Undergraduate (T34) Diversity Enhancing Research Training Programs Application Webinar:

Maximizing Access to Research Careers (MARC)

March, 2020
**Disclaimer**

This webinar and accompanying slides are for informational purposes only. They serve as an overview of the T34 MARC 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 program specific FOA and any Related Notices included in the FOA’s Overview Information section.
Webinar Outline

I. Program Overview
II. Application Overview
III. Budget Overview
IV. Peer Review Overview
Webinar Outline

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

Programs that seek to develop a diverse pool of well-trained undergraduates who complete their baccalaureate degree with skills to successfully transition into and complete a biomedical research focused higher degree program (e.g. PhD or MD/PhD).

MARC Program Website:
https://www.nigms.nih.gov/training/MARC
Eligibility Information - Institutions

• Institutions with NIH RPG funding averaging greater than or equal to $7.5 million in total costs (direct and F&A/indirect per year) over the last three fiscal years are eligible.

• Awards baccalaureate degrees in biomedical sciences.

• Only one application per institution is allowed.

• Only one diversity enhancing undergraduate program (MARC or U-RISE) regardless of the activity code (R25 or T34) per institution.
1. To determine RPG funding, visit [NIH RePORTER](https://report.nih.gov). 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**.
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 May 2020, use FY 19, 18 and 17 RPG funding.
Eligibility Information - Program Director (PD) / Principal Investigator (PI)

- The PD(s)/PI(s) must have a regular full-time appointment (i.e., not adjunct, part-time, retired, or emeritus) at the applicant institution.
- Multiple PD(s)/PI(s) are encouraged.

Applications submitted by individuals with a history of research funding, mentoring and leadership experience have often been viewed more favorably by reviewers.
Eligibility Information - Supported Trainees

• Must be a citizen, non-citizen national or permanent resident of U.S.
  o Deferred Action for Childhood Arrivals (DACA) students are not eligible.

• Matriculated as a **full-time student** at the applicant institution majoring in a biomedical science.

• Appointments are normally made in 12-month increments for 2-3 years, and no trainee may be appointed for less than nine months.
Types of Applications

• New or Resubmission

Application Due Dates: May 21, 2020; May 21, 2021
Award Information - 
*Budget and Project Period*

- **Award Budget**
  - Application budgets are not limited and should reflect the actual needs of the proposed project.
  - NIGMS expects to fund MARC programs at:
    - 4-30 trainees

- **Award Project Period**
  The maximum project period is five years.
Webinar Outline

I. Program Overview
II. Application Overview
III. Budget Overview
IV. Peer Review Overview
First Step in Preparing an Application

Read the **FOA** and **SF424 (R&R)** Application Guide thoroughly.
Title Format

• Use the format:
  
  • ““MARC at Name of Institution””

  • For example, *MARC at the University of Falcon Brown*
<table>
<thead>
<tr>
<th>Section of Application</th>
<th>Page Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Summary/Abstract</td>
<td>30 lines of text</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</td>
<td>1</td>
</tr>
</tbody>
</table>
Training Program Plan

- Program Plan
- Faculty, Trainees, and Training Record
- Other Training Program Sections
- Appendix
Program Plan

Page limit: 25 pages

• Rationale, Mission, Objectives, and Overall Training Plan (Sample format tables A1, A2, and A3)
• Summer Research Experience (SRE)
• 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)
• Trainee Positions, Recruitment, Retention
• Training Outcomes (Sample format tables B1, B2, or B3)
• Program Evaluation and Dissemination
Rationale, Mission, Objectives, and Overall Training Plan

- Rationale for the training program – describe the current institutional efforts to promote diversity, justify the need for the MARC program and explain the distinctions/synergies with other training programs.
- Training mission, objectives (specific, measurable): Baseline data, the trainee pool, and institutional context should inform the objectives and the design of the proposed program activities.
- How the training activities will build skills and attain objectives.
- Plans for using evidence-based approaches to training.
- Plans for at least one summer research training experience.
- Enhancements to the training environment beyond the supported trainees.
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>
</tbody>
</table>


• A summary of key data from the tables should also be included in the narrative of the application.

• Suggested tables must be included in the “Program Plan”. Applications that include these Suggested Tables in any other location will be considered noncompliant and will not be reviewed.
Summer Research Experience

• The plans to ensure that MARC trainees complete at least one summer research training experience (SRE) at a research-intensive institution.

