



U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health
National Institute of Neurological Disorders and Stroke

NIH Strategies for Enhancing the Diversity of Neuroscience Researchers

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Chief**

**Office of Programs to Enhance
Neuroscience Workforce Diversity
(OPEN), NINDS, NIH**



July 22, 2019



Overview

NINDS Strategies to Enhance Workforce Diversity

- About NIH and the Neuroscience Field
- “Why, What is, and Where along the Path” of Diversity
- Highlighted NINDS Diversity Programs
- What can you do?
 - At the Scientific Community Level
 - At the Institutional Level
 - At the Individual Level

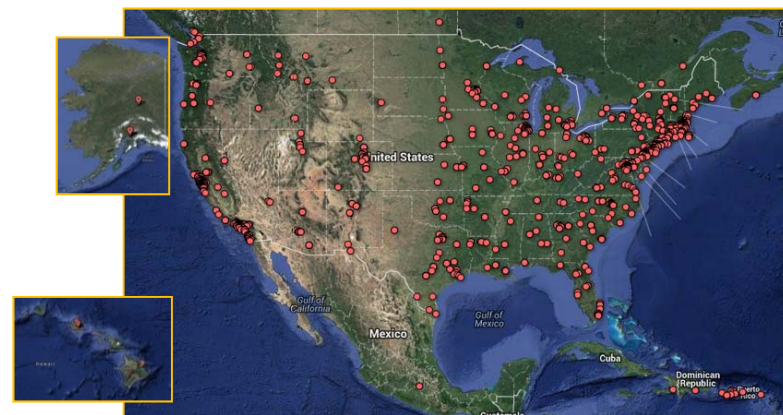
About the NIH



Intramural Research

- Approx. 7,000 scientists
- Approx. 11% of NIH's budget

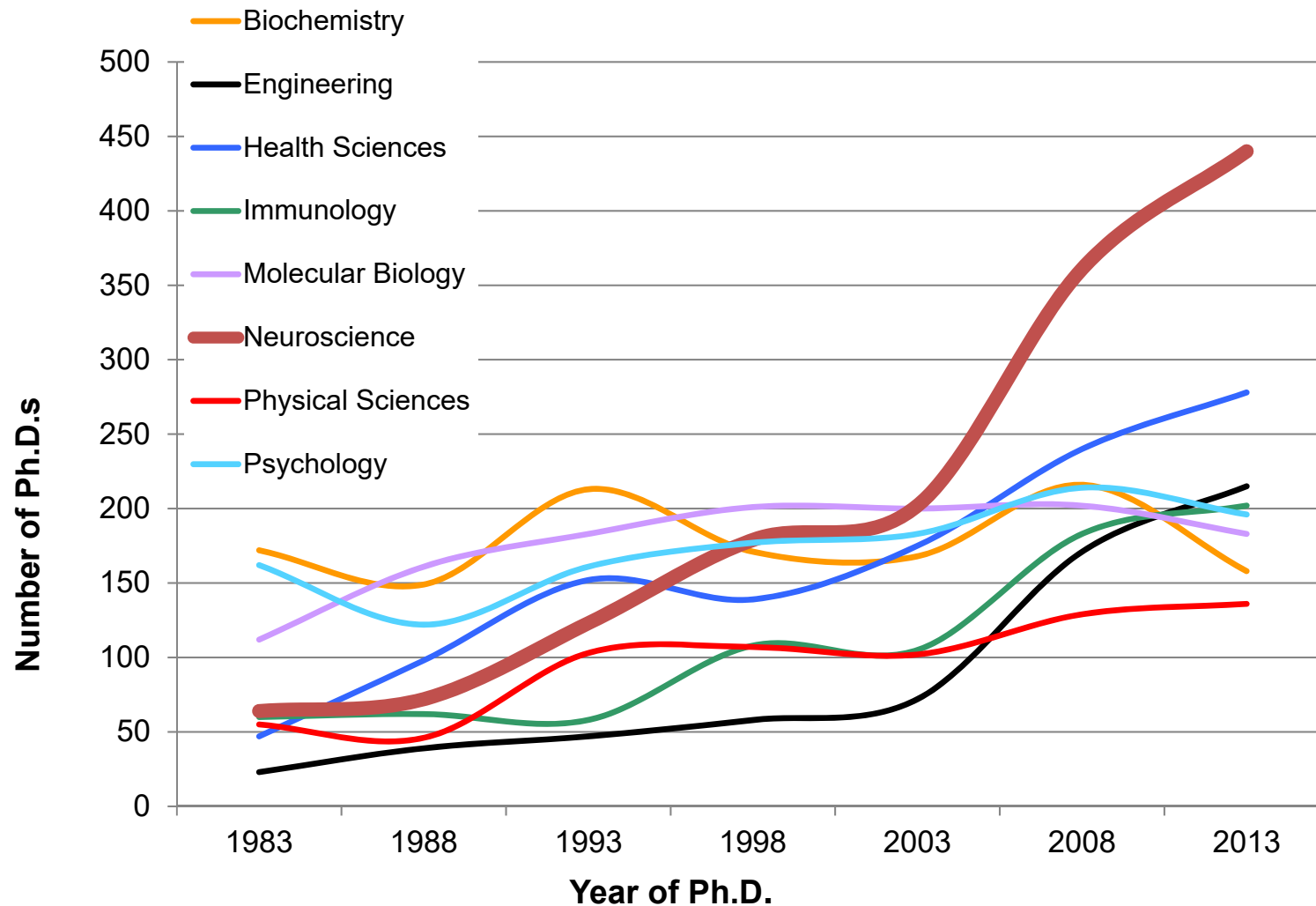
27 Institutes and Centers (ICs) with specific research agendas



