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Division of Training, Workforce Development and Diversity

National Institute of General Medical Sciences

NIGMS U-RISE/MARC Training Grants (T34) (PAR-24-137) (PAR-24-138)

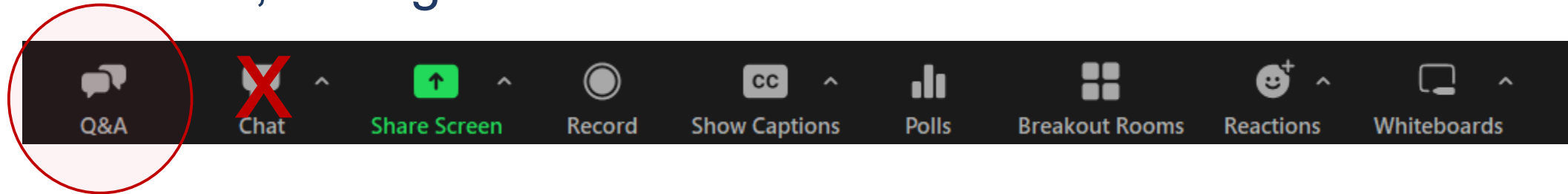U-RISE Program: Marie Harton, Jeremy McIntyre, and Joyce Stamm

MARC Program: Lameese Akacem and Kalynda Gonzales Stokes

Grants Management: Justin Rosenzweig

Review: Marci Wright

Webinar Information

- The webinar video and slides will be available on the NIGMS website.

- Please type your questions in the Q&A box, instead of in the chat box, throughout the webinar.

- If time permits, there will be an open Q&A period at the end of the webinar.

Disclaimer

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

- For any submission, applicants are responsible for following the instructions detailed in the SF424 Guide, the Notice of Funding Opportunity (NOFO) and any Related Notices.
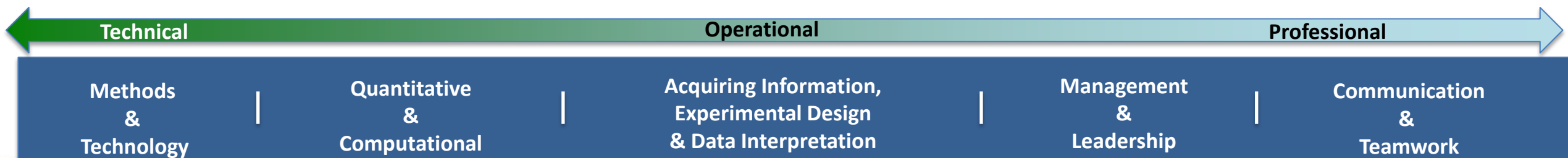
Outline

- Introduction to the Programs
- Key Program Considerations
- Highlights of the Application Components
- Key Changes to current NOFOs
- Budget Overview
- Peer Review

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U-RISE/MARC Program Objectives

- To **promote broad participation in the biomedical research workforce** by strengthening research training environments and expanding the pool of well-trained scientists who:
  - Complete their baccalaureate degree, and
  - Transition into and complete biomedical, research focused higher degree programs (such as Ph.D. or M.D./Ph.D.).

- NIGMS expects organizations to engage in **outreach and recruitment activities** to encourage individuals from underrepresented groups to participate in the program.

Major Themes in NIGMS Training Programs

- **Training objectives** — specific, obtainable and measurable.

- **Trainee skills development** — use of evidence-informed approaches to provide technical, operational, and professional skills.

- **Rigor and transparency, responsible & safe conduct** of research throughout the training experience.

- Commitment to **inclusive, safe, supportive and accessible research training environments** that promote the development of trainees from all backgrounds.

Technical ← Operational → Professional

Methods & Technology	Quantitative & Computational	Acquiring Information, Experimental Design & Data Interpretation	Management & Leadership	Communication & Teamwork

Major Themes in NIGMS Training Programs (cont.)

- **Mentor training and oversight** of trainee/mentor matches.

- **Career preparedness** — provide knowledge of and skills to transition into the range of careers in the biomedical research workforce.

- **Strong organizational support** for research training.

- **Evaluation** — the collection and dissemination of data on the success/failure of education aims. Make career outcomes publicly available.

