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

An OPEN Conversation: NIH Strategies for Enhancing the Diversity of Neuroscience Researchers

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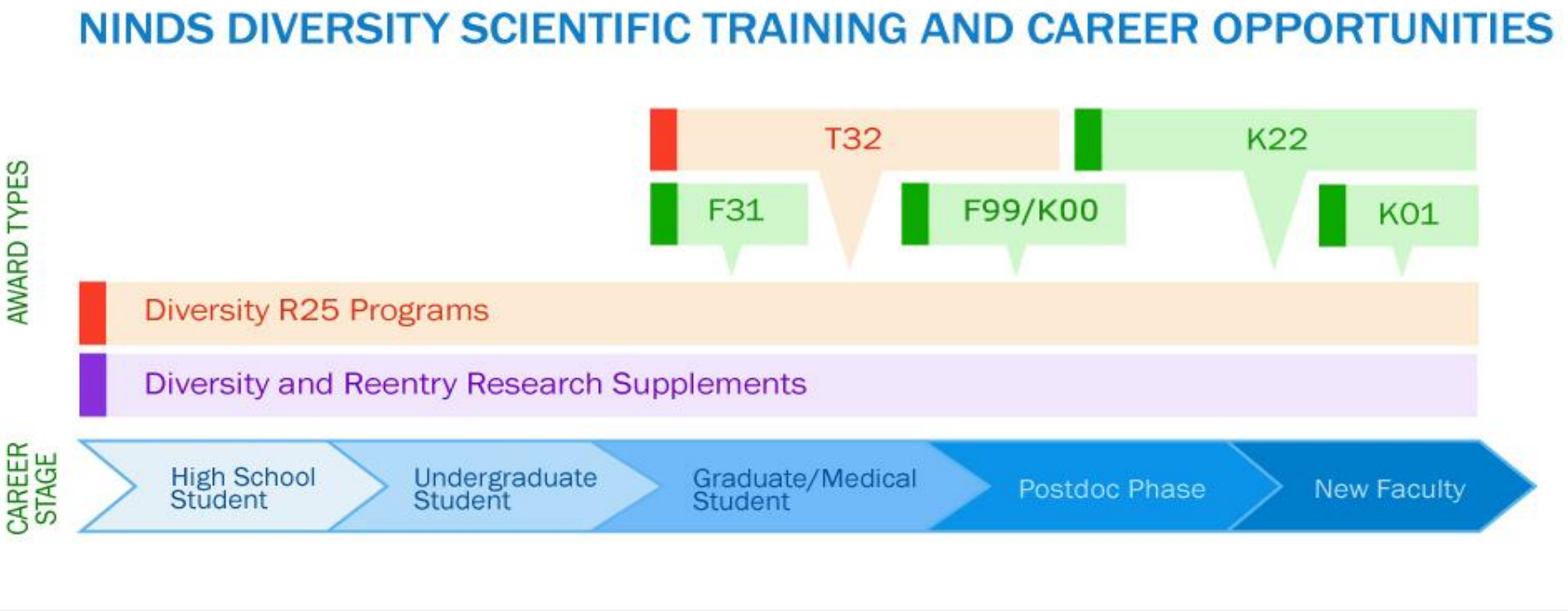
October 16, 2018

NINDS OPEN Pathways



NINDS PROGRAMS

Individual Awards

Diversity F31 - Predoctoral fellowship

NIH Blueprint D-SPAN F99/K00 - Predoc to postdoc transition award

Diversity NINDS K22 - Postdoc to faculty transition award

DiversityNINDS K01 - New tenure track faculty

Research Supplements to Promote Diversity in Health-Related Research

- Under-represented racial and ethnic backgrounds
- Individuals with disabilities
- Individuals from disadvantaged socioeconomic backgrounds
- Individuals reentering research

Institutional Awards

NINDS T32 – Institutional Research Training Grant recruitment and retention plans to enhance diversity

NIH Summer R25 – Research opportunities for high school and undergraduate students

NIH Blueprint ENDURE R25 – Pairs diverse undergraduates with neuroscience focused T32 programs

NINDS Neuroscience Development for Advancing the Careers of a Diverse Research Workforce R25 – Supports educational programs designed to attract, train, and further careers of diverse graduate students, postdocs and junior faculty

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”
- Two examples today: NIH Blueprint DSPAN (F99/K00) and Diversity BRAIN Initiative (K99/R00)

*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/.

