCEPTABLE, and the summary statement will provide the consensus of the review committee.

#### **Protections for Human Subjects**

Generally not applicable. Reviewers should bring any concerns to the attention of the Scientific Review Officer.

#### **Inclusion of Women, Minorities, and Children**

Generally not applicable. Reviewers should bring any concerns to the attention of the Scientific Review Officer.

#### **Vertebrate Animals**

Generally not applicable. Reviewers should bring any concerns to the attention of the Scientific Review Officer.

#### **Biohazards**

Generally not applicable. Reviewers should bring any concerns to the attention of the Scientific Review Officer.

#### **Resubmissions**

For Resubmissions, the committee will evaluate the application as now presented, taking into consideration the responses to comments from the previous scientific review group and changes made to the project.

## Renewals

Not Applicable

## Revisions

Not Applicable

## Additional Review Considerations

As applicable for the project proposed, reviewers will consider each of the following items, but will not give scores for these items, and should not consider them in providing an overall impact score.

### Recruitment Plan to Enhance Diversity

Peer reviewers will separately evaluate the recruitment plan to enhance diversity after the overall score has been determined. Reviewers will examine the strategies to be used to recruit a diverse pool of potential candidates that includes individuals from underrepresented groups. The overall plan will be rated as ACCEPTABLE only if the recruitment strategies for all of the relevant groups identified in the NIH Interest in Diversity are viewed by the review panel as acceptable; otherwise the plan will be rated as UNACCEPTABLE. The consensus of the review committee will be included in an administrative note in the summary statement.

### Training in the Responsible Conduct of Research

All applications for support under this FOA must include a plan to fulfill NIH requirements for instruction in the Responsible Conduct of Research (RCR). Taking into account the specific characteristics of the training program, the level of trainee experience, and the particular circumstances of the trainees, the reviewers will evaluate the adequacy of the proposed RCR training in relation to the following five required components: 1) **Format** - Does the plan satisfactorily address the format of instruction, e.g., lectures, coursework and/or real-time discussion groups, including face-to-face interaction? (*A plan involving only on-line instruction is not acceptable.*); 2) **Subject Matter** - Does the plan include a sufficiently broad selection of subject matter, such as conflict of interest, authorship, data management, human subjects and animal use, laboratory safety, research misconduct, research ethics? 3) **Faculty Participation** - Does the plan adequately describe how faculty will participate in the instruction? For renewal applications, are all training faculty who served as course directors, speakers, lecturers, and/or discussion leaders during the past project period named in the application? 4) **Duration of Instruction** - Does the plan meet the minimum requirements for RCR, i.e., at least eight contact hours of instruction? 5) **Frequency of Instruction** - Does the plan meet the minimum requirements for RCR, i.e., at least once during each career stage (undergraduate, post-baccalaureate, predoctoral, postdoctoral, and faculty levels) and at a frequency of no less than once every four years?

Are the RCR components sufficiently well integrated into the overall curriculum? Are they taught at multiple stages of trainee development and in a variety of formats and contexts? Does the teaching of RCR synergize with elements of the curriculum designed to enhance trainees' abilities to conduct rigorous and reproducible research? Is there evidence that all participating faculty reiterate and augment key elements of responsible conduct when trainees are performing mentored research their laboratories?

Plans and past record will be rated as **ACCEPTABLE** or **UNACCEPTABLE**, and the summary statement will provide the consensus of the review committee.

### Select Agent Research

Generally, not applicable. Reviewers should bring any concerns to the attention of the Scientific Review Officer.

### Budget and Period of Support

Reviewers will consider whether the budget and the requested period of support are fully justified and reasonable in relation to the proposed research training program.

## 2. Review and Selection Process

Applications will be evaluated for scientific and technical merit by (an) appropriate Scientific Review Group(s), convened by the NIGMS Office of Scientific Review in accordance with [NIH peer review policy and procedures \(//grants.nih.gov/grants/guide/url\\_redirect.htm?id=11154\)](https://grants.nih.gov/grants/guide/url_redirect.htm?id=11154), using the stated [review criteria](#). Assignment to a Scientific Review Group will be shown in the eRA Commons. Site visits may be employed as part of this process; however, applicants should not assume that site visits are automatic.

