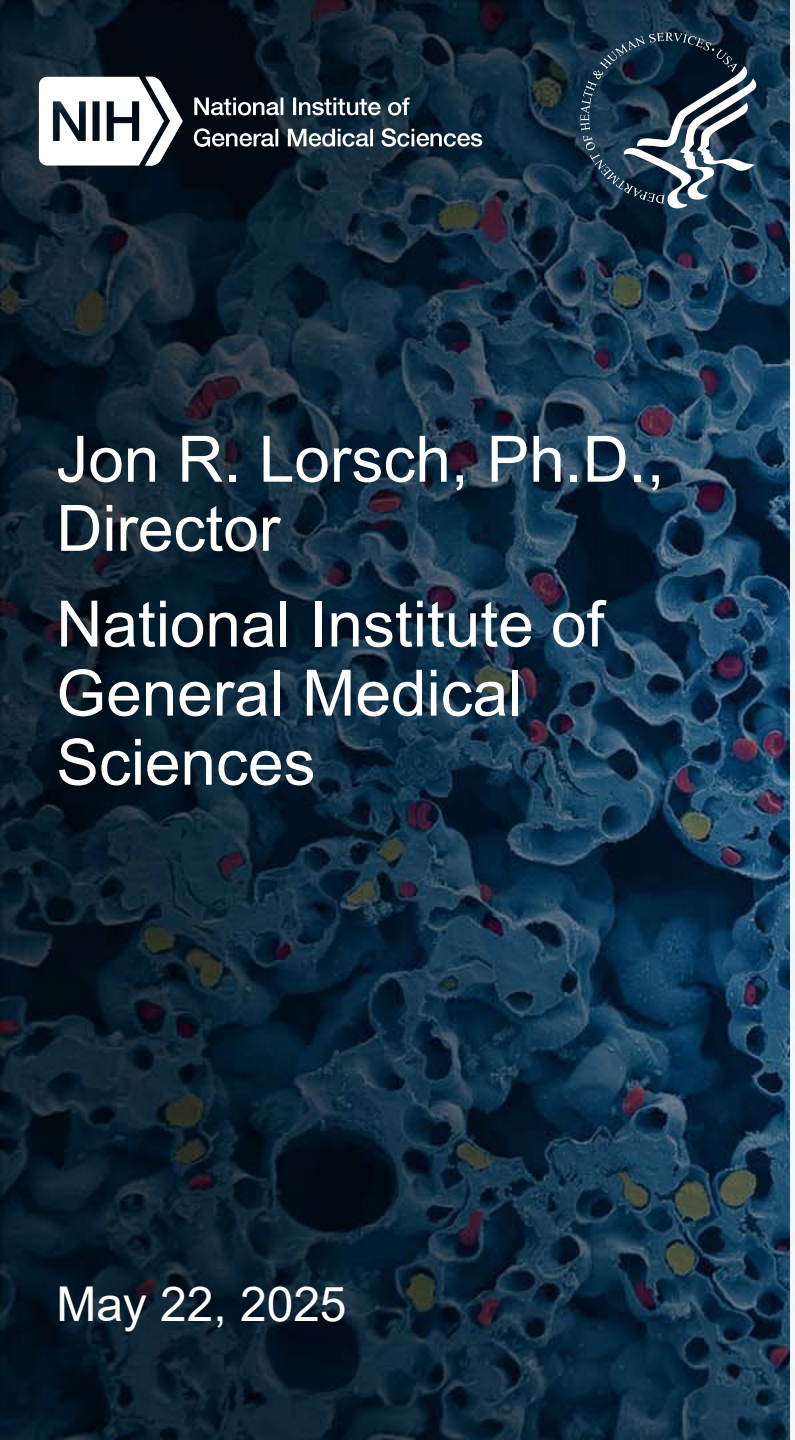


National Institute of General Medical Sciences

National Advisory General Medical Sciences Council

Jon R. Lorsch, Ph.D.,
Director

National Institute of General Medical Sciences

May 22, 2025

Outgoing Members

Ron G. King, Ph.D., M.B.A.

