Restructuring of Undergraduate and Predoctoral Programs to Enhance Diversity in the Biomedical Research Workforce

Division of Training, Workforce Development, and Diversity
Fall 2018
Impetus for Change

NIH has been asked to address issues of overlap and evaluation

NIGMS was asked to move from Research Education (R25) activity code to Training (T) activity codes
## Input from the Community

### Request for Information (RFI) on NIGMS Programs to Enhance Diversity in the Biomedical Research Workforce

**Notice Number:** NOT-GM-15-108

#### Key Dates
- **Release Date:** February 24, 2015
- **Response Date:** April 15, 2015

### Stakeholders’ Meeting
- Bethesda, MD
- **April 2015**

### Notice Request for Information (RFI): Organization and Administration of NIGMS Undergraduate and Pre-Doctoral Diversity Programs

**Notice Number:** NOT-GM-17-017

#### Key Dates
- **Release Date:** August 31, 2017
- **Response Date:** October 31, 2017
Input from the Community
The restructuring team met regularly to discuss the data and models
OPAE Provided Data and Modeling Tools

ARAGON, Dr RICHARD
BASSON, Dr JACOB
CALCAGNO, Dr ANNA
DORSEY, Mr TRAVIS
HECHTMAN, Dr LISA
MIKLOS, Dr ANDREW
MOORE, Dr NATHAN
NIH Wide Retreat

• NIGMS Director and Deputy Director
• Chief Officer of Scientific Workforce Diversity
• Director NIH Division of Biomedical Research Workforce Programs
• Stakeholders across NIH
• Training, Workforce Development and Diversity
• Office of Extramural Research
• Grants Management
Current NIGMS Diversity Training Programs

- Undergraduate: RISE, BRIDGES to Bac, IMSD, PREP
- Postbac: RISE, MARC
- Graduate MS: RISE, BRIDGES to DOC
- Graduate PhD: IMSD
- Postdoctoral: IRACDA

Fall 2018
Restructuring NIGMS Diversity Training Programs

**Community College**

- Undergraduate
  - MARC
  - PREP
- Postbac
  - Research-Intensive Partner
  - Bridges to Bac (B2B)
  - U-RISE
- Graduate M.S.
  - Research-Active Partner
- Graduate Ph.D.
  - BRIDGES to DOC (B2D)
  - IMSD
  - Research Intensive Partner
  - G-RISE
- Postdoctoral
  - Soon - Post-doc to Faculty
  - IRACDA

**Funding Levels**

- $7.5 M RPG Research-Intensive
- < $7.5 M RPG Research-Active

**Note:** Because Master’s RISE programs will be applying for B2D, the institutional cap will be removed.
NIGMS Training Program Goals

Undergraduate Programs

Emphasize the development of a diverse pool of undergraduates that complete their baccalaureate degree and transition into and complete a research-focused, biomedical higher degree program (e.g., Ph.D. or M.D./Ph.D).

Post-baccalaureate Program

Emphasize the development of a diverse pool of scientists with a baccalaureate degree, who transition into and complete a research-focused, biomedical higher degree program (e.g., Ph.D. or M.D./Ph.D).

Graduate Programs

Emphasize the development of a diverse pool of scientists earning a biomedical Ph.D., who have the skills to successfully transition into careers in the biomedical research workforce.
All NIGMS Training Programs Should -

• Focus on technical, operational and professional skills development
• Promote rigor and reproducibility in research
• Teach the responsible and safe conduct of research
• Encourage inclusive, safe, and supportive research environments.
All NIGMS Training Programs Should -

• Use evidence-based, innovative educational and mentoring practices

• Employ cohort-building activities and interventions that enhance the trainees’ science identity and self-efficacy

• Provide individualized mentoring and oversight throughout the trainees’ undergraduate or graduate career

• Introduce trainees to a variety of scientific research areas and careers
All NIGMS Training Programs Should -

- Develop Program Director/Principal Investigator teams to broaden program leadership and provide complementary expertise
- Display coordinated interactions and synergies with other NIGMS-funded training programs at the institution
- Employ long-term tracking of trainee outcomes
Maximizing Access to Research Careers MARC (T34)
Contacts: Sailaja Koduri, Luis Cubano

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**MARC**

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**MARC**

- Will remain a T34 activity code
- At research intensive institutions
- For research-oriented trainees (formerly honors)
- Support for 1-3 years (formerly final 2 years)
Research-Training Initiative for Scientific Enhancement (RISE)
Contacts: Luis Cubano, Anissa Brown

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- Undergraduate RISE (U-RISE) – T34
- U-RISE support for 1-3 years
- Masters programs encouraged to apply for Bridges to the Doctorate (cap lifted)
- Graduate RISE (G-RISE) – T32
- G-RISE support for 2-3 years (typically early years)
- U-RISE and G-RISE will be at Research-Active institutions (<$7.5 M RPG)

Fall 2018
Initiative for Maximizing Student Development (IMSD)
Contacts: Veerasamy Ravichandran, Sailaja Koduri

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- IMSD programs with undergraduates are encouraged to apply for MARC or U-RISE
- IMSD will be at the graduate level – T32
- Support for 2-3 years (typically early years)
- At research intensive institutions (≥$7.5 M RPG)
TWD programs to bridge transitions
Bridges to the Baccalaureate
Contacts: Mercedes Rubio, Patrick Brown

