

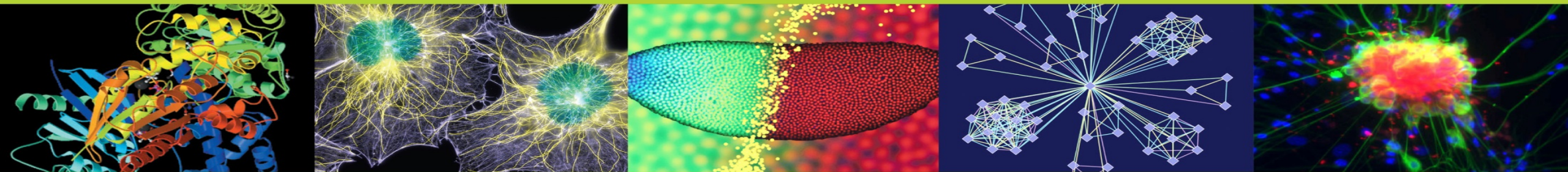


National Institute of  
General Medical Sciences



# 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

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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

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Notice Number: NOT-GM-17-017

## Key Dates

Release Date: August 31, 2017

Response Date: October 31, 2017

# Input from the Community



**2017 TWD**  
**Program Directors' Meeting**  
June 18-21, 2017 • Baltimore Marriott Waterfront • Baltimore, Maryland

Funded by a grant from the National Institute of General Medical Sciences of the National Institutes of Health



ANNUAL BIOMEDICAL RESEARCH  
CONFERENCE FOR MINORITY STUDENTS



**ABRCMS**  
**2017**

NOVEMBER 1 - 4, 2017  
PHOENIX, AZ.



**FASEB**

Federation of American Societies  
for Experimental Biology

*MARC: Maximizing Access to Research Careers*



 **2017 SACNAS**  
**The National Diversity in STEM Conference**  
October 19 - 21, 2017 | Salt Lake City, Utah



# The restructuring team met regularly to discuss the data and models



**Michael  
Bender**



**Patrick  
Brown**



**Anissa  
Brown**



**Luis  
Cubano**



**Kenny  
Gibbs**



**Sailaja  
Koduri**



**Ravi  
Ravichandran**



**Mercedes  
Rubio**



**Desirée  
Salazar**



**Shiva  
Singh**

# OPAE Provided Data and Modeling Tools



ARAGON,  
Dr RICHARD



BASSON,  
Dr JACOB



CALCAGNO,  
Dr ANNA



DORSEY,  
Mr TRAVIS



HECHTMAN,  
Dr LISA



MIKLOS,  
Dr ANDREW

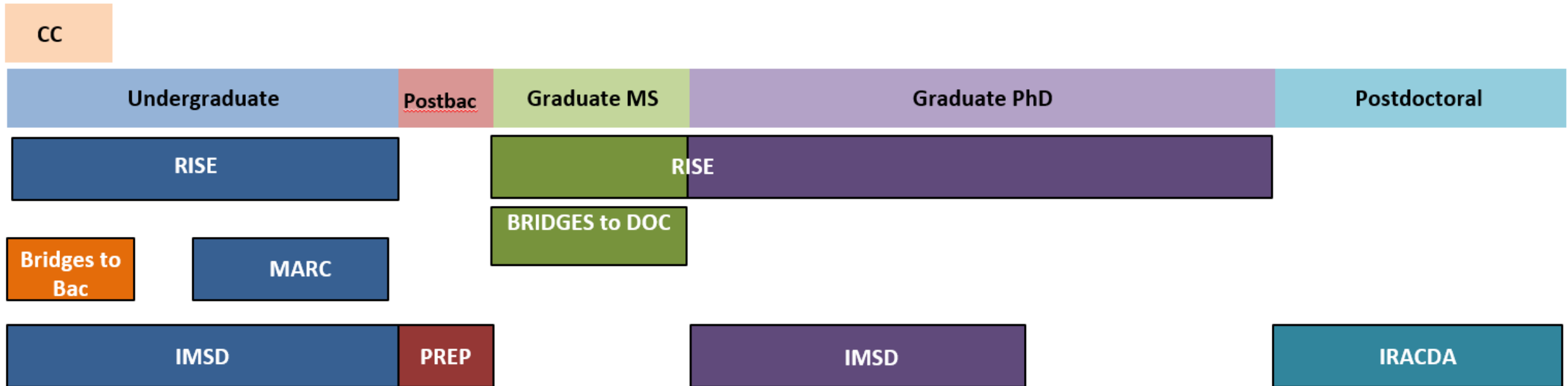


MOORE,  
Dr NATHAN

# 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





# Restructuring NIGMS Diversity Training Programs

Community College



Soon - Post-doc to Faculty

IRACDA

MARC PREP

IMSD

Research-Intensive Partner

Research Intensive Partner

≥ \$7.5 M RPG Research-Intensive

< \$7.5 M RPG Research-Active

Research-Active Partner

BRIDGES to DOC (B2D)

**Note:** Because Master's RISE programs will be applying for B2D, the institutional cap will be removed

Bridges to Bac (B2B)

G-RISE

U-RISE

# 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.**

Community College

Undergraduate

Postbac

Graduate M.S.