NIH Blueprint: NIH Neuroscience Partnership

- The NIH Blueprint is a collaborative and coordinated effort across 13 NIH Institutes and Centers (see components of participating organizations in FOA)
- D-SPAN is intended for individuals who have demonstrated an interest in a neuroscience research career in NIH Blueprint mission-relevant areas and/or BRAIN Initiative research areas
- D-SPAN will build a diverse neuroscience pipeline to academic/research careers with potential benefit to all neuroscience ICs.
- NIH Blueprint diversity initiatives have benefited from a network and an identifiable critical mass by scientific discipline

Participating NIH Institutes and Centers

- NEI
- NIA
- NIAAA
- NIBIB
- NICHD
- NIDCR
- NIDA
- NIEHS
- NIMH
- NINDS
- NINR
- NCCIH
- OBSSR

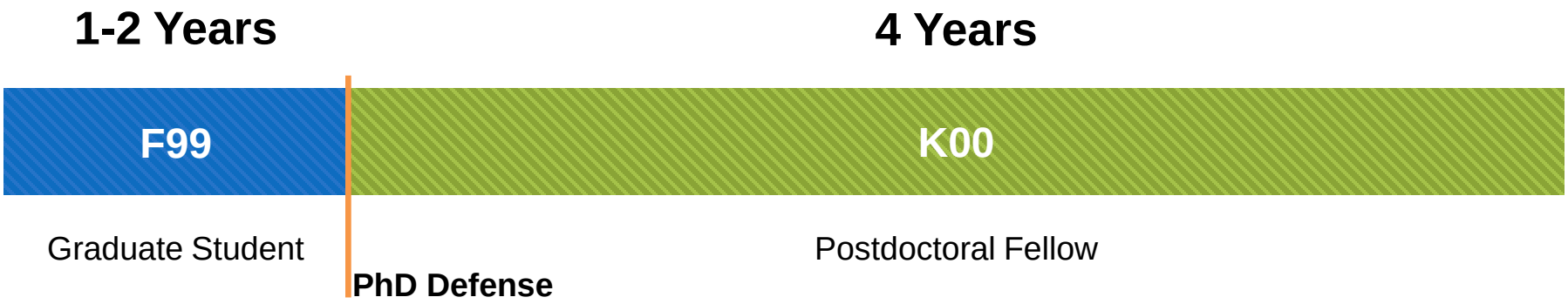
Goals of D-SPAN

- Create a defined pathway for a critical juncture in the training pathway—the transition from predoc to postdoc.
- Encourage and retain outstanding, diverse graduate students who have demonstrated ability and interest in careers as independent neuroscience researchers
- 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

Eligibility for D-SPAN

1. **Individuals from nationally underrepresented in neuroscience research**
   - Groups that have been shown to be underrepresented in health-related sciences on a national basis such as: *Blacks or African Americans, Hispanics or Latinos, American Indians or Alaska Natives, and Native Hawaiians and other Pacific Islanders*.
   - Individuals with disabilities, defined as those with a *physical or mental impairment that substantially limits one or more major life activities*.
2. **Applicants should be 3rd or 4th year PhD students**
   - US citizen or permanent resident only
   - Current F31 awardees and applicants eligible
   - May not be in a professional or dual-degree program
3. **MUST have mission relevance to one of the neuroscience Institutes listed on FOA!**

NIH Blueprint D-SPAN Program Structure



- Two-phase award using the F99/K00 activity code
  - F99 phase (1-2 years): for advanced predoctorates to complete dissertation research and search for an appropriate postdoctoral position with a strong mentor
  - K00 phase (up to 4 years): postdoctoral training and career development
  - The two phases are continuous in time, with the intent of facilitating the transition to a postdoctoral appointment.
- Vetted mentor/mentoring team for each phase
- Enhanced mentoring and professional development opportunities

NIH National Institutes of Health

Mechanism	F99/K00 (D-SPAN)
Career stage eligibility	Apply during graduate school, transition award to postdoc
F99 Phase	• Up to 2 years support in F99 phase • Stipend level for is the same as for the F31 Ruth L. Kirschstein National Research Service Award (NRSA) fellows. • Tuition and fees allowable only at this phase • Institutional Allowance (insurance, supplies, etc.)
K00 Phase	• Up to 4 years in the K00 career development phase • Up to $50,000 toward the salary of the career award recipient. • $3,000 per year toward the research development costs of the award recipient

Evaluation

- Across the BP Institutes, will be able to examine strategies and evaluate outcomes that are often too small for a single NIH Institute
  - Short-term: Transition to a postdoctoral lab with high caliber science and invested mentorship
  - Long-term: Transition to an independent research career in neuroscience
  - Authorship of scientific publications in a neuroscience field
  - Subsequent independent research grant support from NIH or another source.