As part of the scientific peer review, all applications:

- May undergo a selection process in which only those applications deemed to have the highest scientific and technical merit (generally the top half of applications under review) will be discussed and assigned an overall impact score.
- Will receive a written critique.

Applications will be assigned on the basis of established PHS referral guidelines to the appropriate NIH Institute or Center. Applications will compete for available funds with all other recommended applications. Following initial peer review, recommended applications will receive a second level of review by the NIGMS Advisory Council. The following will be considered in making funding decisions:

- Scientific and technical merit of the proposed project as determined by scientific peer review.
- Availability of funds.
- Relevance of the proposed project to program priorities.
- Geographic distribution of the NIGMS training grant portfolio.

## 3. Anticipated Announcement and Award Dates

After the peer review of the application is completed, the PD/PI will be able to access his or her Summary Statement (written critique) via the [eRA Commons \(//grants.nih.gov/grants/guide/url\\_redirect.htm?id=11123\)](https://grants.nih.gov/grants/guide/url_redirect.htm?id=11123). Refer to Part 1 for dates for peer review, advisory council review, and earliest start date

Information regarding the disposition of applications is available in the [NIH Grants Policy Statement \(//grants.nih.gov/grants/guide/url\\_redirect.htm?id=11156\)](https://grants.nih.gov/grants/guide/url_redirect.htm?id=11156).

## Section VI. Award Administration Information

### 1. Award Notices

If the application is under consideration for funding, NIH will request "just-in-time" information from the applicant as described in the [NIH Grants Policy Statement \(//grants.nih.gov/grants/guide/url\\_redirect.htm?id=11157\)](https://grants.nih.gov/grants/guide/url_redirect.htm?id=11157).

A formal notification in the form of a Notice of Award (NoA) will be provided to the applicant organization for successful applications. The NoA signed by the grants management officer is the authorizing document and will be sent via email to the grantee's business official.

Awardees must comply with any funding restrictions described in [Section IV.5. Funding Restrictions](#). Selection of an application for award is not an authorization to begin performance. Any costs incurred before receipt of the NoA are at the recipient's risk. These costs may be reimbursed only to the extent considered allowable pre-award costs.

Any application awarded in response to this FOA will be subject to terms and conditions found on the [Award Conditions and Information for NIH Grants \(//grants.nih.gov/grants/guide/url\\_redirect.htm?id=11158\)](https://grants.nih.gov/grants/guide/url_redirect.htm?id=11158) website. This includes any recent legislation and policy applicable to awards that is highlighted on this website.

## 2. Administrative and National Policy Requirements

All NIH grant and cooperative agreement awards include the [NIH Grants Policy Statement \(//grants.nih.gov/grants/guide/url\\_redirect.htm?id=11120\)](https://grants.nih.gov/grants/guide/url_redirect.htm?id=11120) as part of the NoA. For these terms of award, see the [NIH Grants Policy Statement Part II: Terms and Conditions of NIH Grant Awards, Subpart A: General \(//grants.nih.gov/grants/guide/url\\_redirect.htm?id=11157\)](#) and [Part II: Terms and Conditions of NIH Grant Awards,](#)

[Subpart B: Terms and Conditions for Specific Types of Grants, Grantees, and Activities](#) ([https://grants.nih.gov/grants/guide/url\\_redirect.htm?id=11159](https://grants.nih.gov/grants/guide/url_redirect.htm?id=11159)). More information is provided at [Award Conditions and Information for NIH Grants](#) ([https://grants.nih.gov/grants/guide/url\\_redirect.htm?id=11158](https://grants.nih.gov/grants/guide/url_redirect.htm?id=11158)).

Recipients of federal financial assistance (FFA) from HHS must administer their programs in compliance with federal civil rights law. This means that recipients of HHS funds must ensure equal access to their programs without regard to a person's race, color, national origin, disability, age and, in some circumstances, sex and religion. This includes ensuring your programs are accessible to persons with limited English proficiency. HHS recognizes that research projects are often limited in scope for many reasons that are nondiscriminatory, such as the principal investigator's scientific interest, funding limitations, recruitment requirements, and other considerations. Thus, criteria in research protocols that target or exclude certain populations are warranted where nondiscriminatory justifications establish that such criteria are appropriate with respect to the health or safety of the subjects, the scientific study design, or the purpose of the research.