Adjunct Professor, Translational Genomics Department

University of Southern California

Terri Goss Kinzy, Ph.D.

Professor Emerita of Biochemistry and Molecular Biology

Rutgers, The State University of New Jersey

Outgoing Members (contd.)

David H. Mathews, M.D., Ph.D.
Lynne E. Maquat Distinguished Professor of RNA Biology
Department of Biochemistry and Biophysics
University of Rochester Medical Center

Early Career Investigator *Ad hoc* Participants

Christine R. Beck, Ph.D.
Associate Professor, Department of Genetics and Genome Sciences
University of Connecticut Health Center and The Jackson Laboratory for Genomic Medicine

Paulo Caceres, Ph.D.
Assistant Scientist, Internal Medicine
Hypertension and Vascular Research Division
Henry Ford Health

Early Career Investigator *Ad hoc* Participants (contd.)

Lydia Kisley, Ph.D.
Assistant Professor, Departments of Physics and Chemistry
Case Western Reserve University

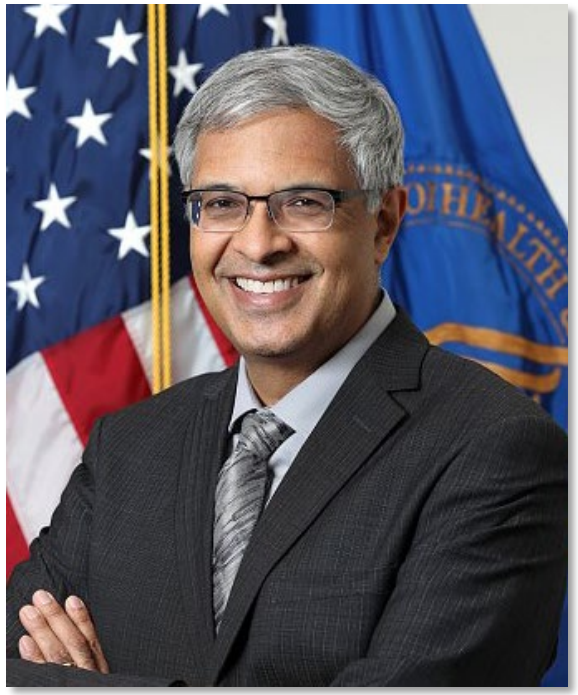
Oscar Vivas, Ph.D.
Assistant Professor, Department of Pharmacology and
Department of Physiology and Biophysics
University of Washington

NIGMS Deputy Director Dorit Zuk Is Retiring

New NIH Director

Jayanta “Jay” Bhattacharya, M.D., Ph.D.

- Became the 18th director of NIH on April 1. Replaces Monica M. Bertagnolli, M.D., who served as director from November 2023 to January 2025.
- Previously held a tenured professorship in the medical school at Stanford University in California.
- Has focused his research on population aging and chronic disease, particularly on the health and well-being of vulnerable populations.



Grantees Receive 2024 Nobel Prizes

Victor Ambros, Ph.D., and Gary Ruvkun, Ph.D.

Awarded the Nobel Prize in physiology or medicine for the discovery of microRNA and its role in post-transcriptional gene regulation

Dr. Ambros of UMass Chan Medical School has been an NIGMS grantee since 1985.

Dr. Ruvkun of Massachusetts General Hospital and Harvard Medical School has been an NIGMS grantee since 1991.

Grantees Receive 2024 Nobel Prizes (contd.)

David Baker, Ph.D.

Awarded the Nobel Prize in chemistry for computational protein design

Dr. Baker of University of Washington School of Medicine was an NIGMS grantee from 1995-2005.

