Bridges Research Training Programs:
Webinar for Potential Applicants

August 10, 2022

The webinar will begin at 2:30 pm Eastern time.
Before We Start

• This webinar is being recorded and will be available online. The slides will also be posted online.

• Type your questions in the “Q&A” chat box.

• There will be a Q&A period at the end of the webinar. You will be able to unmute yourself during this time to ask a question. Please mute yourself again when you are finished speaking.
Webinar Participants

Program

B2B: Shakira Nelson, Ph.D., Laurie Stepanek, Ph.D.
B2D: Bob Coyne, Ph.D.
Kenneth Gibbs, Ph.D., Chief, Undergraduate and Predoctoral Cross Disciplinary Training Branch

Review

Sonia Ortiz-Miranda, Ph.D., Scientific Review Officer

Grants Management

Justin Rosenzweig, Grants Management Team Leader
Disclaimer

This webinar and accompanying slides are for informational purposes only. They serve as an overview of the NIGMS B2B and B2D Programs and are not meant to be comprehensive in coverage of all required components of an application.

Applicants are responsible for following the instructions detailed in the FOAs and any Related Notices (included in the FOA’s Overview Information section), and the SF424 Application Guide.
For Example

Department of Health and Human Services

Part 1. Overview Information

<table>
<thead>
<tr>
<th>Participating Organization(s)</th>
<th>National Institutes of Health (NIH)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Components of Participating Organizations</td>
<td>National Institute of General Medical Sciences (NIGMS)</td>
</tr>
<tr>
<td>Funding Opportunity Title</td>
<td>Bridges to the Doctorate Research Training Program (T32)</td>
</tr>
<tr>
<td>Activity Code</td>
<td>T32 Institutional National Research Service Award (NRSA)</td>
</tr>
<tr>
<td>Announcement Type</td>
<td>Reissue of PAR-19-300 - Bridges to the Doctorate Research Training Program (T32)</td>
</tr>
</tbody>
</table>

- **September 13, 2021** - Updates to the Non-Discrimination Legal Requirements for NIH Recipients. See Notice NOT-OD-21-181.
- **August 5, 2021** - New NIH "FORMS-G" Grant Application Forms and Instructions Coming for Due Dates on or after January 25, 2022. See Notice NOT-OD-21-169
- **August 5, 2021** - Update: Notification of Upcoming Change in Federal-wide Unique Entity Identifier Requirements. See Notice NOT-OD-21-170
- **April 20, 2021** - Expanding Requirement for eRA Commons IDs to All Senior/Key Personnel. See Notice NOT-OD-21-109
Webinar Outline

I. Program Overview

II. Application Overview

III. Peer Review Overview

IV. Budget Overview
**NIGMS Training Programs Are Expected To**

- Focus on technical, operational and professional **skills development**
- Promote **rigor and reproducibility** in research
- Teach the **responsible and safe conduct** of research
- Promote **diversity, equity and inclusion**
- Encourage **inclusive, safe, and supportive** research environments
- Use **evidence-informed** educational and mentoring practices
- Employ **cohort-building activities** that enhance the trainees’ science identity and self-efficacy
- Provide **individualized mentoring** and oversight throughout
- Introduce trainees to a **variety of scientific careers** and research areas
- Make **career outcomes** publicly available

https://www.nigms.nih.gov/research-areas/areas-of-research/training-workforce-development-and-diversity
NIGMS Training Programs

Community College | Undergraduate | Post-bac | Graduate MS | Graduate PhD | Postdoctoral | Faculty
---|---|---|---|---|---|---
Bridges to the Baccalaureate | U RISE | | | G RISE | | |
Bridges to the Doctorate | MARC | | | IMSD | | |
BUILD | | PREP | | NRSA Fellowships | F31/F30 | F32 | F33
PRAT | | | | T32 NRSA | IRACDA | K99 | R00
| | | | | MOSAIC K99 | UE5 | R00
PRAT | | | | | | | K08, K23, K25

NIGMS Diversity Supplement Program
Innovative Programs to Enhance Research Training R25
National Research Mentoring Network U24, U01
R25 Training Modules

NIGMS TWD Programs
Bridges Training Program Goals

Bridge to the Baccalaureate Program (B2B) [PAR-22-125]

Support **strong institutional partnerships** between associate and baccalaureate degree-granting institutions to develop a diverse pool of research-oriented undergraduates who **bridge** from a community college and **complete bachelor's degrees in disciplines related to the biomedical sciences**.

Bridge to the Doctorate Program (B2D) [PAR-21-198]

Support **strong institutional partnerships** between terminal MS-granting and research-intensive PhD-granting institutions to develop a diverse pool of scientists **earning a Ph.D.**, who have the skills to successfully transition into **careers in the biomedical research workforce**.
Eligibility - Institutions

• Institutions of Higher Education (Public/Private)

• **B2B**: terminal associate degree-granting and baccalaureate degree-granting institution(s)

• **B2D**: terminal MS degree-granting and research intensive* PhD degree-granting institution(s)

• An institution is not allowed to serve as the applicant institution on more than one Bridges Program.

*Institutions with an average of NIH research project grant (RPG) funding $7.5 M in total costs per year over the past 3 fiscal years. See [here](#) to determine amount.
Eligibility - Program Director (PD)/Principal Investigator (PI)

- **Multiple PDs/PIs (MPIs) are required** (at least one at each partner institution)
  - At least one of the PDs/PIs should be an established investigator in the biomedical sciences who can provide administrative and scientific leadership to the development and implementation of the proposed program.