Technical   Operational   Professional

Methods & Technology	Quantitative & Computational	Acquiring Information, Experimental Design & Data Interpretation	Management & Leadership	Communication & Teamwork

Eligibility Overview

	MARC	U-RISE
Organization	*Research Intensive* Average > $7.5M NIH Research Project Grant (RPG) funding per year over the past three fiscal years.	*Research Active* Average < $7.5M NIH Research Project Grant (RPG) funding per year over the past three fiscal years.
Principal Investigator	• Must have full time appointment. • Multiple PIs are encouraged – at least one established biomedical investigator.	
Trainees	• Applicant organization selects and establishes qualifications, consistent with applicable law. • US Citizen, Permanent Resident or non-citizen National. • Pursue research training full time (see NIH Grants Policy Statement).	

Key Program Dates

Program	NOFO	Application Due Date	Application Review	Advisory Council	Budget Start Date
U-RISE	PAR-24-137	May 29, 2024 May 28, 2025 May 27, 2026	November	January	April
MARC	PAR-24-138				June

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Key Program Considerations

Promote Broad Participation in the Biomedical Workforce

- NIGMS expects organizations to engage in **outreach and recruitment activities** to encourage individuals from [underrepresented groups](#) to participate in the program.

- Consistent with existing NIGMS practices and applicable law:
  - Funded programs may not use the race, ethnicity, or sex (including gender identity, sexual orientation, or transgender status) of a trainee or faculty candidate as an eligibility or selection criteria.

  - NIGMS does not use the race, ethnicity, or sex of trainee candidates, trainees, or faculty in the application review process or funding decisions.

Examples of Activities to Promote Broad Participation

- Outreach activities to foster awareness of research training opportunities for potential trainees from all backgrounds.

- Targeted recruitment activities to diversify program applicant pools.

- Program admissions processes that consider factors beyond grade point average and standardized test scores – such as how a trainee candidate's lived experiences and perspectives further their commitment to program goals and a biomedical research career.

- Efforts to create and sustain inclusive research training environments for trainees from diverse backgrounds, for example strengthening faculty skills to work effectively with trainees from various cultural and neurodiverse groups.

- Updating curricula, pedagogy, and academic supports to enhance student success and engagement.

- Expanding mentoring, networking, and skills development opportunities, and financial support for trainees.

- Utilizing data to identify, and as appropriate, feasibly address biases and barriers in the research training environment that impede trainee success.

Applicants are encouraged to consult with their General Counsel to ensure all applicable laws and regulations are being followed. See more information here.

Breadth of Research Training Disciplines

- Programs should provide research training opportunities to students from the **breadth of biomedical disciplines at the organization.**

- Proposed programs focused on a single biomedical discipline or approach at an organization with multiple biomedically relevant departments will be a low priority for funding.

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Authentic Research Experiences

- Provide **rigorous, well-designed mentored authentic research experiences** and additional opportunities that will build a **strong cohort** of research-oriented individuals.

- Different models depending on **organizational context.** For example, research-active institutions may partner with local research-intensive institutions or create course-based research experiences.

- Provide **more than financial aid** for trainees to conduct research.

Summer Research Experience

- Programs are expected to assist students in identifying and arranging at least one Summer Research Experience (SRE).

- Provide plans to ensure at least one SRE is at a **research-intensive institution** (for MARC, either at an external site or at their home institution).

- For additional details, see SRE policy.

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Other General Program Considerations

Programs should:

- Be tailored to the **organizational context** – using data to identify specific needs and leveraging organizational strengths to address areas of need.

- Be **well integrated into one or more departments** and exert strong organizational impact.

- Use **evidence-informed**, creative, and transformational approaches to undergraduate training and promoting broader participation.

- Demonstrate **effective oversight** of trainee development and **promote retention** for the entire time the trainee is in the undergraduate program.

- Be responsive to evaluations, particularly with respect to **trainee feedback**.

- Support trainees undertaking **the appropriate next step** toward a research-focused higher degree program.

Trainee Support

- U-RISE and MARC trainees are typically provided support for 2-3 years.

  - Training grant funds are not intended to support short-term undergraduate biomedical research training (for example, one-year appointments).

- Plans for cohort structure:

  - Plan to appoint a new cohort each year of the five years of the program.