Extramural Research

- Supports research and training of scientists located in universities, medical schools, hospitals, and research institutions throughout the United States and overseas
- ~2,500 institutions
- >300,000 scientists & research personnel
- >70,000 applications
- >40,000 awards annually
- Approx. 81% of the NIH budget

Neuroscience is a Young and Growing Discipline



Why Diversity Matters to NIH

- NIH is dedicated to a biomedical research workforce that reflects the nation's diversity
- **Asset (vs deficit) thinking regarding diversity** results in higher-quality scientific research (Nelson & Quick, 2012)
- The recruitment of the most talented researchers from all groups; **leveraging the US intellectual capital**
- NIH has identified the lack of diversity in the physician-scientist workforce as a primary challenge to clinical and scientific research (NIH/WGDBRW, 2012).

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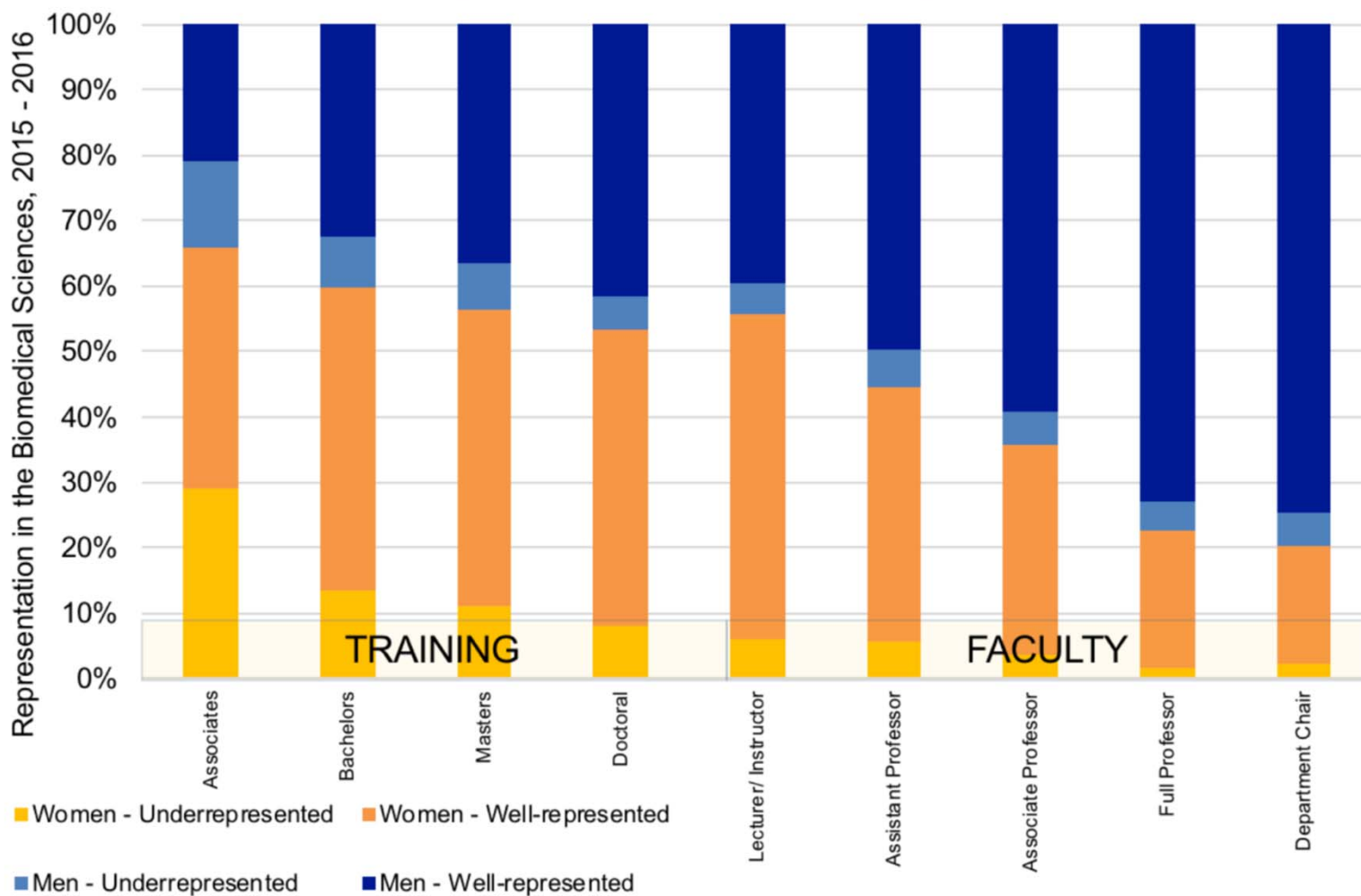


“Every one of your employees is human. You have a rather narrow definition of ‘diversity’, don’t you?”