- The PD/PI of the applicant institution must be designated as the contact PD/PI. PI(s) of partners designated as MPI.

- The contact PD/PI is expected to have a full-time appointment at the applicant institution unless extremely well-justified

Applications that do not meet these requirements will be considered noncompliant and will not be reviewed.
Eligibility - *Trainees*

- Must be a citizen, non-citizen national, or permanent resident of U.S.
- Matriculated as a **full-time student (40 hours or as defined by institution policies)** at CC/MGI* and majoring in biomedical science discipline at the time of initial appointment
- Trainees are required to pursue training full-time
- Appointments are normally made in 12-month increments for up to 2 years, and no trainee may be appointed for less than 9 months

*CC - Community College  
*MGI - Master’s Granting Inst.*
Program Overview

**Bridges Awards** provide for the cost of appointed trainee stipends, tuition and fees, and training related expenses, including health insurance, in accordance with the approved NIH support levels.

**Proposed Programs** are expected to incorporate didactic, research, mentoring, and career development elements to prepare trainees with the technical, operational, and professional skills required for careers in the biomedical research workforce.
### Key Program Dates

<table>
<thead>
<tr>
<th>Program</th>
<th>FOA</th>
<th>Application Due Date</th>
<th>Review</th>
<th>Council</th>
<th>Budget Start</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bridges to the Baccalaureate Research Training Program (T34)</td>
<td>PAR-22-125</td>
<td>Oct. 3, 2022</td>
<td></td>
<td></td>
<td>July 2023</td>
</tr>
<tr>
<td>Bridges to the Doctorate Research Training Program (T32)</td>
<td>PAR-21-198</td>
<td>Oct. 3, 2022</td>
<td>Feb/March 2023</td>
<td>May 2023</td>
<td>August 2023</td>
</tr>
</tbody>
</table>

Due to planned grants.gov system outage from Sep. 23 – Sept. 29, 2022, 2022 due dates have been shifted to Oct. 3 ([NOT-OD-22-190](#)).

The two-week window of consideration associated with the NIH Late Application Policy (when applicable) will be calculated from the original due dates (Sep. 26 for B2B and Sep. 27 for B2D).
Webinar Outline

I. Program Overview
II. Application Components
III. Peer Review Overview
IV. Budget Overview
# The Application - Page Limits

<table>
<thead>
<tr>
<th>Section of Application</th>
<th>Select Page Limits *</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Summary/Abstract</td>
<td>30 lines of text</td>
</tr>
<tr>
<td>Introduction to Resubmission Application (when applicable)</td>
<td>3</td>
</tr>
<tr>
<td>Program Plan</td>
<td>25</td>
</tr>
<tr>
<td>Advisory Committee (optional)</td>
<td>1</td>
</tr>
<tr>
<td>Recruitment Plan to Enhance Diversity</td>
<td>3</td>
</tr>
<tr>
<td>Trainee Retention Plan</td>
<td>3</td>
</tr>
<tr>
<td>Outcomes Data Collection and Storage Plan</td>
<td>2</td>
</tr>
<tr>
<td>Dissemination Plan</td>
<td>1</td>
</tr>
<tr>
<td>Plan for Instruction in Methods for Enhancing Reproducibility</td>
<td>3</td>
</tr>
<tr>
<td>Plan for Instruction in the Responsible Conduct of Research</td>
<td>3</td>
</tr>
<tr>
<td>Each Biographical Sketch</td>
<td>5</td>
</tr>
<tr>
<td>Institutional Support Letter</td>
<td>10</td>
</tr>
<tr>
<td>Institutional Eligibility Letter (per letter)</td>
<td>1</td>
</tr>
</tbody>
</table>

*If page limits are exceeded, the application may be withdrawn prior to review*
**Training Program Section**

- 1. Introduction to Application (for Resubmission and Revision applications)
- 2. Program Plan
- 3. Plan for Instruction in the Responsible Conduct of Research
- 4. Plan for Instruction in Methods for Enhancing Reproducibility
- 5. Plan for Instruction in Methods for Enhancing Reproducibility
- 6. Plan for Instruction in Methods for Enhancing Reproducibility
- 7. Progress Report (for Renewal applications)

**Faculty, Trainees, and Training Record Section**

- 7. Participating Faculty Biosketches
- 8. Letters of Support
- 9. Data Tables

**Other Training Program Section**

- 10. Vertebrate Animals
- 11. Select Agent Research
- 12. Consortium/Contractual Arrangements

**Appendix**

- 13. Appendix

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**Research Training Program Plan Form**

**PHS 398 Research Training Program Plan**

**OMB Number:** 0925-0001  
**Expiration Date:** 09/30/2024

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**National Institute of General Medical Sciences**

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**B2B and B2D Informational Webinar for Prospective Applicants 2022**
# Training Program Section

**PHS 398 Research Training Program Plan**

- **Introduction**
  1. Introduction to Application (for Resubmission and Revision applications)

**Training Program Section**

1. Program Plan
2. Plan for Instruction in the Responsible Conduct of Research
3. Plan for Instruction in Methods for Enhancing Reproducibility
4. Multiple PD/PI Leadership Plan (if applicable)
5. Progress Report (for Renewal applications)

- **Faculty, Trainees and Training Record Section**
  7. Participating Faculty Biosketches
  8. Letters of Support
  9. Data Tables

- **Other Training Program Section**
  10. Vertebrate Animals
  11. Select Agent Research
  12. Consortium/Contractual Arrangements