  - Explain any planned or expected deviations in the application.

Highlights of the Application Components

Application Title Format

Use the format:

"[MARC or U-RISE] at _____"

<p style="text-align:center">name of institution</p>

<u>Examples</u>:

MARC at Fantastic College

U-RISE at the University of Success

Follow the SF424, NOFO and Notices

- Check the SF424 Application Guide—Forms H for institutional training: Training Instructions For NIH and Other PHS Agencies.

- NOFO supersedes the SF424 Guide.

- Notices supersede the NOFO and the SF424 Guide.

- Check the NOFO for required items:
  - Notices
  - Required attachments
  - Optional material
  - Appendices

Released: August 5th, 2023

TRAINING INSTRUCTIONS FOR NIH AND OTHER PHS AGENCIES

SF424 (R&R) APPLICATION PACKAGES

Selected Application Components and Page Limits

Application Components	Page Limit
Project Summary/Abstract	30 lines of text
Research Training Program Plan	25 pages
Required Other Attachment #1: Recruitment Plan to Enhance Diversity	3 pages
Required Other Attachment #2: Baseline Program Data	
Optional Other Attachment #1: Advisory Committee	1 page
Optional Other Attachment #2: Training Activities	10 pages
Each Biosketch (include commitment to scientific rigor, training & mentoring, and promoting inclusive, safe, & supportive scientific environments)	5 pages
Organizational Eligibility and Support Letter	10 pages
Progress Report (**renewal applications only**)	5 pages - program overview 1 page - each appointee to grant

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Other Attachments

R&R Other Project Information Form

- Required:
  - Baseline Program Data
  - Recruitment Plan to Enhance Diversity (3 page maximum)

- Optional
  - Advisory Committee (1 page maximum)
  - Training Activities (10 page maximum)

Baseline Program Data

- The application must provide baseline data on the proposed program.

- The data must reflect the pool of participating faculty, training grant eligible (TGE) undergraduates, and the characteristics of the TGE undergraduates for the current academic year.

- The data serve as a basis for review of planned activities, including recruitment and to determine appropriate budget and number of funded positions.

- Applicants are strongly encouraged to use Suggested Formats C and D.

- **Include in "Other Attachments" Section, NOT NIH Data Tables.**

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Research Training Program Plan Format

Multiple Sections - FOLLOW THE NOFO!
See page limits here.

Training Program Plan – use headers

Responsible Conduct of Research

Instruction in Methods for Enhancing Reproducibility

Multi PD/PI Leadership Plan (if applicable)

Progress Report (renewal only)

Biosketches

Required Organizational Letter (10 pages maximum)

Required Data Tables
- New: 2, 3, 4, 5C, 8D Part II
- Renewal: 2, 3, 4, 5C, 8D Part I

Generally, not applicable

Appendix: follow SF424 Application Guide

2. Research Training Program Plan

For this component, follow the NOFO, not the SF424 Application Guide

- ✓ Rationale, Mission and Objectives
- ✓ Curriculum and Overview of Training Plan
- ✓ Career Development
- ✓ Program Oversight of Training and Mentoring
- ✓ Training Program Director(s)/Principal Investigator(s) (PDs/PIs)
- ✓ Preceptors/Mentors (Participating faculty)
- ✓ Candidate Review Process
- ✓ Trainee Appointments and Financial Support
- ✓ Trainee Outcomes
- ✓ Program Evaluation Plan, Dissemination, and Data Storage

3. Plan for Instruction in the Responsible Conduct of Research (RCR)

- All applications must include a plan to fulfill NIH requirements for instruction in RCR.
  - o Five required components must be addressed.
  - o Components should be well integrated into the overall curriculum at multiple stages of trainee development in a variety of formats and contexts.

- Explain how teaching of RCR synergizes with the curriculum designed to enhance trainees' abilities to conduct rigorous and reproducible research.

- Describe how all program faculty will reiterate and augment key elements when trainees are performing research in their labs.

- Applicants are required to comply with the SF424 Application Guide instructions:
  - RCR Policy and Updated Guidance
  - Resources

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4. Plan for Instruction in Methods for Enhancing Reproducibility

- Applicants are required to comply with the instructions for **Plan for Instruction in Methods for Enhancing Reproducibility** as provided in the SF424 (R&R) Application Guide.

