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NIGMS at a Glance

• NIGMS’ main scientific focus is fundamental (basic) research
  ○ Also a few clinical research areas of responsibility, including sepsis

• NIGMS has the largest training, workforce development, diversity and research capacity building portfolios at NIH

• Fiscal Year 2023 NIGMS appropriation was $3.239B
Maximizing Investigators’ Research Awards (MIRA) Program

• One grant per PI to provide support for their NIGMS-related research program
  ○ Cannot apply for other NIGMS research grants (with a few exceptions)

• MIRA grants are longer and on average larger than NIGMS R01s

• Flexible: No specific aims; research can change direction

• High renewal rates, significantly higher than for R01s (~2x)

• Eligibility: Early-stage investigators (ESIs), new investigators (NIs), established investigators with at least one single PI NIGMS R01-equivalent grant
  ○ Research must be within the NIGMS mission – PIs should contact a program officer before writing an application!

https://nigms.nih.gov/Research/mechanisms/MIRA
In FY 2022, MIRA represented 48% of the R35 MIRA + R01 award pool, an increase of 6 percentage points from the previous fiscal year.

NIGMS awarded 2,054 R35 MIRAs and 2,182 R01s in FY 2022.

NIGMS targets MIRAs to comprise at least 60% of the R01-equivalent pool by 2025.
In FY 2022, NIGMS made R01-equivalent awards to 319 ESIs: (31 R01 awards, 268 R35 MIRA awards and 20 DP2 awards).

This represents the highest number of ESIs supported by NIGMS since creation of the investigator category.

Nearly 85% of the ESIs awarded in FY 2022 received R35 MIRAs.

Comparison of MIRA and R01 PI Demographics, FY 19-21

ESI Ages: NIGMS R01 vs. MIRA Grantees

- ESI MIRA applicants and awardees are typically about a year younger than ESI R01 applicants and awardees.

- Over 60% of investigators applying for ESI MIRA in 2022 did so within 2 years of their first Assistant Professor or equivalent position.
NIGMS has workforce development programs that span career stages from preK to independent researcher.
MOSAIC Program Updates

• Enhance diversity of faculty in research-intensive positions
• Diversity-focused K99/R00s and UE5 Mentoring Hubs (AAMC, ASBMB, ASCB – *need neurosci. and microbio.*)
• 23 NIH ICOs currently participate in MOSAIC
• 80 K99s awarded FY21-22 by 16 ICs (~50% success rate)
• MOSAIC scholars - ~80% women, ~70% URM
• ≥27 scholars have already started or accepted faculty positions
• Scholars’ bios: go.usa.gov/xuR35
New NIGMS Training, Workforce Development and Diversity Programs

• Advancing Research Careers (ARC) diversity-focused F99/K00 graduate student to postdoc transition program
  - Similar model as MOSAIC – cohorts and mentoring centers

• Second branch of Medical Scientist Training Program (MSTP): Leading Equity and Diversity (LEAD) MSTP
  - Eligibility limited to HBCUs, TCUs, and IDeA State institutions
  - PAR-23-030; first due date February 10, 2023

• Undergraduate and graduate training grants for Tribal Organizations
NIGMS IDeA Program

• IDeA Networks of Biomedical Research Excellence (INBRE)
  o Link one or more research-intensive institution in an IDeA state to Primarily Undergraduate Institutions in the state

• Centers of Biomedical Research Excellence (COBRE)
  o Develop research capacity in broad scientific areas with a focus on early-career independent researchers

• IDeA Clinical and Translational Research Programs
Examples of studies that show INBREs are effective

  
  [https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6853779/](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6853779/)

  - “compared with those in the control group, there was a 100% increase in OK-INBRE participants who enrolled in or had completed a professional degree (e.g., MD/DO) and a 175% increase in students attending a biomedical science graduate program.”

  
  [https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9273261/](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9273261/)

  - “In achieving extramural funding, Research Project Investigator awardees were 12.5 times ($P = 0.005$) as likely to receive a grant award of any type and 4.5 times ($P = 0.06$) as likely to receive a subsequent federal grant as those in the control group.”
Questions or Comments?