• Preferable sites are graduate institutions that offer NIH T32 predoctoral programs. To assist with this interaction, NIGMS maintains a list of NIGMS-funded T32 programs. Other NIH Institutes and Centers also support the T32 predoctoral training program in various research areas.

• NIGMS provides funds for the summer research training experience for up to 50% of the awarded number of MARC trainees at the time a competing award is made. SRE funds will not be provided for students continuing the research training at the home institution.

• SRE policy: https://www.nigms.nih.gov/training/T34/Pages/sre.aspx
Career Development

Describe:

• how trainees will learn the skills, knowledge, and steps needed to attain positions in the sectors of the biomedical research workforce that are of interest to them.

• how trainees will be introduced to mentors and sponsors who will enhance their career opportunities (e.g., contacts at national meetings and institutions with NIH-funded T32 training programs).

• 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

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 Commitment

• Describe how the level of institutional 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.
Program Director/Principal Investigator

- NIGMS encourages multiple PD(s)/PI(s) (MPI).
- Has the administrative and training experience to provide strong leadership, direction, management, and administration of the proposed research training program.
- Sufficient bandwidth to oversee the program.
- Received training to mentor individuals from diverse backgrounds.
- Has a demonstrated commitment to training the next generation of the biomedical research workforce.
- The application must describe the administrative structure and leadership succession plan for critical positions.
Participating Faculty

Describe how:

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

• the faculty will receive training in effective, evidence-based mentoring and teaching practices.

• the faculty are evaluated as mentors and teachers.
Biographical Sketches

• Provide biographical sketches for:
  • PD(s)/PI(s)
  • Program Coordinator
  • All Key Personnel
  • Program Faculty / Mentors


• Personal statement should describe a commitment to scientific rigor, research training, mentoring, as well as to promoting inclusive and supportive scientific environments.
Trainee Positions, Recruitment, Retention

• Provide a strong justification for the number of requested trainee positions in the context of the training grant eligible pool.

• Describe the plans for a holistic candidate review process.

• Define and justify the selection and re-appointment criteria.
Training Outcomes

• Provide trainee outcomes for students in similar programs at your institution

• The rate of Ph.D. degree attainment and time-to-degree for recent graduates. *Data should have institutional comparator groups and the graduation rates for all students in the STEM fields represented.*

• Aggregate data on the diversity of the trainees.

• Although the training tables for new applications only allow for five years of recent graduate outcomes, the application may describe up to 15 years of outcomes in the narrative.

• Required Data Training Table: 8D Part II

• Sample format tables: B1, B2, or B3
Applications may describe up to 15 years, please choose the table that is relevant to your data.

- A summary of key data from the tables should also be included in the narrative of the application.
- Suggested tables must be included in the “Program Plan”. Applications that include these Suggested Tables in any other location will be considered noncompliant and will not be reviewed.
Program Evaluation and Dissemination

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

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

• Explain how the PD(s)/PI(s) will share the outcomes of the training or mentoring interventions.

**Evaluation costs are allowed typically up to a maximum of $3,000 for the 5-year project period.**
Other Attachments

• Advisory Committee (1 page maximum) *optional*
• **Recruitment Plan to Enhance Diversity** (3 page maximum)
• **Trainee Retention Plan** (3 page maximum)
• Outcomes Data Collection and Storage Plan (2 page maximum)
• Dissemination Plan (1 page maximum)

*If all attachments except Advisory Committee are not included, the application will be considered incomplete and will not be reviewed.*
Advisory Committee (1 page maximum)

Optional

• An Advisory Committee is not a required component of a training program.

• If an Advisory Committee is intended, the roles, responsibilities, and desired expertise of committee members, frequency of committee meetings, and other relevant information should be included.

• 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

• Page limit: 3 pages
• Include outreach strategies and activities designed to recruit potential training program candidates who are from:
  • diverse backgrounds, including underrepresented racial and ethnic groups,
  • first generation college students,
  • students from low socio-economic backgrounds, and
  • individuals with disabilities.


If this attachment is not included, the application will be considered incomplete and will not be reviewed.
Trainee Retention Plan

• Page limit: 3 pages

• The trainee retention plan **must** describe efforts to sustain the scientific interests as well as the academic and research progress of trainees.

If this attachment is not included, the application will be considered incomplete and will not be reviewed.
Outcomes Data Collection and Storage Plan

• Page limit: 2 pages
• 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).

