



National Institute of
General Medical Sciences



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National Institute of
General Medical
Sciences

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NIGMS Support for Workforce Diversity and Women's Health Research

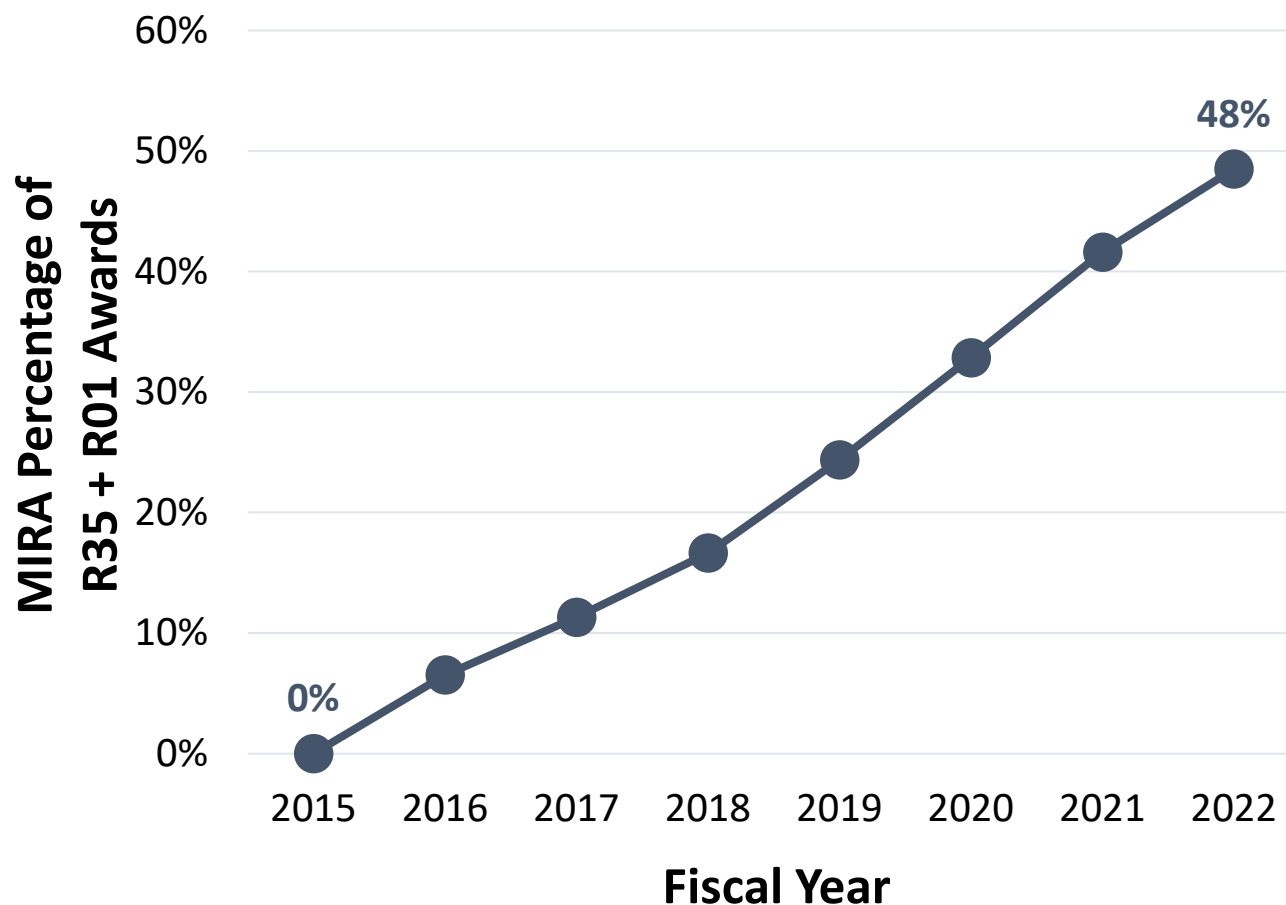
NIGMS Mission

The National Institute of General Medical Sciences (NIGMS) **supports basic research** that increases our understanding of biological processes and lays the foundation for advances in disease diagnosis, treatment, and prevention. NIGMS **also supports research in specific clinical areas that affect multiple organ systems**: anesthesiology and peri-operative pain; clinical pharmacology common to multiple drugs and treatments; and injury, critical illness, sepsis, and wound healing. NIGMS-funded scientists investigate how living systems work at a range of levels—from molecules and cells to tissues and organs—in research organisms, humans, and populations. Additionally, to ensure the vitality and continued productivity of the research enterprise, NIGMS provides leadership in supporting the **training of the next generation of scientists, enhancing the diversity of the scientific workforce, and developing research capacity throughout the country.**

