

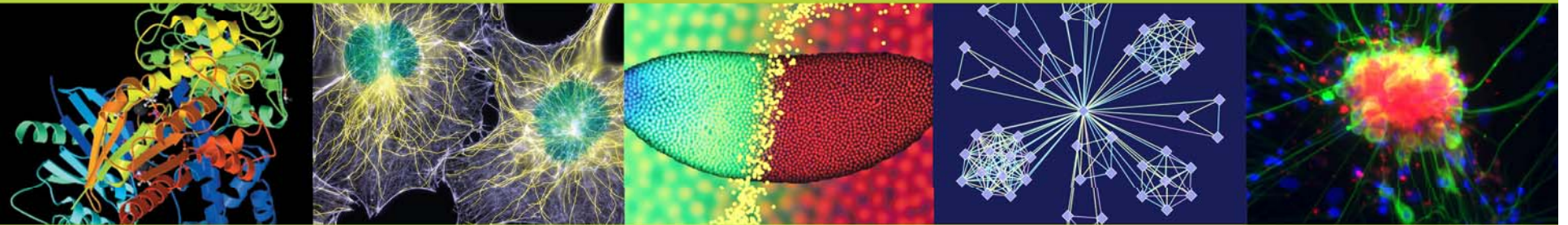


National Institute of
General Medical Sciences



Pilot NIGMS T32 Funding Opportunity Announcement

Dorit Zuk
NIGMS/NIH



NIGMS Biomedical Graduate Training

While preserving the best elements, NIGMS would like to catalyze changes in biomedical graduate training to keep pace with the rapid evolution of biomedical research

NIGMS T32 Program Areas

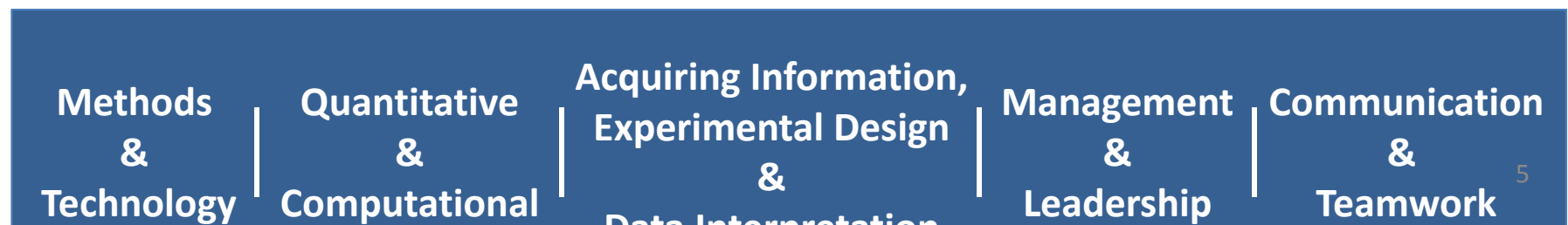
- Behavioral-Biomedical Sciences Interface
- Bioinformatics and Computational Biology
- Biostatistics
- Biotechnology
- Cellular, Biochemical, and Molecular Sciences
- Chemistry-Biology Interface
- Genetics
- Molecular Biophysics
- Molecular Medicine
- Pharmacological Sciences
- Systems and Integrative Biology
- **Transdisciplinary Basic Biomedical Sciences**

Transdisciplinary Basic Biomedical Sciences

- Institutions currently without NIGMS-funded predoctoral T32 training programs including MSTP (exception: Behavioral-Biomedical Sciences Interface and Biostatistics).
- Institutions currently with NIGMS-funded predoctoral T32 training programs that propose to merge two or more of their existing NIGMS-funded predoctoral training programs into a single program.
- Training area: NIGMS-supported areas of basic biomedical sciences, or other broadly-based emerging area(s) within the [NIGMS mission](#).