- **Appendix**
  13. Appendix

**Training Program Section**

2. Program Plan
3. Plan for Instruction in RCR
4. Plan for Enhancing Reproducibility
5. Multiple PD/PI Leadership Plan
6. Progress Report for renewals through [PAR-19-299](#) (B2B) or [PAR-19-300](#) (B2D) only

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[19x440] View Burden Statement

PHS 398 Research Training Program Plan

- **OMB Number:** 0925-0001
- **Expiration Date:** 09/30/2024

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**B2B and B2D Informational Webinar for Prospective Applicants 2022**

**NIH**: National Institute of General Medical Sciences
2. Program Plan *(Page limit: 25 pages)*

- Rationale, Mission, and Objectives
- Curriculum and Overall Training Plan
- Career Development
- Program Oversight, Participating Faculty Selection, and Mentor Training
- Institutional and Departmental Commitment to the Program
- Training Program Director(s)/Principal Investigator(s)
- Preceptors/Mentors (Participating Faculty)
- **B2B**: Trainee Positions, Appointment Process, Retention, and Support
- **B2D**: Application Process, Trainee Positions, Retention and Support
- Training Outcomes
- Program Evaluation and Dissemination

B2B and B2D Informational Webinar for Prospective Applicants 2022
Rationale, Mission, and Objectives

- Rationale for the training program
  - What is the program need?
  - What are the benefits to students?
- Training mission, objectives (specific, measurable): inter-institutional context should inform the objectives and the design of the proposed program activities
- How the training activities build skills and attain objectives
- Discuss the rationale for the proposed institutional partners (proximity, current collaboration, course credit/articulation agreements)
- Describe the current institutional efforts to promote diversity and to create inclusive research training environments
Curriculum and Overall Training Plan

- How transfers will be given credit for existing coursework, experiences, and continued to be supported and tracked
- Enhancements to the training environment beyond the supported trainees
- How the courses, structured activities, and research experiences will accomplish the specific training mission and objectives
  - How are the training activities designed to develop the technical, operational, and professional skills of trainees?
- How the training activities will employ evidence-informed approaches to trainee learning, mentorship, inclusion, and professional development
- 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
Describe how the trainees will be provided:

• Awareness of the breadth of careers available to them in the biomedical research workforce employment landscape

• Access to academic and career outcomes of previous trainees/graduates

• Skills, knowledge, and support needed to attain positions in the sectors of the biomedical research workforce that are of interest to them

• Experiential learning opportunities (e.g., internships, shadowing, informational interviews, teaching opportunities)
Program Oversight, Participating Faculty Selection, and Mentor Training

Should include:

• the planned strategy and administrative structure to oversee and monitor the program and to ensure appropriate and timely trainee progress.

• plan to select faculty based on commitment to training and mentoring

• the mechanism for matching trainees with the appropriate participating faculty mentors.

• 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.
Institutional and Departmental Commitment

Applicants may use this section to expand upon the “Facilities & Other Resources” section and the “Letters of Support” section, as necessary, to provide additional information regarding the institutional and departmental commitment to the program.

Do not repeat information contained elsewhere in the application.
Program Director(s)/Principal Investigator(s)

- Multiple PDs/PIs approach is required—one from each participating institution
- Scientific expertise, administrative and training experiences
- Sufficient bandwidth to oversee the program
- Demonstrated commitment to training the next generation of biomedical research workforce
- Received training to mentor individuals from diverse backgrounds
- The application should describe the administrative structure and leadership succession plan for critical positions, including the MPI team.
Preceptors/Mentors (Participating Faculty)

Describe how:

• the participating faculty will promote the success of the trainees and the training program.

• the program has or will build a diverse team of participating faculty

• the faculty collaborate (joint sponsorship, team teaching, inter-intra-institutional research/teaching collaboration)

• the faculty have sufficient time to commit to training
B2B: Trainee Positions, Recruitment, Retention

• Describe the review process to identify research-oriented candidates for the program
  • Programs are encouraged to develop a process that considers metrics beyond grade point average (GPA), and standardized test scores, for example.

• Define and justify the selection and appointment criteria

• Explain the proposed training grant support structure (e.g., one year at the associate degree-granting institution, and one year at the baccalaureate degree-granting institution)

• Provide a strong justification for the number of requested trainee positions in the context of the training grant eligible pool and other training programs
Application process:

- Describe the admissions data provided in the required "Application and Admissions Data" attachment
  
  - Include characteristics of training grant eligible (I) applicants, (II) admitted individuals, and (III) matriculants for each of the past 5 academic years
  
- Explain how the program will identify and recruit a diverse pool of potential candidates from a wide variety of institutions and backgrounds
  
- Describe plans for a candidate review process that will allow a broad group of trainees the ability to participate in the training program

- Provide a strong rationale if the training program does not conduct its own recruitment and admissions for Ph.D. students entering the university and instead appoints students who were admitted by university departments or other graduate programs
Trainee Positions:

- Describe how large the program will be across all cohorts
- Provide a strong justification for the number of requested funded slots per year in the context of the training grant eligible pool, the size of the proposed program, the number of participating faculty, etc.
- Explain the proposed training grant support structure

Retention and Support:

- Expand upon the Trainee Retention Plan
- Describe the ability for participating department(s) and/or the institution(s) to support trainees for the duration of their graduate careers
- Describe efforts of the program to maintain support for the trainees throughout the Ph.D. program
Training Outcomes

• Provide trainee outcomes for students in similar programs at the institution for up the last five years
  ○ B2B: Tables 5C, 8D, and suggested tables B1, B2, or B3
  ○ B2D: Tables 5A, 8A

• Degree completion rates (Baccalaureate for B2B; PhD for B2D) and time-to-degree for recent graduates. Data should have institutional comparator groups, graduation rates for all students in the STEM fields represented, and a description of career outcomes

• Although the training tables for new applications only allow for 5 years of recent graduate outcomes, the application may describe up to 15 years of outcomes in the narrative
Program Evaluation and Dissemination

• Describe the evaluation or assessment process to be used to determine whether the overall program is effective.