NIH Definition of “Diversity”

- Individuals from underrepresented racial and ethnic groups
- Individuals with disabilities, defined as those with a physical or mental impairment
- Individuals from disadvantaged backgrounds (economically or educationally)
 - Most applicable to high school and undergraduate candidates
- Women
 - Only at more senior career stages and certain FOAs

Diversity Declines Along Career Path

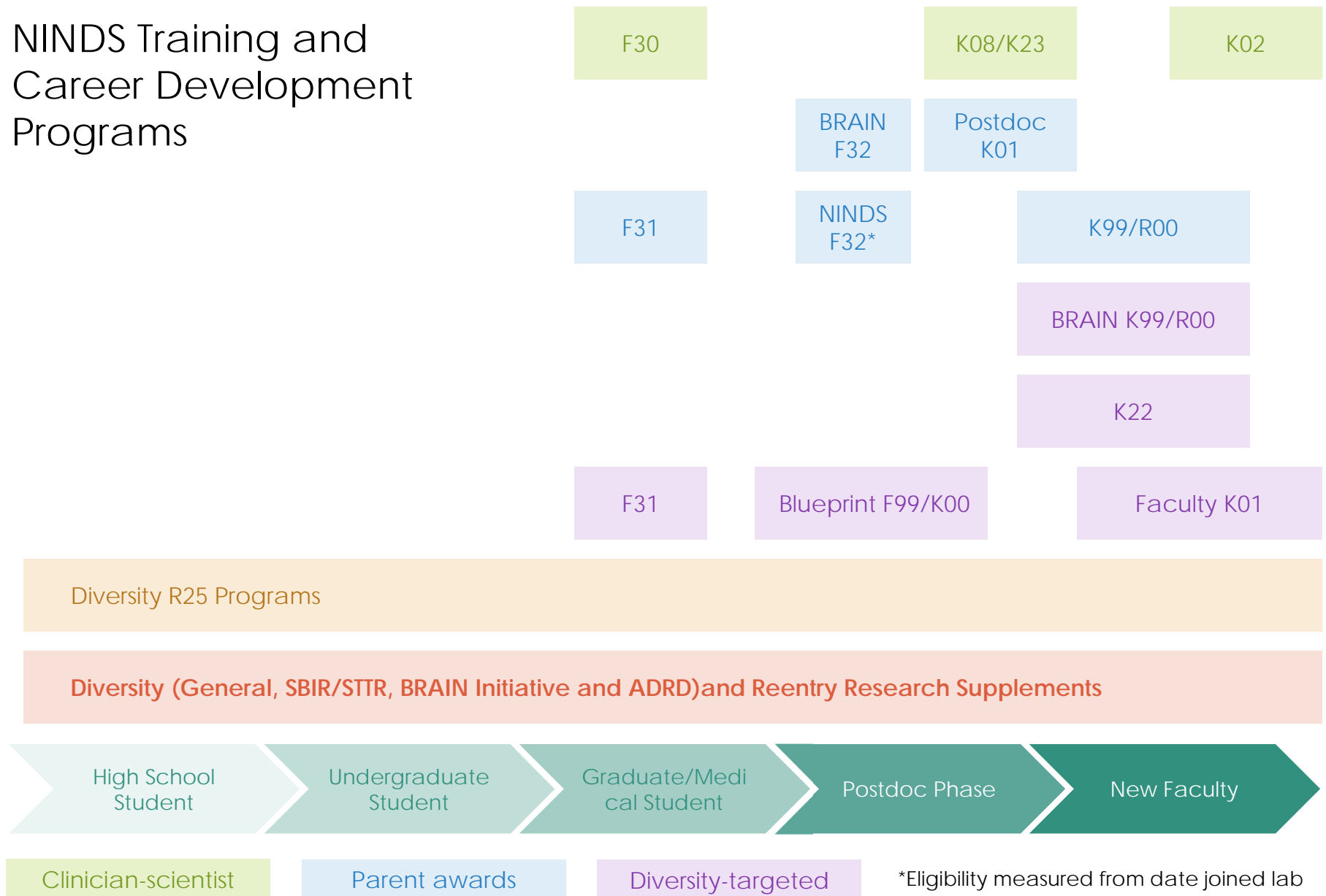


Transition Awards

- The current research environment is often perceived as very challenging (e.g., Developing a 21st Century Neuroscience Workforce, IOM).
 - Attrition of talent occurs at each career transition as the goal of a research career is reconsidered
- In 2014, ~11% of those enrolled in US neuroscience graduate programs were from diverse groups*
- A goal of the NIH is to “create seamless transitions for biomedical career advancement and progression”

*National Science Foundation, National Center for Science and Engineering Statistics. 2015. *Women, Minorities, and Persons with Disabilities in Science and Engineering: 2015*. Special Report NSF 15-311. Arlington, VA. Available at <http://www.nsf.gov/statistics/wmpd/>.

NINDS Training and Career Development Programs



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Research Supplements to Promote Diversity (PA-18-586): Feeder Program and Bridge to Transition

- Supports high school to faculty level researchers through administrative supplements to existing NIH research grants (Rs, Ps, Us, etc.)
- Supplements provide salary and fringe benefits; funds for supplies and travel
- Provide “bridge funds” while the supplementee gains the research experience, preliminary data, and other requirements to develop an application for individual NIH funding
- Sets up mentoring relationships with IDPs
- Feeder program for our Fs and Ks
- Specific funds for BRAIN Initiative, ADRD, and SBIR/STTR FOAs

Guidance for Junior Faculty Diversity Supplements

- Candidates with a history of previously funded R awards are not eligible for this supplement.
- **Short-term Investigator Research Supplement:** Examples of this may include diverse researchers at teaching-intensive schools who wish to pursue summer or another portion of the academic year research experiences in ongoing projects while further developing their own research potential, to enhance their research skills and establish an independent research career.
- **Long-term Investigator Research Supplement:** Candidates will be recently appointed (**within 24 months**) and the project will enhance his or her ability to compete for independent grant support. The applicant should provide clear justification for the need of the supplement and the barriers or feasibility issues that make submission of individual awards such as a K or R not a competitive strategy at the current time.