Graduate Ph.D.

Postdoctoral

# 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



## Now



## Going forward



- 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



## Now



## Going Forward



- 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)

# Initiative for Maximizing Student Development (IMSD)

Contacts: Veerasamy Ravichandran, Sailaja Koduri



## Now



## Going Forward



- **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 ( $\geq$ \$7.5 M RPG)**

# **TWD programs to bridge transitions**

# Bridges to the Baccalaureate

Contacts: Mercedes Rubio, Patrick Brown



4-year Undergraduate

Postbac

Graduate  
M.S.

Graduate Ph.D.

Postdoctoral

Community College

4-year Partner

Bridges to Bac  
(B2B)

- 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.**



**No major changes**

# Bridges to the Doctorate

Contacts: Patrick Brown and Mercedes Rubio



4-year Undergraduate

Postbac

Graduate  
M.S.

Graduate Ph.D.

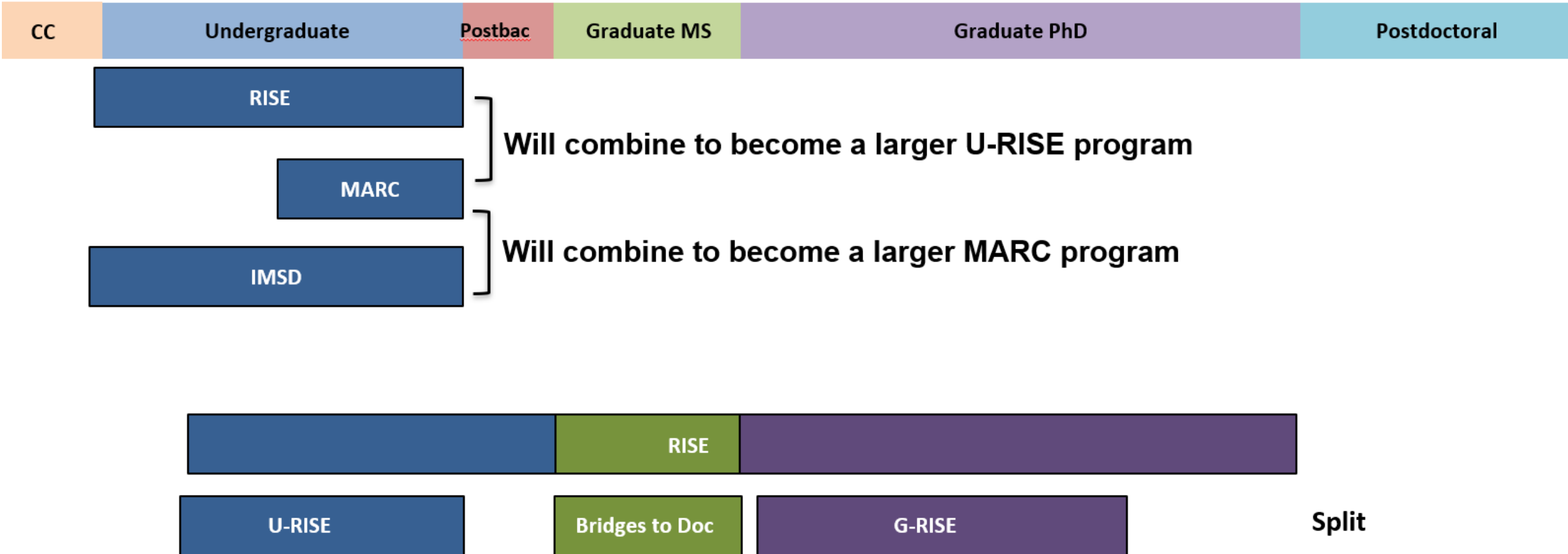
Postdoctoral

Research Intensive Partner

BRIDGES to  
DOC

- 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 other splitting into two or more programs