Maximizing Investigators' Research Awards (MIRA) Program

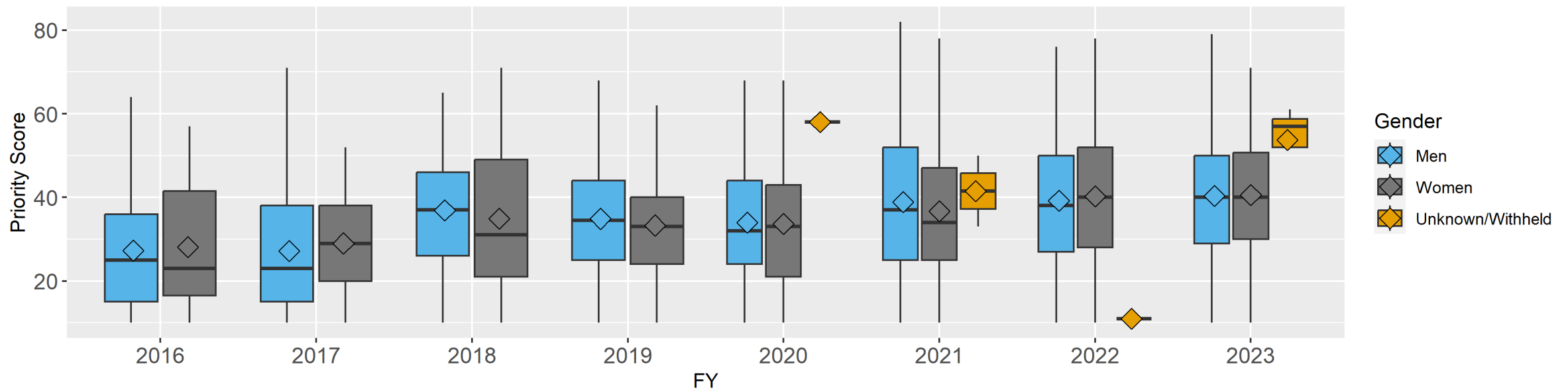
- One grant per PI to provide support for their NIGMS-related research program
 - Cannot apply for other NIGMS research grants (with a few exceptions)
- MIRA grants are longer and on average larger than NIGMS R01s
- Flexible: No specific aims; research can change direction
- High renewal rates, significantly higher than for R01s (~2x)
- Eligibility: Early-stage investigators (ESIs), established investigators (EIs) with at least one single PI NIGMS R01-equivalent grant, new investigators (NIs)
 - ESIs and EIs reviewed by separate panels

