



National Institute of
General Medical Sciences



Jon R. Lorsch, Ph.D.,
Director

National Institute of
General Medical
Sciences

February 1, 2024

Director's Report NAGMS Council

Retiring Council Member

Danielle Li, Ph.D.

Associate Professor

Technological Innovation, Entrepreneurship, and
Strategic Management

Sloan School of Management

Massachusetts Institute of Technology



Ad hoc Council Participants

Eric Alani, Ph.D.

Professor

Department of Molecular Biology and Genetics

Cornell University

(Regular member as of this meeting)



L. Andrew Lee, Ph.D.

Chief Scientific Officer

Integrated Micro-Chromatography Systems, Inc.



Ad hoc Council Participants (cont.)

Christopher W. Seymour, M.D., M.Sc.

Associate Professor

Departments of Critical Care Medicine, Emergency
Medicine, and Clinical Translational Science

University of Pittsburgh School of Medicine



JoAnn Trejo, Ph.D., M.B.A.

Professor, Department of Pharmacology

Assistant Vice Chancellor, Health Sciences Faculty Affairs

University of California San Diego School of Medicine



Ad hoc Council Participants (cont.)

Donald K. Warne, M.D., M.P.H.

Provost Fellow, Indigenous Health Policy

Co-Director, Center for Indigenous Health

Professor, Johns Hopkins Bloomberg School of
Public Health



Leyte Winfield, Ph.D.

Professor, Department of Chemistry & Biochemistry

Chair, Division of Natural Sciences and Mathematics

Spelman College



Early Career Investigator *Ad hoc* Council Participants

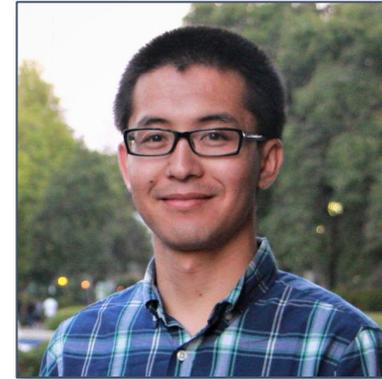
Zhana Duren, Ph.D.

Assistant Professor

Department of Genetics and Biochemistry

Core Faculty, Biomedical Data Science and Informatics

Clemson University

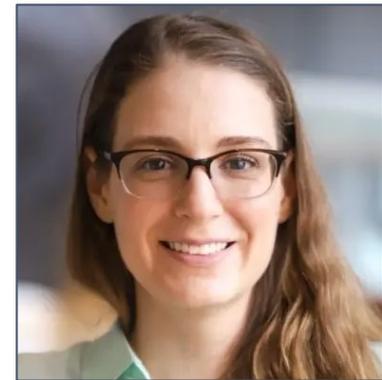


Amanda A. Amodeo, Ph.D.

Assistant Professor

Department of Biological Sciences

Dartmouth College



NIGMS Personnel Changes

New Hires

- **Kimberly Hammer, Ph.D.**, Scientific Review Officer, Scientific Review Branch, Division of Extramural Activities
- **Jenelle Kiernan**, Grants Management Specialist, Grants Administration Branch, Division of Extramural Activities
- **Mechelle Lewis, Ph.D.**, Program Officer, Biochemistry and Molecular Pharmacology Branch, Division of Pharmacology, Physiology, and Biological Chemistry



Personnel changes occurring between 8/27/23 and 1/31/24 are included.

NIGMS Personnel Changes (cont.)

New Hires (cont.)

- **Crystal Richards, Ph.D.**, Program Officer, Networks and Development Programs Branch, Division for Research Capacity Building
- **Joyce Stamm, Ph.D.**, Program Officer, Predoctoral Basic Biomedical and Medical Science Training Programs Branch, Division of Training, Workforce Development, and Diversity
- **Veronica Taylor**, Program Officer, Biophysics Branch, Division of Biophysics, Biomedical Technology, and Computational Biosciences



Personnel changes occurring between 8/27/23 and 1/31/24 are included.