If this attachment is not included, the application will be considered incomplete and will not be reviewed.
Dissemination Plan

- Page limit: 1 page

- A specific plan **must** be provided to disseminate nationally any findings resulting from or materials developed under the auspices of the research education program.

If this attachment is not included, the application will be considered incomplete and will not be reviewed.
Letters

- Institutional Support Letter (10-page maximum) must be attached as part of Letters of Support.

- Institutional Eligibility Letter (1-page maximum) must certify eligibility.

If these letters are not included, the application will be considered incomplete and will not be reviewed.

- Other Letters of Support- can be included but should include distinct information from the required details of the Institutional support Letter.

Combine all Letters of Support into a single PDF file
Plan for Instruction in the Responsible Conduct of Research

• Page limit: 3 pages

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

• 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 a RCR plan will not be reviewed. See NOT-OD-10-019 for more details.
Plan for Instruction in Methods for Enhancing Reproducibility

- 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.

**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

- Clearinghouse for Training Modules to Enhance Data Reproducibility:
Required Training Data Tables

<table>
<thead>
<tr>
<th>Table</th>
<th>Title of Table</th>
</tr>
</thead>
<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 Part II</td>
<td>Program Outcomes: Undergraduate, Recent Graduates</td>
</tr>
</tbody>
</table>

https://grants.nih.gov/grants/forms/data-tables.htm

- A summary of key data from the tables should also be included in the narrative of the application.
- Applications that do not include these data tables, or that include any additional tables in this section, will not be reviewed.
### Required Training Data Tables

<table>
<thead>
<tr>
<th>FUNDING</th>
<th>POLICY &amp; COMPLIANCE</th>
<th>NEWS &amp; EVENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Training Tables (1-8)</td>
<td>MS Word (35 KB)</td>
<td>MS Word (122 KB) PDF (584 KB)</td>
</tr>
<tr>
<td>All Training Tables (Undergraduate Programs)</td>
<td>MS Word (22 KB)</td>
<td>MS Word (68 KB) PDF (114 KB)</td>
</tr>
<tr>
<td>All Training Tables (International Programs)</td>
<td>MS Word (27 KB)</td>
<td>MS Word (41 KB) PDF (101 KB)</td>
</tr>
</tbody>
</table>

### New Applications

<table>
<thead>
<tr>
<th>FUNDING</th>
<th>POLICY &amp; COMPLIANCE</th>
<th>NEWS &amp; EVENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Predoctoral Training Submit tables: 1, 2, 3, 4, 5A, 6A, 8A</td>
<td>MS Word (40 KB)</td>
<td>MS Word (87 KB) PDF (453 KB)</td>
</tr>
<tr>
<td>New Postdoctoral Training Submit tables: 1, 2, 3, 4, 5B, 6B, 8C</td>
<td>MS Word (41 KB)</td>
<td>MS Word (85 KB) PDF (406 KB)</td>
</tr>
<tr>
<td>New Undergraduate Training Submit tables: 2, 3, 4, 5C, 8D</td>
<td>MS Word (49 KB)</td>
<td>MS Word (51 KB) PDF (360 KB)</td>
</tr>
<tr>
<td>New Mixed Pre and Postdoctoral Training Submit tables 1, 2, 3, 4, 5A, 5B, 6A, 6B, 8A, 8C</td>
<td>MS Word (KB 52 KB)</td>
<td>MS Word (115 KB) PDF (576 KB)</td>
</tr>
<tr>
<td>New Mixed Short-Term and Predoctoral Submit tables: 1, 2, 3, 4, 5A, 6A, 8A</td>
<td>MS Word (45 KB)</td>
<td>MS Word (88 KB) PDF (463 KB)</td>
</tr>
</tbody>
</table>
## Sample Table 2. Participating Faculty Members