**NIGMS has experience with these challenges (e.g., MIRA)**

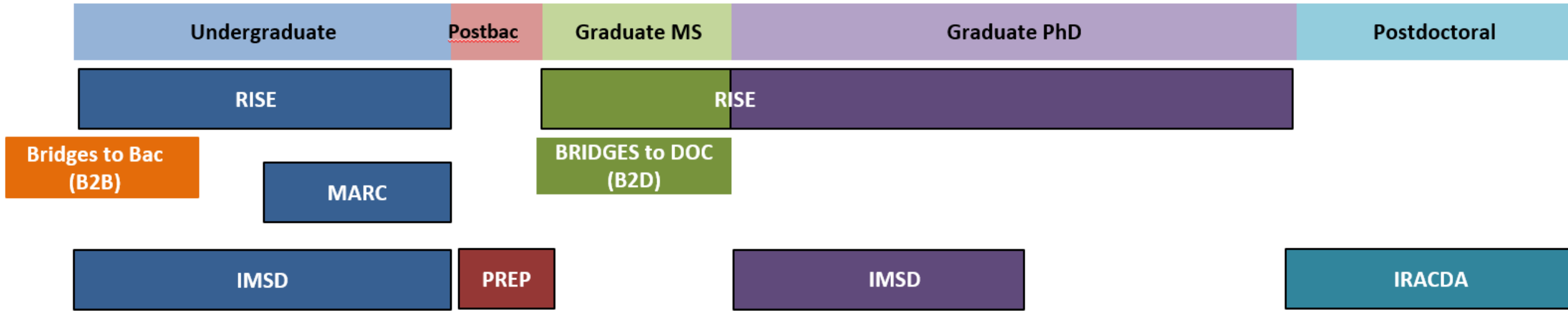
# NIGMS will conduct extensive outreach to provide guidance while programs navigate the transition

- Webinars
- Regional meetings
- National meetings – SACNAS, ABRCMS
- Individualized support

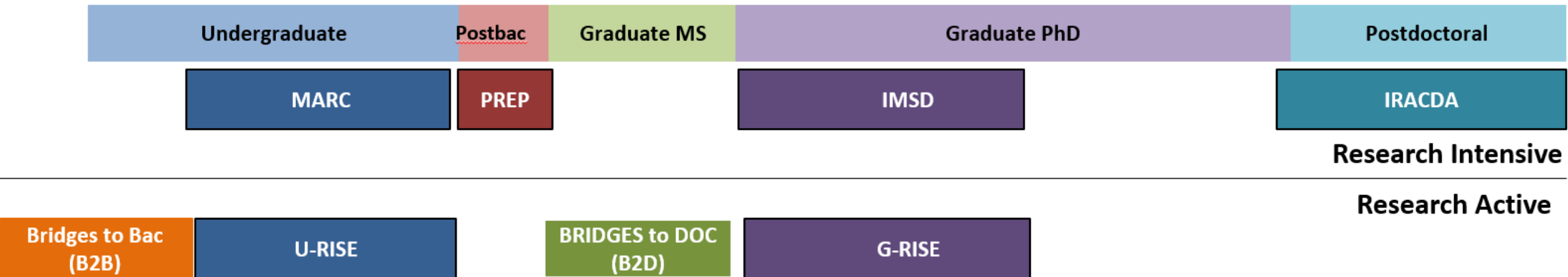


# The reorganization will prevent program overlap

## Now



## Going Forward





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

## R25 activity code

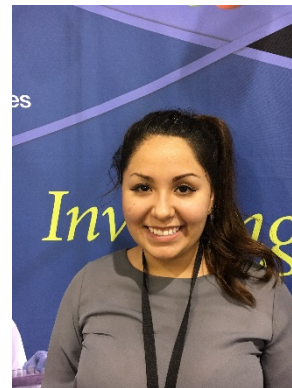
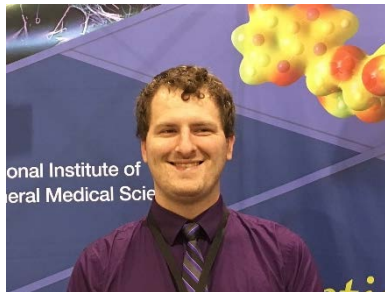
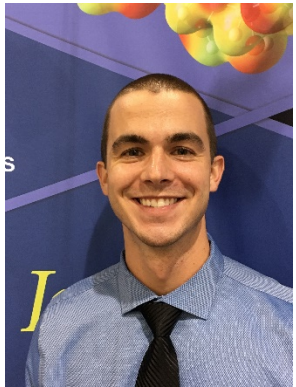
- The NIH Research Education Program (R25) supports research educational activities that complement other formal training programs in the mission areas of the NIH Institutes and Centers.

