Scientific Workforce Diversity in Extramural Research

- Training
- Mentorship
- Navigation
- Funding
- Transition
- Support
Your Guides

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Scientific Workforce Diversity - Guidance

• Why Diversity Matters to NIH – Dr. Le Fauve

• NIH 101: A Primer for ESI and 1st Time Applicants – Dr. Lauren Hill

• Strategies to Support Your Research Training – Dr. Marguerite Matthews

• Career Stage Transitions – Dr. Kenneth Gibbs
Scientific Workforce Diversity - Guidance

- **Why Diversity Matters to NIH** – Dr. Le Fauve
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- **Career Stage Transitions** – Dr. Kenneth Gibbs
Why Diversity Matters: Capitalizing on the Opportunity

- Excellence, Creativity, Innovation
- Broadening Scope of Inquiry: Health Disparities
- Changing Demographics: Types of Diversity
- Global Research Preeminence
### Chief Officer for Scientific Workforce Diversity (COSWD)

<table>
<thead>
<tr>
<th>MISSION</th>
<th>To be the NIH thought leader in the science of scientific workforce diversity, using data-driven approaches to take advantage of the full range of scientific talent, fostering creativity and innovation in science.</th>
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<tbody>
<tr>
<td>MAIN GOAL</td>
<td>To catalyze the development of cultures of inclusive excellence, allowing NIH and NIH-funded institutions to benefit from a full range of talent.</td>
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</table>

- **Build the evidence** using the NIH as a testbed for innovative scientific programs.
- **Disseminate the evidence** through work with the full scientific community, from trainees to established tenured scientists.
- **Act on the evidence** by piloting integrated, institution-wide systems to address bias, faculty equity, mentoring, and work/life issues.
Diminishing Representation for Women and URG Scientists

Percent Representation in Biological/Biomedical Sciences and Medicine, 2017 - 2018

Underrepresented
African American or Black
Hispanic or Latina/o/x
American Indian
Alaska Native
Native Hawaiian
Pacific Islander

Well-Represented
White
Asian

NIH Approaches to Inclusive Excellence

- Distinguished Scholars Program
  - Build a self-reinforcing community of PIs committed to diversity and inclusion
- Faculty Institutional Recruitment for Sustainable Transformation (FIRST)
- Trans-NIH searches for tenure track positions
- NIH Equity Committee
  - Transparency and accountability
- National Research Mentoring Network (NRMN)
- Implicit-bias mitigation
  - NIH SWD Interactive Toolkit

NIH Scientific Workforce Diversity Toolkit

The U.S. scientific research enterprise - from basic laboratory research to clinical and translational research to policy - requires intellect, creativity, and diverse skill sets and viewpoints.

**Diversity**

... enhances excellence, creativity, and innovation
... broadens the scope of biomedical inquiry
... addresses health disparities
... ensures fairness in our highly diverse nation

- Recruitment search protocol
- Tips for reducing implicit bias
- Contact NIH SWD for more information: SWDToolkit@od.nih.gov
NIH Approaches to Inclusive Excellence

Science of Diversity

Diversity Leads to Innovation

LEARN MORE

Science of Diversity | Building Evidence | Sociocultural Factors | Sustaining Diversity
NIH 101: A Brief Primer (Who’s On 1<sup>st</sup> ?)

- **Why Diversity Matters to NIH** – Dr. Le Fauve
- **NIH 101: A Primer for ESI and 1<sup>st</sup> Time Applicants** – Dr. Lauren Hill
- **Strategies to Support Your Research Training** – Dr. Marguerite Matthews
- **Career Stage Transitions** – Dr. Kenneth Gibbs
Presentation Overview

• NIH Institutes and Centers (ICs)
• Finding the right “scientific home” for your research
• Working with NIH Program Officers (POs)
NIH is composed of 27 Institutes and Centers (ICs)
The National Institutes of Health

• Each IC has its own mission
• Each IC has its own budget
• Each IC has its own activities
• Each IC has its own way of doing business

• Contact a Program Officer at the IC before you submit a grant application
Typical NIH IC Organizational Structure

- National Advisory Council
- Office of the Director
- Board of Scientific Advisors

Extramural Research
- Scientific Programs & Divisions
  - Program
  - Review
  - Grants Management

Intramural Research
- Laboratory Studies
- Clinical Studies
Interacting with NIH: Extramural Investigators/Trainees

NIH People

Program Officer
- Scientist & Administrator
- Identifies areas of scientific need
- Communicates NIH priorities to investigators and others
- Manages grants
- Communicates with IC Leadership about the science

Scientific Review Officer
- Scientist & Administrator
- Manages grant reviews
- Appoints members to review groups & panels
- Prepares summary statements