F99/K00 - NIH Blueprint Diversity Specialized Predoctoral to Postdoctoral Advancement in Neuroscience (D-SPAN) Award

1-2 Years

4 Years

F99

K00

Graduate Student

PhD Defense

Postdoctoral Fellow

- Create a defined pathway for a critical juncture in the training pipeline—the transition from predoc to postdoc
- Spans career stages to
 - minimize transition barriers
 - enhance self-efficacy by providing a clear pathway to the postdoctorate
 - empower diverse trainees, via an individual award, to develop independent research plans within a strong, mentored environment
- Currently **40 DSPAN Scholars**, next due dates December 13, 2019; April 15, 2020; December 15, 2020; April 15, 2021

NINDS Diversity Career Development Awards

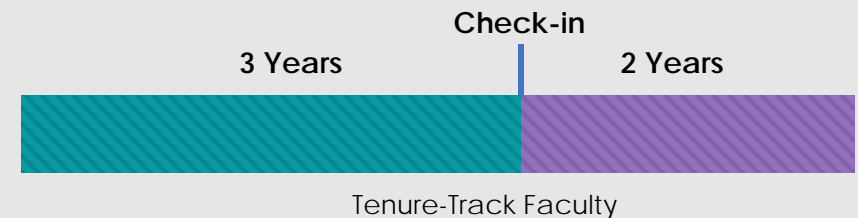
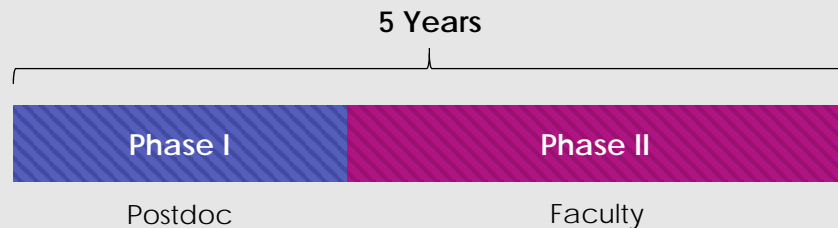
NINDS Diversity K22

PAR-18-469 & PAR-18-468

NINDS Faculty K01

PAR-18-490 & PAR-18-486

FORMAT



ELIGIBILITY



Postdoctoral fellow with <5 years experience



U.S. citizen or permanent resident by time of award



- Individual from underrepresented racial or ethnic group (NOT-OD-18-220)
- Individual with disabilities



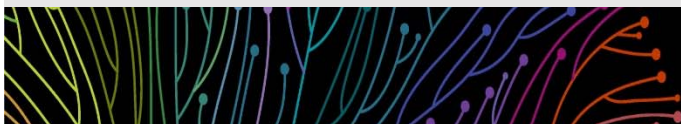
Tenure-track faculty with <3 years experience



U.S. citizen or permanent resident by time of award



- Individual from underrepresented racial or ethnic group (NOT-OD-18-220)
- Individual with disabilities



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The BRAIN Initiative®

Advanced Postdoctoral Career Transition Award to Promote Diversity (K99/R00)

The BRAIN K99/R00 is designed to increase biomedical research workforce diversity and foster a strong cohort of new, highly skilled and well trained, NIH-supported, independent investigators from diverse backgrounds (including nationally under-represented groups) working in research areas supported by the BRAIN Initiative, as highlighted in BRAIN 2025: A Scientific Vision.



Postdoctoral fellow

- Less than 5 years experience
- Requires at least 12 months of training



U.S. citizen or permanent resident

by time of award



U.S. domestic institution



BRAIN Initiative research

- Must be relevant to the scientific goals of the BRAIN 2025 Report, in areas including but not limited to: engineering, computer science, statistics, mathematics, physics, chemistry, and neuroethics



Eligible individuals

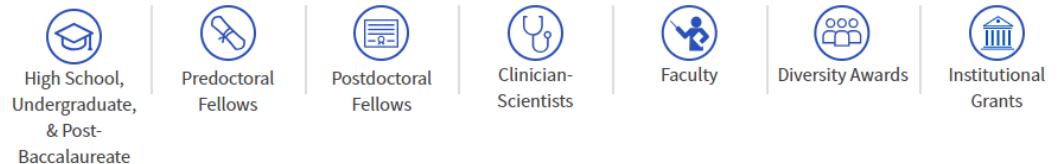
- Individuals from underrepresented racial and ethnic groups (NOT-OD-18-129)
- Individuals with disabilities
- Women

NINDS Resources

<https://www.ninds.nih.gov/Funding/Training-Career-Development>

- Archived webinars:
 - F99/K00
 - K22
 - K01
 - BRAIN K99/R00
- Tip sheets:
 - K22
 - K01

Find Training Grants by Eligibility



Find Training Grants by Mechanism

Individual Fellowships



Research training opportunities for trainees at the graduate and postdoctoral levels

Career Development Awards



Research training opportunities for scientists and clinical-researchers at the postdoctoral and early career faculty levels