Pilot NIGMS-specific funding announcement PAR-17-341

- Emphasize trainee development – providing the skills needed to transition into careers in the biomedical research workforce
- Focus on rigor & transparency, responsible & safe conduct of research, as well as diversity & inclusion throughout the training experience.
- Address conflicts in the incentive structure of the research enterprise (treating trainees as workforce).
- Require mentor training and oversight of trainee/mentor matches.
- Require obtainable and measurable training objectives.
- Require the collection and dissemination of data on the success/failure of educational interventions and post career outcomes on publicly available sites.



What is different?

Program Plan – Rationale, Mission, Objectives and Overall Training Plan

- Rationale and training record
- **Training mission, objectives (specific, measurable)**
- **How the training activities will build skills and attain objectives**
- **Plans for using evidence-based training activities**
- Explain how differences in backgrounds will be accommodated
- Enhancements to the training environment beyond the supported trainees
- For multidisciplinary programs- how does the training program integrate across the various departments.
- Distinctions/synergies with other NIH/NIGMS funded T32 programs

New- Program Plan - Career Preparation

- **Post outcomes**
- **Introduce trainees to a range of careers in the biomedical research workforce**
- **Provide opportunities to develop needed skills and for experiential learning (internships, shadowing, informational interviews)**



New - Program Plan - Program Oversight

- **Oversight throughout the training process is essential**
- **Select faculty based on commitment to training and mentoring**
- **Provide mentor training**
- **Ensure that trainees are in research environments that promote responsible conduct as well as rigor and transparency**
- **Mechanism for**
 - **Matching mentors/mentees**
 - **Monitoring mentee/mentor relationships and plans for removing faculty showing poor mentorship qualities from the program**

New - Institutional Commitment

- **Rigor and responsible conduct in research is valued**
- Start up and bridging funds are available to ensure training continuity
- Provide staff support and research infrastructure
- **Give protected time for training and mentoring**
- **Consider training and mentoring in tenure and promotion**
- Provide safe and accessible facilities
- Support trainees throughout their time in graduate school
- **Support evaluation of training and mentoring activities**
- **Ensure there is no overlap in training mechanisms**

Principal Investigator

- **Parent**

- Expertise, leadership and time commitment

- **Pilot**

- Expertise, leadership, *record of rigorous research*, time commitment, *trained in mentoring, diversity and inclusion*
- Encourage multiple PI's with complementary expertise in training

Preceptors/Mentors

Parent

- Focused on numbers, funding, and scientific expertise

Pilot

- Numbers, funding and expertise
- Bandwidth and commitment *to training* (explicit)
- Must provide research opportunities and teach: experimental design, rigor & reproducibility
- Receive mentor training
- Commitment to diversity and a supportive research environment
- Actively promote career development
- Should consider diversity when building the faculty mentor team (explicit)

Trainees

Parent

- Mostly whether there are sufficient numbers of “well-qualified” students
- Must have an appointment plan

Pilot

- Encourages recruiting and appointing trainees from diverse backgrounds (broadly defined) with the **potential** to become outstanding scientists (e.g., a holistic review process when accepting and appointing students) (explicit)
- Emphasizes a retention plan with oversight throughout the entire time in graduate training

Training Record

Parent

- Completion and time to degree
- Research accomplishments: (e.g., “high-impact” publications, awards, careers in research, leadership positions)
- Evaluations

Pilot

- Completion and time to degree (well- vs under-represented similar)
- Demonstrate rigorous research activity that advanced scientific knowledge and/or technologies (e.g., peer-reviewed papers, presentations at scientific meetings, etc.)
- Plans for career tracking
- Recruitment plans for students from underrepresented groups
- Evaluation, outcomes, and dissemination plans; responsive improvements

Some additional changes

- **All applications are new**
 - Can report up to 5 years of data in the OMB approved Training Tables and up to 15 years in the text
- **Biosketches**
 - must provide a personal statement that describes the appropriateness of their research and their commitment to training and mentoring, rigor and transparency, and supporting trainee career development
- **Other attachments – Reviewers must read**
 - An Advisory Committee (optional)
 - Recruitment Plan to Enhance Diversity (3 pages maximum)
 - Trainee Retention Plan (3 pages maximum)
- **Appendices – Reviewers may read**
 - Required – RCR course syllabus
 - Optional – (1) Courses, Electives, Training Activities; (2) Evaluation and Assessment Instruments; (3) Trainee Appointment Procedures; and (4) Conflict Resolution Protocols