NIGMS Personnel Changes (cont.)

New Hires (cont.)

- **Reina Villanueva-Unger, Ph.D.**, Data Scientist, Data Modeling and Analytics Branch, Division of Data Integration, Modeling, and Analytics
- **Guoqin Yu**, Program Officer, Bioinformatics and Computational Biology Branch, Division of Biophysics, Biomedical Technology, and Computational Biosciences



Personnel changes occurring between 8/27/23 and 1/31/24 are included.

NIGMS Personnel Changes (cont.)

Promotions

- **Rusinel Amarante**, Lead Ethics Coordinator, Executive Office, Division of Management
- **Paula Flicker, Ph.D.**, Chief, Biophysics Branch, Division of Biophysics, Biomedical Technology, and Computational Biosciences
- **Zuzana Justinova, Ph.D.**, Chief, Physiology and Clinical Sciences Branch, Division of Pharmacology, Physiology, and Biological Chemistry



Personnel changes occurring between 8/27/23 and 1/31/24 are included.

NIGMS Personnel Changes (cont.)

Departures

- **Rebecca Johnson, Ph.D.**, Scientific Review Officer, Scientific Review Branch, Division of Extramural Activities (retirement)
- **Melissa Kopyto**, Management Analyst, Executive Office, Division of Management, (move to the National Library of Medicine)
- **Saraswathy Seetharam, Ph.D.**, Scientific Review Officer, Scientific Review Branch, Division of Extramural Activities (retirement)



Personnel changes occurring between 8/27/23 and 1/31/24 are included.

NIGMS Personnel Changes (cont.)

Departures (cont.)

- **Jyoti Singh**, Public Affairs Specialist, Communications and Public Liaison Branch, Division of Management (move to the U.S. Department of Agriculture)
- **Mary Ann Wu, Ph.D.**, Program Officer, Biomedical Technology Branch, Division of Biophysics, Biomedical Technology, and Computational Biosciences (move to the NIH Office of the Director)



Personnel changes occurring between 8/27/23 and 1/31/24 are included.

New NIH Director

Monica M. Bertagnolli, M.D.

- Became NIH director November 9, 2023
- A world-renowned surgical oncologist, cancer researcher, educator, and physician-leader
- Previously served as 16th director of the National Cancer Institute since October 2022
- Before joining NIH, was the Richard E. Wilson professor of surgery at Harvard Medical School, a surgeon at Brigham and Women's Hospital, and a member of the Gastrointestinal Cancer and Sarcoma Disease Center at Dana-Farber Cancer Institute



Director, National Cancer Institute

W. Kimryn Rathmell, M.D., Ph.D.

- Became the 17th director of the National Cancer Institute on December 18, 2023
- Renowned kidney cancer expert and leader in cancer research and patient care
- Previously served as the Hugh Jackson Morgan Chair in Medicine, chair of the Department of Medicine, and physician-in-chief at Vanderbilt University Medical Center



New NIH Deputy Director

Tara A. Schwetz, Ph.D.

- Appointed the NIH deputy director for program coordination, planning, and strategic initiatives, leading the Division of Program Coordination, Planning, and Strategic Initiatives in the NIH Office of the Director on November 9, 2023
- Previously served as acting NIH principal deputy director, a position she held since December 2021
- Joined NIH in 2012 and has held multiple positions across several institutes and within the Office of the Director



New Resources

“Which Grant Is Right for Me?” Web Feature

- Decision tree intended for independent investigators doing research within the NIGMS mission who are new to NIH and do not have a major research grant, including early-stage investigators
- See our website: go.nih.gov/which-grant

NIGMS Research Project Grant Basics *Feedback Loop* Series

- Series of posts outlining NIGMS research priorities, funding opportunities, and the grant application process for those unfamiliar with our Institute
- Read all posts in the series: go.nih.gov/rpg-basics

Funding Opportunities

New Advancing Research Careers (ARC) Predoc to Postdoc Transition Program (F99/K00 and UE5)

- Part of NIGMS' strategic efforts to enhance support for trainees from diverse backgrounds through critical career transition points
- Designed to enhance participation of trainees as they transition from predoctoral research training to postdoctoral research and career development
- First application receipt date is June 13, 2024; find a recorded webinar and read more about this opportunity on *Feedback Loop*:
go.nih.gov/ARC-Feedback-Loop

Funding Opportunities (cont.)