NIGMS MIRA Awards Percentage of Total R01 and MIRA Pool FY 2015-2022



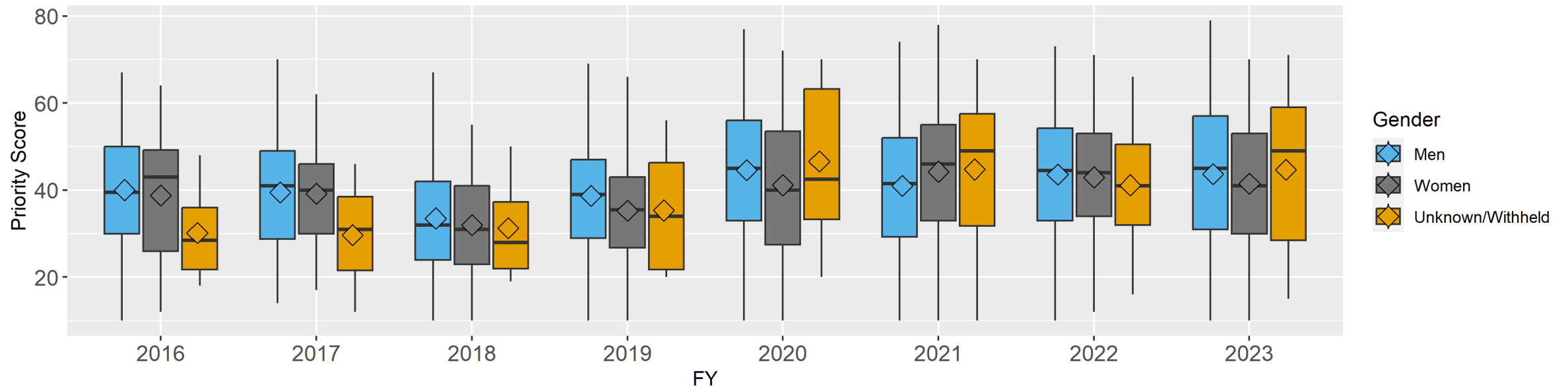
- In FY 2022, MIRA represented 48% of the R35 MIRA + R01 award pool, an increase of 6 percentage points from the previous fiscal year.
- NIGMS awarded 2,054 R35 MIRAs and 2,182 R01s in FY 2022.
- NIGMS targets MIRAs to comprise at least 60% of the R01-equivalent pool by 2025.

Women and men do equally well in peer review in the established investigator MIRA program