R35 Maximizing Investigator's Research Award (MIRA)

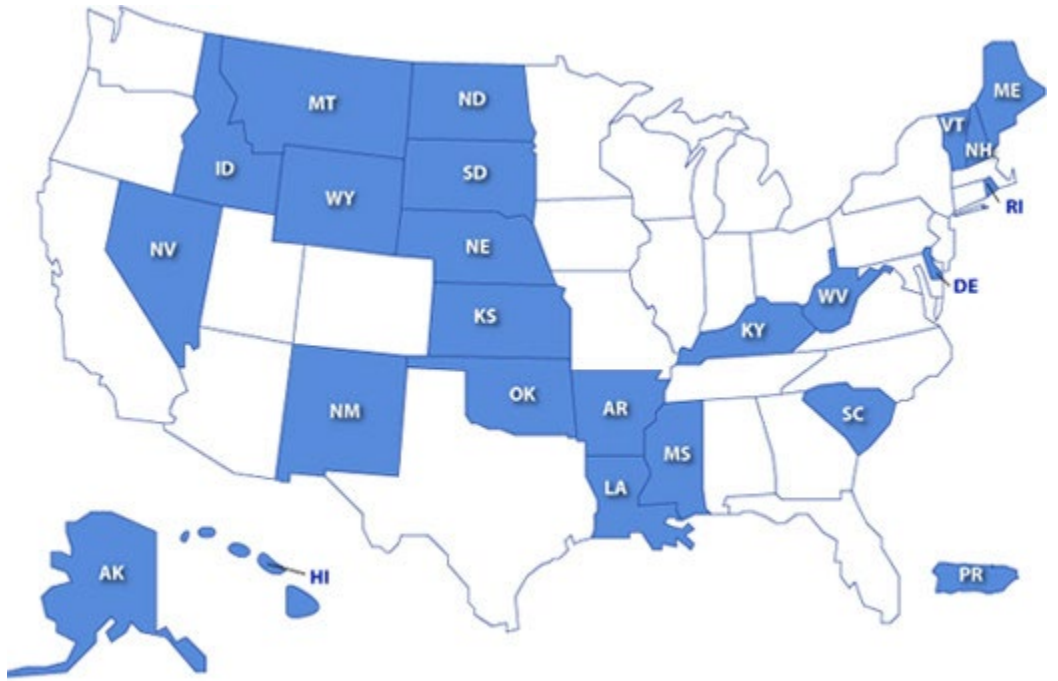
- The R35 MIRA Program provides support to individual investigators for the NIGMS-related program of research in their laboratories:
  - MIRA investigators have greater scientific flexibility and funding stability in addition to reduced administrative burden.
  - Periods of support are longer and budgets larger on average than comparable NIGMS R01s.
  - Applications from Early Stage Investigators (ESIs) and Established Investigators (EIs) are reviewed independently of one other.
- Since FY2013, NIGMS *tripled* the number of ESIs supported through its R01-equivalent awards, mostly due to MIRA.
- As of FY2024, 63% of NIGMS' R01-equivalent funded investigators were supported through MIRA.

ESI MIRA Portrait: Dr. Sharon Neufeldt

- Montana State University
- Received Early-Stage Investigator MIRA in 2020
- Research uses organic and organometallic chemistry to design, optimize and understand catalytic systems for molecular synthesis
  - Critical for making new drugs and medical materials
- Has published 23 papers since starting her lab: https://neufeldt-chemistry.com/publications/
- Just received a Presidential Early Career Award for Scientists and Engineers

Building Research Capacity at the State Level: The Institutional Development Award (IDeA) Program

- **The IDeA Program:**
  - Established by Congress in 1993.
  - Mission is to enhance the competitiveness of institutions in states that have historically received lower levels of NIH research funding.
  - Moved to NIGMS in 2011, line item in NIGMS appropriation ($431 million in FY 2024).
- **IDeA supports:**
  - Basic, translational, clinical, and behavioral research.
  - Research workforce development and Infrastructure enhancement.



Why Have an IDeA program?
Why Build Research Capacity?