Native American Research Centers for Health (NARCH) Planning Grants (R34)

- Supports federally recognized American Indian/Alaska Native Tribes and Tribal organizations to plan and conduct preparatory work for developing competitive NARCH (S06) applications
- Awards aim to expand the reach of the NARCH (S06) program, which supports health-related research, research career enhancement, and research infrastructure enhancement
- First application receipt date is July 8, 2024; read more on *Feedback Loop*: go.nih.gov/NARCH-FBL

Funding Opportunities (cont.)

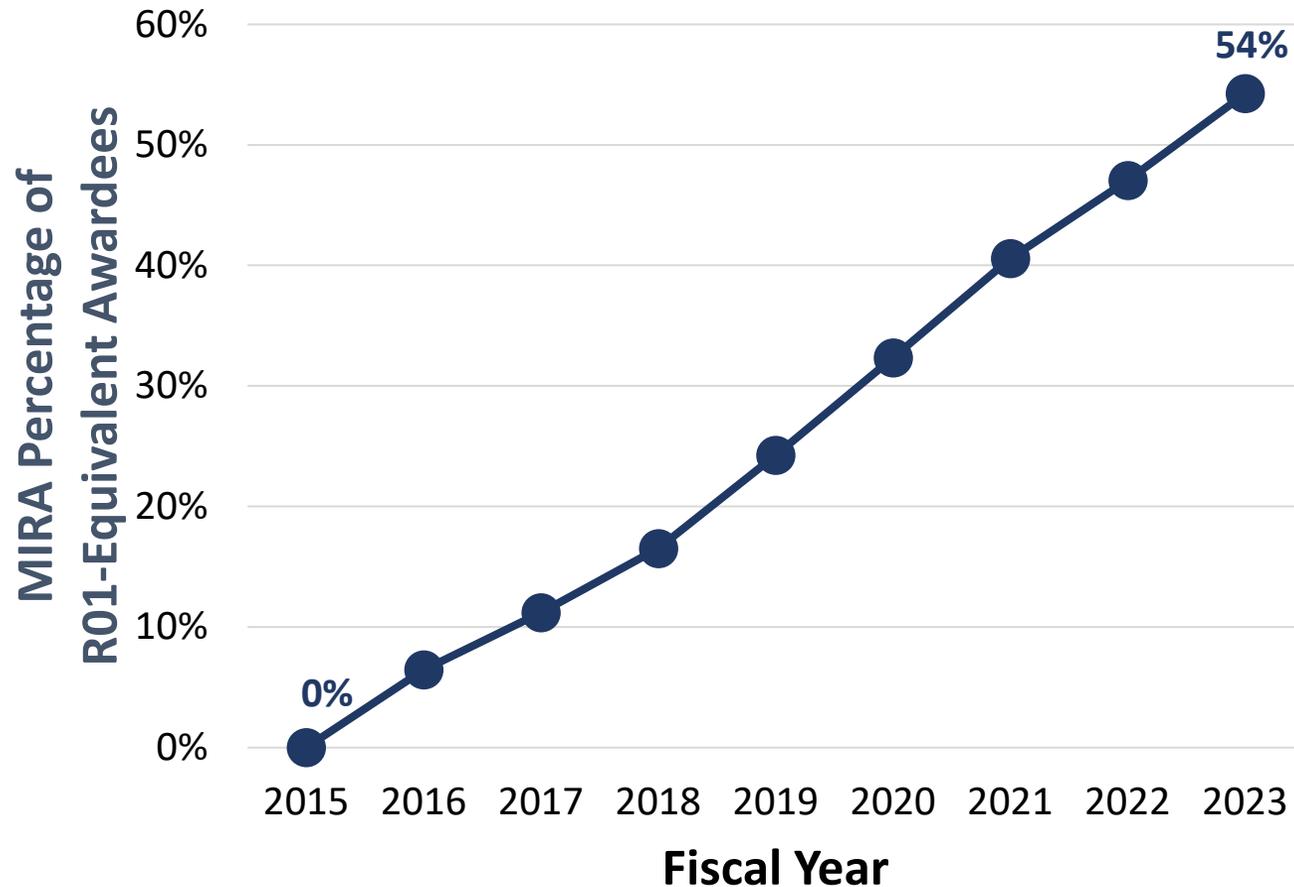
Expanded Program Eligibility for Diversity Supplements