Timeline

- **NIH Guide publication:** Fall 2017
- **Application receipt:** May 2018 - **all applications to NIGMS T32 program areas must come in to this FOA!**
- **Initial review:** Oct/Nov 2018
- **NAGMS Council review:** January 2019
- **Earliest award date:** July 2019

Read, Review, and **then** Ask questions

- **NIGMS T32 FOA:**

<https://grants.nih.gov/grants/guide/pa-files/PAR-17-341.html> (Basic Biomedical Sciences areas only)

- **NIGMS Predoctoral Research Training Grant Website:**

<https://www.nigms.nih.gov/Training/InstPredoc/Pages/default.aspx>

- **Pre-application FOA webinar:**

<https://www.youtube.com/watch?v=tJOLanDizUM>

- Slides: <https://www.nigms.nih.gov/training/instpredoc/Documents/NIGMS-Ruth-L-Kirschstein-NRSA-Predoctoral-Institutional-Research-Training-Grant-T32.pdf>

- **Predoctoral Training Grants FAQs:**

<https://www.nigms.nih.gov/training/instpredoc/Pages/predoc-training-grants-faqs.aspx>

- **NIGMS T32 Staff:**

<https://www.nigms.nih.gov/training/instpredoc/pages/PredocDesc-Contacts.aspx>

Educator-Initiated Innovations

- Training modules to enhance data reproducibility (R25) [RFA-GM-18-002](#)

NIH Rigor and Reproducibility Training Modules

Introduction to the Modules [PDF, 110KB]



Module 1: Lack of Transparency

In order to reproduce someone else's findings adequately, the experimental methods, rationale and other pertinent information must be accessible and understandable. This module highlights the need to include all relevant details in publications to ensure that other studies are able to build upon the research appropriately and accurately.

Lack of Transparency Discussion Material [PDF, 97.2KB]

- Administrative supplements T32 predoctoral grants
 - Rigor & Reproducibility [PA-18-756](#)
 - Career Development [PA-18-757](#)
 - Graduate Education – Technical, Operational, Professional Skills [PA-18-759](#)
 - Safety in the Research Laboratory - [PA-18-758](#) **NEW**

Feedback loop post: <https://loop.nigms.nih.gov/2018/04/administrative-supplements-for-nigms-predocutorial-t32-grants-to-develop-curricular-and-training-activities/#more-11244>

Coming Soon – MSTP FOA

- **Seek Community Input:** May-August 2017 –
 - <https://loop.nigms.nih.gov/2018/01/we-asked-you-responded-community-input-on-enhancing-the-medical-scientist-training-program/>
- **Seek NIH Input:** Fall 2017
- **NAGMS Council Concept Clearance:** January 2018
- **FOA Publication:** September 2018
- **Application Receipt Date:** May 2019
- **Initial Review:** Fall 2019
- **NIGMS Council Review:** January 2020
- **Earliest Award Date:** July 2020

Remember – **much** more info here!

- **NIGMS T32 FOA:**

<https://grants.nih.gov/grants/guide/pa-files/PAR-17-341.html> (Basic Biomedical Sciences areas only)

- **NIGMS Predoctoral Research Training Grant Website:**

<https://www.nigms.nih.gov/Training/InstPredoc/Pages/default.aspx>

- **Pre-application FOA webinar:**

<https://www.youtube.com/watch?v=tJOLanDizUM>

- Slides: <https://www.nigms.nih.gov/training/instpredoc/Documents/NIGMS-Ruth-L-Kirschstein-NRSA-Predoctoral-Institutional-Research-Training-Grant-T32.pdf>

- **Predoctoral Training Grants FAQs:**

<https://www.nigms.nih.gov/training/instpredoc/Pages/predoc-training-grants-faqs.aspx>

- **NIGMS T32 Staff:**

<https://www.nigms.nih.gov/training/instpredoc/pages/PredocDesc-Contacts.aspx>