Principal Components of IDeA

149 Centers of Biomedical Research Excellence (COBRE)
Develop research capacity around a scientific theme with a focus on early-career independent researchers

24 IDeA Networks of Biomedical Research Excellence (INBRE)
Statewide networks linking research-intensive institutions in an IDeA state to Primarily Undergraduate Institutions

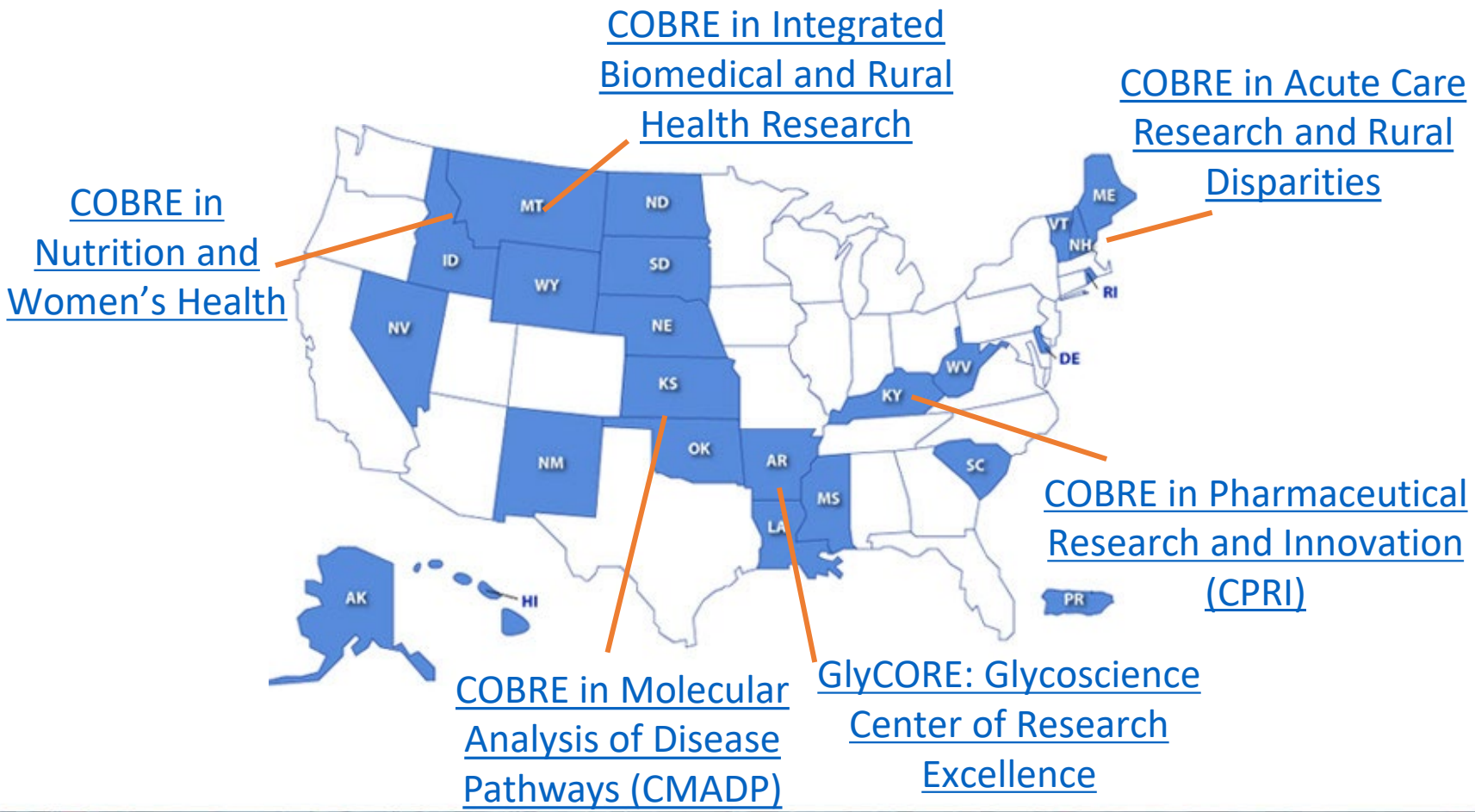
15 Clinical and Translational Research (CTR) Programs
Networks to build capacity for clinical and translational research in IDeA states on topics affecting their populations