## 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

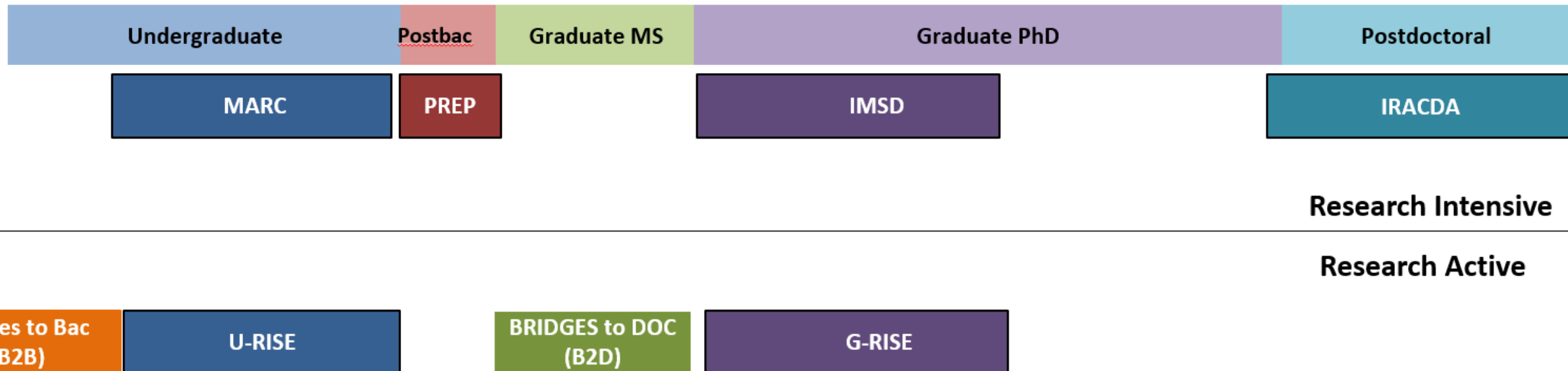
# Moving to T activity codes will ensure equity of trainee support

- Standardized stipend and tuition remission
- Uniformity of support across NIGMS programs (e.g., no longer a disparity for RISE/MARC/IMSD undergraduate trainees)



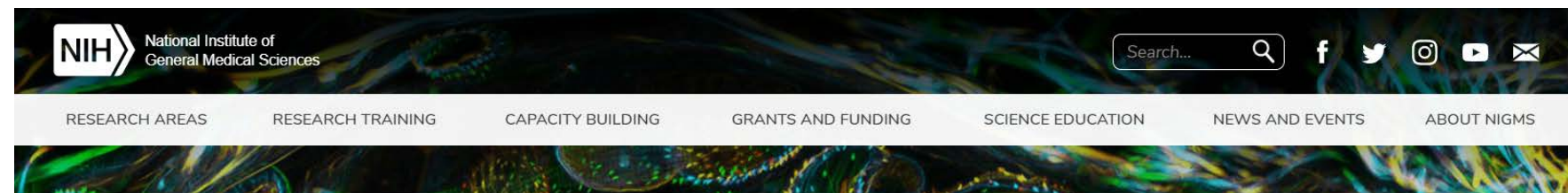
# The restructuring will improve fairness by separating into more two tracks

- 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



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## Evaluation Reports

### Current Reports

[Evaluation of Postdoctoral NRSA T32 Institutional Training Grant Program \[PDF, 890KB\]](#)  
June 27, 2018

[Evaluation of the NIGMS R25 Bridges to the Doctorate Program \[PDF, 392\]](#)  
June 15, 2018



# Community Input on Future Initiatives

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

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Notice Number: NOT-GM-18-034

## Key Dates

**Release Date:** May 24, 2018

**Response Date:** July 20, 2018



**NIGMS Feedback Loop Blog**

*A catalyst for interaction with the scientific community*

## 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)
- Presentation to the May 2018 NIGMS Advisory Council: <https://videocast.nih.gov/Summary.asp?Live=27879&bhcp=1>  
~20 minutes long, starts at 1:43:26 minutes

## **Reorganization of the Bridges Programs:**

- Presentation of formal B2D Evaluation at May 2018 NIGMS Advisory Council: <https://videocast.nih.gov/Summary.asp?Live=27879&bhcp=1>  
~29 minutes long, starts at 2:18:46 minutes
- Presentation of NIGMS Response to B2D Evaluation to Council September 2018: <https://videocast.nih.gov/Summary.asp?Live=28435&bhcp=1>  
~12 minutes long, starts at 54:32 minutes.
- Presentation to Council of Concept Clearance for B2B and B2D FOA September 2018: <https://videocast.nih.gov/Summary.asp?Live=28435&bhcp=1>  
~8 minutes long, starts at 1:23:44 minutes (B2B starts at 1:07:15)



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# Questions? Comments?