• Explain how the plan will effectively track trainee educational and career outcomes.

• Explain how the program will share the outcomes of the training or mentoring interventions.

• The application may include the "Evaluation and Assessment Instruments" Appendix to provide blank survey instruments, rubrics, or forms.
3. Plan for Instruction in the Responsible Conduct of Research (3 pages)

- All applications must include a plan to fulfill NIH requirements for instruction in the Responsible Conduct of Research (RCR).

- Describe how integrated into overall curriculum, complemented with mentored research experiences

- Plan must describe how participation in RCR instruction will be monitored

- The plan must address the five required components:
  1) Format
  2) Subject Matter
  3) Faculty Participation
  4) Duration of Instruction
  5) Frequency of Instruction

Applications lacking an RCR plan will not be reviewed. See NOT-OD-10-019 and NOT-OD-22-055 for more details.
4. Plan for Instruction in Methods for Enhancing Reproducibility (3 pages)

• Applicants are required to provide a Plan for Instruction in Methods for Enhancing Reproducibility

• The plan must describe how trainees will be instructed in principles important for enhancing research reproducibility. These principles include, at a minimum:
  
  • evaluation of the foundational research underlying a project (i.e., the rigor of the prior research);
  • rigorous experimental design and data interpretation;
  • consideration of relevant biological variables such as sex;
  • authentication of key biological and/or chemical resources

If this plan is not included, the application will be considered incomplete and will not be reviewed
Rigor & Reproducibility Resources

- NIH Website on Rigor and Reproducibility: https://www.nih.gov/research-training/rigor-reproducibility
5. Multiple PD/PI Leadership Plan

• Since multiple PDs/PIs must be designated in the application, the application must include a Multiple PD/PI Leadership Plan.

• The emphasis should be on how multiple PD/PIs will benefit the program and the trainees.

• Plans should describe:
  • The governance and organizational structure of the leadership team and training program
  • A communication plan
  • Process for making decisions
  • Procedures for resolving conflicts

• Check the SF424 Application Guide for additional details (use the Training Instructions, page T-98)
### Faculty, Trainees, and Training Record Section

#### PHS 398 Research Training Program Plan

**Introduction**

1. Introduction to Application (for Resubmission and Revision applications)

**Training Program Section**

2. Program Plan

3. Plan for Instruction in the Responsible Conduct of Research

4. Plan for Instruction in Methods for Enhancing Reproducibility

5. Multiple PD/PI Leadership Plan (if applicable)

6. Progress Report (for Renewal applications)

**Faculty, Trainees and Training Record Section**

- Participating Faculty Biosketches
- Letters of Support
- Data Tables

**Other Training Program Section**

- Vertebrate Animals
- Select Agent Research
- Consortium/Contractual Arrangements

**Appendix**

- Appendix

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**Required**

7. Participating Faculty Biosketches

8. Letters of Support

9. Data Tables
7. Faculty Biosketches (5-page limit, each)

Personal statement should address their commitment to:

• Training, mentoring, and promoting inclusive, safe and supportive scientific 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

• Fulfilling the need of the trainees to complete their degrees in a timely fashion
8. Letters of Support

• Three letters of support **must** be included in the application

1. Institutional Support and Commitment Letter (10 pages maximum)
   • A single letter on the applicant institution’s letterhead, signed by each participating institution's central administrator
   • Letter must outline each institution's respective role in administering the program
   • Must describe how the resources within the partnering institutions will be leveraged to enhance the competitiveness of the trainees
As applicable, the letter should address how the institution:

- Supports core facilities and technology resources that can enhance training
- Provides staff, facilities, and educational resources to the planned program
- Supports the PDs/PIs and other staff associated with the planned program
- Ensures that faculty have protected time for mentoring, training and research
- Fosters and rewards excellence in training and mentoring
- Promotes diversity and inclusion at all levels of the research training environment
- Ensures that facilities promote the safety of trainees
- Ensures that facilities are accessible to trainees with disabilities
- Promotes a positive, supportive and inclusive environment
- Ensures trainees access to student support services
- Provides resources for evaluating the training outcomes of the program
- Explain how the program will synergize and share resources
- Explain how the faculty, pool of potential trainees, and resources are sufficient
- Policies and procedure are in place to prevent and respond to discriminatory harassment and other discriminatory practices


2. Associate Degree-Granting Institutional Eligibility Letter (1-page maximum, per letter)
   • Provost or similar official with institution-wide responsibility must certify that the institution does not offer baccalaureate degrees in STEM fields.

3. Baccalaureate Degree-Granting Institutional Eligibility Letter (1-page maximum, per letter)
   • Provost or similar official with institution-wide responsibility must certify that the institution offers baccalaureate degrees in STEM fields.