- Facilitate the recruitment and research training of promising scientists from diverse backgrounds, high school to independent investigator
- Now eligible to apply: SuRE, IDeA COBRE, CTR and INBRE, NARCH
- Read more about the expanded eligibility and how to apply on *Feedback Loop*: go.nih.gov/diversity-eligibility

Supplements for Building Cloud-Based Learning Modules

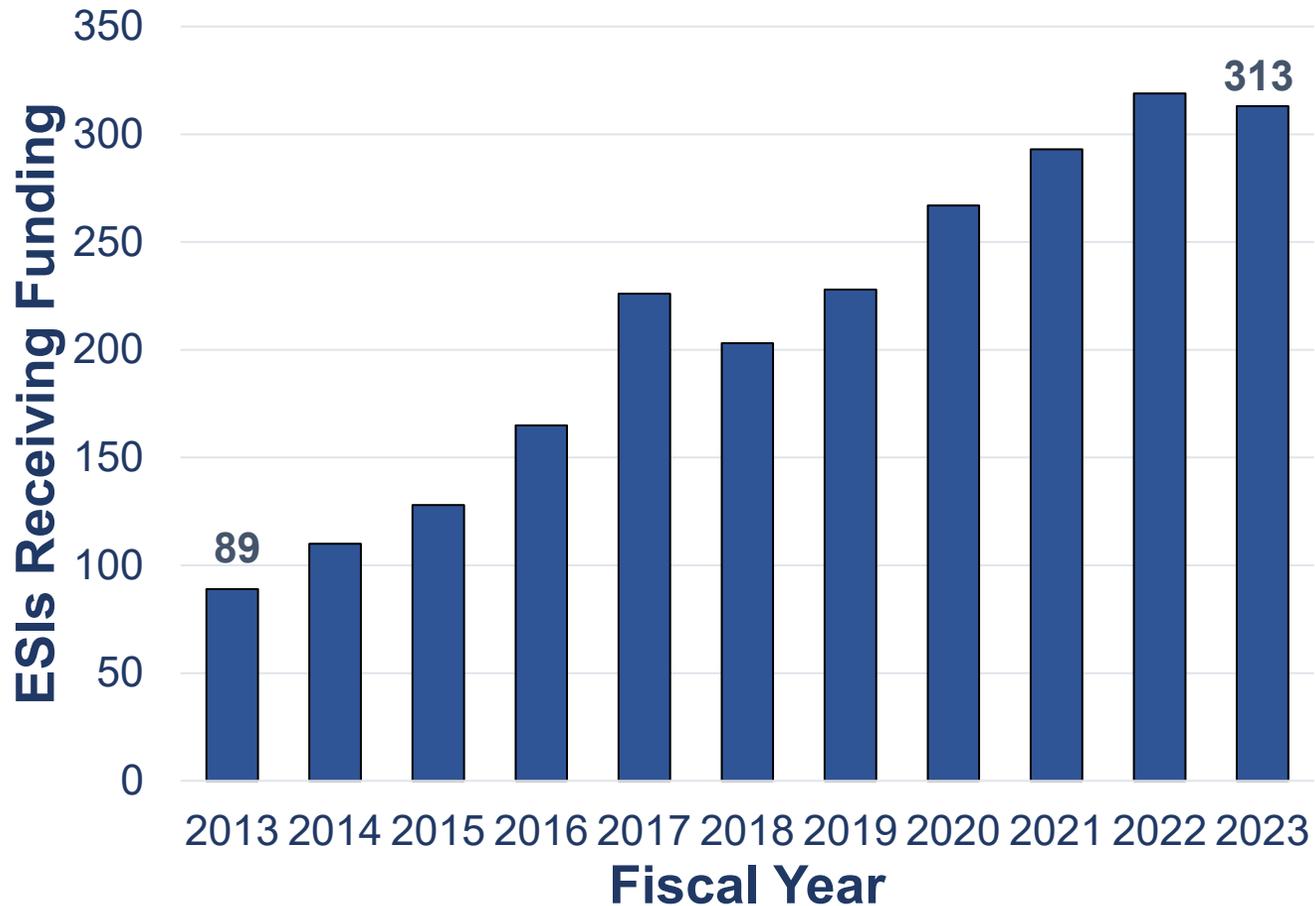
- Application due date is February 15; support faculty investigators to work with NIH-funded cloud software engineers
- Read more about this opportunity on *Feedback Loop*: go.nih.gov/cloud-supplements