Institutional Grants



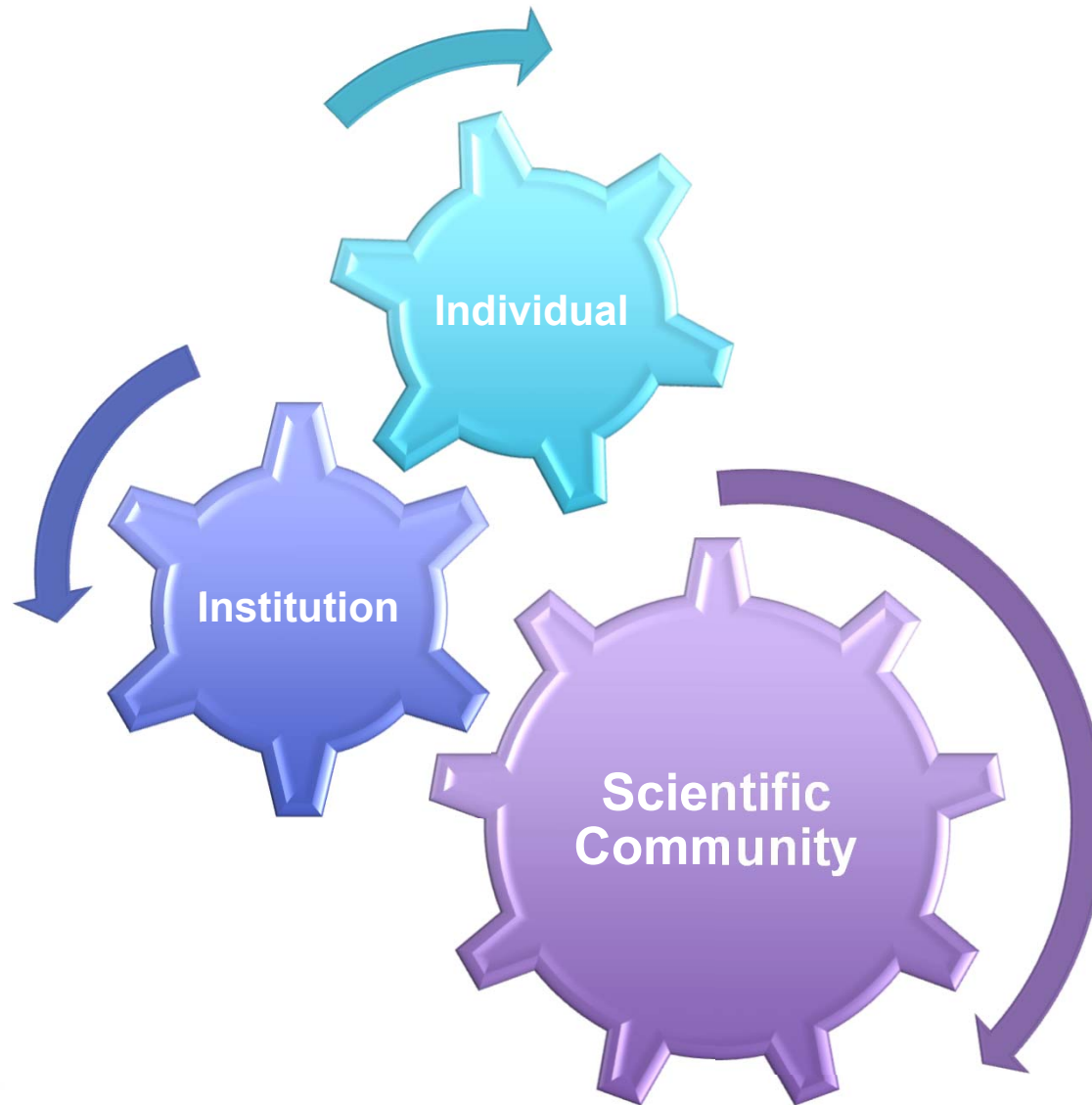
Research training opportunities on an institutional level to support multiple scientists and clinician-researchers at all levels of training

Other Training-Related Programs



These programs have unique elements including specific institutional eligibility, or supplementation of an existing NINDS award.

A Systemic Approach –NINDS OPEN Pathway Programs



At the Scientific Community Level

- Diversity is not an end in itself, but a means of achieving our ideal institutions, learning environments, and communities.
- Merely adding diverse people to a homogeneous environment does not automatically create a welcoming situation
- Practice inclusion, not just diversity by numbers
 - Gordon Research Conference Power Hour
 - Appropriate representation at scientific conferences (NINDS R13 guidance)

**“Diversity is being invited to the party;
inclusion is being asked to dance.”**

At the Scientific Community Level

- Employ your scientific logic when discussing diversity
 - N=1 is not evidence for a group behavior
 - Be willing to “experiment” with change
 - As scientists, we solve tough, complex research questions everyday – increasing diversity in the workforce shouldn’t be “just too hard”
 - “I don’t believe in implicit bias”

“The key isn’t to feel guilty about our biases, guilt tends toward inaction.

We all have biases. What matters is how we act upon them.”