The BRAIN Initiative Advanced Postdoctoral Career Transition Award to Promote Diversity (K99/R00) FOA

PAR-18-814 (Independent Clinical Trial Not Allowed)
PAR-18-813 (Independent Clinical Trial Required)

- National Eye Institute (NEI)
- National Institute on Aging (NIA)
- National Institute on Alcohol Abuse and Alcoholism (NIAAA)
- National Institute of Biomedical Imaging and Bioengineering (NIBIB)
- *Eunice Kennedy Shriver* National Institute of Child Health and Human Development (NICHD)
- National Institute on Deafness and Other Communication Disorders (NIDCD)
- National Institute on Drug Abuse (NIDA)
- National Institute of Mental Health (NIMH)
- National Institute of Neurological Disorders and Stroke (NINDS)
- National Center for Complementary and Integrative Health (NCCIH)
- Office of Research on Women's Health (ORWH)

What is The BRAIN Initiative?

- Ten year effort to accelerate development and use of tools to improve our fundamental understanding of how the human brain and nervous system function in health and disease
- Long term goal: A comprehensive understanding of the brain in action, spanning molecules, cells, circuits, systems, and behavior
- Seven high priority research areas were outlined in BRAIN 2025
- New working group will assess BRAIN's progress and identify key opportunities to apply new and emerging tools to revolutionize our understanding of brain circuits

BRAIN Diversity K99/R00 Objective

- Support the transition of talented, underrepresented post-doctoral scholars to tenure-track or equivalent positions to launch independent research careers that support the goals of the BRAIN Initiative.
- Attracting new investigators to neuroscience from the quantitative and physical disciplines, and vice versa;
- And promoting collaboration between these disciplines.
- A priority for the BRAIN Initiative is a diversity of approaches, tools, and *people*

The BRAIN Initiative®
Advanced Postdoctoral Career Transition Award to Promote Diversity (K99/R00)

Postdoctoral fellow

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

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

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

U.S. domestic institution

K99/R00 Dual-Phase Funding

- 1-2 years mentored postdoctoral research training and career development
- Up to 3 years of independent research support in an independent, tenure-track (or equivalent) faculty position
- Transition is not automatic. The applicant will submit an R00 application to be administratively reviewed by NIH
- To activate the R00 phase, the applicant must have been offered and accepted a tenure-track, full-time assistant professor position (or equivalent) by the end of the K99 project period

The BRAIN Initiative®
Advanced Postdoctoral Career Transition Award to Promote Diversity (K99/R00)

Career stage eligibility	• Apply during postdoc, transition to faculty
K99 Phase	• Up to 2 years support in K99 phase • Salary consistent with institutional salary structure • Research support up to $25,000 • Up to $5,000 for meeting participation
R00 Phase	• Up to 3 years support in R00 career development phase • Up to $249,000 in total costs (can include salary, research, fringe, indirects)

Expected Outcomes/Indicators of Success

- Increase the pool and retention of women, minorities, and persons with disabilities who are highly productive junior faculty conducting BRAIN Initiative research (both neuroscientists and non-neuroscientists)
- Creates a programmatic infrastructure for yearly NIH review of the evidence of career development support, mentoring, and transition plans for diverse scholars at competitive research institutions
- *The BRAIN Initiative Investigators* meeting will provide a forum for peer-mentoring among the BRAIN Initiative Diversity K99/R00 awardees
- Indicators of success for BRAIN Initiative Diversity K99 awardees include:
  - first-authored, peer-reviewed publications in quality journals
  - transition to a tenure-track faculty position with an appropriate start-up package, necessary resources and supportive environment
  - subsequently applying for R01s

Diversity is not a problem

It's the solution.

NINDS, Office of Programs to Enhance Workforce Diversity

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

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