For additional guidance regarding how the provisions apply to NIH grant programs, please contact the Scientific/Research Contact that is identified in Section VII under Agency Contacts of this FOA. HHS provides general guidance to recipients of FFA on meeting their legal obligation to take reasonable steps to provide meaningful access to their programs by persons with limited English proficiency. Please see <https://www.hhs.gov/civil-rights/for-individuals/special-topics/limited-english-proficiency/index.html> (<https://www.hhs.gov/civil-rights/for-individuals/special-topics/limited-english-proficiency/index.html>). The HHS Office for Civil Rights also provides guidance on complying with civil rights laws enforced by HHS. Please see <https://www.hhs.gov/civil-rights/for-individuals/section-1557/index.html> (<https://www.hhs.gov/civil-rights/for-individuals/section-1557/index.html>); and <https://www.hhs.gov/civil-rights/for-providers/laws-regulations-guidance/index.html> (<https://www.hhs.gov/civil-rights/for-providers/laws-regulations-guidance/index.html>). Recipients of FFA also have specific legal obligations for serving qualified individuals with disabilities. Please see <https://www.hhs.gov/civil-rights/for-individuals/disability/index.html> (<https://www.hhs.gov/civil-rights/for-individuals/disability/index.html>). Please contact the HHS Office for Civil Rights for more information about obligations and prohibitions under federal civil rights laws at <https://www.hhs.gov/ocr/about-us/contact-us/index.html> (<https://www.hhs.gov/ocr/about-us/contact-us/index.html>) or call 1-800-368-1019 or TDD 1-800-537-7697. Also note it is an HHS Departmental goal to ensure access to quality, culturally competent care, including long-term services and supports, for vulnerable populations. For further guidance on providing culturally and linguistically appropriate services, recipients should review the National Standards for Culturally and Linguistically Appropriate Services in Health and Health Care at <http://minorityhealth.hhs.gov/omh/browse.aspx?lvl=2&lvlid=53> (<http://minorityhealth.hhs.gov/omh/browse.aspx?lvl=2&lvlid=53>).

In accordance with the statutory provisions contained in Section 872 of the Duncan Hunter National Defense Authorization Act of Fiscal Year 2009 (Public Law 110-417), NIH awards will be subject to the Federal Awardee Performance and Integrity Information System (FAPIS) requirements. FAPIS requires Federal award making officials to review and consider information about an applicant in the designated integrity and performance system (currently FAPIS) prior to making an award. An applicant, at its option, may review information in the designated integrity and performance systems accessible through FAPIS and comment on any information about itself that a Federal agency previously entered and is currently in FAPIS. The Federal awarding agency will consider any comments by the applicant, in addition to other information in FAPIS, in making a judgement about the applicant's integrity, business ethics, and record of performance under Federal awards when completing the review of risk posed by applicants as described in 45 CFR Part 75.205 "Federal awarding agency review of risk posed by applicants." This provision will apply to all NIH grants and cooperative agreements except fellowships.

Institutional NRSA training grants must be administered in accordance with the current NRSA section of the [NIH Grants Policy Statement - Institutional Research Training Grants](#) ([https://grants.nih.gov/grants/guide/url\\_redirect.htm?id=61170](https://grants.nih.gov/grants/guide/url_redirect.htm?id=61170)).

## **Inventions and Copyrights**

Awards made primarily for educational purposes are exempted from the PHS invention requirements and thus invention reporting is not required, as described in the [NIH Grants Policy Statement](#)

[https://grants.nih.gov/grants/guide/url\\_redirect.htm?id=61131](https://grants.nih.gov/grants/guide/url_redirect.htm?id=61131)).

## Cooperative Agreement Terms and Conditions of Award

Not Applicable

### 3. Reporting

When multiple years are involved, awardees will be required to submit the [Research Performance Progress Report \(RPPR\)](https://grants.nih.gov/grants/rppr/index.htm) (<https://grants.nih.gov/grants/rppr/index.htm>) annually. Continuation support will not be provided until the required forms are submitted and accepted.

Failure by the grantee institution to submit required forms in a timely, complete, and accurate manner may result in an expenditure disallowance or a delay in any continuation funding for the award.