4 IDeA Regional Entrepreneurship Development (I-RED) awards

IDeA Co-Funding
Co-fund research grant applications submitted to any NIH IC **(~30/yr)**

One Component of IDeA: Centers of Biomedical Research Excellence (COBRE)

- Example of Impact: One published paper found that COBRE support **increased the success rate of junior faculty receiving funding by** approximately 3-fold, from 15% to 47%. (Bartheld et al. 2015).



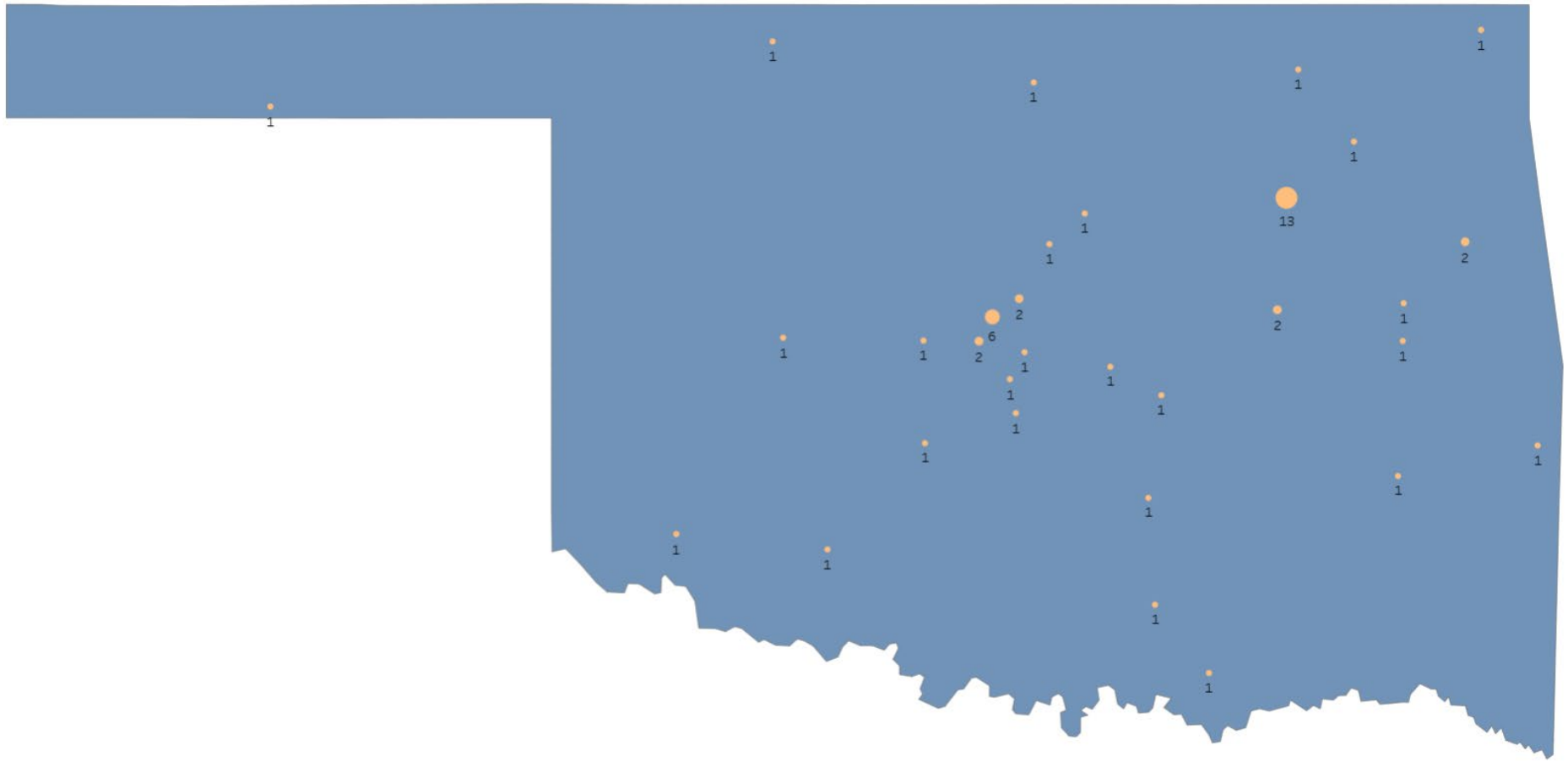
COBRE Investigators in KS Have Gone On to Receive MIRA Awards