If a letter is not included for each institution, the application will be considered incomplete and will not be reviewed.
8. B2D Letters of Support

2. Master's Degree-Granting Institutional Eligibility Letter (1-page maximum, per letter)
   • Provost or similar official with institution-wide responsibility from each partner must certify that the institution(s) does not offer doctoral degrees in the biomedical sciences.

3. Research-Intensive Partner Eligibility Letter (1-page maximum, per letter)
   • Provost or similar official with institution-wide responsibility from each partner must certify that in total, each institution has an average of RPG funding greater than or equal to $7.5 million total costs (both direct and F&A/indirect costs) per year over the past 3 fiscal years.

If a letter is not included for each institution, the application will be considered incomplete and will not be reviewed.
9. Data Tables

- Choose New or Renewal Applications as appropriate
- B2B: Use Undergraduate Training Tables
- B2D: Use Predoctoral Training Tables

For those with a R25 Bridges Program, your application will be a NEW application, not a renewal.

https://grants.nih.gov/grants/forms/data-tables.htm
B2B: Required Data Tables

<table>
<thead>
<tr>
<th>Table</th>
<th>Title of Table</th>
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<tbody>
<tr>
<td>2</td>
<td>Participating Faculty Members</td>
</tr>
<tr>
<td>3</td>
<td>Federal Institutional Research Training Grant and Related Support Available to Participating Faculty Members</td>
</tr>
<tr>
<td>4</td>
<td>Research Support of Participating Faculty Members</td>
</tr>
<tr>
<td>5C</td>
<td>Publications of Those in Training: Undergraduate</td>
</tr>
<tr>
<td>8D</td>
<td>Program Outcomes: Part 1 (Renewals) or Part II (New)</td>
</tr>
</tbody>
</table>

- A summary of key data from the tables should also be included in the narrative (Program Plan) of the application. Make sure information in tables and narrative are consistent.

- Include data for all partnering institutions.

Applications that do not include these data tables will not be reviewed.
B2B: Suggested Data Tables

<table>
<thead>
<tr>
<th>Table</th>
<th>Title of Table</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.1</td>
<td>Undergraduates and Faculty in Participating Biomedical Departments and Interdepartmental Programs</td>
</tr>
<tr>
<td>A.2</td>
<td>Student Population Characteristics</td>
</tr>
<tr>
<td>A.3</td>
<td>Undergraduate Graduation Rates</td>
</tr>
<tr>
<td>B.1, B.2, or B.3</td>
<td>Past Trainee Record (5-Year, 10-Year, or 15-Year)</td>
</tr>
</tbody>
</table>

- If appropriate, include Suggested Data tables within the Training Program Plan (suggested tables counts toward the 25-page limit). A summary of key data from the tables should also be included in the narrative of the application.

- Include data for all partnering institutions

DO NOT include Suggested Tables in the required Data Tables attachment
## B2D: Required Data Tables

<table>
<thead>
<tr>
<th>Table #</th>
<th>Title of Table</th>
<th>New Applications</th>
<th>Renewal Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table 1</td>
<td>Census of Participating Departments or Interdepartmental Programs</td>
<td>Except last 2 columns</td>
<td>Last column only applies to T90/R90</td>
</tr>
<tr>
<td>Table 2</td>
<td>Participating Faculty Members</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Table 3</td>
<td>Federal Institutional Research Training Grant and Related Support Available to</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Participating Faculty Members</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Table 4</td>
<td>Research Support of Participating Faculty Members</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Table 5A</td>
<td>Publications of Those in Training: Predoctoral</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Table 7</td>
<td>Appointments to the Training Grant for Each Year of the Current Project Period</td>
<td>Not Applicable</td>
<td></td>
</tr>
<tr>
<td>Table 8A</td>
<td>Program Outcomes: Predoctoral</td>
<td>Part III Only</td>
<td></td>
</tr>
</tbody>
</table>

- A summary of key data from the tables should also be included in the narrative (Program Plan) of the application. Make sure information in tables and narrative are consistent.
- Include data for all partnering institutions.
- **Table 6A not required and must not be included**
- **Applications that do not include these data tables will not be reviewed.**
B2D: Suggested Data Tables

- **Suggested Format Table A**: Numbers and Characteristics of Applicants, Admitted Individuals, and Matriculants
  - Single departmental programs
  - Interdisciplinary programs with multiple admissions

- The Suggested Format Table A should be combined with the other required attachments (such as the Recruitment Plan to Enhance Diversity, Trainee Retention Plan, etc.) and uploaded to “Other Project Information” of the PHS 398 Research Training Program Plan Forms F and must not be included in the Data Table section.

- Include data for all partnering institutions

**DO NOT include Suggested Tables in the required Data Tables attachment**
### PHS 398 Research Training Program Plan

**Introduction**
1. Introduction to Application (for Resubmission and Revision applications)

**Training Program Section**
1. Program Plan
2. Plan for Instruction in the Responsible Conduct of Research
3. Plan for Instruction in Methods for Enhancing Reproducibility
4. Multiple PD/PI Leadership Plan (if applicable)
5. Progress Report (for Renewal applications)

**Faculty, Trainees and Training Record Section**
1. Participating Faculty Biosketches
2. Letters of Support
3. Data Tables

**Other Training Program Section**
1. Vertebrate Animals
2. Select Agent Research
3. Consortium/Contractual Arrangements

### Appendix

**Required**
- Required Training Activities (2 pages max per activity)
- Responsible Conduct of Research Syllabi (2 pages max total)

**Optional**
- Elective Activities (2 pages max per activity)
- Conflict Resolution Protocols (3 pages max total)
- Evaluation and Assessment Instruments