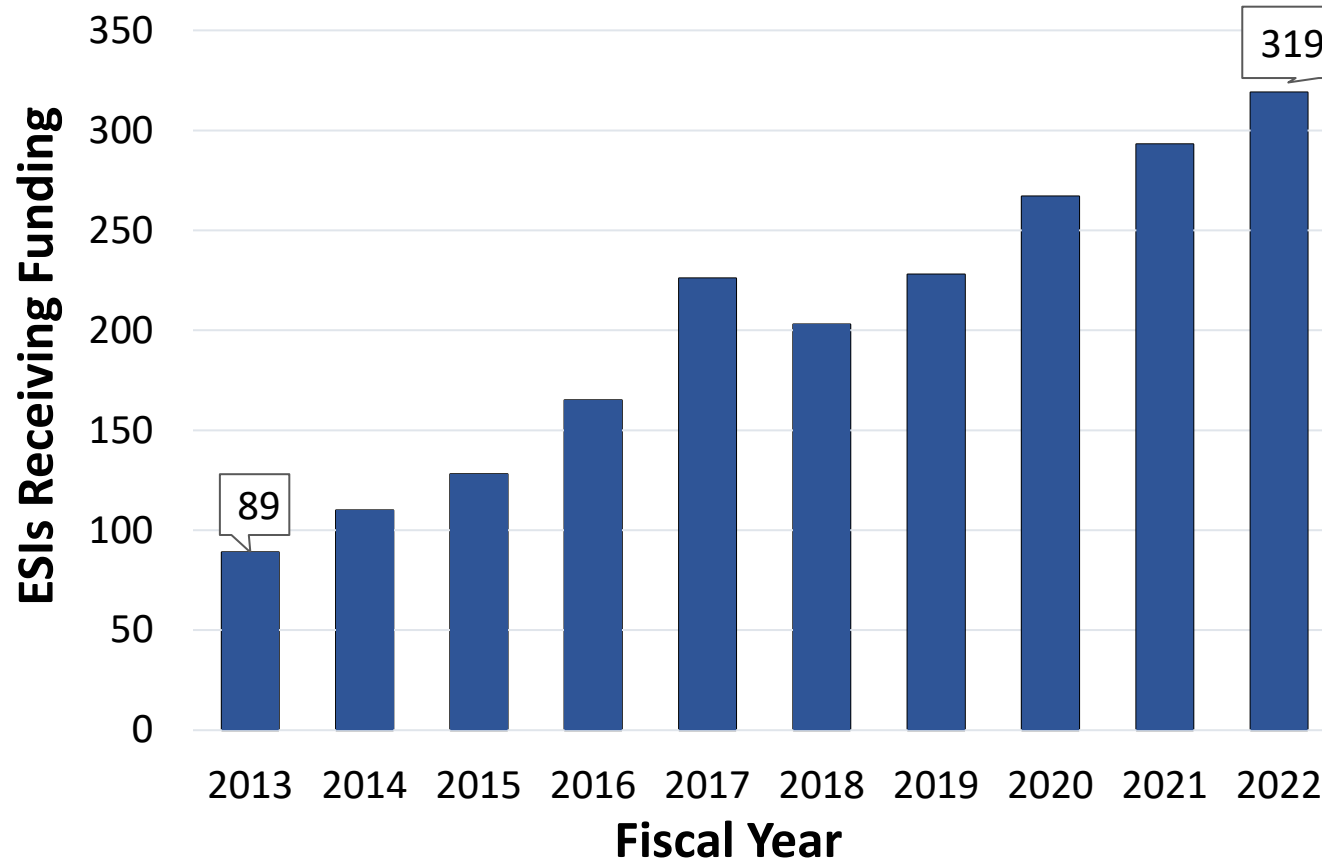
Bar is the median
Diamond is the mean

Women and men do equally well in peer review in the early-stage investigator MIRA program



Bar is the median
Diamond is the mean

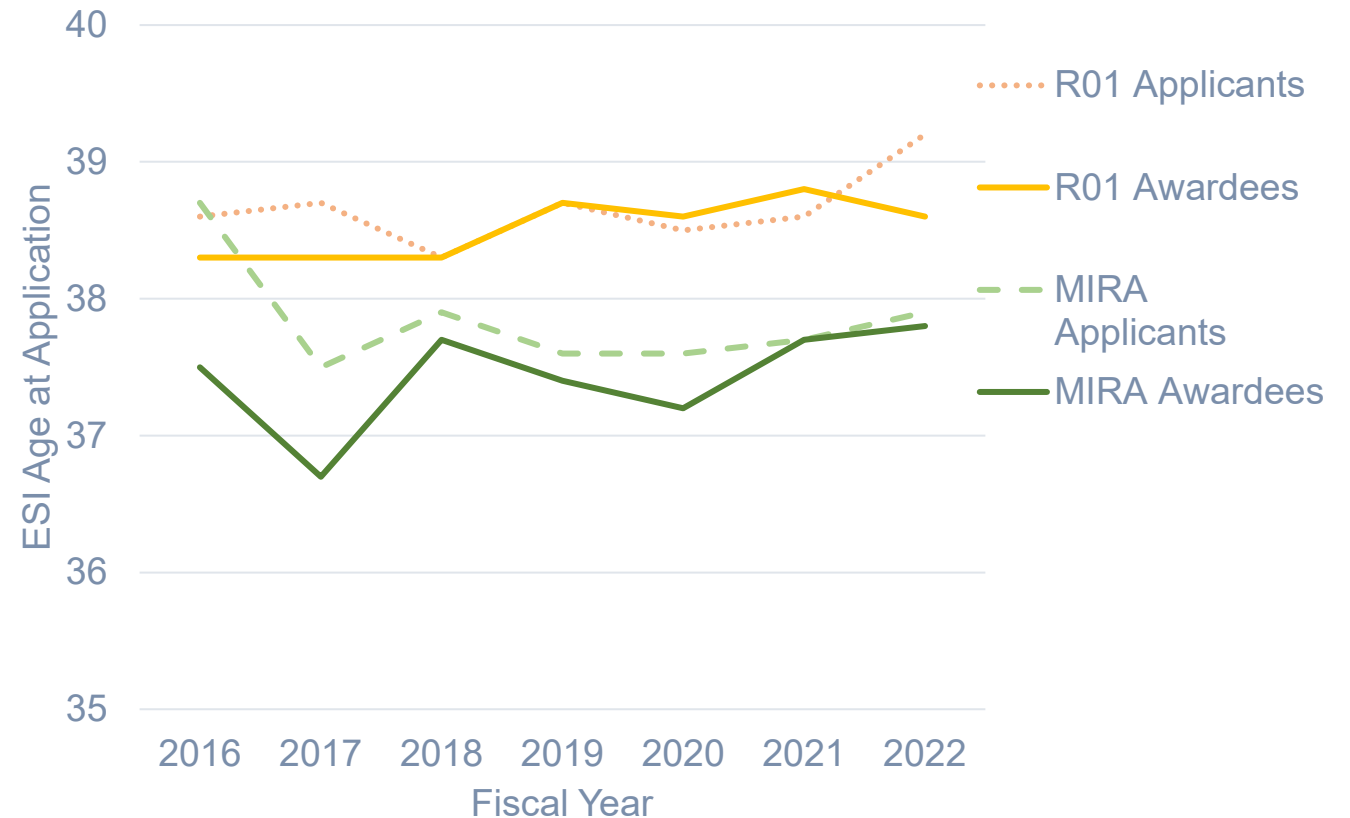
NIGMS Competing Early-Stage Investigator (ESI) Awardees FY 2013-2022