-Neill Franklin

Types of Implicit Bias

- **Similar-to-me bias** means preferring people who are like us.
- A **false correlation** is seeing a relationship between things when the relationship actually doesn't exist.
- **Confirmation bias** means looking for or interpreting information to confirm our own preconceptions.
- All of these types of bias are common in **biomedicine**.
- Lack of critical mass creates greater reliance on implicit bias
- **Accumulation of disadvantage**: Small bias in same direction has large effect over time

Countering Bias

The following strategies have been shown to minimize the effect of implicit bias:

- **Slow down.** When we are busy, distracted, or under time pressure, bias is more evident
- **Increase intergroup contact.** The more interaction with others, the less bias is held toward those groups.
- **Engage in perspective-taking.** Imaging oneself as a member of a different group can decrease bias.
- **Conduct blind review.** If you don't know someone's race or gender, you can't be biased by that information.
- **Define qualifications before starting review.** Avoid the influence of initial biases on your interpretation of the information as you conduct the review.
- **Focus on the individual.** Consciously avoid the tendency to make assumptions about others based on their group membership, or vice versa.
- **Promote inclusive communities.** Work to ensure that everyone has a voice. Acknowledge and attribute ideas accurately. Discuss these issues as a community.

Practicing Inclusion and Mentorship

- Data from several studies show:
 - Mentorship requests from scientists from underrepresented groups, including women, are **more likely to be ignored** than those from white men.
 - Scientists from underrepresented groups **typically receive less mentoring** than their well-represented peers.
 - Recommendation letters based on gender reveal different tendencies (whether letter-writer is female or male)
- Lack of or failed mentorship can promote career **attrition or limit career advancement**.
- Sponsors connect mentees to “power” through award nominations and membership in professional networks

Inclusion is about experiences, not demographics. It's about being confident enough in a space to share your thoughts, ideas, and concerns—and to have them heard in a meaningful way.

-Sabriya Stukes, PhD

NINDS R25s – Building a Network and Diverse Neuroscience Community

Funding Mechanism	Program Goals
NIH R25 for Summer Research Experience	<ul style="list-style-type: none"> • Provide high quality research experience for high school and/or undergraduate students. • Programs that specifically provide opportunities for members of diversity groups and students who might not otherwise have access to outstanding laboratory experiences may be given priority.
NIH Blueprint ENDURE R25	<ul style="list-style-type: none"> • Encourage and prepare undergraduate students from diverse backgrounds to enter PhD degree programs in the neurosciences. • Partnership between research-intensive institutions and institutions with a substantial enrollment of students from diverse groups.
NINDS R25 for Advancing the Career of a Diverse Research Workforce	<p>Support NINDS mission relevant programs to:</p> <ul style="list-style-type: none"> • Increase the pool of current and future Ph.D.-level research scientists from diverse backgrounds underrepresented in biomedical neuroscience research (participation is limited to undergraduate, graduate, post-doctoral and/or junior-faculty career levels) • Facilitate career advancement/transition of the participants to the next step of their neuroscience careers.

TRANSCENDS: Training in Research for Academic Neurologists to Sustain Careers and Enhance the Numbers of Diverse Scholars

- Career stage:
 - Fellows in formal neurology sub-specialty training program
 - Neurology faculty three years or less from first academic appointment
 - Neurologists five years or less from completion of residency
- Program participants will receive:
 - MS or certificate in clinical research through MUSC
 - Mentoring and support in the development of their research
 - Preparation, review (mock study section), and submission of K-type grant application
 - AAN member benefits
- For more information, please contact:
transcends.aan@gmail.com



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National Research Mentoring Network –<https://nrmnet.net>

NRMN's Programs by Career Stage

● Program Available

● Program Under Development

Program statuses as of 2017

MATCHING /LINKING

	Undergraduate	Graduate	Postdoc	Junior Faculty	Senior Faculty	Non-faculty Researcher	Administrator
Guided Virtual Mentorships	●	●	●	●	●	●	●
MyNRMN	●	●	●	●	●	●	●
Near Peer Mentoring	●	●	●				
Virtual Collaboratory			●	●	●	●	

TRAINING

Career Coaching		●	●				
Facilitator Training				●	●	●	●
Grant Writing Coaching Groups			●	●	●	●	
Mentor Certifications				●	●		
Research Mentee Training	●	●	●	●			
Research Mentor Training		●	●	●	●	●	●
Shark Tank			●	●	●	●	
Institutional Mentoring Academy Planning							●

REFERRING

Career Development Webinars	●	●	●	●	●	●	●
NRMNet Portal	●	●	●	●	●	●	●

PROMOTING

NRMN Ambassadors	●	●	●	●	●	●	●
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**DIVERSITY
PROGRAM
CONSORTIUM**
Supported by the National
Institutes of Health