---

Applications will be withdrawn before review if non-compliant due to either (a) missing required appendices or (b) exceeding the page limits.
RESEARCH & RELATED Other Project Information

1. Are Human Subjects Involved?  
   Yes [□]  No [□]

   1.a. If YES to Human Subjects
   Is the Project Exempt from Federal regulations?  
   Yes [□]  No [□]
   If yes, check appropriate exemption number.  
   1 [ ]  2 [ ]  3 [ ]  4 [ ]  5 [ ]  6 [ ]  7 [ ]  8 [ ]
   If no, is the IRB review Pending?  
   Yes [□]  No [□]
   IRB Approval Date:
   Human Subject Assurance Number:

2. Are Vertebrate Animals Used?  
   Yes [□]  No [□]

   2.a. If YES to Vertebrate Animals
   Is the IACUC review Pending?  
   Yes [□]  No [□]
   IACUC Approval Date:
   Animal Welfare Assurance Number:

3. Is proprietary/privileged information included in the application?  
   Yes [□]  No [□]

4. a. Does this Project Have an Actual or Potential Impact - positive or negative - on the environment?  
   Yes [□]  No [□]
   b. If yes, please explain:
   c. If this project has an actual or potential impact on the environment, has an exemption been authorized or an environmental assessment (EA) or environmental impact statement (EIS) been performed?  
   Yes [□]  No [□]
   d. If yes, please explain:

5. Is the research performance site designated, or eligible to be designated, as a historic place?  
   Yes [□]  No [□]

5.a. If yes, please explain:

6. Does this project involve activities outside of the United States or partnerships with international collaborators?  
   Yes [□]  No [□]

6.a. If yes, identify countries:

6.b. Optional Explanation:

7. Project Summary/Abstract

8. Project Narrative

9. Bibliography & References Cited

10. Facilities & Other Resources

11. Equipment

12. Other Attachments

Optional

Required

- Recruitment Plan to Enhance Diversity
- Trainee Retention Plan (3-page limit)
- Outcomes Data Collection and Storage Plan (2-page limit)
- Dissemination Plan (1-page limit)
- B2B Only: Articulation Agreement
- B2D Only: Application and Admissions Data
- Institutional Course Credit Agreements

Optional

- Advisory Committee (1-page limit)
Recruitment Plan to Enhance Diversity (3 pages)

- Describe outreach strategies and activities to recruit trainees from underrepresented groups (see NOT-OD-20-031).
- Describe specific efforts to be undertaken by the training program, including the involvement of training program faculty.
- Centralized institutional recruitment efforts alone are not sufficient.
- Accommodation is not the same as outreach or active recruitment of students with disabilities.
- Please name your file “Recruitment_Plan.pdf”

Applications that do not include this attachment will be withdrawn prior to review.
Trainee Retention Plan (3 pages)

• Describe efforts to sustain the scientific interests of trainees from all backgrounds.

• Describe the specific efforts to be undertaken by the training program, including the involvement of training program faculty.

• Centralized institutional retention efforts alone is not sufficient.

• Please name your file “Retention_Plan.pdf”.

• Resources:
  o https://extramural-diversity.nih.gov/building-participation/recruitment-retention

Applications that do not include this attachment may be withdrawn prior to review.
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.

Describe how the data will be centralized, safeguarded, and retrievable during leadership changes (1-page maximum, part of the 2 pages).

Please name your file “Data_Collection_Storage_Plan.pdf”

Applications that do not include this attachment may be withdrawn prior to review.
Dissemination Plan (1 page)

• A specific plan **must** be provided to disseminate nationally any findings resulting from or materials developed under the auspices of the research training 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 your file “Dissemination_Plan.pdf”

Applications that do not include this attachment may be withdrawn prior to review.
B2B Required Attachment: Articulation Agreement

- This **must** be included to provide evidence that there is synergy between the participating institutions in terms of transfer of course credits, to ensure timely progression to degree.
- Please name your file “Articulation_Agreement.pdf”

B2B Applications that do not include this attachment will be considered incomplete and will not be reviewed.
B2D Required Attachment: Institutional Course Credit Agreement

• This **must** be included to provide evidence that there is synergy between the participating institutions in terms of transfer of course credits, to ensure timely progression to degree.

• Please name your file “Institutional_Agreement.pdf”

B2D Applications that do not include this attachment will be considered incomplete and will not be reviewed
B2D Required Attachment: Application and Admissions Data

• This data **must** be provided to allow for the evaluation of the ability of participating departments/interdepartmental programs to recruit training grant eligible individuals.

• Provide the numbers and characteristics of training grant eligible (I) applicants, (II) admitted individuals, and (III) matriculants for each of the past 5 academic years as well as the average over those years.

• Applicants are encouraged to use **Suggested Table A**, and to report on the categories listed in the [Notice of NIH’s Interest in Diversity](#).

• Demographic data should be from voluntary self-reporting.

• Please name your file “Application_Admissions_Data.pdf”

**B2D Applications that do not include this attachment may be withdrawn prior to review.**
Advisory Committee (1 page maximum) **Optional**

- An Advisory Committee is not a required component of a training program.
- If an Advisory Committee is intended, provide a plan for the appointment of members.
- The roles, responsibilities, and desired expertise of committee members, frequency of committee meetings, and other relevant information should be included.
- Only pre-existing Advisory Committee members should be named in the application. Potential Advisory Committee members should not be identified or contacted prior to receiving an award.
- Please name your file “Advisory_Committee.pdf”
Common Pitfalls

- Not reading the FOA and Notices thoroughly
- Lack of measurable objectives
- Not clear how current program design is informed by past efforts
- Unclear training activities and timeline
- Insufficient justification for the need for the proposed Bridges program, distinction from current programs
- Incomplete or confusing data tables that don’t align with narrative in the Program Plan
- Weak justification for the proposed partnership
Webinar Outline

I. Program Overview
II. Application Overview
III. Budget Overview
IV. Peer Review Overview
Budget Overview
Budget - Trainees

• Support is allowed for **trainees** in the form of a **stipend**.