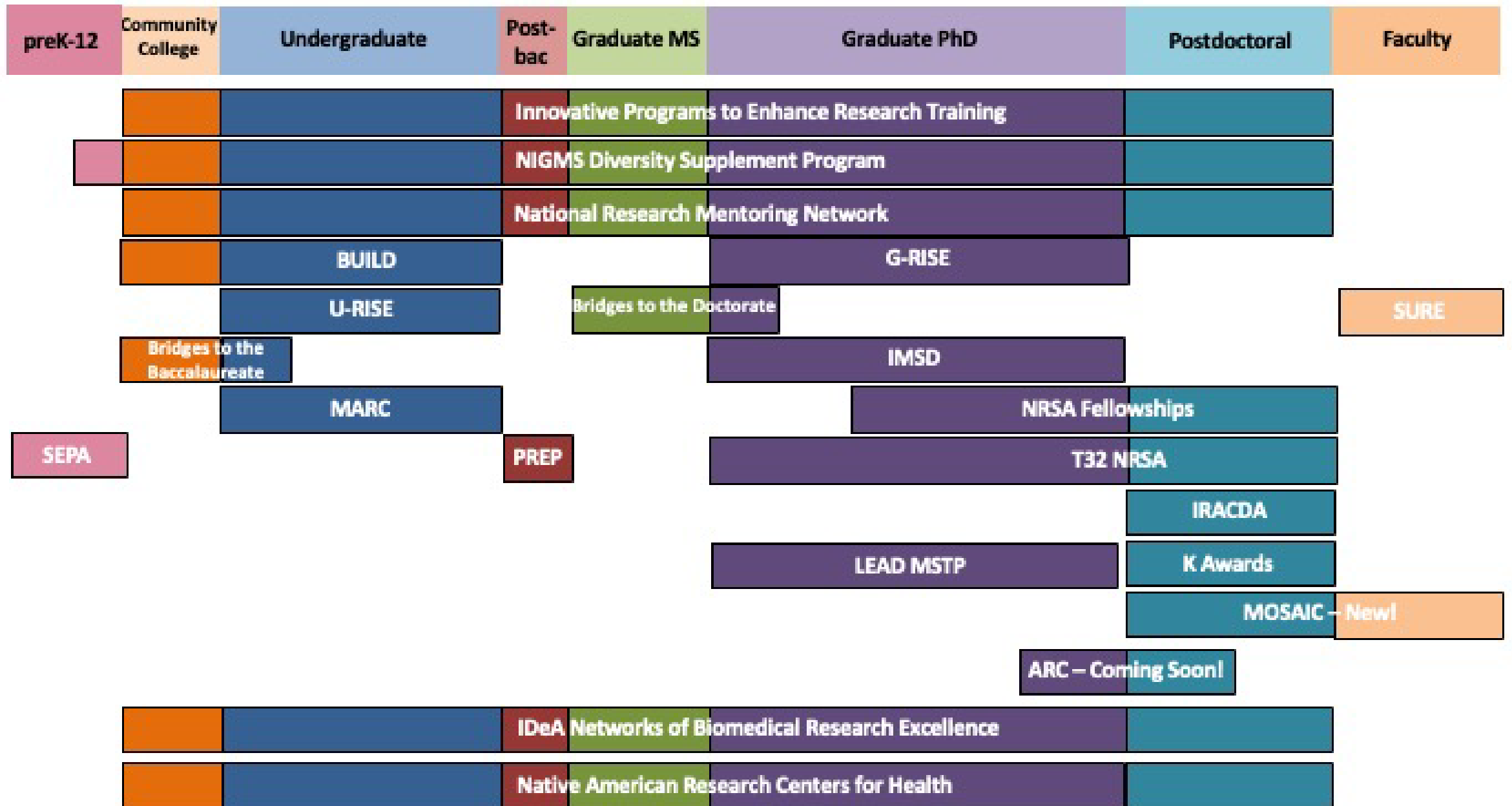
- In FY 2022, NIGMS made R01-equivalent awards to 319 ESIs: (31 R01 awards, 268 R35 MIRA awards and 20 DP2 awards).
- This represents the highest number of ESIs supported by NIGMS since creation of the investigator category.
- Nearly 85% of the ESIs awarded in FY 2022 received R35 MIRAs.
- See Feedback Loop Post for more details: <https://loop.nigms.nih.gov/2023/04/application-and-funding-trends-in-fiscal-year-2022/>