- Rigor & Reproducibility Resources:

  o **NIH Website on Rigor and Reproducibility**
  o **Clearinghouse for Training Modules to Enhance Data Reproducibility**

6. Progress Report (RENEWAL Applications ONLY)

- Demonstrate that the program successfully advanced the goals of U-RISE/MARC (for example, promoted broad participation in the biomedical research workforce by strengthening the research training environment and expanding the pool of well-trained undergraduate students that are prepared to transition into and complete a research-focused higher degree program).

- Describe:
  - Implementation of Proposed Activities
  - Results and Changes from Program Evaluations
  - Impact and Dissemination

- If challenges or program shortcomings are identified, describe sound plans for overcoming or remediating them.

- Include up to 5 pages for the program overview and up to one page summary of progress for each trainee appointed to the training grant (see page limits here).

Faculty, Trainees, and Training Record Section

Required

7. Participating Faculty Biosketches

8. Letters of Support

9. *NIH* Data Tables

7. Faculty Biosketches

- Personal statements should be tailored to the application: Address how the faculty mentor is committed to training and mentoring, and promoting rigor, reproducibility and safety as described in the NOFO.

- New Format (NOT-OD-21-073): Failure to follow the appropriate Biosketch format may cause NIH to withdraw your application from consideration.

8. Letters of Support

- **Required:** Organizational *Eligibility and Support Letter* must be attached as part of Letters of Support (10-page maximum).
  - The letter must be on organizational letterhead and signed by a President, Provost, Dean or similar key leader.
  - **Eligibility:** Certify eligibility of the applicant organization.
  - **Support:** Describe the activities and resources provided by the organization that will ensure the success of the planned training program and its trainees (see NOFO).
  - **If this letter is not included, the application will be considered incomplete and will not be reviewed.**

- Additional letters of support are permitted; however, these letters may not contain any information that is required in the Organizational Support Letter.

- Combine all Letters of Support into a single PDF file.

9. Required NIH Data Tables

TABLE	CONTENT
Table 2	Details on Participating faculty (name, rank, dept, research interest, training record)
Table 3	Other federal institutional training grant and related support for undergraduates (T32, T34, TL4, R25)
Table 4	Participating faculty research support
Table 5C	Trainee publications (organized by mentor)
Table 8D	Program outcomes of trainees (support, start/end dates, research topic, initial and current positions (**New Application = Part II**, Renewal Application=Part I)

Training Data Tables

Informational videos for completing NIH Data Tables

Research Training Data Tables FAQs

NIH Training Tables

In the Program Plan, summarize key data from the training tables that highlight the characteristics of the training grant eligible pool, program faculty, organizational support, student outcomes, and other factors that contribute to the overall training environment of the program.

Required NIH Training Tables

New: 2, 3, 4, 5C, 8D: Part II

Renewal: 2, 3, 4, 5C, 8D: Part I

Faculty, Trainees and Training Record Section

7. Participating Faculty Biosketches — Add Attachment

8. Letters of Support — Add Attachment

9. Data Tables — Add Attachment

- **REMINDER:** Baseline Program Data must be uploaded as an "**Other Attachment.**" NIGMS strongly encourages the use of Suggested Format Table C and D – see more information on the NIGMS website

Applications that do not include the required NIH training tables or that submit additional data tables in the Data Table section will be withdrawn prior to review.

Key Changes to Current NOFOs

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Summary of Key Changes

Application Information	Summary of Changes
Types of Applications allowed	RESUBMISSION applications are only accepted for RENEWAL applications.
Required Other Attachments	• **Two required** ([Baseline Program Data](#), Recruitment Plan to Enhance Diversity). • Two optional (Advisory Committee, Training Activities). • All others have been eliminated – information included in Program Plan.
Appendices	NOFO-specific requirements for appendices have been eliminated.
Required Letters of Support	Single letter required – address both organizational eligibility and support (previously two separate letters).
Budget Section	Increased funding for Training Related Expenses and Summer Research Experience

New vs. Renewal Applications

- Application is considered RENEWAL **only if** the organization has a funded grant through the following NIGMS notices of funding opportunity:
  - For U-RISE: PAR-19-218 or PAR-21-146.
  - For MARC: PAR-19-219 or PAR-21-147.
- **Ineligible renewal applications will not be reviewed**.
- There are different requirements for New vs. Renewal applications (for example, Training Tables and Progress Report).