NIGMS MIRA Awards Percentage of Total R01-Equivalent Pool FY 2015-2023



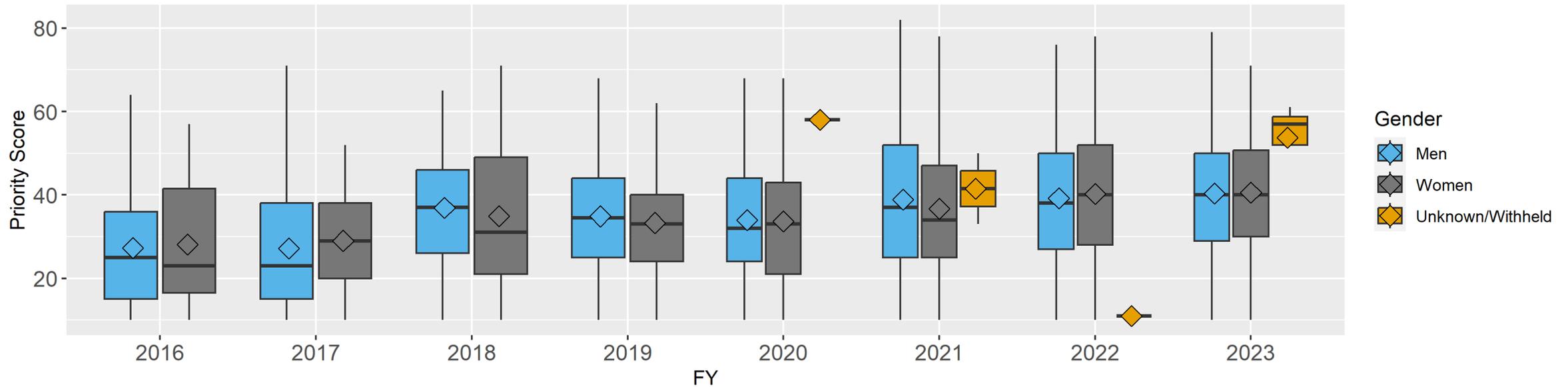
- In FY 2023, MIRA represented 54% of the NIGMS R01-equivalent awardee pool, an increase of 7 percentage points from the previous fiscal year.
- NIGMS awarded 2,413 R35 MIRA PIs and 2,035 other R01-equivalent investigators in FY 2023.
- NIGMS is on track to have at least 60% of the R01-equivalent pool supported by MIRA awards by 2025.