• 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. Appointments of less than 9 months require prior approval from the assigned NIGMS Program Officer.

• A Bridges 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 Bridges appointment.
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, 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.
Bridges to Doctorate - Trainee Travel

- NIGMS will provide up to $1,000 per trainee to travel to scientific meetings or training experiences that will enhance scientific development, build science identity, create a sense of belonging in the scientific community, and build professional networks.

- For Bridges-supported institutions outside the continental United States, $1,250 for travel per trainee will be provided.
**Bridges to Baccalaureate - Trainee Travel**

- NIGMS will provide up to $1,000 per trainee to travel to scientific meetings or training experiences that will enhance scientific development, build science identity, create a sense of belonging in the scientific community, and build professional networks. For Bridges-supported institutions outside the continental United States, $1,250 for travel per trainee will be provided.

- Trainees are required to spend at least one summer in a research training experience at the baccalaureate degree-granting institution. Funds will be provided in the amount of $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.
Training Related Expenses

- TRE that may be requested is limited to a maximum:
  - B2B: $10,000 per trainee per year; maximum total TRE of $100,000 per year
  - B2D: $8,400 per trainee per year.

- For both programs, TRE funds are typically used for costs associated with skills development training activities; seminar speakers; and training and mentoring interventions. For B2B, TRE funds may also be used for curriculum or methods development.

- For both programs, program evaluations costs are typically up to $3,000 for the 5-year training grant period.

- Other program related expenses, including personnel and administrative costs, may be included within the training-related expenses.
Personnel Effort

• TRE 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.
xTrain for Student Appointments

- All Bridges trainees must have an appointment form submitted through the eRA Commons to xTrain before they may receive their stipend.

- If participants cannot continue in the grant program for the full appointment period, an amended appointment must be submitted to xTrain with the correct appointment period.

- For the Doctorate Program, Termination Notice must be submitted through xTrain within 30 days of the end of the total support period.

- xTrain Web Page - application guide, quick reference sheets, FAQs, training materials: [https://era.nih.gov/services_for_applicants/other/xTrain.cfm](https://era.nih.gov/services_for_applicants/other/xTrain.cfm)

Appointments are normally made in 12-month increments.
Webinar Outline

I. Program Overview

II. Application Overview

III. Budget Overview

IV. Peer Review Overview
Review of Applications

- Bridges applications are reviewed by one of two standing NIGMS review committees: TWD-C or TWD-D. (www.nigms.nih.gov/Research/application/Pages/reviewcommittees.aspx)

- Applications will be assigned to either TWD-C/D to balance conflicts and workload.

- Receipt letter from scientific review officer will provide information about meeting dates, instructions for providing updates, link for committee roster, and people to contact during the review and post-review process.

- Scores and summary statements accessed through PI’s eRA Commons account.
Review of Applications

• Please read the review criteria while preparing your application to make sure all of the required information is included.

• Review panel will assess your application against the review criteria.
Review Criteria- Section V of FOA

Scored Review Criteria

• Training Program and Environment
  o Rationale, Mission, and Objectives
  o Curriculum and Overall Training Plan
  o Career Development
  o Program Oversight, Participating Faculty Selection, and Mentor Training
  o Institutional and Departmental Commitment to the Program

• Training Program Director(s)/Principal Investigator(s)

• Preceptors/Mentors (Participating Faculty)

• Trainee Positions, Appointment (B2B)/Application (B2D) Process, Retention, and Support

• Training Record
  o Training Outcomes for Trainees (renewals) or Training Grant Eligible Pool (new)
  o Program Evaluation
Additional Review Criteria (part of Overall Impact score but no separate scores given)

• **Training in Methods for Enhancing Reproducibility** [plan] - Acceptable Y/N?
• **Recruitment Plan to Enhance Diversity** - Acceptable Y/N?
• **Training in the Responsible Conduct of Research** [plan] - Acceptable Y/N?
• [Protections for Human Subjects, Vertebrate Animals, Biohazards]
• **Resubmissions/Renewals**

Additional Review Considerations (no separate scores given and not considered in Overall Impact score)

• [Select Agent Research]
• **Budget and Period of Support** (# Trainee Slots)
Application Preparation - Reminders

Check Application

• Read the FOA thoroughly and make sure that your application addresses all the training elements and that all requested materials are included.

Content

• Make sure that materials are supplied in the correct locations, per FOA instructions.

• Successful submission through Grants.gov and eRA Commons does not mean appropriate responsiveness to the program announcement.

• Allow enough time to carefully check your application after submission. We cannot accept any missing items after the receipt deadline.

Applications will be withdrawn if anything is missing or unallowed materials are included!
Application Preparation - Reminders

Page Limits
• Supply all requested materials within page limits.
• Do *not* “overstuff” sections that don’t have page limits or use appendices to get around the limits.

Appendices
• Note that the Appendix should *only* be used in circumstances covered in the NIH policy on appendix materials and as the FOA specifically instructs applicants to do so.
• The Bridges FOAs require specific Appendix materials.