At the Institutional Level

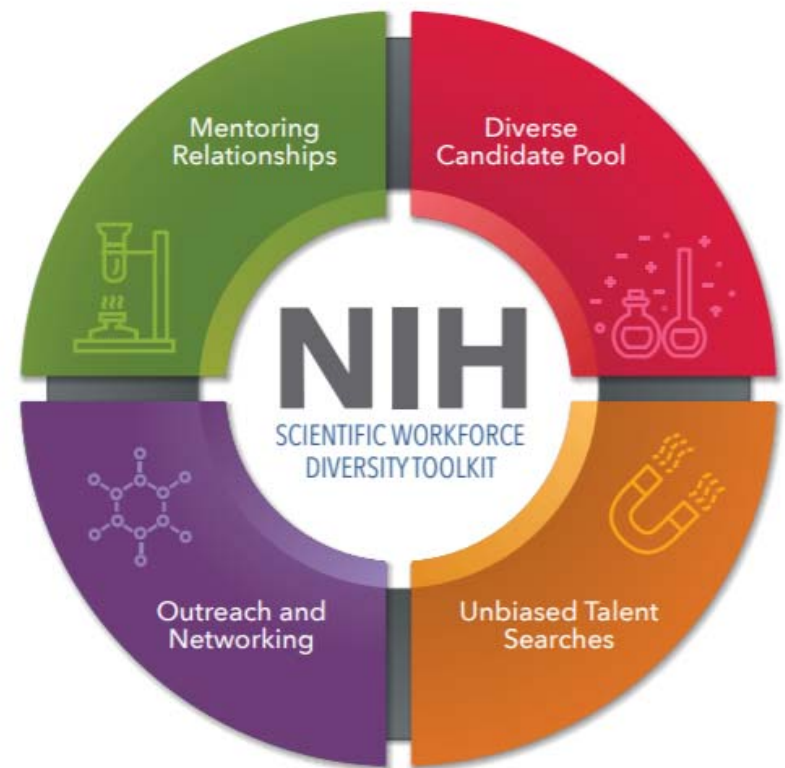
- Senior leadership sets the tone
 - What gets measured gets done, what gets rewarded gets repeated
- Measure Institutional climate and cultural awareness
- Make diversity goals **explicit** and foster development of strategies to achieve those goals
- As a scientist can you imagine changing variables or criteria for measurement midway thru an experiment?
 - Create a rubric for interviewing and internal awards
 - Develop strategies to address unearned advantage and unearned disadvantage
- Allies and advocates for inclusive practices

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

At the Individual Level

- Put on your oxygen mask first – make strategic decisions about extra service burden
- Confront and manage any potential “imposter syndrome”
- Ask for help! Whether it’s issues with experiments, lab dynamics, or personal issues, chances are someone has gone through it before and can offer solutions or support.
- Network - take the time to meet people outside of your institution
- Don’t build your own roadblocks or assume constraints
- Incorporating the “**Platinum Rule**”

At the Individual Level – Empower Yourself

- **Empower yourself to ask questions** – but do your homework
- **Empower yourself to seek the mentorship you deserve** – the right fit for your strengths and weaknesses
- **Empower yourself to leave toxic environments and situations** – that drain your spirit and don't capitalize on your intelligence
- **Empower yourself to own your career** – don't be passive about your journey, prepare yourself for next steps
 - Have a plan, also be open to change
- **Empower yourself to follow your passion** – you are an $n=1$
 - Not everyone will believe in your talents or even that you belong in science, navigate around the naysayers and focus on the support

**IMPORTANT RESOURCES
AND
NIH POLICIES
YOU SHOULD KNOW**

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

CAREER

Career
Pathways

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



National Institutes of Health
Office of Extramural Research



NIH Early Stage Investigator

- *Definition of Early-Stage Investigator*: An individual who qualifies as a New Investigator and is within 10 years of completing his/her terminal research degree or is within 10 years of completing medical residency
- *Early-Stage Investigator Applying for R01 or DP2 grants*:
 - ***Receive special attention at Review (career stage) and at National Advisory Council (high program priority)***
 - ***No imposed reductions in duration and amount of awards (beyond the recommendations of the initial review group)***
 - ***Increased payline for scored R01 applications from Early-Stage Investigators***

ESI extension of one year for childbirth

Notice Number: **NOT-OD-18-235**

Key Dates

Release Date: September 24, 2018

The purpose of this notice is to update NIH policy on extension criteria for [Early Stage Investigators](#) (ESIs).

NIH remains strongly committed to the [Next Generation Researchers Initiative \(NGRI\) policy](#) to fund more early career investigators and to enhance biomedical research workforce diversity.

NIH considers requests for extension of the ESI period for various reasons, including medical concerns, disability, extended periods of clinical training, natural disasters, active duty military service. Each of these requests is reviewed on a case by case basis. Because close to 50% of the ESI extension requests are related to childbirth, **effective immediately, NIH will approve an ESI extension of one year for childbirth within the ESI period.** PDs/PIs must provide the child's date of birth in the extension request justification on the [NIH Extension](#) portal.

Early Career Reviewer Program

- One of the best ways to build your grant writing skills is to serve as a reviewer.
- The NIH Center for Scientific Review (CSR) [Early Career Reviewer \(ECR\) program](https://public.csr.nih.gov/ForReviewers/BecomeAReviewer/ECR/BecomeanEarlyCareerReviewer) was developed to:
 - train qualified scientists without prior CSR review experience so that they may become effective reviewers,
 - help emerging researchers advance their careers by exposing them to peer review, and
 - enrich the existing pool of NIH reviewers by including scientists from less research-intensive institutions as well as those from traditionally research- intensive institutions.
- Prior NIH funding is NOT a requirement.