Grants Management Officer
- Implements the funding process
- Oversees the budget
- Ensures grantee compliance with NIH policies & regulations
• Talk to mentors and colleagues
• Search NIH RePORTER for funded projects
• Search NIH MATCHMAKER for similar projects and their POs
• Review IC missions, strategic plans, & research priorities
• Review IC division or program webpages
Contacting a Program Officer – General Guidelines

• Contact POs via email

• Include a 1-2 Page Concept Paper
  • Research Project Grants (RPG) – include brief background, significance of the problem or question the project will address and specific aims
  • Training (e.g., F30, R36, F31, F32) and Career Development Grants (e.g., K01, K08, K23) – brief background, significance of the problem or question the project will address, specific aims; training goals; mentoring team and their current funding and a CV or NIH Biosketch

• Follow-up as needed – email piles are deep
Getting Engaged: Strategies to Support Your Research Training

- **Why Diversity Matters to NIH** – Dr. Le Fauve
- **NIH 101: A Primer for ESI and 1st Time Applicants** – Dr. Lauren Hill
- **Strategies to Support Your Research Training** – Dr. Marguerite Matthews
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Utilize a Systemic Approach
Select your educational or career level to find a funding opportunity to support your training or career development goals

Undergraduate and Postbaccalaureate Education
Predoctoral Training/CLinical Doctorate
Postdoctoral Training/CLinical Residency
Early Research Career Development
Established Investigator Research Development and Mentoring

EDUCATION AND TRAINING

Recent Announcements
Rehabilitation Research Career Development Programs (K12) [new]
Oct 21, 2016
Pediatric Scientist Development Program (K12) [new]
Oct 27, 2016
Aging Research Dissertation Awards to Increase Diversity (K30) [new]
Oct 20, 2016
Emerging Global Leader Award (K45) [new]
Oct 4, 2016

NIH Research Training and Career Development Programs
NIH supports Research Training and Career Development programs to help prepare individuals for careers in biomedical, behavioral, social, and clinical research. This site is organized to help you target your particular educational or career stage to find out what programs are available for you. It is important to keep in mind that program details and areas of emphasis may vary across NIH Institutes and Centers. Therefore, you are encouraged to contact an Institute or Center Training Representatives to discuss specific programs and how they fit your training and career goals.

Research Pathways
- Physician-Scientist Infographic
- Veterinarian-Scientist Infographic
- Dentist-Scientist Infographic
- Research-Scientist Infographic

CAREER DEVELOPMENT KIOSK
RESEARCH TRAINING KIOSK
FELLOWSHIP KIOSK
OTHER TRAINING-RELATED KIOSK
INTRAMURAL TRAINING

https://researchtraining.nih.gov

National Institutes of Health
Research Supplements to Promote Diversity

- Supplement funding to active NIH research grants (e.g., R, P, U) to support research training of high school students through junior faculty.
  - Research Transition Awards (R00) should check with their Program Officer before applying for a supplement.
- All NIH ICs participate in the Diversity Supplement Program, but each IC has different deadlines and policies
- Administratively reviewed (no peer review) by the IC funding the original grant – projects must be within scope of the parent grant
- Supplements provide salary and fringe benefits; funds for supplies and travel; tuition for predocs
- Typically, 1-3 years of “bridge funds” to allow the supplement awardee to gain the research experience, preliminary data, and/or other skills to prepare a strong application for independent NIH funding.
  - Feeder program for training awards such as Fs and Ks

PA-21-071: IC Specific Contacts and Information
Pursuing Your Own Funding

**Fellowships - F**
- F32 - Ruth L. Kirschstein Postdoctoral Individual National Research Service Award
  - Parent F32 – supported by 20 ICs
  - NINDS F32 – candidates can apply 12mo prior to but no more than 12mo after starting a postdoc position
  - BRAIN F32 – candidates can apply 12mo prior to but no more than 12mo after starting a postdoc position
  - NIA F32 – promoting diversity in AD/ADRD research

**Career Development Awards - K**
- K01 - Mentored Research Scientist Career Development Award
  - ~25 active FOAs for postdocs and/or junior faculty
- K99/R00 - Pathway to Independence Award
  - Parent K99/R00 – supported by most ICs
  - MOSAIC K99/R00 – promoting diversity, supported by most ICs
  - BRAIN K99/R00 – promoting diversity
  - NINDS K99/R00 – promoting diversity in AD/ADRD research
NIH-Supported Training at Institutions

Ruth L. Kirschstein Institutional National Research Service Award (T32)
• NIH supports ~1800 projects that enable over 200 institutions nationwide to recruit and support predoctoral and postdoctoral scientists and provide structured training in a various biomedical disciplines

Institutional Career Development Program Award (K12)
• Prepare postdoctoral and clinician scientists for independent research careers
NIH-Supported Career Development and Networking Opportunities

**Research Education Program (R25)**

- The purpose of this type of program is to support research education activities that complement and/or enhance training, enhance diversity, help recruit individuals with specific disciplinary backgrounds to research careers, and/or foster a better understanding of given research topics.