KU | NIH Center of Biomedical Research Excellence (COBRE)
Center for Molecular Analysis of Disease Pathways

Jennifer Robinson received a MIRA award to continue her research on osteoarthritis.

Jingxin Wang received a MIRA award to further explore RNA splicing.

OKLAHOMA



- 29 4-year institutions
- 20 2-year institutions
  - 1 tribal college
- 3 non-degree granting research institutions

Oklahoma: Overall Statistics

- **Total NIH Funding:** $151,420,133
- **Total NIGMS Funding:** $40,773,522
- **Total IDeA Funding:** $28,427,374
- **% NIH Funding from NIGMS:** 27%
  - NIGMS represents 7% of the total NIH budget
- **% NIH Funding from IDeA:** 19%
- **Number of MIRA Grants:** 16
- **Number of NIGMS R15 AREA Grants (2022-2024):** 5
- **Number of NIGMS R16 SuRE Grants:** 0
- **Number of COBREs:** 10

All numbers are from Fiscal Year 2024

Oklahoma COBREs

- The Center for Neuroscience-based Mental Health Assessment and Prediction – Laureate Institute for Brain Research
- Expanding Excellence in Developmental Biology in Oklahoma – Oklahoma Medical Research Foundation
- Center for Cellular Metabolism Research in Oklahoma - Oklahoma Medical Research Foundation
- Center for Integrative Research on Childhood Adversity – OSU Center for Health Sciences
- Oklahoma Center for Microbiome Research – Oklahoma State University Stillwater
- Oklahoma Center for Respiratory and Infectious Diseases – Oklahoma State University Stillwater
- Oklahoma COBRE in Structural Biology – University of Oklahoma
- Cellular and Molecular Geroscience COBRE – University of Oklahoma Health Sciences
- Oklahoma Center for Microbial Pathogenesis and Immunity– University of Oklahoma Health Sciences
- Mentoring Translational Cancer Research in Oklahoma - University of Oklahoma Health Sciences

Oklahoma Program Highlight: IDeA Network of Biomedical Research Excellence (INBRE)

- Two research-intensive institutions serve as the hub - University of Oklahoma Health Sciences Center (lead) and Oklahoma Medical Research Foundation
- 15 primarily undergraduate institutions and community and Tribal colleges make up the spokes
- Supports faculty and student research projects, mentoring, core facilities (data science and proteomics), and infrastructure enhancement
- The state of Oklahoma contributes additional funding to expand the reach of the INBRE

Oklahoma MIRA Portrait: Susannah Rankin

- Oklahoma Medical Research Foundation
- Studying the role of cohesin and cohesin regulating proteins in chromosome structure and segregation using human cells and frog egg extracts as research systems
- Was supported by the Oklahoma INBRE prior to getting independent funding

Trans-Departmental T32 Predoctoral Training Grant Track

- The goal of this program area is to broaden the scope, institutional and geographic distribution of NIGMS basic biomedical research training programs.

- Enhance organizational capacity for basic biomedical research training and provide research training opportunities to students from the breadth of biomedical disciplines at the participating organizations.

- Organizations with few or no NIH predoctoral T32s and organizations in IDeA states are encouraged to apply.

Headshots of the employees at NIGMS.