<table>
<thead>
<tr>
<th>Name</th>
<th>Degree(s)</th>
<th>Rank</th>
<th>Primary Department or Program</th>
<th>Research Interest</th>
<th>Training Role</th>
<th>Undergraduates In Training</th>
<th>Undergraduates Graduated</th>
<th>Undergraduates Continued in Research or Related Careers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abrams-Johnson, Jane</td>
<td>PhD</td>
<td>Asst. Prof.</td>
<td>Pharmacology</td>
<td>Regulation of Synthesis of Biogenic Amines</td>
<td>Preceptor</td>
<td>1</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Jones, Lisa S.</td>
<td>PhD</td>
<td>Res. Asst. Prof.</td>
<td>Biochemistry</td>
<td>Protein Structure, Folding, and Immunogenicity</td>
<td>Preceptor Exec Comm.</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Sandoz, Miguel J.</td>
<td>MD, PhD</td>
<td>Assoc. Prof.</td>
<td>Neuroscience</td>
<td>Developmental Genetics in Drosophila</td>
<td>Preceptor</td>
<td>4</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>Thomas, James C.</td>
<td>PhD</td>
<td>Prof.</td>
<td>Biochemistry</td>
<td>Molecular and Genetic Analysis of RNA Viruses</td>
<td>PD/PI</td>
<td>7</td>
<td>10</td>
<td>9</td>
</tr>
</tbody>
</table>

44
### Sample Table 3. Federal Institutional Research Training Grants and Related Support Available to Participating Faculty Members

<table>
<thead>
<tr>
<th>Grant Title</th>
<th>Award Number</th>
<th>Project Period</th>
<th>PD/PI</th>
<th>Number of Undergraduate Positions</th>
<th>Names of Overlapping Faculty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Genetic Basis of Mental Illness</td>
<td>T32 MH02708-07</td>
<td>07/2010-06/2015</td>
<td>Johnson, Albert P.</td>
<td>4</td>
<td>Johnson, Watson</td>
</tr>
<tr>
<td>Research Education Program for Residents in Psychiatry</td>
<td>R25 MH09876-06</td>
<td>07/2013-06/2018</td>
<td>Mendez, Roberto V.</td>
<td>0</td>
<td>Mendez, Rivers, Truesdale</td>
</tr>
<tr>
<td>Career Development in Pediatric Mental Health</td>
<td>K12 HD01234-09</td>
<td>07/2012-06/2017</td>
<td>Sterman, Patricia S.</td>
<td>0</td>
<td>Rubin</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td>16</td>
<td></td>
</tr>
</tbody>
</table>
# Sample Table 4. Research Support of Participating Faculty Members

<table>
<thead>
<tr>
<th>Faculty Member</th>
<th>Funding Source</th>
<th>Grant Number</th>
<th>Role on Project</th>
<th>Grant Title</th>
<th>Project Period</th>
<th>Current Year Direct Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jones, Janine L.</td>
<td>NIH</td>
<td>1 R01 GM76259-01</td>
<td>PD/PI</td>
<td>Structure and Function of Acetylcholine Receptors</td>
<td>06/2014--05/2018</td>
<td>$190,000</td>
</tr>
<tr>
<td>Jones, Janine L.</td>
<td>NIH</td>
<td>5 K08 AI00091-03</td>
<td>PD/PI</td>
<td>Purification &amp; Identification of Receptors</td>
<td>11/2012-11/2017</td>
<td>$140,000</td>
</tr>
<tr>
<td>Ehlers, Roger G.-</td>
<td>Univ</td>
<td></td>
<td>PD/PI</td>
<td>University start-up funds</td>
<td>08/2014-07/2017</td>
<td>$350,000</td>
</tr>
<tr>
<td>Mack, Thomas R.</td>
<td>Fdn</td>
<td></td>
<td>PD/PI</td>
<td>Control of Angiogenesis</td>
<td>03/2011-02/2015</td>
<td>$185,000</td>
</tr>
<tr>
<td>Mack, Thomas R.</td>
<td>NSF</td>
<td>PCM 80-12935</td>
<td>PD/PI</td>
<td>Cell Culture Center</td>
<td>12/2012-11/2015</td>
<td>$180,000</td>
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<tr>
<td>Mack, Thomas R.</td>
<td>NIH</td>
<td>1 P01 HL71802-05</td>
<td>Project PI</td>
<td>Subproject 4: Oncogenic Kit Receptor Signaling in vivo</td>
<td>10/2011-09/2015</td>
<td>$165,000</td>
</tr>
<tr>
<td>Smith, James P.</td>
<td>None</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zachary, Andrew</td>
<td>NIH</td>
<td>1 U01 AI28507-01</td>
<td>PD/PI</td>
<td>Human Monoclonal Antibodies as a Therapy for Staphylococcal Enterotoxin</td>
<td>07/2013-06/2018</td>
<td>$200,000</td>
</tr>
</tbody>
</table>