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 Training, Workforce Development, and Diversity Programs



Science Education Partnership Awards (SEPA)

- Xavier University of Louisiana-Mobile Outreach for Laboratory Enrichment (XULA-MOLE)
 - Co-funded with ORWH
 - Comprehensive training and mentoring program for New Orleans high school students and teachers
 - Four-pronged approach: (i) inquiry-based laboratory experiences; (ii) professional development and research design training for teachers; (iii) near-peer mentoring between Xavier undergraduates and their pre-college peers; and (iv) field trips to labs at Xavier.
- Seeds of Success: Empowering Girls in STEM Through Mentoring, Access, and Leadership
 - Yale University program with sites in New Haven and Puerto Rico
 - Out-of-school intervention designed to inspire girls in grades 7-9 to consider careers in STEM by countering gender and race stereotypes through relatable role models; promoting STEM self-efficacy through STEM workshops and activities; and encouraging alignment between cultural and STEM identities through community-based STEM projects.

MOSAIC Program Updates

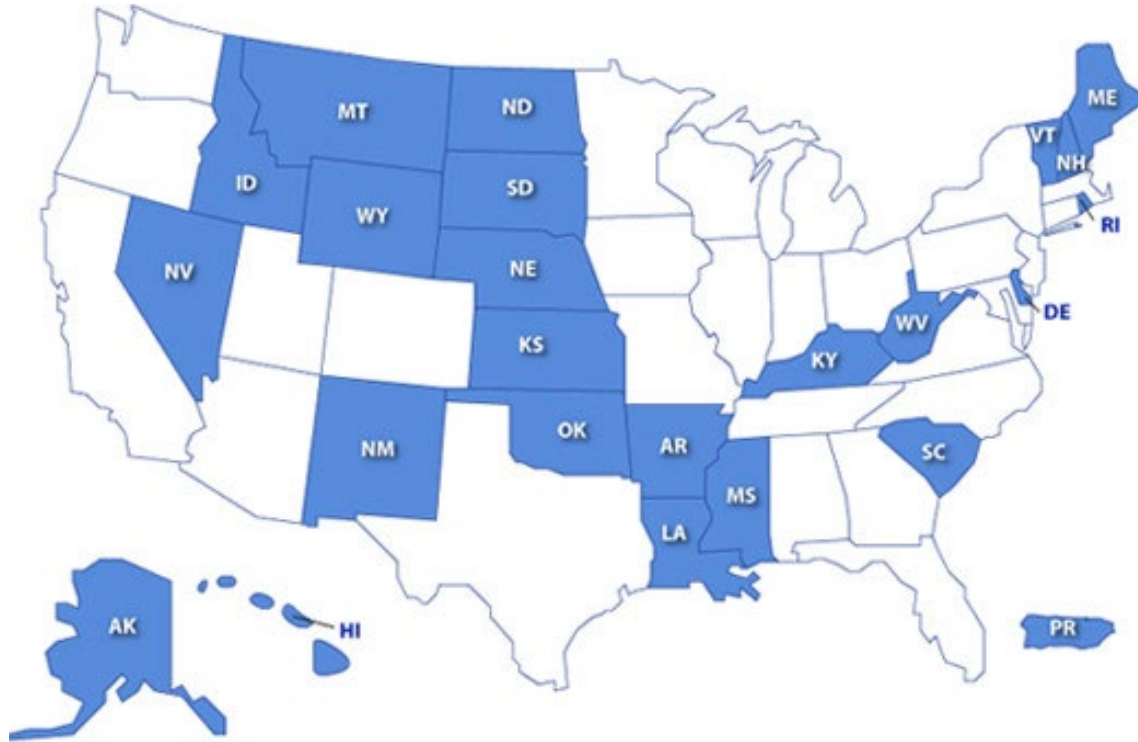
- Enhance diversity of faculty in research-intensive positions
- Diversity-focused K99/R00s and UE5 Mentoring Hubs (AAMC, ASBMB, ASCB, ASM – *need neurosci.*)
- 23 NIH ICOs currently participate in MOSAIC
- 130+ K99s awarded FY21-23 by 17 ICs (~50% success rate)
- MOSAIC scholars - ~75% women, ~70% URM
- ≥42 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
 - PAR-23-221 (UE5) and PAR-23-222 (F99/K00)
- 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; next due date is January 25, 2024
- Undergraduate and graduate training grants for Tribal Organizations