• Emphasize the development of a diverse pool of undergraduates that bridge from two-year to four-year institutions, and subsequently earn their baccalaureate degree in the biomedical sciences

• Encourage programs to provide a longer engagement for the Bridges participants (summer-plus)

• Encourage a strong partnership that offers a well-integrated set of activities both pre-and post-bridging (e.g., trainees conduct research both prior to and after bridging)

• Transition to the T34 activity code to align with the goals of the program
Postbaccalaureate Research Education Program (PREP) (R25)
PAR-17-051
Contacts: Kenneth Gibbs, Luis Cubano

Goal: to enhance diversity in the biomedical research workforce by preparing participants to enter and complete research-focused, biomedical higher degree programs (e.g. Ph.D. or M.D./Ph.D.). Programs are at Research-Intensive institutions.

### Undergraduate

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No major changes
Bridges to the Doctorate
Contacts: Patrick Brown and Mercedes Rubio

- Encourage a strong partnership that offers a well-integrated set of activities both pre- and post-bridging
- Reduce the time to Ph.D. degree (e.g., with effective skill-building activities and course credit articulation agreements)
- Enhance the research efforts of the faculty at the master’s degree granting institution through inter-institutional efforts
- Will transition to the T32 activity code
- The budget cap will be lifted to accommodate former M.S. RISE programs
- Ensure the research activities of the programs align with NIGMS research priorities
The restructuring will involve some programs combining and others splitting into two or more programs.

- RISE will combine to become a larger U-RISE program.
- MARC will combine to become a larger MARC program.

NIGMS has experience with these challenges (e.g., MIRA).
NIGMS will conduct extensive outreach to provide guidance while programs navigate the transition

- Webinars
- Regional meetings
- National meetings – SACNAS, ABRCMS
- Individualized support
The reorganization will prevent program overlap

**Now**

- Undergraduate
- Postbac
- Graduate MS
- Graduate PhD
- Postdoctoral

**RISE**

- RISE

**BRIDGES to DOC (B2D)**

- BRIDGES to DOC (B2D)

**MARC**

- MARC

**IMSD**

- IMSD

**PREP**

- PREP

**IRACDA**

**Going Forward**

- Undergraduate
- Postbac
- Graduate MS
- Graduate PhD
- Postdoctoral

**MARC**

- MARC

**PREP**

- PREP

**IMSD**

- IMSD

**IRACDA**

**Research Intensive**

**U-RISE**

- U-RISE

**BRIDGES to DOC (B2D)**

- BRIDGES to DOC (B2D)

**G-RISE**

- G-RISE

**Research Active**
Moving to T activity codes will bring an alignment of the goals of the program with the funding approach

R25 activity code

- The NIH Research Education Program (R25) supports research educational activities that complement other formal training programs in the mission areas of the NIH Institutes and Centers.

T activity codes - Institutional Training Grants

- To prepare trainees for careers that have a significant impact on the health-related research needs of the Nation.
- National Research Service Awards (NRSA) – Congressional oversight
Moving to T activity codes will ensure equity of trainee support

• Standardized stipend and tuition remission
• Uniformity of support across NIGMS programs (e.g., no longer a disparity for RISE/MARC/IMSD undergraduate trainees)
The restructuring will improve fairness by separating into more two tracks

- The types and perceived quality of undergraduate research experiences vary depending on resources
- Baseline graduation rates vary according to student populations
- Student support services varies according to institutional context
The restructuring will allow for an enhanced capacity for evaluations

- Breaking up programs by training phase will give more accurate counts of the trainees NIGMS supports at each stage of the pathway

- T's require Trainee Appointment Forms
  - Without appointment forms, it has been difficult to capture trainee information required for outcomes analyses
  - Captures self-reported demographic data – this will enhance the ability to monitor the diversity of the trainees
Community Input on Future Initiatives

Request for Information (RFI): Strategies for Enhancing Postdoctoral Career Transitions to Promote Faculty Diversity

Notice Number: NOT-GM-18-034

Key Dates
- Release Date: May 24, 2018
- Response Date: July 20, 2018

Your Perspectives: Strategies for Enhancing Postdoctoral Career Transitions to Promote Faculty Diversity

Posted by Dr. Alison Gammie, Dr. Kenneth Gibbs and Dr. Michael Sesma on November 8, 2018

Post a Comment | No Comments ↓
Additional Resources

Reorganization of the UPT Branch Diversity Programs:
- Request for Information (RFI) on NIGMS Programs to Enhance Diversity in the Biomedical Research Workforce: NOT-GM-15-108
- Request for Information (RFI): Organization and Administration of NIGMS Undergraduate and Pre-Doctoral Diversity Programs (NOT-GM-17-017)
- Feedback Loop: Early Notice: Concept Clearance for the Reorganization of Undergraduate and Graduate Programs to Enhance Diversity in the Biomedical Research Workforce (May 30, 2018)
  ~20 minutes long, starts at 1:43:26 minutes

Reorganization of the Bridges Programs:
  ~29 minutes long, starts at 2:18:46 minutes
  ~12 minutes long, starts at 54:32 minutes.
  ~8 minutes long, starts at 1:23:44 minutes (B2B starts at 1:07:15)
Questions? Comments?