**Average Grant Support per Participating Faculty Member**: $282,000
Sample Table 5C. Publications of Those in Training: Undergraduate

<table>
<thead>
<tr>
<th>Faculty Member</th>
<th>Trainee Name</th>
<th>Past or Current Trainee</th>
<th>Training Period</th>
<th>Publication (Authors, Year, Title, Journal, Volume, Inclusive Pages)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Layback, Sally G.</td>
<td>Wand, Dennis R.</td>
<td>Past</td>
<td>2000-2001</td>
<td>No Publications: Left program</td>
</tr>
</tbody>
</table>

*Bold denotes current trainees.*
Required Training Data Tables: 8D Part II

### Part II. Recent Graduates (Only for New Applications)

<table>
<thead>
<tr>
<th>Trainee</th>
<th>Faculty Member</th>
<th>Start Date</th>
<th>Summary of Support During Training</th>
<th>Degree(s) Received and Year(s)</th>
<th>Topic of Research Project</th>
<th>Initial Position Department Institution Activity</th>
<th>Current Position Department Institution Activity</th>
<th>Subsequent Grant(s)/Role/Year Awarded</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smith, Calvin</td>
<td>Hughes, Noreen</td>
<td>09/2012</td>
<td></td>
<td>BS 2016</td>
<td>Ribosomal protein synthesis</td>
<td>Graduate Student Dept of Molecular Biology University of Maryland Further Training</td>
<td></td>
<td>NSF Fellowship/PI/2017</td>
</tr>
<tr>
<td>Gomez, Catherine</td>
<td>Zhang, Henry</td>
<td>09/2013</td>
<td></td>
<td>BS 2017</td>
<td>Modulation of host cellular responses</td>
<td>Student University of Arizona College of Medicine Further Training</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table A.1. Undergraduates and Faculty in Participating Biomedical Departments and Interdepartmental Programs (Previous Full Academic Year)

<table>
<thead>
<tr>
<th>Participating Department /Division or Program</th>
<th>Total Full-Time Faculty</th>
<th>Participating Faculty</th>
<th>Total Undergraduates</th>
<th>Training Grant Eligible (TGE) Undergraduates</th>
<th>Total Undergraduates Supported by any Training Award</th>
<th>Undergraduates Supported by this Training Grant (Only Renewals/Revisions)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<tr>
<td>Total</td>
<td></td>
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</tbody>
</table>

Suggested Table Formats: A.1
Table A.2. Student Population Characteristics (previous full academic year)

<table>
<thead>
<tr>
<th>Participating Department or Program</th>
<th>Nationally Underrepresented (UR) Racial or Ethnic Populations in the Biomedical Sciences</th>
<th>Individuals with Disabilities</th>
<th>Individuals from Disadvantaged Backgrounds</th>
<th>Institutionally-Defined UR Racial or Ethnic Group(s) in the Biomedical Sciences</th>
<th>Total Unique Undergraduate Individuals from UR Populations</th>
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Suggested Table Formats: A.3

Table A.3. Undergraduate Graduation Rates (Average Last 5 years)

<table>
<thead>
<tr>
<th>Participating Department or Program</th>
<th>Undergraduates from well represented (WR) populations</th>
<th>Undergraduates from UR populations</th>
<th>WR UG: Time to Degree</th>
<th>UR UG: Time to Degree</th>
<th>WR UG: 4-Yr graduation rate (6-Yr)</th>
<th>UR UG: 4-Yr graduation rate (6-Yr)</th>
<th>WR Alumni Pursued Advanced Degrees</th>
<th>UR Alumni Pursued Advanced Degrees</th>
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Appendix

• **Required** Appendix materials:
  - Required Training Activities
  - Responsible Conduct of Research Syllabi
  - Trainee Selection and Appointment Procedures (3 pages maximum)

• **Allowable** Appendix Materials:
  - Elective Activities
  - Evaluation and Assessment Instruments (Blank rubrics and forms)
  - Conflict Resolution Protocols (3-page maximum)

Applications missing or exceeding allowable appendices will be considered non-compliant and will not be reviewed.
Common Pitfalls

• Not reading the FOA and Notices thoroughly.
• Specific aims do not align with institutional assessment and resources.
• Proposed project lacks novelty and innovation.
• Incomplete and/or complete tables that don’t align with institutional self assessment and proposed project.
• Failure to state program challenges and strategies to address them.
Webinar Outline

I. Program Overview

II. Application Overview

III. Budget Overview

IV. Peer Review Overview
Budget Overview
Budget - Participants

• Support is allowed for students in the form of stipend.