NIGMS IDeA Program



- **IDeA Networks of Biomedical Research Excellence (INBRE)**
 - Link one or more research-intensive institution in an IDeA state to Primarily Undergraduate Institutions in the state
- **Centers of Biomedical Research Excellence (COBRE)**
 - Develop research capacity in broad scientific areas with a focus on early-career independent researchers
- **IDeA Clinical and Translational Research Programs**

Montana Center for American Indian and Rural Health Equity

DOI: 10.1111/jrh.12572

ORIGINAL ARTICLE

THE JOURNAL OF **RURAL HEALTH**



Evaluating disparities in access to obstetric services for American Indian women across Montana

Maggie L. Thorsen PhD¹  | Sean Harris PhD² | Ronald McGarvey PhD³ |
Janelle Palacios PhD, CNM⁴ | Andreas Thorsen PhD²

“AIAN women were 20-times more likely to give birth at a hospital without obstetric services and had less access to complex obstetric care.”

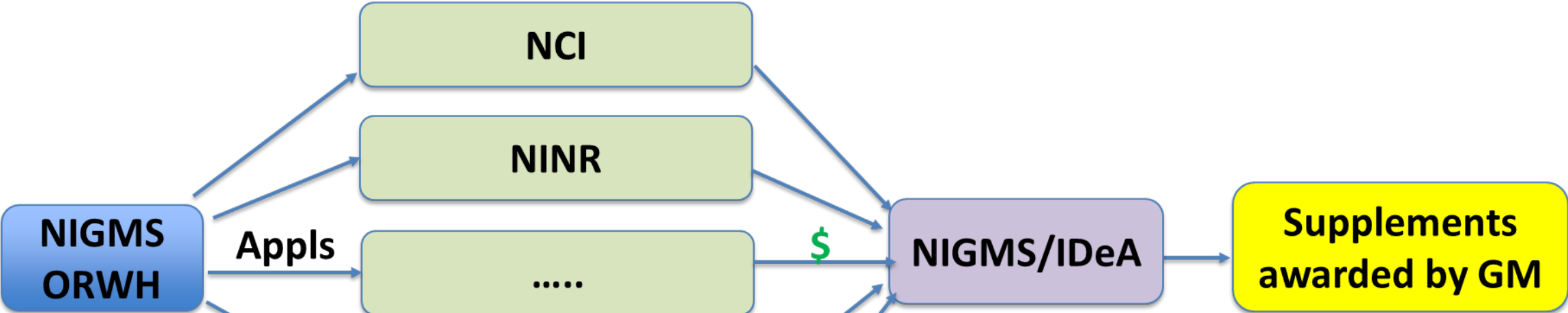
“Current federal policies aim to reduce maternity care professional shortages. Our findings suggest that racial disparities in access to complex obstetric care will persist in Montana unless facility-level infrastructure is also expanded to reach AIAN women.”