NIGMS Competing Early-Stage Investigator (ESI) Awardees FY 2013-2023



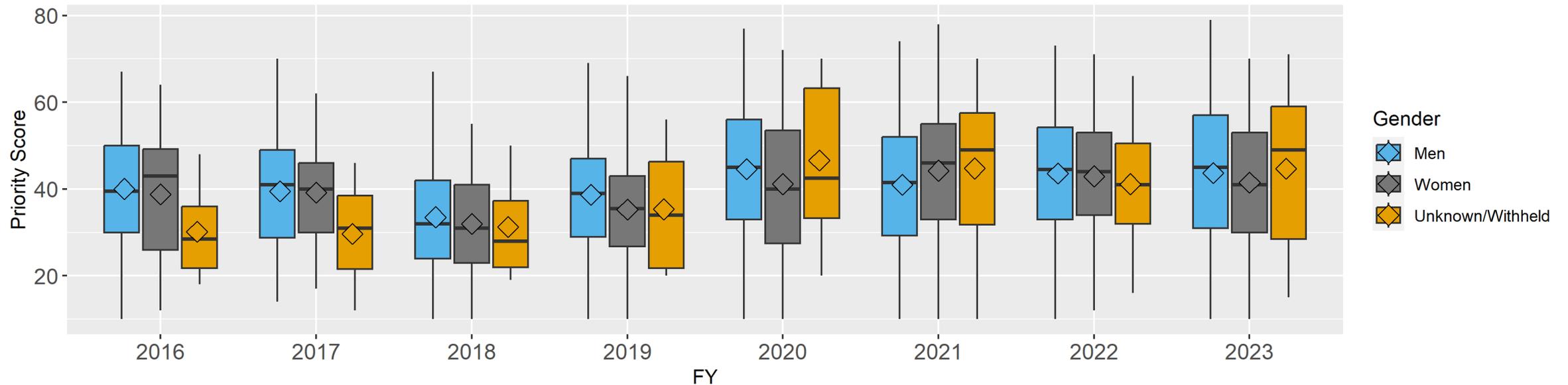
- In FY 2023, NIGMS made R01-equivalent awards to 313 ESIs: (26 R01 awards, 272 R35 MIRA awards, 13 DP2 awards, and 2 U01 awards).
- This is the second year in a row that NIGMS has supported over 300 ESIs with their first NIH grant.
- 88% of the ESIs awarded in FY 2023 received R35 MIRAs.

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



Bar is the median
Diamond is the mean

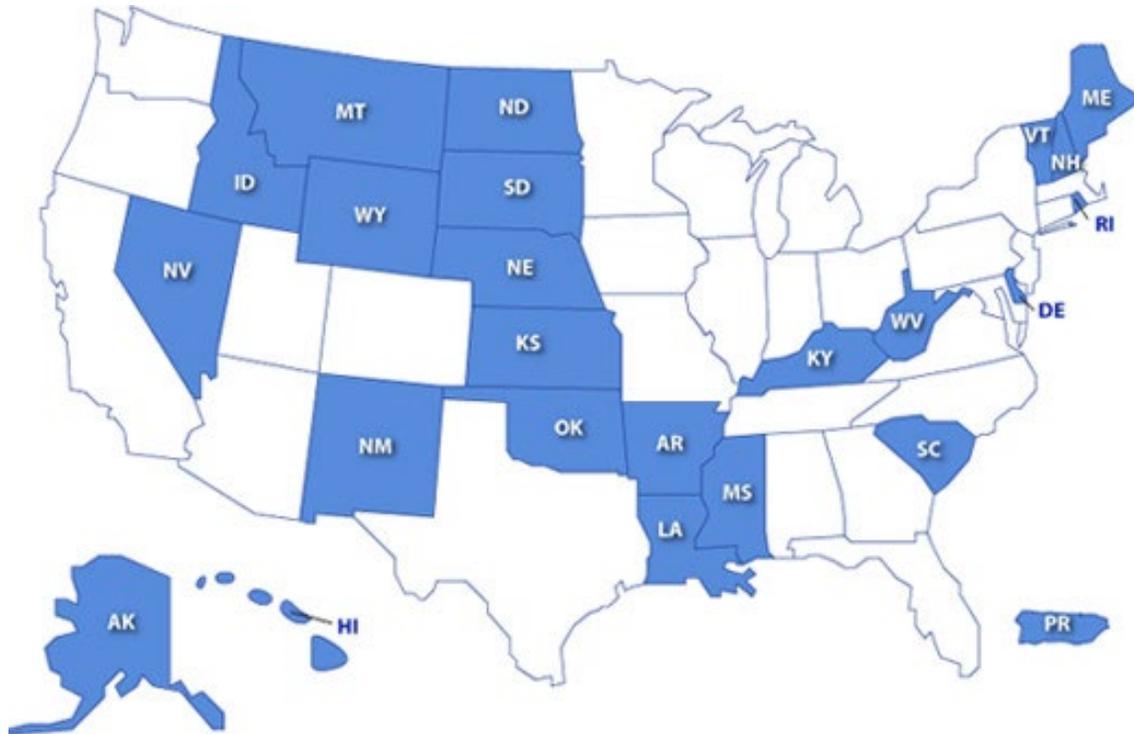
Women and men do equally well in peer review in the early-stage investigator MIRA program