Resubmissions: New vs. Renewal Applications

- **RESUBMISSION applications are only accepted for RENEWAL applications:**

  - RENEWAL applications (grants funded through NIGMS NOFOs: PAR-19-218, PAR-21-146, PAR-19-219 or PAR-21-147) that are not funded on the initial attempt may be revised and resubmitted as a resubmission application (as an –A1).

  - **NEW applications** that are not funded **are not** allowed to submit a Resubmission application (no –A1). Unsuccessful NEW applications should reapply by submitting another NEW application that utilizes constructive feedback from the previous review.

- **Ineligible resubmission applications will not be reviewed**.

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New, Renewals and Resubmissions

- There are different requirements for New *vs* Renewal (for example, Training Tables and Progress Report) and for Resubmissions.

Content	New No –A1s	Renewal NOFOs PAR-19-218 or PAR-21-146 PAR-19-219 or PAR-21-147	Resubmission of Renewal (-A1) NOFOs PAR-19-218 or PAR-21-146 PAR-19-219 or PAR-21-147
Response to Prior Review: • Introduction to Resubmission • Mentions of previous overall or criterion scores, reviewer comments • Mentions of how the application has been modified	X	X	✓
Progress Report (including description of previous implementation of proposed training activities)	X	✓	✓

- The use of markups to identify changes in Resubmission applications should not be used any longer (see NOT-OD-24-061).

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What's new in PAR-24-137/PAR-24-138? "Other Attachments" Section

The number of required **"Other Attachments"** is reduced:

Two "Other Attachments" are required:
1. Baseline program data
2. Recruitment plan to enhance diversity

Two "Other Attachments" are optional:
1. Advisory committee
2. Training activities

All remaining "Other Attachments" from the previous NOFO have been eliminated. Content from many of those is incorporated into various sections of the Program Plan, as described in the NOFO. **No additional "Other Attachments" may be included in this section, or the application will be withdrawn without review.**

What's new in PAR-24-137/PAR-24-138? Appendices Section

NOFO-specific requirements for **appendices** have been eliminated. Applications may only contain appendices that are allowed according to the SF424 Application Guide.

Applications that contain any additional appendices will be withdrawn without review.

Applicants should incorporate information previously allowed in the "Other Attachments" and appendices (for example, retention plans, trainee data collection and storage, conflict resolution protocols) into the *training program plan* as indicated in the NOFO.

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Resources

- [U-RISE](#) and [MARC](#) websites

- [Answers to NIGMS Training Program FAQs](#)

- Dashboard of funded [U-RISE](#) and [MARC](#) programs

- We also encourage you to consult a relevant program officer before submission.
    - U-RISE: [Marie Harton](#), [Jeremy McIntyre](#), [Joyce Stamm](#)
    - MARC: [Lameese Akacem](#) and [Kalynda Gonzales Stokes](#)

Budget Overview

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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 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) <u>webpage</u>.

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Trainee Travel

- NIGMS will provide **up to $1,000 ($1,250 for institutions outside the continental US)** per trainee for travel to scientific meetings and workshops.

- Trainees must be appointed to the training grant at the time of the actual travel for this to be an allowable cost.

- Plans for trainee travel should be well justified.

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Summer Research Experience (SRE)

- NIGMS provides SRE funds for up to **50% of the awarded number of trainees** at the time the competing award is made.

- Funds for the SRE will be provided as follows:

  - **$4,000** per trainee, to be used in accordance with the institutional policies as a per diem for a period of up to ten weeks

  - **$750** for travel to and from the host research organization.

- For additional budget guidance, see <u>T34 Summer Research Experience Policy</u>.

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Training Related Expenses (TRE)

- NIH provides funds to help defray other research training expenses, such as health insurance, staff salaries, consultant costs, equipment, research supplies, and faculty/staff travel directly related to the research training program.
  - **MARC TRE: $10,000/trainee/year (maximum $320,000/year).**
  - **U-RISE TRE: $12,500/trainee/year (maximum $400,000/year).**
- Expect organizations to prioritize trainee benefits (such as health insurance).
- **The grant does not set firm limits for allowable costs** (for example, salary support or evaluation costs).
- Training related expenses should be well justified.