Partnerships with ORWH to Promote Women's Health Research in IDeA States

- Notice of Special Interest (NOSI): Supporting Women's Health Research in IDeA States through the Centers of Biomedical Research Excellence (COBRE) Phase 1 Program - NOT-GM-23-012
 - ORWH intends to support a COBRE focusing on women's health
 - NIGMS remains interested in supporting additional COBREs in this area
- Notice of Special Interest (NOSI): Administrative Supplements for Research on Women's Health in the IDeA States (with ORWH) - NOT-GM-22-005
 - Due dates October 17 2023, 2024 for all IDeA programs



Collaboration with ORWH: Women's Health Research in IDeA States



16 participating ICOs

FY20	19 awards/37 applications
FY21	15 awards/26 applications
FY23	26 Awards/42 applications

Examples of outcomes of ORWH IDeA supplements

Grant: 3P30GM131944-02S1

PI/Project Lead: William Ward and Johann Urschitz

Institution: University of Hawai'i at Manoa

Administrative supplement title: IBR-COBRE Phase III/ Investigating the Maternal Microbial Metabolite Signature in Fetal Growth Abnormalities in a Multi-ethnic Cohort

Funding IC: OD/ORWH

Outcome: Weingrill RB, Lee MJ, Benny P, Riel J, Saiki K, Garcia J, Oliveira LFAM, Fonseca EJDS, Souza ST, D'Amato FOS, Silva UR, Dutra ML, Marques ALX, Borbely AU, Urschitz J. Temporal trends in microplastic accumulation in placentas from pregnancies in Hawai'i. *Environ Int.* 2023 **180**:108220. doi: 10.1016/j.envint.2023.108220. Epub ahead of print. PMID: 37741006. <https://pubmed.ncbi.nlm.nih.gov/37741006/>

Examples of outcomes of ORWH IDeA supplements (continued)

Grant: 3P20GM103434-21S2

PI/Project Lead: Gary Rankin and Nalini Santanam

Institution: Marshall University

Administrative supplement title: West Virginia IDeA Network of Biomedical Research Excellence (WV-INBRE)/Targeting Fusin Axis in Endometriosis-Associated Ovarian Cancer

Funding IC: NIGMS

Outcome: Clower L, Fleshman T, Geldenhuys WJ, Santanam N. Targeting Oxidative Stress Involved in Endometriosis and Its Pain. *Biomolecules*. 2022 **12**:1055. doi: 10.3390/biom12081055. PMID: 36008949; PMCID: PMC9405905. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9405905/>

Examples of outcomes of ORWH IDeA supplements (continued)

Grant: 3U54GM104941-08S1

PI/Project Lead: Gregory Hicks and Emily Day

Institution: University of Delaware

Administrative supplement title: Antibiotic-Loaded Nanoparticles for the Treatment of Bacterial Vaginosis in Pregnant and Non-Pregnant Women

Funding IC: NIAID

Outcome: Irvin-Choy NS, Nelson KM, Gleghorn JP, Day ES. Delivery and short-term maternal and fetal safety of vaginally administered PEG-PLGA nanoparticles. *Drug Deliv Transl Res*. 2023 doi: 10.1007/s13346-023-01369-w. Epub ahead of print. PMID: 37365402. <https://pubmed.ncbi.nlm.nih.gov/37365402/>

The NIH UNITE Initiative

- U** Understanding stakeholder experiences through listening and learning
- N** New research on health disparities/minority health/health equity
- I** Improving the NIH Culture and Structure for Equity, Inclusion, and Excellence
- T** Transparency, communication, and accountability with our internal and external stakeholders
- E** Extramural Research Ecosystem: Changing Policy, Culture, and Structure to Promote Workforce Diversity



UNITE Funding Opportunities

- Research With Activities Related to Diversity (ReWARD)
 - R01 program for investigators who have done exceptional things to promote DEIA and who currently have no NIH Research Project Grant funding
 - Supports investigator's research and continued DEIA activities
 - [PAR-23-122](#); first application due date was June 5, 2023
- Instrumentation Grant Program for Resource-Limited Institutions (RLI-S10)
 - Aims to enhance research capacity and educational opportunities at resource-limited institutions by providing funds to purchase modern, scientific instrumentation
 - Equipment can be used for research and education
 - Major users do not need to be NIH funded
 - [PAR-23-138](#); first application due date was July 3, 2023

UNITE Funding Opportunities (continued)

- The STrengthening Research Opportunities for NIH Grants (STRONG) program
 - Will provide support for resource-limited institutions to conduct research capacity needs assessments and use the results to develop strategic action plans
 - [PAR-23-144](#); first application due date was September 18, 2023

Questions?