The Federal Funding Accountability and Transparency Act of 2006 (Transparency Act), includes a requirement for awardees of Federal grants to report information about first-tier subawards and executive compensation under Federal assistance awards issued in FY2011 or later. All awardees of applicable NIH grants and cooperative agreements are required to report to the Federal Subaward Reporting System (FSRS) available at [www.fsrs.gov](http://www.fsrs.gov) ([https://grants.nih.gov/grants/guide/url\\_redirect.htm?id=11170](https://grants.nih.gov/grants/guide/url_redirect.htm?id=11170)) on all subawards over \$25,000. See the [NIH Grants Policy Statement](https://grants.nih.gov/grants/guide/url_redirect.htm?id=11171) ([https://grants.nih.gov/grants/guide/url\\_redirect.htm?id=11171](https://grants.nih.gov/grants/guide/url_redirect.htm?id=11171)) for additional information on this reporting requirement.

#### Other Reporting Requirements

- The lead institution must submit a completed Statement of Appointment ([PHS Form 2271](https://grants.nih.gov/grants/guide/url_redirect.htm?id=61189) ([https://grants.nih.gov/grants/guide/url\\_redirect.htm?id=61189](https://grants.nih.gov/grants/guide/url_redirect.htm?id=61189))) for each trainee appointed or reappointed to the training grant for 8 weeks or more. Grantees must submit the PHS 2271 data electronically using the xTrain system. More information on xTrain is available at [xTrain \(eRA Commons\)](https://grants.nih.gov/grants/guide/url_redirect.htm?id=41183) ([https://grants.nih.gov/grants/guide/url\\_redirect.htm?id=41183](https://grants.nih.gov/grants/guide/url_redirect.htm?id=41183)). An appointment or reappointment may begin any time during the budget period, but not before the budget period start date of the grant year.
- A notarized statement verifying possession of permanent residency documentation must be submitted with the Statement of Appointment ([PHS Form 2271](https://grants.nih.gov/grants/guide/url_redirect.htm?id=61189) ([https://grants.nih.gov/grants/guide/url\\_redirect.htm?id=61189](https://grants.nih.gov/grants/guide/url_redirect.htm?id=61189))). Individuals with a Conditional Permanent Resident status must first meet full (non-conditional) Permanent Residency requirements before receiving support.

A final RPPR, the expenditure data portion of the Federal Financial Report are required for closeout of an award as described in the [NIH Grants Policy Statement](https://grants.nih.gov/grants/guide/url_redirect.htm?id=11161) ([https://grants.nih.gov/grants/guide/url\\_redirect.htm?id=11161](https://grants.nih.gov/grants/guide/url_redirect.htm?id=11161)).

In accordance with the regulatory requirements provided at 45 CFR 75.113 and Appendix XII to 45 CFR Part 75, recipients that have currently active Federal grants, cooperative agreements, and procurement contracts from all Federal awarding agencies with a cumulative total value greater than \$10,000,000 for any period of time during the period of performance of a Federal award, must report and maintain the currency of information reported in the System for Award Management (SAM) about civil, criminal, and administrative proceedings in connection with the award or performance of a Federal award that reached final disposition within the most recent five-year period. The recipient must also make semiannual disclosures regarding such proceedings. Proceedings information will be made publicly available in the designated integrity and performance system (currently FAPIIS). This is a statutory requirement under section 872 of Public Law 110-417, as amended (41 U.S.C. 2313). As required by section 3010 of Public Law 111-212, all information posted in the designated integrity and performance system on or after April 15, 2011, except past performance reviews required for Federal procurement contracts, will be publicly available. Full reporting requirements and procedures are found in Appendix XII to 45 CFR Part 75 – Award Term and Conditions for Recipient Integrity and Performance Matters.

### 4. Evaluation

In carrying out its stewardship of human resource-related programs, the NIH may request information essential to an assessment of the effectiveness of this program from databases and from participants themselves. Participants may be contacted after the completion of this award for periodic updates on various aspects of their employment history, publications, support from research grants or contracts, honors and awards, professional activities, and other information helpful in evaluating the impact of the program.

Within ten years of making awards under this program, NIGMS will assess the program's overall outcomes, gauge its effectiveness in enhancing diversity, and consider whether there is a continuing need for the program. Upon the completion of this evaluation, NIGMS will determine whether to (a) continue the program as currently configured, (b) continue the program with modifications, or (c) discontinue the program.