• Students may be supported on MARC funding usually up to three years.

• Students may not concurrently hold another federally sponsored award that duplicates MARC support.
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.
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 supported institutions outside the continental United States, $1,250 for travel per trainee will be provided.

• NIGMS will also provide funds for the summer research training experience for up to 50% of the awarded number of MARC trainees at the time the competing award is made.

• Funds for the summer research experience (SRE) will be provided as follows: $3,000 per trainee, to be used in accordance with the institutional policies as a per diem for a period of up to ten weeks; and an additional $500 for travel to and from the host research training. No SRE funds for students staying at the home institution.
Training Related Expenses

• TRE that may be requested is limited to a maximum of: $8,000/trainee/year ($250,000 maximum)

• TRE funds may be used for costs associated with skills development training activities; seminar speakers; and with training or mentoring interventions.

• Limited program evaluation costs (typically up to $3,000 for the 5-year training grant period).

• Other program-related expenses may be included within the budget for 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 MARC 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.

xTrain Web Page - application guide, quick reference sheets, FAQs, training materials: https://era.nih.gov/services_for_applicants/other/xTrain.cfm
Webinar Outline

I. Program Overview

II. Application Overview

III. Budget Overview

IV. Peer Review Overview
Peer Review Overview
Peer Review

• 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.
• MARC applications reviewed by standing NIGMS review committees: TWD-C and TWD-D.  
  [www.nigms.nih.gov/Research/application/Pages/reviewcommittees.aspx](www.nigms.nih.gov/Research/application/Pages/reviewcommittees.aspx)

• Committees are equivalent: applications assigned to one of two committees 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.
Peer Review Cont.

All from PAR Section V under Application Review Information

Scored Criteria:
• Training Program and Environment
• Training Program Director(s)/Principal Investigator(s)
• Preceptors/Mentors (Participating Faculty)
• Trainee Positions, Recruitment, and Retention
• Training Record

Additional Review Criteria:
• Training in Methods for Enhancing Reproducibility
• Resubmissions (responses to previous reviews/changes)

Additional Review Considerations: Acceptable/Unacceptable
• Recruitment Plan to Enhance Diversity
• Training in the Responsible Conduct of Research
• Budget and Period of Support
Formatting Tips

Check Application
- Allow enough time to carefully check application after submission. We cannot accept any missing items after the receipt deadline.

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.
Application Preparation Tips

Content

• Read the program announcement and ensure that your application contains the necessary elements.

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

Context

• Present the **institutional** framework and environment of your program.

• Be realistic in your program’s goals.
Comprehensive

• Address all of the requirements of the program announcement.
  ○ For example:
    • If you don’t have certain components of the institutional baseline data, explain how you plan to obtain it.
    • 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:
    • How are students recruited and selected? By whom?
    • What does the advisory committee do? How often do they meet?
    • How have you used evaluation information in designing/improving your program?
Application Preparation Tips Cont.

Clear

• Don’t bury important information.

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

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

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
## Review Process: Usual Timeline

<table>
<thead>
<tr>
<th>Timeframe</th>
<th>Activity</th>
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<tbody>
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<td>(From submission date)</td>
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<tr>
<td>1 - 2 months</td>
<td>Referral</td>
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<tr>
<td>2 - 6 months</td>
<td>Review Panel</td>
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<tr>
<td>6 - 7 months</td>
<td>Summary Statement Available</td>
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<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>
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</tbody>
</table>
Critical Deadlines

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

- Application Due Date(s)
  - May 21, 2020

- Earliest Start Date: June 2021
For additional information

- Funding Opportunity Announcement (FOA) [PAR-19-219](https://grants.nih.gov/grants/about_grants.htm)
- NIGMS MARC Website [MARC](https://grants.nih.gov/grants/how-to-apply-application-guide/forms-e/training-forms-e.pdf)
- Notices to the MARC FOA
- Frequently Asked Questions – Application Guide, Electronic Submission of Grant Applications
- How to apply: [https://grants.nih.gov/grants/about_grants.htm](https://grants.nih.gov/grants/about_grants.htm)
Agency Contacts

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  rosenzwj@nigms.nih.gov

- Tracy Koretsky, Ph.D.
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- Lee Slice, Ph.D.
  slicelw@mail.nih.gov