  - **NIH Neuroscience Development for Advancing the Careers of a Diverse Research Workforce** – for predoc through junior faculty researchers
  - **Enhancing NIDCD's Extramural Workforce Diversity through Research Experiences (new)** – for undergrad through mid-career faculty researchers
  - **Mentoring Networks to Enhance Diversity in NIDCD's Extramural Research Workforce (new)** – for undergrad through predoc researchers
Finding an R25 Well-Suited for Your Needs

https://reporter.nih.gov/advanced-search
Finding an R25 Well-Suited for Your Needs
Using Social Networks for Support and Guidance

For every fellowship I got I had example successful apps to see because my network is large. Not everyone has that privilege. I share my success apps with anyone, even if I don’t know you. DM me if you need an example app for a K99, FWIS L’Oreal, pre and postdoc Ford, BWF PDP.

I will also share my F32, BWF PDP, and MOSAIC K99 apps for anyone who is prepping their applications. Also, I asked @DrNancyPadilla for her K99 app...and then got funded for my MOSAIC K99...interpret that as you wish 😊

Following the amazing @DrNancyPadilla’s lead, happy to share a postdoc HFSP application (for those changing topics and countries!), and for faculty: Sloan, I/START, ROIs. (Not to mention so many failed applications, but you don’t want those ;)

10:07 AM - Oct 25, 2021 - Twitter Web App
Using Social Networks for Support and Guidance

#NSFGRFP fellowship writers! Lots of people have asked me to read/edit their essays, and the same themes keep coming up.

I threw together this set of cheat codes. They are cheeky but substantive, and (full disclosure) my opinion. Enjoy 😊

Jasmine aka shuri’s labmate, PhD @jasminekwasa

9:09 AM - Oct 14, 2021 - Twitter for iPhone

Predoctoral Fellowship Cheat Codes — Jasmine Kwasa

I’m unabashedly stealing this concept from Michele Washington and Carol Gonzales and the countless others who have a similar resource for applying to fellowships or their websites. Check the out too.

Marginalizes: format, tone, length, margins, and margins. Do not make them white space.

1. Read the instructions and follow them.
   - Marginalizes: format, tone, length, margins, and margins. Do not make them white space.

2. Look for a nursing or other assessment criteria.
   - Marginalizes: format, tone, length, margins, and margins. Do not make them white space.

3. Use RHNORS: writing, editing, and editing them strategically.
   - Marginalizes: format, tone, length, margins, and margins. Do not make them white space.

4. Organize your statements logically — have empathy for your reader! Build a story for the fellow to follow, rather than throwing random, disorganized information at them.

   a. Personal statement: These are pretty standard in terms of format. Be sure to have some kind of intro (most people make this their personal story) into the story, then go through your research/educational background in chronological order. Each new experience is a paragraph. If you’re running out of time, group experiences into sections, but keep chronological within the paragraphs (e.g., I had multiple teaching experiences before I got out of training).

   b. Research statement: DU/ARY side (and fully read the following postgraduate research, etc.)

5. Also shout out to @gonzaless990 and @mathmatiwhale, who had/have similar resources on their websites and definitely inspired this post.

Anyway, dm me if you have questions.

Jasmine aka shuri’s labmate, PhD @jasminekwasa - Oct 14

https://www.jasminekwasa.com/blog/fellowship-cheat-codes
Career Stage Transitions

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MOSAIC Program to Promote Faculty Diversity

• MOSAIC is designed to facilitate the transition of promising postdoctoral researchers from diverse backgrounds, for example individuals from groups underrepresented in the biomedical research workforce at the faculty level, into independent, research-intensive faculty careers.

• The overarching goal of the NIH MOSAIC program is to enhance the diversity of independent investigators conducting research within the NIH mission. Program priority is to address documented underrepresentation at the faculty level (e.g., see NIH’s Notice of Interest in Diversity).

https://www.nigms.nih.gov/training/careerdev/Pages/MOSAIC.aspx
Maximizing Opportunities for Scientific and Academic Independent Careers (MOSAIC)

Postdoctoral Career Transition Award to Promote Diversity (K99/R00) – PAR-21-271, -272, and -273
Institutionally Focused Research Education Cooperative Agreement to Promote Diversity (UE5) – PAR-21-277

MOSAIC K99/R00 Applicants

https://www.nigms.nih.gov/training/careerdev/Pages/MOSAIC.aspx
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Institutionally Focused Research Education Cooperative Agreement to Promote Diversity (UE5) – PAR-21-277