Budget Justification

- State the number of requested funded trainee slots per year. Provide a justification for the number of requested funded slots per year in the context of the following:
  - Number of training grant eligible candidates provided in the trainee pool baseline data across all departments participating in the training program.
  - Number of participating faculty.
  - Other NIGMS-funded training grants at the organization that relate to the goals of this training program.
  - **For Renewal Applications:** The success in filling the awarded training positions. An explanation for the failure to fill previously requested slots should be provided in the application.

- Encouraged to describe the total effort for personnel in the budget justification (delineate effort charged to the grant and effort compensated by other sources).

Peer Review

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Review of Applications

- U-RISE and MARC applications reviewed by standing NIGMS review committees: TWD-C and TWD-D: 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 (SRO) 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.

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Review Process: Usual Timeline

From submission date:

Timeframe	Activity
1 - 2 months	Referral
2 - 6 months	Review Panel
6 - 7 months	Summary Statement Available
7 - 8 months	Advisory Council
8 - 9 months	Funding Decisions
9 - 10 months	Award Start Date

Reach out your SRO with review questions (during review phase)
Post review- reach out to your PO for next steps

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Review of Applications (2)

- Please read the review criteria described in **Section V** of the NOFO while preparing your application. Make sure all the required information is included.

- Review panel will assess your application against the review criteria.

Scored Review Criteria
(Section V of NOFO)

Training Program and Environment (Most expansive)

- *Rationale, Mission, and Objectives*
- *Curriculum and Overall Training Plan*
- *Career Development*
- *Program Oversight of Training and Mentoring*
- *Organizational Commitment to the Program*

Training Program Director/Principal Investigator
- MPI: add additional information on leadership plan/roles conflict resolution and why MPI plan benefits program/trainees

Preceptors/Mentors

Trainees

Training Record

- *Training Outcomes*
- *Program Evaluation, **Dissemination, and Data Storage***

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Additional Review Criteria

Contribute to the overall impact score but do not get separate scores.

- **Resubmissions**
- **Renewals**
- **Training in Methods for Enhancing Reproducibility Plan**
- **Training in the Responsible Conduct of Research Plan**
- **Recruitment Plan to Enhance Diversity Plan**
- *Generally, not applicable criteria*
  - Protection of Human Subject
  - Inclusion of Women, Minorities, and Individuals Across the Lifespan
  - Vertebrate Animals
  - Biohazards
  - Revisions (NOT APPLICABLE)

Additional Review Considerations

- Will not be given individual scores and will not be considered in the overall impact score.

- Will need to be resolved prior to funding

  - **Budget and Period of Support (# of slots**)
  - Select Agents (Generally not applicable)

Advice for Applying

- **Submit early**—at least two days before the deadline to allow time for review.

- Always review your application and check for completeness.

- Correct any errors and address all warnings:
  - Note that <u>not all</u> failures to comply are caught by the automated notification.
  - We cannot accept any missing items after the receipt deadline.

🚫 **Applications will be *withdrawn* if anything is missing *or* unallowed materials are included!**

(NIH grants application guide)

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Application Preparation - Tips

- Don't expect reviewers to "read between the lines" to figure out what you are proposing. Directly and clearly state the most important information.

- Include clear, measurable and attainable program goals

- Make sure faculty biosketches are up-to-date and <u>relevant for training program</u> (personal statement).

- Data in tables and text should match; also, across tables.

- Present outcomes data in a straightforward manner.
  - Don't exaggerate.
  - Don't hide data (reviewers will "do the math").

- Avoid non-compliance and withdrawal
  - Feedback Loop Post

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Questions and Contacts

Scientific/Research Contacts

Marie Harton (U-RISE) (marie.harton@nih.gov)

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Lameese Akacem (MARC) (lameese.Akacem@nih.gov)

Kalynda Gonzales Stokes (MARC) (kalynda.stokes@nih.gov)

Peer Review Contact

Marci Wright (NIGMSReview@mail.nih.gov)

Financial/Grants Management Contact

Justin Rosenzweig (rosenzwj@nigms.nih.gov)

Thank you and Good Luck on the Application!

We are happy to take questions.

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