<https://public.csr.nih.gov/ForReviewers/BecomeAReviewer/ECR/BecomeanEarlyCareerReviewer>

NIH RePORTER

To see what has already been funded in your research area – you can search RePORT (Research Portfolio Online Reporting Tools)

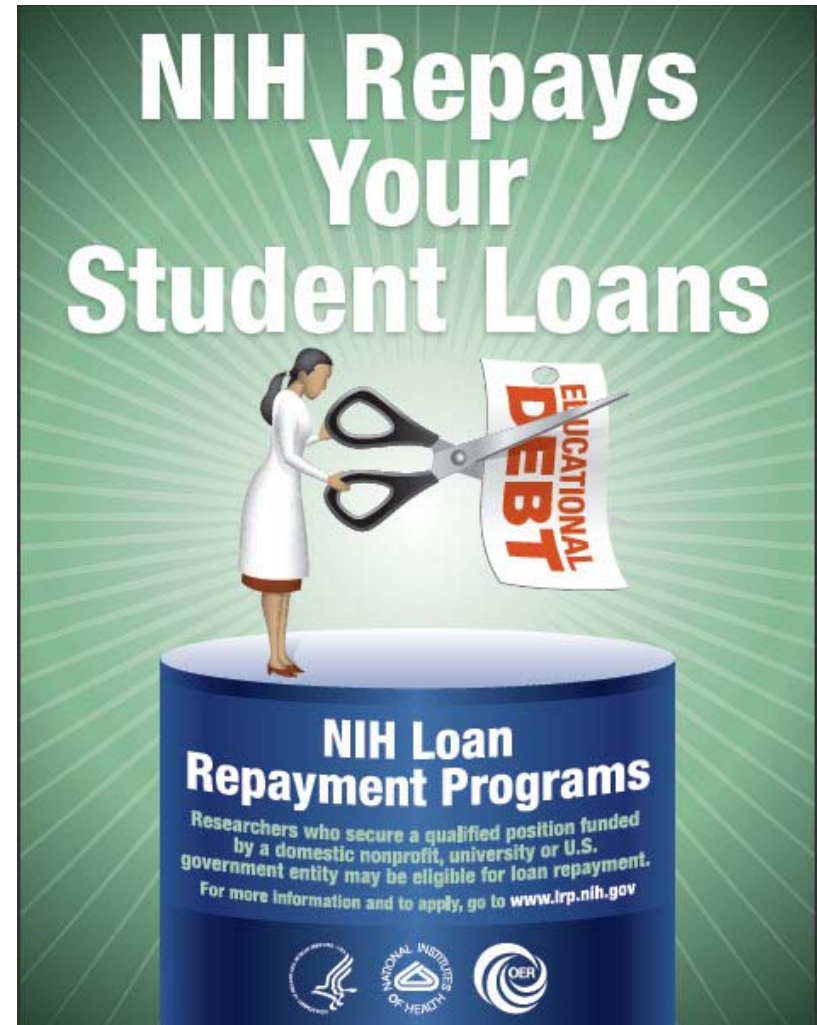
<https://report.nih.gov/index.aspx>

- Get to know projects that are ongoing in your research area
- Know potential collaborators and/or competition in the field
- Determine which NIH study sections review applications in specific fields
- Determine if there are any potential projects eligible for a supplement opportunities

NIH Loan Repayment Programs

Summary

- Up to \$35,000 per year in educational loan repayment depending on debt level
- Coverage of most Federal taxes resulting from the NIH LRP
- 2 Year initial contracts with 1 or 2 year competitive renewal contracts
- NIH Institutes and Centers fund approximately 1,600 researchers each year
- Applicant success rate is 50 percent



5 Extramural NIH LRPs:

For individuals conducting research at non-profit institutions

Visit the LRP website to find out more: www.lrp.nih.gov

Clinical Research

- Patient-oriented research conducted with human subjects or materials of human origin (including cognitive phenomenon) on the causes and consequences of disease in humans

Pediatric Research

- Research related to diseases or disorders in children
- Basic research allowed

Health Disparities Research

- Research focusing on minority and other health disparity populations
- Basic, clinical, social and behavioral research allowed
- Applications reviewed by NIMHD

Contraception & Infertility Research

- Research focusing on conditions impacting ability to conceive or bear children and provide new or improved methods of preventing pregnancy
- Applications reviewed by Eunice Kennedy Shriver NICHD

Clinical DB

- Same as Clinical Research LRP
- Available to clinical researchers from verifiable disadvantaged backgrounds
- Reviewed by NIMHD

Don't Miss Opportunities (AKA \$\$\$) – “The Guide”



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Funding

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[Contracts](#)

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[Extramural Diversity Website](#)

Funding

NIH offers funding for many types of grants, contracts, and even programs that help repay loans for researchers. Learn about these programs, as well as about NIH's budget process, grant funding strategies, and policies, and more.



Grants (NIH Guide to Grants and Contracts)

The NIH Guide for Grants and Contracts is our official publication for NIH grant policies, guidelines and funding opportunities. We publish daily, and issue a table of contents weekly. [Learn more](#) about the NIH Guide and [subscribe today!](#)

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Search for funding opportunities and notices



Related Resources

Avoid Grant Scams

[NIH Funding Strategies](#)

[Types of Grant Programs](#)

[Find and Understand Funding Opportunity Announcements](#)

<https://grants.nih.gov/funding/index.htm>



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weekly
updates!

PLEASE CONTACT US!!!!

*NIH Institutes use the basic NIH
funding mechanisms in different ways*

- The NIH is organized into 27 Institutes and Centers (ICs), each of which is charged with sponsoring training and research in specific, albeit overlapping, areas of science relevant to their “mission”.
 - Different missions & priorities
 - Different budgets
 - Different ways of deciding which grants to fund.

Diversity
is not a
problem

It's the
solution.

NINDS, Office of Programs to
Enhance Workforce Diversity

Dr. Michelle Jones-London

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Twitter: @NINDSDiversity

LinkedIn:

<https://www.linkedin.com/in/nindsdiversity>

From Potential to Action: NINDS Trainees Navigate Diverse Paths to Success



<https://www.ninds.nih.gov/About-NINDS/Workforce-Diversity/Success-Stories>