MOSAIC K99/R00 Applicants

MOSAIC K99/R00 Scholars Participate in Cohorts Organized by UE5

https://www.nigms.nih.gov/training/careerdev/Pages/MOSAIC.aspx
Maximizing Opportunities for Scientific and Academic Independent Careers (MOSAIC)

Postdoctoral Career Transition Award to Promote Diversity (K99/R00) – PAR-21-271, 272, and 273
Institutionally Focused Research Education Cooperative Agreement to Promote Diversity (UE5) – PAR-21-277

- Nearly all NIH ICs participate in the MOSAIC K99/R00 program
- Special emphasis on contributions and commitment to promote diversity
- K99/R00 applications accepted 3x per year (February, June, October)
- To date, > 75% of applicants from URM groups

https://www.nigms.nih.gov/training/careerdev/Pages/MOSAIC.aspx
2021 NIH MOSAIC Scholars

https://www.nigms.nih.gov/training/careerdev/Pages/mosaic-scholars.aspx
Early-Stage Investigator (ESI)

- An NIH ESI is a New Investigator who has completed their terminal degree or medical residency (or the equivalent and whichever date is later) **within the past ten years** and has not yet been awarded a substantial, competing NIH research grant.

- Status can be **extended** for childbirth (1 year per childbirth in ESI window) and other reasons (e.g., COVID-19 related disruptions, family care responsibilities, active-duty military service) considered on a case-by-case basis.

- Receive special attention at Review (career stage), National Advisory Council (high program priority) and potentially increased payline for scored R01 applications from Early-Stage Investigators.

NIGMS MIRA (R35)

• Applications focus on the investigator and the overall program of research in the lab within the mission of NIGMS
• Significance of past and recent contributions to science and to the scientific community
• Impact of proposed work while deemphasizing details of approach
• Two FOAs:
  • PAR-19-367: For Established Investigators
  • PAR-20-117: For Early-Stage Investigators (preliminary data not required!)

Stephen I. Katz Early Stage Investigator Research Project Grant (R01)

- **New Research Directions** (e.g., new approach, methodology, technique, discipline, target, paradigm) – specific attachment
- Can rely on the applicant’s prior work and expertise as its foundation, but should not be an obvious or incremental advancement, expansion or extension of a previous research effort
- **Unpublished data not allowed**
- It is important to check which NIH ICs are signed onto each FOA
  - [PAR-21-038](https://grants.nih.gov/funding/katz-esi-r01.htm): Clinical Trial Not Allowed
  - [PAR-20-039](https://grants.nih.gov/funding/katz-esi-r01.htm): Clinical Trial Required

[https://grants.nih.gov/funding/katz-esi-r01.htm](https://grants.nih.gov/funding/katz-esi-r01.htm)
NIH Loan Repayment Program

- 2-year Research Commitment
- Up to $50,000/year
- New: ASSIST and REACH
- LRP Resources
- Extramural LRP Application Deadline: November 18, 2021
### Extramural LRP Subcategories

For individuals conducting research at non-profit institutions

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
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<tr>
<td><strong>Clinical Research</strong></td>
<td>Patient-oriented research conducted with human subjects or materials of human origin (including cognitive phenomenon) on the causes and consequences of disease in humans</td>
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<tr>
<td><strong>Pediatric Research</strong></td>
<td>Research related to diseases or disorders in children</td>
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<tr>
<td></td>
<td>Basic research allowed</td>
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<tr>
<td><strong>Health Disparities Research</strong></td>
<td>Research focusing on minority and other health disparity populations</td>
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<tr>
<td></td>
<td>Basic, clinical, social and behavioral research allowed</td>
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<tr>
<td><strong>Contraception &amp; Infertility Research</strong></td>
<td>Research focusing on conditions impacting ability to conceive or bear children and provide new or improved methods of preventing pregnancy</td>
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<td></td>
<td>Applications reviewed by Eunice Kennedy Shriver NICHD</td>
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<tr>
<td><strong>Clinical Disadvantaged Backgrounds</strong></td>
<td>Same as Clinical Research LRP</td>
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<tr>
<td></td>
<td>Available to clinical researchers from verifiable disadvantaged backgrounds</td>
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<tr>
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<td>Applications reviewed by NIMHD</td>
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<tr>
<td><strong>Research in Emerging Areas Critical to Human Health (REACH)</strong></td>
<td>Available beginning September 2021 to recruit and retain researchers pursuing major opportunities or gaps in emerging areas of human health</td>
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<tr>
<td></td>
<td>NIH ICs determine gap/emerging areas of research priority areas</td>
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</table>
Thank You Very Much For Attending!

Please check the Virtual Seminar agenda for additional sessions that may be of interest!