Avoid non-compliance and withdrawal: Feedback Loop Post
Application Preparation - Tips

Comprehensive

• Present the institutional framework and environment of your program.

• Address all the requirements of the program announcement.

  For example:
  o If you don’t have institutional baseline data, explain how you plan to obtain it.
  o If you haven’t fully formed your evaluation plan, at least acknowledge that you are working on it.

• Describe how your program “works”

  For example:
  o How are students recruited and selected? By whom?
  o What does the advisory committee do? How often do they meet?
  o How have you used evaluation information in designing/improving your program?
Application Preparation - Tips

Clear

• Don’t bury important information; don’t expect reviewers to “read between the lines” to figure out what you are proposing.

• Include clear, measurable and attainable program goals

• Present outcomes data in a straightforward manner.
  o Don’t exaggerate.
  o Don’t hide data (reviewers will “do the math”).
  o It is far better to present results as they are and address how the program aims to improve.

• Do not summarize data on the Training Tables itself. Summaries should be included in the program plan section only.
  o Inclusion of summarized data would be considered overstuffing
Application Preparation - Tips

Current

• Make sure faculty biosketches are up-to-date, in correct format, and relevant for training program
• Provide data on current and prior students
• Use the most recent institutional data

Consistent

• **Data in tables and text should match**
• Data should be consistent across tables
• Match justification to budget items
• Refer to the correct program in text and tables
• Include a timeline for the activities
# Review Process - Usual Timeline

<table>
<thead>
<tr>
<th>Timeframe</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>(From submission date)</td>
<td></td>
</tr>
<tr>
<td>1 - 2 months</td>
<td>Referral</td>
</tr>
<tr>
<td>2 - 6 months</td>
<td>Review Panel</td>
</tr>
<tr>
<td>6 - 7 months</td>
<td>Summary Statement Available</td>
</tr>
<tr>
<td>7 - 8 months</td>
<td>Advisory Council</td>
</tr>
<tr>
<td>8 - 9 months</td>
<td>Funding Decisions</td>
</tr>
<tr>
<td>9 - 10 months</td>
<td>Award Start Date</td>
</tr>
</tbody>
</table>
Critical Deadlines

• Letter of Intent Due Date(s)
  • Not Applicable

• Application Due Date(s)
  • October 3, 2022 - B2B
  • October 3, 2022 – B2D

• Earliest Start Date
  • July 2023 – B2B
  • August 2023 – B2D

Reminder: Due to planned grants.gov system outage from Sep. 23 – Sept. 29, 2022, 2022 due dates have been shifted to Oct. 3 (NOT-OD-22-190).

The two-week window of consideration associated with the NIH Late Application Policy (when applicable) will be calculated from the original due dates (Sep. 26 for B2B and Sep. 27 for B2D).
For additional information

- Funding Opportunity Announcements:
  - B2B PAR-22-125; B2B website
  - B2D PAR-21-198; B2D website

- FAQs for NIGMS Undergraduate and Predoctoral Training Programs

- Frequently Asked Questions – Application Guide, Electronic Submission of Grant Applications
Agency Contacts

Program: B2B
- Shakira Nelson, Ph.D. 
  shakira.nelson@nih.gov
- Laurie Stepanek, Ph.D. 
  laurie.stepanek@nih.gov

Program: B2D
- Bob Coyne, Ph.D. 
  robert.coyne@nih.gov

Grants Management
- Justin Rosenzweig 
  roenzw@nigms.nih.gov

Review
- Sonia Ortiz-Miranda, Ph.D. 
  sonia.ortiz-miranda@nih.gov
- Tracy Koretsky, Ph.D. 
  tracy.koretsky@nih.gov
Thank you!

Questions
NIH RePORTER- B2D PhD Partner(s)

1. To determine RPG funding, visit NIH RePORTER. Select the Funding feature.

2. Select Awards by Location and enter the institution name in the Organization cell. After entering the institution, click SELECT.

3. Select the institution from the sub listing provided. Submit Query.
### Funding Mechanism

<table>
<thead>
<tr>
<th>Funding Mechanism</th>
<th>Dollar Amount</th>
<th>Awards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other Research-Related</td>
<td>$675,234</td>
<td>3</td>
</tr>
<tr>
<td>Research Centers</td>
<td>$4,631,159</td>
<td>2</td>
</tr>
<tr>
<td>RPGs - Non SBIR/STTR</td>
<td>$419,536</td>
<td>1</td>
</tr>
<tr>
<td>Training - Institutional</td>
<td>$1,636,379</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>$7,362,308</td>
<td>8</td>
</tr>
</tbody>
</table>

4. View funding amount for “RPG- Non SBIR/STTR”. *Note: The current FY is the default, select the FY for the last 3 years and calculate the average for all 3 years. For example, for applications submitted in September 2020, use FY 19, 18 and 17 RPG funding.*

Research Intensive: Institutions with an average of NIH [research project grant (RPG)](https://reporter.nih.gov) funding greater than or equal to $7.5 million in total costs per year over the past 3 fiscal years.
The National Institute of General Medical Sciences (NIGMS) supports basic research that increases our understanding of biological processes and lays the foundation for advances in disease diagnosis, treatment, and prevention. NIGMS-funded scientists investigate how living systems work at a range of levels from molecules and cells to tissues and organs, in research organisms, humans, and populations.

https://www.nigms.nih.gov/about/overview/Pages/default.aspx