The overall evaluation of the program will be based on metrics that will include, but are not limited to, the following:

- Institution types represented
- Geographical distribution of programs
- Demographics of trainees
- Trainee bridging and baccalaureate degree completion rates
- The average time to bridge and time-to-bachelor's degree
- Scientific accomplishments of trainees
- Trainee career outcomes

## Section VII. Agency Contacts

We encourage inquiries concerning this funding opportunity and welcome the opportunity to answer questions from potential applicants.

### Application Submission Contacts

eRA Commons Help Desk (Questions regarding ASSIST, eRA Commons, application errors and warnings, documenting system problems that threaten submission by the due date, and post-submission issues)  
Finding Help Online: <http://grants.nih.gov/support/> ([//grants.nih.gov/support/](http://grants.nih.gov/support/)) (preferred method of contact)

Telephone: 301-402-7469 or 866-504-9552 (Toll Free)

General Grants Information (Questions regarding application instructions, application processes, and NIH grant resources)

Email: [GrantsInfo@nih.gov](mailto:GrantsInfo@nih.gov) (<mailto:GrantsInfo@nih.gov>) (preferred method of contact)

Telephone: 301-945-7573

Grants.gov Customer Support (Questions regarding Grants.gov registration and Workspace)

Contact Center Telephone: 800-518-4726

Email: [support@grants.gov](mailto:support@grants.gov) (<mailto:support@grants.gov>)

### Scientific/Research Contact(s)

Mercedes Rubio Ph.D.

National Institute of General Medical Sciences (NIGMS)

Email: [rubiome@nih.gov](mailto:rubiome@nih.gov) (<mailto:rubiome@nih.gov>)

Patrick H. Brown, Ph.D.

National Institute of General Medical Sciences (NIGMS)

Email: [patrick.brown@nih.gov](mailto:patrick.brown@nih.gov) (<mailto:patrick.brown@nih.gov>)

### Peer Review Contact(s)

Stephanie Constant, Ph.D.

National Institute of General Medical Sciences (NIGMS)

Email: [stephanie.constant@nih.gov](mailto:stephanie.constant@nih.gov) (<mailto:stephanie.constant@nih.gov>)

### Financial/Grants Management Contact(s)

Justin Rosenzweig

National Institute of General Medical Sciences (NIGMS)

Email: [rosenzwj@nigms.nih.gov](mailto:rosenzwj@nigms.nih.gov) (<mailto:rosenzwj@nigms.nih.gov>)

## Section VIII. Other Information

Recently issued trans-NIH [policy notices \(//grants.nih.gov/grants/guide/url\\_redirect.htm?id=11163\)](https://grants.nih.gov/grants/guide/url_redirect.htm?id=11163) may affect your application submission. A full list of policy notices published by NIH is provided in the [NIH Guide for Grants and Contracts \(//grants.nih.gov/grants/guide/url\\_redirect.htm?id=11164\)](https://grants.nih.gov/grants/guide/url_redirect.htm?id=11164). All awards are subject to the terms and conditions, cost principles, and other considerations described in the [NIH Grants Policy Statement \(//grants.nih.gov/grants/guide/url\\_redirect.htm?id=11120\)](https://grants.nih.gov/grants/guide/url_redirect.htm?id=11120).

### Authority and Regulations

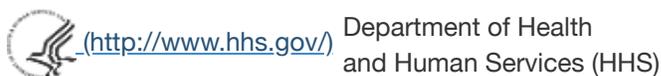
Awards are made under the authorization of Section 487 of the Public Health Service Act as amended (42 USC 288) and under Federal Regulations 42 CFR 66.

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[Weekly TOC for this Announcement \(/grants/guide/WeeklyIndex.cfm?06-21-19\)](https://grants/guide/WeeklyIndex.cfm?06-21-19)

[NIH Funding Opportunities and Notices \(/grants/guide/index.html\)](https://grants/guide/index.html)

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**Note:** For help accessing PDF, RTF, MS Word, Excel, PowerPoint, Audio or Video files, see [Help Downloading Files \(/grants/edocs.htm\)](https://grants/edocs.htm).