Bar is the median
Diamond is the mean

Question from Council: What is NIGMS doing in women's health research?

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**

IDeA Center of Biomedical Research Excellence: 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.”

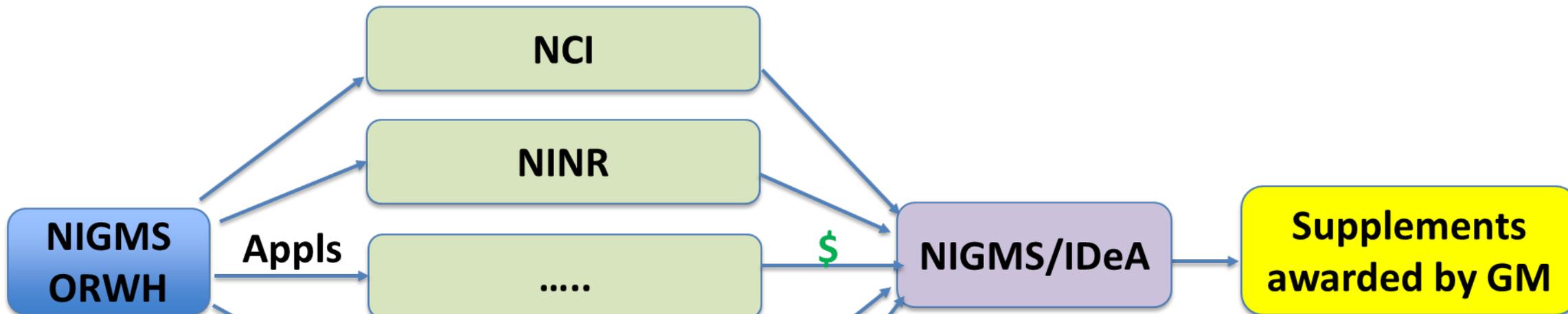
“Current federal policies aim to reduce maternity care professional shortages. Our findings suggest that racial disparities in access to complex obstetric care will persist in Montana unless facility-level infrastructure is also expanded to reach AIAN women.”

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/>

Sex as a Biological Variable (SABV) is relevant to much of NIGMS' portfolio

The 4 Cs of Studying Sex to Strengthen Science



Consider

Design studies that take sex into account, or explain why it isn't incorporated



Collect

Tabulate sex-based data



Characterize

Analyze sex-based data



Communicate

Report and publish sex-based data

<https://orwh.od.nih.gov/sex-gender/orwh-mission-area-sex-gender-in-research/nih-policy-on-sex-as-biological-variable>

Potential Discussion Questions

- What are your observations and perspectives on how efforts to increase the community's focus on SABV are working?
- What are your thoughts on the recent disclosures of data manipulation at highly funded institutions?